APPENDIX 15
Social Impact Assessment

Ulan Coal

Continued Operations Project

Socio-economic Impact Assessment and Community Consultation Program

Prepared for

Umwelt (Australia) Pty Limited

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Glossary

LGA	Local Government Area
MWRC	Midwestern Regional Council
UCML	Ulan Coal Mines Limited
MRTI	Mudgee Regional Tourism Inc
TCB	Trust and Community Benefit

Executive Summary

Coakes Consulting has been engaged by Umwelt (Australia) Pty Ltd (Umwelt) to assess and evaluate the potential socio-economic impacts associated with the Ulan Coal Continued Operations Project (the Project). The socio-economic assessment accompanies a broader Environmental Assessment of the project being prepared by Umwelt for Ulan Coal Mines Limited (UCML).

This report presents the findings of the socio-economic assessment, and includes:

- An overview of the objectives and methodology utilised in undertaking the socio-economic assessment program;
- A background to the company in the community;
- A detailed analysis of the issues and outcomes of the consultation undertaken with landholders in proximity to the company's operations, key stakeholders (including UCML employees, service providers, and special interest community groups and organisations), as well as the broader community;
- Proposes potential strategies to further focus the company's social involvement and investment activities; and
- Details a program for on-going monitoring and evaluation of the company's social and environmental performance over time.

Program Participants

In the current assessment, stakeholders were identified through previous work undertaken in the area and through a community networking approach to ensure a representation of stakeholder views associated with the project. A total of 507 stakeholders (including employees and contractors) were consulted as part of the program.

Social Assessment Methods

The range of methods and mechanisms used to collect, communicate and disseminate information about the proposal included a secondary data review, a media analysis, analysis of social indicators, an employee and contractor survey, three community information sheets, personal interviews, focus groups, presentations to key stakeholder groups, and two community information days.

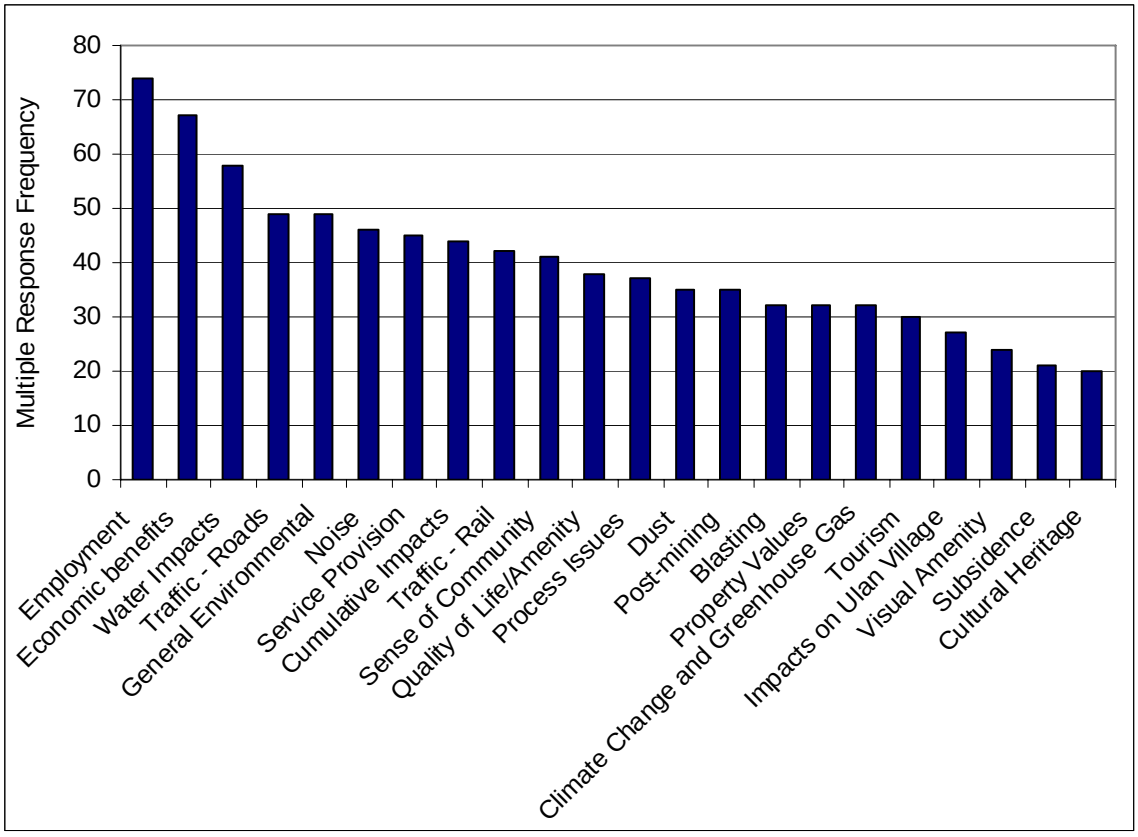
Economic Assessment Methods

At the local level, survey analysis was used to develop a profile of the existing UCML operation and its employees in the region, including an assessment of residential and expenditure patterns. This work, along with existing business expenditure patterns at UCML, was used to predict impacts associated with the influx of a project workforce to the area and likely economic impacts resulting from the Project. Multiplier analysis was used to assess the flow-on effects of Project-related income, investment and employment in a regional/macro-economic assessment.

Impact Assessment

Stakeholder and Community Perceptions

Consultations with key stakeholders, nearby landholders and the broader community were undertaken across the Mid West Regional Council area, with a focus on Ulan Village, Mudgee and Gulgong. Outcomes of the consultation have revealed a number of emerging issues / perceived impacts. The following figure illustrates the key issues identified during the consultation process. The graph is provided to identify salience of issues, however, it should be noted that all issues raised were considered important to those consulted.



Issues Assessment - Community Issues Identified Through Consultation (excluding impacts raised by employees and contractors). Source: Coakes Consulting (2009)

Workforce Impacts - Population Change Projections

Construction Phase

The construction phase is anticipated to span a period of approximately 3 years and 8 months. The projected peak construction workforce is expected to be 270 onsite and a further 80 offsite.

Previous work carried out by Coakes Consulting has found that in rural or remote locations, given the specialised nature of construction, an approximate benchmark of 20% of a construction workforce tends to be recruited locally. Therefore, the current assessment assumes that 80% of both the onsite and offsite construction workforces would be sourced from outside the region.

In relation to the offsite construction workforce, it is assumed that 64 personnel will be sourced from outside the region. UCML has also suggested that a peak of 15% of this offsite construction workforce would reside within the Mudgee Township, with the remainder residing in other areas such as Newcastle and Sydney. As the construction workforce is unlikely to be accompanied by family members, this suggests a potential maximum addition of ten new residents into the town. As this only constitutes a mere

0.1% growth to Mudgee's current population, the proportion of offsite construction workforce residing within the Mudgee township is unlikely to significantly impose on the town's existing services and infrastructure.

For the onsite construction workforce it has been assumed that 216 personnel will be sourced from outside the region, while 54 personnel will be sourced locally, and the construction workers will not be accompanied by their families.

A survey of temporary accommodation availability and capacity was undertaken with 28 accommodation providers in Ulan, Mudgee and Gulgong. The survey revealed that approximately 202 rooms would be available at any one time, thus reflecting a lack of capacity (-68 rooms) to accommodate the potential peak influx of 270 onsite construction workers. However, if workers share a room, there will be sufficient capacity.

Operational Phase

The existing workforce size for both Ulan No. 3 and the surface operation is estimated to be 530. However, following the proposed extension of the Open Cut operations and completion of Ulan West's construction phase, it is anticipated that there would be an additional maximum of approximately 401 new personnel additions to UCML's operations (staff and contractors included).

The current assessment has adopted the following three scenarios ranging from *best case* through to *worst case*.

- **Scenario A (Best Case Scenario):** 25% of the total new workforce would be sourced from elsewhere (i.e., 75% sourced locally).
- **Scenario B:** 50% of the total new workforce would be sourced from outside the region; and
- **Scenario C (Worst Case Scenario):** 75% of the total new workforce would be sourced from outside the region (i.e., 25% sourced locally);

The following table outlines the hypothetical number of new Project employees who are likely to reside in the towns of Mudgee, Gulgong, as well as other surrounding townships including Ulan, Lithgow, Rylstone, and Kandos.

Town of Residence Estimations of UCML's New Operational Workforce

Town	Residential Distribution* (%)	UCML Operational Workforce		
		Scenario A (25% new residents)	Scenario B (50% new residents)	Scenario C (75% new residents)
Mudgee	62	62	125	187
Gulgong	25	25	50	75
Other Towns	13	13	26	39
Total	**100**	**100**	**201**	**301**

Source: Coakes Consulting (February 2009)

Note: * Residential distribution is based on the location of residence for UCML's workforce identified by the current UCML Workforce Survey

Unlike the construction workforce, it is assumed that operational employees will be accompanied by their families in relocating to the area given the long-term nature of the project's operational phase. The following table outlines the predicted family impact according to the likely preferred residential locations of UCML's new operational employees. The main population impacts of the project will be

experienced in the township of Mudgee, whereby the worst case scenario (75% new residents) would result in a potential influx of 568 new community members into Mudgee.

Predicted Family Population Impact by Town

Town	Scenario A		Scenario B		Scenario C	
	25% New Residents	Predicted Family Impact	50% New Residents	Predicted Family Impact	75% New Residents	Predicted Family Impact
Mudgee	62	188	125	380	187	568
Gulgong	25	76	50	152	75	228
Other Towns	13	40	26	79	39	119
Total	**100**	**304**	**201**	**611**	**301**	**915**

Source: Coakes Consulting (February 2009)

Information relating to service capacity and facility thresholds were obtained through the local service provider surveys in the key towns of Mudgee and Gulgong. Key outcomes of this analysis have revealed the following:

- Further pressure is likely to be placed on hospital services in the area, and General Practitioners were not confident in their current capacities to handle additional population increases;
- Further strains are anticipated on Mudgee's existing dental services, which already have an average 4-week waiting period. Furthermore, as Gulgong does not have any dental services of its own within the township, population additions in Gulgong are also likely to place increased pressure on Mudgee based dental services;
- Local schools / education institutions would have the capacity to handle an increase in local population;
- Childcare services surveyed would not have the capacity to handle an increase in local population;
- Mudgee and Gulgong's short-term supply of residential lots seems adequate to absorb the impacts of population change associated with the Project;
- In relation to long-term demands, the Project's workforce is unlikely to add significantly to the forecasted long-term demands in Mudgee's housing sector.

Cumulative Impact Assessment

At the time of developing this report, the Moolarben Coal Project (MCP) had commenced construction. This major project has the potential to affect population impacts.

Employment figures associated with the MCP (*Environmental Assessment Report, MCP Stage 2, March 2009)* indicates approximately 220 construction workers for both Stage 1 and Stage 2 of the project. This peak construction period is anticipated to be completed towards the early part / first half of 2010. Therefore, the MCP's peak construction phase is likely to coincide with the UCML Project's first year of construction, for which a total of 120 construction personnel has been anticipated.

Cumulative Impacts of Project Construction Phases

Operation	Predicted Construction Workforce	Beds Required (assumes 80% of workers not sourced locally)
UCML Continued Operations Project	120	96
MCP (Stage 1 and 2)	220	176
Total (UCML and MCP Projects construction phases coinciding)	**340**	**272**

Source: Coakes Consulting (June, 2008)

Temporary accommodation providers are likely to have a sufficient number of beds to absorb the peak cumulative workforce influx of 272 new construction workers. However, should the workers not be sharing rooms, demand will exceed capacity.

The operation phases for both the MCP and UCML Project will coincide, with peak operational phases of the two projects also likely to coincide / occur at similar times. The following table highlights the total number of new MCP and UCML operational employees who are likely to reside in the towns of Mudgee, Gulgong, and other surrounding townships.

Town of Residence Estimations of UCML and MCP's New Operational Workforces

Town	Residential Distribution* (%)	UCML Operational Workforce	MCP	Total UCML and MCP Peak Operations Coinciding
		Worst Case Scenario: 75% new residents	Worst Case Scenario: 75% new residents	
Mudgee	62	187	205	392
Gulgong	25	75	82	157
Other Towns	13	39	43	82
Total	**100**	**301**	**330**	**631**

Source: Coakes Consulting (February 2009)

Note: * Residential distribution is based on the location of residence for UCML employees identified by the current UCML Employee Survey

The following table shows the predicted cumulative family impact according to the likely preferred residential locations of the new operational employees.

Predicted Cumulative Family Population Impact by Town

Town	Projected Family Distribution		Total – Timing Coinciding
	UCML	MCP	
Mudgee	568	623	1191
Gulgong	228	249	477
Other Towns	119	131	250
Total	**915**	**1003**	**1918**

Source: Coakes Consulting (February 2009)

Based on outcomes of the current assessment, potential cumulative impacts of the current proposed UCML Project and the MCP on both the Mudgee and Gulgong townships include:

- Likely significant strains on health services in Mudgee and Gulgong;
- Potential constraints on existing and long-term residential land availability;
- Potentially heightened pressures on existing primary education services;
- Significant strains on existing childcare services across Mudgee and Gulgong.

Economic Impact Assessment

The project will have a significant positive impact on the economies of the Mid West Regional Council and the whole state of NSW over the course of the next 21 years.

The multiplier analysis shows that the project will generate a total of 273 jobs in Mudgee, 40 in Gulgong and 333 in the Mid West for the duration of the construction period. Over the 21 years of the operations phase there could be an additional 1,190 jobs generated in Mudgee, 185 in Gulgong, and 1,464 in the Mid West. Total jobs generated across NSW are estimated to total 582 during the four years of construction and 2,348 during the 21 years of operations.

Economic activity in Mudgee could be boosted by an average of $330 million a year for the next two decades. For Gulgong the increase could be $44 million a year and for the Mid West Regional Council it is estimated to total $516 million a year. Total economic activity across NSW is estimated to be boosted by $1,299 million a year.

The total economic activity generated over the course of the project is estimated to be $10.8 billion for the Mid West and $27.3 billion for NSW.

The project will also have a notable impact on government revenues. It is estimated to add $2,026 million to NSW Treasury in the form of increased royalty and payroll payments. Commonwealth revenues are estimated to benefit from an increased of $392 million in personal income tax payments.

Strategies for Impact Management and Monitoring

UCML has identified a range of strategies to address social impacts and community concerns. Key strategies include formalising a local employment policy, revising purchasing and supply guidelines to increase opportunities for local business, working with key stakeholders to prioritise community investment needs, participating in an inter-mine working party to address cumulative impacts, and engaging in regular consultation with landowners and key community stakeholders.

In regards to ongoing monitoring of impacts, Xstrata Coal NSW has been successfully monitoring the social impacts of several of its operations in the Hunter Valley, Newcastle, and the Western Coalfields through a program called *Viewpoint*. It is recommended UCML implement a similar program as its primary mechanism for monitoring social impacts.

1.0 Introduction

This report examines the socio-economic issues associated with the Ulan Coal - Continued Operations project (herein referred to as "the project"). The project has been classified as a 'Major Project' as defined by the State Environment Planning Policy (SEPP) (Major Projects) 2005, and therefore requires approval from the NSW Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Coakes Consulting Pty Ltd has been engaged by Umwelt (Australia) Pty Ltd (Umwelt) to assess and evaluate the potential social-economic impacts associated with the project. As such this socio-economic assessment accompanies a broader Environmental Assessment of the project being prepared by Umwelt for Ulan Coal Mines Limited (UCML).

2.0 Background

Ulan Coal Mines Limited (UCML) is located approximately 1.5 kilometres from the village of Ulan, and falls within the Mid Western Regional Council Local Government Area (LGA) in New South Wales. The site is located approximately 38 km north-east of the township of Mudgee and 19 kilometres north-east of Gulgong (refer to Figure 2.1).

Mining at UCML has been undertaken since the early 1920's, with the open cut and underground mining operations as we know them today commencing in 1982 and 1986 respectively. Since the commencement of mining, UCML have both modified their existing approvals and received additional approvals for extension of existing mining operations and associated infrastructure. As such, UCML currently operates under a number of Planning Approvals. To ensure the longevity of the mine UCML is seeking one consolidated Major Project Approval to cover current and proposed operations for the next 21 years. The new approval will seek an increase to the amount of coal that is produced by UCML from 10 million tonnes per annum to 20 million tonnes per annum.

The existing mining operations at UCML consist of Ulan No. 3 Underground and associated surface operations. Open cut mining ceased in mid 2008 as the approved resource had been exhausted. To assist in maintaining coal production across the Xstrata coal group, UCML is proposing an extension of the open cut operations, as well as concurrent mining of the approved Ulan No. 3 Underground and an approved underground area now referred to as Ulan West under a modified mine plan (See Figure 2.2). The 21 year conceptual mine plan involves open cut and longwall mining in the Ulan seam. Existing infrastructure, some of which may be modified, and new infrastructure will be required to support the mining operations. The new infrastructure is primarily associated with the operation of the Ulan West mine and includes conveyors, and support services such as dewatering bores, ventilation fans and service boreholes etc.

Figure 2.1: Locality Plan

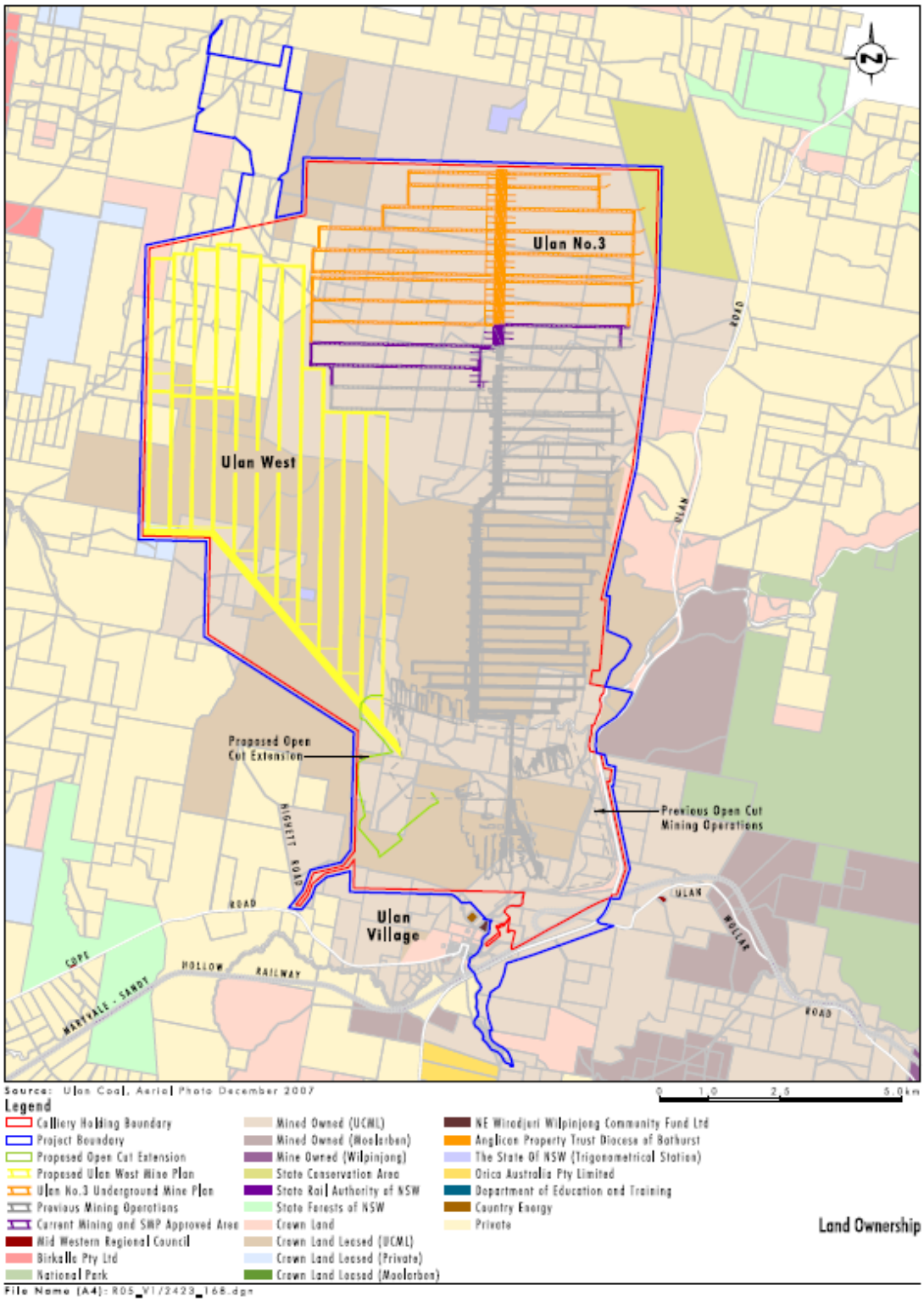


Figure 2.2: Land Ownership

2.1 Context Overview

2.1.1 Land Ownership

Land ownership within the project area and surrounds is shown on Figure 2.2. As illustrated, UCML owns or leases the majority of land subject to mining activities and required for surface facilities. UCML is a major landholder within the Ulan region.

Six private landholdings exist within the mine lease boundary, with proposed mining for Ulan West occurring under five private landholdings, and 3 private residences. All land located within the proposed open cut area is either owned or leased by UCML. As shown, a substantial buffer of mine owned land (UCML or Moolarben) and crown land occurs to the south and east of the current and proposed surface facilities and the Ulan No. 3 Underground Mine, while the majority of the land west of the Ulan West mine is privately owned.

Ulan Village, located 1.5 kilometres south-west of the Coal Handling and Preparation Plant (CHPP), has recently seen a major change in land ownership with the Moolarben Coal Project undertaking an active acquisition program of private residences refer to Figure 2.2.

At present, it is understood there is only one privately owned residence within Ulan village. A primary school, two churches, a hotel and the rural fire services fire shed are also located in Ulan Village.

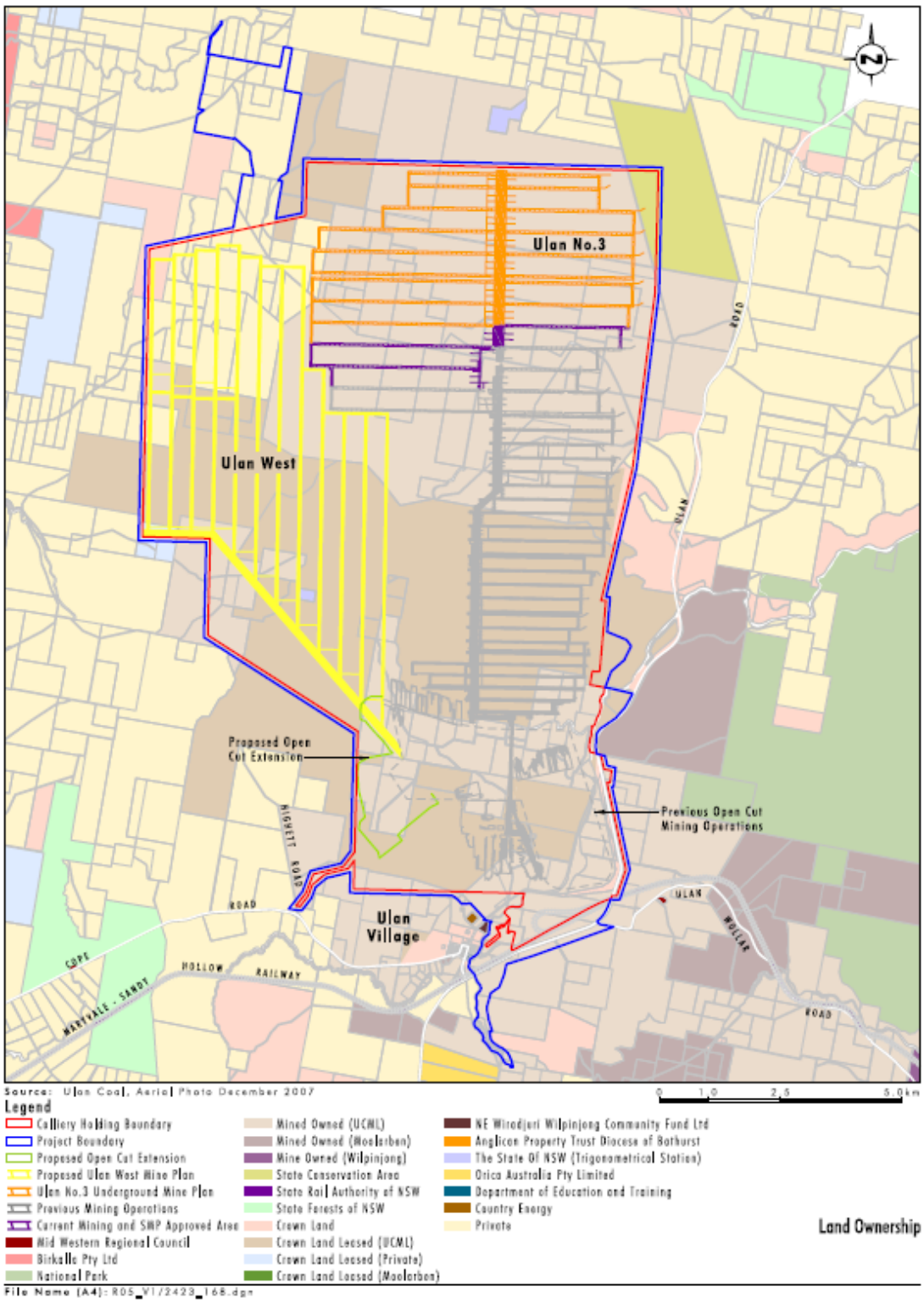


Figure 2.2: Land Ownership

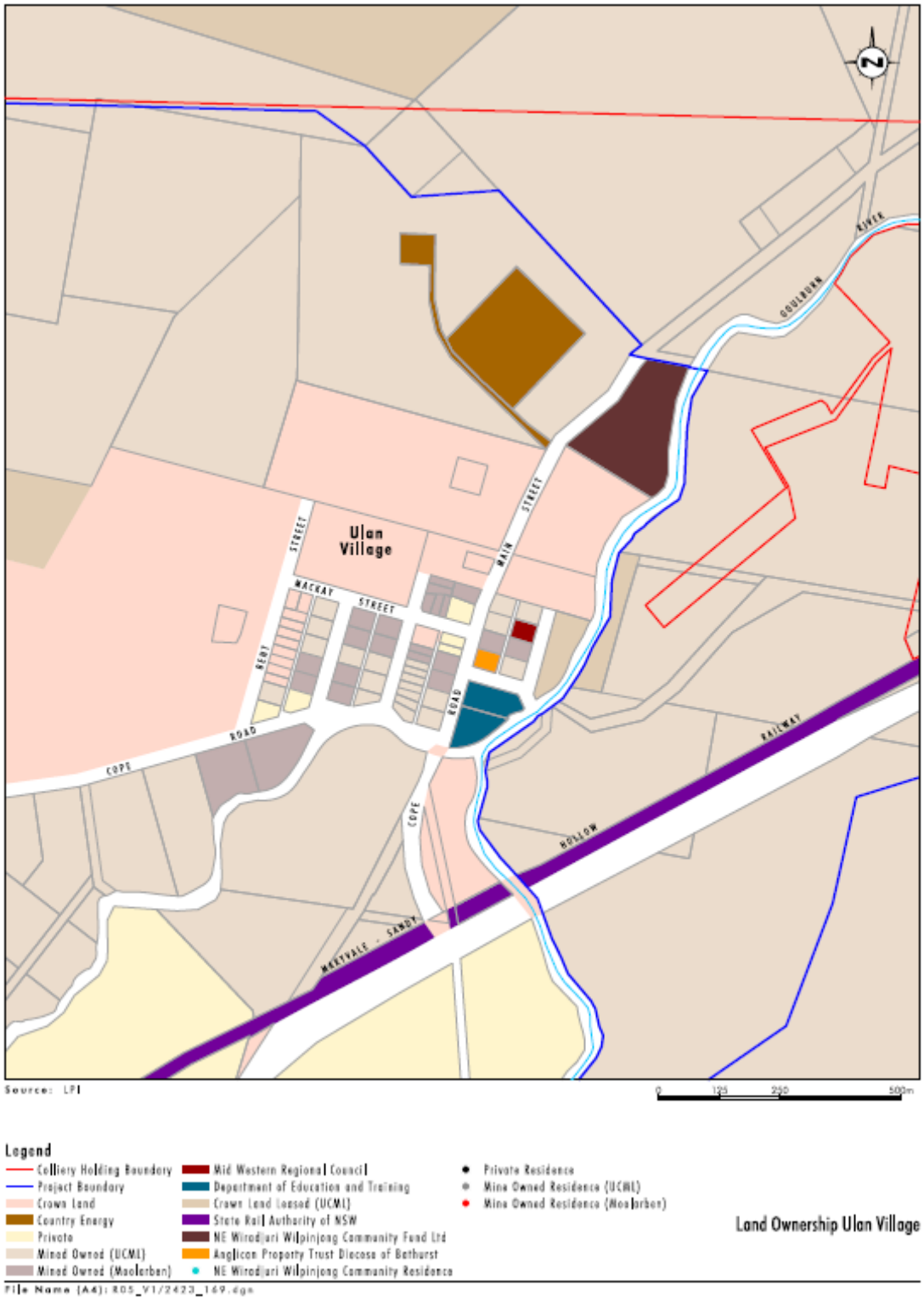


Figure 2.3: Land Ownership Ulan Village

2.1.2 Land Use

UCML is situated in a rural area, primarily surrounded by rural landholdings, native bushland and primary industries including agriculture, forestry and extractive industries.

The area to the south and south-west is dominated by rural residential landholdings. The open cut mining area and surface infrastructure is located within an area dominated by extractive industries, with the Moolarben Coal Mine to be established adjacent to the southern and eastern boundary of the project. The Wilpinjong Coal Mine is located approximately 7 kilometres to the south-east of the nearest part of the project area. Grazing is widely spread throughout the surrounding area occurring at a number of properties located along Blue Springs Road, Cope Road and Ulan Road. The Talbragar River alluvial flood plains are located approximately three kilometres to the north of UCML northern mining boundary, are used for intensive cropping, with cropping activities also undertaken throughout the area to the north-east of the project area from the Golden Highway to Ulan Road. UCML also undertake grazing activities on their extensive buffer lands associated with the Bobadeen Irrigation Scheme. Land capability of the project area is of low to moderate grazing lands with varying soil quality, depth/rockiness and erosion hazard, better quality soils are associated with the Bobadeen Irrigation Scheme.

Viticulture is present to the south and south-west of the project area, approximately 30 kilometres from the surface facilities, with the number of viticulture properties increasing further south at Mudgee. Forestry activities are undertaken in the Durridgere and Cope State Forests to the east and south-west respectively of the project area. No underground mining will be undertaken beneath these areas.

Significant areas of the National Park also exist in close proximity to the Project area with the Goulburn River National Park located immediately east and the Curryall State Conservation Area located within the north-eastern extent of the Mining Lease. The Munghorn Gap Nature Reserve also occurs 20 kilometres to the south-east of the Project.

As noted in Section 2.1.1, the village of Ulan is located approximately 1.5 kilometres west of the nearest coal handling infrastructure. Smaller rural holdings are located to the north, north-west and west of the underground mining area. Three areas of higher density rural residential landholdings are located to the west, south and south-west of the UCML mining lease. The general locations are described as: Wongaroo

Road; approximately 1 kilometre to the west of the project area (near Ulan West); Ridge Road, approximately 7 kilometres south of the project area; and Cope Road approximately 6 kilometres to the south-west from the project area.

2.2 Proposed Development

2.2.1 Open Cut Mining

The conceptual mine plan for the open cut mine is shown on Figure 2.4. Mining will progress to the west of the current open cut. Mining in the open cut is scheduled to commence soon after approval is granted, nominally 2010, for a period of approximately 7 to 11 years.

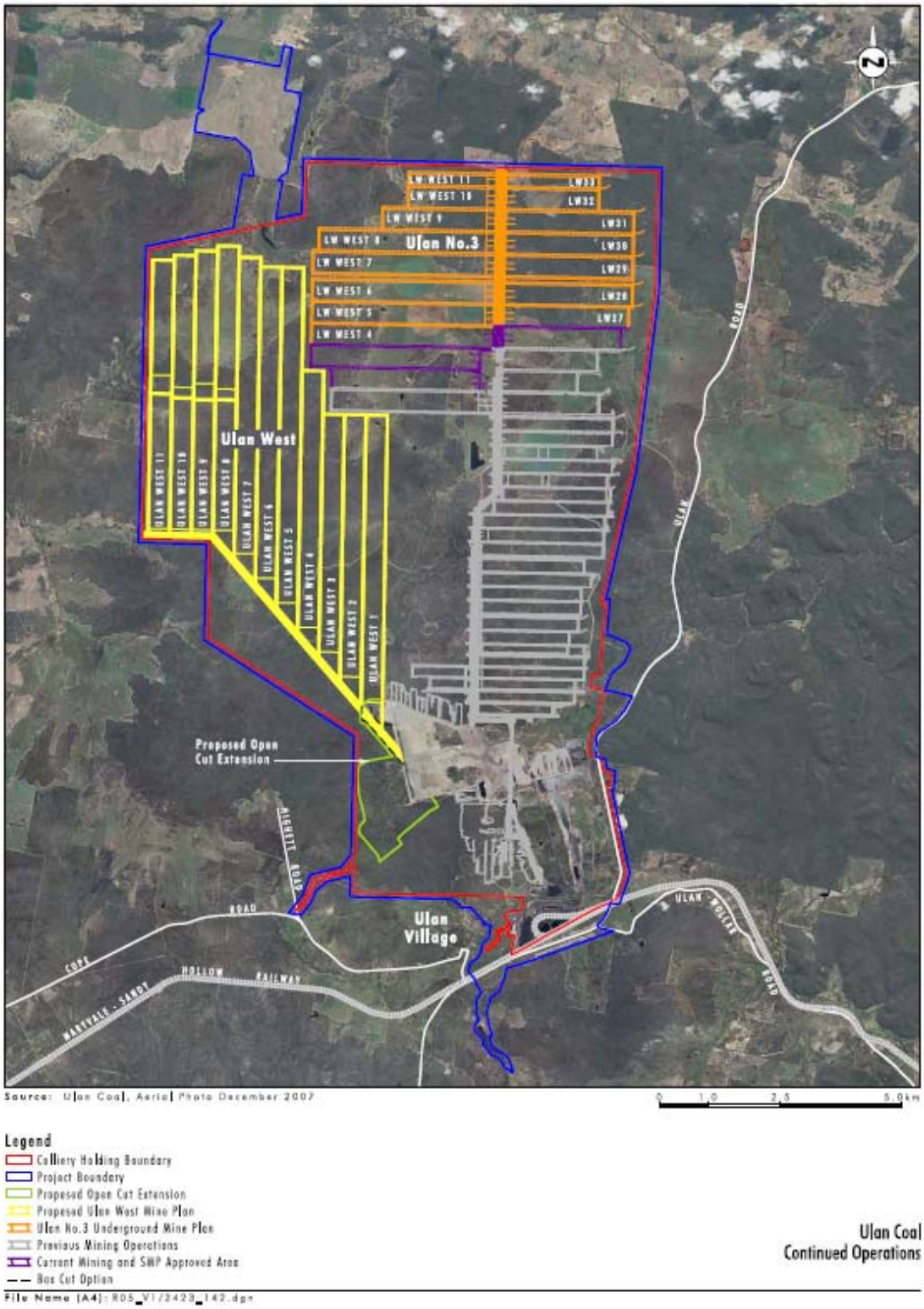


Figure 2.4: Ulan Coal Continued Operations

Open cut mining operations will be undertaken using similar methods to the current operations, that being a combination of dragline and truck and loader methods.
At the end of the open cut mine life, the final voids will continue to be utilised for emplacement of coarse and fine reject material from the CHPP for the remaining life of the underground mines. Filling these voids will continue to form part of the progressive rehabilitation process across the site. Rehabilitation will also include the treatment of the upper batters of the highwall in order to reach a suitable final landform.

Coal will be transported from the pit via truck to the dump slot where it will be transported via conveyor to the CHPP for processing and subsequent transportation via conveyor to the product stockpile area in readiness for rail transport off site.

2.2.2 Underground Mining

The current conceptual mine plans for the Ulan West and Ulan No. 3 mines is also shown in . Underground mining within the Ulan West and Ulan No. 3 mines will utilise the retreat longwall method of mining with a panel width of approximately 400 metres. Mining within Ulan No. 3 will continue to progress to the north with alternate panels being mined either side of the main headings, for a period of 10 to 18 years. Mining of the Ulan West resource is scheduled to commence soon after approval is granted, nominally 2010, and continue for a period of approximately 21 years.

Coal will be brought to the surface via conveyor and delivered to the hub stockpile. The low ash coal will be reclaimed from the hub stockpile via a reclaim tunnel system, crushed and conveyed to the product stockpile area in readiness for transport off site via rail. High ash coal will be directed to the open cut conveyor system via the link conveyor for processing within the CHPP.

2.2.3 Ancillary Mine Support Infrastructure

A number of surface infrastructure facilities will be required to support the operation of the open cut and underground mines, which include but are not limited to:

- coal handling infrastructure (conveyors, stockpiles and crushers etc);
- rail infrastructure/facilities;
- administration, workshop staff facilities;
- ventilation systems, including upcast and downcast shafts;
- service/distribution boreholes - cable drops, ballast and concrete drop holes, etc;
- dewatering bores;

- surface water management infrastructure;
- power supply infrastructure – aerial and underground power lines, substations and switch yards;
- piped services - potable water supply, mine waste water removal, process/fire water supply, emulsion supply, compressed air;
- access roads and other minor infrastructure within the project area;
- underground mine access (man riding shaft/drift);
- refuelling facilities;
- the operation of the Bobadeen basalt quarry; and
- communications and monitoring services including communication towers; etc.

2.2.4 Product Coal Transport

The UCML rail loop is located in the south of the project area, adjacent to Ulan Road and connects to the Maryvale - Sandy Hollow railway line. Coal from the project will be transported off site via rail at an average rate of seven trains per day with a peak of ten trains per day.

2.2.5 Site Access

The main access to the open cut and underground offices/facilities will be via the two existing access roads off Ulan Road as illustrated in Figure 2.5 . The entrance to the current open cut mine and administration building is located approximately one kilometre north of the junction with Cope Road. The entrance to the underground mine and administration building is located approximately 6 kilometres north of the junction with Cope Road. Access to the Ulan West mine is proposed to be via the existing underground access road. The mine can also be accessed via Ulan Village. It is proposed to maintain the use of this access point during the construction phase when establishing the Ulan West mine and the infrastructure upgrades associated with this project.

The surface infrastructure areas supporting the Ulan No. 3 mine are accessed via Bobadeen Road which is located approximately 6 kilometres north of the Ulan No.3 entrance or via the internal road network (see). To enable all weather access, safe passage and heavy vehicle access into surface infrastructure areas, some existing internal trails will require upgrading including, but not limited to, culvert/bridge crossings, and drainage control and road surface improvements. Bobadeen Road will also be used to access the proposed Ulan West surface facilities. Wongaroo Road can also be used to access the underground mining areas. Wonga Roo Road

will be used as an infrequent access point for exploration drilling program and general light vehicle movements associated with routine land management activities and inspections.

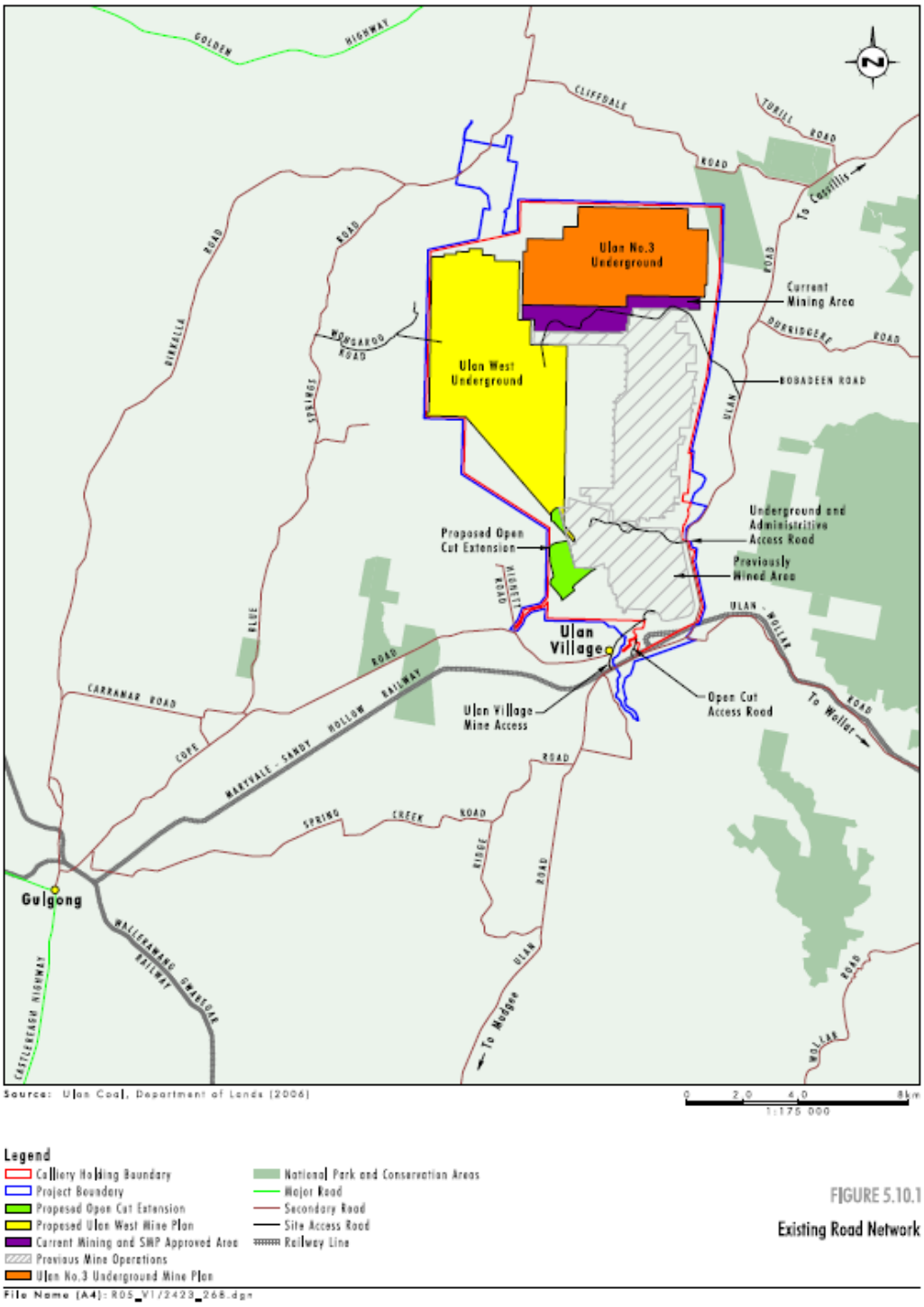


Figure 2.5: Existing Road Network

2.3 Workforce and Hours of Operation

Once at full operation UCML propose to employ approximately 931 people, an increase of approximately 401 people from current workforce numbers. It is noted that the peak on site workforce (1084 personnel) will occur in year 4 at the mine, 270 of which will be associated with the construction activities.

Mining operations are planned to continue to be undertaken 24 hours per day, seven days per week.

3.0 Socio-Economic Impact Assessment Methodology

3.1 Overview

Socio-economic assessment is concerned with assessing and predicting the likely consequences of a proposed action in both social and economic terms. While economic assessment emphasises the monetary effects of an action or proposal, social impact assessment is concerned with assessing benefits and costs in non monetary terms. This involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense. Social and economic assessment processes work together to provide a complete picture of impacts and their meaning.

The current social assessment program had the following key objectives:

- To identify what the community sees as the potential issues/impacts associated with the project and assess these impacts;
- To identify the likely changes that the project's workforce may have on the local population and the use of local/regional services and facilities;
- To identify the economic flow on to the community and region from the local workforce and contractors that may provide services to the mine;
- To identify possible strategies that may be developed to address the issues/impacts raised by the community;
- To recommend an ongoing community program of monitoring and management; and

Furthermore, the program had the following process objectives:

- To provide the community with information on the project, to enable meaningful participation and facilitate relevant information flow;
- To facilitate community involvement and ownership of strategies;
- To ensure that a broad section of the community is involved and has ownership of the program.

3.2 Social Impact Assessment

Social impact assessment is a tool used to predict the future effects of a particular proposal on people, that is their way of life (how they live, work and interact with each other); their culture (norms and traditions); and their community (institutions and structures) (Armour 1990).

Vanclay (2003), building on Armour's categorisation, has identified social impacts as changes to one or more of the following:

- **People's way of life** – that is, how they live, work and play and interact with one another on a day to day basis;
- **Their culture** – that is, their shared beliefs, customs, values and language or dialect;
- **Their community** – its cohesion, stability, character, services and facilities;
- **Their political systems** – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose;
- **Their environment** – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources;
- **Their health and wellbeing** – where 'health' is understood in a manner similar to the World Health Organisation (WHO) definition: 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity';
- **Their personal and property rights** – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties;
- **Their fears and aspirations** – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

The social impact assessment process for the project has a number of phases, as illustrated in Figure 3.1 below:

- Profiling to better understand the community and obtain baseline information;
- Scoping to identify stakeholder issues / impacts associated with the project;

- Assessment of potential issues / impacts, and prediction of the likely socio-economic effects associated with the project;
- Mitigation and enhancement, that is working with the community to develop appropriate strategies to address the issues raised; and
- Monitoring and management of the issues through the life of the project.

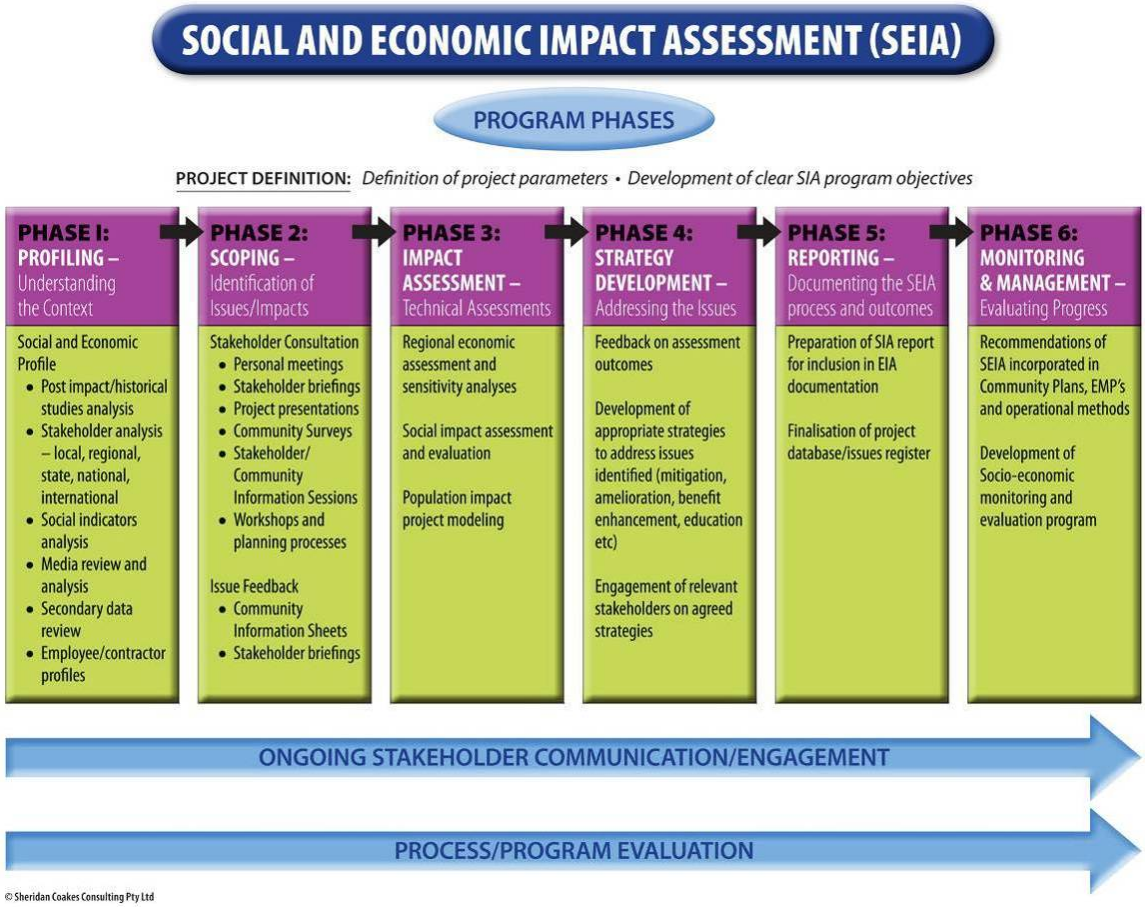


Figure 3.1: Phased approach to Social and Economic Impact Assessment

As is the case with any type of change, some individuals or groups within the community may benefit, while others may experience negative impacts. If negative impacts are predicted, it is the role of social impact assessment to determine how such impacts may be managed effectively to produce the minimum degree of social disruption to those affected; while maximising the positive impacts that may be experienced due to the presence of the project.

Monitoring is also a key component of the social impact assessment process and a program should be developed to identify deviations from the proposed action and to document any unanticipated positive or negative impacts that may arise in the implementation / operational phase. Xstrata Coal NSW has put in place a comprehensive social monitoring program – 'Viewpoint' – that informs social involvement and investment planning for the operation. Outcomes of the current assessment will be integrated as part of this monitoring program going forward.

3.2.1 Social Assessment Methods

Community involvement is an integral part of any social assessment process, and there are a range of different ways of involving the community and collecting relevant information to inform the assessment process.

In the current assessment, stakeholders were identified through previous work undertaken in the area and through a community networking approach to ensure a representation of stakeholder views associated with the project. This technique involves a process called 'snowball sampling' where stakeholders are identified through a review of secondary data sources e.g. Community Service directories, title searches and community involvement. The full range of methods and mechanisms used to collect, communicate and disseminate information about the proposal are summarised in the table below. A list of the stakeholders and stakeholder groups consulted is contained in Appendix 1.

Table 3.1: The Social Impact Assessment Phases, Task and Description

	Objective	Mechanism	Description
Phase 1	To better understand the community	Secondary Data Review Media Analysis Social Indicators Analysis	Development of a profile of the social context in which the Ulan Coal Continued Operations project is based.
	To establish direct linkages between the mine operations and the community	Employee and Contractor Survey	Survey of UCML employees and contractors to obtain information relating to residential location, use of services, expenditure patterns and levels of social involvement/participation.
Phase 2	To obtain an appreciation of community issues and concerns in relation to the project and more broadly within the locality.	*Community Information Sheet 1 "Outline of the proposal"* Personal interviews (Landowners within and immediately adjacent to the project area) Focus Groups (combining stakeholders across identified community	Consultation with key stakeholders across the following stakeholder groups • Employees and Contractors • Ulan Coal Community Consultative Committee (CCC) • Local Government • Regional Stakeholders • Indigenous Groups • Service Providers: - Health - Education

	Objective	Mechanism	Description
		sectors) Presentations to the MWRC, the CCC and broader community groups Planning Focus Group Meeting (involving key government and agency stakeholder) *Community Information Sheet 2 "Issues Feedback"*	- Childcare • Local Businesses and Industry Associations • Community Groups and Organisations
Phase 3	To assess which issues are most significant to the community and / or particular groups	Issue Assessment and Evaluation	Internal assessment of issues and impact evaluation and prediction which will include: • *Interconnectivity Analysis* – assessment of the interconnectedness of issues/impacts associated with the project • *Micro-economic assessment* – assessment of impacts associated with Ulan Coal Mines activities and flow on effects to the township and region. • *Population impact prediction* - prediction of population impacts on key service sectors.
Phase 4	To ensure that the community is informed of assessment outcomes and involved in strategy development.	Community Feedback, including: *Community Information session at the Ulan Community Open Day* *Community Information Sheet 3 - Strategies*	Feedback and validation of social and environmental assessment outcomes to the community through a variety of mechanisms
Phase 5	To ensure that the social assessment program and outcomes are documented for consideration in the planning process	Final Reporting	Development of SEIA report for inclusion in the Environmental Approvals documentation.
Phase 6	To determine whether our predictions were correct through monitoring social impacts of the project over time	Monitoring and Management	Incorporation of relevant indicators as part of existing social monitoring program and provision of recommendations for ongoing social involvement and investment planning.

Where possible, data / information have been collected using a range of methods and techniques. This approach referred to as 'triangulation' is used to account for some of the problems inherent in the use of single methods, and to address issues associated with data reliability and validity. It also assists in facilitating involvement of different individuals and groups.

As identified in Figure 3.1, stakeholder consultation has taken place at key stages of the SIA (Phases 2 and 4) and has included:

- Initial presentation of project information (April – November 2008) to identify potential project impacts (both positive and negative) and to obtain the views and perceptions of stakeholders in and around the proposed project site and the broader community;
- Information session at the Ulan Community day to provide feedback on the Social assessment outcomes (as at November 2008) and seek community input on strategies to address the issues that had been raised; and
- Presentation of the findings of the impact assessment for feedback and community comment (July, 2009).

3.3 Economic Impact Assessment

To determine the economic contribution of the project, an economic assessment has been undertaken of the potential economic impacts of the construction and operational phases of the project at the local, regional, state and national level.

A regional economic profile of mining in the community was developed outlining the contribution of the sector to the region and highlighting economic characteristics of Ulan Coal Mines Limited operations.

At the local level survey analysis has been used to develop a profile of the existing UCML operation and its employees in the region, including an assessment of residential and expenditure patterns. In 2008, Coakes Consulting conducted an Employee and Contractor survey at UCML which involved the participation of employees and contractors employed at both the No. 3 Underground and Open Cut operations. This analysis was utilised to develop a profile of the existing UCML operation and its employees and determine the economic contribution of the project at the local level.

This work, along with existing business expenditure patterns at UCML, has been used to assist in predicting impacts associated with the influx of a project workforce to the area and to predict likely economic impacts resulting from the Project.

Operations and maintenance expenditure will result in an increase in demand for products and services from local businesses and create increased incomes to be spent in part throughout the region, and these will have ripple effects through the

economy. Therefore to support the above micro economic assessment, multiplier analysis has been used to assess the flow-on effects of Project-related income, investment and employment in a regional/macro economic assessment. This has been undertaken to provide an estimate of the regional benefits resulting from investment expenditure and ongoing expenditure throughout the life of the project.

In completing this analysis, input-output analyses undertaken by the Australian Bureau of Statistics (ABS), Hunter Valley Research Foundation and Illawarra Regional Information Service (University of Wollongong) have been drawn upon. Each of these organisations has developed input output tables and industry multipliers for the construction and coal industries. As a basis for comparison, multipliers developed for the mining and construction sectors in Western Australia have also been used. The size of the multiplier ratio used depends on several factors including the ability of the economy to supply the goods needed. For example, if a large proportion of goods are imported, the multiplier will be lower.

The results of the economic impact assessment are contained in Section 5.5.

4.0 Social Profile

The social profile provides an overview of the social context in which Ulan Coal Mines Limited (UCML) operates. The profiling phase is an important component of the social assessment process, as it provides insight into key attributes of an area and its communities; helps identify key stakeholders who may have an interest in the project; and uncovers relevant issues that can be explored in the scoping phase of the social assessment program.

The way in which communities respond to change is driven by elements of the social context in which individual members collectively live, work and play. The behaviour of individuals is shaped by the setting or social context in which they function.

Social context is best conceptualised as a series of interacting social systems, such as families, neighbourhoods, workplaces, and institutions (e.g. health and education) that mutually influence one another. Changes in social systems influence other social systems.

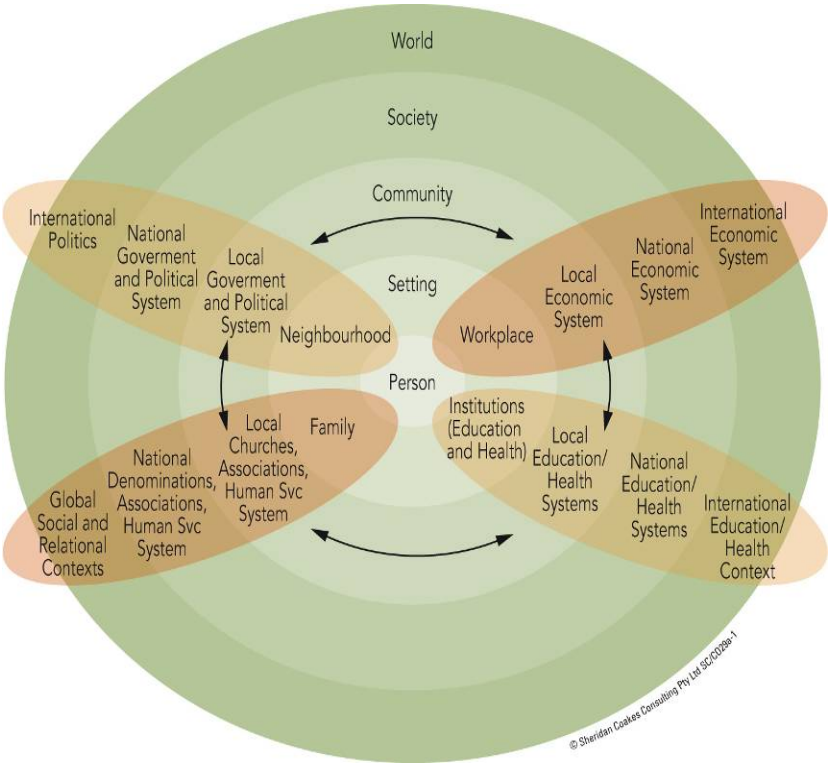


Figure 4.1 Social Ecology, Adapted from Maton (2000)

Given this interaction, community impacts associated with the Project are likely to be driven by the functional and affective relationship that the community has with the operation. The functional relationship is related to land use, recreation, employment opportunities, and functions or activities that take place. The affective relationship on the other hand, is related to perceptions, attitudes, and emotions. While the affective relationship may appear intangible, changes in perceptions, attitudes, and emotions relating to development of any kind represent very real impacts; and the affective relationship that individuals have with the area in which they live can influence their behaviour. Anxiety, stress, and reduced feelings of attachment and belonging are significant impacts in their own right. They also represent pathways to other higher order impacts, such as changes in family and neighbourhood relations, and health and lifestyle behaviours.

The social profile helps inform a more detailed understanding of the project context. This work is necessary to provide a baseline from which potential impacts can be predicted and measured. The profile is divided into two main sections:

1. A Community Profile based on relevant Census data, a review of local and national media, and other secondary data sources, that encompasses the following subsections:
    - Geographical Location and Governance
    - Demographic Profile
    - Services and Industry
    - Community Issues
    - Community Needs and areas of strategic planning

2. A Workforce profile based on data drawn from a detailed survey of the current UCML workforce (employees and contractors).

4.1 Community Profile

The findings from the Employee and Contractor survey suggested that a large proportion of the UCML workforce resides in the towns of Mudgee and Gulgong in the Mid-Western Regional Council (MWRC). A small proportion of the workforce (1 employee, 4 contractors) also indicated that they resided in Ulan. Therefore, the current profile will focus predominantly on discussing socio-economic trends for these localities, in comparison to the MWRC and broader regional NSW.

4.1.1 Geographic Location and Governance

Local Governance

The UCML mine falls within the area governed by the MWRC. This area covers approximately 9,000 square kilometres, and is located about 250 kilometres north-west of Sydney in the central west of NSW. The MWRC came into effect in May 2004 and comprises 100% of the former Mudgee Shire Council, 70% of the former Rylstone Shire Council, and 10% of the former Merriwa Shire Council.

The major regional centre of the MWRC is Mudgee, with other significant towns being Gulgong, Rylstone, and Kandos. The UCML operation is located approximately 38 kilometres north-east of Mudgee; and about 19 kilometres north-east of Gulgong.

Figure 4.2: Mid-Western Regional Council

Source: www.mudgee.org; www.mudgee.nsw.gov.au

The MWRC Shire Council is responsible for local service provision within the MWRC LGA, including: road construction and maintenance, car parking, traffic management; water and sewerage services; environment and heritage approvals; planning programs; environmental assessment programs; health and regulation programs; and waste management services. The Shire is also promoting and developing as a short stay tourist destination which supports local tourist businesses and regional events.

State Governance

The MWRC sits within three NSW state electorates; Orange, Bathurst and the Upper Hunter, as shown in the Figures below. The village of Ulan is located within the Upper Hunter electorate, which has been held by National Party MLA George Souris since 1988. Gulgong and Mudgee fall within the state electorate of Orange which has been held by National Party MLA Russell Turner since 1996. The electorate of Bathurst includes the towns of Rylstone and Kandos, and has been held by Gerard Martin MLA of the Australian Labor Party since 1999.

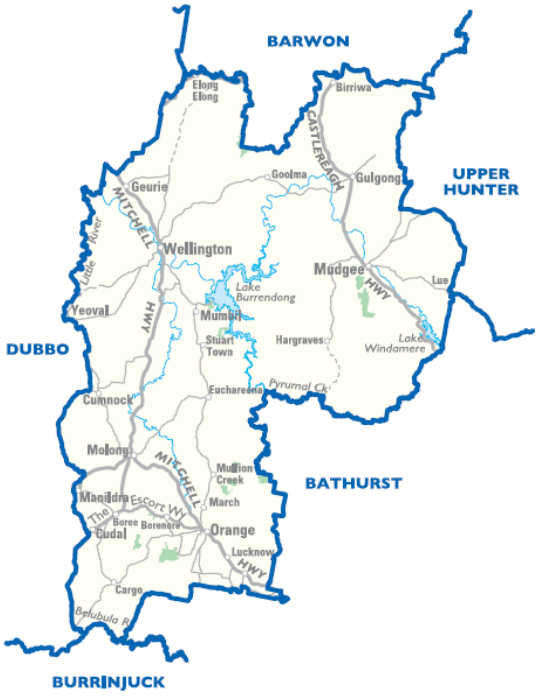


Figure 4.3: Orange

Figure 4.4: Bathurst

Figure 4.5: Upper Hunter

Federal Governance

The MWRC is located within the federal government electorate of Parkes which covers an area of approximately 107,000 square kilometres. The electorate extends from the Queensland border in the north; to Kandos, Ilford, and Euchareena in the south; from Warialda, Gunnedah, and Olinda in the east; and to Dubbo, Quambone, and Lightning Ridge in the west. The electorate has been held by the National Party for over 20 years, with the current sitting member Mark Coulton MP elected in 2007.

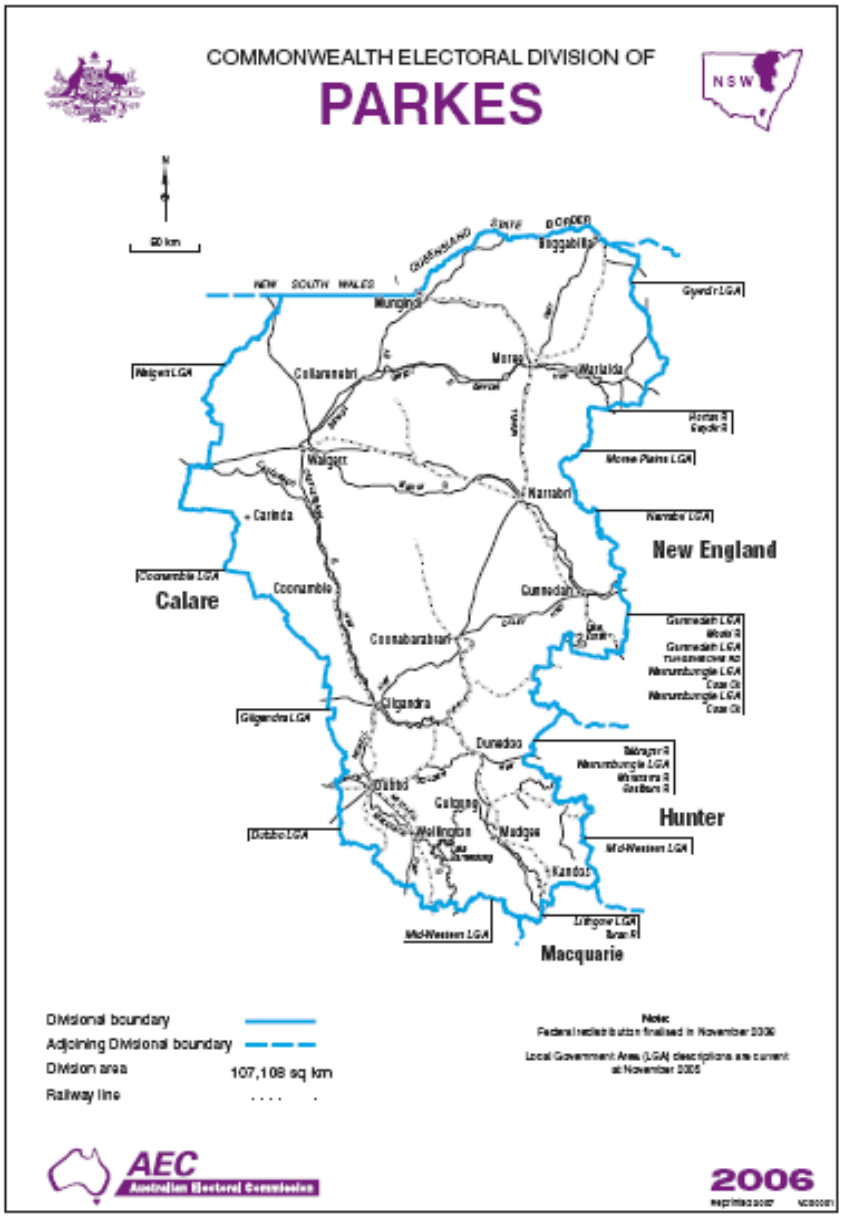


Figure 4.6: Federal Electorate of Parkes

Source: http://www.aec.gov.au/profiles/p/parkes.htm

4.1.2 Industry

Industry in the region is diverse and includes coal mining, agriculture, tourism, and viticulture. This diversity helps ensure regional sustainability. The following is a brief discussion of the major industries present in the MWRC area.

Mining

The mining industry in the MWRC employs nearly 20% of the total workforce resident in Gulgong, and over 10% in Mudgee and the MWRC overall. The coal mining industry makes the largest contribution to wages and salaries in the Shire. Wilpinjong Mine, south-east of Ulan, has recently been developed and mining employment is also expected to increase with the development of the Moolarben mine, adjacent to the Project.

Other minerals mining activities in the region include rock, limestone and clay mining. For instance, directly adjacent to UCML are Kaolin Clay and sandstone mines. In addition, the MWRC also hosts other minerals mining activities such as magnetite, gold, dolomite and ironstone.

Agriculture

The region has a sound agricultural industry, with a prevelance of horse studs, sheep and cattle farms; the later producing beef and dairy products, as well as high quality super fine wool.

Mudgee also has a thriving olive growing industry, with the production of table olives and olive oil products. 'Olive Growers Mudgee' (formerly the Mudgee Olive Association) aims to develop and promote olive growing in the region, and strives to make their products equal or superior to those in Australia and around the world.

Viticulture

The Mudgee region has a thriving viticulture industry with nearly 40 cellar doors and approximately 4500 hectares under vine. The wine industry also plays a valuable role in attracting tourists to the region.

Tourism

Tourism is vital to the region, contributing an estimated $40 million to the local economy. Given the importance of the industry to the area, the Mudgee Regional Tourism Inc (MRTI) was formed in 2000 to strategically manage tourism for the whole region. The MRTI was developed after extensive consultation with residents and local

business, and has nearly 300 members including businesses from the viticulture and hospitality industries. Funds generated via membership and advertising contribute to the development and maintenance of visitor centers and the region's visitor's guide which has been utilised as the major tool for promotion in the region.

4.1.3 Socio-Economic Characteristics

The statistical profile presented below is based on Australian Bureau of Statistics (ABS) census data from 1996, 2001, and 2006 (www.abs.gov.au). The figures included represent:

- the ABS collection district encompassing Ulan village and immediate surrounds (CD 1036206);
- the urban centres / localities of Mudgee and Gulgong (while both Rylstone and Kandos are also major urban centres within the MWRC, these areas were not analysed given that UCML employees predominantly reside in Mudgee and Gulgong);
- the local government area of the MWRC; and
- the balance (regional area) of NSW, excluding the major statistical regions of Sydney and Canberra.

The discussion below is based on the most recently available 2006 ABS data. As land ownership in the Ulan Village has changed substantially since 2006, due to an active acquisition program by Moolarben, the socio-economic characteristics for the Ulan district may have changed from that reported below.

Population Numbers

According to the 2006 Census, the estimated population for the MWRC local government area was 21,055. By aggregating Statistical Local Area (SLA) data for localities which currently constitute the MWRC local government area, time-series comparisons could be made between the 2006 Census data and earlier 2001 data. As illustrated in the table below, the Mudgee locality demonstrates a marginal 1.4% growth in population over the 2001 – 2006 periods relative to the other localities of interest which report declines.

Table 4.1: Total population (2001 and 2006)

	2001	2006	% change	Trend
Ulan District	195	168	-13.8%	▼
Gulgong	2,018	1,906	-5.5%	▼
Mudgee	8,603	8,726	+1.4%	▲
MWRC	21,094	21,055	-0.01%	▼
Regional NSW	1,992,526	2,437,165	+22.3%	▲

Source: (ABS 2001, 2006)

Note. Population figures were based on place of enumeration[1] excluding overseas visitors.

Population forecasting (Ratio Consultants MWRC, 2007) estimates that the resident populations in the MWRC and Mudgee specifically are expected to increase dramatically in coming years, while for Gulgong the rate of growth is expected to be more subdued. Forecasted estimated resident populations for Ulan and surrounds, however, were not available.

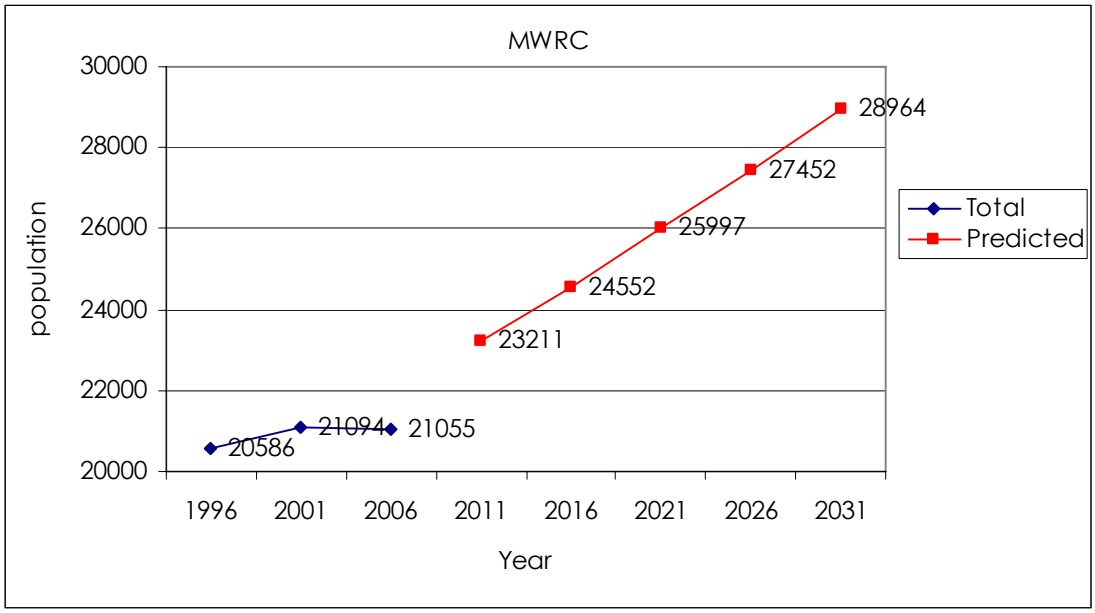


Figure 4.7: Total Population of MWRC for 1996, 2001, and 2006, and forecast estimated resident population until 2031.
Source: (ABS 1996, 2001, 2006); (Ratio Consultants, 2007)

[1] Place of enumeration refers to where people were counted on Census night rather than where they usually live. – DIFFERENT FONT TO REST OF REPORT

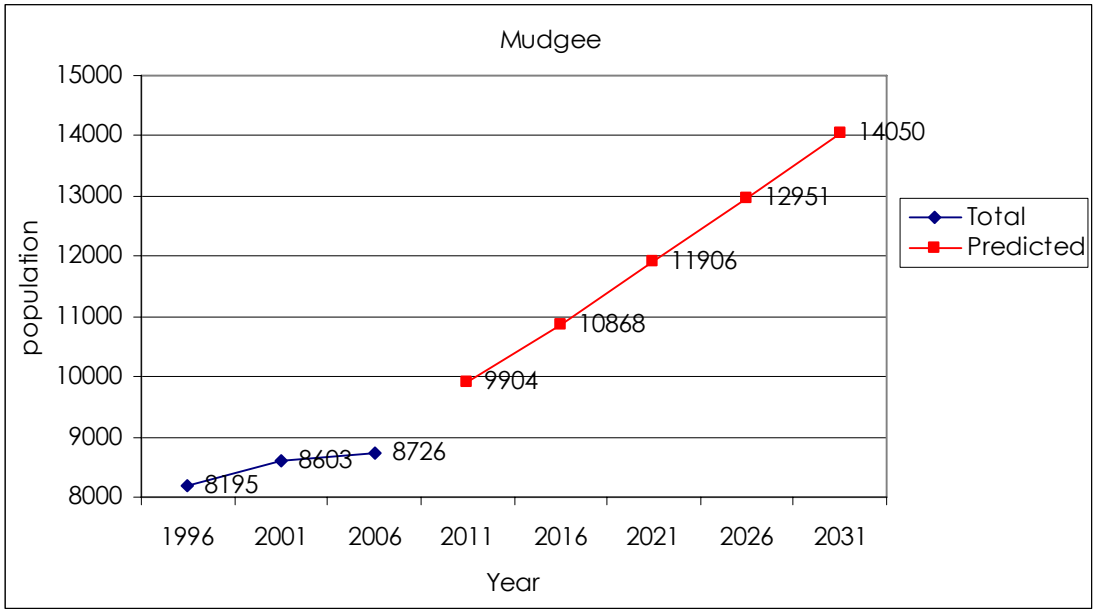


Figure 4.8: Total Population of Mudgee for 2001 and 2006, and forecast estimated resident population until 2031.
Source: (ABS 2001, 2006); (Ratio Consultants, 2007)

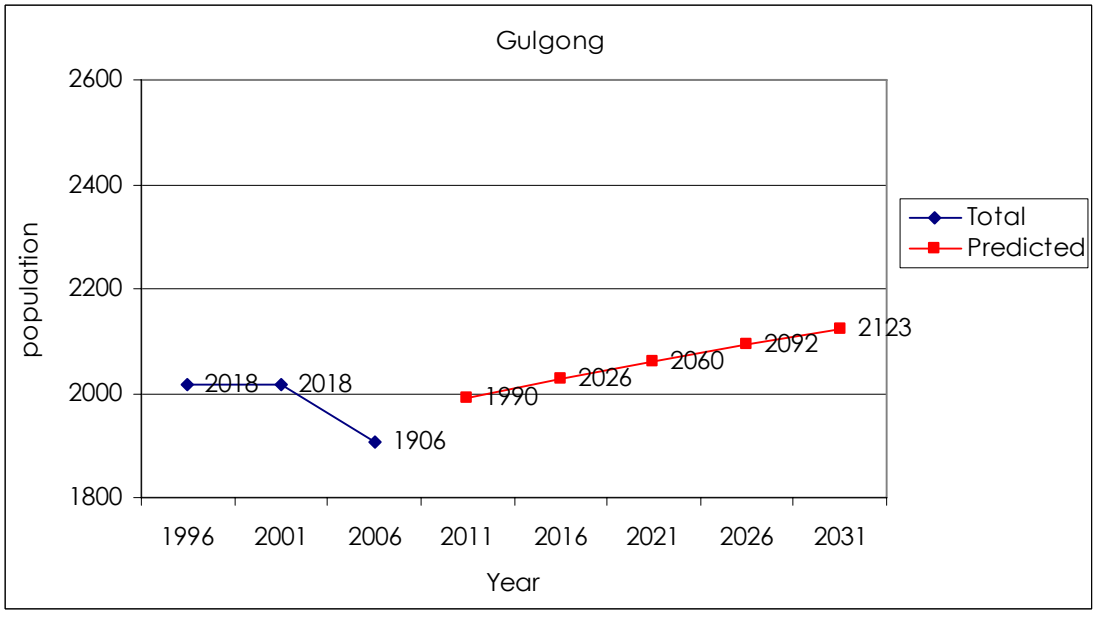


Figure 4.9: Total Population of Gulgong for 2001 and 2006, and forecast estimated resident population until 2031.
Source: (ABS 2001, 2006); (Ratio Consultants, 2007)

The proportion of Indigenous persons residing in Ulan (8.3%, 14 people) was considerably higher than in either Gulgong (3.8%, 75 people); Mudgee (3.1%, 273 people); the MWRC (2.7%, 575 people), or regional NSW (2.1%, 138,185 people). However, given the small total population of Ulan and surrounds, this figure should be interpreted with caution.

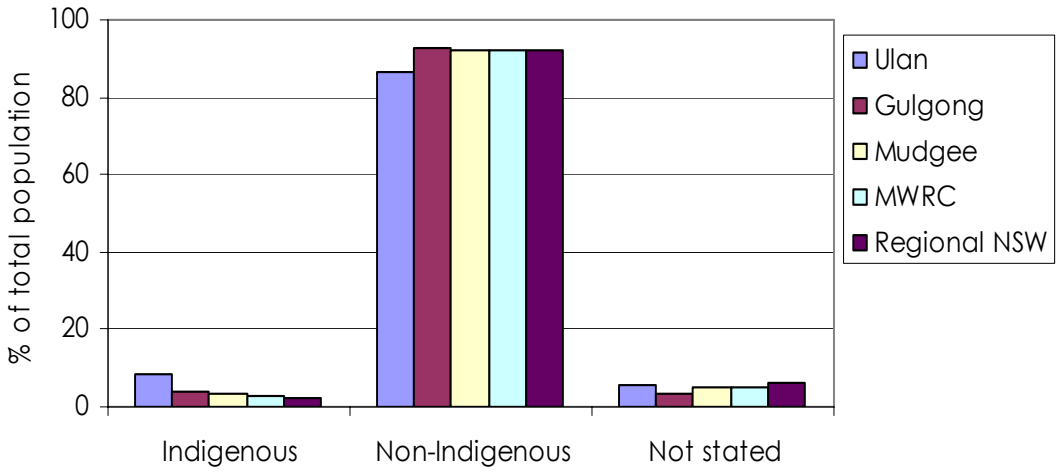


Figure 4.10: Indigenous populations 2006.

Source: (ABS 2006)

Contrary to the trends observed for overall population, the Indigenous population has grown substantially across the areas of interest.

Table 4.2: Indigenous populations (2001 and 2006)

	2001	2006	% change	Trend
Ulan District	11	14	+27.3%	▲
Gulgong	53	75	+41.5%	▲
Mudgee	235	273	+16.2%	▲
MWRC	475	574	+20.8%	▲
Regional NSW	73532	94464	+28.5%	▲

Source: (ABS 2001, 2006)

Age Structure

The median age for Ulan is noticeably higher than the other areas of interest, and has increased substantially from 2001, suggesting that the Ulan District has a relatively older population.

Table 4.3: Median age (2001 and 2006)

	2001	2006	Trend
Ulan District	36	46	▲
Gulgong	35	40	▲
Mudgee	35	38	▲
MWRC	38	41	▲
Regional NSW	37	40	▲

Source: (ABS 2006).

The Figure below represents a more detailed breakdown of the age profile for each location of interest. The Ulan District has a higher proportion of 5-14 year olds, and 45-64 year olds compared with the other areas of interest; while also having a lower proportion of those in the 20 to 34 year old age group.

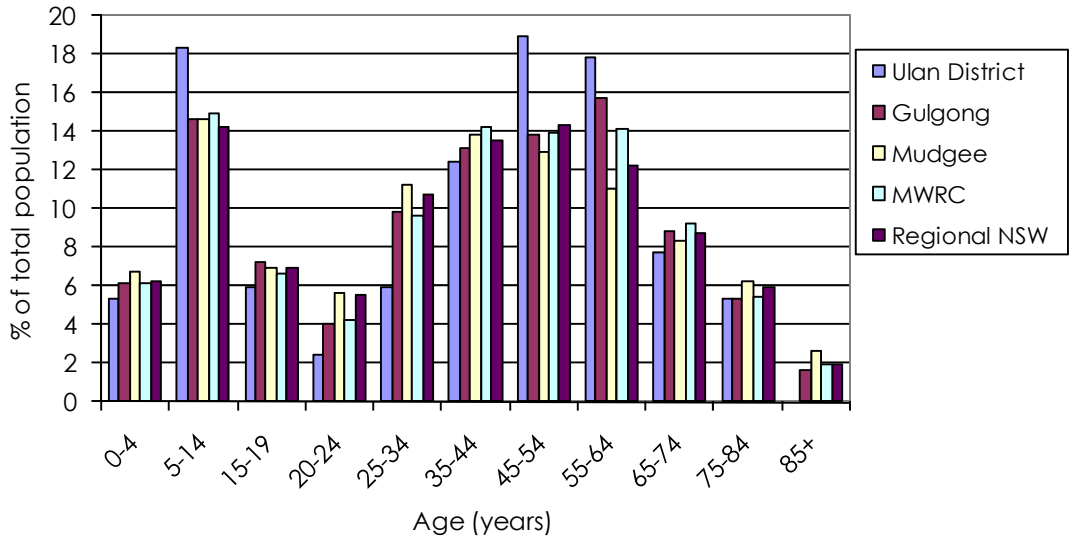


Figure 4.11: Age characteristics 2006.

Source: (ABS 2006)

Family Structure

Changes in family structures have been shown to provide an indication of changes to the residential role and function of a community. With regards to family structure across the locations of interest, in 2006, the highest proportion of the population was comprised of couples with no children (> 40.0%). Ulan District had a lower proportion of couple families with children under the age of 14 years, and higher proportion of families comprising one parent with children under 15 years.

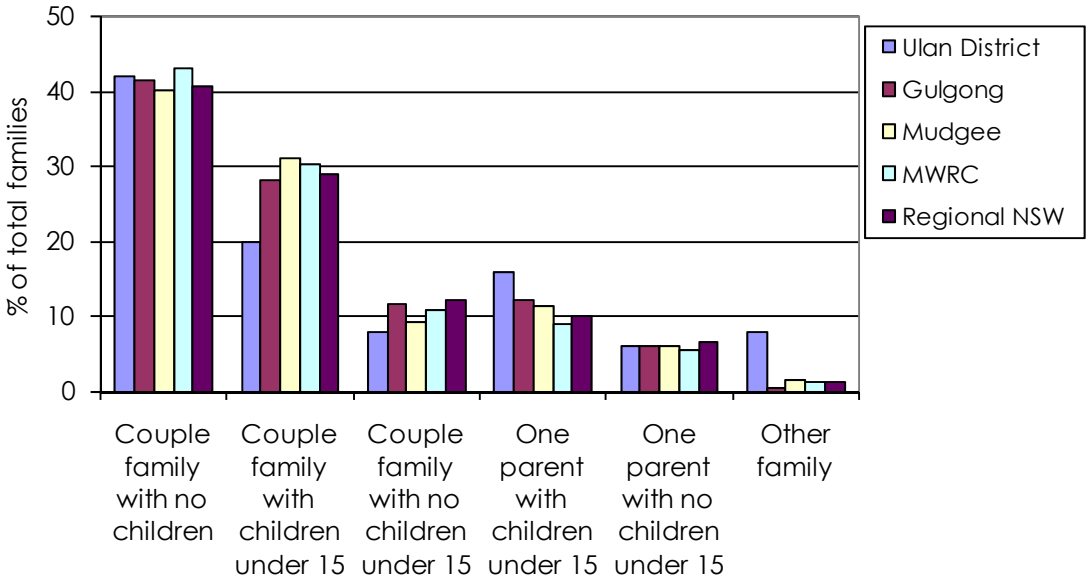


Figure 4.12: Family composition 2006.

Source: (ABS, 2006)

Education

The types of educational institutions that communities attend can reflect factors such as age and family structure, proximity or access to tertiary education, and may influence retention of young adults within the community. The table below represents educational attendance for each of the areas of interest.

Rates of students enrolled in university or other tertiary institutions from Gulgong (2.7%), Mudgee (3.3%), and MWRC (2.9%) are significantly lower when compared with regional NSW overall (8.0%). Not surprisingly given the age structure in the Ulan District, the area has no residents enrolled in university or other tertiary studies, and has a higher proportion (39.2%) of primary school children than other locations (29.4% to 32.5%).

Table 4.4: Type of educational institution attending (% of total students attending an educational institution, 2006)

	Ulan District	Gulgong	Mudgee	MWRC	Regional NSW
Pre-school	5.9	7.3	5.5	5.6	6.0
Primary School	39.2	32.5	31.0	31.7	29.4
Secondary School	27.5	26.5	23.2	24.4	22.8
Technical, further ed.	7.8	11.2	10.4	9.2	8.0
University, other tertiary	0.0	2.7	3.3	2.9	8.0
Other	0.0	1.8	1.1	1.3	1.5
Not stated	19.61	18.1	25.6	25.0	24.3

Source: (ABS, 2006)

Educational Qualifications

Figure 4.13 shows non-school fields of study for each of the locations of interest. The most popular fields of study across all locations were engineering and related technologies; and management and commerce. Ulan District had relatively higher proportions of students enrolled in agriculture, environmental, natural and physical sciences, and information technology compared with other locations.

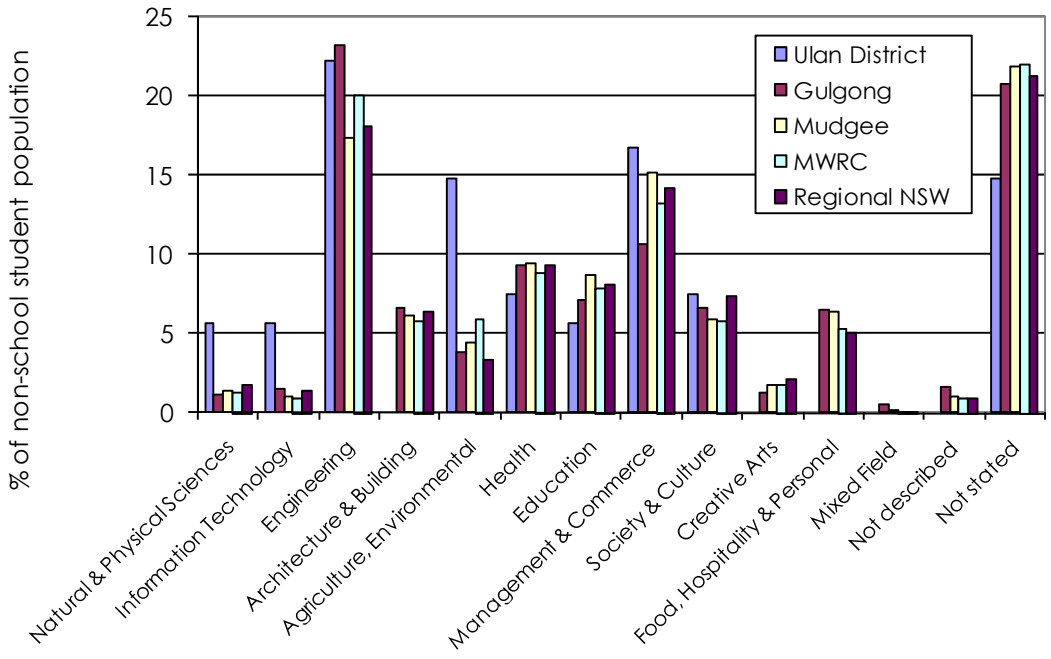


Figure 4.13: Non-school field of study 2006.

Source: (ABS 2006)

Industry and Employment Characteristics

The town of Mudgee (64.6%) has a noticeably higher rate of full-time employment than Ulan District (40.0%), Gulgong (51.0%), the MWRC (50%), or regional NSW overall (51.6%). Unemployment in Ulan is 23.1%, considerably higher than in Gulgong (6.8%), Mudgee (6.9%), the MWRC (6.6%), and regional NSW (5.3%).

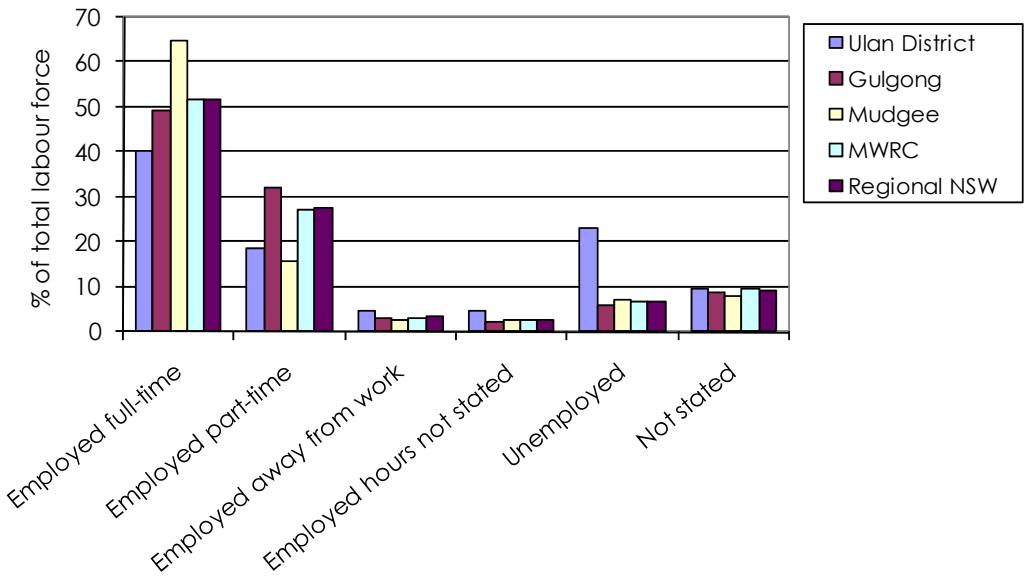


Figure 4.14: Employment status 2006.

Source: (ABS 2006)

Gulgong (19.4%), Mudgee (10.3%) and the MWRC (11.8%) also have a substantially higher proportion of persons employed in mining than the Ulan District (5.8%), and regional NSW (2.9%); while Gulgong and the MWRC have a prominent agricultural industry. Compared with regional NSW, the areas of interest have a much lower proportion of persons employed in the professional, health care, financial, and education industries.

Table 4.5: Industry of employment (2006) % employed

	Ulan District	Gulgong	Mudgee	MWRC	Regional NSW
Agriculture	5.8	16.7	7.3	17.0	9.3
Mining	5.8	19.4	10.3	11.8	2.9
Manufacturing	5.8	12.1	10.7	11.8	13.6
Utilities	0.0	2.0	1.1	1.6	2.0
Construction	5.8	9.8	14.0	11.6	12.6
Wholesale trade	5.8	3.2	3.8	3.5	4.0

	Ulan District	Gulgong	Mudgee	MWRC	Regional NSW
Retail trade	11.5	7.4	13.8	9.8	9.3
Accommodation and food	0.0	2.9	7.3	4.8	5.3
Transport, postal, warehousing	0.0	4.7	5.3	4.4	6.3
Information media	0.0	0.9	1.1	1.0	1.3
Finance and insurance	0.0	0.5	0.9	0.6	1.4
Rental, hiring, real estate	5.8	0.6	1.5	1.0	1.3
Professional, scientific, technical	5.8	3.7	3.8	3.5	4.1
Administrative	11.5	0.9	1.4	1.2	2.2
Public administration and safety	5.8	3.7	5.1	4.7	7.7
Education and training	13.5	2.8	4.2	3.4	4.7
Health care and social assistance	11.5	2.3	1.9	2.1	4.2
Arts and recreation	0.0	0.0	0.7	0.7	1.2
Other services	0.0	3.5	3.6	3.0	4.1
Not stated	5.8	2.9	2.3	2.8	2.6

Source: (ABS 2006)

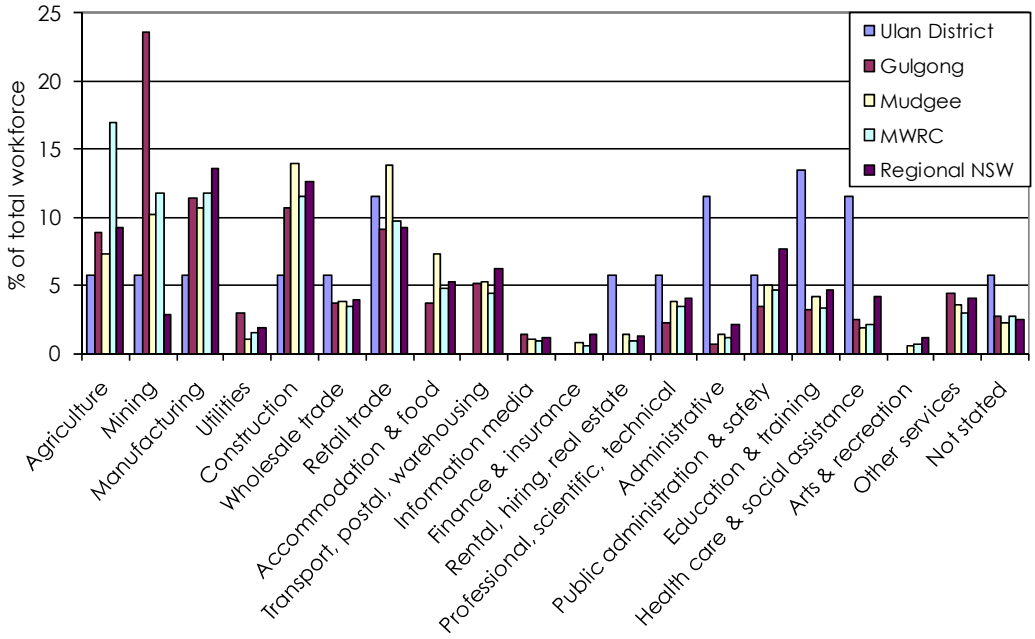


Figure 4.15: Industry of employment 2006.

Source: (ABS 2006)

Figure 4.16 below shows occupations of employment. Ulan has a greater proportion of labourers, and clerical and administrative workers than other locations of interest.

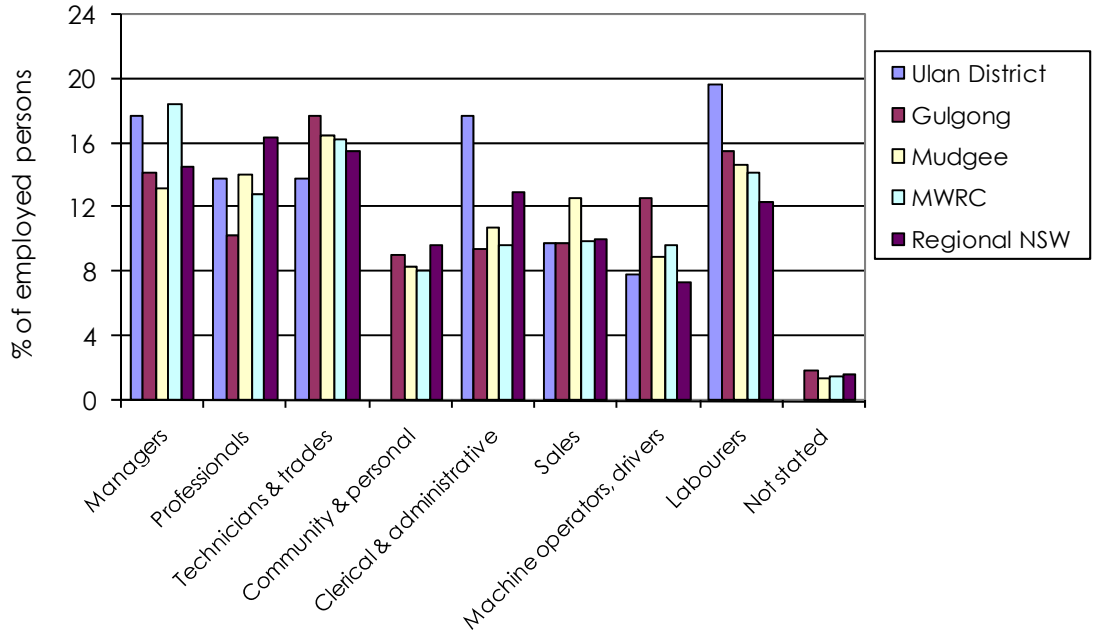


Figure 4.16: Occupations of employment 2006.

Source: (ABS 2006)

Household Incomes

The table below shows median weekly incomes for individuals, families, and households. Weekly median incomes on average in Ulan are lower than in the other areas. Incomes in Mudgee are comparable to regional NSW overall, while Gulgong and the MWRC are relatively low overall.

Table 4.6: Median weekly incomes (2006)

	Individual	Family	Household
Ulan District	$273	$714	$589
Gulgong	$341	$894	$661
Mudgee	$389	$1,026	$745
MWRC	$360	$936	$704
Regional NSW	$386	$1032	$795

Source: (ABS 2006).

A more detailed breakdown of gross individual income per week is shown in Figure 4.17. Ulan has a noticeably higher proportion of incomes between $150 and $599, and no incomes in excess of $1300.

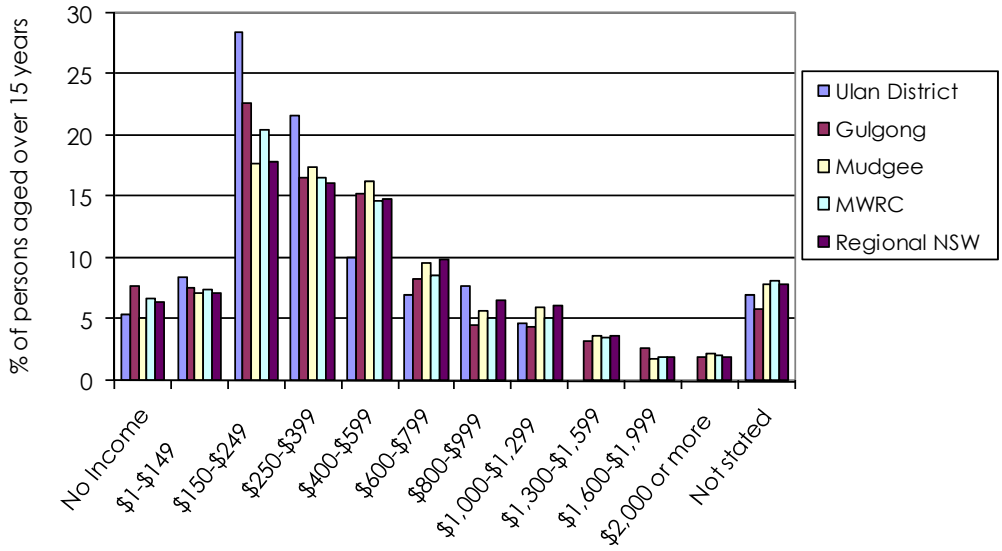


Figure 4.17: Income ranges 2006.

Source: (ABS 2006)

Internet Access

Figure 4.18 shows the proportion of total dwellings with or without internet access. Forty-five to fifty percent of households in Gulgong, Mudgee, and the MWRC have no access to the internet, comparable with regional NSW overall. Of note is the relatively high proportion of Ulan District households without internet access; with dial-up access, the only service available to that area.

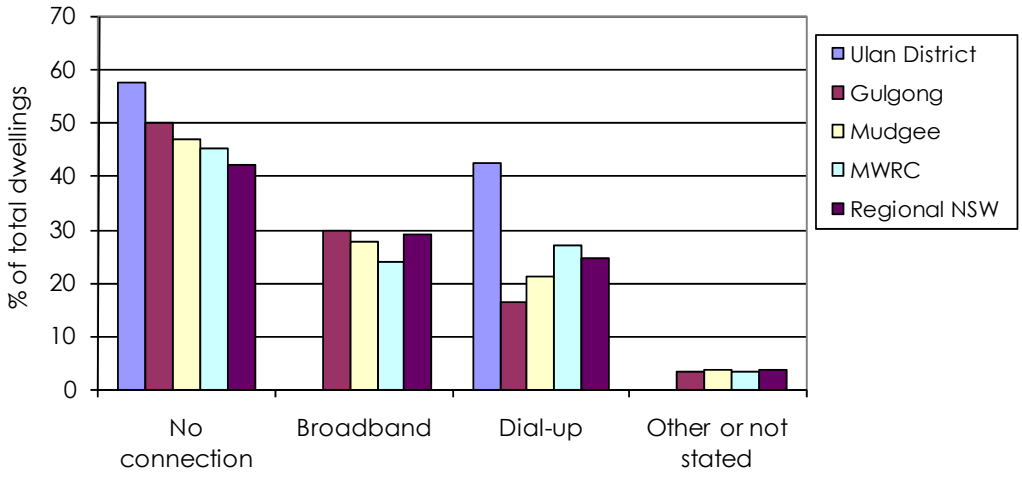


Figure 4.18: Household internet access 2006.

Source: (ABS 2006)

Housing

The characteristics of the dwellings in a given community may indicate the role and function that the area has in the housing market. For example, families may be more likely to be attracted to areas with higher numbers of detached or separate dwellings.

Figure 4.19 below shows the proportion of dwelling structures, and family composition across the areas of interest. The overwhelming majority of residents live in a separate house; with Mudgee recording the lowest number of separate houses as a percentage of total dwellings (83.5%), and the highest proportion of flats, units, or apartments, consistent with a more developed township.

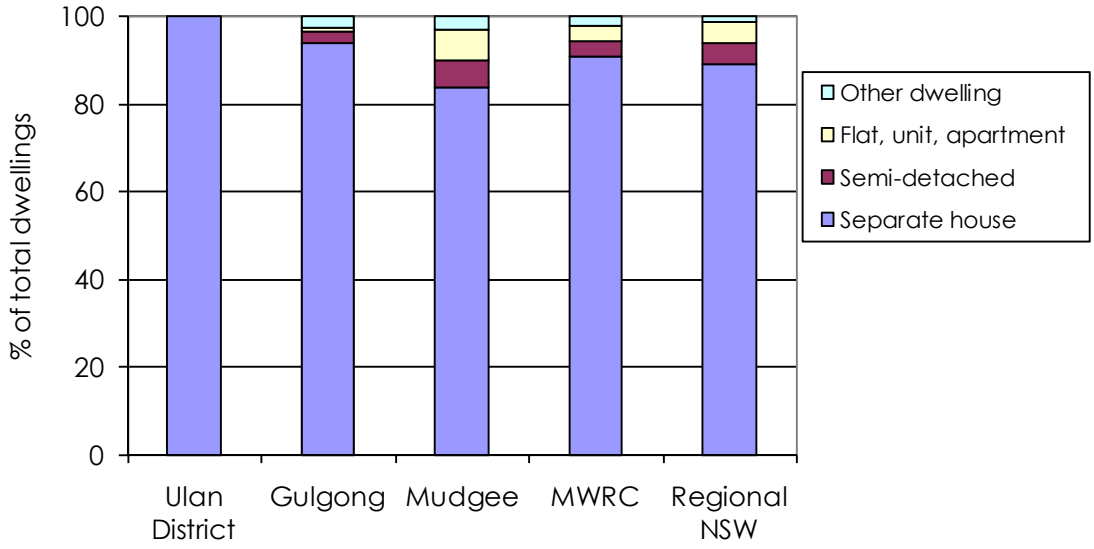


Figure 4.19: Dwelling structures 2006.

Source: (ABS 2006)

The overall number of occupied dwellings in Mudgee, Gulgong, and the MWRC are presented below. There has been a negligible increase in the total dwelling stock from 2001 to 2006 across these locations (~2%).

Table 4.7: Occupied Dwellings (2001 and 2006)

	Occupied Dwellings		% change	Trend
	2001	2006		
Mudgee	3437	3532	2.7%	▲
Gulgong	764	763	-	-
MWRC	8253	8461	2.5%	▲

Source: Ratio Consultants (2007)

The total dwelling stock in Mudgee, Gulgong, and the MWRC is similar in pattern to occupied dwellings.

Table 4.8: Total dwelling stock (2001 and 2006)

	Total Dwelling Stock		% change	Trend
	2001	2006		
Mudgee	3747	3835	2.3%	▲
Gulgong	845	866	2.2%	▲
MWRC	9973	10041	< 1%	-

Source: Ratio Consultants (2007)

Overall Mudgee has more available dwelling stock (303) than Gulgong (103).

Table 4.9: Difference between Total and Occupied Dwelling stock (2001 and 2006)

	Difference Between Total and Occupied Dwelling Stock in 2006
Mudgee	+ 303
Gulgong	+103
MWRC	+1580

Source: Ratio Consultants (2007)

It is expected that dwelling unit approvals in coming years will accelerate. For the period 2003/04 to 2006-07 the average number of dwelling unit approvals in Mudgee was 107 per annum (p/a); for Gulgong it was 10 p/a; and for the MWRC overall it was 188 p/a. In 2005/06 and 2006/07, more than half (62%) of all approvals were in the Mudgee township.

Table 4.10: Dwelling Unit Approvals

	2003/04	2004/05	2005/06	2006/07	2007/08*	Trend
Mudgee	80	84	113	148	33	▲
Gulgong	15	8	6	9	2	-
MWRC	163	169	181	239	39	▲

*to the end of Sept 2007. Estimate to Jul 2008 for MWRC overall is 156.

Source: Ratio Consultants (2007)

Dwelling unit projections were estimated using the 11 year long-term average change in approvals (1996/97 to 2006/07), and the average from the most recent 4 years (2003/04 to 22006/07). The table below shows forecast dwelling unit approvals for each five-year period from 2006 to 2031.

Table 4.11: Forecast Dwelling Unit Approvals

	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	Trend
Mudgee	470	500	550	600	650	▲
Gulgong	35	35	35	35	35	-
MWRC	830	880	960	1030	1095	▲

Source: Ratio Consultants (2007)

Projections suggest significant and consistent long-term growth for Mudgee, with dwelling unit approvals forecast to rise from 94 p/a in the period 2006-2011 to 130 p/a by 2026-2031. For Gulgong the pattern is stable with no growth expected; while for the MWRC overall, expected growth is carried predominantly by the growth forecast for Mudgee.

Land Availability

As at December 2007, Mudgee had 170 developed vacant lots (Mid-Western Regional Council Comprehensive Draft Land Use Strategy, 2008). In addition, the town has a further 390 lots that have been approved, but yet to have a subdivision certificate issued. Therefore, the immediate short-term supply in Mudgee is approximately 560 lots.

In Gulgong, land zoned as residential equates to 478 lots, of which 170 have been developed. In addition to this land, the MWRC approved a 5-stage residential subdivision of 81 lots as part of the original conditions of consent for the Ulan Coal Mine. This subdivision has been in the design, planning and approval phase since 2005 resulting in the construction certificate being issued by MWRC in January 2009.

4.1.4 Community Services and Infrastructure

A major social indicator is the availability of services and facilities to a local population. These include health, education and childcare services, and important supporting infrastructure, such as public and regional transport.

Health

The MWRC is serviced by two district hospitals in Mudgee and Rylstone, and a hospital auxiliary in Gulgong. In addition, Mudgee has a Child and Family Health Service, Community Health Service, and dental, physiotherapy, podiatry, optometry, radiology and chiropractic services. Gulgong has a general practitioner and physiotherapy service.

Education

There are 4 pre-schools, 15 primary schools, and 4 high schools in the MWRC. The pre-schools are located in Mudgee, Gulgong, and Rylstone; the primary schools are spread across the Shire in Mudgee, Gulgong, Bylong, Goolma, Hargreaves, Ilford, Kandos, Lue, Rylstone, Ulan, Windeyer, and Wollar. The highs schools are located at Mudgee, Kandos, and Gulgong.

In addition, other non-school training and education centres in the Shire include the Mudgee TAFE, and the Mudgee Business and Enterprise Centre. There are also library services provided by the Shire in Gulgong, Mudgee, and Kandos.

Childcare

There are local playgroups and childcare centres in both Mudgee and Gulgong. The Mudgee and Gulgong childcare centres provide a creative and educational environment for children aged 6 weeks to 6 years. In addition, both towns have Family Day Care services which offer professional care for children aged 6 weeks to 12 years of age, in the private homes of registered family day carers.

Transport

The most common method of travel to work in the MWRC is by car, (as driver or passenger), with over 80% of those who commute to work using this method.

Consistent with most regional and rural areas in Australia, there is a general lack of public transport services available in the MWRC area. A private coach company (Ogden's Coaches) provides general public bus services in Mudgee, and school bus services in Mudgee, Gulgong, and some other shire areas, including Ulan. In addition, a daily coach service provided by Countrylink connects Gulgong and Mudgee to Lithgow via a number of towns including Rylstone, Kandos, where passengers use the CityRail rail system to access the Blue Mountains and Sydney.

The MWRC has one major airport at Mudgee, which was serviced by Regional Express (Rex) air services 7 days per week, connecting the town to Sydney. However, Rex Airlines ceased its Sydney to Mudgee service in December 2008. The Mudgee Guardian (16/11/08) reported that the air service was cancelled as it was not financially viable without Federal Government Assistance.

Leisure and Recreation

As part of its tourist attractions the MWRC Shire contains a number of National Parks including Wollemi, Goulburn River, and the Munghorn Gap Nature Reserve, all renowned for their spectacular canary, wildlife and camping.

Windamere Dam, approximately 24 kilometres south of Mudgee along the Sydney Road, is set on the Cudgegong River, and is a popular spot for fishing, camping, sailing, swimming, canoeing, and boating. Similarly Dunns Swamp exists above Windamere Dam in the headwaters of the Cudgegong River in Wollemi National Park an is also very popular with tourists. "The Drip" is a picnic area located on the Goulburn River on the eastern side of Ulan Road, approximately 10 kilometres north of the Cope Road intersection. It features fern-covered rock formations, with water dripping from the rock-face. A few kilometres north west from "The Drip" is "Hands on

Rock" which features large over-hanging rock formations with painted stenciled hand drawings for earlier Aboriginal occupation of the area.

The MWRC also has three public swimming pools located at Mudgee, Gulgong, and Kandos, which are open from September through to April each year. The employee and contractor survey (see section 1.2) also revealed that a number of team sports (e.g. netball, rugby league, soccer, football) are common recreational pass-times in the region.

Community Organisations and Services

The MWRC Community Services Directory provides details of the large variety of community organisations and support services operating in the region. Community organisations include the Mudgee Lions Club, the Rotary Club of Mudgee, and the Country Women's Association with chapters in Mudgee, Gulgong, and Rylstone.

Support services for the region are predominantly located in Mudgee and include: Home Care Services, Meals on Wheels, the Accommodation and Support Service, the Community Transport service provided by the Shire, and the Rural Financial Counselling Service of NSW.

Justice

Crime statistics for the period 2006 to 2007 for the MWRC indicate that malicious damage to property has increased by 13.8%, comparing unfavourably to NSW overall (fall by 1.6%). Break and enters in the MWRC increased in both dwelling (10%) and non-dwelling (23.4%) premises, while rates in NSW fell overall (between 1-10%).

Of note, assaults dramatically increased for domestic violence related (85%) and non-domestic violence related (8%) crimes. The crime statistics suggest that the region has an increasing level of anti-social behaviour.

Table 4.12: Recorded criminal incidents (rate per 100,000 of population)

	MWRC		Trend	NSW		Trend
	2006	2007		2006	2007	
Malicious damage to property	1568	1819	▲16%	1599	1572	▼2%
Assault						
Domestic violence	305	566	▲85%	395	401	▲1%
Non-domestic violence	629	683	▲8%	666	671	▲<1%
Break and enters						
Dwelling	395	440	▲11%	704	696	▼1%
Non-dwelling	364	449	▲23%	398	356	▼10%

Source: NSW Bureau of Crime Statistics and Research (2008)

4.1.5 Community Issues

This section highlights local community issues and provides relevant industry related information based on reviews of appropriate studies / reports and other secondary data sources (e.g. media reports).

A review of local, regional, state and national media coverage of the MWRC was conducted to provide a general overview of public opinion in the community and to identify salient community issues. Themes emerging from analysis of local media are provided below.

UCML Media Review

Community Issues	Date	Mining Issues
Looking for future growth in tourism Mudgee Guardian	March 2005	
Call for outside study of mining Mudgee Guardian	April 2005	
Mudgee business booming Mudgee Guardian	May 2005	
	June 2005	**Wilpinjong to create 100 more jobs** Mudgee Guardian
Residents to protest against mining and electrical development Australian Broadcasting Commission (ABC) News	July 2005	**Miner defends expansion plans** Australian Broadcasting Commission (ABC) News
Our future: Cattle and coal Mudgee Guardian	August 2005	**Moolarben responds to environmental fears** Australian Broadcasting Commission (ABC) News
Local housing market set to boom Mudgee Guardian		
Housing blocks set to benefit Ulan Mudgee Guardian	September 2005	
Council reacts to Ulan Road criticism Mudgee Guardian	December 2005	**Protest against global warming, coal mines** Mudgee Guardian
Farmers reject mining as rural industry Mudgee Guardian	February 2006	
Gulgong – Ulan Cope Road upgrades promised Mudgee Guardian	May 2006	
Xstrata donation helps library Mudgee Guardian	June 2006	
	July 2006	**Coal: Mudgee's future** Mudgee Guardian
	August 2006	**Concern raised about mine dust** Mudgee Guardian
	October 2006	**Farmers can't use water due to mines** Mudgee Guardian

Community Issues	Date	Mining Issues
	November 2006	**Mine (Moolarben) responds to its critics** Mudgee Guardian
		Coal train chaos Mudgee Guardian
Legal action taken against Mudgee shopping center plan Australian Broadcasting Commission (ABC) News	March 2007	**Xstrata in court bid to block Felix mine** Australian Financial Review
Renewed call for water restrictions Mudgee Guardian	May 2007	
	June 2007	**City rally against coal mine** The Newcastle Herald
		Minister pushed better deal with mine Mudgee Guardian
Thinking laterally to combat lack of water Mudgee Guardian	July 2007	
Central west endures drought Australian Broadcasting Commission (ABC) News	August 2007	**Mine says employment will be a massive benefit** Mudgee Guardian
Drought summit Mudgee Guardian	September 2007	**Go ahead given for $7.5bn coal mine** The Australian
		Xstrata fails to block Felix Australian Financial Review
Vandalism sprees raise concern Australian Broadcasting Commission (ABC) News	October 2007	
Further legal action considered over planned Mudgee shopping center Australian Broadcasting Commission (ABC) News	December 2007	**Man hurt at Ulan coal mine** Australian Broadcasting Commission (ABC) News
Action group vows to fight shopping center approval Australian Broadcasting Commission (ABC) News		**Xstrata hopes to void NSW Moolarben approval** Platts International Coal Report

Community Issues	Date	Mining Issues
Locals asked for ideas on old mine site Australian Broadcasting Commission (ABC) News	January 2008	**Full-steam ahead for Felix's stalled coal mine** Sydney Morning Herald
Calls to sack council over shopping center plan Australian Broadcasting Commission (ABC) News		
Recent rain more than drop in ocean Canberra Times		
Drought maps are good news for the Mudgee region Mudgee Guardian		
Mudgee shopping center dispute drags on Australian Broadcasting Commission (ABC) News	February 2008	**Mining companies explore Mudgee region** Mudgee Guardian
High cost of health Mudgee Guardian		
Mudgee taking off Mudgee Guardian	May 2008	**Environmentalists disappointed** Mudgee Guardian
		The boom that will eventually bust Mudgee Guardian
		Ulan mine VPA working party Mudgee Guardian
	June 2008	**Mines Share Peace Pipe** Mudgee Guardian
	August 2008	**Moolarben Project Delay** Mudgee Guardian
	October 2008	**Investing in the future of coal** The Newcastle Herald
Council newsletter labelled "waste of money" Australian Broadcasting Corporation (ABC) News	November 2008	**Work to start on Moolarben mine** Australian Broadcasting Corporation (ABC) News
Mudgee tourism operators brace for income fall Australian Broadcasting Corporation (ABC) News		

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Community Issues	Date	Mining Issues
Wake held for last flight out of Mudgee Australian Broadcasting Corporation (ABC) News	December 2008	
Council seeks Federal funding for sporting facilities upgrade Australian Broadcasting Corporation (ABC) News	January 2009	
Action group wants some community control of retail development Australian Broadcasting Corporation (ABC) News		
Aeropelican pulls out of Mudgee airline negotiations Australian Broadcasting Corporation (ABC) News	February 2009	
Call for library design to include visitor centre Australian Broadcasting Corporation (ABC) News		
	March 2009	**Miner says Whitely mural is safe** Australian Broadcasting Corporation (ABC) News
Sealed road promises tourism boost Australian Broadcasting Corporation (ABC) News	April 2009	**Fears raised about mine expansion** Australian Broadcasting Corporation (ABC) News
		GRD wins Felix coal mine contract Australian Broadcasting Corporation (ABC) News

Regional Growth

A prominent theme that emerged in the local and national media is the anticipated economic growth in the MWRC LGA with the development of Wilpinjong coal mine (Peabody) and the recent development of Moolarben mine (Felix Resources); as well as the UCML Continued Operations project. It is expected that these developments will create employment and boost the regional economy by stimulating growth for local business, tourism, and the housing market. The MWRC's planning and development department estimates the value of these developments to be in the order of $500M.

Also in relation to regional growth, a recurrent issue in the local media was the proposed development of a large shopping centre in Mudgee. In March 2007, the Mudgee Community Action Group (MCAG) took legal action against an MWRC decision to approve the development. The Chairman of MCAG said that despite presenting a petition to council with about 5,000 signatures against the development, the community "…had been ignored". More recently, despite strong public opposition, the MWRC upheld its original decision. In response, MCAG has launched a further petition in opposition to the project, and calling for the resignation of the local council. This issue highlights the active nature of the Mudgee community and illustrates the desire of the community to be involved in development decisions that have the potential to impact on their daily business and quality of life.

Mining

Similarly, the decision by the NSW Planning Minister to approve the development of the $7.5 billion Moolarben coal mine near Ulan, has been challenged in court by Xstrata, and was met by outrage from a number of resident and green groups who campaigned heavily against the proposal for almost a year. NSW Greens MLC Lee Rhiannon voiced environmental concerns about the effects of the mine, saying it would add millions of tonnes of carbon dioxide to the atmosphere every year.

Resident and local council concerns centred around the potential impact of the mine on an area termed "The Drip" where spring water flows over a sandstone escarpment into the Goulburn River, and where a number of significant Aboriginal sites are present. The MWRC was satisfied that a 450m buffer zone would protect The Drip; however a number community campaigns against the Moolarben development suggest some community members may be opposed to increased mining activity in the region.

The Moolarben coal mine has commenced construction. According to the mine operators, Felix Resources; this phase is estimated to take 14 months. The mine is due to start producing coal in late 2009 creating approximately 220 jobs. Work has begun on a new coal terminal for Newcastle so as to increase overall port capacity for the industry. This development has also been opposed by environmental groups who have questioned the lack of commitment by the NSW government to reduce greenhouse emissions and prevent climate change.

Felix Resources are seeking to expand the Moolarben coal mine into its second stage which would see a fourth open cut pit as well as two additional underground mines. This has raised fears and concerns by the council about the potential impact these expansions could have on the surrounding community. Council is hopeful that these impacts will managed and mitigated appropriately.

Agricultural Sustainability

There has been concern raised in the Mudgee Guardian over the viability of farms in the MWRC region due to severe drought conditions in recent years. Several articles have conveyed the desperation of farmers and others to have their water needs addressed. Sustainability was a prominent concern, with fears that the current situation may have more than a local impact and may result in a national disaster regarding breeding stock. In March 2007, the Federal government extended drought support to 300 hundred farmers, graziers, and grape growers in the MWRC region.

The financial impact of the drought has resulted in fears that properties will have to be sold as both feed and water become scarce. There have also been concerns about the cost of feed, with a number of farmers having to buy produce from other states, thereby incurring higher transportation costs.

The psychological and emotional impact of drought was also central to many articles, with concerns related to the impact on farmers and their capacity to deal with the pressures associated with the decline of their properties, produce, and business. This stress appears magnified by the strong connection that farmers have with the land, given long family histories in the region. The drought issues raised in the media convey a deep concern for the sustainability of agriculture in the area as well as the individual well-being of those most directly affected.

Tourism

In late 2008, air services to Mudgee were cancelled which raised concerns to tourist operators in the area who anticipated financial impacts from the decision. The last flight on the Mudgee to Sydney service was commemorated as a significant event and passengers were given a certificate upon boarding the flight. Following the retraction of the Regional Express air service in Mudgee, Aeropelican was a contender to replace the service, however this was unsuccessful due to financial reasons. The council is determined not to give up on finding a replacement.

Other Issues

Other issues in the media review related to mine closure and also crime in the area. For example, Gulgong locals have been asked what should be done with the old Red Hill mine site near their town. The Mayor Percy Thompson has suggested that the site be used as a training and practice facility for mine rescues; highlighting community interest in post mining activities.

Furthermore, there has been more recent media attention related to vandalism in Gulgong due to removal/damage to a number of street, rail, and school signs. Locals have expressed concerns related to an increase in vandalism, reflected in local crime statistics.

The themes identified in the media review have a number of implications for the current project. The prominent growth in the region raises issues such as housing availability and affordability, service provision for the growing population, and the need for improved supporting infrastructure, including roads and community recreational areas.

The expansion of mining in the area has received strong opposition from certain quarters, and highlights the importance of having the community consulted and engaged with regards to current and future mining development.

Mining related issues, as evidenced through recent development project approval programs and outcomes of the company's biannual social monitoring program – Viewpoint, – have centred on environmental issues such as water and air quality, noise from operations and general visual amenity, especially for those who reside in proximity to further industry development. These impacts will need to be carefully addressed and managed by existing and future operations.

The drought in recent years has also raised community awareness over water use and availability. Given this, any potential impacts on the water supply as a result of the Project, will need to be considered, especially any impacts that relate to local water supply (i.e. bores) and local waterways.

The economic benefits of regional growth, as a result of an increase in mining, were also frequently documented. However, there is a need to ensure that the more positive impacts associated with mining development are enhanced and that there is effective integration of social investment strategies with local and state government initiatives and programs.

4.1.6 Community Needs

To identify salient community needs in the locality, a review of relevant MWRC Shire plans was also undertaken to articulate focus areas. Community consultation has been undertaken by the MWRC in the development of many of their strategic plans and thus provides a reflection of local community aspirations and values broadly.

MWRC Management Plan (2007/08 – 2011/12)

The current MWRC Management Plan provides insight into relevant issues perceived by the shire, and potential changes in the region. The MWRC has committed $93m over the next 5 years to a range of projects in addition to the services and maintenance the Council currently provides. Of note are Shire commitments to supporting infrastructure for the region namely: the Department of Planning's (NSW) Regional Roads Program, which will see improvements made to major State and regional roads, including the continuation of the seal extension program for unsealed roads, an upgrade to Castlereagh Highway between Gulgong and Mudgee, and the replacement of wooden bridges in the region.

Following community consultation in the shire, across the towns of Mudgee and Gulgong, the MWRC has formulated draft guidelines for tourism and services signage throughout the region. These guidelines are designed to provide visitors with clear directions to tourism establishments and services that cater for travellers' needs.

This initiative supports the Shire's promotion and development of the region as a short stay tourist destination and promotes local tourist businesses and regional events.

MWRC Social Plan (2006)

The MWRC Social Plan 2006 (the most up to date document) outlines current and emerging social issues within the region, and provides practical and cost effective strategies to address such issues to the benefit of all residents within the Council area.

The plan aims to provide an accurate view of the existing social context, and provides a number of recommendations relating to 12 target areas of need identified by the community. The primary focus for each of these areas of need are summarised below. Overall, the plan lists recommendations for each target area "without prioritisation" suggesting that the Shire is committed to a comprehensive and integrated plan that considers the following areas, and all members of the community, of equal importance.

Largely, the recommendations detailed in the Shire's social plan are related to the provision of services – both in terms of identifying gaps in service provision, and in relation to developing and implementing strategies which help facilitate the greater provision of services related to the target groups.

It is also emphasised in the Plan, that none of the target groups should be viewed in isolation, but rather linkages to one or more of the other target groups explored to facilitate the design of comprehensive strategies to address the needs of the specific group and the community more broadly.

Children and Families

The MWRC identified key service gaps for children and families via consultations and community forums undertaken in recent years. The needs identified included affordable childcare; programs for parents supporting child development (e.g. managing challenging behaviour); early intervention services for children with special needs, including assessment and therapy; and greater child protection services targeted at abuse and neglect.

Youth

The MWRC identified that there are limited employment and further education opportunities for youth. This has lead to a trend in young people leaving the area once they complete school. Therefore there is a need for programs to support the transition from high school to employment or further education in the local area. Additional issues for youth included a lack of public transport which impacts on youth access to tertiary education, employment, recreation and leisure activities. Further, it

was recognised that there were few cultural or non-sporting activities for young people.

Older persons

In regards to older persons, there is a need for additional funding for local residential aged care facilities to provide additional beds and to meet increasing operational requirements. Further, there is a need for early intervention and support services for older persons with early onset dementia and challenging behaviours.

Gender specific issues

Although several local community groups and agencies provide services and support to address problems faced by women (such as domestic violence), there is little community based emphasis on enriching the lifestyle of women or increasing the opportunities open to this target group. A variety of local sporting and cultural groups are available to women in the area; however, women who live outside the major regional centres, or have responsibilities as carers of young children, older family, or family with a disability, can often experience difficulties in accessing these groups due to a lack of public transport.

People with disabilities

The MWRC identified the need for specialist staff and services to identify and support persons with a disability and early intervention strategies. There is also the need for suitable accommodation for disabled persons who are not aged, who are often place in aged care facilities, group homes for disabled persons requiring high levels of support, and increased respite services for persons caring for disabled family members.

Indigenous persons

There has been limited consultation with Indigenous persons in the Shire, and therefore there is a strong need for ongoing dialogue to identify the needs of the local Indigenous population. A number of local services however, including health, family support and police, have reported that Indigenous persons are often reluctant to seek out available support, and therefore there is a need to promote these services and develop an Indigenous support network to facilitate Indigenous persons' access to these services.

People from cultural and linguistically diverse backgrounds

This group has special needs in regards to language, communication, and cultural assimilation, but also important psychological needs; with many service providers reporting that many recent arrivals to the community are isolated socially, emotionally, and culturally. There are few dedicated support agencies for this specific group, and many individuals have poor English language skills which may act as a barrier to accessing essential services.

Housing

There is a need for affordable housing in the Shire, particularly closer to major towns where services are more prominent. Population growth has placed increased demand on low income housing, and rental costs have grown more rapidly for individuals and families relative to their low incomes. Therefore, there is a need for developers to incorporate low income housing into estate development, and greater incentives for home buyers, to decrease pressures on rental housing.

Transport

There is a lack of transport options across the Shire, especially for those in rural areas or small villages. The need for increased public transport services has become all the more important as services tend to become more centralised in Mudgee. For families, youth, the frail aged, or people with disabilities, public transport options are crucial in order to gain access to essential services.

Domestic violence

Domestic violence was identified as a significant social issue in the MWRC. Increased community awareness, and reduced community tolerance of domestic violence may lead to more rapid identification of, and intervention in domestic violence cases.

Drug and alcohol issues

Drug and alcohol use has consequences at many levels – for the individual, their family, and the wider community. The Social plan highlights the need for increased education relating to the impacts on drug use, and increased resources and staffing to address drug and alcohol issues, particularly the need for rehabilitation and detoxification services.

Mental health

There is a general need for increased mental health services, support and care in the MWRC, including the need for the development of support groups for people at risk of developing mental illness, and early identification of young people suspected of mental illness.

MWRC Cultural Plan

The MWRC Cultural Plan outlines a number of objectives and strategies to focus cultural development in the Shire via partnerships formed with the community, government, and the private sector.

The Cultural Plan builds on current cultural foundations in the region and aims to foster diversity and creativity by:

- promoting centres and programmes of excellence;
- encouraging maximum community participation and enjoyment;
- seeking economic support from various sources to ensure sustainability of cultural activities; and
- supporting economic development.

The Cultural Plan identifies a lack of suitable facilities for a broad range of cultural activities. The need for comprehensive cultural infrastructure and appropriate management of local arts and heritage involves the provision and co-ordination of cultural opportunities, activities and facilities, including local libraries, theatres and galleries.

Further, there is a need for improved youth services, especially youth disadvantaged by distance or low socio-economic status. Improvements to swimming pools, public transport between communities, bicycle tracks, coaching and facilities specifically for youth are emphasised.

In addition to the cultural needs of local youth, there are also the needs of an ageing population. Therefore, issues such as public transport, walking tracks, library facilities and arts and crafts require further attention.

Comprehensive Land Use Strategy (Draft 2008)

The MWRC comprehensive land use strategy provides a basis for identifying options for the local government authority to meet long term urban and rural growth needs. The purpose of the strategy is to identify environmental, social, and economic opportunities and limitations, and evaluate these against land demand and supply pressures within the Shire. The strategy reflects current and expected population changes and seeks to optimise growth in accordance with the principles of ecological sustainable development. The strategy lists a series of objectives relating to economic prosperity, environmental quality, and social equity. In addition, four key "growth factors" have been identified as most likely to determine the location and development of future growth areas in the MWRC. These factors include:

- water management;
- protection of agriculture;
- minimising land use conflict between urban or rural residential areas, and mining or agricultural development; and
- conserving biodiversity.

Of note, the draft strategy recommends that Ulan retain its current zoning; that minimum lots sizes for that zoning are increased from 750m^2 to 2000m^2; and that there be no further "rural lifestyle development" surrounding Ulan.

In the main residential areas of Mudgee and Gulgong, the overall objective is to provide a range of housing types and other uses that provide day to day services to local residents, and to protect and improve the amenity of residential neighbourhoods. Current zoning in these areas permits a range of development, including attached and detached dual occupancies, flats, group homes, serviced apartments, seniors housing and home business.

Local Stakeholder Surveys

Viewpoint Survey (2006)

As part of the Viewpoint survey undertaken in 2006 by Xstrata Coal NSW, stakeholders surrounding Xstrata Coal's operations in the Western Coalfields area, including UCML stakeholders, were asked to identify areas of community need. In this regard, the following needs were documented as requiring attention (■) and/or were seen to be deteriorating over time (■). These are highlighted in the figure below.

Community attribute	Western Coal fields in need	Western Coal fields deterioration
A growing population		
Ability for people to own their own home		
A high proportion of rental housing	■	
Employment for people in the community		
A mix of people of all ages in the community		
Low unemployment		
A primary school located in the community		
A secondary school located in the community		
Proximity to a major centre		
Frequent community events		■
Reduced crime	■	■
Community representation of the local shire council	■	■
A feeling of belonging and attachment	■	■
A diverse range of different industries		
A large umber of properties for sale		■
Local spending		
A range of medical services	■	■
Pride in the community's appearance	■	■
A good range of retail and trade outlets		
Having young people in the community	■	■
Recreational opportunities	■	
Social facilities (eg. Youth centre)		
Total	**9**	**8**

Figure 4.20: Perceived areas of need and change over time of community attributes in the Western Coalfields
Source: Coakes Consulting Viewpoint Program (2006).

As part of the survey, respondents were also asked a series of questions relating to the company's social investment activities in the area. In the Ulan area, stakeholders wanted to see a more local focus for community contributions, especially in the areas of community events, facilities, education, sport and recreation, environmental management, and roads and traffic.

MWRC Community Survey

As part of its Social Plan (2006), a Community Survey was developed in 2003 and distributed to key agencies, organisations, businesses and community residents across the former Mudgee Shire Council, over a six month period from November 2003 to April 2004. The survey's objective was to provide an indication of community attitudes to a range of identified social issues, including key areas of community need and concerns. When asked what could be improved in their community, respondents identified the need for:

- better transport and roads;
- better facilities in the form of good shops and restaurants;
- greater employment opportunities;
- more affordable housing; and
- better access to medical services.

In addition, when asked to identify three priority areas that would make the community "a better place for other people to live in", most commonly identified responses included:

- more employment opportunities;
- better transport and roads; and
- better facilities.

Respondents were also asked to consider the future and their needs in 15 years time. Although better transport and roads again featured prominently, two of the top three responses included:

- the need for better access to medical facilities;, and
- more services to allow individuals to remain independent for longer.

Perspectives from Current Service Providers

In relation to the provision of services in particular, a prominent theme emerging in the current section, the following perspectives were obtained from personal or phone interviews/surveys with key service providers (Health, Education, Childcare) in the Ulan, Gulgong and Mudgee townships (June, 2008), undertaken as part of the social assessment for the project. This data has not been triangulated through other sources to validate the information provided. Capacity of these providers to manage any change in population that may be associated with further development in the area was also assessed.

Health

The table below reveals general community perceptions in regard to the provision of health services across the Project area of interest. The data provided in Table 4.13 has not been verified and is purely based on the response given to the survey. As outlined, health service providers cited that while the Mudgee District Hospital has been identified to offer an excellent quality of service, the Gulgong Hospital was identified to be in need of improvement including upgrades to existing services and infrastructure.

Health service providers also cited uncertainty in regard to their capability to accommodate any significant population increases in the area. For instance, the South Mudgee Surgery has a current patient to doctor ratio of 20:1, while the Mudgee Medical Centre attends to approximately 130 patients per day. These figures do not allow for a comparative analysis to determine capacity, however both services indicated that patients are frequently turned away due to a significant shortage of GP's in the region, and apparent strains on existing patient to doctor ratios. Indeed, the region's attraction and retention of GP's and other health professionals has been cited as an ongoing issue.

Specialist health service providers who were interviewed expressed the need for further improvement in dental services. The current waiting period for dental attendance at the Mudgee Dental Care is 4 weeks, and clients are reportedly turned away at times. Furthermore, as Gulgong does not have any dental services, Gulgong's residents in need of dental care are likely to travel to Mudgee to access these services. Therefore, improved service capacity in the area of dental care has been cited as key issue.

Table 4.13: Health service provision – Perceived Quality

General Services	Perceived quality of service provision	Waiting period for Routine Appointments	Clients turned away
Gulgong Surgery	In need of improvement	bookings taken daily	occasionally
Gulgong Hospital	In need of improvement	none	never
Mudgee District Hospital	excellent	none	never
Mudgee Medical Centre	good	1 week	sometimes
Mudgee Health Service	good	NA	never
South Mudgee Surgery	adequate	1-2 weeks; none for emergencies	frequently
Specialist Services	**Perceived quality of service provision**	**Waiting period**	**Clients turned away**
Mudgee Dental Care	In need of improvement	4 weeks	sometimes
Mudgee Physiotherapy	excellent	1 to 2 days	sometimes
Mudgee Radiology	adequate	< 3 days	sometimes

Note. NA = not available/not provided/not applicable.
Source: Coakes Consulting (June, 2008)

Education

Overall, the perceived quality of existing education services in the MWRC has been rated highly, with 6 of the 8 schools and other education institutions surveyed (75%) describing education service provision in the Project area of interest as excellent. However, a number of schools did identify the need for access to specialist education services such as school counsellors and speech therapists, and support for children with learning difficulties and other special needs.

Table 4.14: Education – Perceived Quality

Primary Schools	Perceived quality of service provision	Current Capacity
All Hallows School	good	125/Flexible
Gulgong Public School	excellent	500/Flexible
Mudgee Public School	excellent	650/Flexible
St Matthews School	excellent	600/Flexible
Ulan Public School	good	NA/Flexible
High School / Other	**Perceived quality of service provision**	**Current Capacity**
Mudgee High School	excellent	1020/Flexible
Gulgong High School	excellent	400/Flexible
Mudgee TAFE	excellent	NA/Flexible

Note. NA = not available / not provided / not applicable.
Source: Coakes Consulting (June, 2008)

Childcare

Overall, while most of the childcare services interviewed were satisfied with the quality of childcare service provision, it is noteworthy that most of the childcare services surveyed are running either at, or very close to, capacity. In addition, a number of respondents also identified that funding for both capital works and staffing were key service area needs.

Table 4.15: Childcare - perceived quality and capacity of service provision

Childcare Service	Perceived quality of service provision	Current Capacity	Capacity
Happy Days Gulgong	good	20 per day	25 per day
Gulgong Pre School	good	19 per day	20 per day
Gulgong Playgroup	good	15 per week	limited to size of hall
Mudgee Childcare Centre	adequate	40-46 per day	46 per day
Mudgee Pre School	adequate	40 per day	80 per day
Puggles Childcare	good	approx. 20 per day	46 per day
Imaginations Early Learning	good	57 per day	63 per day
Mudgee Family Day Care Scheme	excellent	100 families; 140 children	limited by number of carers
Squeakers Long Day Care	excellent	27 per day; approx 80 families	27 per day

Source: Coakes Consulting (June, 2008)

Summary of Community Needs

The review of local media, council plans and strategies, broader community views, and service provider interviews have revealed the following focus areas of need:

- Supporting infrastructure, particularly roads;
- Improved service provision across the community, with particular emphasis on the provision of general and specialist health services;
- Crime reduction, particularly in the area of domestic violence;
- Development and support for tourism; and
- Preservation of recreational areas and maintenance of associated infrastructure.

4.1.7 Community Profile Summary

In summary, the MWRC and the key towns of interest can be characterised in the following manner:

- the town of Mudgee is experiencing growth, compared with other towns in the MWRC;
- most residents in the MWRC live in a separate house, compared with other dwelling structures;
- the number of dwelling unit approvals is predicted to increase in Mudgee, while remaining relatively stable in Gulgong and other Shire communities;
- there is a high proportion of students attending primary and secondary schools; with fewer persons enrolled in tertiary or other education institutions;
- unemployment is highest in the Ulan area; while the labor force in other areas is comprised predominantly of full-time employees;
- mining, construction, manufacturing, and agriculture are the predominant industries of employment across the Shire;
- Mudgee residents have higher mean weekly individual, household and family incomes, than both Gulgong or Ulan;
- the level of domestic violence recorded in the shire area is higher than that of the state; and
- health, education, childcare, and transport services are primarily offered in Mudgee and Gulgong.

The primary **community needs** identified for the MWRC overall include:

- improved supporting infrastructure, especially roads;
- increased service provision, particularly the need for more General Practitioners; and
- increased activities for local youth.

4.2 Workforce Profile

In order to assess potential impacts associated with the Project, it is necessary to have an understanding of the UCML workforce and their linkage to the local community. That is where employees reside, the services they use, the sport and recreational groups in which they participate, and the extent to which they are involved in volunteer organisations and local charities.

In this section, key demographic and socio-economic characteristics of UCML's workforce are discussed. Information was obtained via a Workforce Survey conducted by Coakes Consulting in early May 2008. Questionnaire's were distributed, completed, and collated during designated training and team meeting sessions with employees conducted following shift changes.

4.2.1 Demographic Details

Of those surveyed, approximately 86% were UCML employees, with 14% contractors to the company. The overwhelming majority of survey respondents (86%) were UCML employees working in the underground operations.

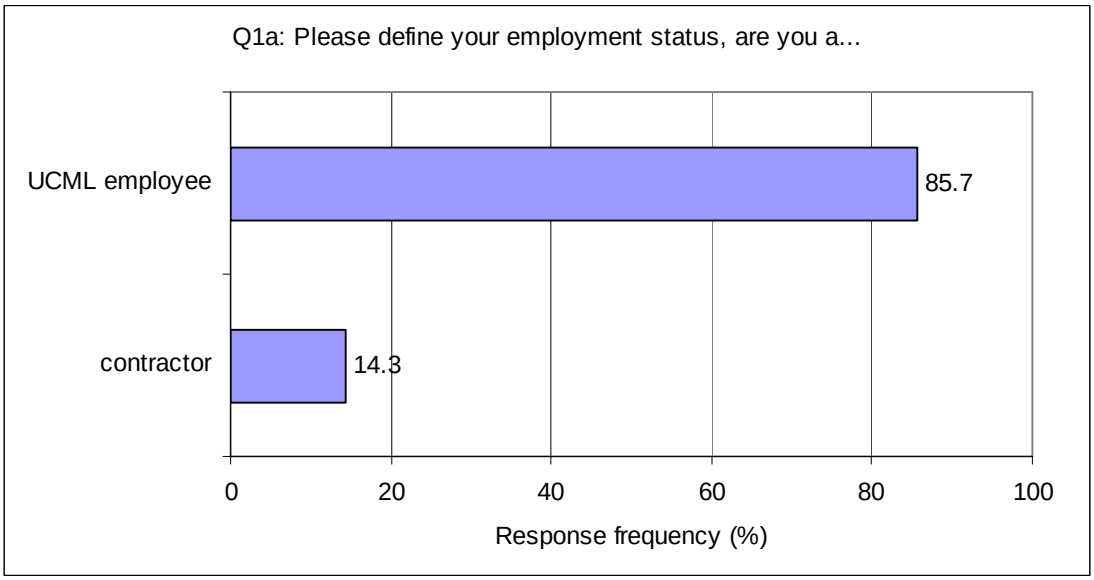

Figure 4.21: Employment status
Source: Coakes Consulting (May, 2008) Workforce Survey

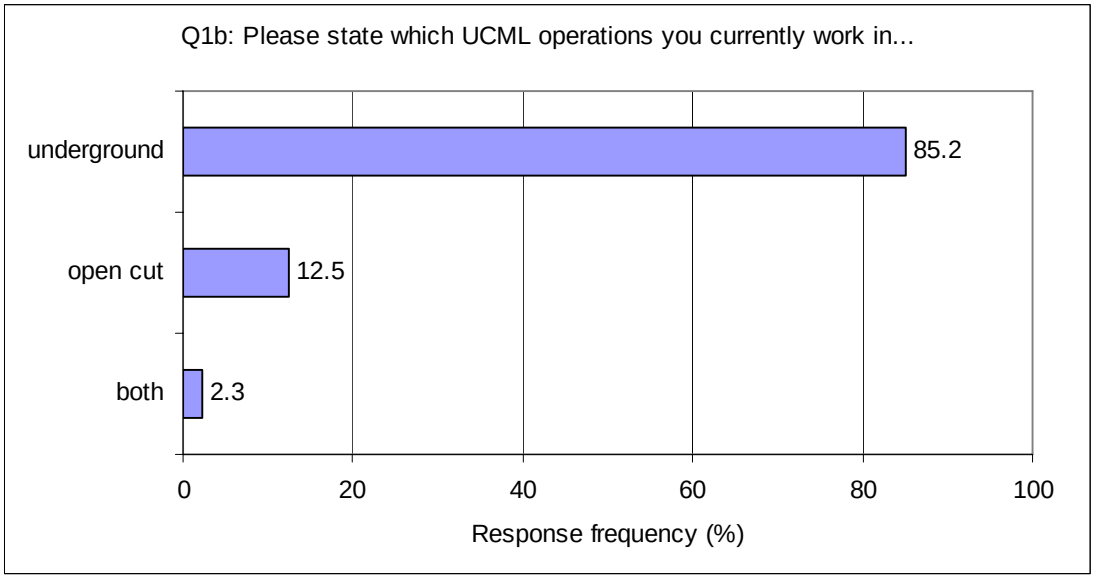

Figure 4.22: Operation currently worked in
Source: Coakes Consulting (May, 2008) Workforce Survey

Of the contractors, 84% currently work in the open cut operation, with 69% of these working for Downer EDI, the key contracting firm responsible for the Open Cut operation. It is important to note that the survey was conducted prior to the cessation of the open cut operations.

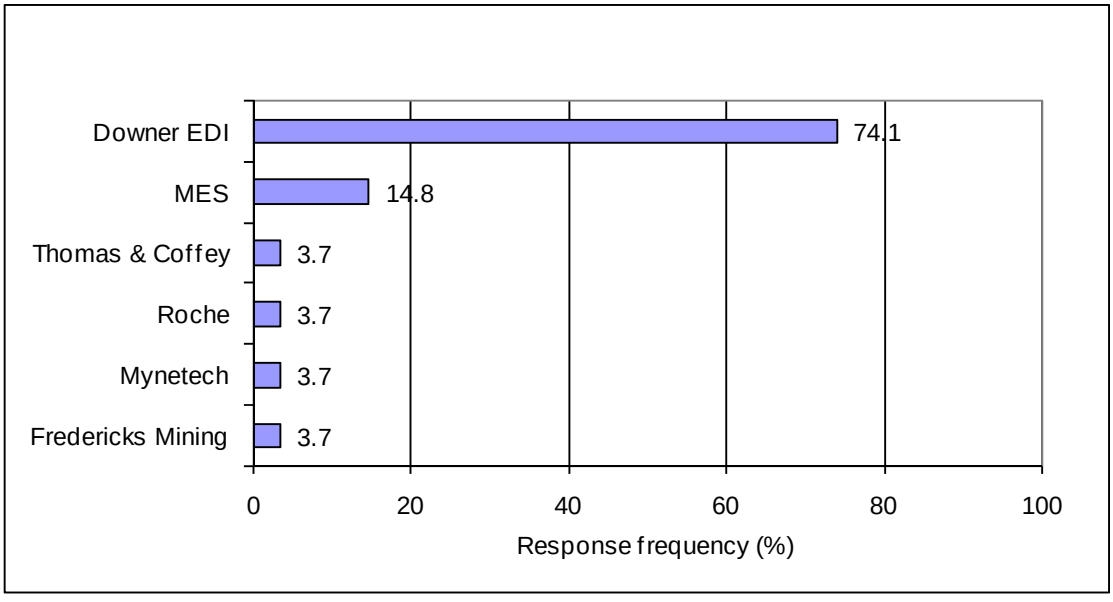

Figure 4.23: Contractor companies
Source: Coakes Consulting (May, 2008) Workforce Survey

The age distribution for both UCML employees and contractors is highly similar; a substantial proportion of employees and contractors fell within the older workforce age bracket of 35 – 54 years.

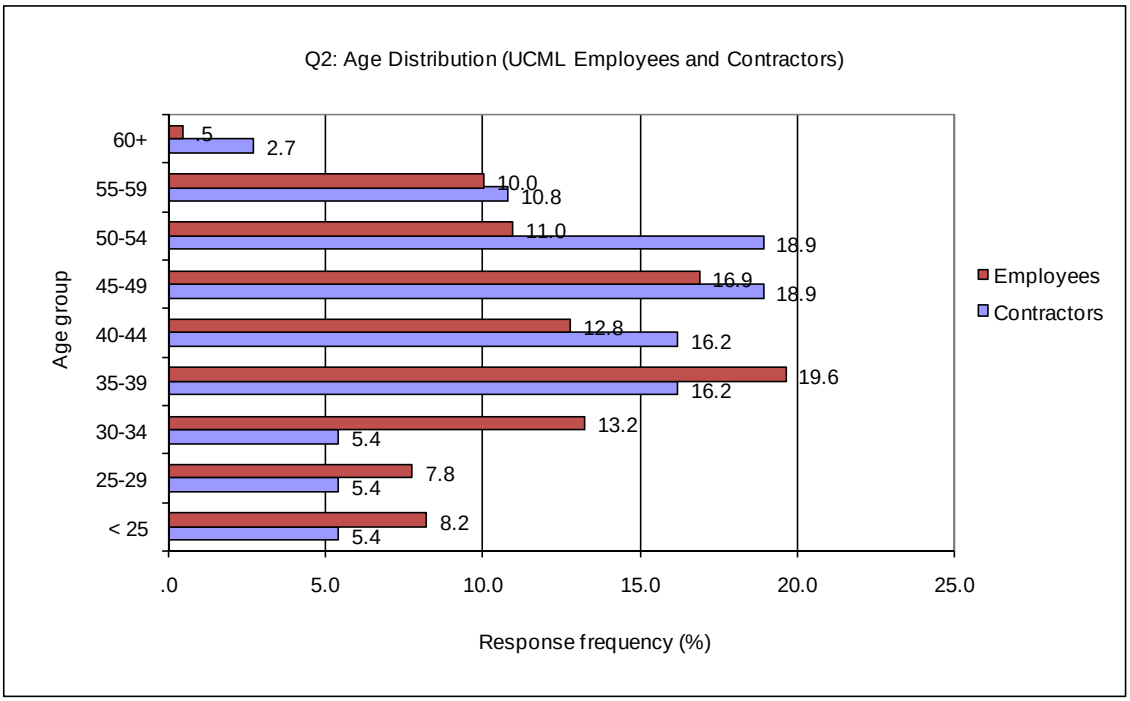

Figure 4.24: Age structure
Source: Coakes Consulting (May, 2008) Workforce Survey

Interestingly, the age breakdown of UCML's workforce (employees and contractors) is comparable to that of the broader mining workforce across the MWRC LGA (ABS Census, 2006), with only marginal differences apparent across age groups.

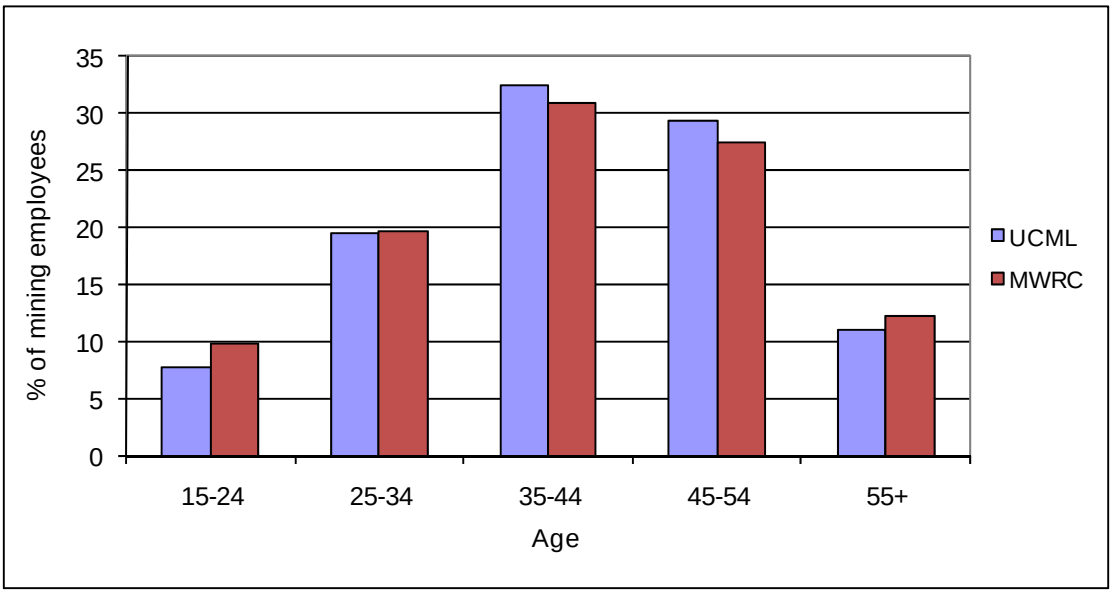

Figure 4.25: Age structure of UCML vs. mining employees in the MWRC LGA
Source: Coakes Consulting (May, 2008) Workforce Survey and ABS Census (2006)

4.2.2 Residential Location

A majority of UCML's employees and contractors currently live in either Mudgee or Gulgong, due to the close proximity of these towns to the UCML Mine operations. Other residential locations included Ulan, Lithgow, Rylstone, and Kandos; however, only a very small number of employees and contractors (1 employee and 4 contractors) specified their places of residence to be in Ulan.

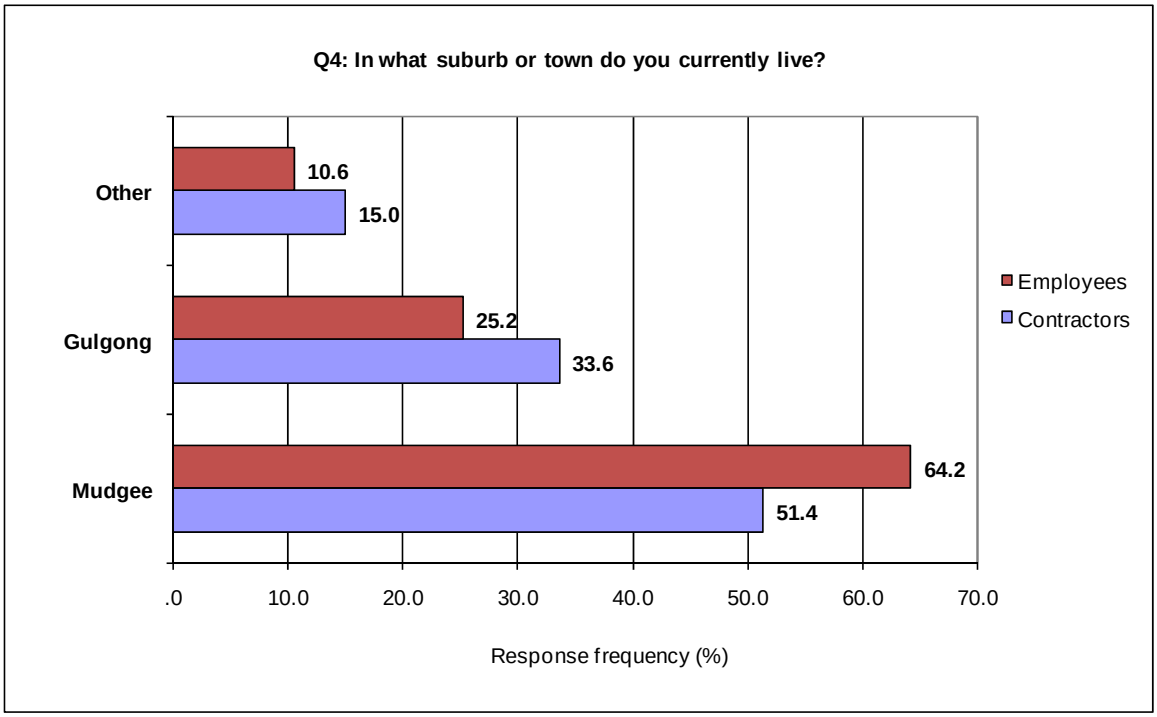

Figure 4.26: Place of residence
Source: Coakes Consulting (May, 2008) Workforce Survey

UCML's employees and contractors appear to have relatively low levels of residential mobility, with most indicating that they have lived in the same location for over 20 years; and a further 19% who have been resident for 10 to 20 years. These statistics indicate strong attachment to the area by UCML employees and contractors.

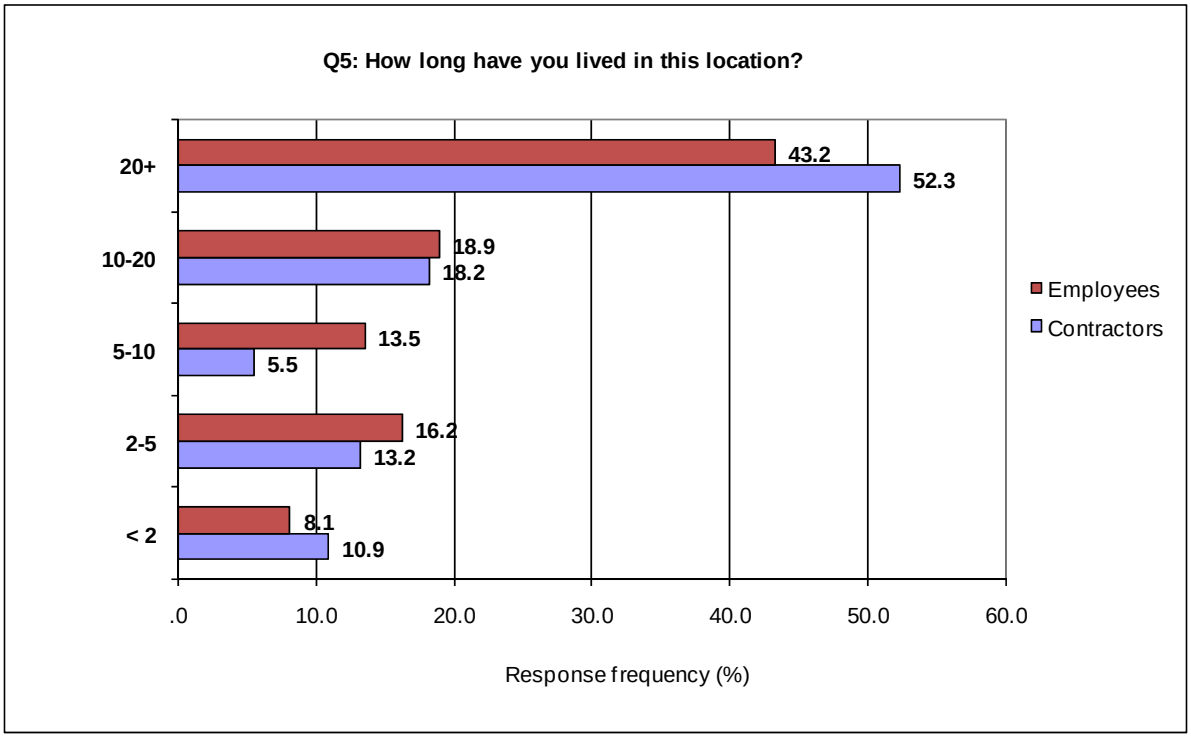

Figure 4.27: Residential tenure
Source: Coakes Consulting (May, 2008) Workforce Survey

Nearly two-thirds of UCML employees and contractors (65.9% and 61.8%, respectively) also reported having already lived in the local area when they commenced employment with UCML. A smaller proportion cited that they had moved from another region / interstate in order to take up employment with UCML. These figures are important in predicting the likely population changes that may be associated with additional employment for the Project.

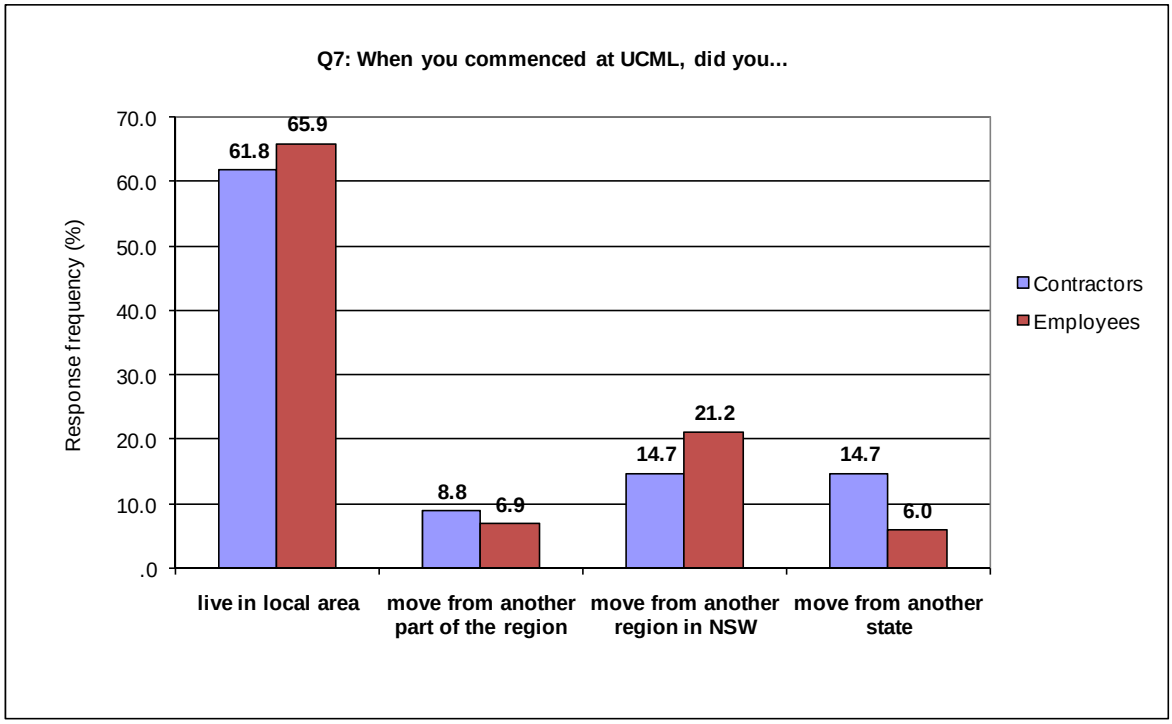

Figure 4.28: Location of residence when recruited
Source: Coakes Consulting (May, 2008) Workforce Survey

UCML's employees and contractors also demonstrate the same tenure trends, with majority either having a mortgage or owning their own home, and a smaller proportion living in rental accommodation.

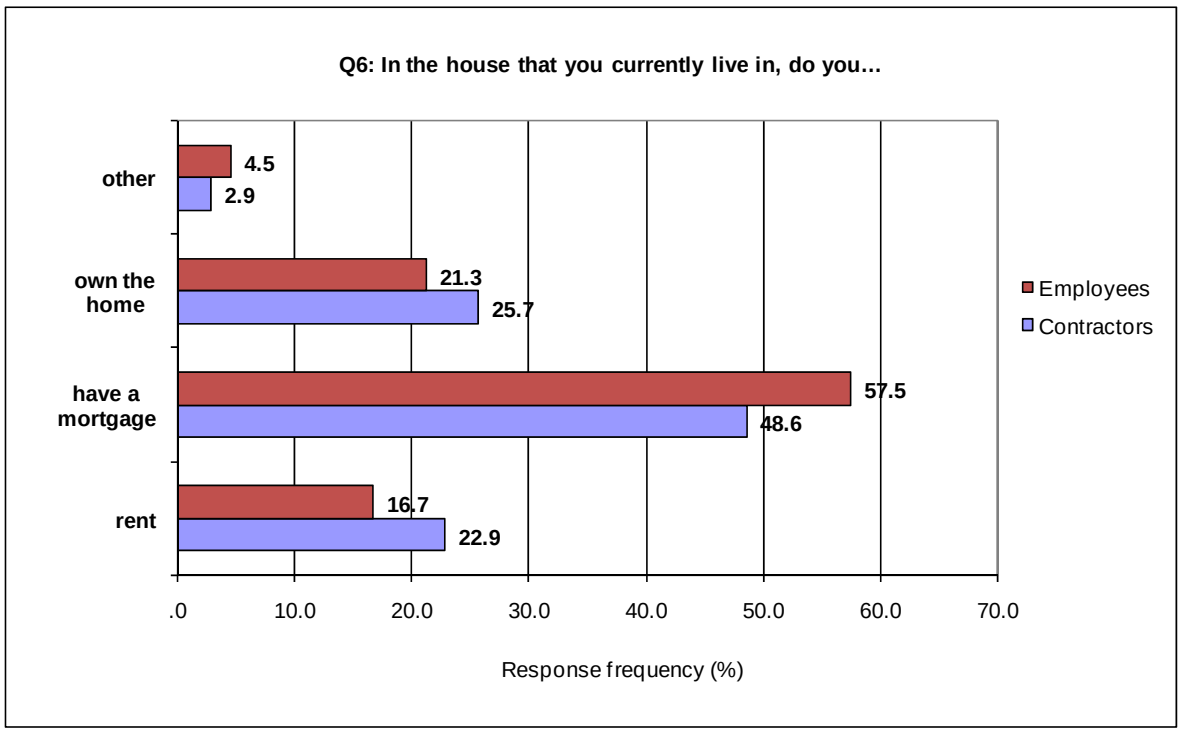

Figure 4.29: Household tenure
Source: Coakes Consulting (May, 2008) Workforce Survey

Given the similarities in demographic and residential trends between UCML contractors and employees, as well as the small proportion of contractors who took part in the current survey (14% of total survey respondents); the following sections will discuss survey outcomes for a *combined* contractor and employee workforce, which will hereafter be referred to as *UCML Workforce*.

4.2.3 Employee Occupations and Qualifications

Almost 30% of UCML's workforce had been employed by the company for a period of between 2 and 5 years, while a substantial number (37%) had worked at the operation for more than 10 years.

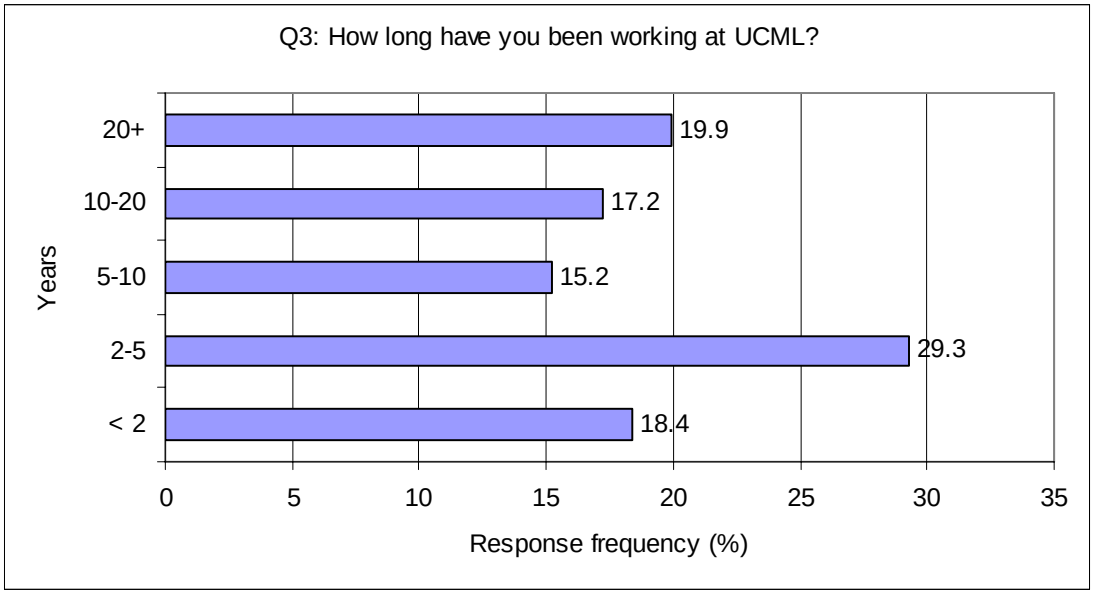

Figure 4.30: Employment duration at UCML
Source: Coakes Consulting (May, 2008) Workforce Survey

Only 5.0% respondents indicated that they had another job (paid employment) in addition to their current employment with UCML. Four of these persons were involved in farming, three were fire-fighters, and the remainder worked in a variety of roles or businesses, including concrete resurfacing and earthmoving.

Approximately one-third (33%) of employees have completed Year 12, with most employees (91.4%) having completed at least Year 10 high school education.

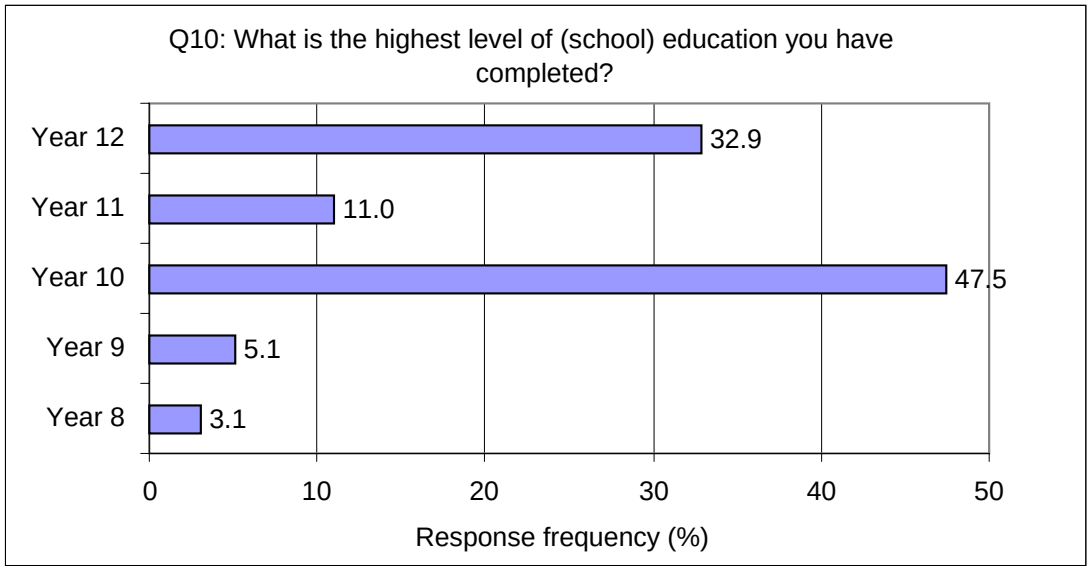

Figure 4.31: Highest level of school education completed
Source: Coakes Consulting (May, 2008) Workforce Survey

The majority of UCML's workforce (82%) has completed further education, trade certificates, or training.

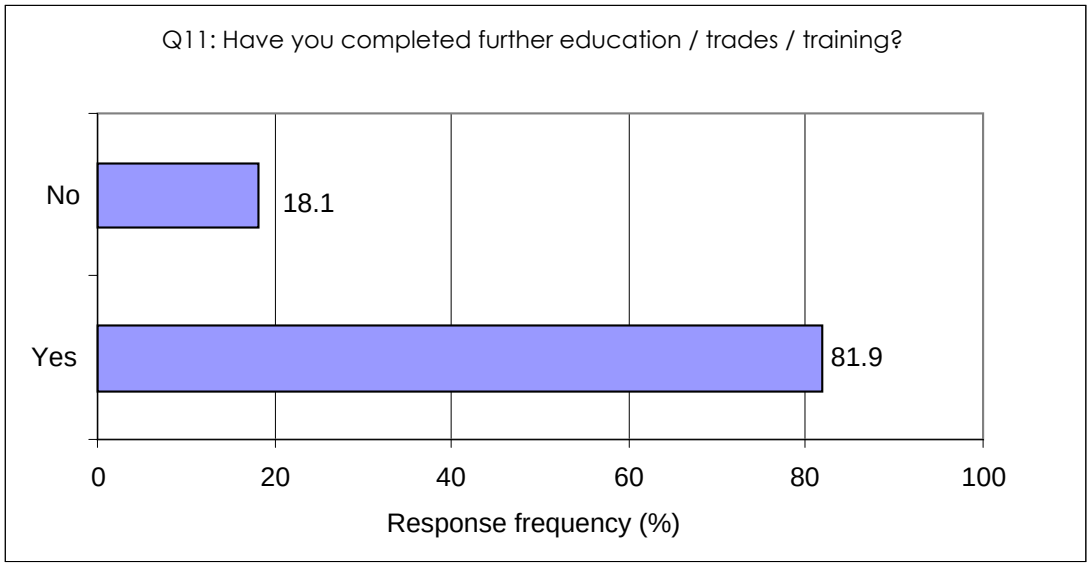

Figure 4.32: Further education, trade, or training completed
Source: Coakes Consulting (May, 2008) Workforce Survey

Given the industry's focus on Occupational Health and Safety, the majority of workforce has completed first aid (67%), and/or trade / TAFE certificates (70%).

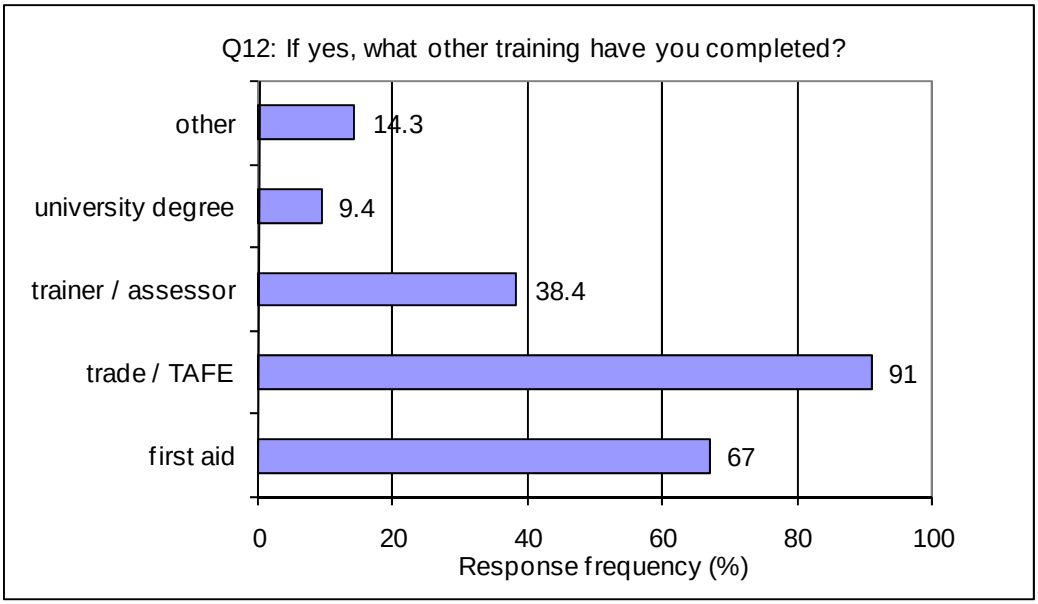

Figure 4.33: Type of further education, trade, or training completed
Source: Coakes Consulting (May, 2008) Workforce Survey

4.2.4 Household Composition

More than half of the respondents (54.5%) had partners in paid employment.

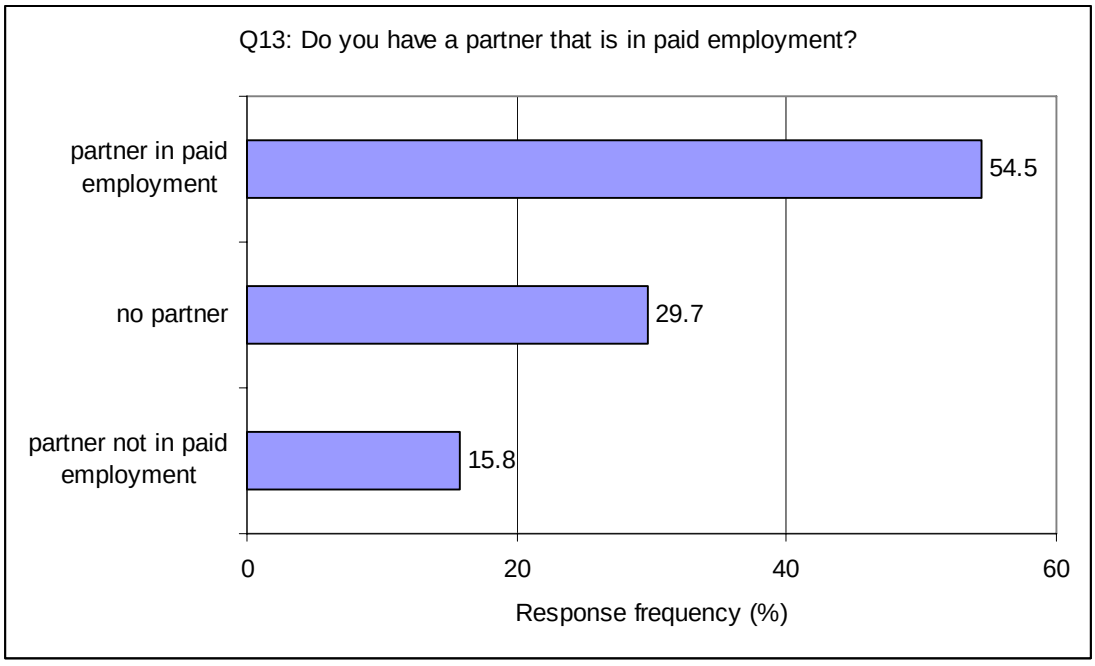

Figure 4.34: Partner employment
Source: Coakes Consulting (May, 2008) Workforce Survey

Of those partners employed, 57% worked full-time, with a further 43% in part-time roles, largely in the areas of community or personal services (27%), or clerical and administrative occupations (24%).

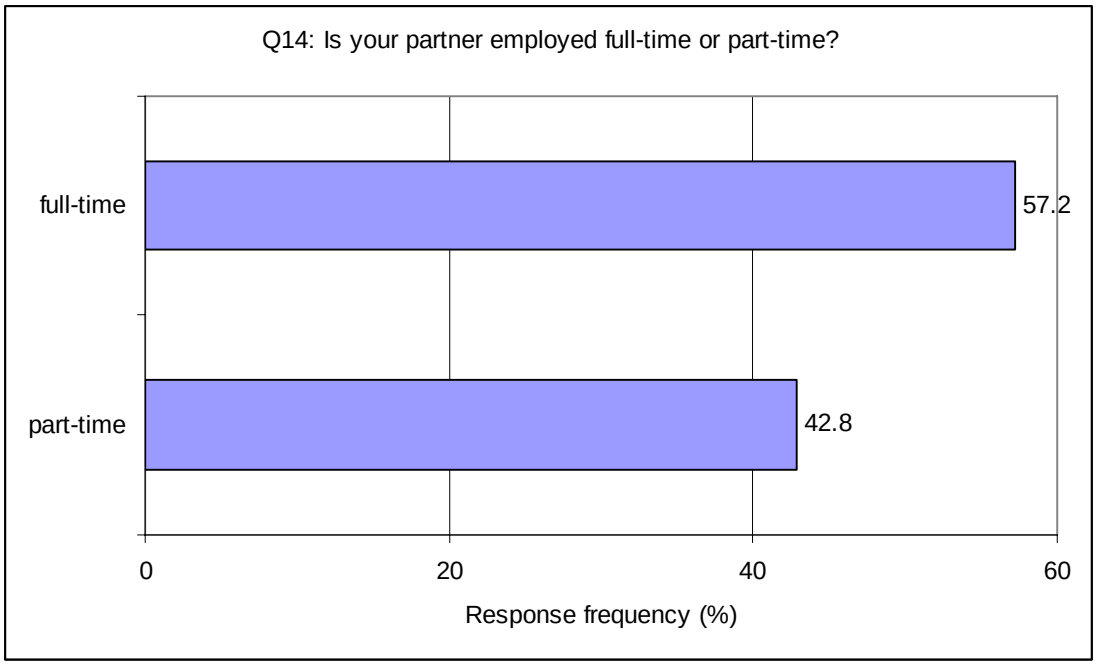

Figure 4.35: Partner employment status
Source: Coakes Consulting (May, 2008) Workforce Survey

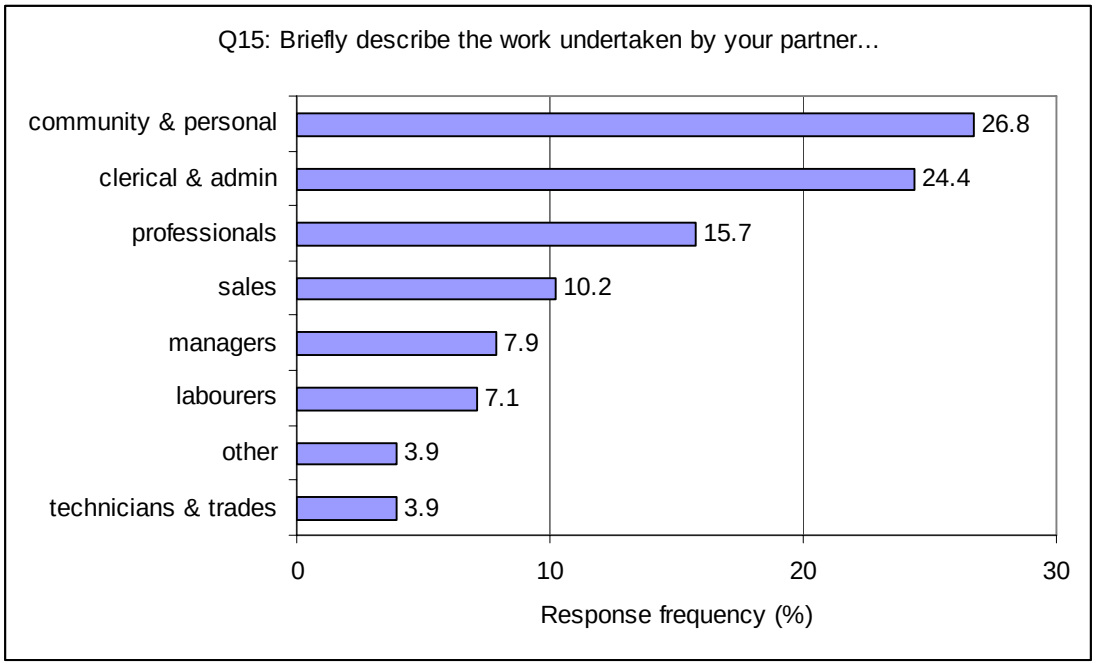

Figure 4.36: Type of work undertaken by partner
Source: Coakes Consulting (May, 2008) Workforce Survey

The average family household size for UCML's workforce is 3.04. The largest family size was 7 (four families). A relatively small proportion of respondents (17% or 42 employees) live alone; while the majority (83% or 217 employees) are couples with, or without children.

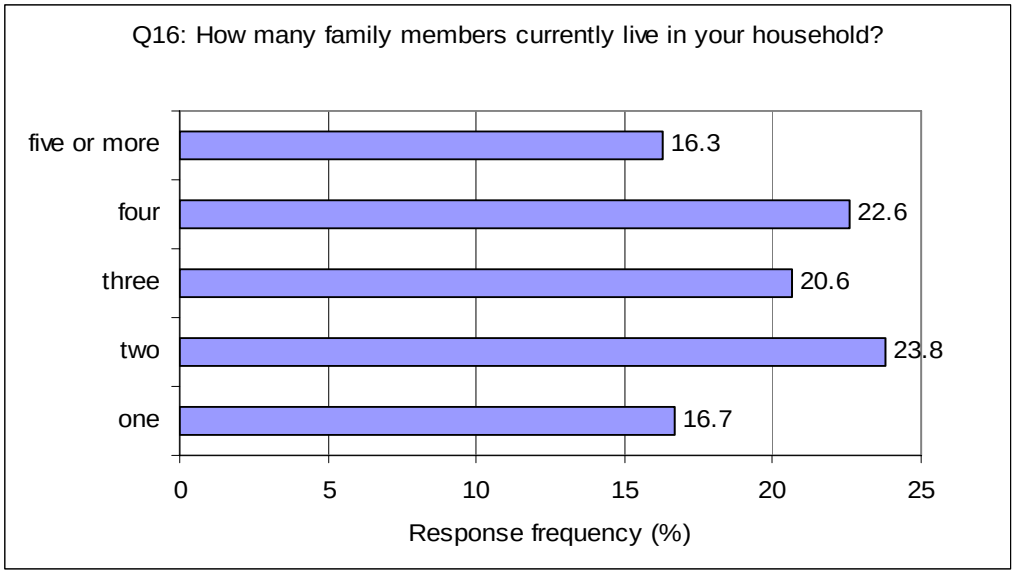

Figure 4.37: Household size
Source: Coakes Consulting (May, 2008) Workforce Survey

Forty-four percent of respondents do not have dependent children under 18 years of age that live in their household; while 41% of families have one or two dependent children (under 18 years) that live with them.

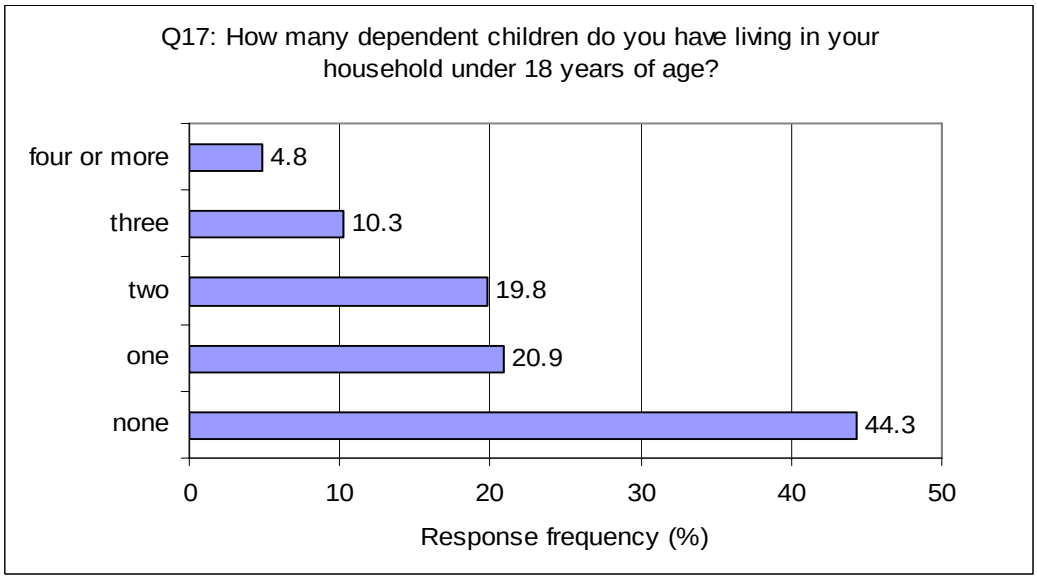

Figure 4.38: Number of dependant children
Source: Coakes Consulting (May, 2008) Workforce Survey

Of those with dependent children, around 71% have children aged 12 years or below.

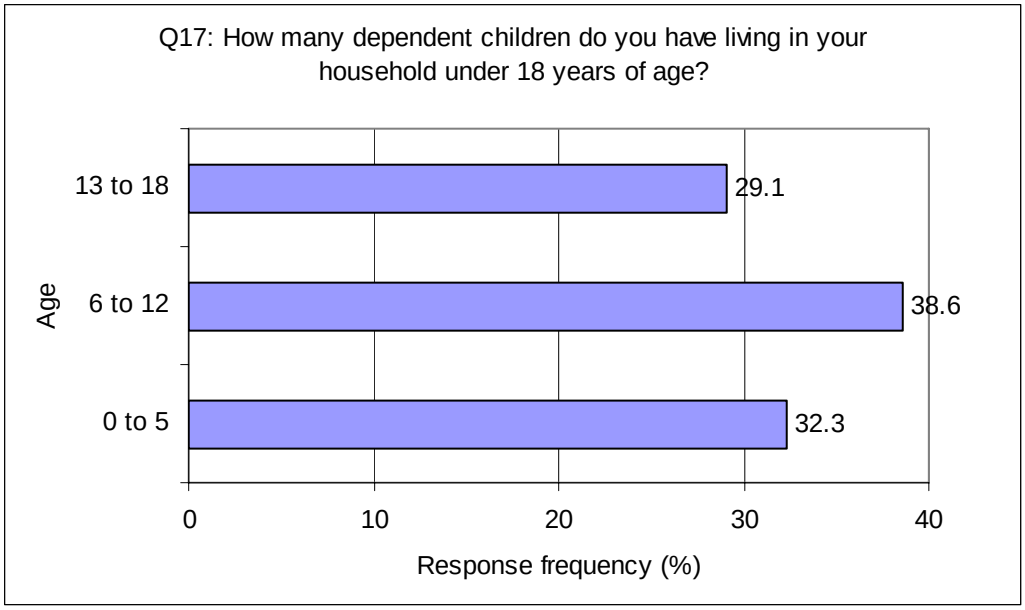

Figure 4.39: Age breakdown of dependent children
Source: Coakes Consulting (May, 2008) Workforce Survey

4.2.5 Household Expenditure

Consistent with the residential location of UCML's workforce, and indicators of community involvement, a large proportion of employee household expenditure occurs in Mudgee (73%) and Gulgong (11%).

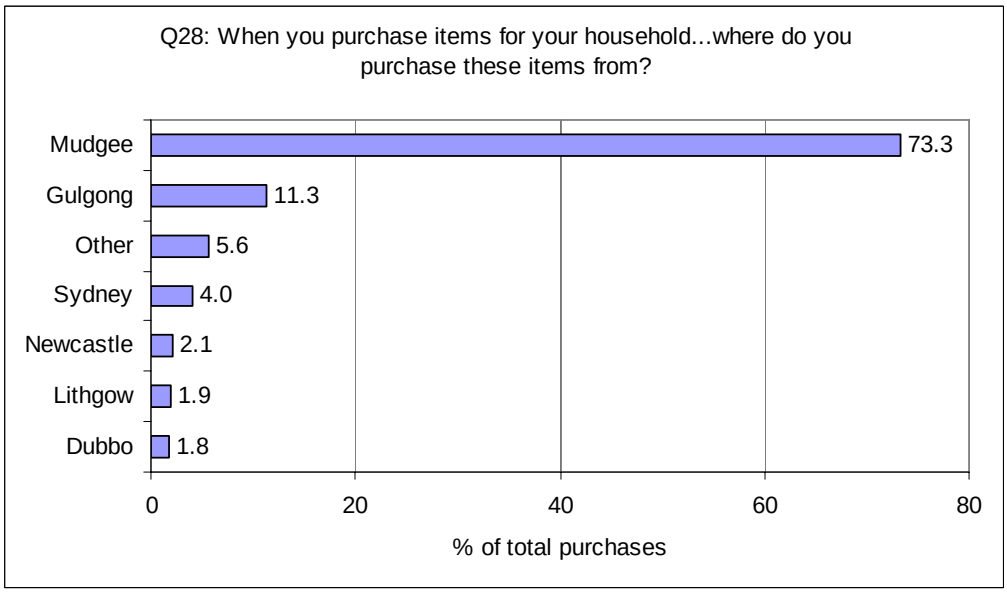

Figure 4.40: Benefits associated with the UCML operation
Source: Coakes Consulting (May, 2008) Workforce Survey

4.2.6 Service Usage

In relation to use of services, access to key services such as medical/health, education and childcare is outlined below.

Medical

Respondents indicated that 59% of all medical or health services are accessed in the regional centre of Mudgee. Aside from the regional centre, services were then most often accessed in Gulgong (13%), Dubbo (9%), and Lithgow (6%); with the most common services used being doctors (41%), dentists (20%), and hospitals (20%).

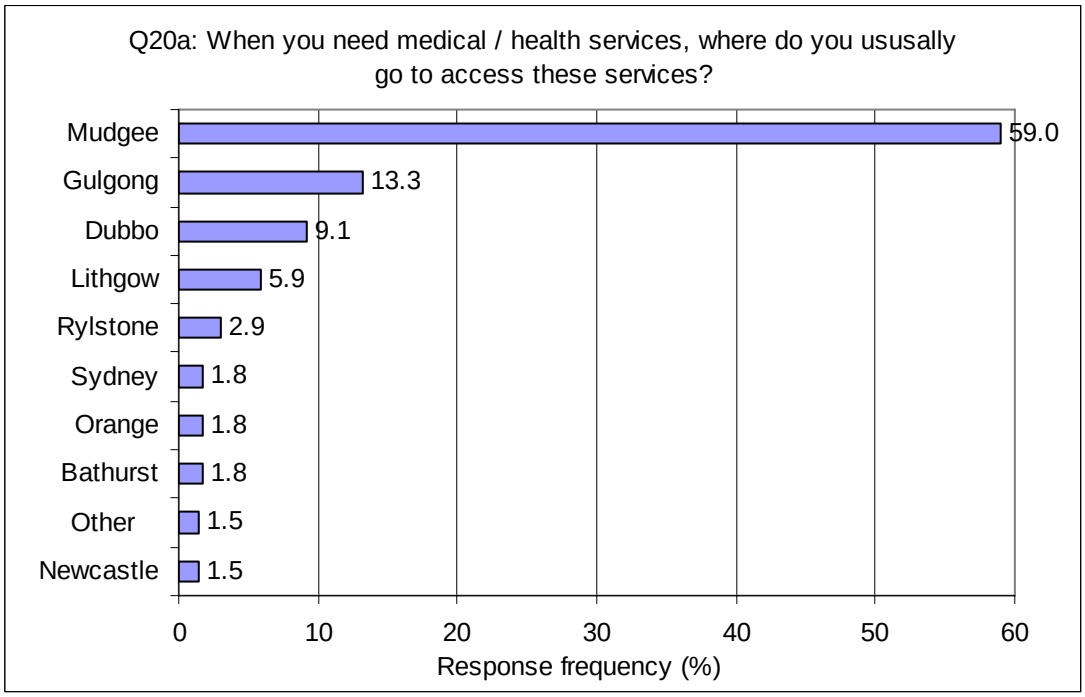

Figure 4.41: Locations of medical or health services accessed
Source: Coakes Consulting (May, 2008) Workforce Survey

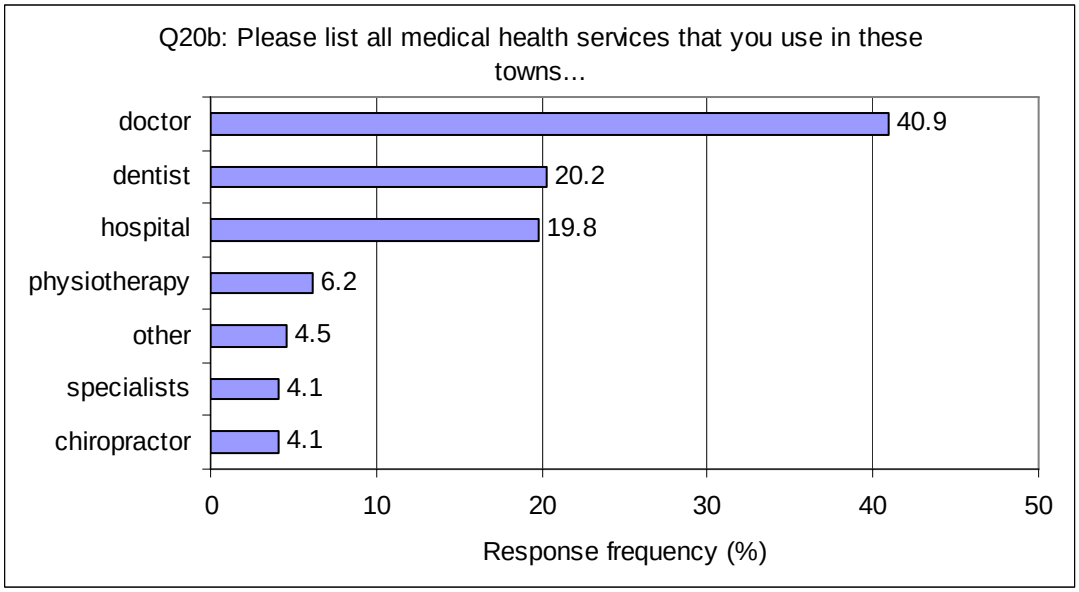

Figure 4.42: Medical or health services accessed
Source: Coakes Consulting (May, 2008) Workforce Survey

Table 4.16 below shows the most common services used across locations.

Table 4.16: Medical services by location (number of cases)

	Mudgee	Gulgong	Dubbo	Lithgow
doctor	69	14	9	
dentist	33			11
hospital	27	11		
physiotherapy	14	1		
chiropractor	8		1	

Source: Coakes Consulting (May, 2008) Workforce Survey

Childcare/Pre-School

Survey respondents indicated that 42 children belonging to their households had attended either pre school or child care in the last year. Of these, 38% (16 children) attended Mudgee Pre School; while 33% (14 children) attended Gulgong Pre School.

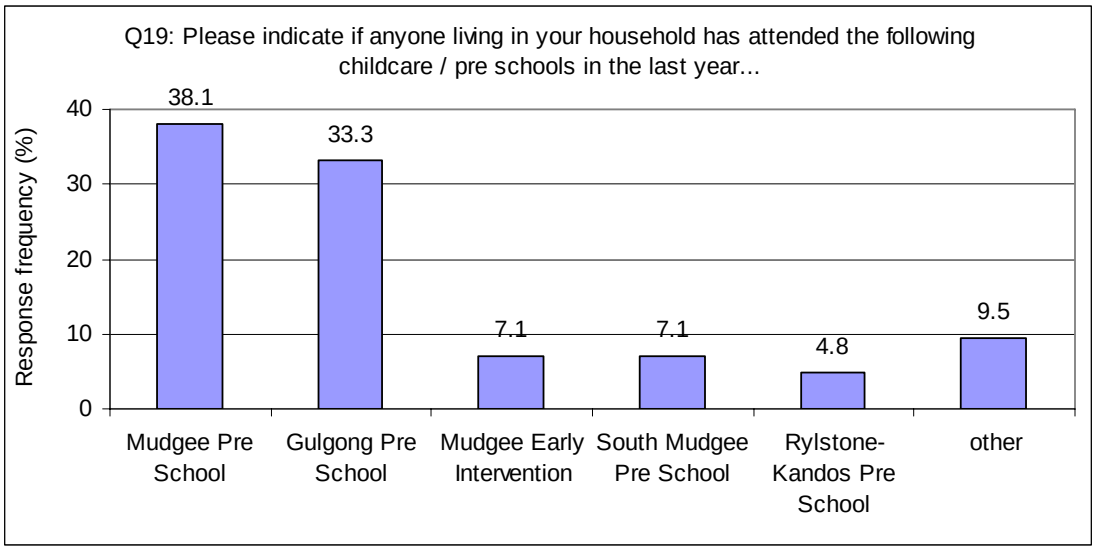

Figure 4.43: Pre school or child care attendance in the last year
Source: Coakes Consulting (May, 2008) Workforce Survey

Education

Primary School

Across the sample of respondents, 90 children were identified as having attended primary schools in the last year. Almost one-third (31% or 28 children) attended Cudgegong Valley Public School, 20% (18 children) attended St Matthews Central; with other schools including Mudgee and Gulgong Public Schools (13% and 12% respectively), and All Hallows School in Gulgong (9%).

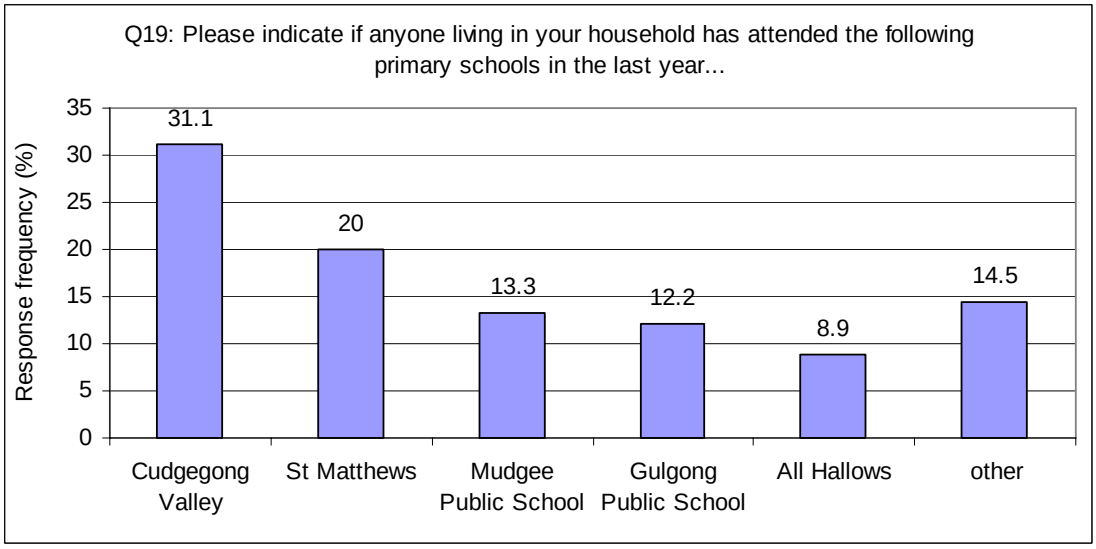

Figure 4.44: Primary school attendance in the last year
Source: Coakes Consulting (May, 2008) Workforce Survey

High School or Other Education Institution

Eighty-five students were identified as having attended a high school or other education institution in the last year. The majority (52% or 44 students) attended Mudgee High School; 20% (17 students) attended Gulgong High School; and relatively smaller numbers attended St Matthews, Mudgee TAFE, or other high schools.

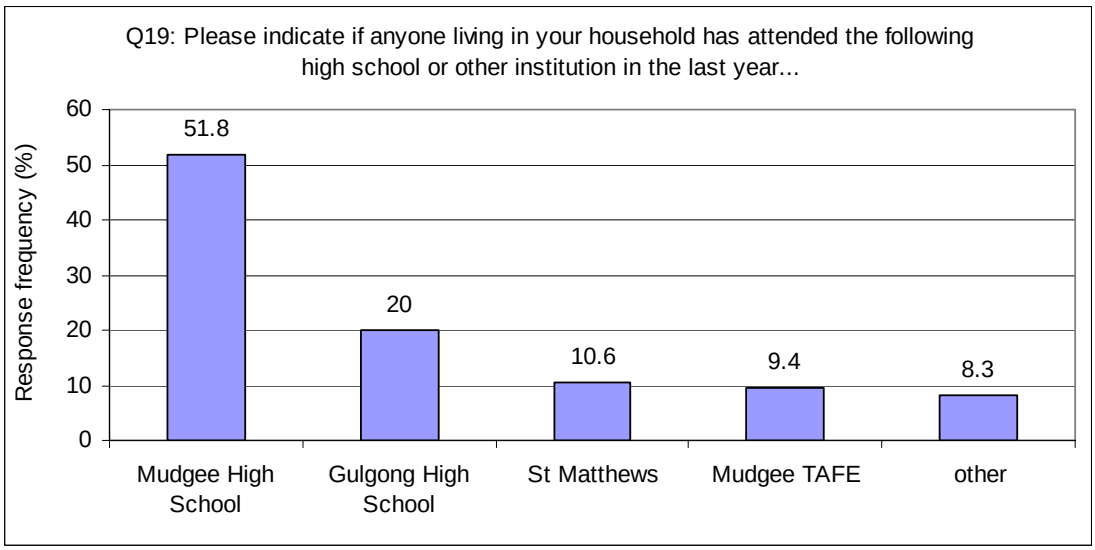

Figure 4.45: High school or other education institution attended in the last year
Source: Coakes Consulting (May, 2008) Workforce Survey

4.2.7 Community Involvement

Sport and Recreation

Over half of respondents (56%) indicated that either they, or a family member in their household, was involved in social, sport, or other recreational or community groups in the MWRC LGA.

Over 20 activities were identified; the most popular sport and recreational groups included netball, rugby league and golf. Other activities, not listed below, included the scouts, church, and four-wheel driving.

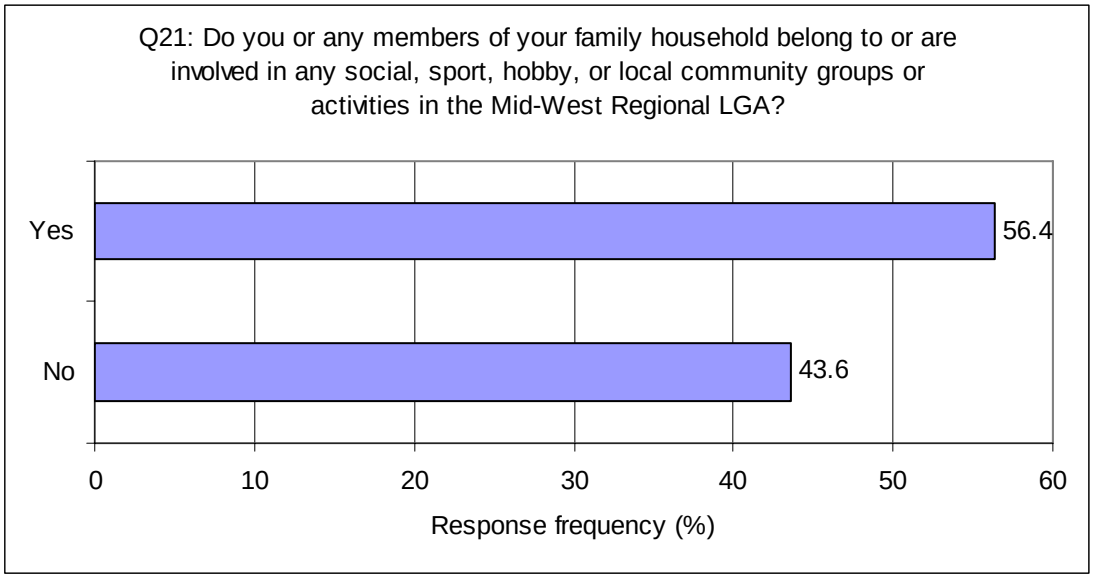

Figure 4.46: Involvement in social, sport, hobby, or community groups
Source: Coakes Consulting (May, 2008) Workforce Survey

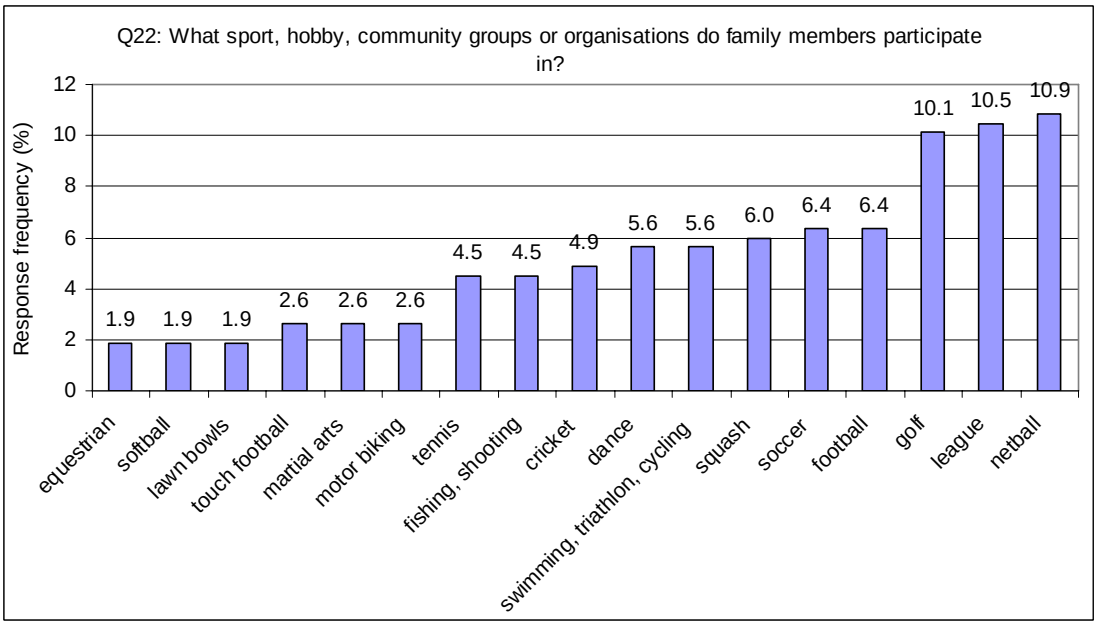

Figure 4.47: Employee and family participation activities
Source: Coakes Consulting (May, 2008) Workforce Survey

Charitable Contributions

Over half (54%) of respondents indicated that they made regular donations to local charities, with most contributing between $100 and $250 dollars annually; while over one-third (33.6%) donated in excess of $250 per annum.

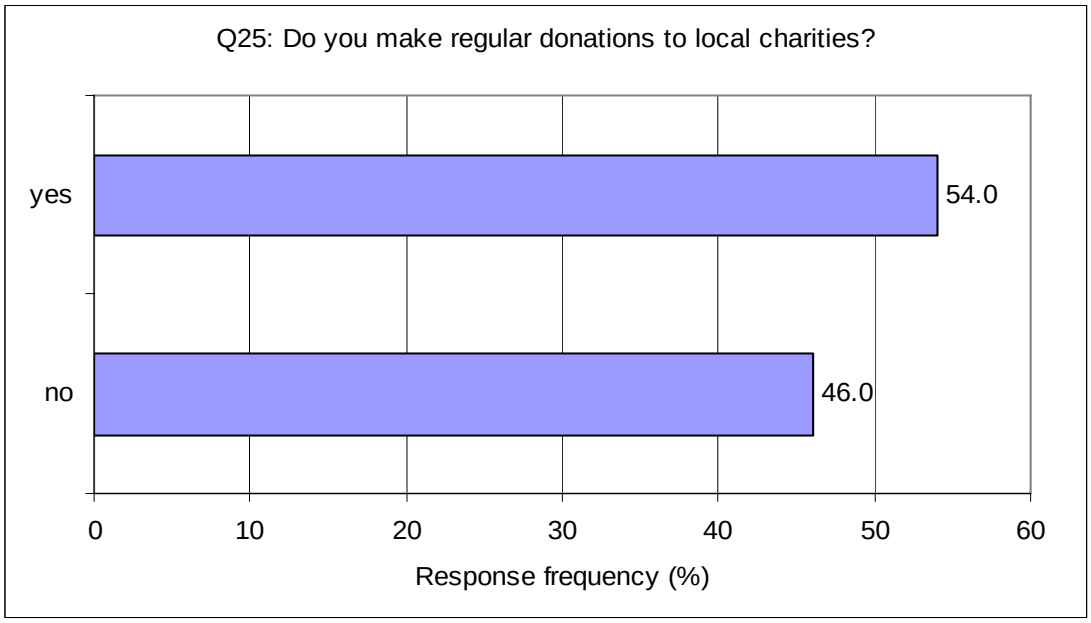

Figure 4.48: Donations to local charities
Source: Coakes Consulting (May, 2008) Workforce Survey

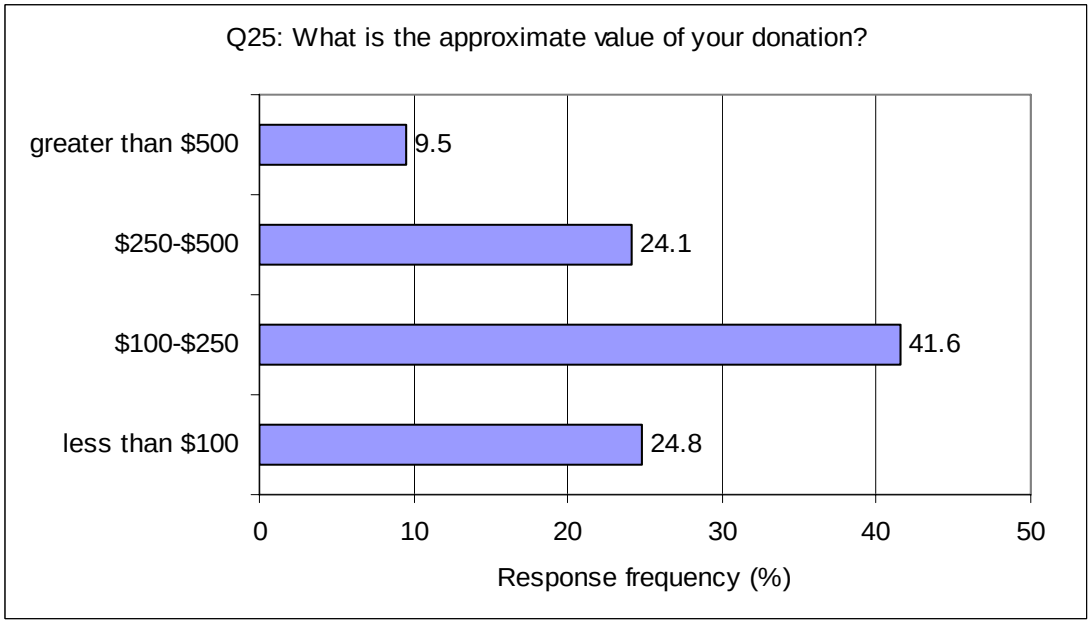

Figure 4.49: Value of contributions made to local charities
Source: Coakes Consulting (May, 2008) Workforce Survey

Of those employees who indicated they made regular donations to local charities, around 39% donate to the Mudgee Police and Citizens Youth Club (PCYC); while Careflight (16.4%) and the Salvation Army (12.7%) also benefit from the charity of UCML employees. Other organisations to benefit from employee donations included the Asthma Foundation, the Westpac helicopter, Legacy, and the Royal Blind Society.

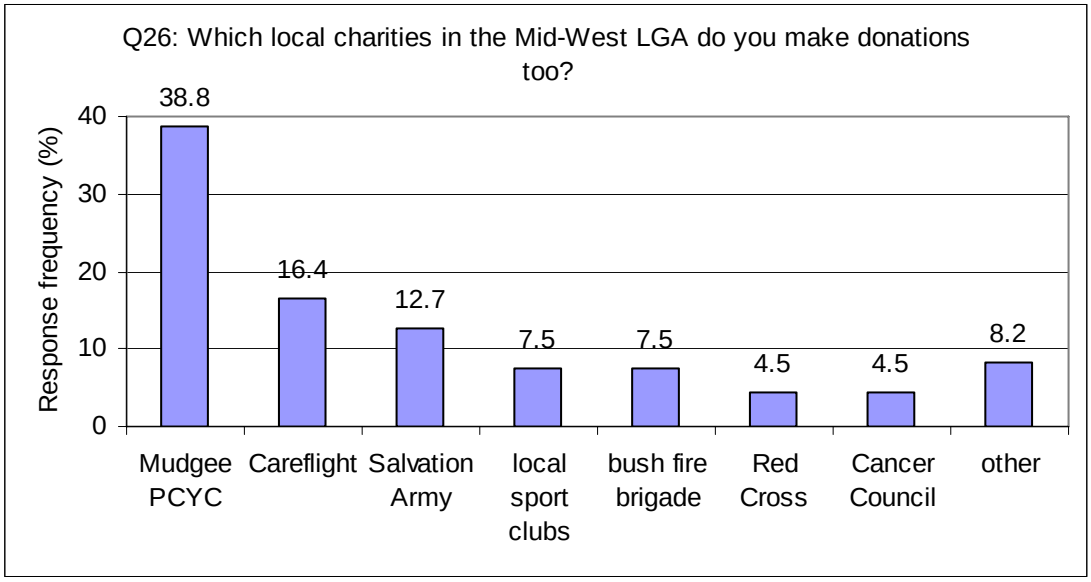

Figure 4.50: Local groups or charities receiving employee donations
Source: Coakes Consulting (May, 2008) Workforce Survey

Volunteering

A small proportion (13% or 33 persons) of UCML's workforce participates in local voluntary services. Of these, the majority (67% or 22 persons) volunteer for the bush or local fire brigades, with a further 7% involved in Volunteer Rescue. Other volunteer organisations that UCML employees are involved in include the PCYC, Meals on Wheels, local churches, the scouts, and local sports clubs.

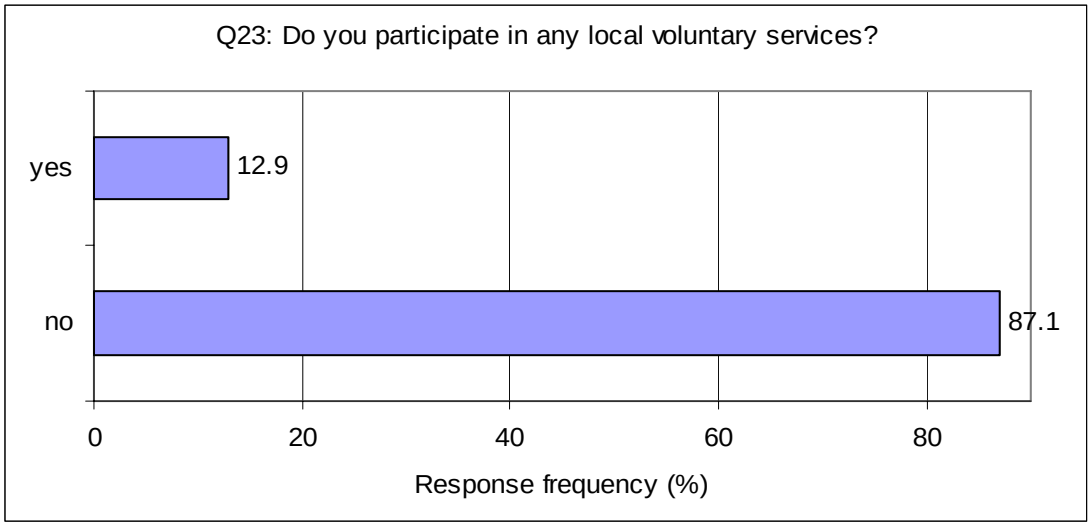

Figure 4.51: Involvement in volunteer services
Source: Coakes Consulting (May, 2008) Workforce Survey

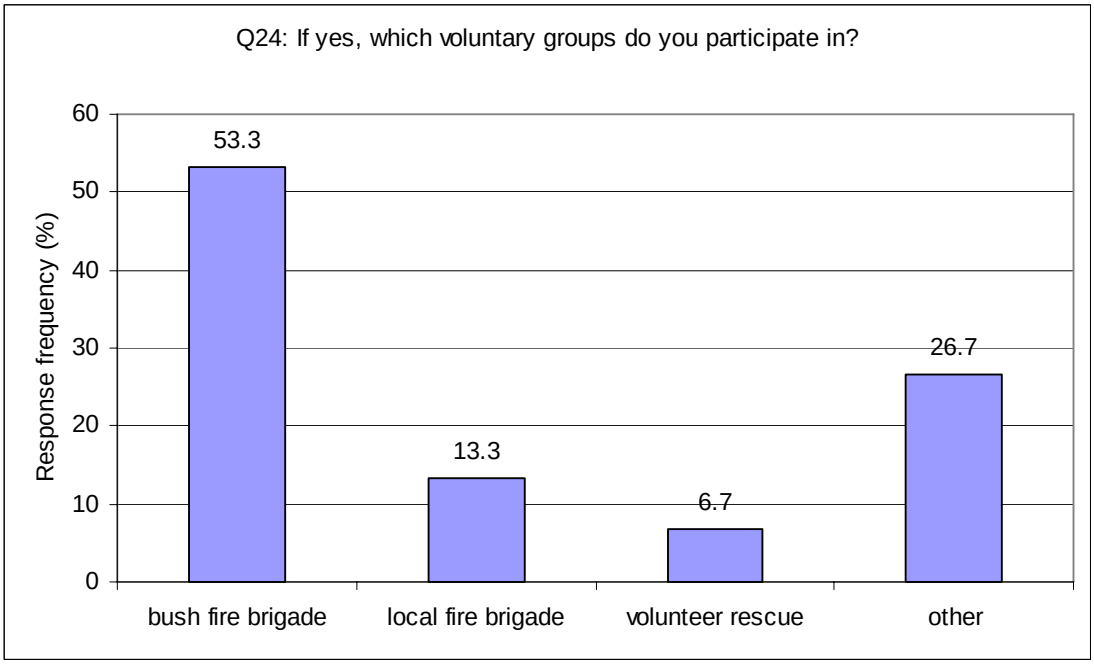

Figure 4.52: Volunteer services
Source: Coakes Consulting (May, 2008) Workforce Survey

4.2.8 Workforce Perceptions of UCML Performance

Environmental Performance

When asked about UCML's environmental performance, 55% (137persons) indicated that they were extremely or very satisfied with UCML's approach to environmental management; 26% were moderately satisfied, with only 8% (20 employees) not at all, or only partially satisfied with the company's efforts in this area.

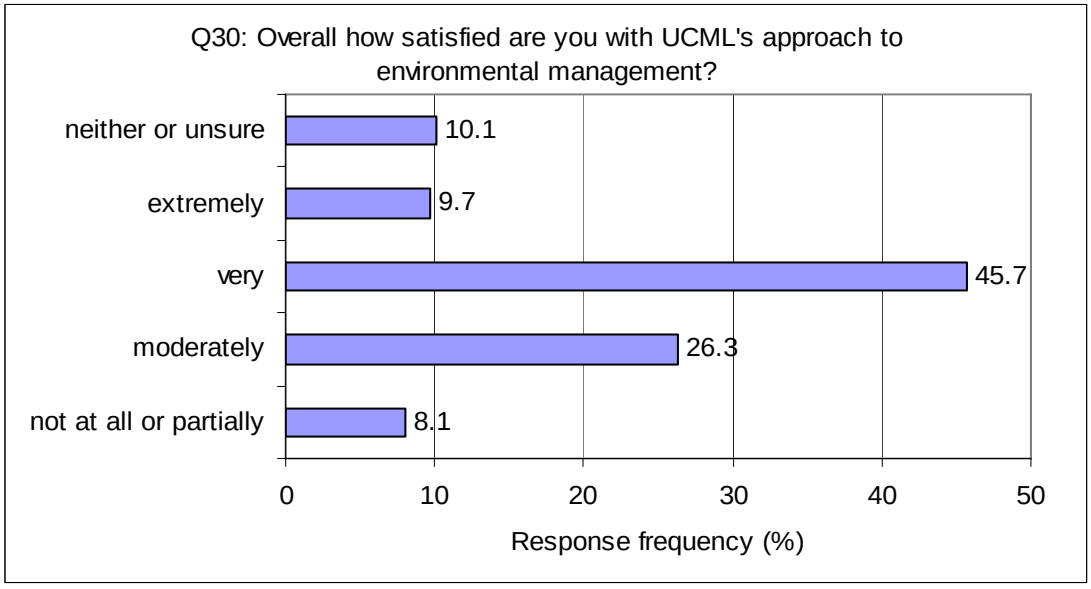

Figure 4.53: Satisfaction with UCML's environmental management
Source: Coakes Consulting (May, 2008) Workforce Survey

Survey respondents were also asked to indicate their levels of agreement relating to a series of attitude statements describing how conscious UCML is of the environment. Employee respondents tended to agree with the statements:

- I am confident that UCML would repair any damage to the environment it caused
- UCML's environmental performance is an example of good practice
- UCML conducts reliable environmental monitoring
- UCML tries to perform better than environmental standards set by government
- UCML has invested in programs that have improved the environment
- The companies activities are environmentally sustainable
- The company is taking measures to address climate change
- UCML takes responsibility for the state of the environment

Respondents were more equivocal on the proposition that:

- Profits are not more important to the company than protecting the environment

The following figure demonstrates the overall mean ratings for each of the nine attitude statements outlined above. The scale ranged from one to five with one corresponding to ***strongly disagree*** and five to ***strongly agree***. It is apparent from the figure that the mean ratings for all the items on the scale fall well above the scale mid-point. This suggests that overall employee perceptions towards UCML's environmental conscience are positive.

Ratings on the items comprising the Environmental Conscience scale were also summed to create a composite indicator of the level of Environmental Conscience perceived by the company's workforce. The overall Environmental Conscience Score obtained for UCML was 3.8 out of 5. This reflects a moderate to high conscience score.

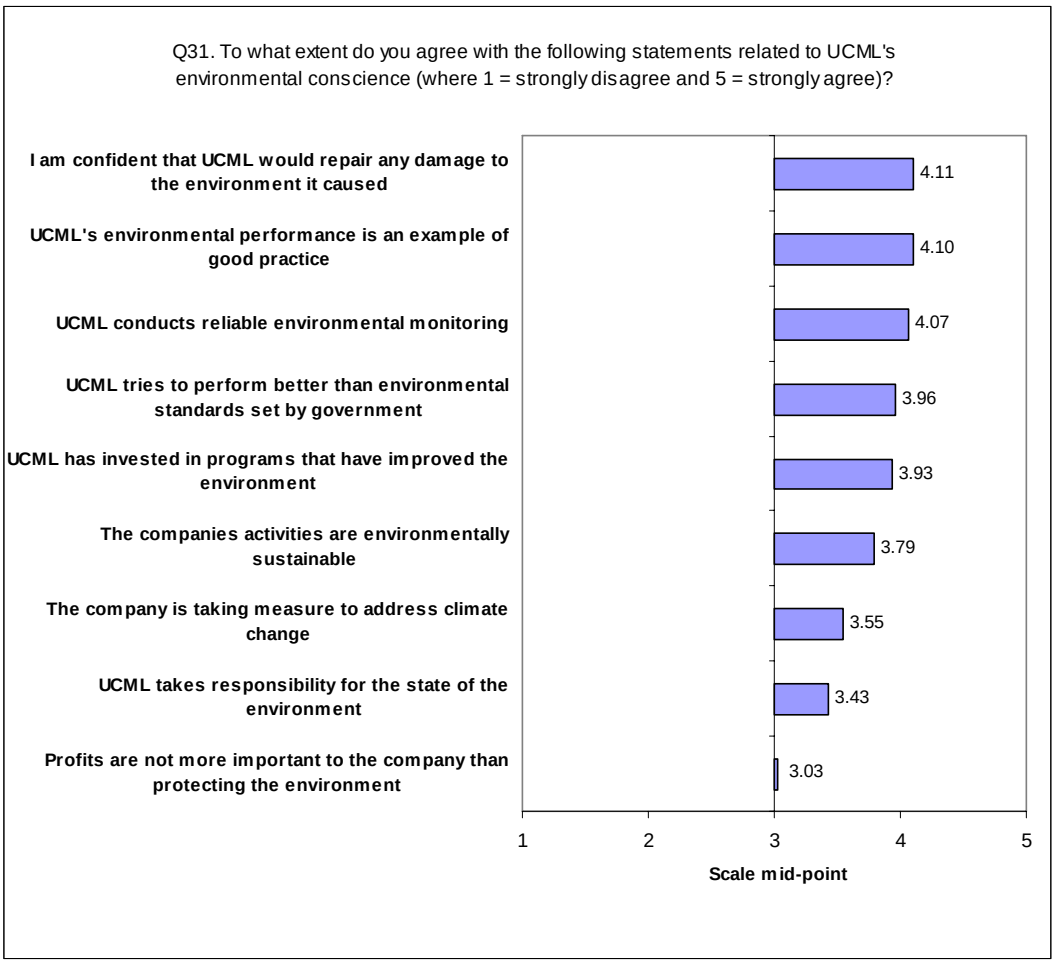

Figure 4.54: Environmental conscience indicators
Source: Coakes Consulting (May, 2008) Workforce Survey

Trust and Community Benefit

Survey respondents were also asked to indicate their levels of agreement relating to a series of attitude statements designed to measure their perceived trust in UCML and community benefit arising from the company's presence in the community. Respondents were required to indicate whether they strongly disagreed, disagreed, agreed, or strongly agreed with the statements.

The figure below demonstrates the overall mean ratings for each of the attitude statements. The scale ranged from one to five with one corresponding to *strongly disagree* and five to *strongly agree*. It is apparent from the figure that those surveyed tended to agree with all the statements, although it is interesting to note that the least level of agreement related to the statement *People trust UCML*. This suggests that there may be some level of workforce apprehension in relation to the level of trust in the company perceived by employees/the community.

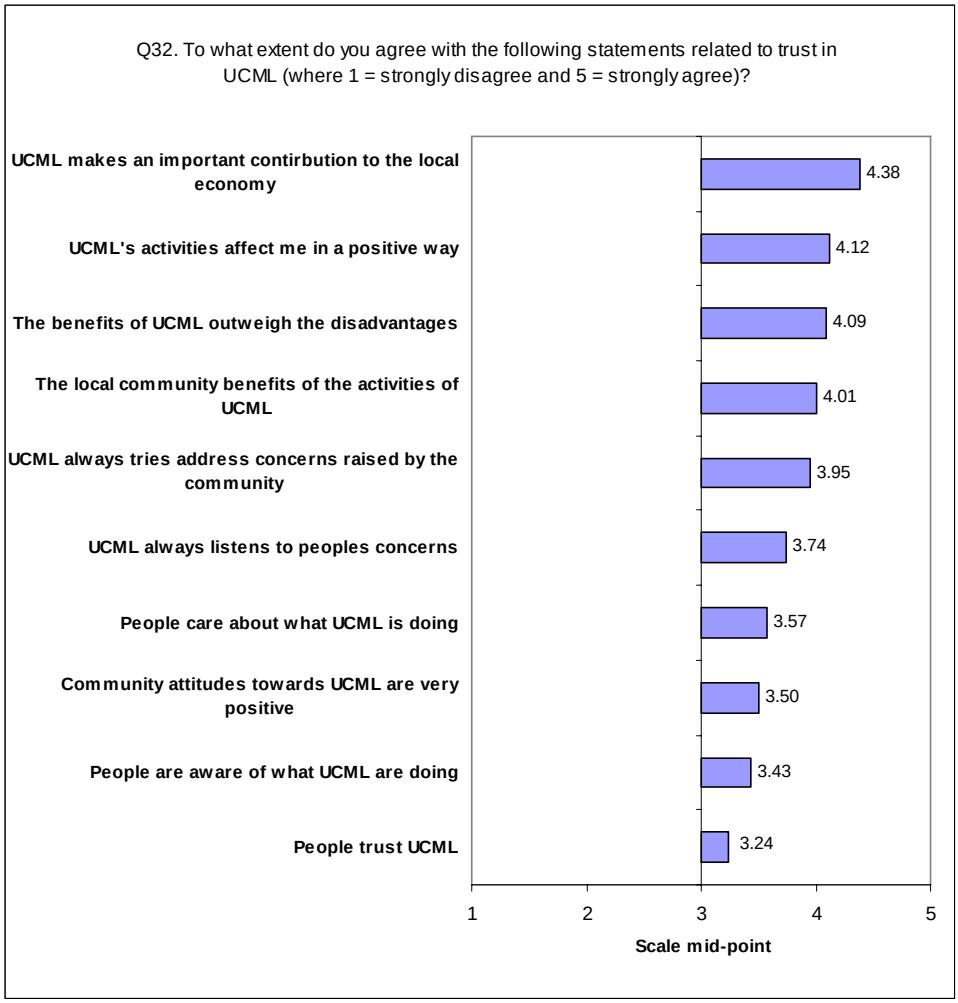

Figure 4.55: Trust and community benefit indicators
Source: Coakes Consulting (May, 2008) Workforce Survey

Ratings on the items comprising the Trust and Community Benefit scale were then also summed to create a composite indicator of perceived Trust and Community Benefit (TCB). The TCB score obtained for UCML by its workforce was 3.8 out of 5, reflecting a moderate to high score.

4.2.9 Workforce Profile Summary

The table below presents a summary of the UCML employee and contractor survey data. Key findings of the survey indicated that:

- The workforce is fairly mature with over half being aged over 35 years;
- The workforce is very stable with the majority of the workforce residing in Mudgee, and over half having lived in the same location for over 20 years;
- Nearly two-thirds of the workforce already lived locally when commencing work with UCML and just over half the workforce have been employed by UCML for 5 years or more;
- The majority of respondents (82%) have gone on to complete further education, trades, or training;
- The majority (73%) of household expenditure occurs in Mudgee with around 11% in Gulgong.
- 59% of respondents access medical or health services in Mudgee, with 13% accessing health services in Gulgong
- In the last year, 42 children of employees attended pre-school or childcare in the locality; 91 children attended primary school (one third of those attended the Cudgegong Valley Public School); and 85 children attended high school (with over 50% attending the Mudgee High School);
- Employees and their families are very active in sporting and recreation, participating in a wide range of groups and activities; and
- Over half of employees regularly donate to local charities, with nearly 13% participating in volunteer activities, particularly in the area of emergency services e.g. rural and bush fire brigades, Volunteer Rescue.

Table 4.17: Profile of UCML Employees – Main Findings

Characteristic	% or total
Sample size	259
Employees and Contractors	
Age (mode)	35-39 years
Mean years employed at UCML	9.3 years
% lived in local area when starting with UCML	65.3
% moved from outside local area when starting with UCML	34.7
Residential location	
Location:	
Mudgee	62.4
Gulgong	24.7
Tenure:	
20+ years	51.0
10-20 years	18.3
Mean tenure	19.8 years
Housing tenure	
Mortgage	56.2
Own home	21.9
Renting	17.6
Education	
Year 8	3.1
Year 9	8.6
Year 10	47.5
Year 11	11.0
Year 12	32.9
Further education, training, or trade	
Trade of TAFE certificate	70.4
First Aid	67.0
Trainer or assessor	38.4
Deputy	17.2
University degree or diploma	9.4
Under manager	3.4
Family composition	
Mean family size	3.0
% employees with no dependents under 18 years	44.7
% employees with dependents under 18 years	55.3
% employees with dependents aged 0 to 5	23.6
% employees with dependents aged 6 to 12	28.2
% employees with dependents aged 13 to 18	21.2

Characteristic	% or total
Age breakdown	
0-5 years (pre school)	13.7
6-12 years (primary school)	16.4
13-18 years (high school)	12.4
19-24 years (young singles / couple)	4.5
25-39 years (young / middle families)	22.3
40-49 years (mature families)	17.5
50 years+ (pre-retirement)	13.2
Medical / Health Service Access	
Locations (% of total services accessed):	
Mudgee	59.0
Gulgong	13.0
Dubbo	9.1
Lithgow	5.9
Services accessed (% of total services accessed):	
Doctor	40.9
Dentist	20.2
Hospital	19.8
Education	
Pre school or child care	
Mudgee Pre School	38.1
Gulgong Pre School	33.3
Primary school	
Cudgegong Valley Public School	31.1
St Matthews Central School	20.0
Mudgee Public School	13.3
Gulgong Public School	12.2
High school or other educational institution	
Mudgee High School	51.8
Gulgong High School	20.0
Community Involvement	
Average community groups per household	1.8
Most popular activities (% of total responses):	
Netball	10.9
Rugby league	10.5
Golf	10.1
Charitable Contributions	
% of employees who make regular donations	54.0
Most common recipients of employee donations (% of total responses):	

Characteristic	% or total
Mudgee PCYC	38.8
Careflight	16.4
Salvation Army	12.7
Volunteer Involvement	
% of employees who volunteer	12.9
% of volunteers who participate in:	
local or bush fire brigade	66.6
Volunteer Rescue Association	6.7

Source: Coakes Consulting (May, 2008) Workforce Survey

In regard to workforce perceptions of UCML's performance:

- 55% of employees/contractors were either extremely or very satisfied with UCML's approach to environmental management, with only 8% not al all, or only partially satisfied;
- Employee/contractor perceptions towards UCML's environmental conscience are positive; and
- Employee/contractor perceptions of trust in UCML and community benefit arising from the company's presence in the community are also very positively viewed.

5.0 Impact Assessment

This section summarises the issues and perceived impacts identified by a range of stakeholders with an interest in the proposed UCML Continued Operations Project. As has been highlighted earlier in this report, impact assessments are likely to be deficient if they discount the effect on people's values, social dynamics and beliefs about particular events. Those people directly affected are in the best position to say how they actually experience events. Further, people's own predictions, in the form of optimism and fears, are a significant component of their behaviour and hence social impacts (Ross 1990).

Consequently, in this section of the report, issues and attitudes have been expressed in line with stakeholder feedback relating to the proposal. Where possible, throughout the assessment process, stakeholder views have been validated through the development of community information sheets summarising the key findings/outputs of the various phases of the assessment and through the provision of feedback sheets that afford further community comment and input.

5.1 Stakeholder Analysis

Social impact assessment involves the cooperation and coordination of a number of 'social partners' or stakeholders. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- Live nearby a resource;
- Have an interest in the proposed action or change;
- Use or value a resource;
- Are interested in its use; or
- Are forced to relocate.

As previously highlighted, in the current assessment, stakeholders have been identified through UCML's existing stakeholder networks; through previous work undertaken in the area; and through a community networking approach, to ensure a representation of stakeholder views associated with the project. A total of 507 stakeholders (including employees and contractors) were consulted as part of the program, the stakeholder groups involved are summarised in the following table.

Table 5.1: Stakeholders consulted

Stakeholder Group	Number
Landowners located within and immediately adjacent to the project area	71
Employees and Contractors	259
Community Members, Groups and Organisations	114
Service Providers: • Accommodation • Business • Education • Health • Tourism • Community Services • Local Government	63
TOTAL	**507**

Source: Coakes Consulting (2008)

The assessment process was also presented to the MWRC staff and councillors at commencement of the assessment program, during a council meeting. In addition, presentations have also been provided to, and input sought from, the Ulan Coal Community Consultative Committee; and a number of community information sheets have been produced to summarise the project and outputs of the assessment program. These can be found in the Appendices of this document.

Issues emerging from the consultations are outlined in more detail below.

5.2 Community Perspectives on Impacts

This section outlines the issues/perceived impacts identified across a range of stakeholders with an interest in the Project. Approximately 507 consultations were undertaken across the Midwest Regional council Area, with a focus on the townships surrounding the operations, Ulan Village, Mudgee and Gulgong.

Information pertaining to the Environmental Assessment for the Project, including the Social Assessment program was also presented at the Ulan Community Open Day (15 November 1008). Local residents and landholders commented on their appreciation of UCML's communication and consultation mechanisms for the project, appreciating the company's proactive contact and openness to better understand community issues in the project assessment process.

5.2.1 General Overview

This section outlines the emerging issues / perceived impacts identified by a range of stakeholders with an interest in the project. Figure 5.1 illustrates the key issues arising from the consultation process. The graph is provided to identify salience of issues, however it should be noted that all issues raised were considered of importance to those consulted.

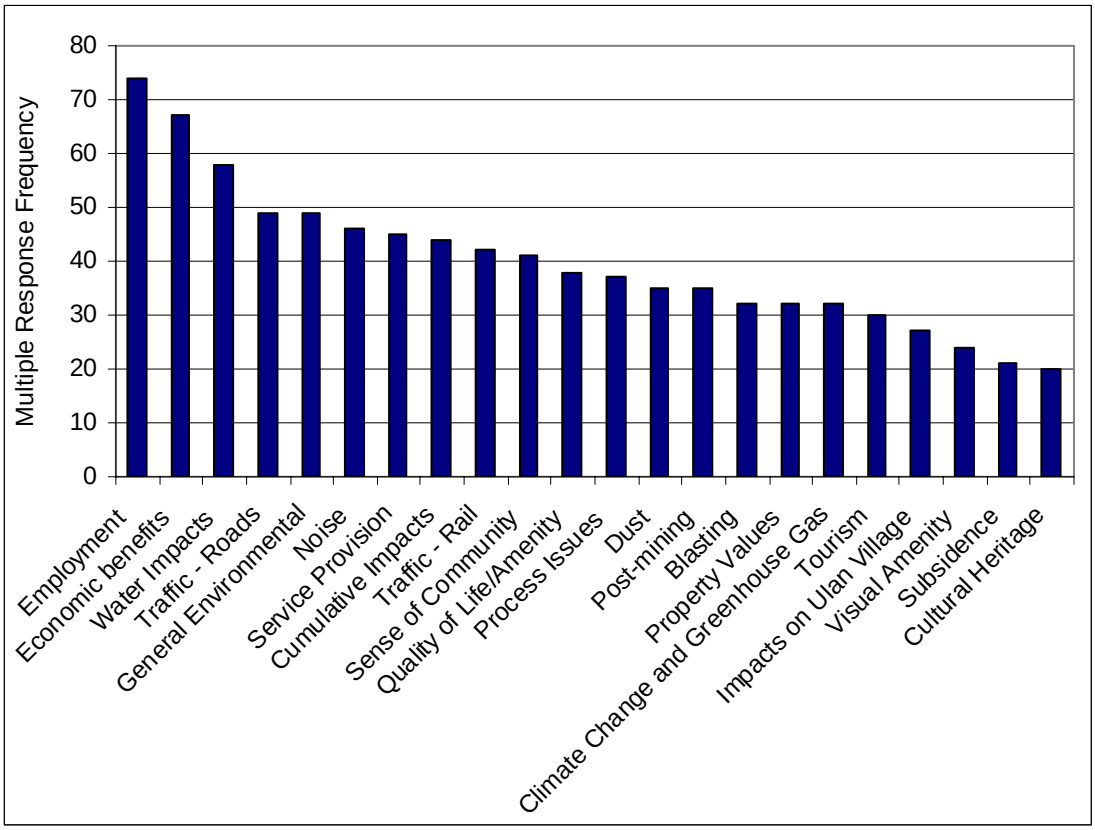

Figure 5.1: Issues Assessment - Community Issues Identified Through Consultation (excluding impacts raised by employees and contractors)

In general, many people noted that Ulan Coal Mines is an existing operation and that their concerns largely related to ensuring that current impacts associated with mining were not exacerbated. Issues raised were also closely associated with the geographic location of participants, with proximity to local infrastructure (e.g. main roads) and the open cut or underground operations seen to influence stakeholder perceptions of issues/impacts associated with the project.

Regional economic benefits of the project, and employment opportunities, were most frequently cited. In respect to potential negative impacts, water impacts, road traffic and a potential increase in noise levels were the most frequently identified themes. Cumulative impacts, as a result of the presence of new mines in the area, were also of concern. Other issues raised included changes to people's quality of life and sense of community; as well as dust and vibration associated with blasting.

Each of the issue themes identified are described in the sub-sections that follow. To ensure confidentiality, personal references have been removed.

Economic and Employment Opportunities

Many of those consulted believed that the project would bring flow-on benefits to local communities and the region more broadly. It was generally felt that regional growth would be beneficial, provided that businesses and service providers had enough time to plan for the company's growth. Potential direct and indirect employment opportunities were also highlighted. However, there was a sense that employment by mines in the area also resulted in wage inequities within the community (between those employed by the mining industry and those that are not) and issues regarding the attraction and retention of staff across other key sectors and service areas.

Potential impacts on water

Many participants raised concerns regarding groundwater extraction and dewatering during the underground mining process and its effect on domestic bores and local waterways. Stakeholders also wanted to know more about water treatment and management, and the potential for water sharing arrangements between UCML and other mines.

Increased traffic on local roads

Although acknowledged as an existing problem in the area, many of those surveyed believed that poor road conditions and traffic problems would be exacerbated as a result of further mining development. Such issues were perceived to be directly affecting local residents, with a noted increase in "peak-hour" traffic, not previously experienced in the locality.

In addition, community members were concerned about general road safety issues – speeding, a lack of overtaking lanes, limited bus bays; as well as increased traffic noise.

General environmental concerns

Stakeholders also raised concerns about the overall effect of mining on the environment. The potential effect of mining activities on wildlife, flora, fauna and biodiversity, were some of the more commonly identified general environmental concerns.

Noise from operations

Noise was of concern, particularly to some residents and landowners who indicated they had moved to the area for peace and quiet and did not want that to change. Some residents remarked how noise appeared to carry across the area, due to temperature inversions, wind patterns and the local geography. Overall, it was felt that noise levels should not increase as a result of further development.

Impacts on community services

During the consultation process respondents reported that existing services were under pressure, particularly health services; and expressed that there was also a lack of youth services and facilities in local towns. In addition, further difficulties were expected in accessing skilled people within the locality to fill critical roles.

Cumulative impacts of mining

A common concern raised was about the number of new and proposed mines in the region and the associated cumulative impacts of noise, dust and water. Comments were made as to how such impacts would be addressed by the company in their assessment program and by the broader industry within the region.

Rail transport and associated impacts

Stakeholders also questioned whether the existing rail line could cope with increased production. Some residents and members of the Wollar community raised concerns over the potential for increased noise associated with an increase in rail movements.

A loss of sense of community

A number of community members felt that the recent growth of the mining industry was affecting the nature of the community, and that it was becoming more fragmented. Participants also outlined that residents were participating less in community groups and organisations; and noted that a change in public insurance requirements meant that it was much more difficult for local community events to take place.

Quality of life

A number of residents indicated that they had moved to the area as it offered a particular lifestyle, or was an excellent place to raise a family or to retire. Consequently, they were concerned about the changing nature of the amenity of the area.

Process issues

Participants welcomed the early approach by UCML to involve them as part of the social assessment program, however, also expressed a lack of trust in the development approval process generally. In this regard it was felt that in other recent development processes, community members had not had the opportunity to raise concerns nor have these been adequately addressed.

Dust impacts

Stakeholders consulted acknowledged that dust was not exclusively due to mining activity, but also related to the recent drought. They were concerned about cumulative dust impacts due to the presence of other mines in the area, and again noted that there was an expectation that dust would not increase with further mine development.

Post mining activities

Several respondents queried the final landform and intended land use post mine closure. Also of interest were the proposed rehabilitation activities and management of water issues i.e. recharging of aquifers in the region. On a social front, concerns related to the loss of community due to the recent purchase of local homes and properties by other mining companies.

Impacts of blasting

Several residents raised noise and vibration concerns associated with blasting. However, it was acknowledged that the company had addressed the issue to some extent by informing the community of upcoming blasts. Again it was expected that future blasting impacts would be managed effectively should the project proceed.

Views on Property value

Some community members commented that increased mining operations could make selling their homes more difficult; whilst others felt that property prices in the area may increase due to a greater demand for housing. It was also felt that this may affect housing affordability, particularly for those individuals and families not directly involved in the mining industry.

Potential greenhouse gas emissions and climate change

Several participants queried whether greenhouse or other gases would be released from the coal seam during the mining process; and were concerned as to the potential impacts of mine development on climate change broadly.

Impacts on the tourism sector

Given the prominence of tourism in the area, some people expressed a concern about the effect of mining on the tourism industry. Of particular concern was the potential effect of increased mining traffic on tourist drives; changes to the aesthetics of the river systems due to altered/changed water flow; and the pressure that may be placed on local accommodation providers, particularly during peak tourist periods. Others felt that additional population in the area would facilitate business opportunities for tourist operators and yield greater opportunities for employment in this sector.

Impacts on the Ulan Village

A few participants felt that as a result of recent housing purchases by other mining companies, there were fewer residents remaining in the Ulan Village. This was seen to have had a dramatic affect on the village's sense of community, as well as reduced community participation and social interaction. General traffic movements and safety issues were also mentioned, particularly issues regarding road transport trucks not slowing down to 50km/hour through the village and non-adherence to school speed zones.

Visual Amenity

A few landowners raised concerns relating to the potential for increased light-glow from operations, and the further development of infrastructure such as power lines and poles, fans, and dewatering bores.

Subsidence

Those closest to the underground operations were concerned with the potential impact on their homes due to undermining; while general questions related to the effects of subsidence were also raised by members of the broader community.

Local cultural heritage

A few respondents expressed concern over the potential impact or disturbance on cultural heritage that might occur as a result of the Project. Although some people were unaware of Indigenous significance within the area, many stated they did not want to see "Hands on Rock" or the "The Drip" impacted.

5.2.2 Stakeholder Group Perspectives on Impacts – A comparative analysis

Landowners' perceptions of impacts

The figure below shows impacts identified by landowners. Consistent with general community perception, economic benefits and employment were the most frequently identified impacts; followed by traffic (road and rail), dust, cumulative impacts, noise and blasting.

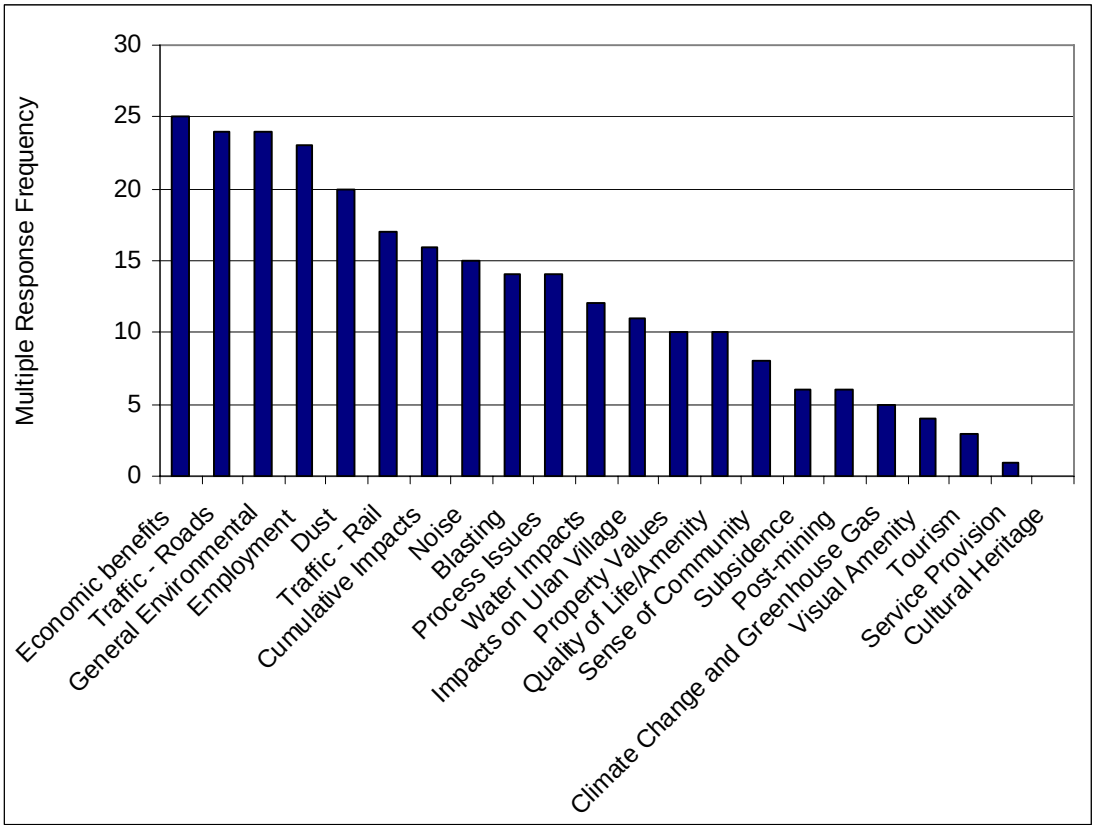

Figure 5.2: Landholders' perceptions of impacts
Source: Coakes Consulting (May, 2008) Employee and Contractor Survey

Broader community perceptions of impacts (community groups)

Figure 5.3 below shows impacts identified by broader community groups.

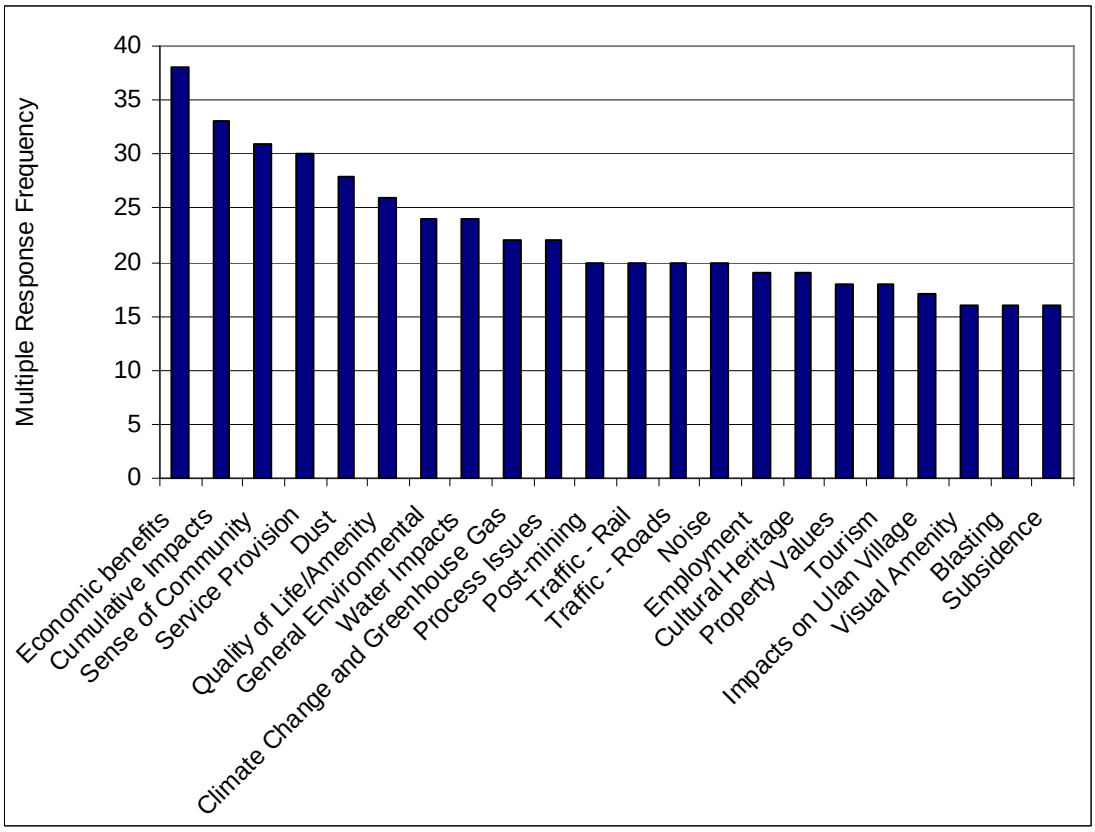

Figure 5.3: Broader community perceptions of impacts
Source: Coakes Consulting (May, 2008)

As with the other stakeholder groups, economic benefits and employment opportunities at the mine were the most commonly identified impacts. However, concerns around the cumulative impacts associated with multiple mining developments were also raised, as well as perceptions of a reduced sense of community due to a strong industry presence in the area. Some respondents also noted strains in service provision as a key impact of mining activities in the area.

Environmental Group perceptions of impacts

To obtain the view of members of environmental groups in the area, a forum was held with members of the Mudgee District Environment Group. The issue themes raised by this group were broad ranging and encompassed all of the impact areas identified above. Specific issues included:

- Cultural heritage;
- Cumulative impacts from mining in the area, including water, noise, dust and traffic (rail and road);
- Dust and vibration associated with blasting and general operations and subsequent impact on residents' quality of life;
- Greenhouse gas and the effect of mining on climate change more broadly due to increased production, including the psychological impact (depression) of climate change on individuals;
- Noise from operations, blasting and traffic (rail and road);
- Process issues, lack of trust in the approvals process generally due to past experiences with the process, values not being assessed; employment benefits being overstated; the need for honest and transparent communication processes.
- Subsidence and the effect it may have on landforms, land use and ecology;
- Surface water and ground water, including where water comes from, water management on and off site, the effect of mining on groundwater systems, aquifers and bores and the Goulburn River;
- Intended use of the area post mining, especially land rehabilitation and potential future land uses;
- The changing nature of the community and its economic base as land uses change from agricultural to mining and associated changes to quality of life;
- The impact of an increased workforce on housing, social infrastructure and service provision in Mudgee and Gulgong;
- The impact of mining on the ecology, flora, fauna and the biodiversity of the area;
- The impact that an increased workforce and increased production will have on road and rail traffic, including noise and road conditions; and
- The need to be able to access reliable and clear information to facilitate meaningful participation and involvement.

Service Provider perceptions of impacts

As part of the interviews/surveys which assessed service capacity of key service providers (Health, Education, Childcare) in the Ulan, Gulgong and Mudgee townships, respondents were also asked about their perceptions of mining activities in the region. The figure below illustrates issues identified by these service providers in the region.

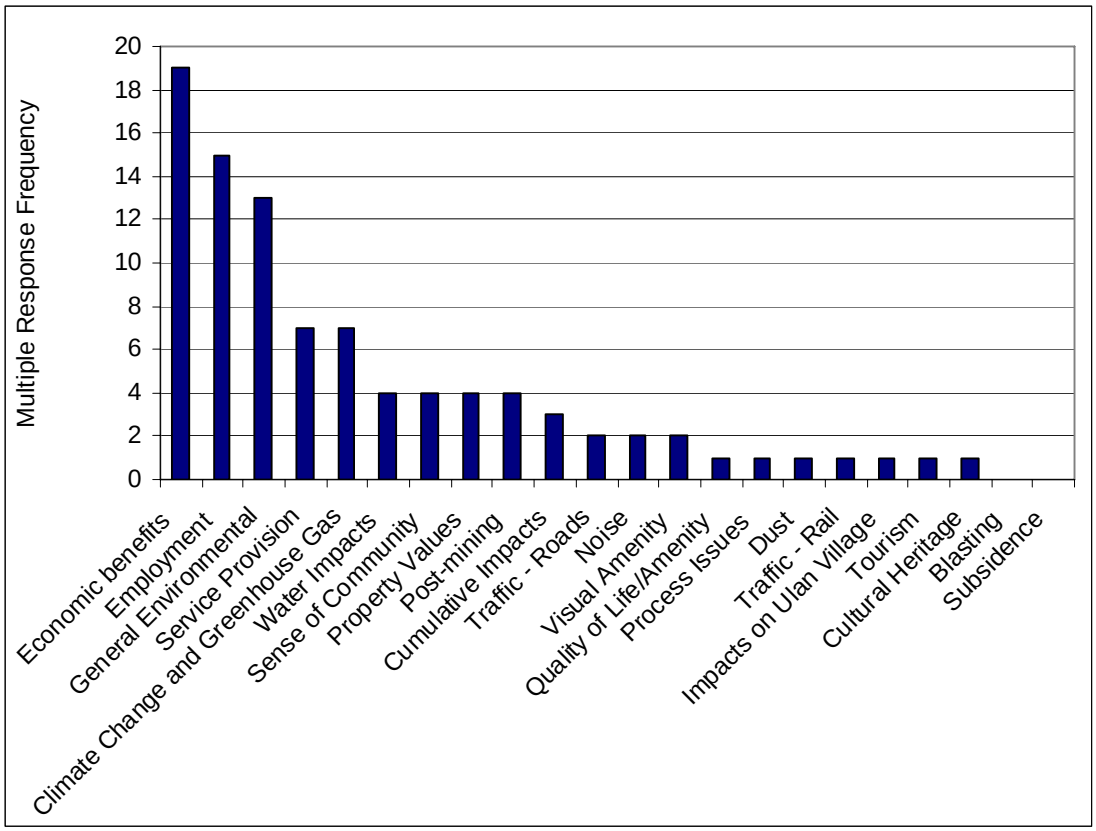

Figure 5.4: Service providers' perceptions of impacts
Source: Coakes Consulting (June, 2008)

The economic benefits and employment once again were considered the major positive impacts. However, there were also concerns expressed about the impact of mining on climate change specifically, and on the environment more generally, as well as the impact of mining on service provision.

Employee perceptions of impacts

The figure below highlights impacts identified by UCML employees and contractors.

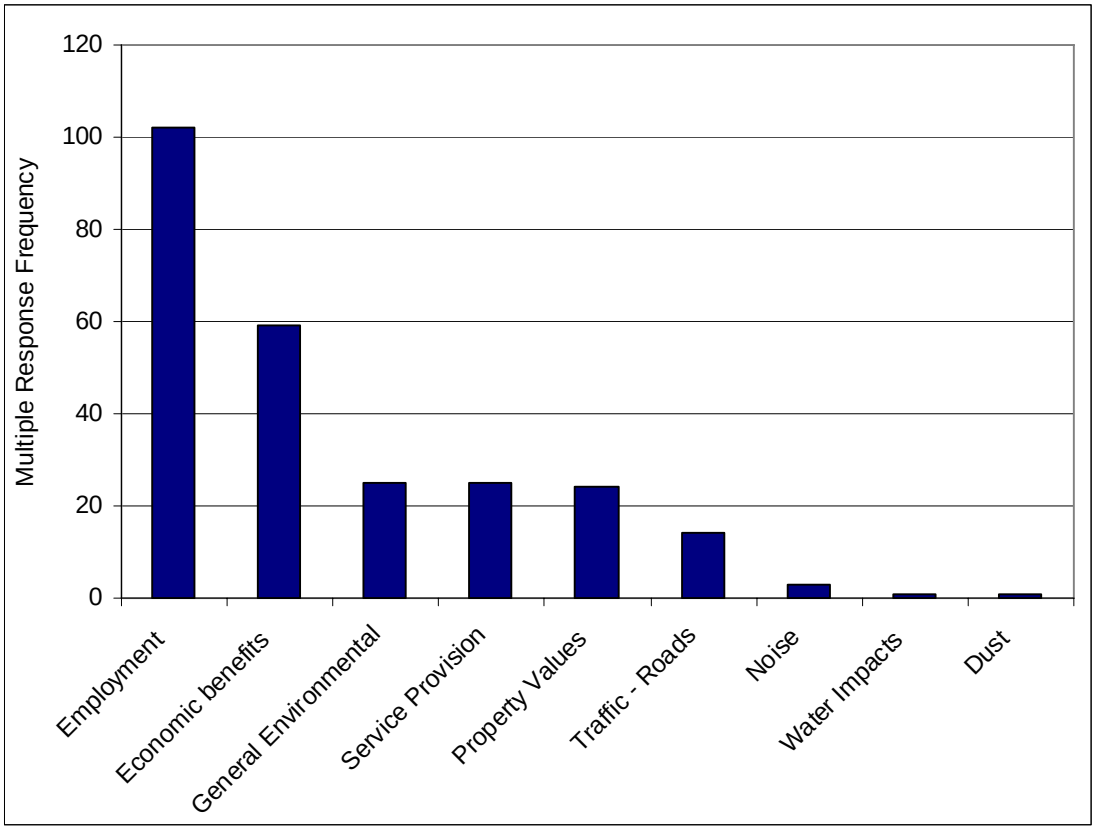

Figure 5.5: Employees' perceptions of impacts
Source: Coakes Consulting (May, 2008) Employee and Contractor Survey

Not surprisingly, employment was viewed as the overwhelming impact of the mine, followed by the economic benefit to local communities. General environmental concerns, service provision, and property values were also identified as potential impacts associated with the project.

5.2.3 Summary of stakeholder group perspectives

The economic and employment impacts of the mine were the most frequently identified positive impacts across all stakeholder groups. In regard to negative impacts, general environmental concerns featured prominently among service providers, employees, environmental groups and the broader community; with water also being a key area of concern across groups.

Consistent with their proximity to the operation, landowners identified blasting, dust, and noise more often than the other stakeholder groups. Conversely, impacts on climate change and greenhouse gases were more commonly identified by service providers, environmental groups and the broader community, with little to no acknowledgement from landowners or employees.

Whilst the benefits of the mine were most commonly recognised by all stakeholders, the proximity of stakeholders to the operation influenced the negative impacts that were raised. Landowners living in close proximity to the mine raised the potential direct impact of operations on their quality of life, traffic, water etc, while the broader community, environmental groups, service providers, and employees who perhaps live in areas more removed from the mine are more concerned about the overall impact on the environment, traffic impacts and climate change issues.

5.3 Workforce Impacts

5.3.1 Population Impact Projections

Changes in population may result in a range of social impacts affecting individuals, families, and communities. Such changes are often associated with large scale development projects that often require construction and operational workforces to be accommodated and serviced, in close proximity to the project. In this section, projected population impacts associated with the Project are presented and discussed as a basis to inform future planning within the local government area and broader region.

Construction phase

The construction workforce will predominantly comprise of labourers, supervisors, engineers, and administration on and off the site. The construction phase is anticipated to span a period of approximately 3 years and 8 months. The projected peak construction workforce is expected to be 270 onsite and a further 80 offsite.

Previous work carried out by Coakes Consulting has found that in rural or remote locations, given the specialised nature of construction, an approximate benchmark of 20% of a construction workforce tends to be recruited locally. Therefore, the current assessment assumes that 80% of both the onsite and offsite construction workforces would be sourced from outside the region.

Onsite Construction Workforce

Information provided by UCML suggests that the projected peak onsite construction workforce for the Project will be 270. It is therefore assumed that 80% (216) will be sourced from outside the region while 20% (54) will be sourced locally. Given the temporary nature of construction, it is also assumed that the construction workers will not be accompanied by their families and that most of the onsite workers are likely to

be residing in temporary accommodation in proximity to the operation and within the locality.

For purposes of the current assessment, it is further assumed that the construction workforce will reside in similar localities to existing UCML employees as revealed by the current UCML Employee Survey.

This Survey indicated that approximately 62% of the workforce resided in Mudgee while a substantial 25% resided in Gulgong. Therefore, it is assumed that the onsite construction workforce will also predominantly reside in temporary accommodation in both the towns of Mudgee and Gulgong.

To assess potential strains on temporary accommodation, a survey of temporary accommodation availability and capacity was undertaken with 28 accommodation providers in Ulan, Mudgee and Gulgong. These included hotels, motels, caravan parks, as well as onsite cabin facilities. The table below summarises current capacities of the accommodation providers surveyed.

Table 5.2: Temporary Accommodation – Service Provider Capacity

Accommodation Service	Current Capacity
Motels	
Gulgong Motel	18 rooms, 36 beds
Goldfields Motor Inn (Gulgong)	14 rooms, 34 beds
Golden Chain Ten Dollar Town Motel (Gulgong)	36 rooms, 76 beds
Centennial Hotel/Motel (Gulgong)	8 rooms, 16 beds
Vineyard Motor Inn (Mudgee)	16 rooms, 46 beds
Cudgegong Valley Motel (Mudgee)	16 rooms, 27 beds
Horatio Motor Inn (Mudgee)	22 rooms, 29 beds
Winning Post Motor Inn (Mudgee)	16 rooms, 43 beds
Best Western Wanderlight Motor Inn (Mudgee)	35 rooms, 90 beds
Golden Chain Soldiers Motel Inn (Mudgee)	18 rooms and 2 executive suites, 36 beds
Central Motel (Mudgee)	9 units, 15 beds
Woolpack Hotel (Mudgee)	11 rooms, 35 – 40 beds
Mudgee Motor Inn (Mudgee)	46 rooms, 100 beds
Total Single Bed Capacity	**588**
Total Number of Rooms / Units	**300**
Hotels	
Post Office Hotel (Gulgong)	14 beds
Prince of Wales Hotel / Motel (Gulgong)	7 motel rooms – 14 beds 4 hotel rooms – 8 beds

Commercial Hotel (Gulgong)	10 rooms, 10 beds
Ulan Hotel (Ulan)	6 rooms, 8 beds
Lawson Park Hotel (Mudgee)	7 rooms, 7 beds
Paragon Hotel (Mudgee)	17 rooms, 30 beds
Court House Hotel (Mudgee)	8 rooms, 20 beds
Oriental Hotel (Mudgee)	7 rooms, 15 beds
Total Single Bed Capacity	**126**
Total Number of Rooms	**80**
Serviced Apartments / Caravan Parks / Cabins	
Henry Lawson Caravan Park (Gulgong)	6 Onsite Vans, 14 cabins; 20-30 beds
Colonial Court Villas and Serviced Apartments (Mudgee)	12 apartments, 76 beds
Ningana Motel/Apartment (Mudgee)	n/a (includes predominantly terrace apartments and motel units)
Mudgee Valley Tourist Park (Mudgee)	33 cabins, 80 beds
Mudgee Riverside and Tourist Park (Mudgee)	27 tourist cabins, 33 semi-permanent/permanent for workers, 30 beds in total for workers
Parklands Resort & Conference Centre (Mudgee)	68 rooms, 136 beds
North East Wiradjuri Company (Ulan)	5 beds at any one time
Total Single Bed Capacity	**352**
Total Number of Cabins / Rooms / Units	**166**

Source: Coakes Consulting (March, 2009)

In reviewing temporary accommodation availability in the region, the following scenarios were assumed:

- Workers will be required to share the same rooms; or
- Workers will not be sharing the same rooms, with the exception of worker dormitories.

Outcomes of the temporary accommodation service provider survey have revealed a capacity of approximately of 546 rooms across all the accommodation providers surveyed; comprising a total of 1,066 beds (for single persons). Motel accommodations in the area offer the most number of rooms and single bed capacity relative to the other accommodation types.

The temporary accommodation establishments that were surveyed have revealed a weighted average occupancy rate of 63%. Based on the assumption that the workers will not be sharing the same room, approximately 202 rooms would be available at any one time, thus reflecting a lack of capacity (-68 rooms) to accommodate the potential peak influx of 270 onsite construction workers.

Based on the assumption that the workers will be sharing the same room, it has been assumed that approximately 395 beds across all the accommodation establishments would be available at any one time. This provides a substantial amount of spare capacity and is likely to be able to accommodate the influx of a peak 270 onsite construction workforce related to the Project.

An average of 54% of the total average clientele across all the temporary accommodation establishments surveyed, serviced contractors / workers from surrounding mine operations; with approximately 46% servicing tourist or visitors to the area. A number of these establishments also catered to conferences and corporate group events.

When asked about their occupancy trends over the last five years from 2004, 50% of the service providers interviewed suggested that their occupancy rates had increased, with a smaller percentage (36.4%) indicating that occupancy had stayed the same. A smaller percent of respondents cited that their occupancy rates were very much determined by seasonal fluctuations such as workforce influxes from surrounding mining operations. Interestingly though, service providers shared the unanimous view that the current economic climate had resulted in a marked decline in tourist numbers in the region of late, thus resulting in an excess of spare capacity within their establishments. As such, there might be greater room / bed capacity to absorb the potential peak influx of 270 onsite construction workforce (or a further 80 offsite workforce) who are likely to require temporary accommodation, depending upon project timing.

According to those service providers who were interviewed, a number of key temporary accommodation developments had been planned for the area. These primarily included the proposed expansion to the Haratio Motor Inn, with 19 additional units already approved for the establishment. There were also some discussions around the proposed development of two new motels in Mudgee, however respondents were unsure about the sustainability of these proposed developments given the current economic climate and declining tourist clientele.

In relation to their own expansion plans, approximately 71% of the total temporary accommodation service providers surveyed indicated that they had no existing plans to further expand their establishments, while a smaller handful cited expansion intentions, but only at a planning stage with no concrete plans set in place.

Most of the accommodation service providers who were surveyed cited the current economic climate and downturn in tourist numbers as impacting their current occupancy rates and therefore influencing spare capacity within their establishments. All respondents expressed very positive responses and enthusiasm over the prospect of accommodating additional clientele in the event of a population influx in the area.

All respondents also cited that they did not face any pressing issues when providing services to their clients, although a very small minority (3 respondents) did express concerns over an overall shortage of temporary accommodation as a key issue facing the temporary accommodation service industry in the region broadly.

Offsite Construction Workforce

Information from UCML estimates that the projected peak offsite construction workforce for the Project will be 80. It is therefore assumed that 80% (64) of this workforce will be sourced from outside the region. UCML has also suggested that a peak of 15% of the offsite construction workforce would reside within the Mudgee township, with the remainder residing in other areas such as Newcastle and Sydney. As the construction workforce is unlikely to be accompanied by family members, this suggests a potential maximum addition of ten new residents into the town. As this only constitutes a mere 0.1% growth to Mudgee's current population, the proportion of offsite construction workforce residing within the Mudgee township is unlikely to significantly impose on the town's existing services and infrastructure.

Operational Phase

Workforce Projections

Although operational workforce sizes are likely to increase during early Project phases and decline in later stages, it is always preferable to use the maximum workforce scenario when assessing the population impacts of a proposed project, so as to afford a more reliable indication of the full extent of potential impacts which a project may have on the broader population.

Based on information provided by UCML, the current analysis assumes that UCML's total operational workforce will peak at 931 across all of its operations (i.e., Ulan West, Ulan No. 3, and Open Cut) during the first year of operation for Ulan West following completion of its construction phase. This peak workforce number includes both staff and contractors. The existing workforce size for both Ulan No. 3 and the surface operation is estimated to be 530. However, following the proposed extension of the

Open Cut operations and completion of Ulan West's construction phase, it is anticipated that there would be an additional maximum of approximately 401 new personnel additions to UCML's operations (staff and contractors included).

Outcomes of the UCML Workforce Survey have revealed that approximately 65% of UCML's existing workforce (employees and contractors) had already been living in the local area when they commenced their employment with UCML; thus reflecting a large proportion of locally sourced operational personnel. However, it remains uncertain at this stage as to whether the Project could continue to source this high percentage of employees from the local area. Therefore, in order to provide a comprehensive overview of potential implications related to the current workforce projections, and inform strategic project planning, the current assessment has adopted the following three scenarios ranging from *best case* through to *worst case*.

- **Scenario A (Best Case Scenario):** 25% of the total new workforce would be sourced from elsewhere (i.e., 75% sourced locally).
- **Scenario B:** 50% of the total new workforce would be sourced from outside the region; and
- **Scenario C (Worst Case Scenario):** 75% of the total new workforce (301) would be sourced from outside the region (i.e., 25% sourced locally);

The outcomes of the current UCML Workforce Survey have revealed that an overwhelming majority of UCML employees and contractors currently live in either Mudgee or Gulgong (87%). Given that Mudgee is the regional centre for the MWRC LGA, and the relative proximity of both Mudgee and Gulgong to UCML's operations, it is also likely that a similar proportion of UCML's new operational workforce may also choose to reside in these localities.

Based on outcomes of the current UCML Workforce Survey and each of the workforce scenarios listed above, the following table outlines the hypothetical number of new Project employees who are likely to reside in the towns of Mudgee, Gulgong, as well as other surrounding townships. These figures form the basis for the predicted Project related family-level and community service impacts discussed in the following sections.

Table 5.3: Town of Residence Estimations of UCML's New Operational Workforce

Town	Residential Distribution* (%)	UCML Operational Workforce		
		Scenario A (25% new residents)	Scenario B (50% new residents)	Scenario C (75% new residents)
Mudgee	62	62	125	187
Gulgong	25	25	50	75
Other Towns (including Ulan, Lithgow, Rystone, and Kandos)	13	13	26	39
Total	**100**	**100**	**201**	**301**

Source: Coakes Consulting (February 2009)
Note: * Residential distribution is based on the location of residence for UCML's workforce identified by the current UCML Workforce Survey

5.3.2 Family Level Impacts across the Region

Unlike the construction workforce, it is assumed that operational employees will be accompanied by their families in relocating to the area given the long-term nature of the project's operational phase. Therefore, family level impacts analysis was undertaken to provide a more detailed understanding of the extent of impacts which may result from the influx of an operational workforce to the locality.

To inform the family level impacts analysis, the following demographic assumptions have been made in addition to the aforementioned workforce scenarios:

- All of the new resident population would be aged less than 65 years;
- The average household family size of the new population would be 3.04, consistent with the average household family size reported in the current UCML Workforce Survey;
- The age breakdown of family members would match that found in the ABS Census demographic data; and
- Potential family level impacts would equate to the assumed number of new resident employees multiplied by the average household family size.

The following table outlines the predicted family impact according to the likely preferred residential locations of UCML's new operational employees. As the table clearly illustrates, the main population impacts of the project will be experienced in the township of Mudgee, whereby the worst case scenario (75% new residents) would result in a potential influx of 568 new community members into Mudgee. Gulgong is the other town likely to experience substantial impacts as a result of new operational employees entering the region, indicating an influx of an estimated 228 new community members.

Table 5.4: Predicted Family Population Impact by Town

Town	Scenario A		Scenario B		Scenario C	
	25% New Residents	Predicted Family Impact	50% New Residents	Predicted Family Impact	75% New Residents	Predicted Family Impact
Mudgee	62	188	125	380	187	568
Gulgong	25	76	50	152	75	228
Other Towns	13	40	26	79	39	119
Total	**100**	**304**	**201**	**611**	**301**	**915**

Source: Coakes Consulting (February 2009)

As outlined in the table above, the Project-related impacts are anticipated to be highest in Mudgee, given that Mudgee is the key regional centre for the MWRC LGA. The town of Gulgong is anticipated to have the next highest level of family impact. The balance of the population is also distributed across a range of other towns in the region, such as Ulan, Lithgow, Rylstone and Kandos. As the current UCML Workforce Survey has indicated that only a very small handful of employees / contractors (no more than 10) tended to reside across these surrounding townships, these other towns have not been included in further analyses.

As previously mentioned, while outcomes of the UCML Workforce Survey have revealed that approximately 65% of UCML's existing workforce already lived in the local area before they commenced their employment with UCML, it remains uncertain as to whether the Project could continue to source this high percentage of employees from the local area. Based on previous experience in similar social impact assessments of development projects both nationally and internationally, an 80% influx of production personnel is typically assumed. Therefore, the following sections will provide a more in-depth discussion of family-level impacts with respect to specific age break downs, for both best and worst case scenarios (25% and 75% influx of workers, respectively).

Scenario A (Best Case Scenario)

The following table illustrates the distribution of predicted family impacts according to the 2006 ABS Census age distribution for each respective township. Figures in the table assume the "Best Case Scenario" where 75% of UCML's new operational workforce (301) is assumed to be sourced locally; while 25% (100) and their respective family members are assumed to be sourced from outside the region.

Table 5.5: Potential Family Level Impacts (25% new resident employees)

Age Range (Years)	Mudgee Town		Gulgong Town	
	Current % of Population	Potential Population Additions	Current % of Population	Potential Population Additions
0-4	8.11	15	7.92	6
5-12	13.77	33	14.05	11
13-17	9.47	16	9.64	7
18-24	9.59	13	8.56	7
25-34	13.54	25	12.64	10
35-44	16.65	31	14.18	11
45-54	15.56	29	16.86	13
55-64	13.30	25	16.16	12
Total	**100**	**188**	**100**	**76**

Source: Coakes Consulting (February 2009)

Based on the figures presented above, family level impacts are likely to be more significant in Mudgee than Gulgong. With a potential influx of 100 new operational personnel and their respective family members, the number of school aged children in Mudgee (5 – 12 years) is expected to increase by 33, marking a 2.6% growth. This finding is consistent with outcomes of the population projects study undertaken by Ratio Consultants (2005) for the MWRC (*Population Projections Review, 2005 – 2031)*. In that study, the number of primary school aged children in Mudgee was also projected to increase consistently by approximately 4.6% over the period 2006 – 2011.

With a best case assumption of 25% influx of operational personnel, the older workforce population in Mudgee (35 – 64 years) has also been projected to increase substantially by about 3% (85 persons). Indeed, the *Population Projections Review* study (2005) has also projected Mudgee's workforce population to undergo a progressive 6.5% growth over the period 2006 – 2011, with this growth largely attributable to key development projects around the region in addition to UCML, including the Moolarben and Wilpinjong operations.

Scenario C (Worst Case Scenario)

The following table illustrates the age distribution and related family level impacts for the "Worst Case Scenario", which assumes 25% (100) of new operational personnel would be sourced locally; while 75% (301) and their family members are assumed to be sourced from outside the region.

Table 5.6: Potential Family Level Impacts (75% new resident employees)

Age Range (Years)	Mudgee Town		Gulgong Town	
	Current % of Population	Potential Population Additions	Current % of Population	Potential Population Additions
0-4	8.11	46	7.92	18
5-12	13.77	100	14.05	32
13-17	9.47	48	9.64	22
18-24	9.59	39	8.56	20
25-34	13.54	77	12.64	29
35-44	16.65	95	14.18	32
45-54	15.56	89	16.86	38
55-64	13.30	76	16.16	37
Total	**100**	**568**	**100**	**228**

Source: Coakes Consulting (February 2009)

Based on the Worst Case Scenario - assuming that 75% of UCML's new operation workforce will be new residents entering the region from elsewhere - Mudgee's school aged children (5 – 12 years) is projected to increase significantly by 100, marking a substantial 7.8% growth to the current number of school aged children in Mudgee. The current worst case assessment has also projected a significant 8% increase in Mudgee's workforce population (25 years and over), thereby further reiterating the prevalence of an industry workforce presence in the region.

Outcomes of the current assessment also suggest a worst case scenario outcome of a potentially significant 20% growth in Gulgong's school aged child population, following an influx of new UCML personnel into the township. Like Mudgee, Gulgong is also anticipated to experience substantial growth in its workforce population on the basis of the worst case scenario assumption. This finding is again consistent with outcomes of the *Population Projections Review* study (2005), which has also projected an estimated 12.5% growth to Gulgong's workforce population over the 2006 – 2011 time period.

5.3.3 Project Related Impacts on Local Services

In order to predict impacts on service delivery associated with project population change, it is necessary to assess the current capacity of key community services in the locality.

In assessing the likely population impacts associated with UCML's Project across the different age categories for both the Mudgee and Gulgong townships, it is evident that the impact of additional employees and their families may potentially affect the following key service sectors:

- Health;
- Education;
- Childcare; and
- Housing / Accommodation

The social assessment program has involved a detailed review of service provision and service capacity within the MWRC for these sectors across the key towns of Mudgee and Gulgong. As previously noted, it is recognised that there are few services provided in Ulan and surrounds, with most services being accessed in the major regional centre of Mudgee.

Information relating to service capacity and facility thresholds has been obtained and, when used in conjunction with information relating to the current UCML workforce, provides a baseline from which impacts associated with the project can be predicted. A detailed overview of existing service capacity in the MWRC has been provided in Section 3.1.4. The following sub-sections discuss the potential impacts of the project workforce on these services, as outlined below.

Health / Medical

As previously discussed, the MWRC is serviced by two district hospitals in Mudgee and Rylstone, and a hospital auxiliary in Gulgong. The Mudgee District Hospital currently attends to an average of 8 in-patients per day, with approximately 23 triaged. It is anticipated that with a minimum of 188 potential new residents entering Mudgee and 76 entering Gulgong (Scenario A – best case family level impact scenario), further pressure is likely to be placed on hospital services in the area.

General health service providers were also not confident and had greater uncertainty in their capacity to handle additional population increases. For instance, the South Mudgee Surgery has a current patient to doctor ratio of 20:1, while the

Mudgee Medical Centre attends to an approximate 130 patients per day. These services have cited that patients are frequently turned away due to a significant shortage of GP's and apparent strains on existing patient to doctor ratios. Therefore, any population increases within the region are likely to add greater pressures on existing GP services.

Interestingly, specialist health services such as dental, physiotherapy and radiology, have cited greater confidence in being able to handle population increases that may be associated with the project. However, the current waiting period for dental attendance at the Mudgee Dental Care is 4 weeks, with clients reportedly turned away at times. Thus, a further significant increase of a minimum 188 new residents into the Mudgee Township is likely to impose increased pressure on Mudgee's existing dental services. Furthermore, as Gulgong does not have any dental services of its own within the township, population additions in Gulgong are also likely to place increased pressure on Mudgee based dental services.

Table 5.7: Health services – Current and Potential Capacity

General Services	Patients per day	Waiting period	Clients turned away	Capacity to handle increase in population
Gulgong Surgery	35	bookings taken daily	occasionally	unlikely
Gulgong Hospital	NA	none	never	no
Mudgee District Hospital	8 in-patients ~23 triaged	none	never	unlikely
Mudgee Medical Centre	130	1 week	sometimes	unsure
Mudgee Health Service	NA	NA	never	no
South Mudgee Surgery	20 per doctor	1-2 weeks; none for emergencies	frequently	no
Specialist Services	**Patients per day**	**Waiting period**	**Clients turned away**	**Capacity to handle increase in population**
Mudgee Dental Care	NA	4 weeks	sometimes	unlikely
Mudgee Physiotherapy	30	1 to 2 days	sometimes	yes
Mudgee Radiology	40	< 3 days	sometimes	yes

Source: Coakes Consulting (June, 2008)

Education

Of the 8 schools / education institutions surveyed, all were unanimous in the view that their particular education facility would have the capacity to handle an increase in local population.

Outcomes of the current assessment have projected that the number of primary school aged children is expected to increase by a minimum of 33 in Mudgee and 11 in Gulgong, under the best case scenario assumption of 25% new UCML personnel entering the region from other localities (Scenario A). Under the worst case scenario (Scenario C - 75% new resident employees), Mudgee's school aged children is expected to increase by 100 and 32 in Gulgong.

In relation to high school aged children, it is anticipated that Mudgee would experience a minimum increase of 16 new students, and an additional 7 in Gulgong; while under the worst case scenario, Mudgee faces a potential influx of 48 new high school student and Gulgong 22. While these figures may be substantial, the table below has outlined that all the education facilities that were interviewed have indicated flexibility in expanding their current capacities, including the possibility of installing demountables and developing further extensions to existing facilities. Therefore, education services in the region are likely to be capable of coping with the current Project's anticipated population change and influx of new residents.

Table 5.8: Education – Current and Potential Capacity

Primary Schools	Current Capacity	Capacity to handle increase in population
All Hallows School	125/Flexible	yes
Gulgong Public School	500/Flexible	yes – can install demountables
Mudgee Public School	650/Flexible	yes
St Matthews School	600/Flexible	yes – building new school
Ulan Public School	NA/Flexible	yes – can install demountables
High School / Other	**Current Capacity**	**Capacity to handle increase in population**
Mudgee High School	1020/Flexible	yes
Gulgong High School	400/Flexible	yes
Mudgee TAFE	NA/Flexible	Yes

Note. NA = not available / not provided / not applicable.
Source: Coakes Consulting (June, 2008)

It is, however, noteworthy that the *Population Projections Review* study (2005) has projected an ongoing growth in Mudgee's primary school and high school aged children, estimating 6.4% and 6.9% growth projections respectively for the ten year period from 2006 – 2016. This trend of continued growth suggests the need for ongoing flexibility in current education service capacity.

Childcare

The following table outlines the current enrolments and existing capacity of pre-school and childcare services in the Project area of interest. Overall, while most of the childcare services interviewed were relatively confident in their capacity to handle an increase in population, it is noteworthy that most of the childcare services surveyed are currently running either at, or very close to, capacity.

Indeed, the current assessment has revealed a minimum potential increase of 15 young dependent children (0 – 4 years) in Mudgee and an increase of 6 in Gulgong. Under the worst case scenario assumption, a maximum of 46 new dependent aged children in Mudgee is likely, alongside a further 18 in Gulgong. As outlined in the previous section, the number of school aged children (5 – 13 years) who may also be in need of childcare services (i.e. before and after school care, vacation care) is also anticipated to undergo considerable growth in coming years. Therefore, there is likely to be potential strains to existing childcare services should there be an increase in demand for these services.

Table 5.9: Childcare - Current and Potential Capacity

Childcare Service	Current Capacity	Capacity	Capacity to handle increase in population
Happy Days Gulgong	20 per day	25 per day	Unlikely
Gulgong Pre School	19 per day	20 per day	yes –could increase licence to 25 per day
Gulgong Playgroup	15 per week	limited to size of hall	Unlikely
Mudgee Childcare Centre	40-46 per day	46 per day	Unlikely
Mudgee Pre School	40 per day	80 per day	yes
Puggles Childcare	approx. 20 per day	46 per day	yes
Imaginations Early Learning	57 per day	63 per day	Unlikely
Mudgee Family Day Care Scheme	100 families; 140 children	limited by number of carers	yes – can grow with population
Squeakers Long Day Care	27 per day; approx 80 families	27 per day	unsure

Source: Coakes Consulting (June, 2008)

Housing and Accommodation

In relation to the current Project, the current analysis has revealed that under a best case assumption of 25% influx of new resident employees (Scenario A), Mudgee will experience a minimum 188 new residents, and a further 76 in Gulgong. Based on the worst case scenario of 75% new UCML employees sourced from outside the region (Scenario C), Mudgee is likely to be faced with a potential influx of a substantial 568 new residents alongside 228 in Gulgong. In light of these potential population changes, it will be imperative to gain a better understanding of the current status of the housing sector in the region, particularly for both the Mudgee and Gulgong townships given that most of the potential influx of new company personnel is likely to predominantly reside in these key towns.

The *Mid-Western Regional Council Housing and Population Forecasting Review*, prepared in 2007 by Ratio Consultants, forecasted population projections throughout the MWRC Shire in light of expected major projects in the local government area including the Moorlarben and Wilpinjong coal mines, the possible re-opening of the abattoir, and the Gulgong-Mudgee Vineyard Resort (Mid-Western Regional Comprehensive Land Use Strategy, 2008). The demand for total dwelling stock over the next 25 years was estimated to increase by between 500 and 1,000 dwelling units every 5 years to 2031, with the more dramatic increases occurring post-2016.

Table 5.10: Forecast Total Dwelling Stock (2006 – 2031)

Locality	Total Dwelling Stock, 2006	2011	2016	2021	2026	2031
Mudgee	3,835	4,305	4,805	5,355	5,955	6,605
Gulgong	866	898	929	961	992	1,024

Source: Ratio Consultants (2007)

The following table highlights the estimated current supply of residential lots in both Mudgee and Gulgong. As can be seen, Mudgee has a significant number of available lots - 1,570 in total.

Table 5.11: Estimated Residential Lot Yield

Locality	Developed Vacant Lots	Potential Lots on Undeveloped Zoned Land	Total Estimated Supply
Mudgee	170	1400	1570
Gulgong	170	435	605

Source: Andrews Neil (2006); MWRC (2007); Parsons Brinckerhoff Land Use Survey Data (2007)

In 2007, there were reportedly 170 developed vacant lots in Mudgee. In addition to these, there are further 390 lots that have been approved but are yet to have a subdivision certificate issued. This suggests that Mudgee has an immediate short term supply of approximately 560 lots (*Mid-Western Regional Comprehensive Land Use Strategy*, prepared by Parsons Brinckerhoff, 2008). In Gulgong, in addition to those lots that are already available for development, there is currently a surplus within the township, with the potential to supply a further 362 lots in the future based on zoned residential land availability within the town.

The *Mid-Western Regional Council Housing and Population Forecasting Review* (Ratio Consultants, 2007) also undertook projections of gross residential allotment demands for both Mudgee and Gulgong, on the basis of expected major industry activities. This is highlighted in the table below, and shows gross residential allotment demands per year based on dwelling unit approvals every five years. Unlike Gulgong, which shows stability in future demand for residential lots within the township, Mudgee demonstrates growth in annual residential lot demand over the two five-year periods 2001/02-2005/06, and 2006/07-2010/11; increasing from an annual demand of 74 lots annually to 94. Some of the growth prevalent in Mudgee has also been attributed to the *treechange* phenomenon, where urban populations choose to adopt a more rural lifestyle (Mid-Western Regional Comprehensive Land Use Strategy, 2008).

Table 5.12: Gross Residential Allotment Demands per Annum across Five-yearly increments of Dwelling Unit Approvals (2001/02 – 2030/31)

Locality	2001/02 – 2005/06	2006/07-2010/11	2011/12 – 2015/16	2016/17 – 2020/21	2021/22 – 2025/26	2026/27 – 2030/31
Mudgee	71	94	100	110	120	130
Gulgong	7	5	7	7	7	7

Source: Ratio Consultants (2007)

The following table outlines projected residential land availability for both Mudgee and Gulgong (Mid-Western Regional Comprehensive Land Use Strategy, 2008). It has been predicted that no additional residential lots will be required in Gulgong as the town has sufficient available land which exceeds the projected demand within the town.

In contrast to Gulgong, Mudgee is expected to continue to face the need for developed vacant residential lots and zoned land in order to maintain a supply of 94 dwelling units annually to 2011, and 130 per annum by 2026. Indeed, it has been identified by the Mid-Western Regional Comprehensive Land Use Strategy (2008) that

the need to provide an average of over 100 lots to the market over the following 25 year period would impose significant challenges on the Mudgee township.

Table 5.13: Lot Availability based on Projected Demand for Each Town

Locality	Total estimated supply of developed and undeveloped land	2006/07 – 2010/11	2011/12 – 2015/16	2016/17 – 2020/21	2021/22-2025/26	2026/27-2030/31	Further Supply Required by 2031
Mudgee	1570	1194	694	144	-456	-1106	1106
Gulgong	0	450	415	380	345	310	Nil

Source: Mid-Western Regional Comprehensive Land Use Strategy (2008)

Based on the current residential supply of 1,570 lots in Mudgee, Mudgee is anticipated to have a shortage of 456 lots by 2026. This prediction is in light of expected major industry activities considered by the *Mid-Western Regional Council Housing and Population Forecasting Review*, which include the Moorlarben and Wilpinjong coal mines, the possible re-opening of the abattoir, and the Gulgong-Mudgee Vineyard Resort. Therefore, it has been anticipated that the total additional supply required over the next 25-year period would be a minimum of 1,106 new lots and suitable land for lot development.

In the immediate future with Mudgee's short term bank (supply) of 560 lots, there is anticipated to be sufficient supply in Mudgee to cater for residential demand in the next 5 – 6 years (Mid-Western Regional Comprehensive Land Use Strategy, 2008). Therefore, Mudgee's short-term supply of residential lots seems adequate to absorb the impacts of population change associated with the Project. In relation to long-term demands, projections on the back of other industry activities in the area (*Mid-Western Regional Council Housing and Population Forecasting Review*) suggest that any current population influx may have further repercussions on already substantial long-term demand forecasts. It is, however, noteworthy that UCML's workforce size will be scaled down by 2022 following closure of Ulan No. 3 and cessation of the Open Cut operations. Therefore, UCML's workforce is unlikely to substantially change the forecasted long-term demands in Mudgee's housing sector.

In addition to availability of residential lots, the status of rental property demands in the area must also be considered. This would be particularly useful given that the current UCML Employee Survey has outlined that a proportion of employees (17.6%) tend to reside in rental accommodation. In addition, mining workforces tend to be more transient in nature, particularly during the construction phase of a project.

Therefore, there is likely to be greater demands on the region's rental market in the face of concurrent development activities and projects in the region.

In the *Population Projections Review (2005 – 2031)* prepared by Ratio Consultants (2005) for the MWRC Shire, it is suggested that a tight rental housing market exists across the local government area, particularly in the towns of Mudgee and Gulgong, given the proximity of these towns to neighbouring resource development projects, as well as the extent of regional services offered in Mudgee itself. A key recommendation stemming from the review was for the MWRC to facilitate more residential development projects so as to provide an adequate ongoing supply of residential housing stock, thereby supporting the rental market.

5.4 Cumulative Impact Assessment

This section discusses the cumulative impacts that may arise from other projects that are currently planned within the MWRC region. At the time of developing this report, the Moolarben Coal Project (MCP) had commenced construction. – This major project has the potential to affect population impacts.

Charbon Colliery, a further coal mining operation in the region located 70 kilometres from Mudgee, has also recently submitted an application for extension of their existing mine. However, the company anticipates that their existing workforce size would remain unchanged following the extension.

Therefore, the current cumulative impacts analysis will take into account cumulative population changes resulting from workforce influxes from both the MCP (stage 1 and 2) and current UCML continued operations Project, should the timing of both of these projects' construction and operational phases coincide.

The MCP, owned and operated by Felix Resources, had Stage 1 of its development approved in 2007, and is currently seeking approval for Stage 2. The integrated MCP (Stage 1 and 2) is located approximately 40 kilometres north-east of Mudgee and approximately 25 kilometres east of Gulgong. This integrated mining complex will comprise integrated open cut and underground mines including coal handling, washing, rail loading facilities and associated infrastructure. The approved Stage 1 includes open cut pits, an underground mine, as well as associated infrastructure and materials handling plant. Stage 2 of the Project seeks approval for two underground mines and a further open cut pit, as well as the relevant facilities to support Stage 1

infrastructure. Stage 2 of the project will also see an overall increase in coal production for export to both domestic and international markets (Moorlarben Coal Mines Pty Ltd, 2009).

According to Stage 2 of the MCP's Environmental Assessment Report (March, 2009), an anticipated 220 construction personnel are likely to be employed during the initial intensive two-year construction phase, during which construction of Stage 2 infrastructure will occur concurrently with that of Stage 1. This phase of construction has been reported to be the most capital and labour intensive, encompassing construction of all major MCP infrastructure components; and is likely to be completed towards the early part / first half of 2010. Given the MCP's construction timing, the peak construction phases for both the MCP and UCML Project are unlikely to coincide as UCML's peak construction phase (270 construction personnel) is not likely to occur until Year 4 of its construction period (Year 2013)

Stage 2 of the MCP's Environmental Assessment also reports a maximum operational workforce number of 439 personnel, peaking during Year 7 of operations (2015 - 2016). Peak operations are expected to be maintained for a further 14 years, until 2031. The operational phases of both the MCP and the UCML Project would therefore coincide, with peak operational periods also likely to occur concurrently. The MCP has anticipated its production to peak during Year 7 of operations (2015 – 2016), while the UCML Project has also anticipated a peak total of 931 operational personnel across all of its operations (401 new personnel in addition to existing Ulan No. 3 and Open Cut workforces) during the first year of operation following Ulan West's construction (Year 2014).

The current section discusses worst case scenario / peak cumulative workforce impacts of both the MCP and the current proposed Ulan Coal Continued operations project, on the social and community infrastructure of the region; specifically the impacts on short-term / temporary accommodation availability, as well as residential accommodation availability, and other community service sectors such as health, education, and childcare.

5.4.1 Construction Phase

Employment figures associated with the MCP (*Environmental Assessment Report, MCP Stage 2, March 2009)* indicates approximately 220 construction workers for both Stage 1 and Stage 2 of the project. This peak construction period is anticipated to be completed towards the early part / first half of 2010. Therefore, the peak construction phases for both the MCP and UCML Project are unlikely to coincide given that UCML's peak construction phase (270 construction personnel) will not occur until Year 4 of its construction period (Year 2013).

The MCP's peak construction phase is more likely to coincide with the UCML Project's first year of construction, for which a total of 120 construction personnel has been anticipated. The cumulative population impacts, which assume construction timing to coincide for both the current Project and the MCP, are outlined in the following table. The numbers provided have been based on the assumption that 80% of the construction workforces would be sourced from outside the region. It has also been assumed that due to the temporary nature of construction, workers will not be accompanied by families and will reside in temporary accommodation during the course of the construction period.

Table 5.14: Cumulative Impacts of Project Construction Phases

Operation	Predicted Construction Workforce	Beds Required (assumes 80% of workers not sourced locally)
UCML Continued Operations Project	120	96
MCP (Stage 1 and 2)	220	176
Total (UCML and MCP Projects construction phases coinciding)	**340**	**272**

Source: Coakes Consulting (June, 2008)
Note: MCP workforce figures have been sourced from *Moolarben Coal Project* Stage 2 Environmental Assessment Report (March 2009)

Given the proximity of the MCP to the towns of Mudgee and Gulgong, it is likely that the MCP's construction workforce's residential trends would mirror that of the current Project, with most workers likely to reside within the Mudgee and Gulgong townships. A peak accommodation requirement of 272 beds has been assumed should both the MCP and current Project's construction phase occur concurrently.

Given the current capacity of 1,066 beds (for single persons) across all the key temporary accommodation providers in Mudgee, Gulgong and Ulan, an approximate 395 beds have been assumed to be available at any one time based on the current weighted average occupancy rate of 63% across these temporary

accommodation providers. As such, assuming the workers will be sharing rooms, there is likely to be a sufficient number of beds to absorb the peak cumulative workforce influx of 272 new construction workers. On the other hand, should the workers not be sharing rooms, this would suggest a requirement of 272 additional rooms - a demand which exceeds the assumed spare capacity of 202 rooms likely to be available at any one time.

However, it is likely that in the face of limited and constrained accommodation availability, workers would be encouraged to share rooms. Further, most of the accommodation providers who were interviewed also expressed concerns regarding a potential decline in occupancy rates given the current economic climate and fall in tourism numbers. Therefore, there is unlikely to be a significant shortage of temporary accommodation availability to house the assumed cumulative population change projections associated with the combined Ulan and MCP construction phases..

5.4.2 Operational Phase

The operation phases for both the MCP and UCML Project will coincide, with peak operational phases of the two projects also likely to coincide / occur at similar times. Therefore, a comprehensive analysis of worst case cumulative impacts has been undertaken – i.e., in the event that both the MCP and UCML's peak operational phases occur at the same time.

The following key assumptions have also been adopted to assist in the current assessment:

- Approximately 75% (worst case scenario) of the operational workforces for each project move into the region from outside the area;
- New employees are assumed to reside in the same proportions as those identified in the current UCML Employee Survey, given the relative proximity of the Mudgee and Gulgong townships to both the Moolarben Coal operation and the Project; and
- MCP operational employees will demonstrate an average family size similar to that identified in the current UCML Employee Survey (3.04).

The following table highlights the total number of new MCP and UCML operational employees who are likely to reside in the towns of Mudgee, Gulgong, and other surrounding townships. UCML's peak number of new employees is estimated to be 401, with MCP's totalling 439. Therefore, assuming that 75% of these combined

workforces would be sourced from outside the region, the worst case total number of new operational employees who are likely to move into the region (from both the current proposed UCML Project and the MCP) is estimated to be 631.

Table 5.15: Town of Residence Estimations of UCML and MCP's New Operational Workforces

Town	Residential Distribution* (%)	UCML Operational Workforce	MCP	Total UCML and MCP Peak Operations Coinciding
		Worst Case Scenario: 75% new residents	Worst Case Scenario: 75% new residents	
Mudgee	62	187	205	392
Gulgong	25	75	82	157
Other Towns (including Ulan, Lithgow, Rystone, and Kandos)	13	39	43	82
Total	**100**	**301**	**330**	**631**

Source: Coakes Consulting (February 2009)
Note: * Residential distribution is based on the location of residence for UCML employees identified by the current UCML Employee Survey

As outlined above, Mudgee faces a cumulative growth of 392 new production employee residents should the MCP and current proposed UCML operations' peak operation phases coincide; while Gulgong faces a further influx of 157 new personnel.

The following table shows the predicted cumulative family impact according to the likely preferred residential locations of the new operational employees. As the table clearly illustrates, the main population impacts of the project will be experienced in the township of Mudgee, whereby the worst case scenario of 75% new residents constitutes a potential influx of 1191 new community members. Gulgong is the other town likely to experience substantial cumulative impacts from the prospect of new operational employees entering the region, where an estimated influx of 477 new community members is predicted.

Table 5.16: Predicted Cumulative Family Population Impact by Town

Town	Projected Family Distribution		Total – Timing Coinciding
	UCML	MCP	
Mudgee	568	623	1191
Gulgong	228	249	477
Other Towns	119	131	250
Total	**915**	**1003**	**1918**

Source: Coakes Consulting (February 2009)

The cumulative family population impacts predicted by the current assessment suggest a worst case total of approximately 1918 new community members entering the region, with both Mudgee and Gulgong likely to experience a predominant extent of the potential impacts. This is likely to significantly impact on existing service provision in the region, particularly in Mudgee.

The table below outlines the age distribution of predicted cumulative family impacts for both the towns of Mudgee and Gulgong, according to the 2006 Census age distribution.

Table 5.17: Potential Cumulative Family Level Impacts – Mudgee and Gulgong

Mudgee			
Age Range	**Projected Family Distribution**		**Total – Timing Coinciding**
Years	**UCML**	**MCP**	
0-4	46	50	97
5-12	100	110	210
13-17	48	52	100
18-24	39	42	81
25-34	77	84	161
35-44	95	104	199
45-54	89	97	186
55-64	76	83	159
Total Mudgee	**568**	**623**	**1191**
Gulgong			
Age Range	**Projected Family Distribution**		**Total – Timing Coinciding**
Years	**UCML**	**MCP**	
0-4	21	21	38
5-12	35	35	67
13-17	24	24	46
18-24	24	24	41
25-34	34	34	60
35-44	42	42	68
45-54	39	39	80
55-64	34	34	77
Total Gulgong	**228**	**249**	**477**

Source: Coakes Consulting (February 2009)

In summary, based on outcomes of the current assessment, potential cumulative impacts of the current proposed UCML Project and the MCP on both the Mudgee and Gulgong townships include:

- Likely significant strains on health services in Mudgee and Gulgong;
- Further constraints on existing and long-term land availability for residential development, particularly in Mudgee as the town is already forecasted to experience insufficient land availability to accommodate projected long term population growth;
- Potentially heightened pressures on existing primary education services with the *worst case* addition of 210 additional school-aged children in Mudgee and 67 in Gulgong; given the already high proportion of primary school aged students in Mudgee and Gulgong;

- Current capacity of the Mudgee High School (1020 / Flexible) and the Gulgong High School (400 / Flexible) suggests sufficient capacity to accommodate a ***worst case*** influx of an additional 100 secondary school aged students in Mudgee and a further 46 in Gulgong; and
- Significant strains on existing childcare services across Mudgee and Gulgong, given that most current childcare services are already running at, or close to, capacity and are therefore unlikely to be able to accommodate an additional 97 young children (0 – 4 years) in Mudgee / 38 young children in Gulgong, without expansion to services.

5.4.3 Conclusion

It is important to note that the figures provided above are population predictions only and are based on a number of ***worst case scenarios.*** To ensure accuracy of prediction, the cumulative impact assessment for Ulan Coal Continued Operations project will need to be revised as additional information regarding project approvals/closures in the area becomes available.

It should also be noted that any service sectors shown to have limited capacity to accommodate the projected population impacts of the Ulan Coal Continued Operations Project will also have difficulty servicing any further population impacts that might arise from any additional large projects, without suitable growth strategies being implemented.

The capacity of service providers is discussed in detail in Section 5.3.3 and, for example, highlights the limited capacity of the health sector to provide for projected population change.
Residential land availability, particularly in Mudgee, has also been identified to be under significant constraints given current and projected growth within the township.

Based on the assumptions and predictions provided above, the cumulative impacts on services within the MWRC LGA, if not addressed, could play a significant role in challenging the attraction and retention of staff for the Ulan Coal Continued Operations; as well as any other projects (mining or non-mining related) that may develop within the area in the next three to five years.

5.5 Economic Impact Assessment

5.5.1 The Proposed Development

The Project will result in an increase in production from 10 Mtpa to 20 Mtpa and extend the life of the mine for a further 21 years. The project will create an additional 200 jobs for the first three years of construction, rising to 292 (on-site and off-site construction jobs) in the fourth year. The on-site construction workforce will peak at 270 during Year 4. The operational workforce will increase from 530 to a peak of 931 in the first year of operations, following completion of the construction phase for Ulan West. Employee numbers are then expected to decline to 375 over the succeeding nine years, staying at this lower level for the remainder of the mine life.

5.5.2 Multiplier analysis

Multiplier analysis is a standard tool of economic analysis used to assess the flow-on effects on income, investment and employment of a proposed increase in investment or production. The multiplier effect operates because the initial activity requires the purchase of labour, goods and other services and these purchases generate further flow-on expenditure. At each round of investment and expenditure the effect diminishes until a final total increase in the economy can be calculated. It is the ratio of the value of the final impact across the economy to the initial investment that is termed the multiplier.

In a similar vein to the multiplier effects of investment expenditure, there are multiplier effects of ongoing expenditure on operations. Operations and maintenance expenditure will call forth an increase in production from local firms, and these firms in turn will need to purchase more inputs and services, and there will be a flow of ripple effects through the economy.

The actual mechanics of deriving multipliers is based on the use of transactions tables. These have been developed at national, state and local levels by a number of different agencies, and it is these tables that are used in the analyses in this report. The transaction tables show the linkages between industries in terms of the purchases of goods and services by each, from each other industry of the economy.

The size of the multiplier ratio depends on several factors including the ability of the economy to supply the goods needed. If a large proportion of goods are imported from outside of the region, the multiplier will be reduced. Multipliers can be estimated for a local area economy, a regional economy, a State or a national economy. The

size of the multipliers will always increase as the analysis moves from local to state to national simply because this shift will increase the capacity of the defined economy to supply the goods, and there will be fewer imports from outside the economy.

The multipliers used in this report represent the impacts in terms of economic output and employment. The output multipliers represent the increase in goods and services produced throughout the economy, and are a sum of the materials and services needed by the project, their flow-on requirements, and the goods purchased with the increased wages and salaries generated by the project. The employment multiplier is similar and indicates the way in which the project generates jobs throughout the wider economy as well as within the specific mining operations.

Multipliers have been estimated in this analysis for the coal mining and construction activities, and for the expenditures by employees. For ongoing operations activities these multipliers are:

	Output	Employment
Regional	1.928	2.717
State	2258	3.927
Australia	2.763	4.062

For construction activities the multipliers used in this analysis are:

	Output	Employment
Regional	1.621	1.820
State	1.893	2.731
Australia	2.362	3.515

The multipliers used for employee expenditures are similar to those for operational expenditure, except that they are a little larger, especially for the local region:

	Employee Expenditure
Regional	2.103
State	2.320
Australia	2.771

We have compared the results of our own modelling with other analyses, for example those undertaken by the Australian Bureau of Statistics at a National level and by the Illawarra Regional Information Service (University of Wollongong) and by the Hunter Valley Research Foundation at a regional level. Economics Consulting Services has

also undertaken multiplier analyses for a number of industries in WA as well as for the coal mining industry in the Hunter Region of NSW. The main point of difference between our analysis for Ulan West and these other studies is in the regional employment multipliers estimated by IRIS Research and the Hunter Valley Research Foundation for coal operations. Their estimates, at 5.87 and 4.25 respectively, are well above all other estimates of employment multipliers for the Australian economy – when it would be logical for them to be considerably less.

The differences have been discussed with researchers at the University of Wollongong, and we can see no reason to amend our own estimates which are consistent with other published data as well as with multipliers calculated be ECS in a 2008 study of the Hunter coal industry.

The capital cost of the Ulan project is $881 million and this will be expended over a period of 3 years and 8 months. The new mine has an anticipated economic life of 21 years. In this analysis, expenditure by employees from their wage and salary incomes is treated separately from expenditure on the development and then the operations of the mine.

5.5.3 Economic Impacts of Employee Expenditure

Employees working on the project, whether they locate in the area for only a short time during the construction phase or settle in the area for the longer operations phase, will have an economic impact through their weekly expenditures.

These weekly expenditures are estimated on the basis of an average workforce for the construction phase of 218 each year over a period of three years and eight months, and 598 for the 21 years of operations of the mine. The average total payments for labour and salaries are assumed to be $75,868 per employee during construction and $101,884 per employee during operations. These averages are taken from ABS data on average weekly earnings. Based on data from the ABS Annual Household Expenditure Survey, the average wage or salary earner spends 62.5% of their income on household and personal expenditure items.

This 62.5% is an average across all incomes. It is notable that the proportion of income spent on household and personal items declines as incomes go up - although the absolute level of household expenditure rises with income.

Of the 218 in the construction workforce, it is assumed that 143 (80% of the onsite construction workforce) reside in a local camp while working on the project. Mudgee is assumed to be the residential location of a further 27 of the 41 onsite workers that are recruited locally.

For operations, we have assumed that 90% of workers will be resident or will become resident in the local area. The assumed residential location of workers is summarised in Table 5.18.

Table 5.18: Location of Workforce

Location	Workforce Engaged In		
	Construction	Operations	Total
Mudgee	170	438	608
Gulgong	9	68	77
Other local	5	33	38
Newcastle	12	13	25
Sydney	18	24	42
Lithgow	0	11	11
Dubbo	0	11	11
Brisbane	4	0	4
Total	**218**	**598**	**816**

Source: UCML (April 2009)

This part of the analysis is concerned with where the workers will spend their incomes, rather than where they originate from. So it is the location of the workers while they are on the project that becomes the important consideration. It is assumed that the workforce will expend their incomes mainly in the towns where they reside. There will be some spillovers in spending between towns and this will be, to an extent, self compensating as the flow of spending will be both into and out of each town. Construction workers who reside in the camp will spend less locally as they have permanent residences and families elsewhere. In this analysis it is assumed that their local expenditure is at rate equal to 20% of that of a permanent local employee.

The annual expenditures by employees will have an impact on the local economy as well as through the wider region. During the construction phase, the annual payment to wages will average $16.5 million and the employees will spend an average of $10.3 million, of which $3.3 million will be in the local area. During operations, the total expenditure will average $38.1 million a year, with $27.9 million of this being

expended in Mudgee. While the majority will be spent locally, not all expenditure is in the local area, and this is especially the case with the multiplier effect – which has ripple effects going beyond the immediate area.

Table 5.19 shows that, during construction, $2.7 million of the yearly spend will be made in Mudgee, with $0.4 million in Gulgong and a total for the local area of $3.3 million. During operations, these annual rates of expenditures are considerably higher, at $27.9 million, $4.3 million and $34.3 million. Adding the expenditure by construction workers to that of operations workers, gives an average expenditure per year of $28.1, $4.4 and $34.9 million, respectively.

Every dollar that is spent by households has a multiplier effect through the local and more distant economies. As discussed above, the multipliers for any local area are smaller than for a more widely defined area. This means that there will be flow- on impacts of expenditures in the towns within the wider Mid Western Regional Council area, but there will be significant impacts beyond the Council area – in other major NSW centres such as Lithgow, Dubbo, Newcastle and Sydney.

Table 5.19: Annual Economic Impacts of Employee Expenditures

Area	AVERAGE ANNUAL EMPLOYEE SPEND ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$2.7	$5.6	$27.9	$58.7	$28.3	$59.6
Gulgong	$1.3	$0.9	$4.3	$9.0	$4.4	$9.2
Other Local	$0.4	$0.5	$2.1	$4.5	$2.2	$4.6
Total Mid West	$3.3	$6.9	$34.3	$72.2	$34.9	$73.4
Sydney	$5.2	$6.8	$1.5	$6.6	$1.7	$7.8
Newcastle	$2.8	$3.6	$0.8	$3.4	$0.9	$4.1
Lithgow	$1.3	$3.2	$0.7	$3.1	$0.7	$3.7
Dubbo	$0.8	$3.0	$0.7	$3.0	$0.7	$3.5
Total NSW	$10.1	$23.5	$38.1	$88.3	$39.8	$92.4
Other Australia	$0.2	$5.1	$0.0	$17.2	$0.0	$18.1
Total Australia	$10.3	$28.6	$38.1	$105.5	$39.9	$110.5
Imported	-	-	-	-	-	
Overall Total	**$10.3**	**$28.6**	**$38.1**	**$105.5**	**$39.9**	**$110.5**

Multiplier impacts include the initial direct impact as well as the flow-on effect. So the multiplied impact for construction of $5.6 million for Mudgee includes the direct expenditure of $2.7 million.
Source: ECS (June 2009)

The local employee spend during construction of $3.3 million a year in the Mid West Regional Council has a local multiplier effect. The multiplier generates an additional impact of $3.6 million within the Council area, to give a total impact of $6.9 million a year. While the total direct expenditure for the rest of Australia, beyond the Mid West Regional Council, totals only $7.0 million during construction and $3.7 million during operations, it is estimated that the flow-on effects of employee expenditures will have a total annual impact on the Australian economy of $28.6 million. Expenditure by operations workers will add an additional $105.5 million to the national economy.

These annual contributions can be added to give a total figure for the full course of the project. This analysis shows that the expenditure by employees will directly inject $733 million into the Mid West Regional Council, and a further $104 million into the Australian economy over the course of the project. When account is taken of the multiplier impacts, the full impact on the Mid West Regional Council is estimated to be $1,542 million and for the Australian economy a further $778 million, to give a total of $2,320 million over the course of the project. (Table 5.20).

Table 5.20: Economic Impacts of Employee Expenditures over the course of the Project

Area	TOTAL EMPLOYEE SPEND FOR PROJECT LIFE ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$9.7	$20.3	$585.9	$1,232.1	$590.6	$1,242.0
Gulgong	$1.6	$3.3	$90.3	$189.9	$91.9	$193.2
Other Local	$0.9	$1.8	$44.8	$94.1	$45.6	$95.9
Total Mid West	$12.1	$25.4	$721.0	$1,516.2	$733.1	$1,541.6
Sydney	$19.1	$24.8	$32.0	$138.0	$51.0	$162.9
Newcastle	$10.3	$13.0	$16.8	$71.4	$27.0	$85.5
Lithgow	$4.8	$11.8	$15.2	$65.6	$19.9	$77.4
Dubbo	$2.9	$11.2	$14.4	$62.1	$17.3	$73.3
Total NSW	$37.2	$86.3	$799.3	$1,854.3	$836.5	$1,940.6
Other Australia	$0.7	$18.7	-	-	$0.7	$379.2
Total Australia	$37.9	$105.0	$1,215.9	$2,214.7	$837.2	$2,319.8
Imported	-	-	-	-	-	-
Overall Total	**$37.9**	**$105.0**	**$1,215.3**	**$2,214.7**	**$837.2**	**$2,319.8**

Source: ECS (June 2009)

5.5.4 Economic Impact of Spending on Materials and Equipment

A second significant impact on the local economies comes from Ulan Coal's expenditure on materials and equipment - everything other than expenditure on

labour. In this discussion we will use the generic term "materials" to cover items including equipment and materials for site preparation, conveyors and other earth moving equipment, contractors, mine site accommodation, transport and marketing, and the ongoing use of materials such as repairs and replacement parts, fuel and explosives.

The total annual expenditure on materials is estimated at $210.5 million during the construction phase and $608.2 million during the operations phase (Table 5.21). The expenditure on materials during both the construction and operations phases is spread more widely than expenditure by employees. This is to be expected with materials and equipment being sourced from outside of the Mid West Regional Council area, and outside of NSW. In fact, some 37% of materials are sourced from within the Mid West Regional Council, 49% from elsewhere in NSW, 5% from other parts of Australia and an estimated 9% is imported.

This pattern of expenditure on materials reflects the reality that a number of significant requirements are sourced almost entirely from outside of the Mid West Regional Council. Included in this list are spare parts, some chemicals, safety equipment, energy, contract mining materials handling and road transport, rail transport, port costs and royalties and licences.

Table 5.21: Annual Economic Impacts of Expenditures on Materials and Equipment

Area	AVERAGE ANNUAL PROJECT SPEND – EXCLUDING LABOUR ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$35.8	$58.0	$136.8	$263.8	$143.1	$274.0
Gulgong	$4.7	$7.6	$17.4	$33.6	$18.3	$34.9
Other Local	$18.3	$29.7	$69.8	$134.6	$73.0	$139.7
Total Mid West	$58.8	$95.3	$224.1	$432.0	$234.3	$448.6
Sydney	$31.8	$66.7	$121.6	$305.1	$127.1	$316.8
Newcastle	$47.0	$95.0	$179.6	$389.4	$187.8	$406.0
Lithgow	$0.0	$1.8	$0.0	$30.6	$0.0	$30.9
Dubbo	$0.0	$1.7	$0.0	$29.0	$0.0	$29.3
Total NSW	$137.6	$260.5	$525.3	$1,186.1	$549.3	$1,231.5
Other Australia	$25.1	$123.8	$28.3	$343.5	$32.7	$365.1
Total Australia	$162.7	$384.3	$553.6	$1,529.5	$582.0	$1,596.6
Imported	$47.8	-	$54.6	-	$63.0	-
Overall Total	**$210.5**	**$384.3**	**$608.2**	**$1,529.5**	**$645.0**	**$1,596.6**

Source: ECS (June 2009)

These annual impacts can be added to give a total figure for the economic impacts over the 21 years of the project (Table 5.22). This analysis shows that the expenditure on materials, services and equipment will directly inject $3,005 million into the Mudgee economy, $4,921 million into the Mid Western Regional Council economy, and $11,535 million into the NSW economy over the course of the project.

When account is taken of the multiplier effects, the full impact on the Mudgee economy is estimated to be $5,753 million. There is an estimated overall impact of $9,421 million for the whole Mid Western Regional Council, and $25,862 for the NSW economy.

Table 5.22: Economic Impacts of Expenditures on Materials over the course of the Project

Area	TOTAL SPEND FOR PROJECT LIFE - EXCLUDING LABOUR ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$131.3	$212.8	$2,873.6	$5,540.3	$3,004.8	$5,753.0
Gulgong	$17.2	$27.9	$366.1	$705.9	$383.4	$733.8
Other Local	$67.1	$108.8	$1,465.6	$2,825.8	$1,532.7	$2,934.5
Total Mid West	$215.6	$349.5	$4,705.4	$9,071.9	$4,921.0	$9,421.4
Sydney	$116.6	$244.5	$2,553.4	$6,407.3	$2,670.0	$6,651.8
Newcastle	$172.3	$348.4	$3,771.9	$8,177.9	$3,944.2	$8,526.3
Lithgow	$0.0	$6.5	$0.0	$642.0	$0.0	$648.5
Dubbo	$0.0	$6.2	$0.0	$608.3	$0.0	$614.4
Total NSW	$504.5	$955.1	$11,030.7	$24,907.3	$11,535.2	$25,862.4
Other Australia	$92.0	$454.0	$594.5	$7,213.1	$686.5	$7,667.1
Total Australia	$596.6	$1,409.1	$11,625.2	$32,120.5	$12,221.8	$33,529.6
Imported	$175.3	$0.0	$1,147.0	$0.0	$1,322.3	$0.0
Overall Total	**$771.8**	**$1,409.1**	**$12,772.3**	**$32,120.5**	**$13,544.1**	**$33,529.6**

Source: ECS (June 2009)

5.5.5 Economic Impact of All Expenditure Activities

The analyses presented in Table 5.22 to Table 5.25 can be added to provide a picture of the overall economic impact of expenditures from activities associated with the Project over the next 21 years. Table 5.22 and 5.21 are added to yield Table 5.23 which shows the average annual impacts; the addition of Tables 5.20 and 5.22 gives Table 5.24 which shows the accumulated impacts over the life of the project.

Table 5.23: Annual Economic Impacts of Expenditures from the Project

Area	AVERAGE ANNUAL PROJECT SPEND – LABOUR AND MATERIALS ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$38.4	$63.6	$164.7	$322.5	$171.4	$333.6
Gulgong	$5.1	$8.5	$21.7	$42.7	$22.6	$44.1
Other Local	$18.5	$30.2	$71.9	$139.0	$75.2	$144.3
Total Mid West	$62.1	$102.3	$258.4	$504.2	$269.2	$522.0
Sydney	$37.0	$73.5	$123.1	$311.7	$129.6	$324.5
Newcastle	$49.8	$98.6	$180.4	$392.9	$189.1	$410.1
Lithgow	$1.3	$5.0	$0.7	$33.7	$0.9	$34.6
Dubbo	$0.8	$4.7	$0.7	$31.9	$0.8	$32.7
Total NSW	$147.7	$284.0	$563.3	$1,274.4	$589.1	$1,324.0
Other Australia	$25.3	$128.9	$28.3	$360.6	$32.7	$383.2
Total Australia	$173.0	$412.9	$591.6	$1,635.0	$621.9	$1707.1
Imported	$47.8	-	$54.6	-	$63.0	-
Overall Total	**$220.8**	**$412.9**	**$646.3**	**$1,635.0**	**$684.8**	**$1,707.1**

Source: ECS (June 2009)

The total economic impact of the project is the sum of the direct and flow-on effects of the employee expenditure and the expenditure on materials and services for the mine. The addition shows even more emphatically that the project will have a significant impact on the Mudgee economy, as well as the Regional economy. Local direct expenditure from the project and from employees in Mudgee will average $171 million a year over the 21 years of construction and operations. The project will have flow on impacts which generate a further $162 million a year increase in economic activity for Mudgee.

There will also be a significant economic impact on the economy of the Mid Western Regional Council. Direct expenditure from the project will average $269 million a year, with a further $253 million year being generated through flow-on effects.

Table 5.24 provides the accumulated impacts of the Project, over its full 21 years of economic life, on the regional, State and Australian economies. It shows that the mine will bring direct expenditures in the Mudgee economy totalling $3,595 million to the Mudgee economy and $5,654 million to the Mid West Regional Council area. These direct expenditures have a multiplier effect generating a total economic impact over the course of the next 21 years of $7.0 billion in Mudgee and $11.0 billion for the Mid West Regional Council area.

Table 5.24: Accumulated Economic Impacts of Expenditures from the Project

Area	TOTAL SPEND FOR PROJECT LIFE – LABOUR AND MATERIALS ($millions)					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	$140.9	$233.1	$3,459.5	$6,772.4	$3,595.4	$6,995.0
Gulgong	$18.8	$31.2	$456.5	$895.8	$475.2	$927.1
Other Local	$68.0	$110.6	$1,510.4	$2,919.9	$1,578.4	$3,030.5
Total Mid West	$227.7	$374.9	$5,426.3	$10,588.1	$5,654.0	$10,963.0
Sydney	$135.7	$269.4	$2,585.4	$6,545.3	$2,721.1	$6,814.7
Newcastle	$182.6	$361.4	$3,788.7	$8,250.3	$3,971.3	$8,611.8
Lithgow	$4.8	$18.3	$15.2	$707.6	$19.9	$725.9
Dubbo	$2.9	$17.3	$0.0	$2,462.5	$17.3	$687.7
Total NSW	$541.7	$1,041.4	$11,830.0	$26,761.6	$12,371.7	$27,803.0
Other Australia	$92.0	$454.0	$594.5	$7,213.1	$686.5	$7,667.1
Total Australia	$634.5	$1,514.1	$12,841.1	$34,335.2	$13,058.9	$35,849.3
Imported	$175.3	-	$1,147.0	-	$1,322.3	-
Overall Total	**$809.7**	**$1,514.1**	**$13,987.6**	**$34,335.2**	**$14,381.1**	**$35,849.3**

Source: ECS (June 2009)

5.5.6 Jobs Created by the Project

The project is anticipated to initially employ an additional 200 construction workers, rising to 292 (on-site and off-site construction workforce) workers in the final year of the construction phase. The on-site construction workforce will peak at 270 during Year 4. The operational workforce will increase from 530 to 931 in the first year of operations, following completion of the construction phase for Ulan West. Employee numbers are then expected to decline to 375 over the succeeding nine years, staying at this lower level for the remainder of the mine life.

It is estimated that an average of 27 construction workers will be resident in Mudgee in addition to the 143 workers in a local camp. There will be an average of 336 Mudgee residents engaged in operations.

In addition to the jobs directly associated with the mine, multiplier impacts of the project will generate an additional 139 jobs in Mudgee during the construction phase and 577 during operations.

The total Mid West Regional Council area is estimated to gain an annual average of 184 jobs directly in the three years and eight months of construction and the multiplier effect will bring a further 151 jobs to the Council area.

The project is estimated to bring an operations workforce to the local Mid West economy of 539, and a further 926 jobs are estimated to be created as a result of the wider economic activity generated outside of the project, i.e. the multiplier effect.

Just as there are flow on benefits in increased economic activity for areas outside the immediate locality, so too are jobs created outside the immediate area. After taking account of the multiplier impacts of the project, there will be significant numbers of jobs created outside of the local area. For example, it is estimated that the total number of jobs generated throughout Australia, directly and indirectly, by the Project will be 762 during construction and 2,429 from operations (Table 5.25).

Table 5.25: Estimated Number of Jobs Created by the Project

Area	AVERAGE ANNUAL NUMBER OF JOBS CREATED					
	Construction		Operations		Overall	
	Direct	Multiplied	Direct	Multiplied	Direct	Multiplied
Mudgee	170	309	336	913	366	967
Gulgong	9	16	133	361	135	364
Other Local	5	9	70	190	71	192
Total Mid West	184	335	539	1,465	571	1,523
Sydney	18	111	24	360	27	380
Newcastle	12	63	13	190	15	201
Lithgow	0	37	11	170	11	177
Dubbo	0	35	11	163	11	169
Total NSW	214	581	598	2,348	635	2,450
Other Australia	4	181	0	81	1	112
Total Australia	218	762	598	2,429	636	2,562
Imported						
Overall Total	**218**	**762**	**598**	**2,429**	**636**	**2,562**

Source: ECS (June 2009)

5.5.7 Impacts on Government Finances

The impacts of the development of the project on government finances will take a number of forms.

From a NSW point of view, the most significant impact on government finances will come in the form of royalties and payroll tax. From a Commonwealth point of view there will also be significant personal income tax and company tax payments.

In NSW the rate of payroll tax has been reduced in 2009 to 5.75 per cent on all salaries paid above a threshold of $623,000. While the taxation provisions also allow for a number of exemptions from liability for payroll tax, the Grouping Provisions of section 16 of the Act (NSW Pay-Roll Tax Act 1971) would seem to ensure that most of the wages and salaries paid for the construction and operations of the project will be subject to payroll tax contributions.

During the construction phase of three years and eight months, the construction work force will average 217, and payroll tax collections are estimated to be at an annualised rate of $0.947 million. The operations workforce is expected to average 598, and payroll tax collections are calculated to be $3.503 million a year over the course of 21 years.

The stream of pay roll tax collections is estimated to have an undiscounted value over the life of the project of $75.5 million. At a discount rate of 9 per cent they have a net present value of $31.7 million. At a more conventional discount rate of 7%, payroll tax collections have a net present value of $37.3 million (Table 5.26).

The mine will also generate significant royalty collections for the State, and significant personal income tax collections for the Commonwealth. Personal income tax collections could reach $19.5 million a year at the peak levels of employment (year 4).

Royalty collections on coal production for the State of NSW are currently set at ad valorem rates of 5% for deep underground mines, 6% for underground mines and 7% for open cut mines. The Ulan project is a mix of open cut and underground operations, so we have assumed a royalty rate of 6.5%. Royalties have been calculated on the basis of real prices outlook for thermal coal produced by the

Australian Bureau of Agriculture and Resource Economics.[2] The prices cited by ABARE are on a FOB basis, so these have been adjusted back to a pit value by adding back estimated transport and port handling costs. Also, the ABARE price forecasts are for the period to 2014 only. Beyond that time, this analysis has used real prices declining at an annual rate of four percent. This price outlook is used to generate a conservative estimate – it is not based on any assessment of market expectations.

The estimated value of royalties over the whole life of the project has an accumulated value of $1,948 million. At a discount rate of 7%, this value is reduced to $1,084 million in NPV terms.

Table 5.26: Benefits to State and Commonwealth Governments over the Life of the Project

SOURCE OF ECONOMIC BENEFIT	WHOLE OF PROJECT LIFE BENEFITS		
	NOT DISCOUNTED ($'million)	DISCOUNTED AT 7% ($'million)	DISCOUNTED AT 9% ($'million)
NSW State Revenues			
Payroll Taxes	75.5	37.3	31.7
Royalties on coal	1,948.2	1,084.4	945.8
NSW Total	**2,023.7**	**1,121.7**	**977.5**
Commonwealth Revenues			
Personal Income taxes	341.8	193.5	170.3
Personal Medicare payments	20.1	11.4	9.5
Commonwealth Total	**361.9**	**204.9**	**179.8**
TOTAL BOTH GOVERNMENTS	**2,385.6**	**1,326.6**	**1,157.3**

Source: ECS (June 2009)

It is estimated that the total direct revenue benefits to the State of NSW will be $2,024 million over the life of the project. These revenue flows do not include revenues that will flow from the business that will be generated as a consequence of market opportunities arising from the project (the multiplier impacts).

The project will also provide company tax payments and GST payments to the Commonwealth Government. These have not been estimated as there are too many unknowns to make a realistic independent estimate.

[2] Australian Bureau of Agriculture and Resource Economics (ABARE). Australian Commodities. March Quarter. Volume 16, number 1.

5.6 Impact Significance

This section outlines the impacts/changes considered to be of most relevance to the community in relation to the Project. Social impact areas have been summarised according to Vanclay's (2003) categorisation of impacts as follows.

5.6.1 The Community

From a community perspective, the assessment has identified a number of impacts at the community level that have the potential to affect community cohesion, stability, character, services and facilities within the project locality.

Community Needs

The synergies between local residents, local service providers and Mid Western Regional Council's perceptions of community need, highlighted the following areas as being of greatest community need:

Health

- access to specialist medical services and General Practitioners
- lack of services for the aged and those with disabilities, particularly in relation to respite care
- rural isolation and effects on children and the elderly in particular

Education / Employment

- notable skills shortage in the labour market (fewer residents continuing education past Year 10)
- educational opportunities, particularly for young people
- transition from high school to work
- increasingly alienated young people dropping out of work and society (unskilled young people)

General Service Level Enhancement

- infrastructure and service provision enhancement – particularly vulnerable groups, young, aged, those with disabilities
- need to create a sense of belonging
- need to overcome social isolation, particularly of the young and the elderly
- need for out-of-hours services
- provision of youth entertainment facilities

- need for improved public transport services to afford greater accessibility for MWRC Shire residents, particularly as key community services and infrastructure are becoming more centralised in Mudgee

Impacts of Population Change on Service Delivery

Predicted project impacts, with respect to service provision for the MidWestern LGA and the localities of Mudgee and Gulgong, suggest that a potential influx of new residents associated with the current Project is likely to place further strains on existing service provisions in the region, particularly in the area of health.

Stakeholder consultations undertaken as part of the current assessment program have highlighted prevalent community concerns over the quality and adequacy of existing health services in the region. A substantial proportion of key community stakeholders, including health service providers, have cited the need for improved health and related services, including the need to upgrade existing facilities, improving accessibility to GP and specialist health services, as well as the pertinent need to improve and upgrade local health facilities including the current hospital in Gulgong.

In the area of education, the quality of existing education services has been cited by key community stakeholders as excellent, with current capacities highly flexible in accommodating the potential population change associated with the Project. However, cumulative impacts around the potential concurrence of multiple development projects in the area, such as the Moolarben Coal Project and UCML's continued operations, may impose potential strains on existing education services given population forecasts have highlighted long-term growth in Mudgee's school-aged population. While education providers have cited flexibility in their existing capacities to accommodate an increase in student population; this level of flexibility will need to be monitored through ongoing planning, so that education providers could cope with the projected long-term growth in demand for education services by a growing school aged population.

Another key service area likely to experience substantial impacts from population change in the region is that of childcare. While most of those childcare service providers who were interviewed as part of the current assessment program cited some level of confidence in accommodating a growing population, these childcare services are currently operating at, or close to, capacities. Indeed, some childcare services have also cited challenges in attracting and retaining child care workers to

assist in meeting their capacities, despite the adequacy of existing facilities in accommodating larger capacities. Therefore, an increase in demand on childcare services by an influx of dependent aged children into the region is likely to impose considerable strains on existing childcare services.

The potential influx of new residents associated with the current project is anticipated to predominantly reside within the Mudgee Township. This inference is based largely on outcomes of the current UCML Employee Survey, as well as the fact that Mudgee is the MWRC's regional centre and is also in close proximity to UCML's operations. Therefore, there is a likelihood that Mudgee's temporary rental and residential housing sectors may be placed under further pressure in the face of greater demands by multiple ongoing large-scale development and industry projects in the area. It is, however, noteworthy that UCML's workforce size will be substantially scaled down by 2022, following closure of Ulan No. 3 and cessation of the Open Cut operations. Therefore, while the *Mid-Western Regional Council Housing and Population Forecasting Review*, which considered expected major activities of the Moorlarben Project, Wilpinjong Mine, the possible re-opening of the abattoir and the Gulgong-Mudgee Vineyard Resort, has forecasted that Mudgee is likely to require an average of over 100 lots provided a year over the following 25 year period; UCML's workforce is unlikely to add significantly to these forecasted demands.

Construction Impacts

As has been highlighted in Section 5.3.1, a sufficient proportion of additional accommodation is available prior to commencement of the construction phase to accommodate the construction workforce.

However, given the temporary and transient nature of this workforce, the influx of new people into the locality may place pressure on additional services in the region and also influence the social fabric of the community. Indeed, several community members who were consulted as part of the current assessment program have indicated that the recent growth of the mining industry had affected the nature of their local community, and that they felt their community was becoming more fragmented. In addition, participation in local community groups and voluntary organisations had also declined substantially over the years, due largely to the transient mining workforce population apparent within the community. Therefore, it may be valuable to maximise local labour for the construction workforce.

The Environment

In relation to the Continued Operations project, residents/landholders in proximity to the project identified a number of environmental issues, these included:

- Dust
- Cumulative impacts
- Blasting
- Operational noise
- Visual amenity
- Groundwater and surface water
- Increase in Traffic(rail and road)

The degree to which issues were perceived of concern related to geographic area. For example, landholders residing in the vicinity of the Open Cut area were more likely to raise issues associated noise, dust and blasting; whereas those near Cope Road and Ulan Road raised traffic impacts. Water and cumulative impacts associated with mining generally were frequently cited by all landowners.

Technical environmental assessment has been undertaken to address each of the issues identified above a part of the Environmental Assessment (EA) for the project. Outcomes of these studies can be found in the relevant issue sections of the EA document.

5.6.2 Fears and aspirations

This impact category relates to stakeholder perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

In this regard, stakeholders consulted raised concerns about the number of current mines operating in the area. The major cumulative issue identified related to environmental impacts such as noise and dust, additional traffic and the changing visual nature of the area.

However, the project was also seen to provide a number of benefits and assist in meeting aspirations for the future of the locality such as local economic development (e.g. housing and retail sectors) and opportunities for further employment for youth. Improvements in other services such as tertiary education were also highlighted as opportunities that could be enhanced.

6.0 Strategies for Impact Management and Monitoring

Mitigation strategies are processes, programs or plans designed to address the perceived issues and impacts stakeholders raised during the assessment program. The strategies may serve to enhance the positive impacts associated with a project, or mitigate or ameliorate negative impacts. It is important to note, however, that such strategies may only assist in making a proposal more acceptable to the community and are not designed to change the values held by particular stakeholder groups.

In response to the perceived issues/impacts discussed in Section 5 of this report, UCML has identified a range of strategies to address social impacts and community concerns, particularly those relating to:

- Economic development - especially local employment, education and training;
- Quality of life - including community investment, impact on health services, and road safety; and
- Cumulative impacts of mining.

In addition, strategies aimed at strengthening UCML's community engagement practices are also provided.

The recommended strategies outlined below acknowledge that UCML has been operating in the area since the 1920's and the company has programs in place to manage community impacts. Therefore, the strategies in this section aim to build upon existing programs and formalise selected activities that currently occur on an *ad hoc* or informal basis.

6.1 Mitigating environmental effects

Environmental issues raised in relation to the project have been subject to specialist assessment as part of the Environmental Assessment (EA). Consequently, mitigation strategies to address specific environmental issues are outlined in the relevant section of the EA. For example, subsidence impacts on properties within the Project area have been documented and appropriate management strategies will be identified in future Subsidence Management Plans in accordance with the Department of Primary Industries' requirements.

A community information day was held in 28 July 2009 following completion of the environmental studies to present the findings and proposed mitigation strategies. Approximately 500 local residents and landholders in the consultation area were invited to the information event. Other mechanisms used to feed back the results of the environmental and social studies include ongoing project updates to the Community Consultative Committee and the Mid-Western Regional Council, distribution of information sheets summarising the key project impacts and proposed management measures, personal meetings with private landholders, meetings with relevant Government agencies, and presentations to community groups.

6.2 Strategies to Address Economic Development – Employment, Education and Training

The most commonly raised impact across all stakeholder groups in relation to the Project was economic development, with specific mention made of local employment and training.

UCML currently aims to maximise local employment and provide training and education opportunities through:

- Advertising employment, apprenticeships and traineeships in local media;
- Providing an employment pack that allows local residents to register their interest in employment opportunities at the UCML office;
- Sharing information about corporate and UCML mining careers with local schools;
- Offering training opportunities through partnerships with local tertiary education providers;
- Participating in the corporate school scholarship program; and
- Continued implementation of Corporate and UCML Corporate Social Involvement (CSI) programs

It is recommended that UCML continue with the above activities, however, this strategy should be augmented by:

- Formalising a policy that gives local residents employment preference where they have the required skills and experience, and demonstrate a cultural fit with the organisation;
- Providing a link from the UCML website to www.xstratacareers.com.au so that local residents can easily register their interest in employment online; and

- Developing partnerships with other local organisations, to promote employment opportunities in non-mining related sectors to the families of UCML employees. This may assist I maximising the human capital available locally and further encourage employment across a diverse range of industries.

6.3 Strategies to Address Economic Development – Local Business

UCML has an informal 'buy local' practice whereby goods and services tend to be purchased from local businesses provided that they are competitive in terms of quality and price. It is therefore recommended that this be formalised by revising the UCML purchasing and supply manual to ensure local suppliers and contractors are able to tender for all contract, supplier and service opportunities. In developing the policy, it is recommended UCML consider industry best practice on local procurement, such as preferential weighting for local businesses in tender selection criteria(whereby UCML is not unfairly disadvantaged commercially); and maintaining a register of local businesses so they can be notified electronically of upcoming tenders.

In addition to formalising its local procurement policy, it is recommended UCML share relevant economic information contained in the Social Impact Assessment with key economic stakeholders such as the local Chamber of Commerce and Industry and the Mid-Western Regional Council to afford further information flow to staff and/or members of these associations.

6.4 Strategies to Address Quality of Life – Community Investment

The community's positive view of the economic benefits associated with UCML's operations partially relates to XCN's and UCML's existing social involvement programs. The company provides funding to local organisations through its Corporate Social Involvement (CSI) program.

Some recent investments in the local community include emergency department equipment and cardiac monitors for the Mudgee Health Service; two emergency department beds and an ECG machine for the Gulgong Area Health Service; support for the Mudgee Dad's Take Home Reading Program; the Mudgee mobile library van; and provision of funding over three years for a Youth Worker for the Mid-Western Regional Council. In addition to CSI and VPC funding, UCML Staff also help support local organisations by volunteering and fundraising.

UCML's social involvement program appears to deliver sound outcomes, however there has not been a process to ensure its investment focus areas are aligned with community need. It is therefore recommended that UCML review its social involvement plan in consultation with key stakeholders such as the Community Consultative Committee and Mid-Western Regional Council to develop a list of strategic investment priorities. These priorities can be reviewed annually using UCML's standard risk and opportunity identification process (Broad Brush Risk Assessment) to ensure the program's focus areas remain relevant and address issues of greatest community need/challenge.

6.5 Strategies to Address Quality of Life – Health Care

At present, UCML attempts to reduce the impacts of its workforce on local health services by continuing current activities such as:

- Running an in-house annual influenza vaccination program;
- Providing in-house employee medical assessments every three years;
- Offering First Aid training to employees;
- Delivering a health promotion program for UCML employees; and
- Encourage raising funds for health-related causes (e.g. hospital equipment, the Cancer Foundation etc) through staff volunteering and fund raising activities.

While the above activities may somewhat reduce the impact of the UCML workforce on health services, it is recognised that further pressure will be placed on these services due to the cumulative impact of a growing mining sector in the region.

This Social Impact Assessment did not include a comprehensive Health Impact Assessment, and in the absence of valid health data, it is inappropriate to recommend strategies to address health impacts. The delivery of health services is the responsibility of Government, not private enterprise; however UCML can play an important role in the planning of health services by sharing information about its workforce and their requirements. In this regard, UCML could provide relevant sections of this Social Impact Assessment, such as the employee profile and population change modelling outcomes, to health authorities and jointly discuss how best to manage the current and future impacts of its workforce on local health

services. Furthermore, the company may seek to partner with other mining companies to further support this important sector of the community.

6.6 Strategies to Address Quality of Life – Road Safety

Road traffic was one of the most common concerns identified during consultation, particularly among local landowners. Although the concerns were in regard to the cumulative impacts of all mining activities, it highlights that UCML should attempt to mitigate road traffic issues where possible. It needs to be acknowledged that a number of stakeholders identified poor road conditions, lack of overtaking lanes and limited bus bays as their safety concern, and while rectifying these issues is not UCML's responsibility, the company may be able to provide in-kind support and assistance, given the company's and the broader mining sector's focus on health and internal safety aspects.

The only road safety activities UCML currently undertakes is promoting safe driver practices in its internal newsletter; applying a driver fatigue policy to all employees; and providing driver training to staff whose job involves driving on site.

It is therefore recommended that UCML focuses on understanding any causal relationships that may exist between road safety and its operations, and take appropriate steps to address those underlying causes. For example, a key initiative that could help address people's concerns about the noted increase of traffic during 'peak hour' periods, is for UCML to work with neighbouring mining companies to coordinate the start and end times for shifts. Currently all the mines change shifts at the same time, whereas staggered shift changes could result in a major reduction in traffic congestion at peak times. Similarly, UCML could give consideration to transporting workers by bus during the mine's construction phase. Not only would this alleviate local traffic pressures, it could provide revenue to a local transport business, reduce the number of people driving with possible fatigue, and reduce greenhouse emissions.

6.7 Strategies to Address Cumulative Impacts

Many stakeholders consulted for the Social Impact Assessment made reference to the fact that their concerns related to the cumulative impacts of mining rather than the impact of UCML's operations *per se.* UCML belongs to a working party comprised of representatives from neighbouring mines who meet regularly to discuss issues of common concern. At present, the working party is focused on how it can help

address water impacts, through initiatives such as a water transfer agreement between the mines and developing a regional groundwater model.

The inter-mine working party has the potential to address other cumulative impacts highlighted in this report. For example, there is the possibility of developing an integrated environmental monitoring network, or a coordinated shift change roster as mentioned in the road safety section previously.

It is therefore recommended UCML continue to participate in the working party and look for further opportunities to address cumulative impacts in the region in partnership with neighbouring companies.

6.8 Strategies to Address Community Engagement

A key mechanism for ensuring community impacts are managed effectively is for UCML to have a well-structured, strategic community engagement program. Community feedback with respect to UCML's community engagement process has to date been very positive. As part of the operation's ongoing community relations program, regular contact is made with residents, landholders and other key stakeholders affected by UCML's activities, and the general public is kept informed through mechanisms such as *Ulan News*, project updates, and community engagement/education events. The approach taken by the company in the social impact assessment program for the current Project has also been noted by community stakeholders.

UCML's current engagement program can be strengthened by ensuring that regular contact made with landowners and other key stakeholders during the EA process is continued in a structured and ongoing manner. In addition, it is recommended that community information sheets are developed on key issues identified in the EA and Social Impact Assessment, and made available on the UCML website.

6.9 Strategies to Monitor Social Impacts

Xstrata Coal NSW has been successfully monitoring the social impacts of several of its operations in the Hunter Valley, Newcastle, and the Western Coalfields through a program called *Viewpoint*.

The objectives of Viewpoint program include:

- To assess stakeholder perceptions of the company's environmental performance at a corporate and operational level;

- To assess the adequacy of information provided to stakeholders and the methods and mechanisms used to involve stakeholders in company activities;
- To identify appropriate mechanisms to provide information to, and obtain information from, stakeholder groups;
- To determine how well the company is performing in relation to their community involvement activities;
- To identify community needs and priorities to guide social investment programs (partnerships and sponsorships); and
- To assist in further institutionalising community aspects into the operations culture.

The Viewpoint program is designed to enhance company performance through monitoring community and social perception indicators approximately every two years, against a number of key objectives. Indicators assessed through the program include:

Table 6.1: Key Monitoring Indicators

Assessment Area	Description
Knowledge and Awareness	• Identification of top of mind associations with UCML's operations • Awareness and knowledge of UCML's operations
Reputation	• Stakeholder's perceived rating of the company's reputation in the community
Attribution of Change	• Identification of the level of environmental, social and economic change occurring within the community and perceived as being attributable to UCML's activities
Impact Management	• Identification of the perceived social, environmental and economic issues/impacts associated with UCML's mining operations • Community satisfaction with the management of issues/impacts by the company • Concerns/issues associated with future mining activities and priorities attached to these • Stakeholder perspectives on how these impacts could be addressed/managed
Community Engagement	• Evaluation of the extent of involvement and opportunities for engagement • Awareness and satisfaction with existing engagement efforts undertaken by UCML • Identification of the appropriate mechanisms for information provision and involvement • Identification of information needs/requirements relating to the company's activities
Trust and Community Benefit	• The perceived level of trust the community has in messages and actions of UCML • The perceived level of community benefits associated with UCML actions/contributions in

Assessment Area	Description
	the community
Community Contribution and Needs	• Knowledge and awareness of UCML's sponsorships and community contributions • Identification of areas of community need and priorities to define focus areas for social investment • Identification of infrastructure services and facilities required by the community
Economic Contribution and Investment	• Measurement of the perceived impacts i.e. financial/economic, relating to UCML's operations /presence in the region • Community perceptions of the economic linkages between UCML at the local and regional level

Source: Coakes Consulting (2009)
These indicators have been developed and are copy written to Coakes Consulting

Given the success of the Viewpoint program, it is recommended that UCML implement the Viewpoint program to inform future operational involvement and investment/contribution planning and practice. This will also further facilitate comparisons with other XCN operations and help identify best practices that can be shared with other business units.

Table 6.2: Summary of Recommendations

Impact Area	Recommended strategy
Economic Development	
Employment, education and training	Formalise a policy to maximise local employment
	Provide a link from UCML's website to Xstrata Coal NSW's employment website
	Develop partnerships to promote non-mining employment to families of UCML employees
Local business	Revise purchasing and supply guidelines to increase opportunities for local business to tender
	Share relevant data from this Social Impact Assessment with key economic stakeholders
Quality of Life	
Community investment	Collaborate with key community groups and the Mid-Western Regional Council to develop a list of strategic investment priorities
Health Care	Share relevant data from this Social Impact Assessment with key health stakeholders.
Road Safety	Work with adjoining mining companies to coordinate roster change over times

Impact Area	Recommended strategy
	Consider providing bus transport for employees during the construction phase
Cumulative Impacts	
	Participate in the inter-mine working party and work towards addressing cumulative impacts in the region
Community Engagement	
	Regularly consult with landowners, the Mid-Western Regional Council and the Community Consultative Committee and other key stakeholders.
	Develop community information fact sheets on issues identified in this Social Impact Assessment
	Provide regular project updates to the community through *Ulan News* and community events

Source: Coakes Consulting (2009)

7.0 References

Armour, Audrey. (1990) Integrating Impact Assessment into the Planning Process. *Impact Assessment Bulletin* 8 (1/2):3-14.

ABC News Online, 2008: sourced from http://www.abc.net.au

Australian Bureau of Statistics, 1996 Census Population and Housing: sourced from www.abs.gov.au

Australian Bureau of Statistics, 2001 Census Population and Housing: sourced from www.abs.gov.au

Australian Bureau of Statistics, 2006 Census Population and Housing: sourced from www.abs.gov.au

Australian Electoral Commission: www.aec.gov.au

Brereton, D., & Forbes, P. (2004). Monitoring the Impact of Mining on Local Communities: a Hunter Valley Case Study. Paper presented to Minerals Council of Australia Inaugural Sustainable Development Conference, Melbourne, October 2004.

Burdge, Rabel J. 2004. *A Community Guide to Social Impact Assessment*. Third ed. Middleton, Wisconsin: Social Ecology Press.

Electoral Commission NSW: Retrieved from http://www.elections.nsw.gov.au

Hunter Valley Research Foundation (2003), Newcastle and Hunter Region 2002-2003, prepared by the Hunter Valley Research Foundation sourced from website: www.hvrf.com.au

Hunter Valley Research Foundation (2005), Newcastle and Hunter Region Economic Forecast 2004-2005, prepared by the Hunter Valley Research Foundation sourced from website: www.hvrf.com.au

Mid Western Regional Council retrieved from http://www.mudgee.nsw.gov.au/index.php?option=com_frontpage&Itemid=1

Mid Western Regional Comprehensive Land Use Strategy (April, 2008). Prepared by Parsons Brinckerhoff, retrieved from the Mid Western Regional Council Shire website

Mid Western Regional Council Population Projections Review (2005 – 2031) Report to Council. Prepared by Ratio Consultants

Mid Western Regional Shire Housing and Population Forecasting Review (November 2007).Prepared by Ratio Consultants

Mid Western Regional Council Social Plan (November 2006). Retrieved from the Mid Western Regional Council Shire website

Mid Western Regional Council Management Plan (2007/08 – 2011/12). Retrieved from the Mid Western Regional Council Shire website

Mid Western Regional Council Cultural Plan. Prepared by Melanie Trethowan and the Cultural Plan Working Party. Retrieved from the Mid Western Regional Council Shire website

Moolarben Coal Project Stage 2 Environmental Assessment Report (March 2009), retrieved from http://www.moolarbencoal.com.au/

The Nature Conservation Council of NSW http://www.nccnsw.org.au/

NSW Coal Affected Communities report presented at the Greens NSW Coal Issues Forum held at Parliament House, April 2005., retrieved from http://www.lee.greens.org.au/CoalCommunities.pdf

NSW Department of Local Government retrieved from http://www.dlg.nsw.gov.au/DLG/DLGHome

Ross, Helen. 1990. Community social impact assessment: A framework for indigenous peoples. *Environmental Impact Assessment* 10:185-193.

Vanclay, F., Van Schooten, M. and Slootweg, R. 2003 (edited by Becker, H. A., Vanclay, F), 'Conceptualising social change processes and social impacts', *The International Handbook of Social Impact Assessment: Conceptual and Methodological Advances*, Edward Elgar Publishing.

8.0 Appendices

8.1 Stakeholder Groups Consulted

Stakeholder Group	Mechanism	No. of Participants
Landowners	Personal interviews with landowners located within and immediately adjacent to the project area.	71
Employees and Contractors	Surveys of existing UCML employees and contractors to develop a mine employee profile and to update residential and expenditure patterns.	259
Service Providers: • Accommodation • Business • Education • Health • Tourism • Community Services • Local Government	Personal interviews with service providers across the MWRC LGA, including Ulan, Mudgee and Gulgong. Service providers consulted included: • Ulan Hotel • Ulan Community Committee • Mudgee Home Improvement Centre • Gulgong Chamber of Commerce- (Focus Group with multiple participants) • Mudgee Radiology • Mudgee Community Health Centre • Mudgee Physio • South Mudgee Surgery • Mudgee Dental Care • Mudgee District Hospital/Health Service • Mudgee Medical Centre • Gulgong Hospital • Gulgong Surgery • Ulan Public School • Mudgee Public School • Dept Education and Training • Central West Community College • St Matthews Central School • Mudgee High School • TAFE- Mudgee Campus • All Hallows School • Gulgong Public School • Cudgegong Learning Centre • Redhill Environment Centre (school) • Gulgong High School • Mudgee Child Care Centre • Imaginations Early Learning Centre • Squeakers Long Day Care Centre • Family Day Care • Mudgee Pre school • Puggles Child Care Centre • Gulgong Playgroup Incorporated • Gulgong Pre School • Happy Days At Gulgong	63
Community Members, Groups and Organisations	Presentations on the Project to community groups within the MWRC LGA, including:	114

	• Ulan Coal Community Consultative Committee • Mudgee District Environment Group • Rotary Club of Mudgee- Sunrise (Presentation) • NSW Rural Fire Service • Rotary Club of Mudgee (Presentation) • Mudgee Lions Club (Presentation) • Dunedoo Area Community Group	
	Total Number of Participants	**507**

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