



RIX'S CREEK EXTENSION

SOCIAL IMPACT AND OPPORTUNITY ASSESSMENT

July 2015



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Prepared by
Umwelt (Australia) Pty Limited

on behalf of
The Bloomfield Group

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APPENDICES

A TRC Analysis

Acronyms

ABS: Australian Bureau of Statistics

ASR: Age Standardised Rate

Bloomfield: Bloomfield Group Pty Ltd

CCC: Community Consultation Committee

CHPP: Coal Handling and Preparation Plant

DGRs: Director Generals Requirements

DPE: Department of Planning and Environment

EIS: Environmental Impact Statement

EP&A: Environmental Planning and Assessment Act 1979

LGA: Local Government Area

ML Mine Lease

Mtpa: million tonnes per annum

PEA: Preliminary Environmental Assessment

ROM: Run of Mine

SIA: Social Impact Assessment

SIOA: Social Impact and Opportunity Assessment

SRLUP: Strategic Regional Land Use Plan

TRC: Town Resource Cluster

TBGF: The Bloomfield Group Foundation

1.0 Introduction

This report documents the results of a Social Impact and Opportunity Assessment (SIOA) undertaken by Umwelt (Australia) Pty Ltd on behalf of The Bloomfield Group (Bloomfield) for the Rix's Creek Continuation of Mining Project (the Project). The report will contribute to an Environmental Impact Statement (EIS) for the Project that is being prepared by environmental consultancy AECOM. The Bloomfield Group is seeking approval for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Bloomfield Group and Rix's Creek Mine

Rix's Creek Mine (the Mine) is owned and operated by Bloomfield. It is an open cut coal mine approximately 5 kilometres (kms) north-west of Singleton within the Singleton Local Government Area (LGA) (see **Figure 1.1**). The mine currently produces approximately 1.5 million tonnes per annum (Mtpa) of product coal from its existing operations and employs approximately 150 people.

In addition to Rix's Creek Mine, Bloomfield also operates an open cut coal mine (Bloomfield Mine) located at Ashtonfield, East Maitland. At the time of analysis, the Bloomfield Mine employed approximately 90 people.

Bloomfield also operates two engineering companies from the Bloomfield corporate head office at East Maitland: Four Mile Engineering (Four Mile) which, at the time of analysis employed approximately 90 employees and primarily services other Bloomfield operations; and Kings Engineering (Kings) which also employed approximately 50 people and services primarily external clients.

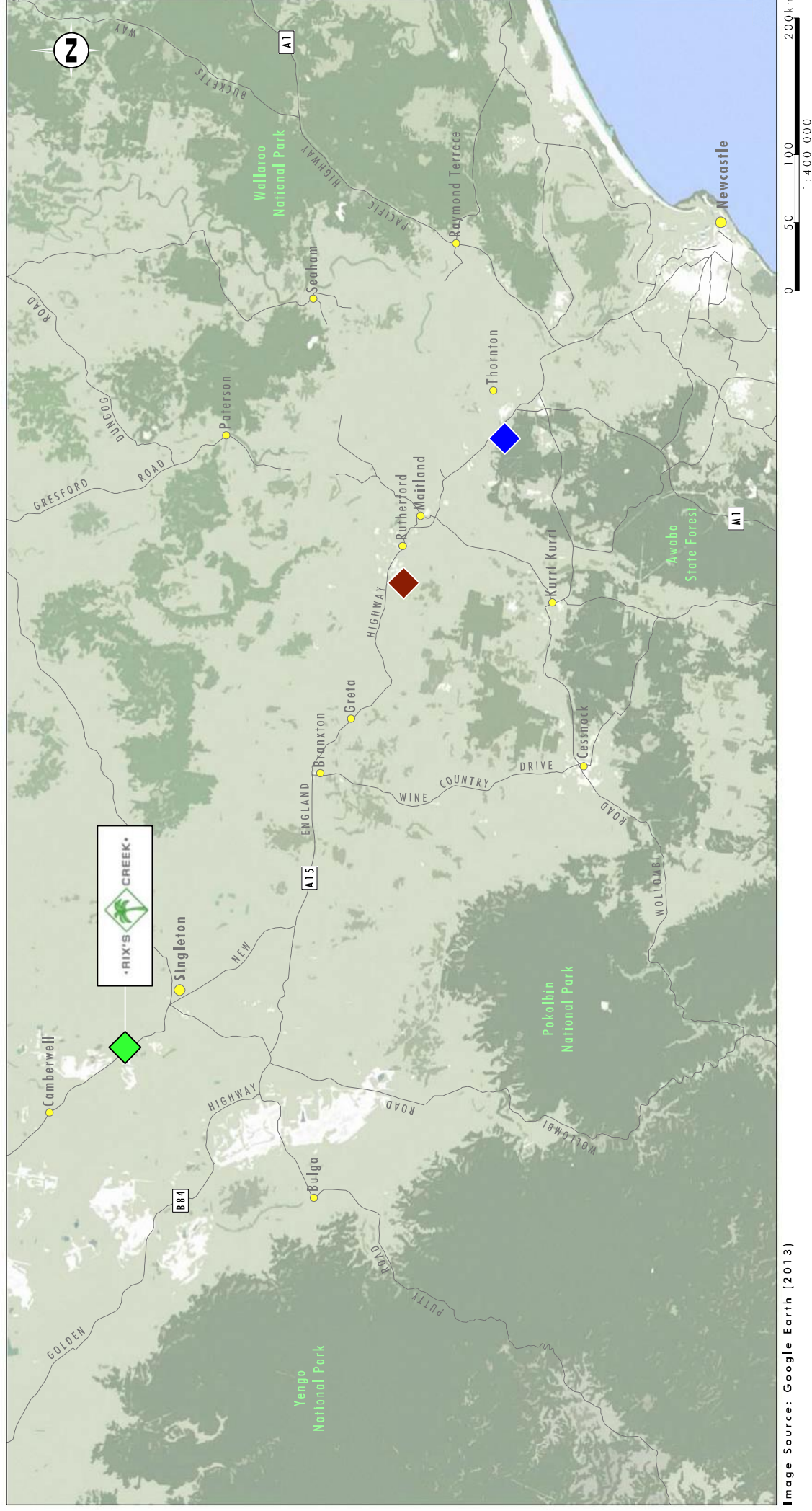
In total, approximately 500 employees are employed by the Bloomfield Group, with revenue from the Rix's Creek mine contributing to sustaining employment across the group.

The Bloomfield group has been operating coal mines in the Hunter Valley for over 75 years, with the commencement of the Bloomfield operation in 1937. The Group remains a family owned business.

1.2 Rix's Creek Continuation of Mining Project.

Bloomfield is seeking approval to extend the life of the existing open cut coal mining operations at Rix's Creek until 2037. The continuation of mining operations will extend in a north-westerly direction and require a modification to Mine Lease 1432 for an out of pit dump. The continuation of operations will utilise the existing mine infrastructure, including access, Coal Handling and Preparation Plant (CHPP), coal stockpiling and rail facilities.

The Project seeks to continue the existing mining operation and to mine up to 4.5Mtpa Run of Mine (ROM) coal per year. Mining methods will be the same as those currently employed at the Mine, being multi-seam bench open cut techniques. ROM coal will continue to be processed onsite at the existing CHPP which has capacity to accept the proposed increase in throughput. Product coal will be transported by rail to the Port of Newcastle. It is estimated that the Mine could yield a total of 32 million saleable tonnes of coal at an overburden ratio of approximately 10.5:1 before coal seams are exhausted.



Legend

- ◆ Rix's Creek Mine
- ◆ Bloomfield Collieries (including office and Open Cut) and Four Mile Engineering
- ◆ Kings Engineering

FIGURE 1.1

Locality Plan

1.2.1 Project Aspects most relevant to the SIA

Elements of the Project of most relevance to this SIOA are presented in **Table 1.1**

Table 1.1 – Project Elements and their Relevance

Project Element	Relevance to SIA
Creation of 70 additional operational jobs at Rix's Creek mine	potential community, economy and stability issues, including benefits and impacts
Increase in duration of mine operations to 2037	associated continuation of current employment, as well as any existing activities that might impact off site
Movement of the footprint, including overburden, away from the Singleton township	potential amenity issues for the local community, including noise and dust
Vegetation clearance and topography disturbance in close proximity to a major public road	potential visual impact issues
Continuation of the current approved operation hours of the mine (24 hours per day 7 days per week), but an actual increase in operating hours for the CHPP, from 4.5 days to 7 days per week	potential amenity issues such as noise
Increase in quantity of product coal transported by rail to Newcastle, from 1.5Mtpa to 2.5Mtpa	Potential amenity issues, such as noise and dust, traffic
Increases in total output	associated economic impacts
Continuation of activities that may generate noise, dust, or vibration that has potential to impact off site	Potentially subject of current community complaint
Additional road crossing over the New England Highway	potential traffic issues during construction, potential benefits during operation
Workforce change	Potential for the existing Bloomfield workforce transfer to meet the requirements of the new Rix's Creek Project manning (see Section 6.2)

An important consideration for this assessment is the linkages, particularly in terms of personnel, between the various operations and entities within the wider Bloomfield Group, and the opportunities and interactions that these may present for the Project. For example, Bloomfield has indicated that it expects the operations of the Bloomfield Mine at Maitland to slow down, leading to potential closure within the extended period of operation at the Rix's Creek Mine. It is therefore anticipated that the need for additional operational roles on the Rix's Creek site, resulting from the Project if approved, may coincide with the possible loss of positions at the Bloomfield Mine operations, thus sustaining employment of the majority of the Bloomfield Mine workforce. The nature of the roles, and the numbers of employees required, are expected to be well matched (Refer to **Section 6.2**).

It should be noted that while this SIOA makes reference to the Bloomfield Mine workforce, and includes it as a potential labour source for the Rix's Creek Project, the assessment of the full range of social impacts associated with a potential Bloomfield Mine closure, are outside the scope of the current study.

1.2.2 Director General's Requirements

In preparing this SIA, the Director-General's Requirements (DGRs) issued for the Project have been addressed as required by Clause 75F of the EP& A Act. The matters raised by the Director-General, relevant for consideration in the SIA, are outlined in **Table 1.2** along with reference to where these requirements are addressed in this report.

Table 1.2 - DGR's Addressed in the SIOA

Key Issue	Director-General's Requirements Rix's Creek Continuation of Mining Project (SSD 13_6300), 3 March 2014	Section Addressed
Social and Economic	Provide an assessment of :	
	potential direct and indirect economic benefits of the development for local and regional communities and the State;	6.2 (also see Economic Assessment Report)
	potential impacts on local and regional communities, including increased demand for local and regional infrastructure and services; and	6.0
	a detailed description of the measures that would be implemented to minimize the adverse social and economic impacts of the development, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanisms	7.0

2.0 Methodology

Social Impact Assessment (SIA) is an approach to predicting and assessing the likely consequences of a proposed action in social terms, and developing options and opportunities to improve social outcomes. Best practice SIA is participatory, and involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense, in order to provide a complete picture of potential impacts, their context and meaning.

As is the case with any type of change, some individuals or groups within a community may benefit, while others may experience negative impacts due to a development proposal. The term Social Impact and Opportunity Assessment (SIOA) makes it clear that perceived and experienced 'impacts' may be positive or negative. If negative impacts are predicted, it is the role of the SIOA to determine how such impacts may be managed effectively to reduce the degree of impact to those affected. Conversely, such an assessment will also ideally identify mechanisms by which any opportunities or positive benefits arising from a project can be further enhanced.

2.1 International Guidelines for Social Impact Assessment

The International Association for Impact Assessment (IAIA) defines Social Impact Assessment as:

'...the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment (Vanclay, 2003).'

The IAIA guidelines adopt Vanclay's (2003) classification of social impacts, as issues affecting (directly or indirectly) people's:

- way of life - how they live, work, play and interact with one another on a day to day basis;
- culture - their shared beliefs, customs, values and language or dialect;
- community - its cohesion, stability character, services and facilities;
- 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;
- 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;
- health and wellbeing - health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity;
- personal and property rights - particularly whether people are economically affected or experience personal disadvantage which may include a violation of their civil liberties; and

- 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 SIOA process includes multiple steps, from data gathering and analysis, issue identification, risk assessment, impact and benefit assessment, identification of potential impact mitigation opportunities and preparation of social impact management plans.

Monitoring and evaluation is also a key component of an SIOA process; to monitor impacts over time and to identify any unanticipated impacts that may arise as a result of the proposed change.

Table 2.1 summarises the key SIOA activities identified within the IAIA guidelines and where such activities have been addressed in this report.

Table 2.1 - Activities Comprising Social Impact Assessment (Vanclay, 2003)

Activities for Social Impact Assessment	
Stakeholder profiling and issue scoping	
Participates in the environmental design of the planned intervention	Scoping of perceived social issues up front in the assessment process to inform project assessment and planning (Section 5.0; Project PEA (AECOM 2014)) Potential for social amenity impacts taken into consideration in planning stages; Main text of EIS
Identifies interested and affected people	Section 5.0
Facilitates and coordinates the participation of stakeholders	Section 5.0
Documents and analyses the local historical setting of the planned intervention so as to be able to interpret responses to the intervention, and to assess cumulative impacts	Section 3.0, Section 4.0, Section 5.0
Collects baseline data (social profiling) to allow evaluation and audit of the impact assessment process and the planned intervention itself	Section 3.0, Section 4.0, Section 5.0
Gives a rich picture of the local cultural context, and develops an understanding of local community values, particularly how they relate to the planned intervention	Section 4.0 Section 5.0 Section 6.0
Identifies and describes the activities which are likely to cause impacts	Section 1.0, Section 6.0
Impact assessment and mitigation planning	
Predicts (or analyses) likely impacts and how different stakeholders are likely to respond	Section 6.0
Assists evaluating and selecting alternatives	Section 7.0 Main text of EIS
Assists in site selection	Continuation of existing operation
Recommends mitigation measures	Section 7.0
Describes potential conflicts between stakeholders and advises on resolution processes	Section 6.0, Section 7.0

Activities for Social Impact Assessment	
Develops coping strategies for dealing with residual or non-mitigatable impacts	Section 7.0
Contributes to skill development and capacity building in the community	Section 7.0
Advises on appropriate institutional and coordination arrangements for all parties	Section 7.0
Assists in devising and implementing monitoring and management programs	Section 7.0

2.2 Assessment Activities

A range of assessment methods have been used to develop a detailed understanding of how the existing mine operations relate to the local area, region and state (the baseline case), and to identify potential social impacts that may be associated with the Project. A summary of the methods and approaches adopted in the current assessment are presented in **Table 2.2**.

Stakeholder consultation for the Project was undertaken by the Rix's Creek Project team and AECOM; and was guided by the *Rix's Creek Continuation of Mining Stakeholder Strategy* (AECOM, 2013). Summaries of activities and outcomes were communicated to Umwelt to inform the SIOA report. Details regarding consultation are presented in **Section 5.0**.

Table 2.2 - Assessment phases and methods

Task	Description
PHASE 1 PROFILING	
Knowledge Scan	This phase has involved gaining a greater understanding of the company and its key community stakeholders through review of relevant Company documents and other studies, including media and studies undertaken within the local area
Community Profile and Capitals Analysis	Umwelt has drawn from its existing database of socio economic data and findings from the Project's specialist Economic Assessment to compile relevant demographic, social and economic indicators data across the local communities within the assessment area. Relevant communities have been profiled across their five capital assets – Social, human, economic, physical and natural capital. Assessment and analysis of Australian Bureau of Statistics (ABS) Census data and other relevant social and community indicators and data sets has been undertaken to develop a detailed social profile of the communities of interest. Areas of existing community sensitivity and resilience have been identified through a community capitals analysis.
Operational Profile and Town Resource Cluster (TRC) Analysis This includes a workforce survey across 250 Bloomfield Group employees)	A separate analysis (TRC-Analysis) has been undertaken to determine the socio-economic linkages between the operation and the community. Such an approach assists in defining the SIA area and estimates the direct and indirect contribution of the operations to the community and the broader region through the operations workforce and suppliers. Workforce data collected focuses on residential location of employees, use of community services, household expenditure and participation in local community groups and organisations. Supplier data focuses on employee numbers and location, office location, business expenditure and proportion of the supplier business reliant on Bloomfield.

Task	Description
PHASE 2 ISSUE SCOPING	
Issues Review, including complaint and enquiry analysis	Review of existing company and Project consultation records and outcomes to identify and analyse issues of key relevance to the SIOA assessment and key stakeholders and local communities.
PHASE 3 IMPACT ASSESSMENT AND PREDICTION	
Workforce and population modelling	Drawing on the data from the knowledge scan, community profile, TRC Analysis, and issues scoping, a number of scenarios for potential workforce change and flow on population effects have been modelled. This information has informed assessment of population related impacts, including micro-economic benefits, sense of community and effects on service provision across a range of community sectors e.g. housing, health facilities, education, childcare etc.
Assessment and Prediction of Impacts	This phase has involved assessing and predicting the impacts associated with the proposed extension on the local community and broader region, utilising the information collected in Phases 1 and 2. As social impacts are often interlinked with actual (or perceived) technical or environmental impacts (e.g. dust traffic, noise, final landform), relevant specialist reports and/or summaries have been reviewed to inform the SIOA as appropriate.
PHASE 4 SOCIAL IMPACT MANAGEMENT STRATEGY	
Strategy Development and Monitoring	Responding to the findings of Phase 3, strategies to address predicted impacts and a monitoring framework to incorporate recommendations into project operations have been developed, in consultation with the Bloomfield project team.
Report Preparation	Outcomes of the study are documented in this SIOA report.

3.0 Existing Environment – Operational Context

In order to effectively predict social impacts of a proposed change it is important to understand the current social context of a Project and its functional linkages with its local and regional communities and economies. This section presents an analysis of the existing socio-economic linkages between Rix's Creek, the wider Bloomfield's operations and their local and regional communities using a technique known as Town Resource Cluster Analysis (TRC-Analysis; Fenton, Coakes, and Marshall, 2003).

TRC-Analysis looks at the links between resource projects and communities via their direct (e.g. employment) and indirect contributions (e.g. employee household expenditure and use of services). TRC-Analysis may identify contributions or impacts experienced in areas close to and/or some distance away from a project. For example, communities in capital cities or other states may experience some benefit from a mining project through indirect flow-on effects, such as employee household expenditure (e.g. spending occurring in regional centres) or employment by suppliers to the project (e.g. if a large supplier has its main office and employs many staff in another location).

TRC data is particularly critical when calculating the impacts and benefits of a Project that, like Rix's Creek, is continuing or expanding its activities, or where there is a continuing or similar workforce. Identifying the functional linkages between a project and the surrounding communities can also assist in accurately defining an appropriate social assessment area for the Project.

Given the high degree of corporate linkage between Rix's Creek and the various other Bloomfield operations, and the potential for the existing Bloomfield Mine employees to become part of the future Project workforce, the TRC-Analysis has considered the Bloomfield Company and its operations as a whole, with specific reference to Rix's Creek where relevant.

The following sections provide a baseline summary of the existing Rix's Creek and wider Bloomfield Group workforces including employee characteristics, residential and expenditure patterns, use of local services and participation in the community.

Information has been sourced from:

- A detailed survey of the existing Bloomfield workforce, including Rix's Creek, Bloomfield Mine, Kings Engineering, Four Mile Engineering and Bloomfield corporate office (survey completed by 231 out of the 500 employees);
- A survey of Bloomfield suppliers (completed by 38 out of 57 suppliers); and
- A review of relevant company documents and reports.

The full TRC-Analysis report is attached at **Appendix A**, and a summary of key findings is presented in **Section 3.1** and **Section 3.2** below.

3.1 Bloomfield Workforce

A survey of the Bloomfield workforce, including contractors, was conducted in early 2014. Approximately half of the workforce (46%) participated in the survey.

3.1.1 Employee Characteristics

Table 3.1 summarises the key characteristics of the Bloomfield Group employees, based on the survey data obtained. Most employees were employed full time (96.5 %), and the average length of time working for the Bloomfield Group was 10 years.

Table 3.1 - Characteristics of Employees

Characteristics	Survey percentage (%) or number (#)
Employment status	
Permanent full-time	96.54%
Permanent part-time	3.03%
Casual	0.43%
Length of time working for the mining industry	
Mean (years)	16.13
Length of time working for the Bloomfield Group	
Mean (years)	10.00
Employed previously in the mining sector	
Percentage	45.89%
Highest level of school education	
Year 10 or below	54.55%
Year 11	11.25%
Year 12	32.03%
Not specified	2.16%
Additional qualifications	
Trade/TAFE certificate	49.78%
Degree/ Diploma	19.05%
Other	4.76%
Not Specified	26.84%
Proportion that relocated to the area to work with Bloomfield	
Percentage	11.25%
Home ownership	
Has a mortgage	52.81%
Renting	14.29%
Owens the property	25.54%
Other	2.16%
Staying with family	1.30%

Key survey findings are summarised below:

- Over 96% of the Bloomfield work force is employed on a permanent full time basis.
- The average length of employment for the Bloomfield Group is 10 years while average length of employment in the mining industry is 16 years, characteristic of a relatively stable workforce within the sector.

- The most common level of school education completed by Bloomfield employees was year 10 or below (55%). This is a higher proportion of people than the NSW state average of 41% of persons completing year 10 or below (ABS 2011a). A total of 32% of employees completed year 12, compared to 52% of the NSW population (ABS 2011a)
- Nearly 50% of the workforce has a Trade/TAFE qualification, which is much higher than the NSW state average of 18% (ABS 2011a); 20% of employees have a Degree/Diploma which is only marginally lower than the NSW average of 22%.
- Approximately 62% of Bloomfield employees are married, while 12% report living in a de-facto relationship. Only 17% of the workforce is single and the rates of separation and divorce among Bloomfield employees are combined at approximately 5%. The rates of marriage and de facto relationships among Bloomfield employees are higher than the NSW average of 49% of residents (ABS 2011a). A combined total of 11% are separated or divorced.
- Approximately 53% of Bloomfield employees have a mortgage while 25% own their property outright; approximately 14% of employees are renting. This is a high rate of ownership (fully owned and mortgage) compared to approximately 33% of NSW residents owning their property and 33% of NSW residents owning their property with a mortgage (2011).

3.1.2 Residential Location

Most Bloomfield Group respondents said they resided in or near East Maitland/Maitland/Rutherford (33%), followed by Singleton (11%), and Lake Macquarie (10%).

A high proportion of the Rix's Creek workforce live in Singleton (35%); whereas Maitland is the main township of residence of workers from the Bloomfield Mine and other surveyed organisations. There are no Bloomfield Mine employees that currently live in Singleton. Employee residence locations are presented in **Figure 3.1** and **Table 3.2** below.

Table 3.2 - Employee Residence Locations

	Rix's Creek		Bloomfield Mine		Other Surveyed Organisations		All Employees	
East Maitland/Maitland/Rutherford	31	20%	29	38%	95	41%	155	34%
Singleton	54	35%	0	0%	0	0%	54	12%
Lake Macquarie	4	3%	10	13%	34	15%	48	10%
Newcastle	6	4%	10	13%	29	13%	45	10%
Branxton	14	9%	7	9%	2	1%	24	5%
Kurri Kurri	6	4%	5	7%	11	5%	22	5%
Cessnock	10	6%	2	3%	5	2%	17	4%
Port Stephens	2	1%	5	7%	10	4%	17	4%
Raymond Terrace	0	0%	2	3%	11	5%	13	3%
Thornton	2	1%	2	3%	7	3%	11	2%
Greta	4	3%	0	0%	5	2%	9	2%
Metford	2	1%	0	0%	7	3%	9	2%
Muswellbrook	6	4%	0	0%	0	0%	6	1%

	Rix's Creek		Bloomfield Mine		Other Surveyed Organisations		All Employees	
Seaham	0	0%	2	3%	5	2%	6	1%
Beresfield	0	0%	0	0%	4	2%	4	1%
Central Coast	0	0%	2	3%	2	1%	4	1%
Murrurundi	4	3%	0	0%	0	0%	4	1%
Aberdeen	2	1%	0	0%	0	0%	2	0%
Bulga	2	1%	0	0%	0	0%	2	0%
Camberwell	2	1%	0	0%	0	0%	2	0%
Dungog	0	0%	0	0%	2	1%	2	0%
Gresford	2	1%	0	0%	0	0%	2	0%
Scone	2	1%	0	0%	0	0%	2	0%
Upper Hunter	0	0%	0	0%	2	1%	2	0%
Total	155		76		231		462	

3.1.3 Employee Expenditure

Employees were asked to provide estimates of their annual personal income before tax, and that of any other members of their household, and to detail where they spent their money. From this data an estimated economic contribution from Bloomfield Group employees to the local and regional communities has been extrapolated.

The calculations below represent estimations based on the most recent available income quintiles data and average household expenditure from the ABS (2010). In order to conservatively estimate the expenditure in each town, and so as not to overestimate the economic value of the proposal, the proportion of total income spent in town is based on the highest income quintile (which spends the lowest proportion of overall income on household expenditure). Expenses which would not contribute to the local economy (for example costs such as health insurance, mortgage repayments and utility bills) have not been included in the overall estimations. Further detail is provided within **Appendix A**. Results are summarised in **Table 3.3** and depicted within **Figure 3.2**.

Total household expenditure was highest in Maitland, Newcastle, Singleton and Lake Macquarie, which together account for \$14.7 million per annum or 70% of spending estimated across all Bloomfield employees. As anticipated, Rix's Creek employees have a high proportion of expenditure in Singleton (38%), and workers from Bloomfield Mine and other surveyed organisations have a high proportion of their expenditure in Maitland and surrounding suburbs (45%).

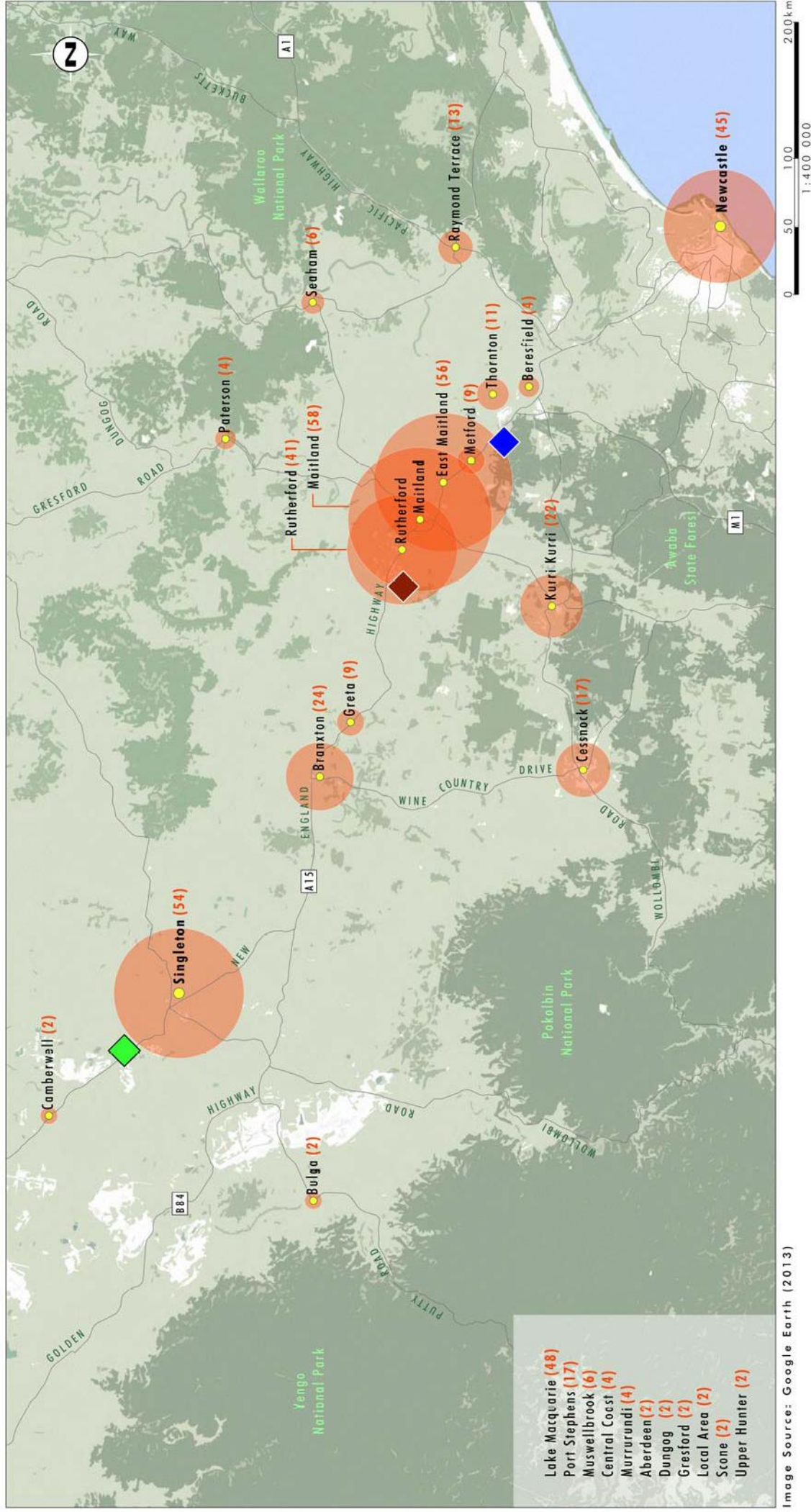
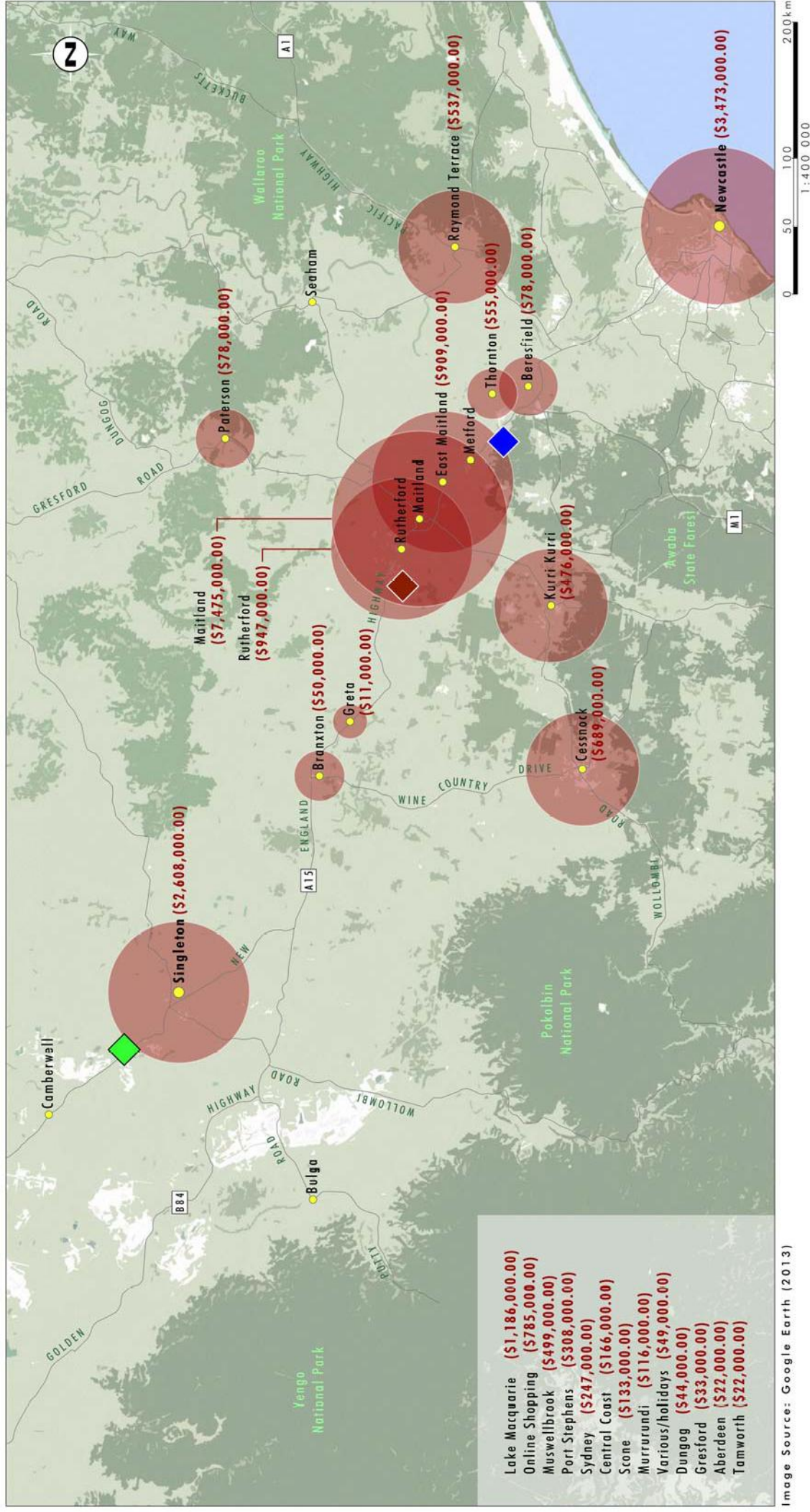


FIGURE 3.1

Bloomfield Group Employee
Town of Residence



Legend

- ◆ Rix's Creek Mine
- ◆ Bloomfield Collieries (including office and Open Cut) and Four Mile Engineering
- ◆ Kings Engineering
- Total Employee Household Expenditure

FIGURE 3.2

Employee Household Expenditure

Table 3.3 - Total Household Expenditure by Location (All Employees)

	Rix's Creek (\$ millions)	Bloomfield Mine (\$ millions)	Other Surveyed Organisations (\$ millions)	Total Household Expenditure (\$ millions)
Maitland	1.48	2.13	3.86	7.48
Newcastle	0.74	0.80	1.93	3.47
Singleton	2.55	0.00	0.06	2.61
Lake Macquarie	0.06	0.39	0.73	1.19
Rutherford	0.12	0.03	0.80	0.95
East Maitland	0.17	0.09	0.64	0.91
Online Shopping	0.25	0.10	0.44	0.79
Cessnock	0.36	0.05	0.29	0.69
Raymond Terrace	0.00	0.07	0.47	0.54
Kurri Kurri	0.03	0.23	0.22	0.48
Muswellbrook	0.50	0.00	0.00	0.50
Central Coast	0.00	0.12	0.05	0.17
Port Stephens	0.08	0.15	0.08	0.31
Sydney	0.07	0.04	0.14	0.25
Scone	0.13	0.00	0.00	0.13
Murrurundi	0.12	0.00	0.00	0.12
Beresfield	0.00	0.00	0.08	0.08
Paterson	0.00	0.00	0.08	0.08
Thornton	0.04	0.00	0.01	0.06
Branxton	0.00	0.01	0.04	0.05
Various/holidays	0.02	0.02	0.02	0.05
Dungog	0.00	0.00	0.04	0.04
Gresford	0.00	0.00	0.03	0.03
Aberdeen	0.02	0.00	0.00	0.02
Tamworth	0.02	0.00	0.00	0.02
Greta	0.01	0.00	0.00	0.01
Total	6.77	4.23	10.01	21.03

3.1.4 Use of Social Infrastructure and Services

3.1.4.1 Health

Health services tend to be accessed in the main locations of employee residence, with the most common services accessed being doctors, dentists, hospitals, and physiotherapists. Health services usage data by Bloomfield Group employees is provided in **Table 3.4** and mapped in **Figure 3.3**.

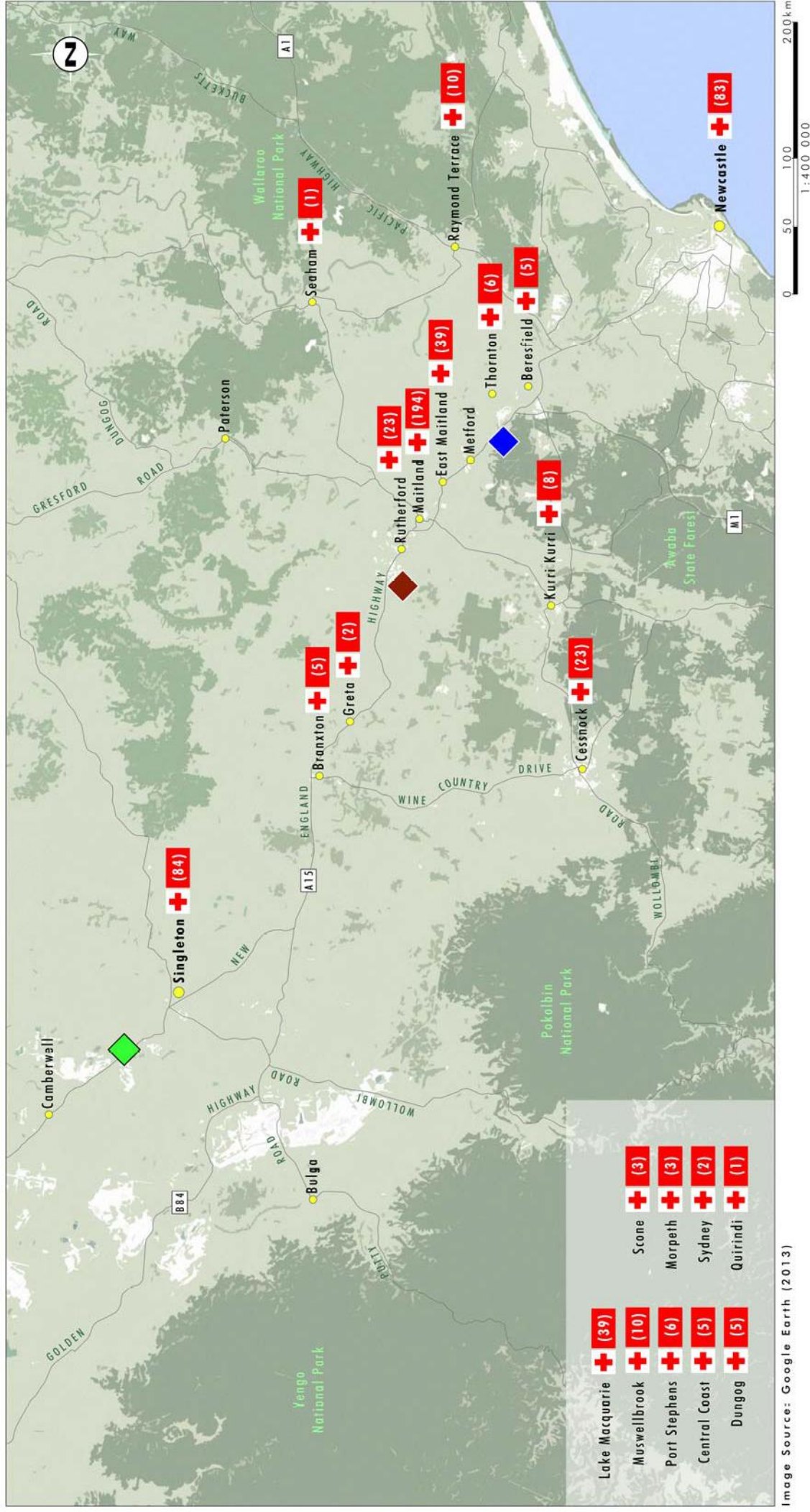


FIGURE 3.3

Use of Health Services

Table 3.4 - Number of Employees' Family Members Using Health Services, by Type and Location (All Employees)

	Doctor/GP	Dentist	Hospital	Optometrist	Physiotherapist	Chiropractor	Specialist (other)
Maitland	73	71	44	7	30	54	5
Singleton	29	23	10	1	17	3	1
Lake Macquarie	20	10	3	1	3	2	0
Newcastle	19	18	23	3	11	3	6
Thornton	6	0	0	0	0	0	0
Cessnock	6	9	4	2	2	0	0
Beresfield	5	0	0	0	0	0	0
Branxton	5	0	0	0	0	0	0
Raymond Terrace	4	4	0	0	1	1	0
Kurri Kurri	3	2	1	0	2	0	0
Morpeth	3	0	0	0	0	0	0
Muswellbrook	3	2	3	0	2	0	0
Central Coast	2	2	1	0	0	0	0
Dungog	2	1	0	0	1	0	1
Greta	2	0	0	0	0	0	0
Scone	2	0	0	0	1	0	0
Port Stephens	2	3	0	0	1	0	0
Quirindi	0	1	0	0	0	0	0
Sydney	0	2	0	0	0	0	0
Seaham	0	0	0	0	1	0	0

As shown in **Table 3.5**, the employees across the Bloomfield Group, including those from Rix's Creek, access healthcare across the Hunter Region. Maitland, Singleton, Lake Macquarie and Newcastle are key centres for the access of health services by employees and their families. Further details regarding the use of health services by Rix's Creek, Bloomfield Mine and other individual surveyed organisations are provided in **Appendix A**.

3.1.4.2 Education

As shown in **Table 3.5**, the employees across the Bloomfield Group, including those from Rix's Creek, access education services across the Hunter Region. The locations of educational institutions attended by Bloomfield Group employee households are presented in **Table 3.5** and mapped in **Figure 3.4**. Most people in respondents' households were reported as attending educational institutions in Newcastle, Maitland and Singleton.

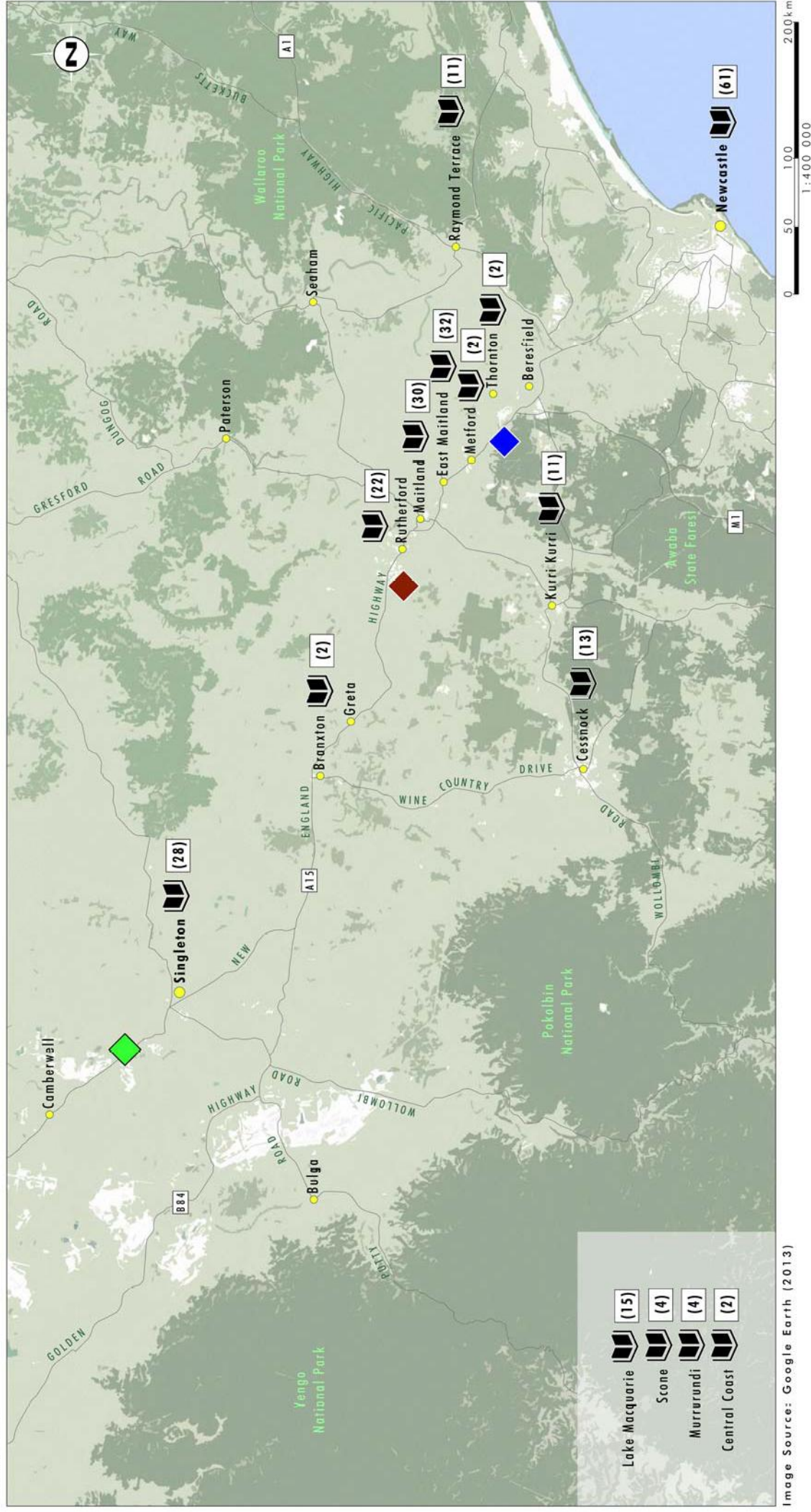


Image Source: Google Earth (2013)

Legend

- Rix's Creek Mine
- Bloomfield Collieries (including office and Open Cut) and Four Mile Engineering
- Kings Engineering
- Educational Attendance (Total persons)

FIGURE 3.4

Educational Attendance

Table 3.5 - Number of People in Respondents' Households Attending Educational Institutions/Child Care Facilities, By Town (All Employees)

	Rix's Creek	Bloomfield Mine	Other Surveyed Organisations	Total Employees
Newcastle	19	22	19	61
Maitland	19	19	46	82
Singleton	28	0	0	28
Lake Macquarie	2	0	13	15
Raymond Terrace	0	0	11	11
Kurri Kurri	6	2	2	11
Branxton	2	0	0	2
Scone	4	0	0	4
Metford	0	0	2	2
Murrurundi	4	0	0	4
Thornton	0	0	2	2
Central Coast	0	2	0	2
Cessnock	6	6	0	13

3.1.5 Household Participation in Community Groups and Activities

Table 3.6 and **Figure 3.5** display the number of employees and their family members that participate in community activities and groups, by location. The most common activities related to sport and recreation and in particular those activities that occur in a team or club environment. Community participation generally follows residential patterns with the highest levels of participation occurring in Maitland and Singleton.

Data on community group participation by differing operational workforces is provided in **Appendix A**.

Table 3.6: Number of Respondents and their Family Members Participating In Activity/Group, By Location (All Employees)

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Maitland	95	3	3	15	6	9	0
Lake Macquarie	26	0	0	3	0	0	0
Cessnock	8	3	0	0	0	2	0
Dungog	5	0	5	3	0	0	0
Hunter Valley	7	0	0	0	0	0	0
Newcastle	29	0	3	10	0	2	0
Raymond Terrace	3	0	0	0	0	0	0
Seaham	7	0	0	0	0	0	0
Singleton	31	2	3	8	0	2	2
Thornton	10	0	0	0	3	3	0

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Port Stephens	5	0	3	3	0	0	0
Gresford	3	0	0	2	0	0	0
Kurri Kurri	14	0	0	0	0	0	0
Branxton	44	3	3	15	3	3	0
Great Lakes	18	0	0	5	0	0	0
Largs	16	3	0	2	0	0	0
Murrurundi	13	0	10	3	0	0	0
Muswellbrook	8	0	0	2	3	3	0
Aberdeen	5	0	2	0	0	0	0

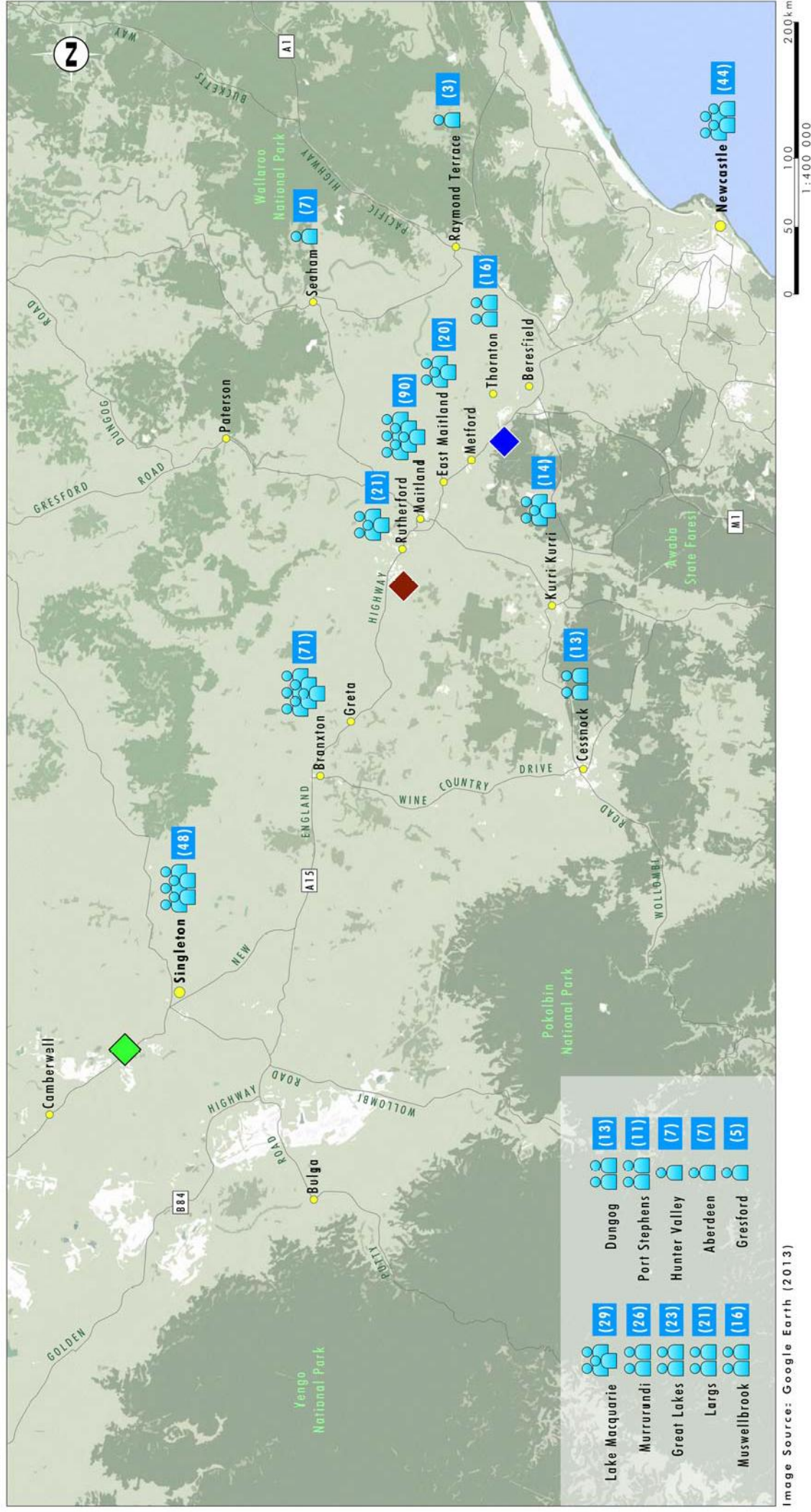


Image Source: Google Earth (2013)

Legend

- ◆ Rix's Creek Mine
- ◆ Bloomfield Collieries (including office and Open Cut) and Four Mile Engineering
- ◆ Kings Engineering
- ◆ Community Participation (Total persons)

FIGURE 3.5

Employee Household Community Participation

3.2 Bloomfield Suppliers

Suppliers to Rix's Creek and the wider Bloomfield Group were also surveyed and included within the TRC-analysis. Detailed outcomes from the supplier data, including numbers and locations of supplier offices and numbers and locations of supplier employees are provided in the TRC-Analysis report at **Appendix A**.

Similarly to employee expenditure (**Section 3.1.3**), the TRC-Analysis affords an estimate of supplier expenditure within the local area and wider region. Total estimated supplier expenditure and expenditure that is dependent upon Bloomfield Group operations is provided in **Table 3.7**. Detailed explanation of the methodology used to estimate supplier spending is provided in **Appendix A**.

Table 3.7 - Estimates of Suppliers' Total Business Expenditure and Expenditure that is Directly Reliant on Bloomfield (\$ Million)

Location	Estimated Total Expenditure (\$ million)	Estimated Bloomfield Dependent Expenditure (\$ million)
Singleton	\$58.20	\$13.12
Other	\$55.87	\$12.59
Maitland	\$48.89	\$11.02
Newcastle	\$41.90	\$9.44
Sydney	\$23.28	\$5.25
Muswellbrook	\$4.66	\$1.05
Cessnock	\$2.33	\$0.52
Total	\$232.79	\$52.47

While the above table provides an estimate of business expenditure in the local towns, a small number of the businesses surveyed had extremely high business income which may lead to an overestimation of the total expenditure in the towns above. For example, one surveyed business estimated a total income of \$200 million. The results of the above expenditure estimates should therefore be interpreted with caution.

3.3 Community Funding

The Bloomfield Group financially supports local organisations through The Bloomfield Group Foundation (TBGF) and other sponsorship programs, and encourages employees to participate in charitable and community events.

TBGF's Mission Statement is 'to support and benefit the people in our region' (TBGF 2006) with the guiding principles for funding recipients focusing on:

- Support for local and regional community services, particularly youth who have not left school and those that are more vulnerable and less able to financially support themselves;
- Medical and health related research, projects and support programs; and
- Programs aimed at underpinning community health or welfare (including junior sport).

Through sponsorship programs and TBGF, the Bloomfield Group donated almost \$2.6 million between March 2006 and March 2014. A breakdown of financial year totals for this period is presented in **Table 3.8**. Recipients include large charitable organisations such as the Cancer Council and Red Cross, Youth of the Streets, The Smith Family and the Salvation Army.

Table 3.8 - Community Funding through sponsorship programs and TBGF

Year	Sponsorship Programs	TBGF	Total
2006-2007	\$27,000	\$240,000	\$268,000
2007-2008	\$16,000	\$54,000	\$70,000
2008-2009	\$126,000	\$228,000	\$355,000
2009-2010	\$27,000	\$173,000	\$200,000
2010-2011	\$86,000	\$277,000	\$363,000
2011-2012	\$250,000	\$311,000	\$561,000
2012-2013	\$54,000	\$216,000	\$270,000
2013-2014	\$171,000	\$329,000	\$500,000
2014-2015*	\$13,380*	\$35,140*	\$48,520.*
Total*	\$770,381	\$1,863,140	\$2,135,520

*note donations commenced during the 2014-2015 financial year only include data up until December 2014.

As noted above, the Bloomfield Group has an active policy of encouraging employees to participate in charity and community organisations, with a notable example being the long running employee organised golf day which raises funds for the Cancer Council. This event has been running since 2003 and raised \$25,000 in 2015 as part of the Hunter Coal Festival.

In summary, the TRC analysis has highlighted the socio-economic linkages that exist between the Bloomfield Group operations and companies and the broader Hunter valley region, with a particular focus on employee expenditure, use of local community services, participation in community life and social contribution and investment.

4.0 Existing environment – Social Profile

A baseline social profile is primarily a knowledge scan of primary and secondary data sources to obtain an understanding of the existing social environment in which a proposed project is based. The social profile is a necessary component of the SIOA, and provides a foundation from which impacts associated with the proposed modification may be predicted.

The following components have been assessed in the development of the social profile for the proposed modification, namely:

- **Development context and geographic scope** – description of the context and identification of the communities of interest relevant to the current assessment;
- **Historical context** – review of the history of the local area and communities, including their culture and values;
- **Community capitals/assets** – assessment of areas of vulnerability and resilience across the communities of interest;
- **Governance** – outline of relevant administrative and political structures at local, state and federal levels; and
- **Key community values, issues and concerns** – documentation of current community issues in the Singleton LGA and Hunter Region as a whole, as identified in key planning documents, regional studies and the local and regional media.

Data sources utilised in the preparation of this profile section include:

- ABS Census (ABS, 2006; 2011); Social Health Atlas (PHIDU, 2011) and other social indicator datasets
- Local and State Government reports;
- Existing Environmental Assessments / Environmental Impact Statements;
- Relevant research reports and publications; and
- Review of relevant media.

4.1 Geographic Context

Town Resources Cluster (TRC-Analysis) (see **Section 3.0**) has been used to identify the associations that currently exist between the Rix's Creek operations and the wider community. These associations are useful when defining the study area for the SIOA. The TRC-Analysis indicated that Rix's Creek is highly linked to Singleton, and that other Bloomfield operations (such as the Bloomfield Mine) are highly linked to Maitland and the lower Hunter region.

These locations tend to be where most employees and contractors live and consequently where a significant portion of household expenditure and use of local services occurs. It is therefore important to detail the socio-economic profile across different geographical scales, from the local areas immediately surrounding the Project to the broader localities and townships or cities in the wider region.

As such, the geographic areas of interest for the SIOA include:

- **The Project Area:** covers all aspects of the existing approved Rix's Creek current and proposed operations and associated works.
- **The Local Area:** the surrounding *Statistical State Suburbs* of Camberwell, Bridgman, Singleton Heights, Hunterview, Wattle Ponds, McDougall's Hill and Maison Dieu as defined by the ABS (2011) were included as the neighbouring suburbs to the Rix's Creek operations.. This surrounding local area is depicted within **Figure 4.1**.
- **Singleton LGA:** the LGA in which Rix's Creek operations are based, and where 35% of Rix's Creek employees reside.
- **Maitland LGA:** the LGA where Bloomfield Mine and other Bloomfield operations are based, and where 33% of all surveyed company employees live.
- **The wider Hunter Valley:** To allow for a regional level assessment and comparison, and defined as the *Hunter Valley Excluding Newcastle Statistical Area Level 4* by the ABS; and
- **The state of NSW:** to afford a comparative assessment and assess the proposed change to the NSW community.

The complete outcomes of the TRC Analysis are presented in **Appendix A**. Other outcomes from the TRC have been integrated into relevant report sections as referenced.

4.2 Demographic Snapshot of Local Area

A demographic summary of the geographic context is provided in **Table 4.1**. Note that data is drawn from the 2011 Census only. Longitudinal analyses were not considered feasible as the geographic boundaries for the local areas changed between the 2006 and 2011 censuses. It is also worth noting that 2011 was during the 'coal chain event' of 2010-2012, where intense social and infrastructure pressures were placed on Singleton and other communities within the Hunter Valley caused by intense mining and infrastructure development activities (Carver 2015). Following this event, there has been a decrease from the peak of development back to a more 'historical market pattern' (Carver 2015).

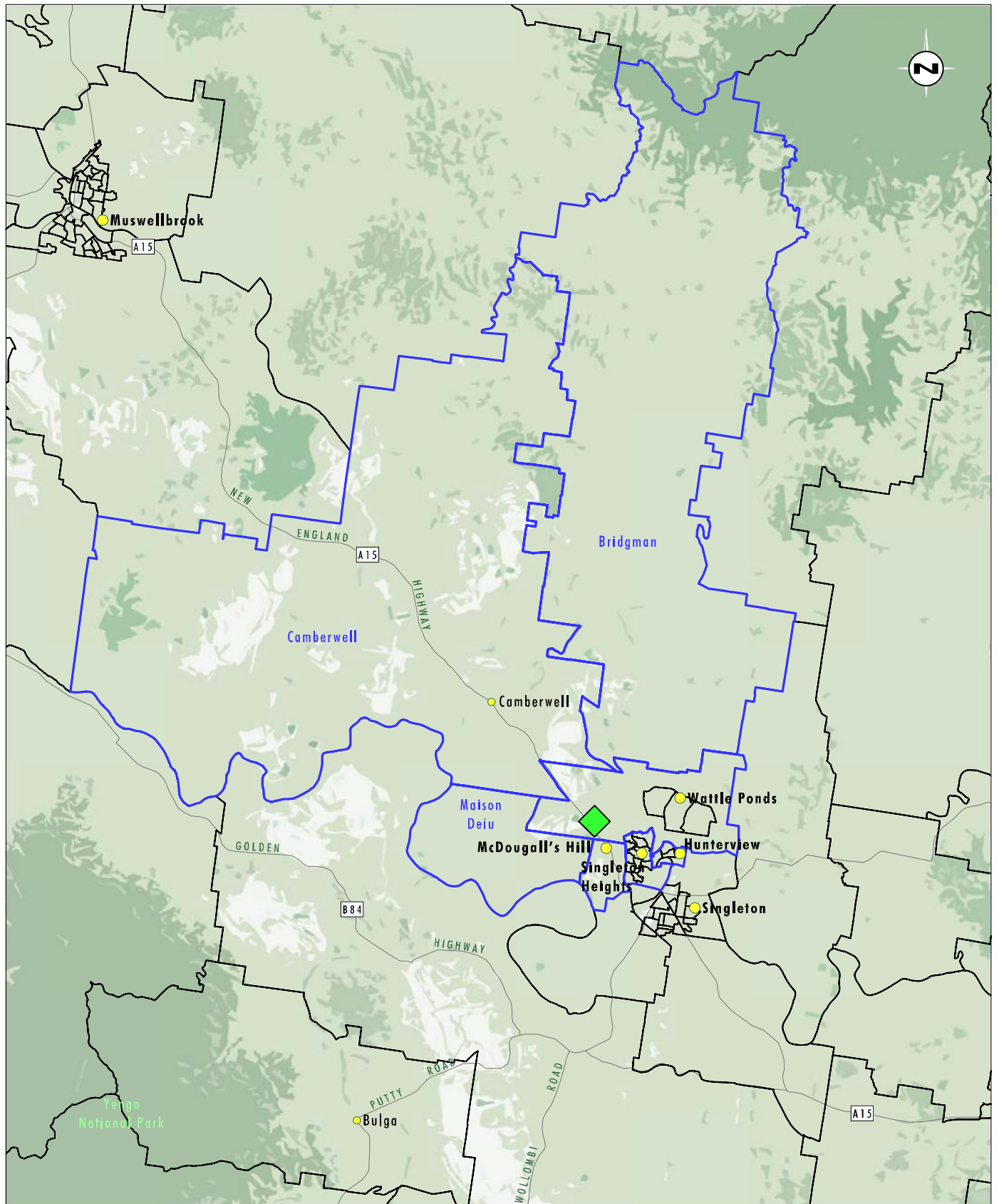


Image Source: Google Earth (2013)
Data Source: Australian Bureau of Statistics (2001), Bloomfield Group (2014)

0 5 10 12.5 km
1:250 000

Legend

- Statistical State Suburb
- ◆ Project Area

FIGURE 4.1

Project Area and
Local Area

Table 4.1 – Local Area Demographic Summary Table

	Maison Dieu	Camberwell	Bridgman	Wattle Ponds	Huntreview	McDougalls Hill	Singleton Heights	Singleton LGA	Hunter Valley	NSW
Total Persons	163	180	396	1,323	2,647	455	4,667	22,694	95,775	6,917,658
>65 years	7%	11%	10%	5%	4%	8%	9%	10%	15%	12%
45-64 years	31%	32%	28%	24%	17%	35%	22%	25%	25%	23%
35-44 years	13%	18%	16%	19%	17%	17%	15%	15%	15%	15%
15-34 years	23%	23%	26%	23%	34%	23%	30%	27%	22%	28%
<15years	25%	17%	20%	29%	28%	17%	24%	22%	22%	21%
Percent working age	67%	72%	69%	66%	75%	75%	67%	68%	62%	66%
Percent persons completing year 12	29%	22%	28%	40%	43%	35%	32%	40.2%	28%	48%
Median age of persons	37	43	37	33	28	40	31	35	41	37
Median total personal income (\$/weekly)	609	677	612	761	882	730	632	640	386	461
Median total household income (\$/weekly)	1,458	1,607	1,402	2,648	2,406	2,283	1,657	1,692	823	1,036
Median mortgage repayment (\$/monthly)	542	2,400	1,800	2,349	2,167	2,318	1,820	2,000	1,257	1,517
Median rent (\$/weekly)	240	160	250	450	360	250	280	260	155	210
Average number of persons per bedroom	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8
Average household size	2.9	2.5	2.7	3.3	3	2.8	2.7	2.7	2.5	2.6
% Unemployment	0%	0%	3%	2%	3%	4%	4%	3%	6%	6%
% Labour force participation	64%	67%	72%	52%	53%	60%	51%	52%	55%	59%
Same address - 1 year	93%	86%	92%	86%	74%	80%	80%	81%	81%	82%
Same address - 5 years	71%	63%	66%	58%	38%	63%	54%	52%	56%	56%

Note: Values *higher* than the NSW value have been highlighted orange, while values *lower* than the NSW value have been highlighted blue, where there is a difference of more than 5% for percentages or a difference of more than 10% for values.

As seen in **Table 4.1** most suburbs in the local area have higher rates of persons aged 45 to 65 years and lower rates of persons aged 15-34 years, with the exception of Hunterview and Singleton Heights. Hunterview and Singleton Heights have higher proportions of youth and young people, where 62% of persons in Hunterview and 54% of persons in Singleton Heights are aged under 35 years, in comparison with an average of 49% of persons across NSW (ABS, 2011a). The percent of persons completing year 12 is lower than NSW for all localities across the Hunter Valley region..

The median price of weekly rent is at least 10% higher than the state average for the local area, except for the suburb of Camberwell, which is more in line with the median rental price for the wider Hunter Valley (ABS, 2011a). There is a similar pattern for the median cost of mortgages across the local area, aside from Maison Dieu, which is similar to the wider Hunter Valley, with median mortgage repayments at least 10% lower than the NSW average (ABS, 2011a).

Median length of residence in the local area is generally above the state average, at the time of the 2011 Census, aside from in Hunterview and Singleton Heights. This may be reflective of a younger demographic moving into the area following more recent land releases (Carver 2015).

Both the median weekly personal income and the median weekly household income is higher than the state average across the local area, while the Hunter Valley showed median personal and household incomes below the state average (ABS, 2011a).

The largest sector of employment for the local area was mining (ranging from 19.2% to 26.8%), although Maison Dieu had a slightly higher rate of participation in agriculture, forestry and fishing (22.1%) than other locations. This is in contrast to NSW where health care and social assistance is the largest employment sector (11.6%), with mining only accounting for 1% of employment in NSW. Retail is the largest employment sector in the Hunter Valley (10.7%) (ABS, 2011a).

Additional demographic data for the LGAs of Singleton and Maitland are presented within the Community Capitals Analysis provided at **Section 5.3**. Also note that there has been a substantial change in social context in the Hunter Valley since the 2011 census that is not reflected in this data. More detail on this change is provided in **Section 4.5.3**.

4.3 Community Capitals Analysis

In order to understand the sensitivity of local and regional communities to changes in mining operations and employment, a Community Capitals analysis of the local area and wider region was undertaken. The Capitals analysis utilises a 'Sustainable Livelihoods' approach to social profiling (Beckley, Martz, Nadeau, Wall, & Reimer, 2008; Ellis, 2000; Hart, 1999). The Sustainable Livelihoods approach centres on people rather than resources.

To do so, focus is given to five interrelated 'community capitals' or assets – natural, economic, human, physical, and social – which together, make up a holistic profile of a community (see **Figure 4.2**). Each of the capitals has been profiled at the LGA level.

In addition, the Capitals Analysis has also been informed by the TRC- Analysis (see **Appendix A**) and a review of regional issues and opportunities (**Section 4.0**).

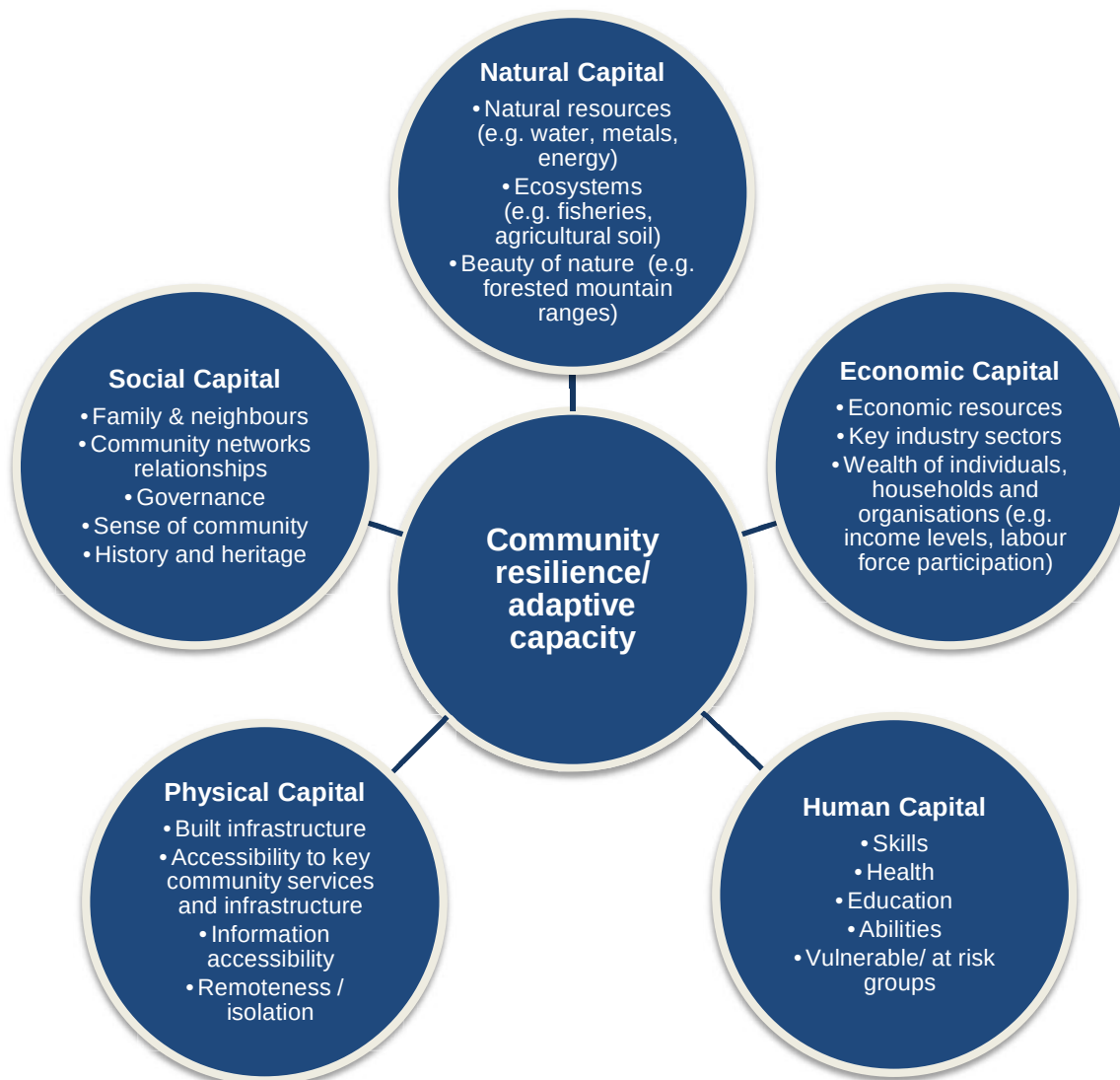


Figure 4.2 - Community Capitals Framework©

4.3.1 Natural Capital

Natural capital refers to the natural assets and resources that contribute to community strength and sustainability. Natural capital can include the presence and use of resources such as minerals, productive agricultural soil, oil and gas, and forests; which provide commercial and practical benefit to the community. Natural capital can also include other environmental assets and ecosystem services, which often generate tourism or provide other social, cultural, conservation and recreational value, such as waterways or lakes.

Assigning definite values to natural capital can often be difficult and may be considered controversial according to different value systems. Additionally, as natural landscape values are not confined to socially defined boundaries (such as suburb or LGA boundaries), different values of natural capital often co-exist between different communities in different places.

For example, privately owned bushland may have one value for the landholder who seeks to run cattle, different values for local environmental protection groups, other values for local government authorities who draw rates from the land, and different values again for the resource extraction industry who may seek to mine the land in the future.

Aspects which give some indication of the natural capital of the local area and wider region, as relevant to the Project, include the following:

- Approximately 40% of the total identified coal reserves of NSW are situated in the Hunter region. This is likely to provide enough coal to last a number of decades at the rate of predicted future mining. The presence of coal has provided employment for the Hunter region indicating strong natural capital in the region (Department of Planning and Infrastructure, 2012).
- Farm holdings in the Hunter region comprise from 52% to 80% of the landscape, with a mix of primarily grazing (from 75% – 82%) and cropping (from 1% – 5%) uses (Department of Primary Industries, 2013). The gross total value of agriculture for the Hunter Valley (excluding Newcastle) is estimated at \$330.6 million (ABS, 2011c).
- The Upper Hunter is ranked second in the world of locations for thoroughbred horse breeding (Department of Primary Industries, 2013).
- Approximately 23.9% of Maitland LGA's rural land is used for extensive agriculture while 1.4% is used by extractive industries including coal, sand and gravel and clay (Maitland City Council, 2005).
- The Strategic Regional Land Use Plan – Upper Hunter (SRLUP) identifies key areas for coal, coal seam gas and other minerals extraction and exploration, viticulture and equine industry clusters and agricultural land (Department of Planning and Infrastructure, 2012).
- The Hunter region contains a diverse range of soil landscapes, from alluvial soils with a long history of cropping on the valley floor, rugged forested areas and extensive volcanic soils on the Merriwa plateau (Department of Primary Industries, 2013).
- A number of natural recreational assets are located within the Singleton LGA. For example, Lake St Clair is popular among both residents and tourists for camping, boating, water-skiing, and fishing (visitsingleton.com).
- Tourists often use the Yengo, Mt Royal and Wollemi world heritage-listed national parks for bushwalking and horse riding (Destination NSW, 2011).
- The Hunter Central Rivers Catchment Management Authority identifies high value natural systems in the region (including Endangered Ecological communities, ecological connectivity etc) and reports on the condition of numerous environmental values and ecosystem services 2011-2012, as well as the investment of over \$16 million in catchments within the Hunter-Central Rivers catchments (Hunter-Central Rivers Catchment Management Authority, 2013).

Vegetation communities such as Lower Hunter Spotted Gum Ironbark Forest, Freshwater Wetland Complex, Hunter Stringybark Spotted Gum Ironbark Forest and Hunter Lowlands Redgum Forest Variant are highly valued by the Maitland and wider Hunter Valley community (Maitland City Council, 2005).

Community members in the Hunter Region and across NSW are also concerned about the potential impacts of the mining industry on the wider natural environment. The most significant areas of concern include visual impacts, air quality, noise and vibration from blasting, quantity and quality of water in the Hunter River, loss of native vegetation, loss of good quality agricultural land and subsequent long-term impacts of food security (DPI 2012).

4.3.2 Economic Capital

Economic Capital is defined as the extent of financial or economic resources within a town or community, including access to credit (Black & Hughes, 2001). Examining a community's economic capital involves consideration of a number of indicators, including industries and employment, workforce participation and unemployment, income levels and cost of living pressures, such as weekly rent or mortgage repayments.

- Unemployment rates increased in Singleton and Maitland approximately 3.5% and 4.5% respectively between June 2012 and December 2014, in contrast to a more slight increase of 1% across the same time period for NSW as seen in **Figure 4.3** (Department of Employment 2015). This rise may be due to direct and indirect impacts from reductions in employment across the coal mining sector associated with the end of the 'coal chain event' in 2012 (Carver 2015).

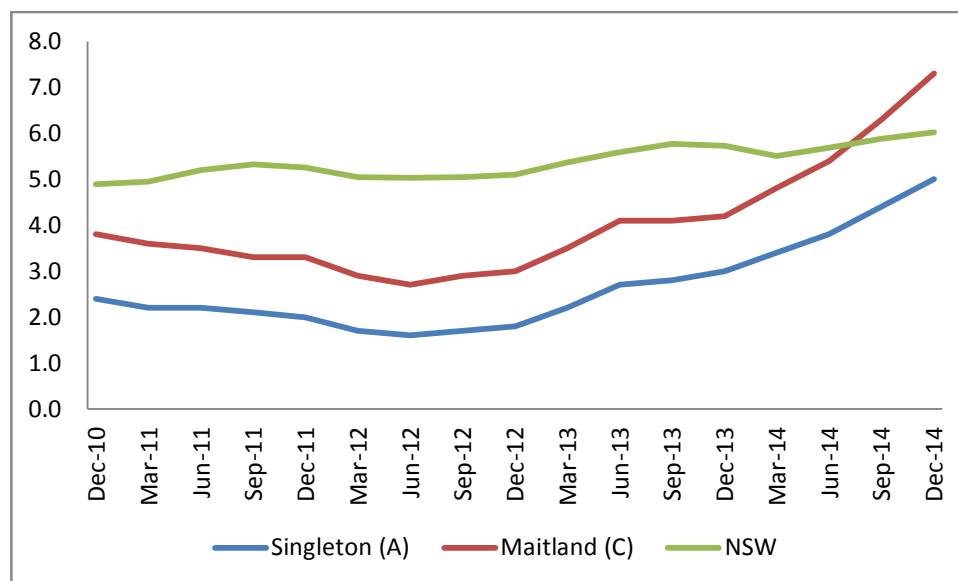


Figure 4.3 – Smoothed unemployment rate 2010-2014, Singleton Maitland and NSW

- Labour force participation rates are higher in the local area than in the wider Hunter Valley and NSW (see **Table 4.1**) Labour force participation rates in Singleton LGA and Maitland LGA are 67% and 62% respectively (ABS, 2011a)
- In Singleton LGA and Maitland LGA there were increases in the number of people in full time employment 2006-2011 (ABS, 2006a, 2011a).

- The highest employment sector for Singleton LGA during 2011 was mining with 2,807 people or 25% indicating that they worked with/in the industry. Despite being one of the LGAs in which mining employees working in the Hunter region reside, demographic statistics for Maitland LGA (6%) do not strongly reflect the dominance of employment in the mining industry found in the Singleton LGA or local area. The highest sector of employment for Maitland LGA was manufacturing with 3,646 people or 12%, with other large employment sectors being healthcare and social assistance (11%) and retail (11%) (ABS, 2011a).
- The most common occupations in the region are indicative of the dominance of employment in the mining industry. More Singleton residents were employed as 'technicians and trade workers' or 'machinery operators' than any other job category in both 2006 and 2011 (ABS, 2006a, 2011a). Mining related occupations were not as dominant in Maitland with residents reporting a higher engagement with several occupations including 'technicians and trade workers', 'professionals', and 'clerical and administrative workers'.
- Household incomes are generally increasing in all areas, corresponding with increases in wages across NSW. Weekly household incomes are above the NSW average across the local area and Singleton LGA (\$1,692), indicative of above average wages characteristic of employment within the mining industry (ABS, 2006a, 2011a).
- Average living costs can be seen as declining from the 'coal chain event' related peak in 2012 Singleton. Median rental prices in Singleton have decreased from \$305 in 2012 to \$230 in 2014 (realestate.com.au). Similarly, sales data in Singleton indicates a declining price trend, with median prices in 2012 of \$364,000 down to \$238,000 in 2014 (realestate.com.au).
- Economic challenges and opportunities predicted in the next 20 years include growth and diversity in the regional economy, improvements in the regions infrastructure, cohesive planning for the future, skills and workforce development, creativity and innovation, and the natural and built environment (Deloitte Access Economics, 2013)

Further detail regarding the economic capital of the study area through Rix's Creek and other Bloomfield operations presence in the region, is provided in the operational context in **Section 3** and the TRC Analysis report in **Appendix A**.

4.3.3 Human Capital

Human Capital refers to the health, welfare, knowledge and skills of members in a community (Coakes & Sadler, 2011). The status of a community's human capital is assessed by considering population size, age distribution, education and skills, general population health and the prevalence of at-risk groups.

Population Change

- The Upper Hunter Region experienced significant population growth from 2006 – 2011, with an increase in population of around 17% over the five year period, which is around three times the NSW state average of 5% (ABS, 2006b, 2011b). This growth correlates with an increase of over 7000 jobs, 3252 (46%) of which were in the mining industry (ABS, 2006b, 2011b).
- Singleton LGA had a total population of 22,695 for 2011 (ABS, 2011) which shows a population increase of approximately 3% from 2006. The population growth is predominantly in the age group of 55 years and over, with notable increases also within the 20-24 year age bracket (ABS, 2006b, 2011b).

- Maitland LGA had a population of 67,478 people in 2011 (ABS, 2011). This was an increase of 10% from 61,880 people in 2006 (ABS, 2006). Maitland LGA is one of the fastest growing areas in NSW, providing new residential accommodation for the lower Hunter region.

Population Mobility

- Residents of Singleton LGA show similar levels of residential mobility to wider NSW, with 18,177 (85%) of these residents indicating that they currently live at the same address as they did a year ago while 12,000 people currently reside in the same address as they did five years ago (60%). 85% of persons in NSW reside at the same address as they did one year ago. Maitland LGA also has comparable levels of migration with 85% of people reporting that they currently live at the same address as they did a year ago while a further 23,160 (39%) report that they currently live at the same address as they did five years ago.

Age

- The median age increased by approximately one year between 2006 and 2011 across all relevant communities, excluding Camberwell where there was a median age increase of 5 years. A median age increase of 1 year across this period is consistent with wider NSW. (ABS, 2006a, 2011a).

Education

- While the proportion of the population that has completed year 12 increased 4% in Muswellbrook, and 5% in Singleton, increases remain lower than the NSW average increase of 7% for the 2006 – 2011 period (ABS, 2006a, 2011a).
- When compared to the NSW average of 31% in 2011 (ABS, 2011a) the proportion of residents over 15 years old with a Certificate I – Certificate IV level of education was significantly higher across all assessed communities (49%) excluding Maitland (25%).

Health Status

- The rate of respiratory system disease (including asthma and chronic obstructive pulmonary disease) is slightly higher in Maitland (Age Standardised Rate - ASR - 27.1 per 100) than NSW (ASR of 25.4 per 100). The ASR rate in Singleton (ASR 24.5 per 100) (PHIDU, 2014) is slightly lower than the NSW rates.
- More persons rated themselves as having fair or poor health in Maitland (ASR 18.2 per 100) than Singleton (ASR 14.1 per 100) and the state average (ASR 15.5 per 100), and adults in Singleton reported lower levels of psychological stress than the NSW average (PHIDU, 2014). Note that Maitland has almost double the State average percent of persons employed in health care & social assistance of the communities compared (12% versus 7%)
- The proportion of the adult population that has at least 1 of 4 health risk factors such as smoking, harmful use of alcohol, physical inactivity, and/or obesity, was on par with, or slightly higher than, the NSW average (ASR 56.6 per 100) in both Singleton (ASR 55.6 per 100) and Maitland LGA's (ASR 59.6 per 100). (PHIDU, 2014).

- Overall, the health and well-being of residents in Singleton LGA was comparatively good, relative to residents from NSW. However, Singleton LGA was found to have less GP services available, a higher rate of residents in residential aged care and a higher proportion of women who smoked during pregnancy, than the NSW average (PHIDU, 2014).

At-Risk Groups

- There was a higher rate of persons in residential aged care in Singleton LGA (107.4 per 1,000) than NSW average (87.6 per 1,000) (PHIDU, 2014).
- The proportion of children developmentally vulnerable in one or more domains (physical health and well-being, social competence, emotional maturity, language and cognition, communication) was higher in Singleton (ASR 24 per 100) than in NSW (ASR 21 per 100) (PHIDU, 2014).

Cultural Sites

- Singleton LGA hosts an extensive range of cultural sites, including heritage walks, bush tracks, collections of local history at the Singleton Historical Museum in the old Council chambers and the Rural Museum at Singleton Showground.
- The Australian Army Infantry Museum was related to Singleton 1973 and boasts an extensive collection of infantry 'tools of the trade' and historical material dating back to 1885.
- The villages of Jerry's Plains, Broke-Fordwich and Bulga are three of the villages within the Singleton LGA.
- Maitland LGA has an extensive range of cultural sites, including an array of heritage walks and historical sites such as the historic pump house and grounds at Walka Water Works and Maitland Gaol. Maitland Gaol has over 150 years of history and has housed some of Australia's most notorious criminals.
- A number of art and cultural centres including the Maitland Regional Art Gallery and the Hunter Valley Gallery are also located in Maitland.

In assessing the links between the Project and the health and education aspects of the human capital of the local area and region, the health and education of the Rix's Creek and wider Bloomfield Group workforce is of interest. Details regarding employee use of health and education infrastructure are included within the operational context section (**Section 3**).

4.3.4 Physical Capital

Physical capital includes provision of built infrastructure and services to the community. Within this capital it is important to consider the type, quality and degree of access to public, built and community infrastructure (including amenities, services and utilities) and housing and accommodation.

- The built infrastructure in Singleton LGA is well developed for a regional area, with a wide range of recreational, sporting and open spaces, a number of schools, a well-resourced library, multiple community halls in the region, including the Civic Centre which acts as a prominent community hub in Singleton (Singleton Council, 2014).

- Singleton Council provides most of the public utilities, including water supply, town sewerage services, domestic general waste and recycling collection services while energy for the Singleton LGA is provided by Ausgrid (Singleton Council, 2014).
- Three of the Hunter's four power stations (Bayswater, Liddell, and Redbank coal-fired power stations) are located in the Hunter Valley. These power stations cumulatively generate more than 60% of the state's energy supply (Department of Planning and Infrastructure, 2012). It is noted that Redbank power station went into receivership during October 2013.
- 91.4% of employed persons who reside in Singleton LGA travelled to work by car (83.7% as a car driver and 7.7% as a car passenger in 2011 (ABS, 2011a), indicating higher than NSW state average car travel in the LGA.
- The Singleton LGA is traversed by two main national highways: the New England Highway, which links Sydney to Brisbane; and the Golden Highway, which links Newcastle to the Western Region of NSW via Dubbo. The Hunter Expressway linking Singleton to the F3 expressway was completed in 2014, providing decreased travel times between the Hunter and the coast, including Newcastle and Sydney.
- The development of the Hunter Expressway is likely to result in long term residential changes across the Hunter Valley. For example, current and future employees who work within Newcastle or Lake Macquarie may choose to reside further up the Hunter Valley. Alternately, current and future employees within the Singleton LGA and other locations within the Hunter Valley may choose to reside closer to the coast.
- Passenger rail services are available within key towns within the region and heavy rail is the primary mode of coal transport to the Port of Newcastle for export, with 2014 estimates of increases from approximately 170 Mtpa exported in 2013-2014 to 191 Mtpa in 2016; with potential for further increases. (ARTC, 2014)
- Singleton has limited multicultural services, indicative of the lower percentage of persons born overseas (8%), compared to 26% in NSW in 2011 (ABS, 2011a).
- The median waiting times for Singleton Hospital are lower than the national average times for treating emergencies and undertaking eye and general surgeries (NHPA, 2012).
- Singleton has police, fire, and ambulance services which are co-ordinated centrally across the Hunter Valley (Singleton Council, 2014).
- Maitland LGA and Singleton LGA have high rates of free standing dwellings. Of houses in the Singleton LGA, 89% are freestanding dwellings compared to 82 % in the Maitland LGA and 70% for NSW as a whole (ABS, 2011a).

DPI (2012) and BHP Billiton (2011) community studies identify the impact of mining on housing affordability, availability, increased costs of living, mining leases on rural/residential properties, impacts on tourism, longer commute times and increased homelessness and squatting, as issues for the region, particularly during the coal chain event of 2010-2012. However, these outcomes need to be viewed in light of the recent downturn in the mining sector, a return to historical market trends and a consequent concurrent increase in supply of temporary, rental and other forms of accommodation (see **Section 4.5.3**).

4.3.5 Social Capital

Social capital refers to community cohesion and the strength of relationships within a community. Various indicators are used to examine social capital, including the level of volunteering, population mobility, crime rates and the cultural composition of the community (percentage of people born overseas, language spoken at home). The influx of visitors to an area and the extent of a transient workforce population can also contribute to varying levels of social capital and resilience within a community:

- People born overseas accounted for 8% of the population in Singleton LGA (excluding those who did not state a country of birth) and 7.6% in the Maitland LGA, with approximately half in both cases being people from the UK or New Zealand. In contrast, 26% of the NSW population (ABS, 2011a) identify as being born overseas (with close to 6% from UK and NZ). Singleton and Maitland have much lower cultural diversity than NSW generally.
- Singleton had 4% Indigenous persons and Maitland had 3.5 % indigenous persons in 2011, higher than the NSW average of 1.8% (ABS, 2011a).
- The proportion of single parent families with children in Singleton was similar to the NSW average of 8 % in 2011.
- While all areas had rates of 'family households' (defined as a household containing a couple, a couple with one or more children or a one parent family) which were similar to the NSW average of 71 %, there has been a considerable increase in non-family households, primarily one person households between 2006 – 2011 (ABS, 2006a, 2011a).
- In the five years to 2011, the number of volunteers dropped slightly across the local area, and the Hunter Region, which may be indicative of a trend of reduced volunteerism. However, the rates remain generally higher than the NSW average (ABS, 2006a, 2011a).
- In Singleton LGA, crime rates have been generally stable between 2009 and 2013. Exceptions to this include a 66% increase in possession and/or use of cannabis offences and a 85.7% increase in prohibited and regulated weapons offences 2011-2013 (BOCSAR, 2014).
- There is a deep Aboriginal heritage across all of the Hunter Valley, with multiple Aboriginal groups being based in the area and members of the local Aboriginal community frequently operate cultural tours from Singleton (visitnsw.com)

In assessing the social capital of the local area and region in relation to the project through community participation, the participation of the Rix's Creek and wider Bloomfield workforce is of interest. Details regarding employee community participation are included within the operational context section (**Section 3.0**).

4.3.6 Summary of Community Capitals

From the community capital profile analysis, it is possible to assess key areas of community resilience and risk in the local area, the Singleton LGA and wider Hunter Valley, as it relates to mining operations and the Project. These key findings are summarised below in **Table 4.2**, with specific points relating to a locality, where relevant.

Table 4.2 - Capitals Resilience and Risk.

Capital Area	Areas of Resilience	Areas of Risk
Natural	The Hunter region has abundant and diverse natural capital values, including: diversity of natural resources, abundant coal resources, agricultural and conservation lands. Currently accessed coal reserves are primarily in the Singleton and Muswellbrook areas Access to National Parks and other tourist locations	Balancing conflicting land uses, particularly mining, agriculture, vineyards and equine industries. Loss of conservation connectivity.
Economic	Continued economic support from mining sector Increasing housing affordability	Lack of economic diversity in the Hunter region and dominance of mining industry employment and associated occupations; vulnerable to changes in mining activity, such as following the coal chain event 2010-2012. Increasing unemployment rates
Human	Significant population growth in the Upper Hunter region and in Maitland LGA, including increases in population aged 20-24 years. Increasing number of students completing Year 12 or other certificate courses High levels of technical skills in the community. Singleton has relatively stable residential mobility, but Maitland has lower long term residence than the NSW average, reflecting rapid growth in housing estates.	Ageing population Below average rates of completion of Year 12 Below average levels of post-school education (with the exception of Certificate-level qualifications) Relatively limited access to health services (compared to major centres). Proportion of population in Maitland with 1 or more health risk indicators is slightly above the state average; note Singleton is very close to State average.
Physical	Comparatively good provision of utilities, built infrastructure and transport infrastructure for a regional area. Well connected by both rail and road Completion of the Hunter Expressway has eased traffic issues	The provision of some public utilities is under strain with an increasing population Public transport options off the rail line are limited Hospital / medical services under strain Lack of diversity in housing stock
Social	Higher than NSW average rates of volunteering (but declining) Proactive planning regarding business & infrastructure needs Overall stable crime rates Strong Aboriginal culture across the region	Rate of volunteerism decreasing 2006-2011 Low cultural diversity Increase in cannabis and weapons offenses 2011-2013

4.4 Political Governance

4.4.1 Local Government

The Singleton LGA is governed by the Singleton Shire Council. The Mayor is directly elected by residents of the Singleton LGA, and the additional nine councillors are elected proportionally as a single ward. The September 2012 election resulted in the appointment of independent Cr John Martin as Mayor. All Councillors elected during 2012 are independent.

The Maitland LGA is governed by the Maitland City Council. The Mayor is directly elected by residents of the Maitland LGA, and the additional twelve councillors are elected proportionally across four wards. Cr Peter Blackmore has retained his position as Mayor since he was first elected in 1999.

4.4.2 State and Federal Government

The Singleton LGA is located within the Upper Hunter State Electorate, which extends from Spring Ridge in the north to Yengo National Park in the south, from the Talbragar River in the west to Bundook in the east. The Upper Hunter State Electorate is currently represented by National Party Member, Michael Johnsen, who won the seat in the March 2015 election, from National Party Member George Souris who did not contest the seat.

Maitland LGA is located within the Maitland State Electorate, which extends from Glen Oak in the north to Bishops Gate in the South and from the Hunter River in the west to the Pacific Highway in the east. The Maitland State Electorate is currently represented by Labor member Jenny Aitchison.

At the federal level, the Singleton LGA and Maitland LGA are within the electoral district of Hunter and are represented by the Hon. Joel Fitzgibbon MP (Australian Labor Party), who retained his seat in the September 2013 election. As Member for Hunter since 1996, in the lead up to the election he became the Minister for Agriculture, campaigning on a platform of agriculture and mining co-existing 'side by side'.

4.5 Community and Strategic Planning

Essential within Council community and strategic planning processes is consultation with residents. Both Maitland and Singleton councils have undertaken extensive community consultation through the development of the *Singleton Strategic Plan*, *Maitland Social Plan and Maitland +10 Strategy* respectively. It is considered that these documents are broadly representative of dominant values within the communities for whom they have been prepared.

4.5.1 Singleton

Singleton Council released a long term Community Strategic Plan '*Our Place: A Blueprint 2023*' in June 2013 (Singleton Council, 2013). The plan focused on four key pillars of Community, Place, Environment and Community Leadership.

A review of the Plan indicates that, the Singleton community values its community identity and community services, and promotes learning and healthy lifestyles. Singleton also values community leadership, organisation and business. The Community Strategic Plan advocates community leadership through informed and active decision making, a diverse economy, an effective delivery of services and collaborative businesses that strengthen the community.

The environment is of high value to Singleton residents, with the Plan giving priority to the protection of the natural and built environment, sustainability in all actions, environmental awareness and positioning Singleton at the forefront of alternative energy. Singleton values its local places and has a focus on safety, affordability, connectedness, heritage and sustainable assets.

Mining is a key industry in the Singleton LGA and there are currently 20 coal mines located within the LGA. The royalties generated from mining activity totalled \$550 million in the year between 2011 and 2012, in addition to this, the mining industry employs 2800 Singleton residents.

Mining in the Singleton LGA is presented in the Strategic Plan as a benefit to the economic prosperity of the region. However, a number of negative aspects were also identified, including:

- Housing and accommodation pressures;
- Increased cost of living;
- Prevalence of a drive-in/drive-out workforce;
- Tensions between competing land use (e.g. mining and agriculture and residential);
- Health/community impacts of mining shift work;
- Changes to local amenity
- Traffic congestion created by commuting workforce;
- Loss of community and decline of surrounding villages; and
- Stress on infrastructure and services.

It should be noted, however, that recent and rapid changes in the economic context subsequent to the Plan as a result of the end of the coal chain event and downturn in the mining industry, may have resulted in a shift of issues. For example, decreased stress on housing and accommodation due to less mining workforce demand (Carver 2015).

Singleton Council has also undertaken additional strategic planning in order to guide and facilitate the implementation of the long term community strategic plan. Plans include:

- Singleton Lifestyle Plan for Older People (Singleton Council 2015)
- Multicultural Action Plan (Singleton Council 2014)
- Local Villages Planning Study (ongoing).

Plans of particular relevance to the project include the Singleton Accommodation and Housing: Strategy and Action Plan (Carver. 2015) and the Singleton Council Open Space and Recreation Needs Study (Ross Planning, 2013).

The Accommodation and Housing Strategy and Action Plan particularly notes impacts on housing from the recent 'coal chain event' (Carver 2015):

- local investment into detached and duplex housing products in Singleton Heights fulfilling a shortfall in detached product over the previous ten years (this is some of the closest urban development to the existing Rixs Creek mine operation);
- A high portion of duplex houses were investor driven for the rental market, leading to a rental oversupply post the mining boom, resulting in distressed investments being offered for sale at 10-15% less than peak market value;
- Lower and middle income earners could enter the housing market, further taking pressure off the rental housing sector and community housing; and
- Renters were afforded the opportunity to upgrade their accommodation quality or seek rental options at a lower price point.

Hand in hand with increased development is the increased demand for suitable infrastructure, including open space and recreational infrastructure, as profiled in the Open Space and Recreation Needs Study (Ross Planning 2013). The study identifies Alroy Oval and the neighbouring Council owned and YMCA operated Singleton Heights Sports Centre (SHSC), as two specific facilities that require upgrade to meet current and future needs of the local community. The Alroy Oval and SHSC have been identified by Bloomfield and Singleton Council as a focus for the Project's Voluntary Planning Agreement (VPA). Identified needs include (Ross Planning 2013):

- Alroy Oval:
 - Upgrade athletics amenities – including additional amenities and change rooms, as well as disabled access and facilities
 - Lighting to second field – to provide for additional use and reduce overuse of field 1
 - Improve drainage of the athletics track -to allow for increased use and reduce down time from over use
- Singleton Heights Sports Centre
 - Redevelopment/Refurbishment of the facility to provide two purpose built multi-courts, and required squash facilities – due to the age, condition and restrictive size of the existing facility.

4.5.2 Maitland

Maitland City Council released its updated Community Strategic Plan, *Maitland +10*, in March 2013. The Plan was developed in consultation with community members.

The plan focuses on five key themes:

- People and lifestyle;
- Built space;
- Our natural environment;
- Prosperous and vibrant city; and
- Connected and collaborative community leaders.

The discussion of lifestyle aspects, including recreational facilities and events, indicates that these are valued aspects of community life in the Maitland LGA. Also featured within the plan is a focus on the built environment including heritage, accessibility and the sustainability of the town centre; indicating a concern for the continued prosperity and aesthetics of the regional centre. In addition to this Maitland values its natural environment, with the acknowledgement of the need to effectively manage resources and a growing population while ensuring the protection of natural assets including rivers and floodplains. *Maitland +10* indicates that Maitland residents view natural resources as an asset. These resources include fertile agricultural land, coal production and extractive mineral deposits.

Other key values for the Maitland community include the prosperity of business and the community in the coming years. *Maitland +10* highlights a need for diversity and growth for the benefit of the community with the inclusion of investment. Maitland also values community sustainability, with the 10 year plan focusing on participation in decision making and a sense of belonging for residents.

Maitland City Council also released its *Maitland Social Plan 2009-2019* in 2010 to enable the council to build on strengths and address issues within the community. Similar to *Maitland +10*, the Social Plan was developed in consultation with the community. It focuses on principles of social justice (equity, access, participation, rights) and inclusion (reducing disadvantage, increasing participation, a greater voice with greater responsibility).

Maitland Council has undertaken further strategic planning relevant to the LGA, however has not been undertaken.

4.5.3 Regional Media Coverage

A media analysis was undertaken to further identify, analyse and reinforce details regarding regional stakeholder perceptions and values. The articles were primarily sourced from regional media, including *The Newcastle Herald*, *The Singleton Argus*, *ABC News* and *The Muswellbrook Chronicle*. In addition a small percentage of articles were drawn from free online specialist publications, such as *Mining Australia* and metropolitan media such as *The Sydney Morning Herald*.

Analysis indicates an existing concern for the impact of the mining industry, in terms of its long term environmental impact and aesthetic impact, on the Hunter area and critiques on industry sustainability. Common concerns include foreign ownership of mining resources, noise, dust, visual impact, increased traffic as a result of mining activities and the impact of mining on alternative industries, especially agriculture (including viticulture) and the equine industry. However media has also focused on contributions of mining to the region, primarily in the form of jobs and economic activity, both direct and dispersed.

Key regional issues and opportunities emerging from the analysis included:

- Balancing the long-term impacts and economic benefits of mining for the region;
- Responding to the continued downturn in mining and ongoing mining related job losses in the Upper Hunter;
- Addressing land use conflicts more effectively and developing coordinated approaches to land management and rehabilitation;
- Enhancing infrastructure, housing and service provision and improving planning for these for a growing region (e.g. roads / transport; housing accessibility, affordability and mix; health services);

- Addressing community sustainability and protecting core community values;
- Addressing mining-related health concerns (e.g. air quality and dust, health research and assessments);
- Ensuring employment and training opportunities for local people;
- Protecting the environment and natural capital of the area;
- Improving information sharing with the community by government and industry; and
- Managing cumulative impacts of mining in the region.

4.5.4 Media Coverage regarding Bloomfield, Rix's Creek and/or the Project

A review of media coverage related to Bloomfield and Rix's Creek over the last three years suggests there is little negative media interest in the Project, beyond the general factual reporting of the Project intent and schedule, with sources attributed to Bloomfield spokespeople. There has been no article expressing a negative or alternative view regarding the Project specifically, nor alternative spokespeople sought, suggesting the Project to be generally regarded as lacking in evident controversy, tension or community conflict.

While generally positive, some concerns that have been recently reported relate to the Rix's Creek Operation with respect to rehabilitation post mining. Such concerns, largely from agricultural and environmental groups, raise the possibility of land rehabilitation for food production.

When Rix's Creek specifically has been referred to negatively, it has been as an element within a small number of general Hunter Valley mining stories. These references have primarily been photographic references used to illustrate either general mining, or other specific mines. Articles regarding the Bloomfield Group generally are all positive with a key focus on employee loyalty, family friendly practices, community funding contributions and mine history.

Media around mining generally in the Hunter Valley, however, highlight some general community concerns including:

- Loss of agricultural and horticultural investment in the area;
- Lack of legislative protection for existing non-resource sector industries (e.g. viticulture, horse studs) in the region; and,
- Extinction of Hunter woodlands due to mining, housing and agriculture.

Table 4.3 below summarises the relevant media articles.

Table 4.3 - Media Report Summary.

Date	Article	Content and Positioning	
01/04/15	<i>Hunter Woodland facing extreme risk of extinction due to mining, housing and agriculture</i> ABC News	Article regarding the clearing of woodlands in the Hunter Valley post colonization, outlining continued risks due to expansion of housing and industry in the region. Key issues identified as habitat loss, weed invasion and inappropriate fire regimes. <i>Tone of article = negative (not specific to Rix's Creek).</i>	Negative
30/03/15	<i>Open cut coal mine rehabilitation effort at Rix's Creek will restore grazing capacity in future.</i> ABC: NSW County Hour	Article outlines the possible positive impacts of mine site rehabilitation on agriculture, using the Rix's Creek Operations as an example. <i>Tone of article = positive</i>	Positive
27/03/15	<i>Hunter Valley shafted over coal mine risk: Major horse breeder could invest in Victoria instead.</i> The Daily Telegraph	Article indicating that prospective industry investors may be avoiding the Hunter Valley due to encroachment of mines into agricultural lands. <i>Tone of article = negative (not specific to Rix's Creek).</i>	Negative
24/03/15	<i>Hunter region demands mining safeguards</i> AAP	Article outlining calls from the Hunter Thoroughbred Breeders Association and the Hunter Valley Wine and Tourism Association to ban coal and coal seam gas operations within 10km of critical industry. <i>Tone of article = negative (not specific to Rix's Creek)</i>	Negative
08/04/14	<i>Rix's Creek plans to expand</i> Singleton Argus,	Movement away from Singleton Heights – decrease of impacts to township over time Continuation of employment for Rix's Creek, as well as potentially Bloomfield Key issues identified as air quality, noise, vibration and ecology <i>Tone of article = neutral/positive</i>	Neutral
08/04/14	<i>Three generations remain loyal to Bloomfield</i> Singleton Argus	Human interest piece profiling McKerrow family who have had three generations working with Rix's Creek, including: o Comments from employees regarding family friendly hours; and o Comments from management regarding policy to employ family members resulting in low staff turnover and good continuity of corporate knowledge. <i>Tone of article = positive</i>	Positive
17/12/13	<i>Rix's Creek digs deep</i> Singleton Argus	Article regarding Rix's Creek employees fundraising for Cancer Council and also the Maitland relay for life, with further commentary about Rix's creek history and status as a 'small family owned company' which doesn't 'fit the profile of a typical mining company' <i>Tone of article = positive</i>	Positive
04/05/14	<i>King Coal : 10 years on</i> Newcastle Herald	Article regarding cumulative impacts of Hunter mining industry generally. Rix's Creek mine did not feature in specific commentary but was included as one of approximately eight images of Hunter coal operations. <i>Tone of article = negative (not specific to Rix's Creek)</i>	Negative
15/03/14	<i>Staying at Camberwell</i> Singleton Argus	Article about Camberwell local resident Wendy Bowman talking about the challenges of living near to coal mines, including dust and competition for land use. Rix's Creek Mine is mentioned regarding Mrs Bowman's former home "Granbalang" which had been historically 'bulldozed' to make way for the Mine. <i>Tone of article = negative</i>	Negative
03/09/13	<i>Rix's Creek truck stop</i> Singleton Argus	Article regarding opening of new government funded Rix's Creek rest area on New England Highway which had been constructed as the previous one that to be moved due to regular blasting closures associated with Rix's Creek Mine. <i>Tone of article = positive re truck stop, neutral re Rix's Creek Mine</i>	Neutral
01/09/13	<i>Ashton Coal Camberwell court case begins</i> Newcastle Herald	Article regarding Hunter Environment Lobby's legal bid to overturn the approval of Ashton Coal's South East Open Cut coal mine in Camberwell, on grounds of impact to Glennies Creek, dust and noise. Rix's Creek was not mentioned in the article, however, it featured as the backdrop for the photograph accompanying the story (i.e. residents in front of Integra and Rix's Creek mines). <i>Tone of article = negative (not specific to Rix's Creek)</i>	Negative
26/01/13	<i>Cancer Council opens doors</i> Singleton Argus	Article regarding opening of Cancer Council office in the Upper Hunter, including announcement of a \$34,032 donation by Rix's Creek Charity Golf Day. <i>Tone of article = positive</i>	Positive
13/10/12	<i>Bloomfield celebrates 75th anniversary as family-owned coal mine</i> Newcastle Herald	Article detailing Bloomfield anniversary attended by 1000 people, and differentiating Bloomfield as a "stark contrast" and "alternative supply" to "the coal industry's more familiar corporate profile of large multinational companies and fly-in fly-out workers". <i>Tone of article = positive (not specific to Rix's Creek)</i>	Positive
13/07/12	<i>Chamber links business to coal</i> Singleton Argus	Article regarding Singleton Chamber of Commerce's efforts to facilitate local procurement in mining, featuring commentary regarding Bloomfield management's presentation to the Chamber which noted Bloomfield's preference for local procurement, with examples of hydraulic hosing, takeaway food, fencing and environmental consultants, as well as support for community projects. <i>Tone of article = positive</i>	Positive

5.0 Perceptions of Project Risks and Issues

A key component of a SIOA is the process of understanding, from a community perspective, the issues, impacts and opportunities associated with a Project, as well as the broader community values and land uses associated with the assessment area.

These objectives were achieved through:

- A review of historical and existing issues via analysis of previous complaints as detailed in **Section 5.1.1** (this is particularly relevant to the continuation project);
- Analysis of Community Consultative Committee meeting minutes (**Section 5.1.2**)
- A review of the issues screening process undertaken by AECOM during preparation of the Preliminary Environmental Assessment (PEA) (**Section 5.1.3**);
- A review of consultation activities, outcomes and feedback via the Project consultation process managed by AECOM (Section 5.1.4); and
- Incorporation of findings from the Operational Context (**Section 3**) and Social Profile (**Section 4**) aspects of the SIOA.

5.1.1 Historical Issues – complaints register

All Rix's Mine complaints are dealt with under the '*Complaints Protocol for Rix's Creek Coal Mine*' as set up in response to the Rix's Creek Environmental Monitoring Committee, a framework established under the current development Consent. The protocol is used to register and investigate all complaints, which are referred to the Mine Manager and which are dealt with on an individual basis.

The Rix's Creek register of community enquiries and complaints for the calendar years 2002 to 2015 was reviewed in order to provide historic context regarding community interactions with the mine operations. The number of community complaints by specific issue themes is presented in **Figure 5.1** and **Figure 5.2**.

Rix's Creek received a total of 243 complaints over the 12 year period, averaging less than 18 complaints annually. The number of complaints varies from a minimum of 5 complaints in 2008 to a maximum of 30 recorded in 2013. Since 2008, the year in which the lowest numbers of complaints were received, there was a progressively upward trend of increasing complaints as is illustrated in **Figure 5.2**.

Operations in years 2002, 2006 and 2012-2013 were more concentrated in the west or south pits, closer to some residents. Overall levels of complaints declined in 2014, even though work continued in the west pit. This has been attributed to improvements in the real-time noise monitoring framework brought on line by Rix's Creek at this time. Few complaints were received in the first quarter of 2015.

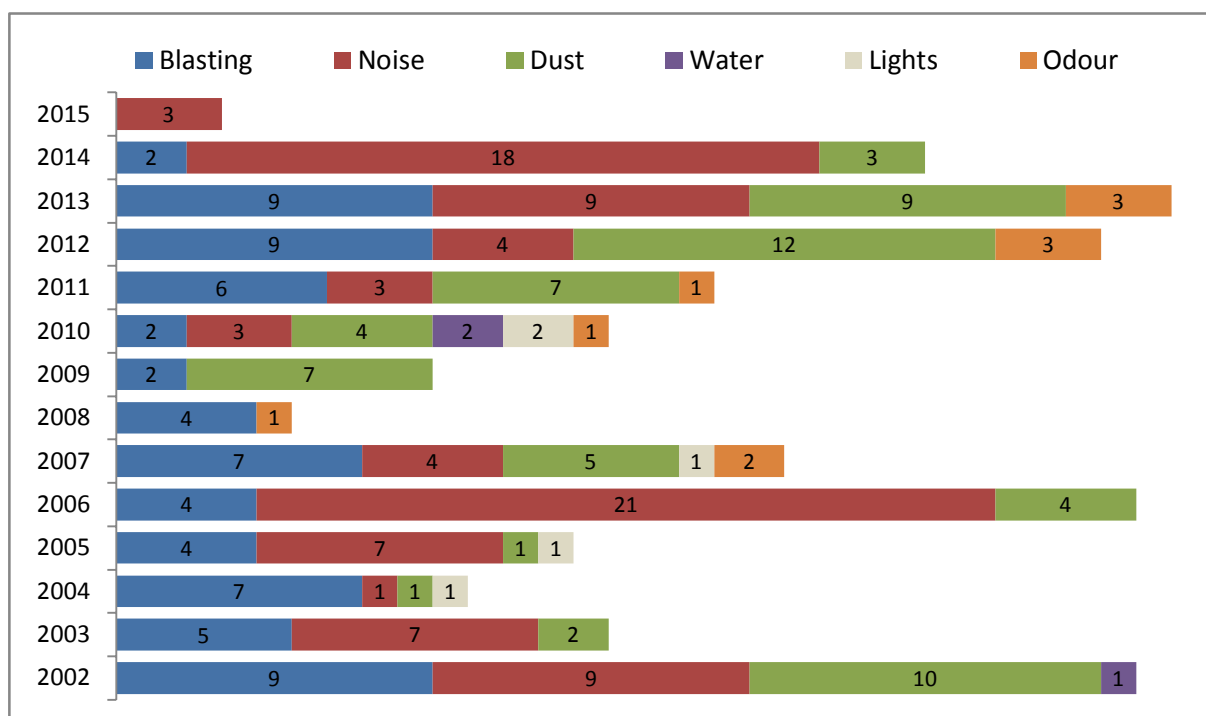


Figure 5.1 - Community Complaints by Year*.

*Note that totals are not provided as they may be less than the sum of complaints per category as some complaints related to two (or more) categories

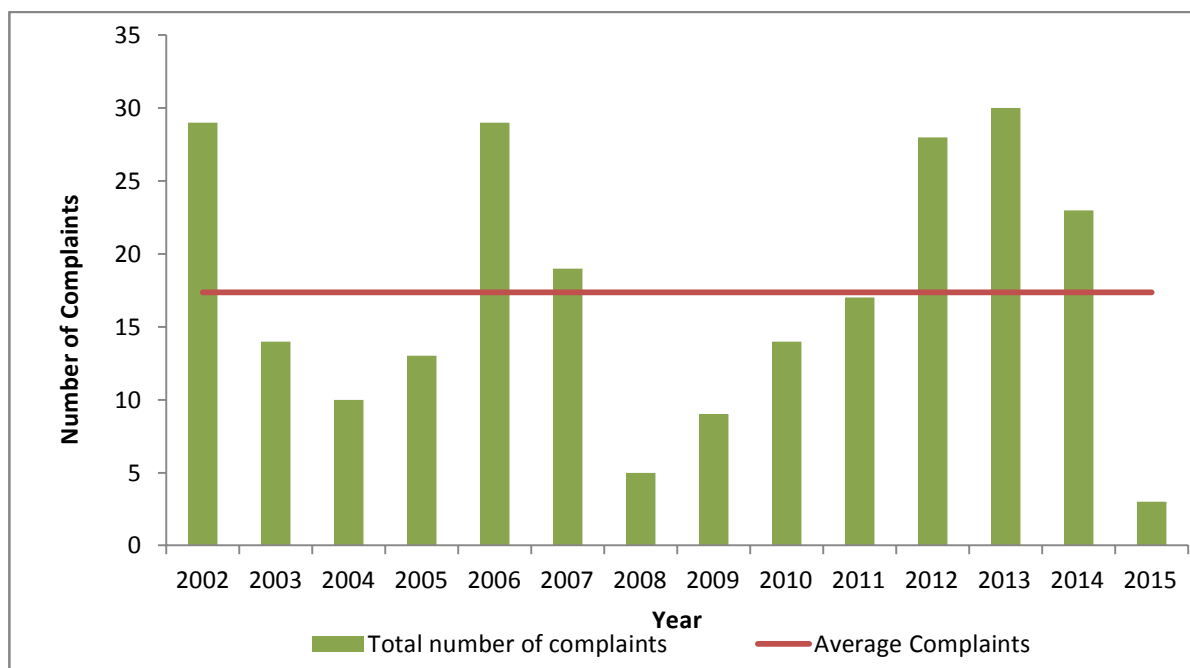


Figure 5.2 - Complaints received 2002-2015

Trends in the complaints data analysed for this assessment (including frequency, location and subject matter) indicate:

- Since 2002, the majority of complaints received have been in relation to blasting, noise and dust;
- An increasing concern about noise and blasting, in the area around the mine, over the last five years. However, current complaints are comparable with those from a decade ago, when fewer mines operated in the Singleton LGA.
- Prior to 2009, half of all complaints originated to the south of operations in Maison Dieu, however the proportion of complaints from Maison Dieu has decreased to approximately 28% from 2009-2013, including complaints from further south in Long Point. Operations were closest to Maison Dieu in 1994. A further 28% of complaints originated to the south east of Rix's Creek, in Singleton and Singleton Heights.
- The number of complaints may have risen due to the increased urban development encroaching closer to the existing Rix's Creek operation.
- The remainder of complaints originate from the north in the Camberwell/Middle Falbrook Road (18%), to the east in Wattle Ponds/ Bridgman Road (16%) and from the New England Highway and surrounds (9%). Aside from the majority of noise complaints originating from the south, primarily in Maison Dieu, there are no other clear trends in locality specific complaints.
- There was a decrease in noise complaints during 2014 which is attributed to the development and implementation of real time noise complaint management processes; whereby real time noise monitoring occurs at the location of the complainant, once a complaint is received, and if noise is determined to be significant, operations are altered accordingly to minimise any impacts that may be being experienced.

Findings regarding complaints have been incorporated into the assessment of social impacts relating to noise, dust and other amenity issues presented in **Section 6.1**.

In addition to complaints, Rix's Creek has received 11 community enquiries between 2009 and 2013. Where recorded, enquiries (like complaints) have been primarily related to dust and blasting.

5.1.2 Rix's Creek Community Consultative Committee

Enquiries are also received through the Rix's Creek Community Consultation Committee (CCC). The CCC is comprised of one chairperson, four community representatives and three Rix's Creek employees. The CCC follows the *Guidelines for establishing and operating Community Consultative Committees* (Department of Planning – now DPE – 2007), and meets twice a year. A review of the Rix's Creek CCC minutes from 2009 to 2014 has also been undertaken. A total account of environmental complaints and enquiries, as discussed in the CCC minutes from May 2014, shows 19 complaints and five enquiries concerning a combination of blasting noise and odour. In 2013 a total of 8 complaints and 3 enquiries were lodged in response to a total of seven blasts. In addition, a total of 10 complaints and one enquiry were lodged regarding noise. The CCC notes that the majority of these came from the Maison Dieu area during periods when a North Westerly wind was evident.

In response to these complaints the CCC notes that the Rix's Creek operation has undertaken a number of techniques to reduce noise impacts specifically for Maison Dieu residents including:

- Creation of a noise bund;
- Planting of more trees;
- Adjustment of the pit shape to reduce noise for Maison Dieu;
- Trialling of options for noise reduction by a noise engineer; and
- Continued development of a noise model.

The different noise reduction options and development of a noise model are now substantially complete. The Bloomfield Group also runs an additional separate CCC to discuss activities at the Bloomfield mine. A review of the Bloomfield CCC minutes from 2009 to 2014 show that Rix's Creek was discussed during the CCC meetings four times from 2012 to 2013, however, the references refer to internal business to Rix's Creek and Bloomfield and are not relevant to the current assessment.

Overall, key points arising from the analysis of CCC minutes include the ongoing provision of environmental monitoring data from Rix's Creek, open communication with CCC members, complaints review and active management of these complaints by Rix's Creek.

5.1.3 Issue Screening - Informing Planning for the Project

During preparation of the PEA for the Project, AECOM undertook an issues screening process in order to identify the key issues likely to be most relevant to the Project. A component of the issues screening process was a broad review of key issues raised in public submissions in relation to other major coal mining projects during planning assessment processes over the past 5 years. As such, these issues raised provide a regional scale indication of community interest and stakeholder perceptions regarding mining, which may also be relevant to the current Project.

Table 5.1 presents issues identified during the AECOM screening and their level of interest rankings. Levels of interest in issues may vary over time, however the issues below were considered up to date at the time of preparation (2014).

Table 5.1 - Projected level of stakeholder interest, as identified during PEA screening (Source: AECOM, 2014)

Level of interest	Definition	Issues identified during PEA screening
High level of interest	Issues raised in feedback from most stakeholders or in most submissions made on major coal mining projects	Air Quality ▪ Operational dust
		Noise and Vibration ▪ Operational noise ▪ Blasting and vibration
		Ecology ▪ Vegetation clearance and habitat loss ▪ Landscape and drainage change

Level of interest	Definition	Issues identified during PEA screening
Medium level of interest	Issues raised in feedback from some stakeholders or in some submissions made on major coal mining projects	Ecology - Changes to aquatic ecology as a consequence of discharge and runoff quality and quantity changes Soils and Geology - Increased sediment and erosion Surface water - Water quality during operation - Changes to volume and quality of inflows onsite and offsite; - Impacts to local bore users Heritage - Impacts to items of Aboriginal heritage - Impact to items of European heritage Visual and landscape - Impact from an increase in the size of the disturbance area - Impact to rural character and local view corridors Hazard and Risk - Impacts associated with a bushfire event Rehabilitation - Disturbance to existing areas of rehabilitation - Lack of rehabilitation taking place post mining
Low level of interest	Issues not raised, or rarely raised, in feedback from stakeholders or in submissions made on major coal mining projects	Social and Economic - Increase in demand for local services - Creation of employment opportunities Visual and Landscape - Visual alterations to surface topography Traffic and Transport – - Increase in vehicle movements - Increase in rail movements Hazards - Spontaneous combustion of reject material - On-site storage of dangerous goods Greenhouse gases - Greenhouse gas emissions during operations Land Use - Reduction in grazing land Waste - Operational waste and waste associated with washery and reject material Surface water - Operational water balance deficit

5.1.4 Stakeholder Consultation regarding the Project

The Rix's Creek Project team, with AECOM, are undertaking the stakeholder consultation program to ensure relevant stakeholders are informed of the Project and have the opportunity to provide input during project planning. Engagement activities are being undertaken according to the Rix's Creek Stakeholder Engagement Strategy (AECOM, 2014b). Program activities have included development and implementation of:

- A Project webpage (part of Bloomfield Group's larger website) at <http://www.bloomcoll.com.au/Operations/RixsCreek/tabid/226/Default.aspx>
- Briefings to government agencies;
- Stakeholder letters;
- Newspaper advertising (including proactive media releases featuring the Rix's Creek Mine);
- Newsletter/Fact Sheets (distributed to all residents in the Singleton township);
- General public tours of the project site and mine rehabilitation area associated with the Hunter Coal Festival and Tom Farrell Rehabilitation Context Site Visit
- Community Information Session (yet to be conducted);
- Site inspections (for government agencies and the Rix's Creek CCC);
- Consultation with Aboriginal stakeholders (as part of Cultural Heritage Management Plan); and
- Engagement with Rix's Creek and the broader Bloomfield workforce (including the survey undertaken to inform the SIOA TRC-Analysis).

As Umwelt has not been involved in planning for the engagement, or present at engagement activities, the SIOA has been informed by documentation completed by the Project Team and supplied to Umwelt regarding the completed consultation. Engagement summaries provided to Umwelt to date (March 2015) contain fifteen interactions with local residents since May 2013, not including industry representatives and government stakeholders¹. Based on these meeting transcripts, the issues raised by landholders regarding the Project included:

- Noise and dust relating to blasting;
- Odour associated with dust plumes;
- Operational noise (i.e. concern that the Project could exacerbate existing noise); and

¹ Consultation reports provided to Umwelt by AECOM, while clear and well recorded, do not include detailed information provision as to comments received from stakeholders. As such, it is not clear whether a lack of expressed concern is a result of the consultation approach or a genuine indicator of a lack of concern. This should be considered in interpreting consultation results.

- Transport (concern that the new access off the New England Highway may be more dangerous due to two-way traffic).

Government stakeholders were also engaged by AECOM representatives, with the results of this agency consultation discussed further in the main text of the EIS.

5.1.5 Summary of Perceived Risk and Issues

Key points arising from the analysis of community perceptions and experiences regarding the Project, and other analyses undertaken, are as follows:

- Preliminary issues identified during AECOM's screening process as being of highest stakeholder interest included operational noise, blasting and vibration; vegetation clearance and landscape change; and low interest in a range of issues, including socio economic themes.
- Historical issues relating to the operation have been mainly associated with noise, and blasting, which were the most common topic of current complaints to Rix's Creek, and which affirm the PEA issues identified in the screening process. Complaints increased from 2008-2013, particularly from residents in the localities of Maison Dieu and Singleton Heights.
- The detached housing development in Singleton Heights (see **Section 4.5.1**) is likely to have attracted young families into the area, as indicated in the higher rates of persons aged under 35 years in Singleton Heights and Hunterview as discussed in **Section 4.2**. Percentages of youth and young people are also likely to have increased since the 2011 census. Singleton Heights is also the closest suburb to the existing Rix's Creek operation and increased complaints may have been due to increased residential presence in this area.
- There appears to be a low degree of landholder / community interest in the Project, with only two responses received in follow up to the first Project Information Sheet which was distributed to all households in the Singleton township. These two responses were from residents who already have an existing complaint pattern with Rix's Creek, regarding noise. The Project team has noted, during conversations with these landholders, that the footprint of the mine will be moving away from these residents' locations.
- One resident has expressed concern regarding traffic patterns on the Highway, associated with truck stops; however the Rix's Creek traffic assessment has not identified a technical issue in this regard.
- Regional values and perceptions tend to regard mining as an essential component of the economy, but also identify a range of general issues due to the presence of multiple mines in the area.
- The end of the 'coal chain event' 2010-2012 has reduced the risk of overburdening existing accommodation and infrastructure in the local area and wider region.
- Strategic planning documentation indicates that the condition of Alroy Oval and the SHSC require upgrading to meet the needs of the current and future district population. The oval and SHSC have been identified by Bloomfield and Singleton Council as a focus of the VPA for the Project.

- There has been little media interest in the Project, suggesting minimal perceived conflict, controversy or 'outrage' associated with the Project.
- There were no significant risks to the project or the local community identified through the operational and demographic profiling analyses. There are no significant wider risks posed to the five community capitals within the Singleton LGA (see **Section 4.3**) as a result of continuation of the Project.

6.0 Assessment of Social Impacts

6.1 Community Identified Issues

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; and
- Are interested in its use.

This section collates the issues/perceived impacts identified by a range of stakeholders who predominantly live nearby the proposed site or who have an interest in the proposed change. Those people directly affected are in the best position to say how they actually experience events, and people's own predictions, in the form of optimism and fears, are a significant component of their behaviour and hence social impacts (Ross 1990).

Community issues have been assessed by analysing a combination of outcomes of community consultation activities (undertaken by AECOM), complaints registry data and minutes from regular CCC meetings (See **Section 5.0**).

To maintain the confidentiality of participants who have been involved in the interview process, the issues raised have been analysed by issue theme analysis.

As can be seen in **Figure 6.1** the predominant issues arising in both the complaints data and consultation activities relate to noise, followed by issues relating to blasting and dust.

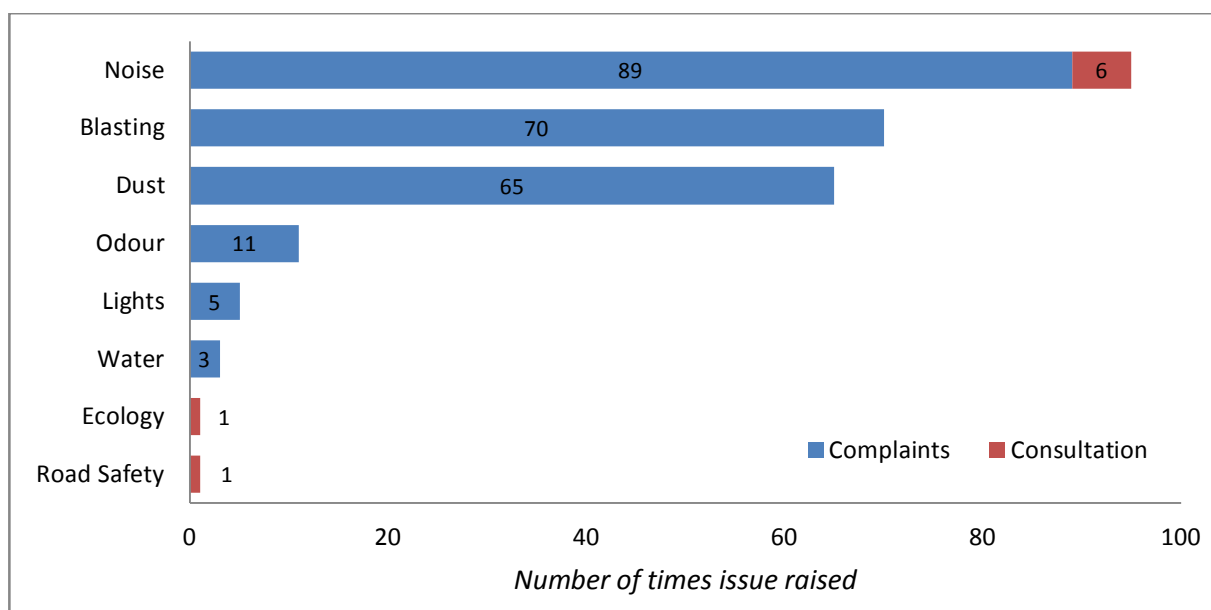


Figure 6.1 - Complaints and Consultation Theme Occurrences.

As highlighted in **Table 6.1** below, noise, blasting and dust contribute to 96.72% of all complaints made to the community hotline (or referred on from the EPA) between 2002 and April 2015. The consultation data indicates that noise alone accounts for two thirds of all issues raised during consultation.

Table 6.1 - Complaints and Consultation Themes.

Issue	Proportion of complaints made (period 2002 – 2015)	Number of times raised during consultation
Noise	36.6%	6
Air Quality (incl. dust and odour)	31.3%	0
Blasting related	28.8%	0
Visual (incl. Lights)	2.1%	0
Water Quality	1.2%	0
Environmental (incl. waste, flora and fauna)	0%	2
Economic Impacts	0%	1
Traffic and Road Safety	0%	1

6.1.1 Social Amenity

In the context of the SIOA, social amenity is referred to in relation to issues or activities that might have a substantial impact on the community or community members or even peoples livelihoods through economic impacts and flow on effects. For example, the removal of a strand of trees might be seen to have the impact of lowering the “visual amenity” of a location, or increased dust and noise from a mine may impact – sometimes significantly – the ability of a landholder to have quiet enjoyment of a premise.

As can be seen in **Figure 6.2**, concerns relating to social amenity, that have been raised through either the community hotline (complaints) or consultation activities, include:

- Noise;
- Air quality(dust and odour);
- Water;
- Lights (visual amenity); and
- Blasting.

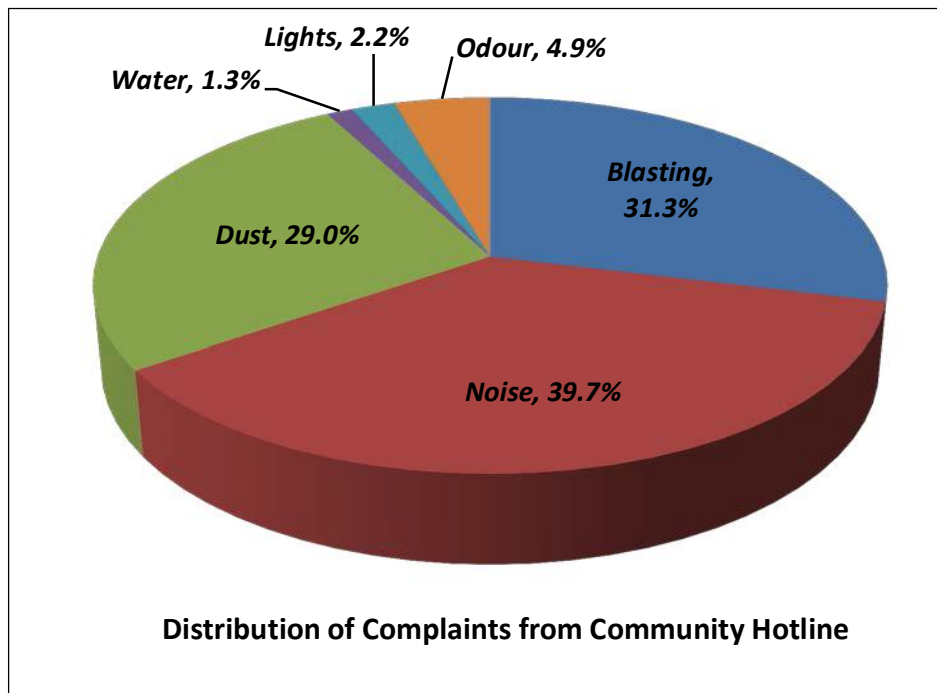


Figure 6.2 - Complaint Themes.

Potential impacts on social amenity, and community concerns associated with these issues, have largely been identified via community hotline data.

6.1.1.1 Noise

As highlighted previously concerns regarding noise from mining activities were the most prominent issue in both the consultation and complaints data analysis. According to the minutes from the CCC meetings, all complaints were related to operational noise from the mine (general noise complaints, e.g. complaint from a nearby resident claiming that noise from the mine was excessive on a certain date), and in at least one case related to noise from a truck. The consultation data indicated that noise from coal trains passing residential areas was also considered to be an issue.

During 2014 noise complaints comprised 78% of all recorded complaints, and to date, in 2015, all complaints have related to noise (**Figure 6.3**). While complaints relating to noise have fluctuated over the period from 2002 to 2015; they have increased steadily since 2008. It is too early in 2015 to say whether this trend will continue.

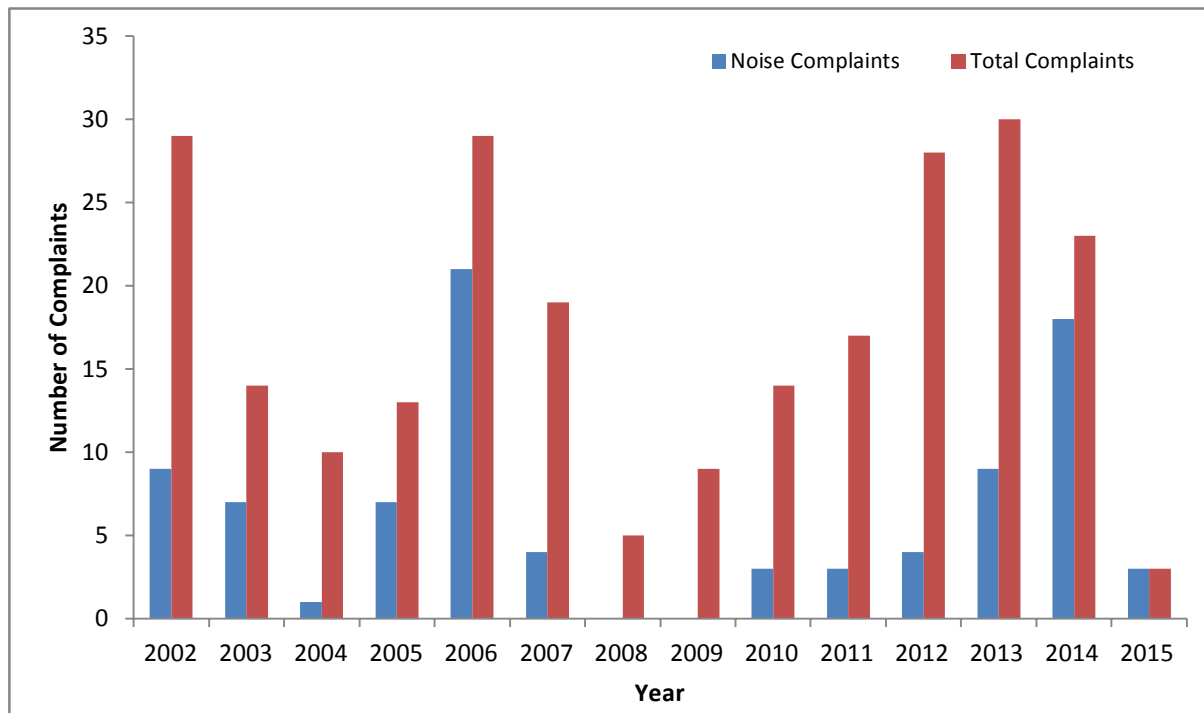


Figure 6.3 - Noise Complaints over Time.

6.1.1.2 Blasting

Over a quarter of all complaints made to the community hotline related to blasting (29%). As with noise complaints, complaints relating to blasting have fluctuated over time, reaching a low in 2008 and rising steadily to 2013, with a small reduction in complaints in 2014 (**Figure 6.4**).

Blasting related complaints often referred to pressure levels and vibration, with many residents complaining of blasts shaking houses, windows or sheds. At least one blasting complaint also made reference to the impact of blasting in relation to air quality (dust plume) and noise.

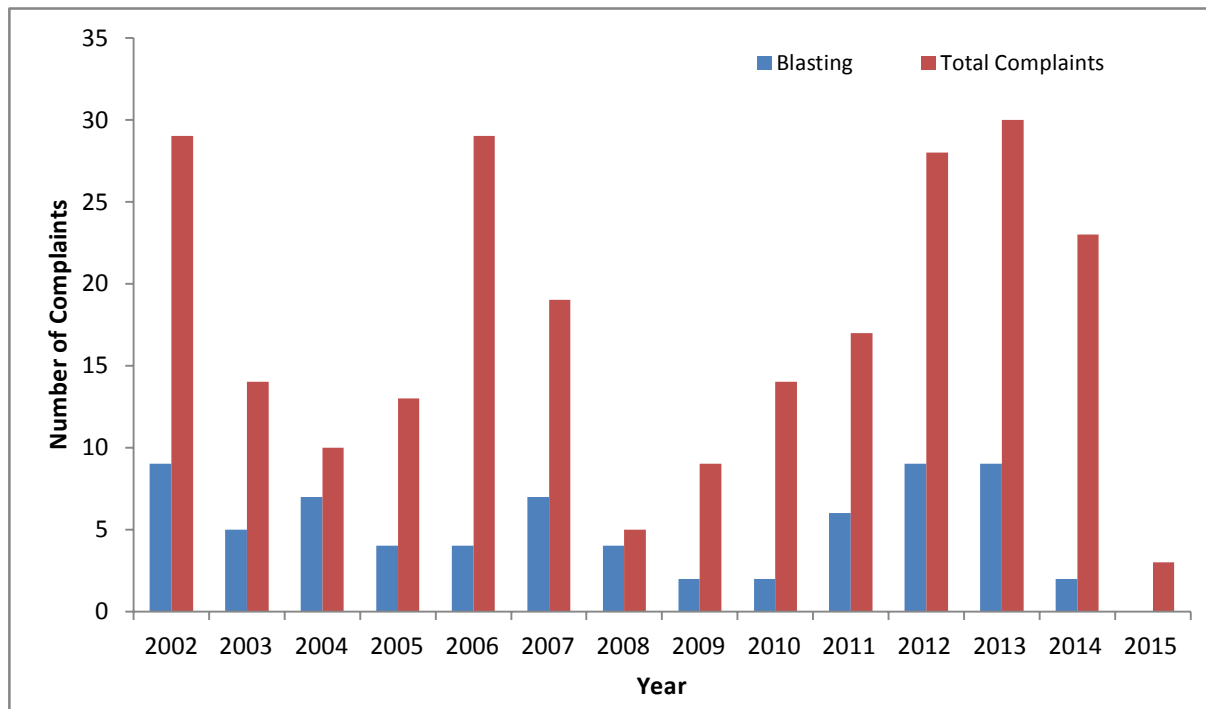


Figure 6.4 - Blasting Complaints over Time.

6.1.1.3 Air quality

The analysis of complaints data has identified community concerns regarding perceived impacts to air quality, associated with the Rix's Creek mine, specifically dust and odour.

In combination these two issues account for almost a third (31.28 %) of all complaints received via the hotline since 2002; however specific references were also made to air quality, dust or odour during AECOM's consultation activities. Complaints relating to dust and odour often related to blasting activities, and associated 'dust plumes' over the highway and town. Additionally, dust from other operational activities such as bulldozing and haulage were also noted.

While fluctuations in the number of complaints made about dust and odour can be seen over time (refer to **Figure 6.5**), there has been a steady decline in the number of air quality complaints made since 2012.

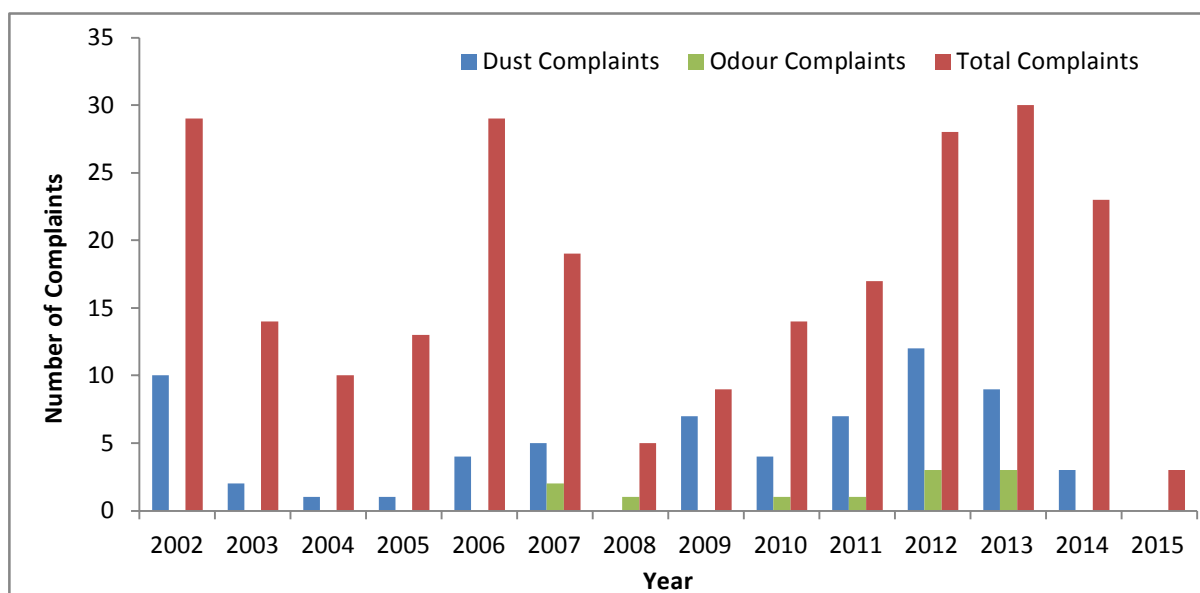


Figure 6.5 - Air Quality (incl. Dust) Complaints over Time.

6.1.1.4 Visual

Complaints data analysis indicates that perceived impacts to visual amenity are low and primarily associated with mine site lighting. Complaints relating to lighting have been sporadic between 2002 and 2015, with only one complaint being received in 2004, 2005 and 2007 respectively and two complaints received in 2010 (**Figure 6.6**).

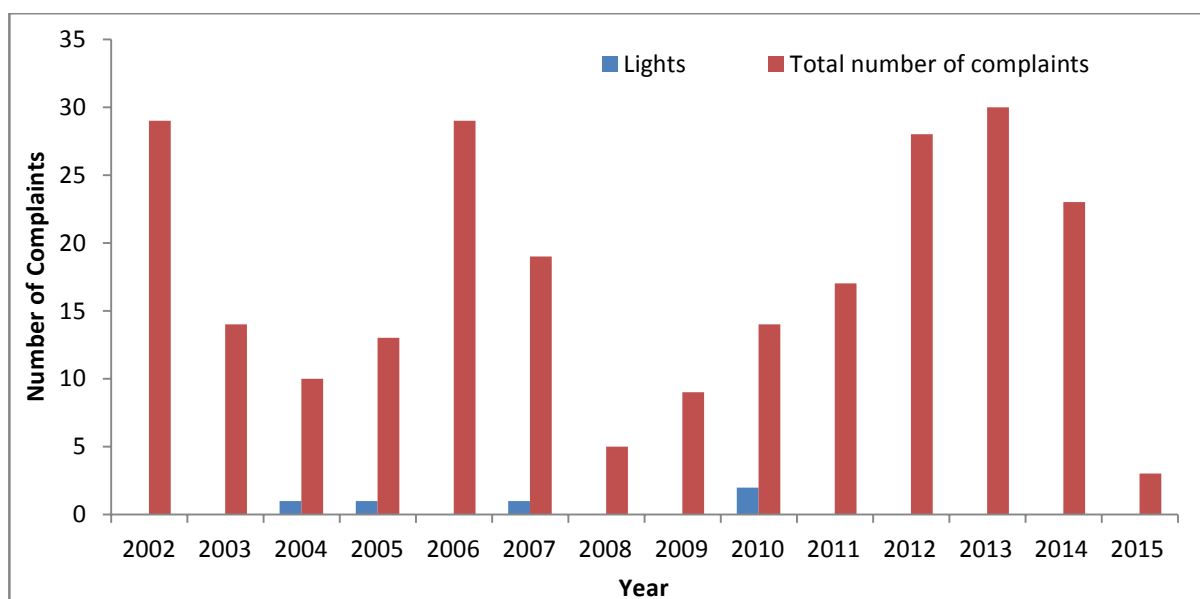


Figure 6.6 - Visual (Lighting) Complaints over Time.

Specifically, the complaints received related to lighting from operations around the old tailings pond, and also a light plant facing towards a nearby retreat.

No specific concerns associated with visual amenity have been noted during project specific consultation activities with residents.

6.1.1.5 Traffic and Road Safety

Concerns relating to the safety of changes to existing roads and new access ways from the New England Highway into the mine site were raised by one consultation participant. There were however no complaints made through the community hotline since its inception in 2002. Consequently traffic is not considered a significant issue to the local community.

6.2 Population Change

In addition to the approximately 150 roles already present at Rix's Creek, there are an additional 70 operational roles proposed to be generated at Rix's Creek as part of the Project. However, as noted in **Section 1.2**, it is Bloomfield's intention, if possible, to transfer its existing workforce at Bloomfield Mine to fill the additional jobs at Rix's Creek Mine if no further employment is available at the Bloomfield Mine operation. As this option to transfer the Mine employees cannot be guaranteed at this stage, the option of hiring new workers has also been assessed. In order to model the potential options of highest change, two workforce scenarios have been developed and assessed:

- **Scenario 1A:** whereby existing workers at Bloomfield Mine are transferred to Rix's Creek and none of these workers change their residential location. No additional employees are required. This is effectively a 'no impact' scenario.
- **Scenario 1B:** whereby existing workers from Bloomfield Mine are transferred to Rix's Creek operations, and all of these employees change their residential location to mirror the existing place of residence profile of current Rix's Creek Employees (see **Appendix A** for more information). No additional employees are required.
- **Scenario 2A:** whereby a completely new workforce is employed, whereby 14% of workers (10) move to the area to take up employment, consistent with the existing number of workers at Rix's Creek who moved into the area to take up employment at the current operations (see **Appendix A** for more information). The remaining new workers are sourced from within the region
- **Scenario 2B:** whereby a completely new workforce, with 100% of workers (70) move into the region to take up employment. Whilst highly unlikely, this is considered the scenario with the greatest change and is considered the 'worst case' scenario from a social impact perspective.

Modelling of the four scenarios is outlined in detail below.

Scenario 1A

Scenario 1A involves 100% of new Rix's Creek roles being filled by the existing Bloomfield Mine workforce. With no population movements predicted, it is considered that there is a negligible population change impact under Scenario 1A. Further outcomes of this scenario are considered to result in a positive impact, given the offsetting of potential unemployment of 70 workers from the Bloomfield Mine.

Scenario 1B

Scenario 1B predicts an influx of 28 new employees, or 81 total persons (when family members are also taken into account), into the Singleton LGA, primarily from Maitland, Newcastle, Lake Macquarie and Port Stephens localities. Noting the recent completion of the Hunter Expressway, the corresponding decrease in traffic on the New England Highway and decrease in travel times from these locations to the Rix's Creek site, it is considered unlikely that so many employees would relocate their families for minor reductions in travel time, or if so, would not necessarily do so all at once. Nonetheless, even if the number of Bloomfield Mine employees relocated as predicted within Scenario 1B, it is considered that the numbers of people entering the LGA is not significant and unlikely to result in impacts noticeable at the community level. The smaller levels of change likely to be experienced in other LGAs are likewise considered unlikely to result in impacts noticeable at a community level. Further this scenario is also considered to result in a positive impact given the offsetting of potential unemployment of 70 workers from Bloomfield Mine.

6.2.1.1 Scenario 2A

The greatest scale of change within Scenario 2A is an increase of 14 total persons within the Singleton LGA, given Bloomfield's preference for hiring locally. It is considered that the numbers of people entering the LGA is not significant and unlikely to result in impacts noticeable at the community level. The smaller levels of change in other LGAs are likewise considered unlikely to result in impacts noticeable at a community level.

6.2.1.2 Scenario 2B

Scenario 2B, or the 'worst case' scenario, predicts a total increase of 99 persons, including the families of 34 employees, within the Singleton LGA. Notwithstanding the following discussion, it is considered that the numbers of people entering the LGA is not significant and unlikely to result in impacts noticeable at the community level. The smaller levels of change in other LGAs are also likewise considered unlikely to result in impacts noticeable at a community level.

It is noted that regardless of Rix's Creek employment planning, recent layoffs, stand downs and redundancies throughout the coal mining sector in the Hunter Valley (in the order of 1500 workers since 2012-2013 (Tasker, 2014) due to the coal chain event) indicates that there is likely to be a large number of appropriately skilled people looking for work, many of whom may still be looking for work when Rix's Creek would be hiring a new workforce, pending project approval.

6.3 Economic Impacts

Currently producing approximately 1.5 million tonnes per annum (Mtpa) of product coal from its existing operations and employing approximately 150 people, the Rix's Creek Mine continuation plan seeks to continue the existing mining operation and to mine up to 4.5Mtpa Rom coal per year, in order to make up a potential shortfall due to the future closure of the Bloomfield Mine operations. Potential economic opportunities of the proposed continuation could include:

- Creation of up to 70 additional operational jobs at Rix's Creek mine and a subsequent associated increase in the duration of existing jobs;
- Indirect employment generating opportunities;

- Increases in total output, and associated economic impacts; and,
- Increases in employee expenditure in proximal towns and regions.

6.3.1 Employee and Business Expenditure

The TRC Analysis, undertaken by Umwelt in 2014 and included at **Appendix A**, estimated the annual expenditure of Rix's Creek employee households to be approximately \$6.8 Million (AUD) across proximal towns such as Maitland, Newcastle, Singleton and Lake Macquarie (see **Appendix A** for a full listing). The creation of additional jobs at the Rix's Creek mine would therefore further contribute to the economic flow on effects to these towns. It is estimated that the project may result in an increase of expenditure of up to 3.03 million dollars as seen in **Table 6.2**, when considering scenario 2B (see **Section 6.2**) and the outcomes of the TRC-Analysis; however is noted that this is a upper estimate and actual expenditure is likely to be lower.

Table 6.2 – Projected Employee Expenditure

	Current Expenditure	Greatest Change	Total Estimated Expenditure
	(\$ millions)	(\$ millions)	(\$ millions)
Maitland	1.48	0.67	2.15
Newcastle	0.74	0.33	1.07
Singleton	2.55	1.15	3.70
Lake Macquarie	0.06	0.03	0.09
Rutherford	0.12	0.05	0.17
East Maitland	0.17	0.08	0.25
Online Shopping	0.25	0.11	0.36
Cessnock	0.36	0.16	0.52
Raymond Terrace	0	0.00	0.00
Kurri Kurri	0.03	0.01	0.04
Muswellbrook	0.5	0.23	0.73
Central Coast	0	0.00	0.00
Port Stephens	0.08	0.04	0.12
Sydney	0.07	0.03	0.10
Scone	0.13	0.06	0.19
Murrurundi	0.12	0.05	0.17
Beresfield	0	0.00	0.00
Paterson	0	0.00	0.00
Thornton	0.04	0.02	0.06
Branxton	0	0.00	0.00
Various/holidays	0.02	0.01	0.03
Dungog	0	0.00	0.00
Gresford	0	0.00	0.00
Aberdeen	0.02	0.01	0.03
Tamworth	0.02	0.01	0.03
Greta	0.01	0.00	0.01
Total	6.78	3.06	9.84

Overall, existing business suppliers to Bloomfield were estimated to contribute approximately \$156 million within the Hunter Valley region, and an additional \$77 million to the broader economy. Of this total of \$233 million, approximately \$52 million is attributed to services provided to the Bloomfield Group specifically. No projection of supplier expenditure has been made in the current assessment due to insufficient supplier data, and the potentially irregular relationship between increased production and/or employment levels and supplier expenditure.

6.3.2 Donations and Sponsorships

The Bloomfield Group undertakes substantial sponsorships and donations to groups in and around the communities in which their operations are based and conducted. These donations and sponsorships are often directed to community groups and thereby have direct economic flow on effects to the region.

In the 2014 calendar year, the Bloomfield Group made donations and sponsorships to community groups and events in locations including (but not limited to) Singleton, Darlington, Maitland and Lochinvar to the total of \$335,760.12 (AUD).

6.3.3 Social Impacts following changes to the economy

An in depth assessment of economic impacts of the Project has been undertaken by KPMG. This report outlines possible changes to the local economy as a result of the continuation of the Rix's Creek Operations.

The results show that the exports associated with the Project have a positive net impact on activity in the NSW and Hunter Valley economies (illustrated through GSP). Modelling estimates that the increase in coal exports (relative to the base case) increases NSW real GSP by 0.04% (equivalent to \$394 million in 2012-13) and real GRP by 0.26 % (equivalent to \$104 million in 2012-13). Higher mining activity has positive flow-on impacts on other industries. Industries that supply the mining sector with inputs, such as trade, manufacturing and professional services are likely to experience additional activity as demand for inputs supplied is boosted by the mining sector.

6.4 Community Infrastructure and Services

A project's impact on community infrastructure and services is often one of the more tangible social impacts of a project and is considered a secondary order impact largely influenced by population change. Project factors that can impact community services and infrastructure include:

- Changing demand due to an increase in temporary or permanent population;
- Changing behaviours of users, such as workforce rosters determining patterns of peak service utilisation; and/or
- Direct impacts on physical infrastructure during project construction and/or operation.

Community infrastructure and services have been separated into three categories for the purposes of this analysis, these being;

- Accommodation and housing;

- Community facilities and services; and
- Road infrastructure.

6.4.1 Accommodation and Housing

While no broader social impacts arising from population growth are anticipated, in order to estimate the potential impacts on housing and accommodation, the following assumptions have been made:

- The worst case scenario (i.e. Scenario 2B) has been modelled, based on the assumption that the other scenarios would be of lesser impact.
- Workforce modelling is based on the *peak* number of workers (and their families) i.e. 70.
- Workers are most likely to either purchase or rent properties on the private market when moving into the area.
- Each worker/family relates to one unit of housing, be it one house, apartment or other dwelling.

An analysis of vacancy rates from 2005-2015 was undertaken for the postcode 2330, being roughly equivalent to the Singleton LGA (i.e. excluding the south east corner of the LGA).

As depicted in **Figure 6.7**, there has been an increasing number of housing vacancies since late 2012, coinciding with the end of the coal chain event that continues into 2014. It is considered highly likely that there are sufficient rental properties alone to accommodate the proposed 70 additional families within these LGAs, under Scenario 2B (worst case).

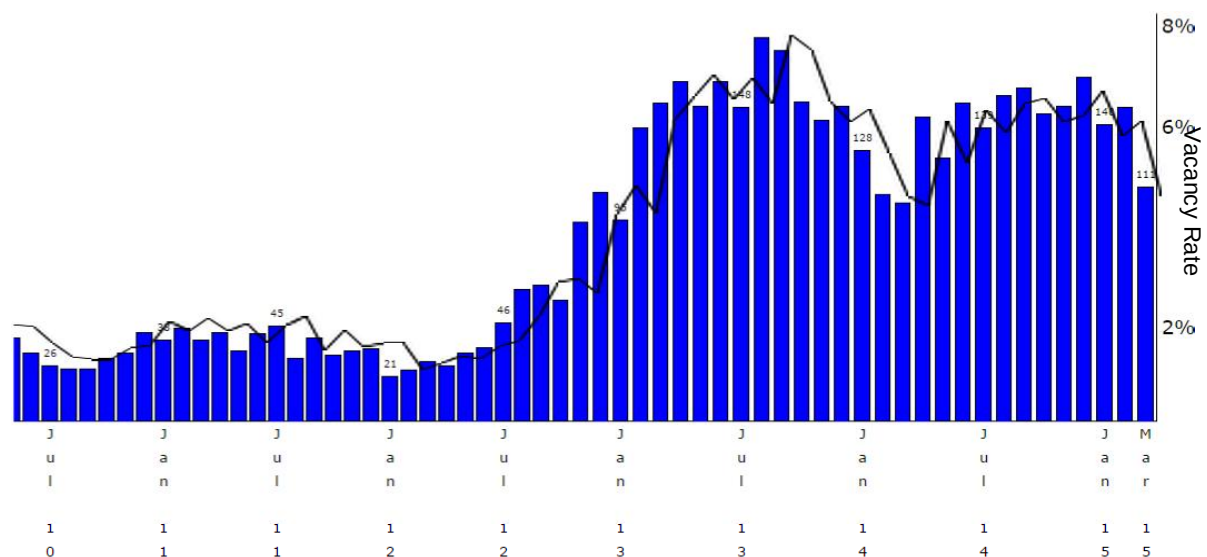


Figure 6.7 – Total Vacancies and Vacancy Rate in Postcode 2330 2010-2015 (SQM Research 2015)

Available houses and units for 2008--2015 in postcode 2330, is presented in **Figure 6.8** (SQM Research, 2015). As with rental availability, the numbers of properties for sale has increased in Singleton since late 2012. Consequently, given this data, it is considered that there is sufficient housing capacity within the market stock to accommodate the 'worst case' scenario for incoming workers within Singleton alone, and as such no further analysis of other LGAs is required.

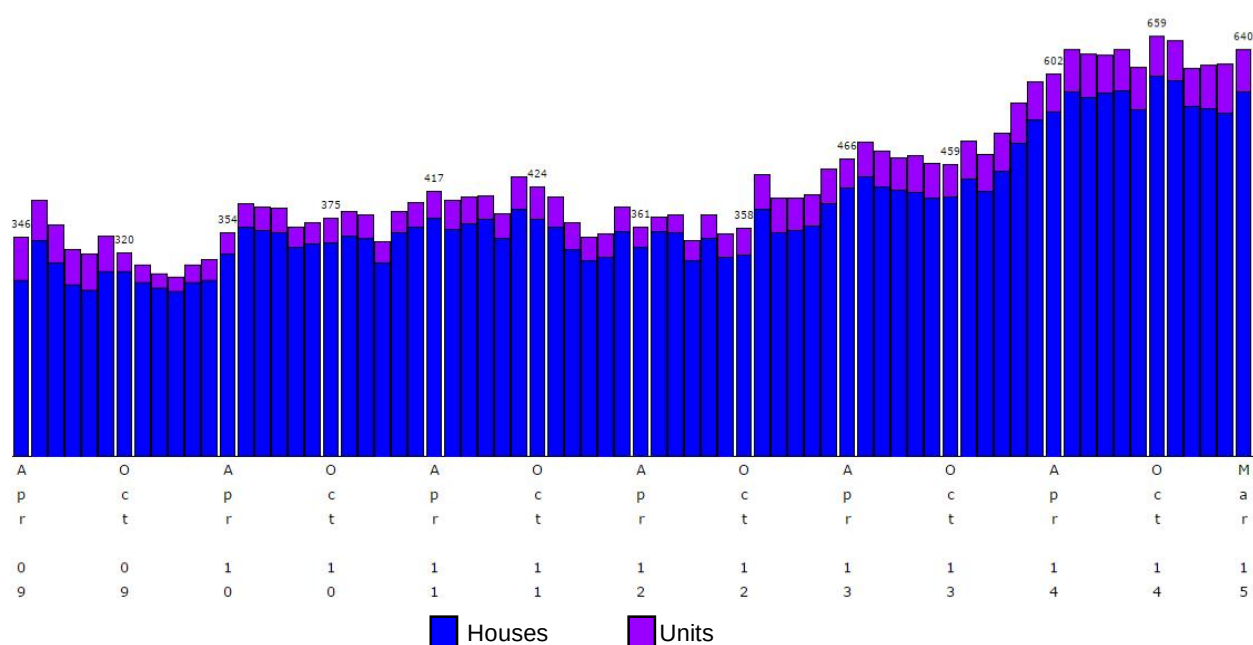


Figure 6.8 - Stock on Market in Singleton (SQM Research, 2014)

Given that there is sufficient housing capacity for the worst case scenario (Scenario 2B), no further scenarios have been assessed.

6.4.2 Impacts on Community Services and Facilities

Impacts to community infrastructure can occur when there is insufficient capacity within existing relevant health, education, childcare, aged care, youth services, recreational facilities or other community services and facilities to cater for the increased population growth associated with a Project.

Analysis of population estimates 2004-2014 in **Figure 6.9** (ABS, 2014) indicates that while Singleton has experienced higher population growth rates than NSW generally 2004-2008, growth has slowed, especially from 2011-2013, potentially due to the lack of housing in the LGA, followed by mine and associated activity/construction based temporary workforces leaving the area at the end of the coal chain event. Population in Singleton is projected to increase at 0.8% annually, with a total increase of 16.3% between 2011 and 2031 (NSW Government 2014)

Population growth has also been above the NSW average in Maitland since 2004 and in Cessnock since 2008. Population growth in Muswellbrook and the Upper Hunter has been lower than the NSW average over the past 10 years.

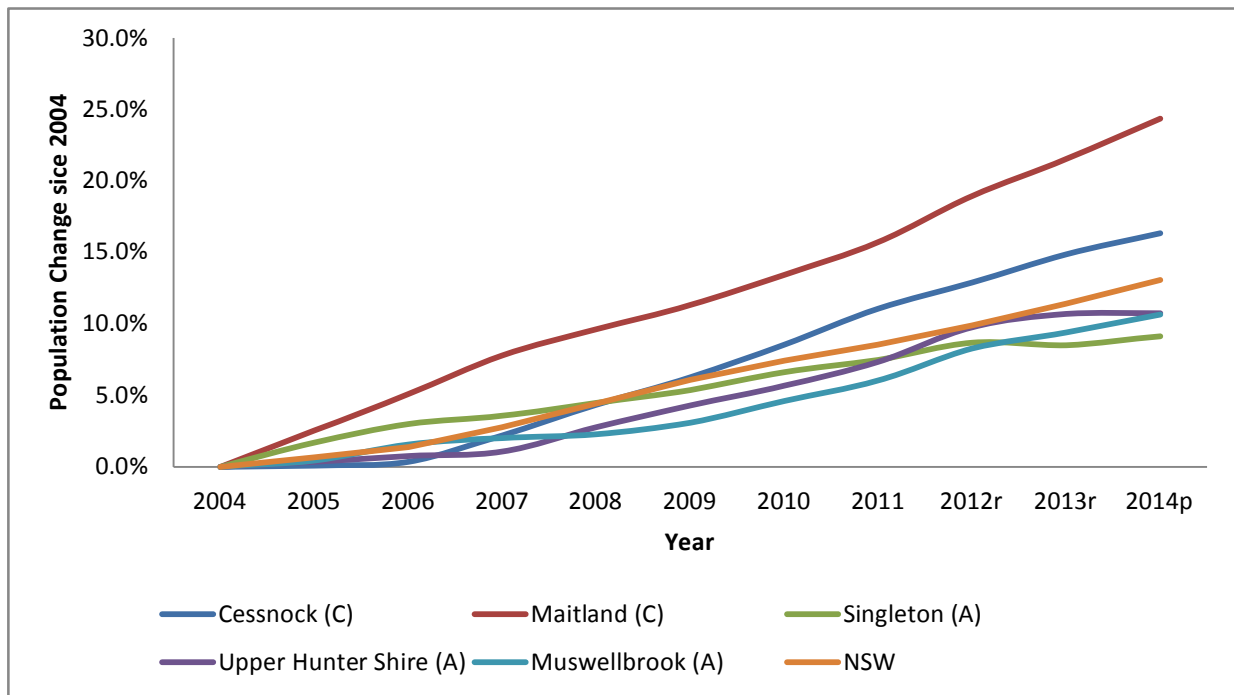


Figure 6.9 - Population change 2004-2014 (based on 2004 numbers)

The stabilising in population within the Singleton LGA provides the opportunity to maintain and improve community and other infrastructure, and plan for future growth as anticipated within the Singleton Strategic Plan. This includes development of current infrastructure, such as Alroy Oval and Singleton Heights Sports Centre, being two significant items of community infrastructure in proximity to the existing Rix's Creek operation.

7.0 Management and Monitoring

Amelioration or mitigation strategies are processes, programs or plans designed to remove, manage or address the perceived negative impacts / issues raised by stakeholders or otherwise during the assessment process. Management strategies can also be put in place to maximise the opportunities that arise with any given development. Such strategies can go some way in ensuring that perceived impacts raised by the community are addressed or off-set in an appropriate manner. In more specific instances, a particular strategy may fully address the concern raised. However, in other instances, where particular values are held, such strategies may only assist in making a proposal more acceptable to the community, rather than changing the values held by particular stakeholder groups or eliminating impacts completely.

Through community involvement in the development and implementation of such strategies, stakeholders may develop a greater knowledge of the project, a heightened level of trust in the proponent and a greater ownership over issue solutions.

7.1 Proposed Management Strategies

Bloomfield Group currently undertakes a number of monitoring, management and mitigation activities in relation to identified community concerns around a range of issues. These include: noise and dust mitigation activities; rehabilitation to minimise visual impact; manning of a 24 hour community hotline; and regular meetings of the CCC. The company also contributes to wider community needs through the Bloomfield Foundation and other programs. These existing programs and protocols will go some way toward ensuring that social amenity impacts are minimised and community benefit, due to the presence of the Rix's Creek mine, is maximised.

Each of the impact risk categories identified in **Section 6.0** have been considered, and strategies that may further assist in the amelioration of ongoing community concerns, minimisation of negative social impacts, or maximisation of opportunities related to the Rix's Creek Operations are presented in **Table 7.1**. **Table 7.1** is structured through:

- the presentation of each impact risk category;
- a technical risk assessment derived from an external specialist study undertaken for the project (where possible);
- Consideration of the impact risk by stakeholders (where possible);
- An assessment of the impact risk in relation to potential social impacts - as low, medium or high; and
- Presentation of existing community/social impact management responses (in black) or new community/social impact management responses (in red). (Note that measures related to the technical risk are not generally repeated here. Technical measures are discussed more fully in the EIS).

Table 7.1 - Impact Risk Categories and Associated Management Approaches.

Risk	Technical Assessment (for further information see overall EIS)	Stakeholder Assessment	Social Impact Assessment	Existing (black) and Proposed (red) Management and Monitoring Approaches
Ecological	"... the scale of ecological impacts that will result from this proposal are insignificant and perfectly manageable...."	- Only one consulted stakeholder mentioned ecological considerations (rehabilitation focus). - Opportunities noted for green waste recycling. - No complaints referred to concerns around flora or fauna.	Low social / community risks: - Minimal concern expressed by stakeholders. - Insignificant or manageable risks identified in the Ecological Impact Assessment.	Continued monitoring of community concerns through a dedicated community hotline. Providing information to the community about such activities may help to maintain concerns at their current minimal level. This could be achieved through; - Targeted information included in community information sheets; - Community information sessions; - Feedback through social, online and print media
Economic	"... the results show that the exports associated with the project have a positive net impact on the economic activity in the NSW and Hunter Valley economies ... equivalent to \$394 million [for the NSW GSP] and equivalent to \$104 million [for the Hunter Valley GRP]"	- Local employment - Cost of living - Access to Bloomfield Foundation and other funding - Employee/supplier spending	Low to moderate POSITIVE social / community risks - Direct and flow on economic benefits from undertaking the project. - Not discussed during consultation activities - Not relevant to complaints received.	Aspects of economic benefit such employee/supplier spending are largely inherent to the operation. Cost of living changes, such as those experienced in the coal chain event 2010-2012 are not anticipated due to the project and do not require management. Opportunities for the maximisation of economic benefit due to the proposed ongoing presence of Rix's Creek mine exist through • Explicit preference for employment of the local population • Increasing sponsorship and funding through the Bloomfield Foundation and other programs • Assistance in applying for funding
Visual	"...no significant cumulative impacts will occur to sensitive receivers in the region considering the directions that the Mine is viewed from and the existing landform and vegetation present in the study area."	No specific visual amenity concerns noted during consultation, however 5 complaints related to lights were raised over the period 2004 – 2010.	Low to moderate social / community risks Visual amenity impacts due to mining operations	Visual screening, through bunds, trees and rehabilitation. Continued monitoring of community concerns through a dedicated community hotline.
Noise	"... exceedance of PSNL is likely during adverse meteorological conditions for all NAG. The greatest impact is predicted for the year 2017 stage.... Noise levels are predicted to reduce significantly over the following stages..."	Noise was raised as an issue by 6 of the consulted stakeholders. Noise complaints comprised nearly 40 % (39.73 %) of all complaints made across the 2002 to 2015 period. During 2014 noise complaints (n=18) made up 78 % of all recorded complaints in 2015 and all complaints received to date (n=3) have related to noise. A desire for noise attenuation strategies were expressed, including the construction of sound barriers.	Moderate social / community risks: - Low technical risk as seen in the noise impact assessment report. - High levels of community concern indicated through analysis of complaints data. - Management and monitoring measures have already been initiated, ameliorating the risks, reducing impacts from high to moderate.	Community Hotline for reports of complaints and blasting related issues Informing the community of implemented noise attenuation strategies such as creation of noise bunds, adjustment in pit shape, etc. through; - Community information sheets; - Community information sessions; - Feedback through social, online and print media Feedback to the community regarding ongoing noise monitoring activities (e.g. Use of third party noise consultant, 3D noise modelling activities). Inclusion of noise monitoring results in community information sheets and as an agenda item for each CCC meeting.

Risk	Technical Assessment (for further information see overall EIS)		Stakeholder Assessment		Social Impact Assessment		Existing (black) and Proposed (red) Management and Monitoring Approaches	
Water	Groundwater: "...the risk of adverse impacts to [ground] water quality is considered to be negligible."		No water quality concerns were raised during the consultation period. Only three complaints were made regarding water, through the community hotline.		Low social / community risks - No concerns stated during consultation - No significant impacts evident in the Surface Water Quality Assessment - No significant impacts evident in the Ground Water Quality Assessment. - Less than 2 % of all complaints received related to water quality.		Continued monitoring of community concerns through a dedicated community hotline. Informing the community of the results of water monitoring activities in place (e.g. the installation of flowmeters across site as per Minerals Council Australia Water Accounting Framework) through; - Community information sheets; - Community information sessions; - Feedback through social, online and print media - Ongoing participation in Upper Hunter Mining Dialogue	
	Surface water "The Project will not impact on offsite water quality due to spillages from the mine water dams: Current water management and planning systems are effectively preventing spills."							
Air Quality	"... whilst adverse air quality impacts may arise at a number of already impacted sensitive receptor locations, these effects can be managed and mitigated effectively"		While air quality was not specifically raised during the consultation period, concerns relating to dust made up almost a third (29.02 %) of complaints through the community hotline across the 2002 to 2015 period. From 2012 to 2015 (to date), dust complaints have totalled 42.86 % of all complaints made through the community hotline. In addition, many complaints made about blasting were related to associate dust, and these complaints constituted a further 35.71 % of complaints made since 2012.		Moderate social / community risks - No concerns stated during consultation - Some adverse impacts indicated in the Air Quality Assessment. - Dust, associated with blasting, was highlighted as a major concern through the community hotline. - However, these concerns could be somewhat mitigated through the management and monitoring activities already being undertaken by RC.		Continued monitoring of community concerns through a dedicated community hotline. Informing the community of dust mitigation strategies that are currently underway (e.g. The use of dust and fume dispersion models to minimise the potential of a dust or fume cloud drifting into the industrial estate.) through; - Community information sheets; - Community information sessions; - Feedback through social, online and print media	
Population Change	N/A		No identified concerns		Low social / community risks - No concerns stated during consultation - No significant impacts identified in Section 6.2		No management actions required, although development/implementation/continuation of local employment policy encouraged.	
Community Infrastructure and Services	N/A		No identified concerns		Low social / community risks - No concerns stated during consultation - No significant impacts evident in Section 6.4		Potential increases in population due to the project are not anticipated to result in notable increases in stress on local community infrastructure and services. Nonetheless, consideration of contribution to local infrastructure support is recommended, be it through a Voluntary Planning Agreement (VPA) or otherwise. Potential items for consideration include highlighted requirements at the Alroy Oval and relating to the Singleton Heights Sports Centre (as discussed in Section 6.4).	
Rehabilitation	N/A		No identified issue		Low social / community risks - No concerns stated during consultation - Key regional issue within wider media		Continue to engage community in relation to rehabilitation practices, such as through the rehabilitated lands tour held as part of the Hunter Coal Festival	

7.2 Monitoring

An often neglected but later aspect of any socio-economic assessment is the development of an appropriate monitoring framework to enable any unanticipated impacts to be addressed. It is recommended that an integrated social and environmental impact monitoring program be developed should the proposal be approved, to assess and document any important unanticipated impacts that may arise when the project is implemented. Such a monitoring program is useful in tracking project development and comparing actual impacts with predicted social impacts. While the community may perceive particular impacts, in relation to the proposal, the monitoring program will be essential in determining the occurrence or non occurrence of such effects.

It is additionally recommended that in addition to the community hotline, continued consultation with immediate neighbours and stakeholders be conducted through face to face consultation to monitor and assess any issues of continuing concern to these stakeholders.

Also, the Community Consultative Committee (or similar) should continue over the life span of the project, and the results of the CCC should be made available to interested community members, such as through a dedicated website. Membership of the CCC may also need to be revisited to ensure that community representation is sought from areas around the operations where complaints are received and issues present. Regular evaluation of the CCC process is also recommended to ensure that the committee is on track and is achieving its objectives from company, government and community perspectives.

8.0 Conclusion

The SIOA has identified a range of perceived community issues associated with ongoing operations at the Rix's Creek Mine. The management and monitoring approaches that are already undertaken by the Bloomfield Group, including a community hotline and the CCC are seen to be well utilised and effective in ensuring that the local community has input into the operations, and is responsive in addressing community concerns.

The proposed strategies for management of community risks are the result of the combination of technical and community risks, as assessed through consultation, complaints data analysis and technical reports prepared by specialist consultants.

As is the case with developments of this kind, the perceived social impacts/ issues are greatest for those living in closest proximity to the proposal, or those who perceive they will be most directly impacted by the development. Consequently, should approval of the project be granted, an appropriate social impact monitoring program should be developed to assess the occurrence or non-occurrence of such effects. Furthermore, it will be essential for the company to maintain an ongoing dialogue with local residents throughout the operation of the project in relation to issues of relevance and importance to the community.

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APPENDIX A

TRC Analysis



RIX'S CREEK TOWN RESOURCE CLUSTER (TRC) ANALYSIS

July 2015



RIX'S CREEK TOWN RESOURCE CLUSTER (TRC) ANALYSIS

July 2015

Prepared by
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Report No. **3349/R02/V6**
Date: **July 2015**



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1.0 Introduction

The Rix's Creek Mine is located in the Upper Hunter Valley of New South Wales (NSW), approximately 5 kilometres north west of Singleton, 24 kilometres south east of Muswellbrook and 6 kilometres to the south east of Camberwell Village (see **Figure 1.1**).

Bloomfield is seeking approval for the *Rix's Creek Continuation of Mining Project* (the Project) which relates to ongoing processes of existing open cut coal mine operations in Pit 3, as well as other mining and related activities across the Rix's Creek Mine (the Mine). The Project would allow the Mine to continue to operate as an open cut mine, utilising its existing infrastructure facilities.

To determine the potential social impacts of this proposal on Singleton and surrounding areas, Bloomfield has commissioned Umwelt to undertake a Social Impact and Opportunities Assessment (SIOA) for the Project. This report presents the findings of the Town Resources Cluster (TRC) Analysis component of the SIOA.

Town Resource Cluster Analysis (Fenton, Coakes, and Marshall, 2003) uses detailed workforce survey data to assess the socio-economic linkages that exist between natural resource projects and communities through direct (e.g. employment) and indirect contributions (e.g. employee household expenditure and use of services) of the company's current operations and the proposed project. These contributions or impacts are experienced not only in areas close to an operation but also some distance away. For example, communities in capital cities or other states may experience some benefit from a mining project through indirect flow-on effects, such as employee household expenditure (e.g. spending occurring in regional centres) or employment by suppliers to the project (e.g. if a large supplier has its main office and employs many staff in another location).

This report summarises TRC findings related to the Bloomfield Group's operations generally, and draws upon workforce data gathered from employees across the Bloomfield Group's operations. These include but are not limited to:

- Rix's Creek Mine;
- Bloomfield Collieries;
- Bloomfield Group Offices;
- Kings Engineering; and
- Four Mile Engineering.

Additional discussion, relating to targeted analyses of flow on social impacts, for example, impacts on housing or impacts associated with movement of employees between the operations, will be undertaken during the impact assessment phase of the SIOA.

Note that employment numbers have changed since the time of analysis, for example employee numbers at Kings has reduced to approximately 50 employees, and Rix's Creek has increased by approximately 20 employees, with employment levels not less than assessed within the Singleton LGA. It is considered that employee levels within the current assessment are considered broadly representative of current staffing levels across the Bloomfield Group.

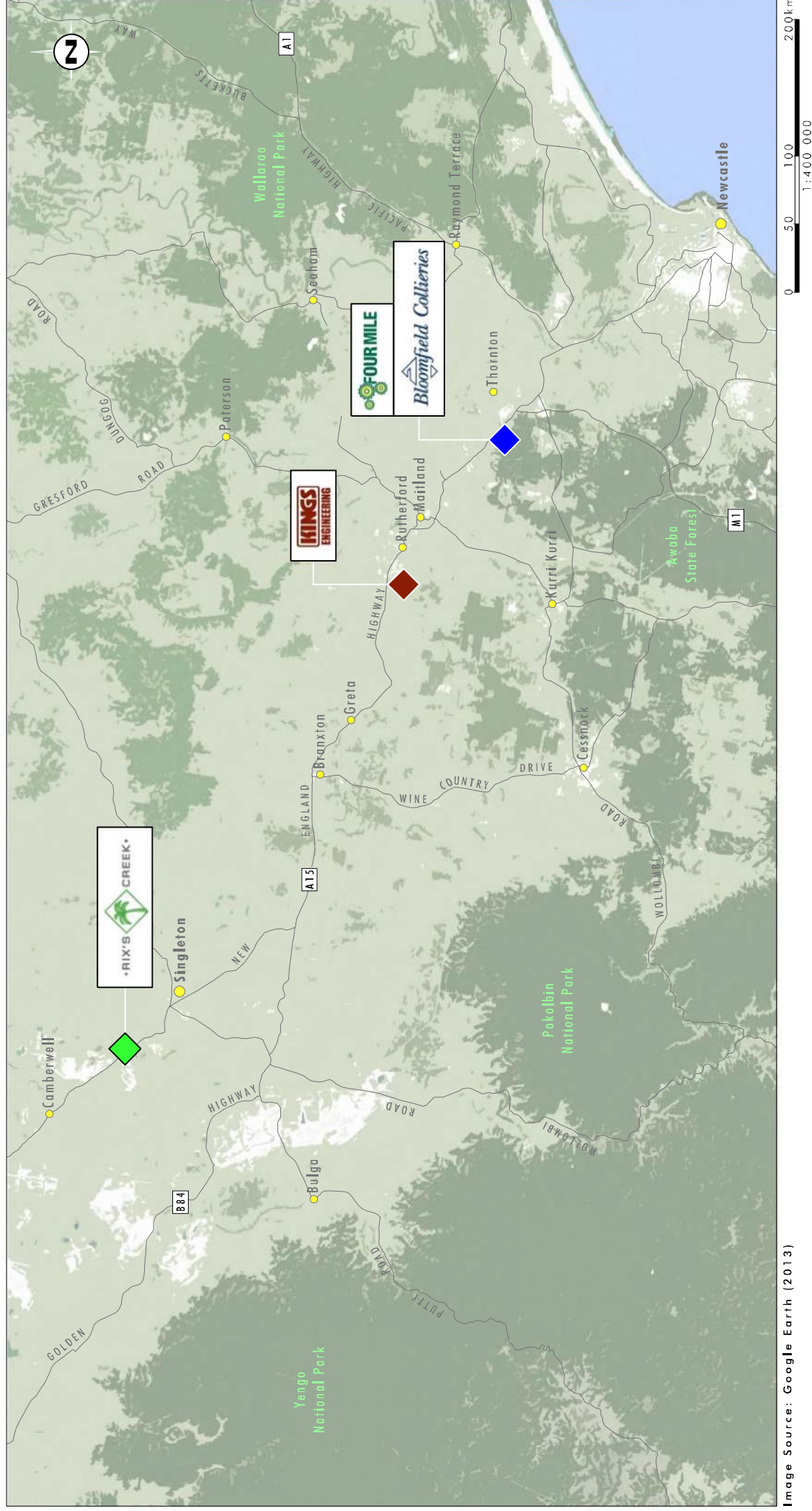


FIGURE 1.1

Locality Plan

2.0 Method

The data for undertaking the TRC analysis was obtained via surveys of employees within each of the Bloomfield Group's operations and suppliers to the Bloomfield Group.

2.1 Survey Development and Implementation

The employee survey comprised 27 questions in relation to:

- number of employees;
- their town of residence;
- annual household expenditure;
- use of health services;
- attendance at education facilities; and
- participation in community activities and groups.

The supplier survey consisted of 15 questions relating to:

- location of suppliers' head and local offices;
- number of employees;
- business expenditure by suppliers; and
- suppliers' estimated business reliance on the Rix's Creek Mining Operation.

The employee survey was provided as an electronic copy and distributed internally as a hard copy to Bloomfield Group employees. The survey was completed during working hours (e.g. during shift changes) and survey responses were received as hard copies.

The supplier survey was undertaken online, with a link and instructions provided to 57 supplier organisations who service the Bloomfield Group's operations.

2.2 Participants and Sampling

As shown in **Table 2.1**, 231 (46 per cent) of the total Bloomfield workforce completed a survey, and 38 (67 per cent) of the suppliers to Bloomfield, achieving large sample sizes relative to total employee and supplier numbers and reliable datasets with low error margins.

Statistics Summary:

A **Population** refers to an actual group of persons that the survey sample is representing. The two 'populations' of the current report refer to all the employees within the Bloomfield Group, and to all the suppliers of the Bloomfield Group.

A **sample** refers to a given subset of the population that are being analysed. In this case the sample is all the survey respondents.

The **Confidence Level** refers to how confident you can be that results measure what they claim to measure and are *reliable*.

An **Error Margin** refers to *how accurate* the measurement actually is.

For Example:

If 70% of participants in a survey (a **sample**) respond 'yes' to a question, and that there is a **confidence level** of 95 per cent, and an **error margin** of 6 per cent, we can say that *we are 95 per cent sure that 64 to 76 per cent of the whole **population** would answer 'yes' to that question.*

Additionally, to present a **number** that represents the population (instead of a **percentage**) we can **estimate missing data** by extrapolating the average of survey results.

For the current report a multiplier of **2.1645** has been used to extrapolate from the total *employee sample* to the **population** i.e. 231 (the sample) x 2.1645 = 500 (the population).

For the current report a multiplier of **1.5** has been used to extrapolate from the total *supplier sample* to the **population** i.e. 38 (the sample) x 1.5 = 57 (the population).

Table 2.1 – Sample Characteristics

	Sample	Population	Representation	Error margin (95 per cent confidence)¹
Rix's Creek Employees	78	130	60.00%	+/- 7.05%
Bloomfield Collieries Employees	36	70	51.43%	+/- 11.47%
All other Bloomfield Group Employees (including Four Mile, Kings Engineering and Bloomfield Offices)	115	300	38.67%	+/- 7.19%
Total Employees	231	500 ²	46.40%	+/- 4.73%
Suppliers	38	57 ³	66.67%	+/- 9.26%

1: An error margin of under 10 per cent is generally considered to be a sufficiently high response rate within social research.

2: Based on employee numbers across the five operations listed in Section 1.0 and other Bloomfield Group operations.

3: Based on supplier lists supplied by Bloomfield to the project team.

Explanatory notes regarding statistical terms and calculations informing the analysis are included in the Sidebar on the previous page for further reference.

3.0 Results

3.1 Employees

3.1.1 Profile

Table 3.1 summarises the key characteristics of the Bloomfield Group employees, based on survey data. Most employees were employed full time (96.5 per cent), and the average length of time working for the Bloomfield Group was 10 years.

More than half of the employees (62 per cent) sampled said they were married, and 17 per cent of workers were single. Workers' wages and combined household income is discussed in **Section 3.1.3**.

Further characteristics of the overall Bloomfield Group workforce are summarised in **Table 3.1**.

Table 3.1 – Characteristics of Employees

Characteristics	Survey percentage (%) or number (#)
Employment status	
Permanent full-time	96.54%
Permanent part-time	3.03%
Casual	0.43%
Length of time working for the mining industry	
Mean (years)	16.13
Length of time working for the Bloomfield Group	
Mean (years)	10.00
Employed previously in the mining sector	
Percentage	45.89%
Highest level of school education	
Year 10 or below	54.55%
Year 11	11.25%
Year 12	32.03%
Not specified	2.16%
Additional qualifications	
Trade/TAFE certificate	49.78%
Degree/ Diploma	19.05%
Other	4.76%
Not Specified	26.84%
Proportion that relocated to the area to work with Bloomfield	
Percentage	11.25%
Home ownership	
Has a mortgage	52.81%
Renting	14.29%
Owns the property	25.54%
Other	2.16%
Staying with family	1.30%

Characteristics	Survey percentage (%) or number (#)
Length of time in town or suburb of residence	
Mean (years)	19.38#
Median (years)	16.00#
Number of people in household	
Mean number of people	3.18#
Proportion of single males in sample	
Percentage	16.88%
Family structure	
Married	62.34%
Single	17.75%
Divorced	3.03%
Separated	1.73%
Defacto Relationship	12.55#
Widowed	2.16#

3.1.2 Town of Residence

Bloomfield Group employees live in a number of locations surrounding the various operations (see **Table 3.2**). As presented in **Table 3.2** and mapped in **Figure 3.1**, most respondents said they lived in or near East Maitland/Maitland/Rutherford (33 per cent), followed by Singleton (11 per cent), and Lake Macquarie (10 per cent). Missing data was estimated (as outlined in the sidebar to **Section 2.0**).

A high proportion of the workforce at Rix's Creek live locally in Singleton, while East Maitland/Maitland/Rutherford was the key area of residence of workers from the Bloomfield open cut operation and other surveyed organisations.

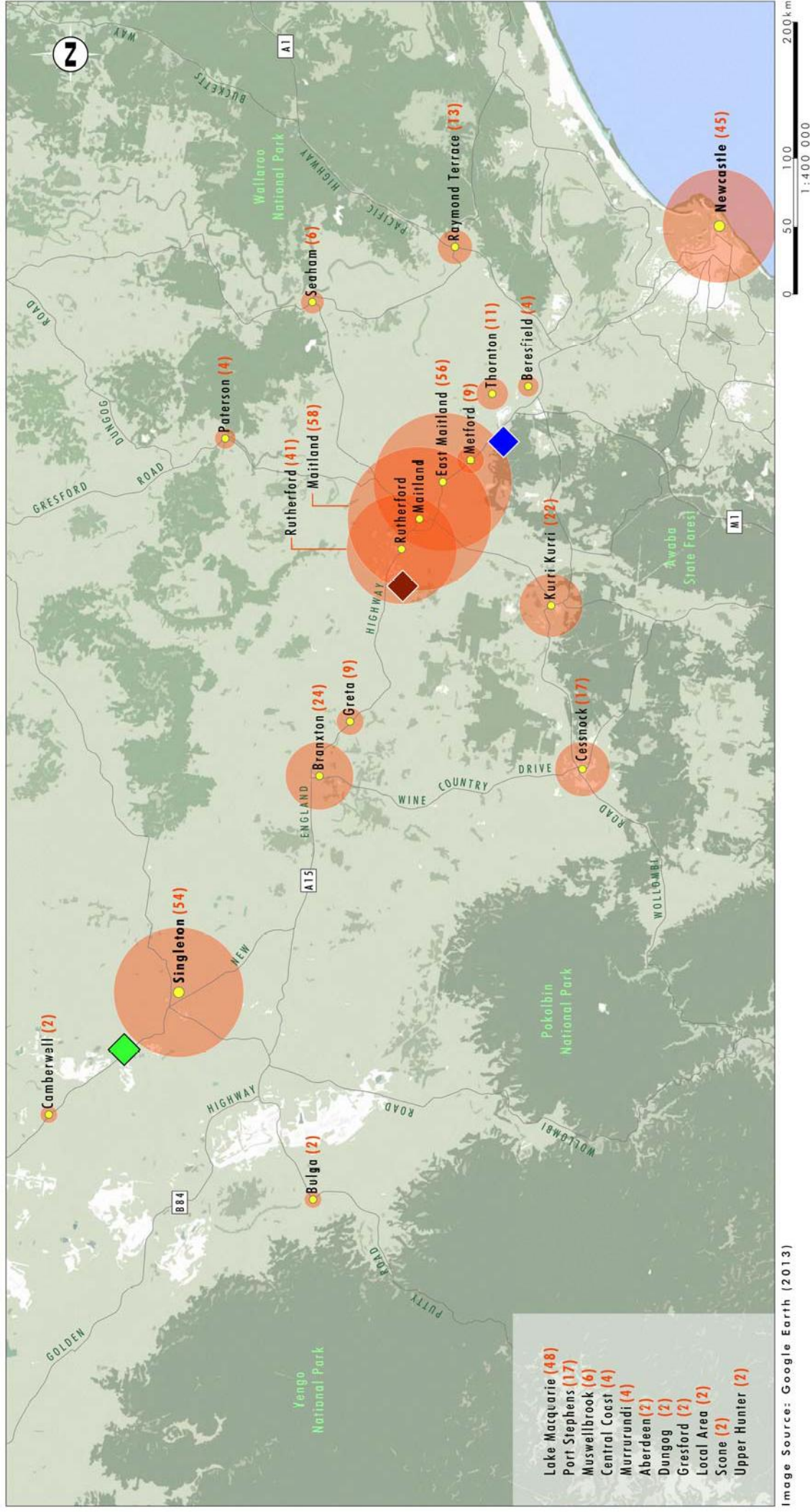


FIGURE 3.1

Employee Town of Residence

Table 3.2 – Employee's Town of Residence Based on Survey Data (Total Employees)

	Rix's Creek	Bloomfield Open Cut	Other Surveyed Organisations	All Employees
East Maitland/Maitland/ Rutherford	31	29	95	155
Singleton	54	0	0	54
Lake Macquarie	4	10	34	48
Newcastle	6	10	29	45
Branxton	14	7	2	24
Kurri Kurri	6	5	11	22
Cessnock	10	2	5	17
Port Stephens	2	5	10	17
Raymond Terrace	0	2	11	13
Thornton	2	2	7	11
Greta	4	0	5	9
Metford	2	0	7	9
Muswellbrook	6	0	0	6
	Rix's Creek	Bloomfield Open Cut	Other Surveyed Organisations	All Employees
Seaham	0	2	5	6
Beresfield	0	0	4	4
Central Coast	0	2	2	4
Murrurundi	4	0	0	4
Aberdeen	2	0	0	2
Bulga	2	0	0	2
Camberwell	2	0	0	2
Dungog	0	0	2	2
Gresford	2	0	0	2
Scone	2	0	0	2
Upper Hunter	0	0	2	2
Total	155	76	231	462

1: 'total employees' does not match the total employees of the Bloomfield group as not all responses provided sufficient data for analysis.

Note: Conditional formatting has been used in this table and subsequent tables; higher values are displayed in darker blue, and lower values are displayed in lighter blue.

Respondents were also asked if they relocated to the area to take up employment with Bloomfield with 11.25 per cent of respondents outlining that they had relocated for this purpose.

3.1.3 Annual Income and Household Expenditure

3.1.3.1 Household Income per Week

Survey respondents were asked to estimate their annual personal income before tax, and their annual total household income before tax, according to supplied income brackets. The median personal income per year was \$100,000 to \$150,000, which also was the most common income bracket (43.29 per cent of respondents). When asked if there was anyone else in their household who earned an income, 61 per cent of workers reported additional household members in the workforce, with a median income bracket per household of \$150,000 to \$200,000, which accounted for 22 per cent of the sample.

When personal and household incomes are considered in combination (i.e. the larger of the two figures is taken for those who have provided both) a figure of \$125,000 is found to be the median income (i.e. the midpoint of the common income bracket of \$100,000-\$150,000). This figure has therefore been used for analysis in **Section 3.1.3.2**.

3.1.3.2 Household Expenditure by Location

Survey respondents were asked to identify the locations in which they spend money on household goods and services, and then estimate the proportion of their spending that occurs in each town. Using this information, combined with estimates of household income described in **Section 3.1.3.1** and level of household expenditure provided within the ABS (2010) *Household Expenditure Survey 2009-2010*, the amount of employee household expenditure occurring in each location can be calculated.

Household expenditure of Bloomfield Group employees was estimated using reference to the ABS Household Expenditure Survey. Median employee/employee household income is between the fourth and highest income quintiles (i.e. between the highest 40 percent and highest 20 per cent of the population) in NSW (ABS 2010). The weekly spending on household goods and services by the highest quintile was applied to Bloomfield Group employees, as a more conservative estimate. Calculated median weekly expenditure is \$1,327.23, or 32.97 per cent of total weekly income. This proportion was calculated using in depth expenditure data from the ABS, and did not include income spent on items that had no connection to the local economy. For example, income spent on insurances, mortgage repayments and interest, or mobile phone bills were not included in the expenditure calculations. Conversely, the calculations did include items such as money spent on groceries, local health care and petrol. Noting the quality of data provided and assumptions made around expenditure percentiles, it is considered that the methodology used provides a conservative estimate of localised employee household expenditure.

Respondents' estimates of the percentage of spending occurring in each town were then used to extrapolate an estimated total employee expenditure on household goods and services per town. Results for each operation and total extrapolated employees are presented in **Table 3.3** and mapped in **Figure 3.2**.

Total household expenditure was highest in Maitland, Newcastle, Singleton and Lake Macquarie, which together accounted for slightly more than \$14.7 million or 70 per cent of spending estimated for all employees. As anticipated, Rix's Creek employees have a high proportion of expenditure in Singleton (38 per cent), and workers from Bloomfield Open Cut and other surveyed organisations have a high proportion of expenditure in Maitland and surrounding suburbs (45 per cent).

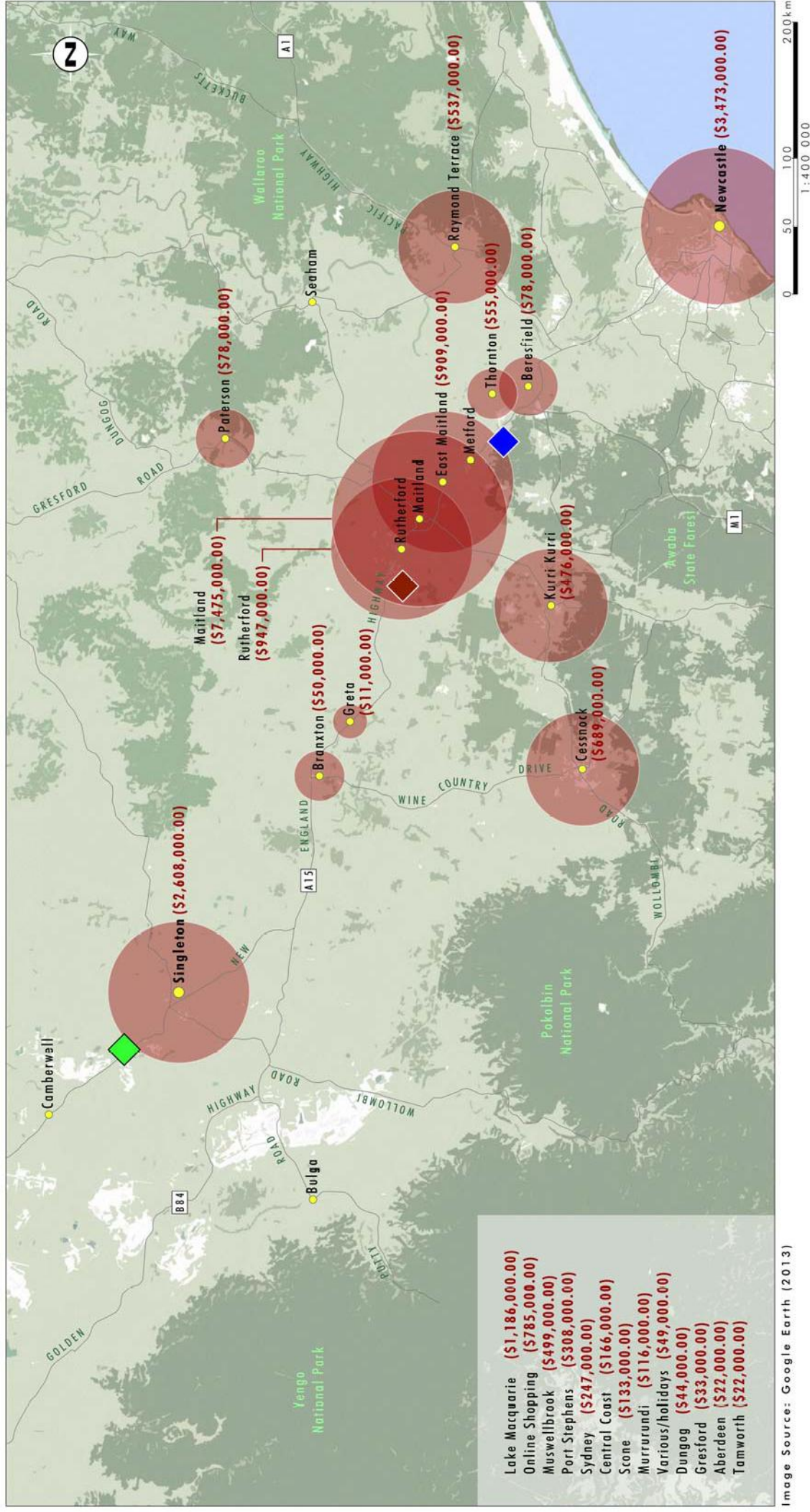


FIGURE 3.2

Employee Household Expenditure

Table 3.3 – Total Household Expenditure by Location (All Employees)

	Rix's Creek (\$ million)	Bloomfield Open Cut (\$ million)	Other Surveyed Organisations (\$ million)	Total Household Expenditure (\$ million)
Maitland	1.478	2.134	3.863	7.475
Newcastle	0.742	0.803	1.929	3.473
Singleton	2.550	0	0.058	2.608
Lake Macquarie	0.060	0.393	0.733	1.186
Rutherford	0.117	0.031	0.799	0.947
East Maitland	0.173	0.092	0.644	0.909
Online Shopping	0.246	0.098	0.441	0.785
Cessnock	0.360	0.045	0.285	0.689
Raymond Terrace	0	0.072	0.465	0.537
Kurri Kurri	0.033	0.226	0.217	0.476
Muswellbrook	0.499	0	0	0.499
Central Coast	0	0.118	0.048	0.166
Port Stephens	0.083	0.150	0.076	0.308
Sydney	0.070	0.037	0.140	0.247
Scone	0.133	0	0	0.133
Murrurundi	0.116	0	0	0.116
Beresfield	0	0	0.078	0.078
Paterson	0	0	0.078	0.078
Thornton	0.042	0.002	0.011	0.055
Branxton	0	0.006	0.044	0.050
Various/holidays	0.017	0.017	0.016	0.049
Dungog	0.004	0	0.040	0.044
Gresford	0	0	0.033	0.033
Aberdeen	0.022	0	0	0.022
Tamworth	0.022	0	0	0.022
Greta	0.011	0	0	0.011
Total	6.778	4.222	9.148	20.986

Note: sums of expenditure may not equal totals due to rounding.

3.1.4 Household Participation in Community Groups and Activities

Employees were asked to identify how many people in their household participated in social, sport, hobby, or local community groups and activities. Approximately 43 per cent of respondents indicated that at least one member of their household participated in such activities or groups. These respondents were then asked to identify the nature and location of these activities.

Table 3.4 and **Figure 3.3** displays the number of respondents and their family members that participate in community activities and groups, by location. The most common activities related to sport and recreation, and in particular sport and recreation activities that occur in a team or club environment. Singleton and Maitland tended to be the most common locations for activities, which is to be expected given that these are the locations where employees and their families tend to reside. The breakdown of community group participation by operation is provided in **Tables 3.5, 3.6** and **3.7**.

Table 3.4 – Number of Respondents and their Family Members Participating In Activity/Group, By Location (All Employees)

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Maitland	95	3	3	15	6	9	0
Lake Macquarie	26	0	0	3	0	0	0
Cessnock	8	3	0	0	0	2	0
Dungog	5	0	5	3	0	0	0
Hunter Valley	7	0	0	0	0	0	0
Newcastle	29	0	3	10	0	2	0
Raymond Terrace	3	0	0	0	0	0	0
Seaham	7	0	0	0	0	0	0
Singleton	31	2	3	8	0	2	2
Thornton	10	0	0	0	3	3	0
Port Stephens	5	0	3	3	0	0	0
Gresford	3	0	0	2	0	0	0
Kurri Kurri	14	0	0	0	0	0	0
Branxton	44	3	3	15	3	3	0
Great Lakes	18	0	0	5	0	0	0
Largs	16	3	0	2	0	0	0
Murrurundi	13	0	10	3	0	0	0
Muswellbrook	8	0	0	2	3	3	0
Aberdeen	5	0	2	0	0	0	0

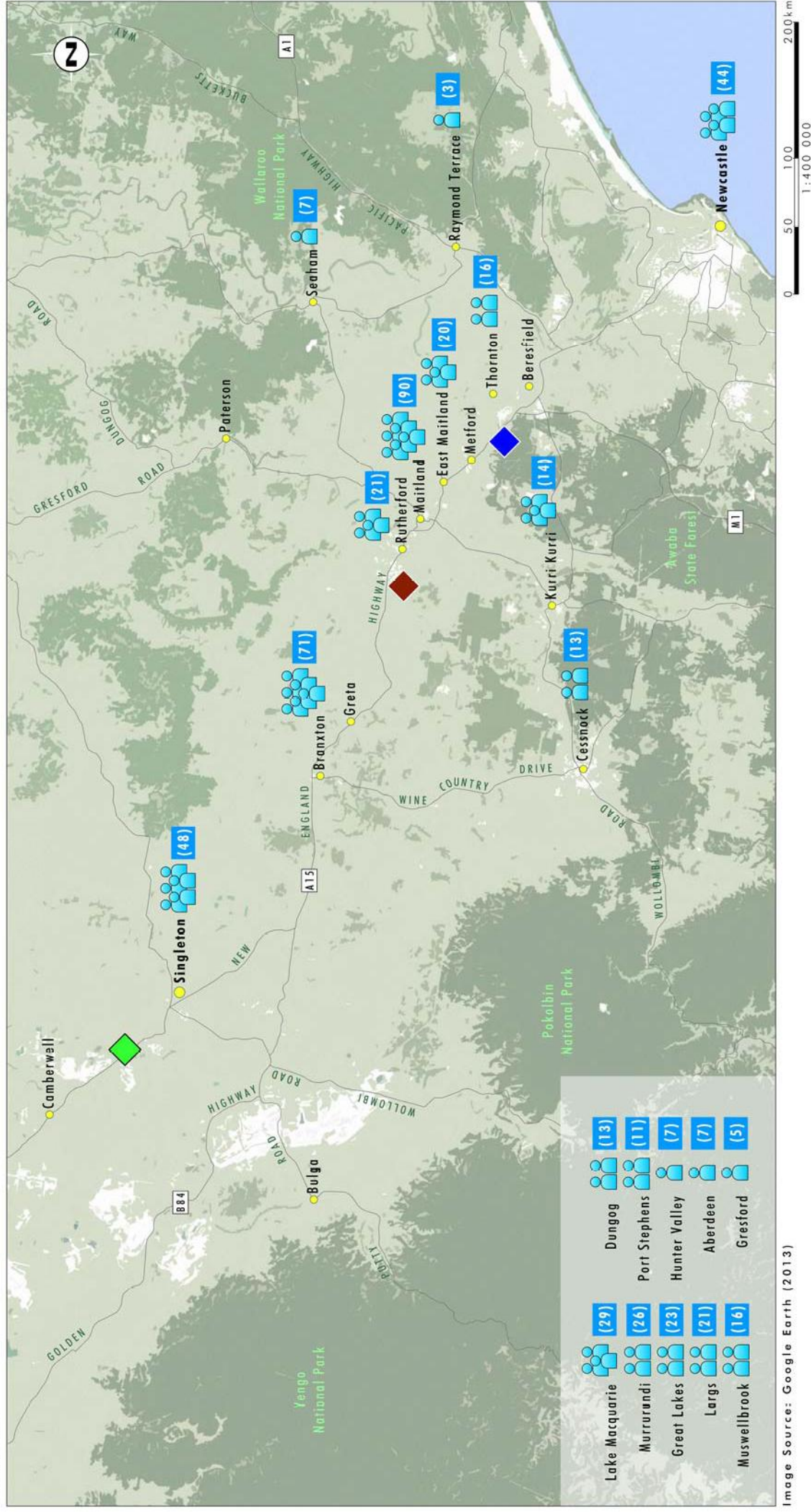


Image Source: Google Earth (2013)

Legend

- ◆ Rix's Creek Mine
- ◆ Bloomfield Collieries (including office and Open Cut) and Four Mile Engineering
- ◆ Kings Engineering
- ◆ Community Participation (Total persons)

FIGURE 3.3

Employee Household Community Participation

Table 3.5 – Number of Respondents and their Family Members Participating in Activity/Group, by Location (Rix's Creek)

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Maitland	27	0	0	0	0	0	0
Lake Macquarie	0	0	0	0	0	0	0
Cessnock	8	0	0	0	0	2	0
Dungog	0	0	0	0	0	0	0
Hunter Valley	2	0	0	0	0	0	0
Newcastle	3	0	0	0	0	2	0
Raymond Terrace	0	0	0	0	0	0	0
Seaham	2	0	0	0	0	0	0
Singleton	28	2	3	5	0	2	2
Thornton	0	0	0	0	0	0	0
Port Stephens	0	0	0	0	0	0	0
Gresford	0	0	0	2	0	0	0
Kurri Kurri	7	0	0	0	0	0	0
Branxton	13	0	0	2	3	0	0
Great Lakes	0	0	0	0	0	0	0
Largs	2	0	0	0	0	0	0
Murrurundi	0	0	5	0	0	0	0
Muswellbrook	0	0	0	2	0	0	0
Aberdeen	0	0	2	0	0	0	0

Table 3.6 – Number of Respondents and their Family Members Participating in Activity/Group, by Location (Bloomfield Open Cut)

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Maitland	18	0	0	2	0	0	0
Lake Macquarie	8	0	0	0	0	0	0
Cessnock	0	0	0	0	0	0	0
Dungog	0	0	0	0	0	0	0
Hunter Valley	0	0	0	0	0	0	0
Newcastle	16	0	0	0	0	0	0
Raymond Terrace	0	0	0	0	0	0	0
Seaham	0	0	0	0	0	0	0
Singleton	0	0	0	0	0	0	0
Thornton	0	0	0	0	0	0	0
Port Stephens	2	0	0	0	0	0	0
Gresford	0	0	0	0	0	0	0
Kurri Kurri	2	0	0	0	0	0	0
Branxton	2	0	0	0	0	0	0
Great Lakes	0	0	0	2	0	0	0
Largs	14	0	0	2	0	0	0
Murrurundi	8	0	0	0	0	0	0
Muswellbrook	0	0	0	0	0	0	0
Aberdeen	0	0	0	0	0	0	0

Table 3.7 – Number of Respondents and their Family Members Participating in Activity/Group, by Location (Other Surveyed Organisations)

	Sport and recreation	Community groups	Volunteer emergency services	Other	Youth/ school groups	Arts and culture	School parents' association
Maitland	50	3	3	13	6	6	0
Lake Macquarie	18	0	0	3	0	0	0
Cessnock	0	3	0	0	0	0	0
Dungog	5	0	5	3	0	0	0
Hunter Valley	5	0	0	0	0	0	0
Newcastle	10	0	3	10	0	0	0
Raymond Terrace	3	0	0	0	0	0	0
Seaham	5	0	0	0	0	0	0
Singleton	3	0	0	3	0	0	0
Thornton	10	0	0	0	3	3	0
Port Stephens	3	0	3	3	0	0	0
Gresford	3	0	0	0	0	0	0
Kurri Kurri	5	0	0	0	0	0	0
Branxton	29	3	3	13	0	3	0
Great Lakes	18	0	0	3	0	0	0
Largs	0	3	0	0	0	0	0
Murrurundi	5	0	5	3	0	0	0
Muswellbrook	8	0	0	0	3	3	0
Aberdeen	5	0	0	0	0	0	0

3.1.5 Use of Community Services

3.1.5.1 Health Services

Employees were asked to identify the types and locations of health services that they or their family members utilise. As shown in **Table 3.8** and mapped in **Figure 3.4**, health services tended to be accessed in the main locations of employee residence, and the most common services accessed included doctors, dentists, hospitals, and physiotherapists. The breakdown of use of health services by operation and extrapolated across all employees is provided in **Tables 3.9, 3.10** and **3.11**.

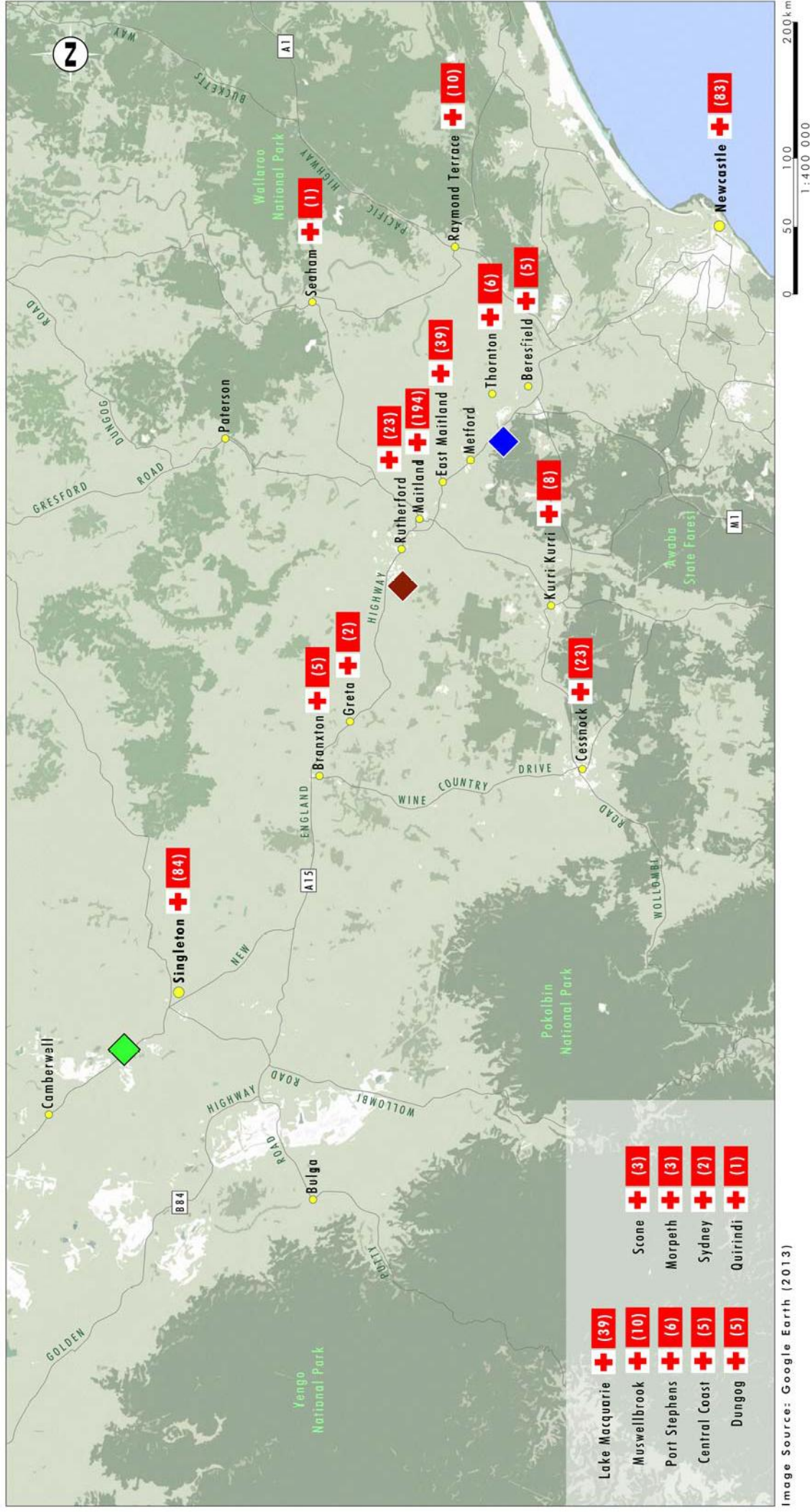


FIGURE 3.4

Use of Health Services

Table 3.8 – Number of Employees' Family Members Using Health Services, by Type and Location (All Employees)

	Doctor/GP	Dentist	Hospital	Optometrist	Physiotherapist	Chiropractor	Specialist (other)
Maitland	73	71	44	7	30	54	5
Singleton	29	23	10	1	17	3	1
Lake Macquarie	20	10	3	1	3	2	0
Newcastle	19	18	23	3	11	3	6
Thornton	6	0	0	0	0	0	0
Cessnock	6	9	4	2	2	0	0
Beresfield	5	0	0	0	0	0	0
Branxton	5	0	0	0	0	0	0
Raymond Terrace	4	4	0	0	1	1	0
Kurri Kurri	3	2	1	0	2	0	0
Morpeth	3	0	0	0	0	0	0
Muswellbrook	3	2	3	0	2	0	0
Central Coast	2	2	1	0	0	0	0
Dungog	2	1	0	0	1	0	1
Greta	2	0	0	0	0	0	0
Scone	2	0	0	0	1	0	0
Port Stephens	2	3	0	0	1	0	0
Quirindi	0	1	0	0	0	0	0
Sydney	0	2	0	0	0	0	0
Seaham	0	0	0	0	1	0	0

Table 3.9 – Number of Employees' Family Members Using Health Services, by Type and Location (Rix's Creek)

	Doctor/GP	Dentist	Hospital	Optometrist	Physiotherapist	Chiropractor	Specialist (other)
Maitland	20	16	14	0	5	3	1
Singleton	28	23	10	1	16	3	1
Lake Macquarie	2	2	0	0	0	0	0
Newcastle	2	5	5	2	4	0	1
Thornton	0	0	0	0	0	0	0
Cessnock	3	6	2	2	1	0	0
Beresfield	0	0	0	0	0	0	0
Branxton	3	0	0	0	0	0	0
Raymond Terrace	0	0	0	0	0	0	0
Kurri Kurri	1	0	0	0	1	0	0
Morpeth	0	0	0	0	0	0	0
Muswellbrook	3	2	3	0	2	0	0
Central Coast	0	0	0	0	0	0	0
Dungog	1	0	0	0	0	0	0
Greta	2	0	0	0	0	0	0
Scone	2	0	0	0	1	0	0
Port Stephens	0	0	0	0	0	0	0
Quirindi	0	1	0	0	0	0	0
Sydney	0	0	0	0	0	0	0
Seaham	0	0	0	0	0	0	0

Table 3.10 – Number of Employees' Family Members Using Health Services, by Type and Location (Bloomfield Open Cut)

	Doctor/GP	Dentist	Hospital	Optometrist	Physiotherapist	Chiropractor	Specialist (other)
Maitland	16	16	16	0	8	1	2
Singleton	0	0	0	0	0	0	0
Lake Macquarie	3	1	0	1	1	1	0
Newcastle	5	6	5	0	1	1	2
Thornton	0	0	0	0	0	0	0
Cessnock	0	0	0	0	0	0	0
Beresfield	3	0	0	0	0	0	0
Branxton	0	0	0	0	0	0	0
Raymond Terrace	0	0	0	0	0	0	0
Kurri Kurri	1	1	0	0	0	0	0
Morpeth	1	0	0	0	0	0	0
Muswellbrook	0	0	0	0	0	0	0
Central Coast	2	2	1	0	0	0	0
Dungog	0	0	0	0	0	0	0
Greta	0	0	0	0	0	0	0
Scone	0	0	0	0	0	0	0
Port Stephens	0	1	0	0	1	0	0
Quirindi	0	0	0	0	0	0	0
Sydney	0	1	0	0	0	0	0
Seaham	0	0	0	0	0	0	0

Table 3.11 – Number of Employees' Family Members Using Health Services, by Type and Location (Other Surveyed Organisations)

	Doctor/GP	Dentist	Hospital	Optometrist	Physiotherapist	Chiropractor	Specialist (other)
Maitland	37	39	34	7	17	1	3
Singleton	1	0	0	0	1	0	0
Lake Macquarie	15	7	3	0	2	1	0
Newcastle	12	7	13	1	6	2	3
Thornton	6	0	0	0	0	0	0
Cessnock	3	3	2	0	1	0	0
Beresfield	2	0	0	0	0	0	0
Branxton	2	0	0	0	0	0	0
Raymond Terrace	4	4	0	0	1	1	0
Kurri Kurri	1	1	1	0	1	0	0
Morpeth	2	0	0	0	0	0	0
Muswellbrook	0	0	0	0	0	0	0
Central Coast	0	0	0	0	0	0	0
Dungog	1	1	0	0	1	0	1
Greta	0	0	0	0	0	0	0
Scone	0	0	0	0	0	0	0
Port Stephens	2	2	0	0	0	0	0
Quirindi	0	0	0	0	0	0	0
Sydney	0	1	0	0	0	0	0
Seaham	0	0	0	0	1	0	0

Respondents were also asked to estimate the frequency with which they or their family members use health services. As shown in **Table 3.12** and mapped in **Figure 3.5**, frequency varied depending on the type of service. For instance, doctor visits tended to be more regular than optometrist visits.

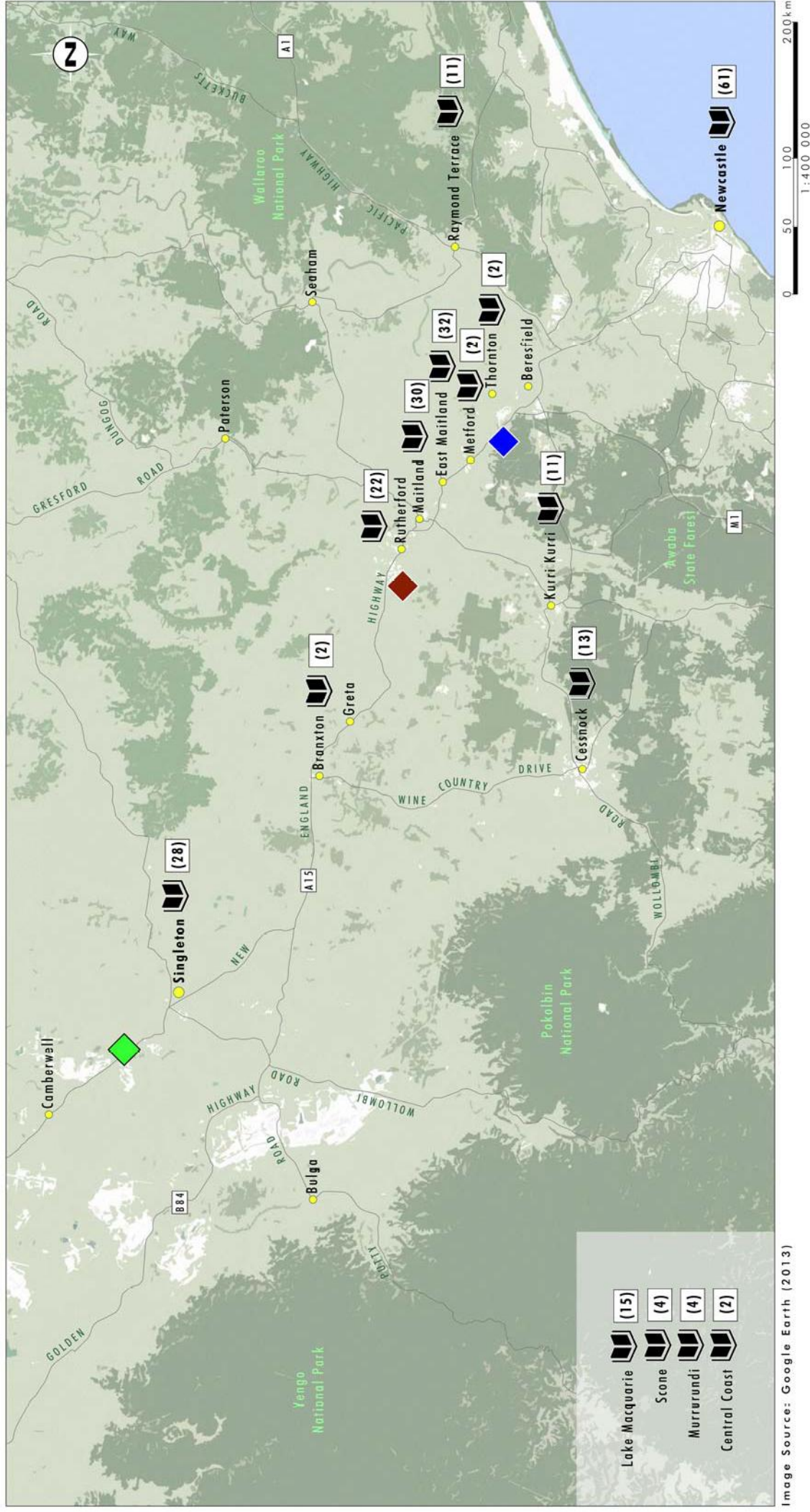


FIGURE 3.5

Educational Attendance

Table 3.12 – Frequency of Health Service Use (As Indicated By All Employees)

	Weekly	Fortnightly	Every 1 - 3 months	Every 4-6 months	Yearly	As required
Doctor/ GP	2	4	95	147	100	17
Dentist	0	0	6	119	247	26
Hospital	0	0	11	17	17	67
Optometrist	0	0	0	2	24	4
Physiotherapist	2	0	40	30	19	32
Chiropractor	2	0	34	0	0	2
Specialist (other)	0	2	17	11	6	0

3.1.5.2 Educational Institutions

Respondents living with children, other family members and/or flatmates were asked to indicate the locations where they accessed schools, universities, preschools and child care services, if applicable. Results are presented in **Table 3.13** and mapped in **Figure 3.5**, with missing data estimated. Most household members attending an education institution were reported as accessing the service in Newcastle, East Maitland and Maitland.

Table 3.13 – Number of People in Respondents' Households Attending Educational Institutions/Child Care Facilities, By Town (All Employees)

	Rix's Creek	Bloomfield Open Cut	Other Surveyed Organisations	Total Employees
Newcastle	19	22	19	61
Maitland	19	19	46	82
Singleton	28	0	0	28
Lake Macquarie	2	0	13	15
Raymond Terrace	0	0	11	11
Kurri Kurri	6	2	2	11
Branxton	2	0	0	2
Scone	4	0	0	4
Metford	0	0	2	2
Murrurundi	4	0	0	4
Thornton	0	0	2	2
Central Coast	0	2	0	2
Cessnock	6	6	0	13

3.2 Suppliers

3.2.1 Office Location

Suppliers were asked to indicate the town in which their business' main office was located. As shown in **Table 3.14**, the most common locations were Singleton, Newcastle and Maitland. Two suppliers within the sample with head offices outside the Hunter also had an additional office in the Hunter area.

Table 3.14 – Location of Suppliers' Main Offices

Location	Number of suppliers' offices (sample)	Percentage of suppliers (sample)
Singleton	14	37%
Newcastle	11	29%
Maitland	9	24%
Sydney	6	16%
Muswellbrook	2	5%
Rutherford	2	5%
Kurri Kurri	1	3%
Cessnock	1	3%
Melbourne	1	3%
Wollongong	1	3%
Adelaide	1	3%
Total	49	N/A

Note: Multiple responses permitted; therefore the sum of percentages exceeds 100 per cent.

3.2.2 Number and Location of Employees

The average number of employees per supplier (including full-time, part-time and casual) was over 52 employees, with a median of 34 employees. The mean is influenced by the fact that there were some large employers within the sample. For example, the largest employer had at least 270 employees. The median should therefore be considered more reflective of what is a 'typical' number of employees.

Respondents were also asked to indicate the towns in which their employees lived, including the number of employees living in each town. These findings are presented in **Table 3.15** and **Figure 3.6**. The majority of supplier employees resided in Newcastle and Maitland. When extrapolated to all suppliers, from the data supplied it is estimated that there are at least 2,885 employees across all suppliers.

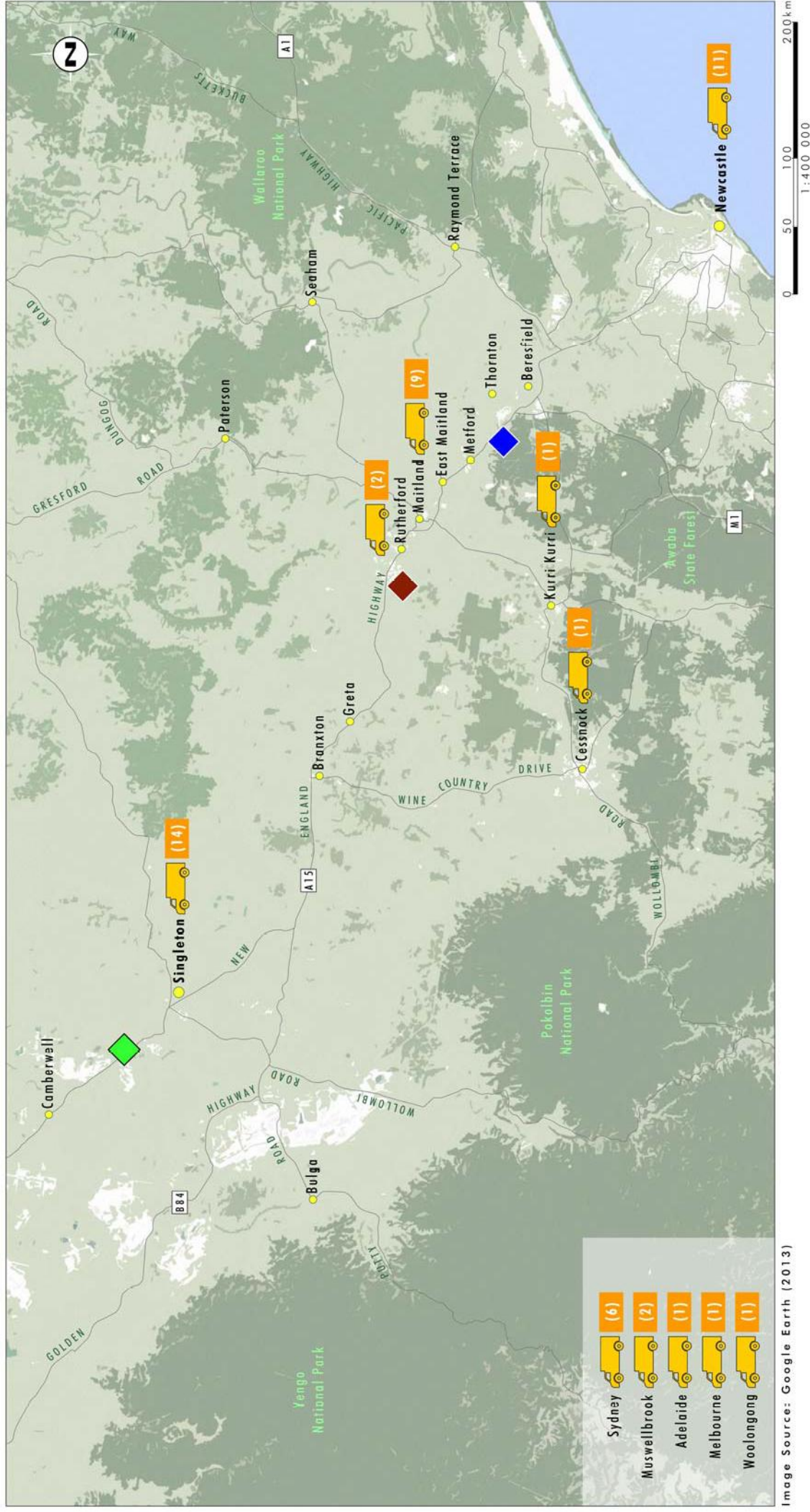


FIGURE 3.6

Suppliers Office Locations

Table 3.15 – Suppliers' Employees' Town of Residence

LGA	Employees (Sample)	Percent of all employees	Employees (estimated total)
Newcastle	462	24%	692
Maitland	327	17%	490
Singleton	346	18%	519
Branxton	212	11%	317
Muswellbrook	212	11%	317
Cessnock	135	7%	202
Other	115	6%	173
Sydney	115	6%	173
Total	1923	100%	2885

3.2.3 Business Income

A total of 18 respondents reported their estimated total business income for the past financial year, with estimates ranging from between \$4 million and \$200 million.

The average total reported revenue was \$29.17 million. However, income estimates were not distributed normally and therefore the mean is influenced by a number of very large values. As such, in the following analysis, the median revenue of \$9.8 million has been used as an appropriate figure for all supplier survey respondents and an estimate of business income for all suppliers, to ensure that the analysis provides conservative estimates of overall business expenditure.

3.2.4 Location of Business Expenditure

Respondents were asked to estimate the proportion of their business revenue that is spent on goods and services relating to their business activities (excluding wages), and identify where this money is spent. Respondents' responses were then extrapolated across all suppliers to give an estimate of total supplier expenditure, as presented in **Table 3.16**.

Table 3.16 – Location and Amount of Suppliers' Expenditure

Location	Business expenditure (sample) (\$ million)	Percent Expenditure	Estimated Total Expenditure (\$ million)
Singleton	\$38.80	25%	\$58.20
Other	\$37.25	24%	\$55.87
Maitland	\$32.59	21%	\$48.89
Newcastle	\$27.93	18%	\$41.90
Sydney	\$15.52	10%	\$23.28
Muswellbrook	\$3.11	2%	\$4.66
Cessnock	\$1.55	1%	\$2.33
Total	\$155.19	100%	\$232.79

Note: The analysis above is based on 18 respondents that provided sufficient information relating to (a) percentages of expenditure, by town, and/or (b) an estimate of goods and services expenditure, as a proportion of overall business revenue and assumed as representative of all respondents. Revenue for all businesses was assumed to be the median business revenue, as described above.

1: 'Other' locations were not specified within survey results.

As shown in **Table 3.16**, most business spending by suppliers occurs in Singleton, Maitland, Newcastle and other locations. Other unspecified locations accounts for the second highest business spend of suppliers in the survey.

The average proportion of business revenue spent on goods and services was 44 per cent. This means, that on average, suppliers spent around \$4.3 million per annum on goods and services.

While the above table provides an estimate of business expenditure in the local towns, a small number of the businesses surveyed had extremely high business income which may lead to an overestimation of the total expenditure in the towns above. For example, one surveyed business estimated a total income of \$200 million. The results of the above expenditure estimates should therefore be interpreted with caution.

3.2.5 Suppliers' Business Dependency on Mining and the Bloomfield Group

Suppliers were asked to describe the size of their contract with the Bloomfield Group as either 'small', 'medium', or 'large', with similar numbers nominating within each group (i.e. as 'small' (10) 'medium' (10) and 'large' (8).)

Suppliers were also asked to comment on the percentage of their income that is: (a) dependent on the mining industry and (b) dependent on the Bloomfield Operations specifically. On average, suppliers who responded to the question indicated that 75 per cent of their business was dependent on the mining industry (median of 65 per cent), and that 23 per cent of their business was dependent on Bloomfield specifically (median of 10 per cent).

3.2.6 Business Expenditure with a Direct Reliance on Bloomfield

Suppliers' business expenditure that is directly reliant on the Bloomfield Group was estimated using the business expenditure figures described in **Section 3.2.3** and **Section 3.2.4**, in combination with the estimates of business dependence described in **Section 3.2.5** and presented in **Table 3.17**.

Table 3.17 – Estimates of Suppliers' Business Expenditure that is Directly Reliant on Bloomfield

Location	Business expenditure (sample) (\$ million)	Percent Expenditure	Estimated Total Expenditure
Singleton	\$8.75	25%	\$13.12
Other	\$8.39	24%	\$12.59
Maitland	\$7.35	21%	\$11.02
Newcastle	\$6.29	18%	\$9.44
Sydney	\$3.50	10%	\$5.25
Muswellbrook	\$0.70	2%	\$1.05
Cessnock	\$0.35	1%	\$0.52
Total	\$34.98	100%	\$52.47

3.2.7 Capacity to Expand and Further Opportunities with Bloomfield

Suppliers were also asked to indicate their capacity to take on additional work. Over two thirds of the sample (73 per cent) indicated that they had capacity to do so. Additionally, survey respondents were asked if they believed there would be future opportunities for business with the Bloomfield Group. Over half of the sample (57 per cent) stated that they either believed there would be future opportunities, or that they hoped there would be so.

4.0 Conclusion

Findings from the TRC show strong socio-economic linkages between Bloomfield and a number of communities, particularly those towns and regional centres in closest proximity to the company's operations, namely East-Maitland/Maitland/Rutherford and Singleton, which receive substantial economic benefit from the operations. Similarly, social impacts, as measured through community participation and social infrastructure use were also substantial, and again were focused on the communities closest to the operations.

In summary, the results of the survey indicate:

- Bloomfield employees largely reside in East Maitland/Maitland/Rutherford (34 per cent) followed by Singleton (12 per cent), Lake Macquarie (10 per cent), and Newcastle (10 per cent). A high proportion of the Rix's Creek workforce lives in Singleton, while employees from Bloomfield Open Cut and other operations are more likely to live in East Maitland/Maitland/Rutherford. Rix's Creek employees are the only employees that live in Singleton.
- Bloomfield employees directly contribute approximately \$21 million to various local, regional and state economies, with expenditure greatest in Maitland and surrounding suburbs (\$9.2 million) followed by Newcastle (\$3.5 million) and Singleton (\$2.6 million). Approximately 98 per cent of employee expenditure in Singleton is attributed to Rix's Creek employees.
- Bloomfield has a relatively stable workforce, with the average length of employment being 10 years, and the average length of time living in their current residential location totalling almost 20 years. There were also high proportions of the workforce that were married (or de facto) with a high degree of home ownership (or home purchase).
- Approximately 43 per cent of households have a member participating in a community related group or activity, with the most common activities relating to sport and recreation, particularly team based sports.
- Community participation and social infrastructure usage generally reflected residential patterns, with the highest levels of overall participation in Maitland followed by Singleton. Use of education facilities were an exception to this, with the highest attended location for an educational facility (school, university, TAFE, etc) being Newcastle.
- Suppliers reported relatively high levels of reliance on Bloomfield (on average, almost a quarter of their respective business income for those participating in the survey. Over half of the suppliers surveyed indicated a capacity, and desire, to take on additional work with Bloomfield.
- Overall, suppliers to Bloomfield are estimated to contribute approximately \$156 million within the Hunter Valley region, and an additional \$77 million to the broader economy. Of this total \$233 million, approximately \$52 million is attributed to services provided to Bloomfield specifically.



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