

WATERMARK

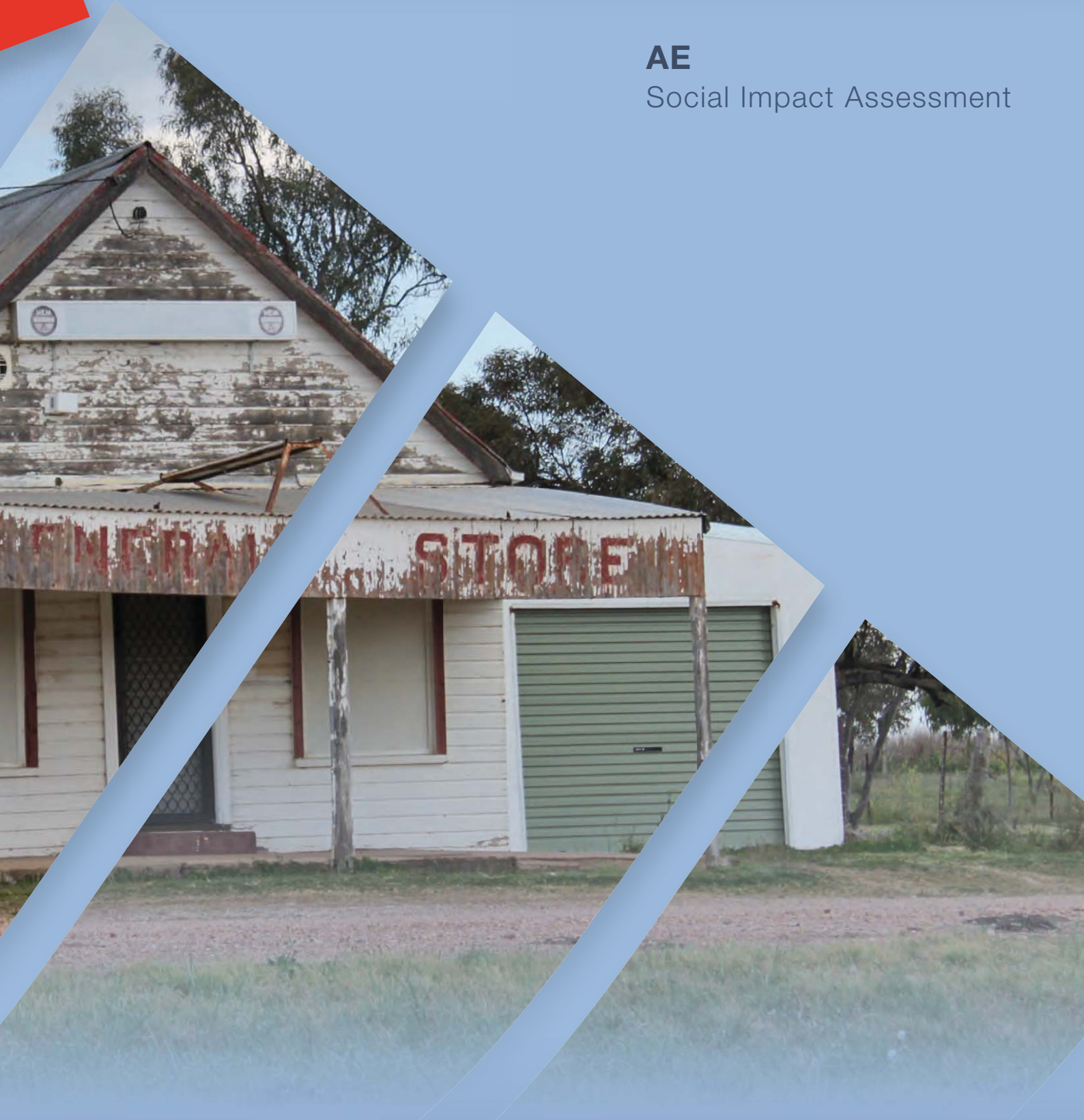
COAL PROJECT

ENVIRONMENTAL IMPACT STATEMENT

February 2013

AE

Social Impact Assessment



WATERMARK COAL PROJECT

SOCIAL IMPACT ASSESSMENT

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15 January 2013

For

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EXECUTIVE SUMMARY

This Social Impact Assessment (SIA) has been prepared by Hansen Bailey to support the Environmental Impact Statement for the Watermark Coal Project (the Project). The Project consists of the construction and operation of an open cut mining operation extracting up to 10 Million tonnes per annum of Run of Mine coal for a 30 year period. The Project's proposed workforce is approximately 600 full-time equivalent employees during construction and approximately 600 full-time equivalent employees during the operation of the Project. Approximately 200 full-time equivalent operational employees will be required at Year 1 of the Project, with a peak of 600 expected at approximately Year 21. By Year 30, it is expected that there will be approximately 200 employees.

The Project is located in the southern portion of the Gunnedah Local Government Area (LGA). The Regional Study Area of this SIA includes the LGAs of Gunnedah, Liverpool Plains, Tamworth Regional, Upper Hunter and Narrabri. The Sub Regional Study Area is the focus of this SIA, and comprises the LGAs of Gunnedah, Liverpool Plains and Tamworth Regional.

Data collation and a literature review were key components of the SIA, particularly as there was a range of existing local and regional planning documents and processes providing significant background and direction to issues investigated in this SIA. Direct interviews with key local council staff and state government agencies were also key components of the SIA methodology.

The SIA provides a detailed socio-economic profile of the current community, with a specific focus on the Sub-Regional Study Area and the urban settlements within it. Gunnedah LGA had a population of 12,066 at the 2011 Census, while neighbouring Liverpool Plains LGA had a population of 7,480 and Tamworth Regional LGA had a 2011 population of 56,292 in 2011.

Key demographic characteristics are:

- Gunnedah LGA's population declined 10% from 1996 to 2006 and then increased by almost 6% from 2006 to 2011;
- Liverpool Plains LGA's population fell marginally from 1996 to 2011;
- Tamworth Regional LGA's population increased by 5% in both periods 1996 to 2006 and 2006 to 2011;
- The median age in 2011 of most LGAs in the Study Area was above that of NSW's (37);
- In 2011, all LGAs in the Study Area except Liverpool Plains LGA had a higher proportion of younger people (under 15) than NSW (20%) and a higher proportion of older people (over 55) than NSW (27%), particularly Liverpool Plains LGA with 35%;
- All LGAs in the Study Area in 2011 had a higher proportion of indigenous people than NSW (2.5%), with Gunnedah, Liverpool Plains and Narrabri LGAs recording 11%;
- The unemployment rate in June 2012 for the LGAs of Gunnedah, Liverpool Plains and Tamworth Regional was above 6%, compared to NSW (5.2%) and the Upper Hunter LGA (1.7%);

- For all LGAs in the Sub Regional Study Area in 2011, the rate of unemployment by age group was highest for 15-19 year olds (between 13% and 19%) and unemployment rates generally fell as the age groups increased;
- In 2011, there were significant differences in the unemployment level between Indigenous and non-Indigenous people in the Study Area, where the indigenous unemployment rate was often above 20%. Similarly, the labour force participation rate of Indigenous people was generally lower than that of non-Indigenous people in the Study Area in 2011;
- Median income indicators in 2011 were lower in all LGAs in the Study Area than for NSW, although Gunnedah LGA's indicators improved more significantly than the other LGAs from 2006; and
- Median individual income differences between indigenous and non-indigenous people in the Study Area were significant. In 2011, median incomes of indigenous people in all areas in the Study Area were lower than those of non-indigenous people.

An assessment of the current housing market in the Sub Regional Study Area, with a particular focus on Gunnedah and Liverpool Plains LGAs, shows that residential property prices between 2003 and 2012 increased substantially, as did the number of properties on offer in most areas. The SIA shows details for housing sub-markets and locations, giving an accurate picture of the housing market during that period. An assessment of the temporary housing market shows that typical 'tourist' accommodation is being heavily used by the construction and resources sector. Purpose-built Workforce Accommodation Facilities have either been constructed (Narrabri), or been given approval (Werris Creek and Boggabri) in the Study Area.

An assessment was made of the current community facilities and services provided in the Sub Regional Study Area, including education facilities, children's services, youth services and facilities, health services, emergency services, recreation, sporting and leisure services, cultural facilities and cultural development, social support services and community groups, commercial and retail services and public transport.

Current community identity, values, aspirations and lifestyle were explored, focussing on the Sub Regional Study Area. Issues relating to community cohesion, health and wellbeing and social order and community safety were also investigated. To inform these findings, the SIA sourced a range of recent detailed community consultation undertaken by the Councils in the Sub Regional Study Area.

The SIA projects the likely size and impacts of the additional population in the Study Area that can be expected as a result of the construction and operational workforces of the Project. A distinction is made between '*local hires*' (i.e. those currently residing within the Sub Regional Study Area) and '*non-local hires*' (i.e. those that are expected to be sourced from outside the Sub Regional Study Area).

The construction workforce is expected to be mainly sourced from outside the Sub Regional Study Area, meaning that approximately 480 non-local hires and an accompanying 100 people (families) can be expected to be temporarily located in the Sub Regional Study Area during the expected 18 month construction period. The single construction workforce is to be encouraged to reside in the proposed Workforce Accommodation Facility (MAC Werris Creek) to alleviate pressure on the local housing market.

The impacts of the operational workforce are assessed under three Workforce Hiring Scenarios, being:

- Scenario 1 – that 80% will be local hires and 20% non-local hires;
- Scenario 2 – that 50% will be local hires and 50% non-local hires; and
- Scenario 3 – that 20% will be local hires and 80% non-local hires.

Shenhua Watermark would strongly prefer that non-local hires eventually settle locally in the Sub Regional Study Area, therefore avoiding a 'fly-in / fly-out' (FIFO) or 'drive-in / drive-out' (DIDO) workforce. The SIA does not model a DIDO / FIFO workforce.

The population impacts of the operational workforce show that, depending on the Workforce Hiring Scenario, the additional population expected as a result of the incoming workforce at Year 21 (peak) of the Project will be between 300 and 1,200 people. The additional population expected at Year 1 of the Project is a third of that, being between 100 and 400 people. These figures assume that the non-local hires of the Project all settle within the Study Area.

The incremental growth of the incoming population across the Study Area is evident, with the growth expected to be gradual between Year 1 and Year 21. Under Workforce Hiring Scenario 1, the increase will only be 10 additional persons a year during that period. The increase would be 25 persons per year under Workforce Hiring Scenario 2 and 40 persons per year under Workforce Hiring Scenario 3. The majority of the increase would be in Gunnedah urban area, although this is expected to be only between 4 and 14 additional persons per year, dependent on the Workforce Hiring Scenario.

The subsequent impacts on housing demand and affordability are also expected to be incremental and spread across the Study Area, as the incoming workforce and their families are expected to settle in a variety of locations across the Study Area.

The SIA also models the number of additional dwellings required in the Study Area as a result of the population increases detailed above. At Year 21 (peak) of the Project, between 120 and 480 additional dwellings will be required across the Study Area, depending on the Workforce Hiring Scenario used. The additional dwellings required at Year 1 of the Project are a third of that, being between 40 and 160 dwellings across the Study Area.

Under Workforce Hiring Scenario 1, only 4 additional dwellings per year will be required across the entire Sub Regional Study Area between Year 1 and Year 21, which increases to 10 additional dwellings a year for Workforce Hiring Scenario 2 and 16 additional dwellings a year for Workforce Hiring Scenario 3. The area likely to be most impacted is the Gunnedah urban area, which could require between one and six dwellings per year, depending on the Workforce Hiring Scenario. Tamworth Regional and Liverpool Plains LGAs could each expect additional demand of between one and four dwellings per year.

The population and housing impacts of the indirect (flow-on) workforces expected as a result of the Project are also modelled and show that:

- 318 people, some with additional partners and children, could move temporarily to the Sub Regional Study Area as a result of the flow-on employment effects of the construction phase of the Project;
- The Study Area can expect a population of 1,463 that is attributed to the flow-on employment effects of the operational phase of the Project over its 30 year life. This equates to an average of 50 people per year of the Project;
- That 585 dwellings in the Study Area are likely to be occupied over the life of the Project as a result of flow-on employment from the operational phase of the Project.

However, this SIA cannot predict how many of this population of 1,463 are already living in the Study Area. Therefore this SIA cannot provide any firm conclusions as to the likely increase in dwelling demand in the Study Area or its component LGAs as a result of Project operational phase flow-on employment.

It is the cumulative impact of current and future mining and resource projects in the Study Area that will have the most significant impact on population growth, housing demand and affordability in the Study Area, particularly as:

- In 2022, the Project operational workforce (383) will represent only 11% of the total personnel expected to be employed in mining and resource industry projects in the Gunnedah Basin; and
- The potential population associated with the cumulative mining and resource sector workforce for the Gunnedah Basin in 2016 (8,410) is estimated to be approximately three times the size of the estimated population associated with the existing 2012 workforce (2,593), with a small decline by 2022 (5,200);
- There is the potential for an additional 5,817 people associated with mining and resource sector personnel in the Study Area by 2016 as a result of cumulative resource projects; and
- There is the potential need for 2,327 dwellings in the Study Area by 2016 as a result of cumulative resource projects.

Analysis of the labour force in the Sub Regional Study Area shows that in 2012, there was predicted to be:

- 2,595 unemployed people living in the Sub Regional Study Area;

- An available labour supply of 1,010 people in the Gunnedah LGA (up from 921 in 2006), including a labour surplus of 591 (427 in 2006);
- An available labour supply of 734 people in the Liverpool Plains LGA (up from 612 in 2006), including a labour surplus of 477 (422 in 2006); and
- An available labour supply of 4,674 people in the Tamworth Regional LGA (up substantially from 2,575 in 2006), including a labour surplus of 2,755 (1,634 in 2006).

Although there has been considerable change in the structure of the economy of the Sub-Regional Study Area since 2006, there was still a labour surplus in each of the LGAs in 2012.

The SIA outlines the caution that must be taken when applying this data to the Project, particularly as the skills and working intentions of the available labour force is not known. However, it appears that the Sub Regional Study Area will be able to absorb a substantial proportion of the jobs created by the Project. There are therefore implications for skills training in the Study Area.

The SIA includes an analysis of the expected impacts of the Project on community facilities and services in the Sub Regional Study Area. Key points are:

- Impacts on individual services will generally be incremental and able to be absorbed by the 'natural' growth of those services;
- Cooperation in monitoring and planning between the mining and resource companies in the Study Area and relevant local and state government agencies and other stakeholders will be the key to ensuring that services are adequately able to plan for growth.

The most pronounced impacts on existing community facilities will be:

- The impact of the construction workforce on health facilities, especially facilities nearest to the proposed Workforce Accommodation Facility (MAC Werris Creek); and
- The impact of the construction and operational workforces on the requirement for appropriate skills training.

Expected impacts of the Project on the Sub Regional Study Area's current community identity & values, community cohesion, health & wellbeing and social order & community safety are identified. Key points are:

- Significant changes to community identity and values are more likely to be as a result of cumulative developments in the Study Area;
- Assisting new residents to settle in to the community will benefit both them and current residents;
- There are a number of both positive and negative impacts on volunteering in the community;
- Fatigue management, family impacts and mental health and drug and alcohol issues are acknowledged and can be managed through appropriate education and support; and
- A perceived decrease in social order and community safety cannot be easily attributed to the Project alone.

A wide range of mitigations to address the social impacts of the Project are given, which encompass housing demand and affordability, labour force, primary, secondary & tertiary education, children's services, youth services, health services, emergency services, recreation, leisure & sporting facilities, cultural facilities & cultural development, social support services & community groups, public transport, community identity & values, community cohesion, health & wellbeing and social order & community safety. The mitigations are proposed to be documented and monitored through a Social Impact Management Plan, which will be prepared if development consent is granted.

WATERMARK COAL PROJECT SOCIAL IMPACT ASSESSMENT

for
Shenhua Watermark Coal Pty Ltd

1 INTRODUCTION

1.1 BACKGROUND

In October 2008, Shenhua Watermark Coal Pty Limited (Shenhua Watermark) was granted Exploration Licence (EL) 7223. Shenhua Watermark is a subsidiary of the Shenhua Corporation.

The Watermark Coal Project (the Project) is located within EL 7223, in the Upper Namoi Valley of NSW, approximately 35 km south south-east of the township of Gunnedah, off the Kamilaroi Highway and to the immediate west of the village of Breeza. It is located within the Gunnedah Local Government Area (LGA). The Project is approximately 282 km by rail from the Port of Newcastle. **Figure 1** illustrates the regional locality of the Project in relation to the nearest settlements, including the villages of Breeza and Curlewis and the town of Gunnedah.

1.2 THE PROJECT

Shenhua Watermark is seeking State Significant Development Consent under Division 4.1 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) for the Project. The Project Application Boundary (Project Boundary) is shown on **Figure 1**.

The Project generally comprises:

- The construction and operation of an open cut mining operation extracting up to 10 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal for a 30 year period;
- An open cut mining fleet of excavators and shovels, supported by haul trucks, dozers, graders, drill rigs and water carts;
- Progressive rehabilitation of all disturbed areas;
- The construction and operation of a Coal Handling and Preparation Plant (CHPP) with a throughput of 10 Mtpa ROM coal;
- The co-disposal of tailings and coarse reject within the Overburden Emplacement Areas (OEA);
- The construction and operation of a rail spur, rail loop, Kamilaroi Highway rail overpass, associated load out facility and connection to the Werris Creek - Moree Railway Line;
- The construction and operation of a Mine Access Road;
- The construction and operation of administration, workshop and related facilities;

- The construction and operation of ground and surface water management and reticulation infrastructure including pipelines, pumping stations and associated infrastructure for access to water from groundwater aquifers, the Mooki River and private dams to the north-east of the Project Boundary;
- The installation of communications and electricity reticulation infrastructure; and
- A workforce of up to approximately 600 full-time equivalent employees during construction and up to 600 full-time equivalent employees during the operation of the Project.

Further details of the Project workforce are given in **Section 6.3**.

1.3 DOCUMENT PURPOSE

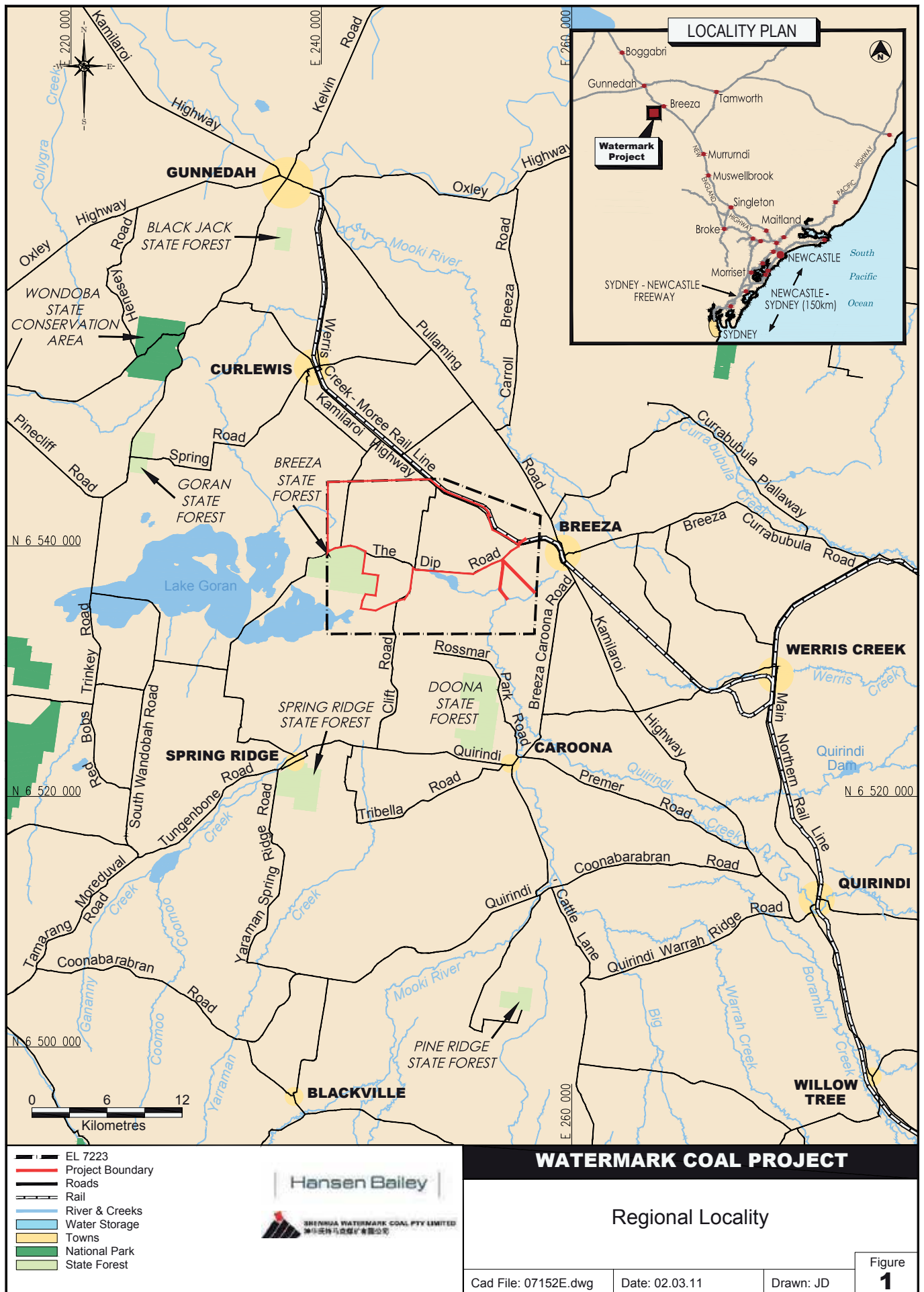
Hansen Bailey has prepared this Social Impact Assessment (SIA) for the Project. The SIA contributes to an Environmental Impact Statement (EIS) being prepared to support an application for development consent under Part 4, Division 4.1 of the EP&A Act for the Project.

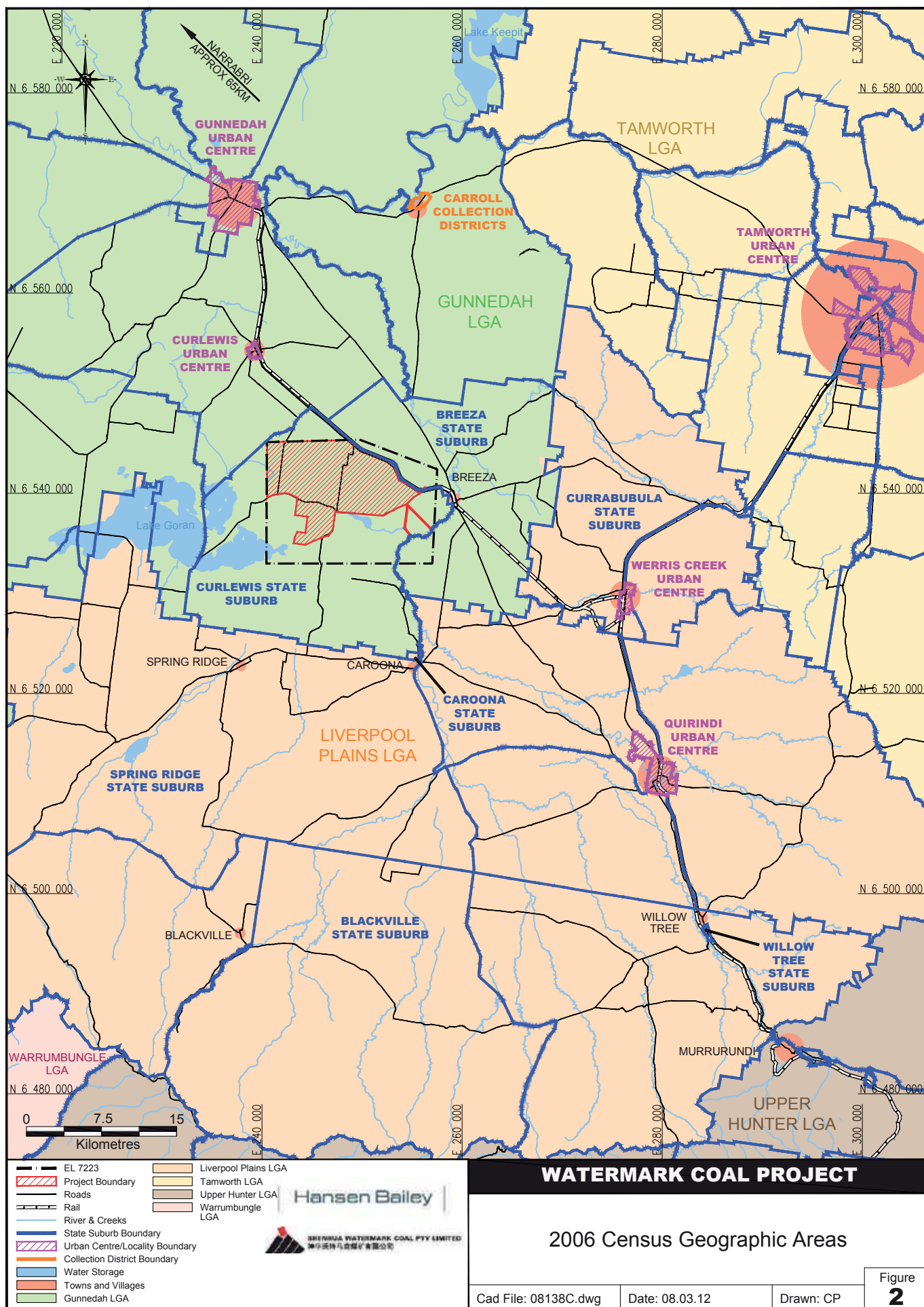
SIA is a process for understanding and responding to the social issues associated with development. SIA is focussed on how to identify, avoid and mitigate adverse impacts for communities and enhance outcomes (Franks, 2012).

1.4 DOCUMENT STRUCTURE

This SIA is structured as follows:

- **Section 1** – Introduction - describes the Project and explains its regional and regulatory context;
- **Section 2** – Scope and Methodology – provides a detailed explanation of the scope and methodology adopted for the SIA;
- **Section 3** – Local and Regional Social and Economic Planning – analyses the range of strategic social, community and land use planning documents and projects that have been coordinated and / or published by local or state government applicable to the Study Area, and that are relevant to this SIA (supplemented by **Appendix C**);
- **Section 4** – Economic Profile – gives an overview of the Study Area and wider region's economic profile, as context for **Section 5**;
- **Section 5** – Social Profile and Current Social Facilities and Services – provides a detailed demographic profile of the Study Area, and description and analysis of the current range of social facilities and services available in the Study Area; and
- **Section 6** – Potential Social Impacts and Mitigations – assesses the social impacts of the Project on the Study Area, and puts forward applicable mitigation strategies to mitigate any adverse impacts.





1.5 STUDY AREA, LOCATION AND GOVERNANCE

1.5.1 Study Area

The Study Area of this SIA includes both Sub Regional and Regional Areas, and is described in detail in **Section 2.4.1**. In summary:

- The LGAs of Gunnedah, Liverpool Plains and Tamworth Regional are included in the *Sub Regional Study Area*; and
- The *Regional Study Area* includes the LGAs of Upper Hunter and Narrabri in addition to the Sub Regional Study Area LGAs of Gunnedah, Liverpool Plains and Tamworth Regional described above.

The boundaries of the LGAs described above are shown in **Figure 2**.

1.5.2 Location and Travel Times

Distance and travel times from the Project Boundary (at the corner of The Dip Road and the Kamilaroi Highway, Breeza) to centres in the Sub Regional Study Area, are outlined in **Table 1**.

Table 1
Travel Distance and Times from Corner of the Dip Rd and Kamilaroi Highway

Location	Distance from Project Boundary at Cnr Dip Rd and Kamilaroi Highway	Approx Travel Time from Cnr Dip Rd and Kamilaroi Highway (mins)
Breeza	3 km	2
Curlewis	22 km	14
Caroona	24 km	29
Werris Creek	31 km	22
Quirindi	43 km	31
Currabubula	43 km (via Werris Creek) (31 km via Currabubula-Breeza Road)	29 (via Werris Creek) (Via Currabubula-Breeza Road – time unavailable)
Gunnedah	40 km	28
Carroll	54 km (via Gunnedah)	36
Willow Tree	58 km	40
Spring Ridge	30 km	45
Murrurundi	75 km	54
Tamworth	75 km (via Werris Creek)	66
Blackville	60 km	95

Source: GoogleMaps, 2012

1.5.3 Other Geographic Areas

There are other geographic areas that are referred to in this SIA, as described below.

Gunnedah LGA is located wholly within the traditional Kamilaroi Aboriginal nation, which stretches from St George in Queensland in the north to Coonabarabran in the south (Gunnedah Shire Council (GSC), 2005a).

The wider Namoi Valley region, which is referred to occasionally in this SIA, comprises seven LGAs:

- Tamworth Regional;
- Liverpool Plains;
- Gunnedah;
- Narrabri (part);
- Walgett (part);
- Warrumbungle (part);
- Walcha (part); and
- Coonamble (part).

The population of the Namoi Valley has been estimated by the ABS 2006 Census to be 89,853 people (Parsons Brinckerhoff Australia Pty Ltd (PB), Edge Land Planning (ELP) Centre for Agricultural and Regional Economics (CARE), 2010).

1.6 CUMULATIVE CONTEXT OF MINING AND RESOURCE PROJECTS IN THE GUNNEDAH BASIN

The Gunnedah Basin is one of the primary coalfields in NSW, along with the Hunter Valley, Newcastle, Southern NSW and Western NSW. As at June 2012, there were 31 operating open cut mines and 30 operating underground mines in NSW (NSW Minerals Council, 2012). As at January 2013 in the Gunnedah Basin there were nine existing approved mining projects and two existing coal seam gas (CSG) projects as shown in **Table 75 in Appendix A**.

Table 75 also shows that there is potential for a significant increase in mining projects with development of the Boggabri Continuation Project, Tarrawonga Modification Project, Vickery Coal Project, Maules Creek, Watermark, Caroona and Goonbri mines. The coal mines in the Gunnedah Basin are concentrated in the Boggabri - Baan Baa area to the north north-west of Gunnedah, with a secondary node at Werris Creek in the south-east corner of the Basin.

The Project is expected to be the first mining project of its size proposed in the Gunnedah Basin south of Gunnedah Township.

There are two existing CSG developments in the Gunnedah Basin; the Coonarah Gas Fields (CGF) project and the Santos Gunnedah CSG Project. The gas extracted from the CGF project is supplied domestically to a nearby gas fired electricity generation plant and via a pipeline to Narrabri.

The current workforce of the CGF project could not be determined, however, based on the proposed workforce and production capacity of the Narrabri Coal Seam Gas (NCSG) project, an existing workforce of 50 people was assumed.

The NCSG project intends to incorporate the existing CGF project into a significantly larger project area, which is anticipated to facilitate coal seam gas extraction for a further 20 years. Several other coal seam gas exploration leases are registered across the Gunnedah Basin, indicating the potential for multiple coal seam gas developments in the near future. The Santos Gunnedah CSG Project is part of a wider Santos proposal that covers the entire north west region of NSW and consisting of four sub regions. Two of these sub regions (Northern Slopes and North Central Plains) overlap with the Sub Regional Study Area of this SIA. Therefore estimates have been made of the proportion of the total workforce of the Santos Project expected in the Sub Regional Study Area from information provided in *The economic impacts of developing coal seam gas operations in Northwest NSW, December 2011 Report to Santos* (Allen Consulting Group, 2011).

Table 2 summarises the anticipated timing and personnel requirements of each project. It is important to note that early stage exploration projects have been included and, for such projects, it is difficult to assess if they will be feasible from an economic or technical perspective let alone from an environmental and planning perspective. It is further noted that there is minimal publically available information relating to residential assumptions, timing and number of employees or proportion of non-local employees. As such, broad and conservative assumptions have been made regarding potential future projects.

Table 2
Proposed Timing of Mining Projects in the Gunnedah Basin

		Personnel																	
Site Type	Project	2010	2012	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034	2036	2038	2040	2042	2044
Coal Mining	Canyon Mine		0																
	Sunnyside Coal Project		0																
	Werris Creek Mine		100		100			100											
	Rocglen Coal Mine		67		67			67											
	Boggabri Coal Mine		500		500			500											
	Narrabri Coal Mine Stage 2		211		211			211											
	Tarrawonga Mine & Tarrawonga Coal Project		70		Up to 120			120											
	Vickery Mine		0																
	Vickery Coal Project				400			400											
	Maules Creek Mine				466			466											
	Watermark Project				300			383											
	Vickery South Project							100											
	Caroona Project							600											
	Goonbri Project							70											
Coal Seam Gas	Coonarah Gas Fields		50																
	Santos Gunnedah CSG Project		39		1200			100											
Total Personnel			1,037		3,364			3,117											



Existing mine life or resource approval



Proposed mine or resource life



The Project

Table 2 demonstrates that:

- It is anticipated that in 2022, the Project has the potential to occur simultaneously with four existing mining projects, two coal seam gas projects and six potential mine projects;
- In 2022, the Project operational workforce (383) will represent 11% of the total personnel expected to be employed in mining and resource industry projects in the Gunnedah Basin; and
- The potential cumulative mining and resource industry workforce for the Gunnedah Basin in 2016 is estimated to be approximately 3 times the size of the estimated existing workforce, with a small decline by 2022.

1.7 REGULATORY FRAMEWORK

This SIA is prepared as part of the documentation accompanying the Watermark Coal Project EIS, prepared under the EP&A Act as described above. There are no specific legislative requirements for the preparation of SIAs in NSW. The Director-General's Requirements (DGRs) for the Project reference *Techniques for Effective Social Impact Assessment: A Practical Guide* (Cox, 1995). This document provides examples of SIA techniques that may be used during the compilation of SIAs, depending on the subject matter and methodology applicable to the SIA.

1.7.1 Director-General's Requirements

The Director General of the Department of Planning and Infrastructure (DP&I) issued the Environmental Assessment Requirements (DGRs) for the Project on 19 April 2012. **Table 3** lists each requirement in the DGRs relevant to social impact assessment and where it is addressed in this SIA.

Table 3
Director-General's Requirements Relevant to Social Impacts

DGRs	Section Addressed in SIA or Other Documents
NSW Planning and Infrastructure - Socio-Economic Impacts	
• Social and Economic – including an assessment of the: - potential direct and indirect economic benefits of the project for local and regional communities and the State;	Economic Impact Assessment (Gillespie Economics, 2012)
- potential impacts on local and regional communities, including: - o increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and	Section 6
o impacts on social amenity;	Section 6
- a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the project, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism; and	Section 6

DGRs	Section Addressed in SIA or Other Documents
- a detailed assessment of the costs and benefits of the development as a whole, and whether it would result in a net benefit for the NSW community;	Economic Impact Assessment (Gillespie Economics, 2012)
Department of Primary Industries – Agriculture	
How will the development increase competition for the rural sector to attract labour, particularly the irrigation industry which requires higher labour inputs	Section 6.8.3
How much competition and capacity is there for access to rail for the transport of grain out of Gunnedah, Narrabri, Moree, Weemelah	Traffic & Transport Impact Assessment (DC Engineering, 2012)
Gunnedah Shire Council	
The Social Impact Analysis must specifically address the impacts of the project on the Gunnedah Shire. This must analyse the following:	Section 6
* Employment The proponent should analyse the cumulative impact of coal mining development in the Gunnedah Basin in terms of introduced employees and the demands placed on the local labour force to satisfy the 600 direct employees	Section 1.6 and Section 6.8
The analysis shall also assess the potential multipliers relative to the direct workforce having regard in particular to ancillary and service support workers	Economic Impact Assessment (Gillespie Economics, 2012)
* Education and Training The proponent shall review the capability of the existing education and training network within the region to support the proposed development as well as address demands from other industries and employers in the region impacted by the movement of employees to this development	Section 5.11.1, Section 6.8 and Section 6.9.3
The proponent shall provide clear and pro-active mechanisms by which impacts in education and training of the workforce in the region will be overcome	Section 6.9.3
*Housing Strategy The implications for housing both the direct workforce and the multiplier population as a consequence of the development shall be reviewed in detail. This analysis must assess regional impacts in the major urban centres of Quirindi, Tamworth and Gunnedah as well as the smaller centres and villages within the region. A review of potential fly in fly out and drive in drive out workforce should also be undertaken on a scenario basis of high, medium and low probability	Section 6.6
Particular attention is to be given to residential accommodation demands in Gunnedah having regard to available residential housing and land zoned and capable of supporting residential development. The proponent should clearly outline its preferred approach to housing its workforce and mechanisms by which it will implement this approach It is requested that the proponent enter into discussions with Council on this matter	Section 6.6

DGRs	Section Addressed in SIA or Other Documents
* Accommodation Village Location It is noted that an accommodation village within the Gunnedah LGA is proposed as part of the start up of the project to deal with the construction workforce and the inception of mining operation The proposed location and nature and timeframe for establishment of this village should be clearly articulated. It is requested that the proponent be required to liaise with Council in respect of this proposition	Section 5.10.4
* Economic Analysis The proponent shall provide a complete economic assessment of the implications of the development	Economic Impact Assessment
Particular attention shall focus on the town of Gunnedah and villages of Curlewis and Breeza and the implications for local business and the associated demands/benefits the project may have on the community. The analysis shall review consequential development that will flow from the project and the requirements such development will have on the local economy, infrastructure and services	Section 6.7
The analysis should assess the impacts in lower socio-economic groups through increases in accommodation and cost of living expenses. Similarly, methods by which potential two speed or three speed local economies can be mitigated shall be articulated	Section 5.10.3, Section 5.10.5, Section 6.6.5 and Section 6.7
* Social Impacts The introduction of up to 600 workers (5% of the current Shire population) and the consequential population increase will require a review of demands on law and order provision as well as community support infrastructure	Section 6.9.10 and 6.9.16
The demands of labour force and support workers on Council services such as recreation and community facilities must also be addressed	Section 6.9.12, Section 6.9.14 and 6.9.16
The potential change in demographic and social attitude must be closely examined, having regard to the immediate impact on the community and the potential longer term issues which may result from such a significant population increase	Section 6.5 and Section 6.10
* Health Service Demands This matter requires a regional overview to be undertaken as well as a specific analysis of the implications on Gunnedah medical and allied services	Section 5.11.4 and Section 6.9.8
The proponent should be required to establish specific methods by which it will support medical services to meet the inevitable demand from its workforce and their families as well as those linked to associated support industries	Section 6.9.8
*Child Care Given the proponent's advice of a preference for employees to reside in the region on a permanent basis, the demand for child care and other infant support services requires detailed examination given that current facilities are operating at or near capacity	Section 5.11.2 and Section 6.9.5

DGRs	Section Addressed in SIA or Other Documents
* Population Impacts A full population projection assessment should be required. This should consider where employees and support workers will reside and implications for transport, schools and training facilities, social and recreational demands, law and order, community services, housing and local roads. An assessment of the cost to local government should also form part of this review	Section 6
* Transport and Access The proponent should review all existing transport networks that support the community and evaluate the increased demands that the project and its direct and indirect workforce will have on these networks	Section 5.11.10 and Section 6.9.19
*Voluntary Planning Agreement It is essential that there is recognition by the proponent of the impact of this development on community facilities and services with Gunnedah Shire. Hence, it is requested that the proponent enter into discussions with Council regarding a Voluntary Planning Agreement (VPA)	EIS
Liverpool Plains Shire Council	
Community consultation and engagement – given the historical and current level of interest expressed in the project by the Liverpool Plains community it is expected that a high level of communication would be conducted with community stakeholders and consultation processes should be both meaningful and transparent and should also sufficiently underpin the required economic and social impact analysis required as part of the assessment process	EIS Stakeholder Engagement Chapter and Section 2.4.2
Social and Economic Impacts – Council's experience is that social and economic impact analyses conducted for these types of development proposals has been historically deficient and not representative of actual and anticipated impacts on communities. Consequently, given the potential level of impact of this project on surrounding rural and regional communities, it is expected that a robust and high level assessment of potential impacts will be undertaken for this project. The assessment should extend beyond that of a desk-top review, shall use appropriate and accepted methodologies, be conducted by suitably experienced and qualified consultants and be prepared in accordance with recognised best practice guidelines using locally available data collated from both primary and secondary research (wherever practicable)	SIA
Impact on community infrastructure and assets – it is anticipated that this project will create significant additional demands on community infrastructure (including local halls, libraries and health facilities) within a number of LPSC communities including Quirindi, Werris Creek and Currabubula. Due regard should be given to these additional demands and their corresponding impacts in the EIS preparation process. It would be also useful if any proposed community enhancement funding (CEF) process could be clearly articulated as part of the EIS. CEF offered by the company is not currently available to the Liverpool Plains Shire Council LGA	Section 6

DGRs	Section Addressed in SIA or Other Documents
Community water supplies and sewer infrastructure – potential impacts on community water supplies and sewer infrastructure arising from the operation of the development and additional demand created as a result of workforce housing requirements should be duly considered	Section 6.6.3
Voluntary Planning Agreement for regional infrastructure - should be considered in detail and appropriate liaison with Council should be undertaken	EIS
Cumulative Impacts – like traditional social and economic assessment models applied for mining developments, cumulative impact assessments have also be traditionally deficient and have considerably underplayed impacts on regional communities. As a consequence, a scientifically robust assessment of the range of cumulative impacts should be undertaken	Section 6
Ongoing consultation with Council – Council staff would be pleased to assist the proponent in the provision of local strategies (including copies of the LPSC Community Strategic Plan, Social Plan and other planning documentation) as deemed appropriate. It would also be prudent to request that the proponent conduct further detailed consultations with Council throughout the EIS preparation phase	Section 2.4.2 and Appendix C
Tamworth Regional Council	
The VPA should not only apply wholly to the Gunnedah LGA, but also include the neighbouring areas, such as Tamworth, which significantly contribute to, and support the mining industry	EIS
The VPA should also be prepared and exhibited before, or concurrently with, the Development Application for the Watermark Coal Project	EIS
With regard to the Director-General's Requirements, Council requests that given the potential social and economic impacts, not only on the Gunnedah LGA, but also on the adjoining LGAs, such as Tamworth, particular emphasis be placed upon providing very robust and realistic Economic and Social Impact Assessments, which respect to the Gunnedah LGA and surrounding LGA's	Section 6
In addition, as infrastructure demand impacts are not limited to the Gunnedah LGA, any Community Enhancement Funds should also allocate funding to adjoining LGAs for the provision of soft infrastructure, as well as regional infrastructure	Section 6

2 SCOPE AND METHODOLOGY

2.1 INTRODUCTION

This section outlines the scope and methodology used in this SIA, and describes its relationship to the other technical assessments prepared as part of the Watermark Coal Project EIS.

2.2 SCOPE

This SIA has been prepared as part of the Watermark Coal Project EIS and in accordance with the DGRs for the Project, as outlined in **Section 1.7.1**.

The scope of this SIA is to provide:

- An assessment of the socio-economic profile and values of the current community of the Study Area, with specific focus on the Sub-Regional Study Area;
- An assessment of the current community facilities and services provided in the Study Area, with a particular focus on Gunnedah and Liverpool Plains LGAs. These facilities and services include:
 - Education facilities;
 - Children's services;
 - Youth services and facilities;
 - Health services;
 - Emergency services;
 - Recreation, sporting and leisure services;
 - Cultural facilities and cultural development;
 - Social support services and community groups;
 - Commercial and retail services; and
 - Public transport.
- An assessment of the current housing market in the Study Area, with a particular focus on Gunnedah and Liverpool Plains LGAs;
- An analysis of the range of policies, documents, strategies and cooperative planning projects relating to local and regional social and economic planning issues;
- A description of the estimated construction and operational workforces of the Project;
- Projections of the size and final residential locations of the population expected as a result of the Project workforces;

- An analysis of the expected impacts of the Project on the community profile, values and community facilities and services all described above, with analysis including:
 - An assessment of the impact of the construction and operational workforces and related population; and
 - Acknowledgement of the cumulative impacts of current and expected mining and resource projects in the region;
- Descriptions of mitigations of the socio-economic impacts of the Project.

2.3 INTERACTIONS WITH OTHER TECHNICAL ASSESSMENTS

This SIA is one of the technical assessments prepared as part of the EIS and references the findings of the following technical assessments where relevant:

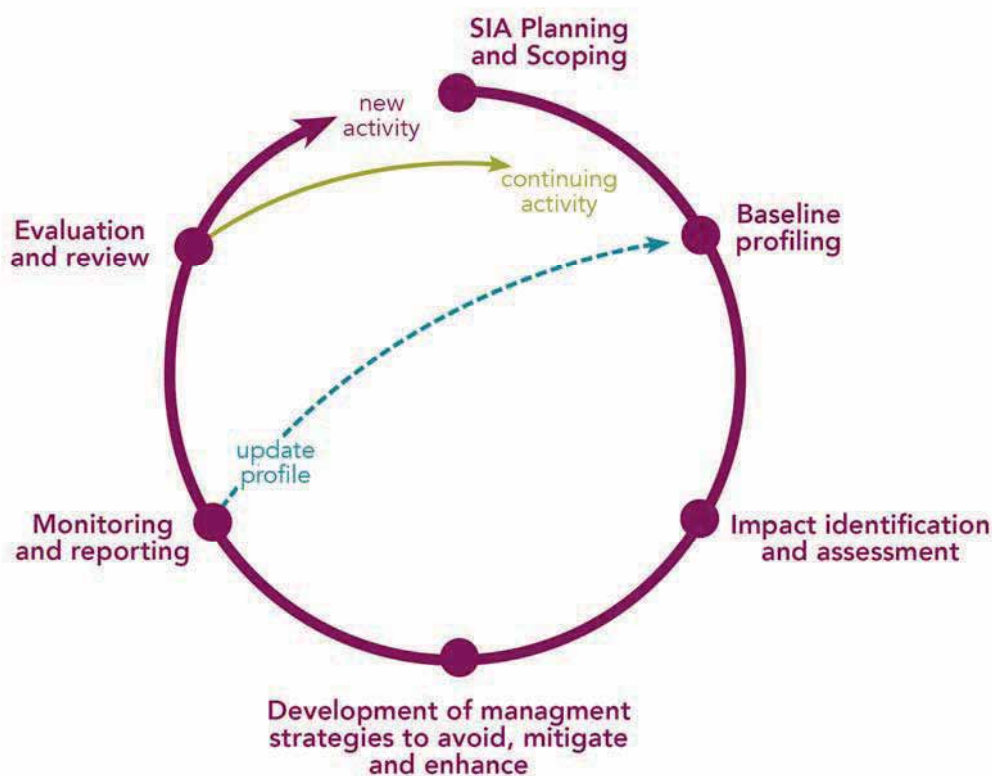
- Aboriginal Cultural Heritage Assessment (ACHA);
- Aboriginal Cultural Heritage Values Assessment (ACHVA);
- Economics Impact Assessment;
- Air Quality & Greenhouse Gas Impact Assessment;
- Acoustics Impact Assessment;
- Ecological Impact Assessment;
- Surface Water Impact Assessment;
- Groundwater Impact Assessment;
- Agricultural Impact Statement; and
- Traffic and Transport Impact Assessment.

2.4 METHODOLOGY

The methodology adopted for the preparation of the SIA involved the following key phases:

1. SIA Planning and Scoping;
2. Baseline Profiling;
3. Impact Identification and Assessment;
4. Development of management strategies;
5. Monitoring and reporting; and
6. Evaluation and Review.

The full SIA process is illustrated in **Figure 3**. The last two phases (*monitoring and reporting* and *evaluation and review*) are part of the post-approval process and therefore not relevant to the scope of this SIA. Each phase relevant to this SIA process is discussed in the following sub sections.



Source: Adapted after Franks, 2011 & 2012

Figure 3
The Phases of Social Impact Assessment

2.4.1 SIA Planning and Scoping

Defining the Study Area

Although the Project is located in the Gunnedah LGA, it is within close proximity to the Liverpool Plains LGA and is also part of a region that encompasses the neighbouring LGAs (to both Gunnedah and Liverpool Plains LGAs) of Tamworth Regional, Narrabri and Upper Hunter LGAs.

In such a complex regional setting, the choice of appropriate Study Areas was of paramount importance to the SIA, hence a two-tiered approach of a Sub Regional Study Area and a Regional Study Area was chosen, as explained below.

Sub Regional Study Area

The LGAs of Gunnedah, Liverpool Plains and Tamworth Regional are included in the Sub Regional Study Area. Although the Project is located in the Gunnedah LGA, which is expected to be the primary area of influence of the Project, the neighbouring LGAs of Liverpool Plains and Tamworth Regional are considered to be of equal importance in assessing the socio-economic impacts of the Project. Emphasis has been placed on the Sub Regional Study Area in this SIA, being the area likely to be most impacted by the Project.

The Gunnedah LGA is the prime focus of this SIA, with a 2011 population of 12,066 (Australian Bureau of Statistics (ABS), 2012b). Gunnedah urban area is the closest large town to the Project, with a 2011 population of 7,888 (ABS, 2012b). Gunnedah LGA also includes villages nearby to the Project (including Curlewis and Breeza) and other rural areas.

The Project is approximately 24 km from the Gunnedah LGA boundary with Liverpool Plains LGA (2011 population 7,540 (ABS, 2012b)), which contains a number of smaller towns and villages which will also be within the Project's area of influence. Therefore the Liverpool Plains LGA has been included in the Sub Regional Study Area. Liverpool Plains LGA's largest town is Quirindi, with a 2011 population of 2,580 (ABS, 2012b), which is approximately 40 km to the east of the Project Boundary.

The regional city of Tamworth, with a 2011 urban area population of 36,131 (ABS, 2012b), is located approximately 75 km north-east of the Project. Tamworth is the closest regional city to the Project, and serves as a regional service centre to the Gunnedah and Liverpool Plains LGAs. The Tamworth Regional LGA (2011 population 56,292 (ABS, 2012b)), is therefore included in the Sub Regional Study Area, although due to its distance from the Project a lesser focus is given in this SIA to this LGA than that of Gunnedah and Liverpool Plains LGAs.

The towns and villages described above are shown in **Figure 1** and the LGA boundaries are shown in **Figure 2**.

Regional Study Area

The Regional Study Area of this SIA includes the LGAs of Upper Hunter and Narrabri in addition to the Sub Regional Study Area LGAs of Gunnedah, Liverpool Plains and Tamworth Regional described above. These two additional LGAs have been included in the Regional Study Area since the Project's influences, particularly those relating to accommodation, labour force demand and supply and economic benefits, are likely to extend further than the Sub Regional Study Area into these adjoining LGAs. However it is likely that these LGAs will be impacted to a lesser extent than the Sub Regional Study Area LGAs, due to their increased distance from the Project Area.

Upper Hunter LGA, with a 2011 population of 13,754 (ABS, 2012b), is situated to the south of the Liverpool Plains LGA, while Narrabri LGA, with a 2011 population of 12,925 (ABS, 2012b), is situated to the north of Gunnedah LGA.

Figure 2 shows the LGA boundaries described above.

Prioritisation of Demographic Characteristics, Community Infrastructure and Impacts

A community comprises a wide range of people, some with common demographic characteristics (e.g. older people or culturally diverse people) and some with specific needs (e.g. people with disabilities).

This report recognises that some sectors of the community, and consequently some community infrastructure types, are more likely than others to be impacted as a result of the population that is expected as a result of both the Project and cumulative impacts of mining and resource projects in the Study Area. For this reason, this SIA has prioritised the following:

- The types of demographic characteristics that are analysed;
- The types of community infrastructure (facilities and services) that are investigated; and
- The types of impacts and subsequent mitigations that are subsequently proposed.

In prioritising these issues, it is still acknowledged that other sectors of the community will also be affected as the population grows, however their changes and subsequent social impacts will be more related to the general demographic changes that will occur regardless of growth of particular sectors of the economy, such as the mining and resources sector.

It is therefore acknowledged that the following demographic characteristics, community impacts and subsequent impacts, although important, have not been analysed in detail in this SIA for the reasons given above:

- Culturally and linguistically diverse people and services targeted to that community;
- Religious affiliation and religious institutions;
- Older people and aged care services; and
- Disability services.

However, these sectors of the community, their needs and relevant services are addressed in detail in the range of planning documents that have been prepared by GSC, LPSC and TRC as described in **Section 3**, particularly in the Social Plans of each Council.

2.4.2 Baseline Profiling

Understanding the local and regional socio-economic setting of the Project was critical to assist in identifying and analysing potential project impacts. 'Baseline profiling' was conducted for both the Sub Regional and Regional Study Areas and included collection, collation and analysis of a comprehensive set of quantitative and qualitative data for a range of social and economic indicators. This approach ensured a thorough understanding of the existing social environment, particularly at the Sub Regional level. Sub Regional level information was contextualised by collecting and analysing information at the broader regional and state of NSW level. Various consultations were also held to both contextualise information already collated and to gain a better understanding of the issues that needed to be analysed by the SIA.

The outcomes of the baseline profiling of the Sub Regional and Regional Study Areas are presented in **Section 4** and **Section 5**.

A description of the quantitative and qualitative information sources used in this SIA is provided below.

Quantitative Data Sources

Quantitative data provides a significant background for **Section 4** and **Section 5** of this SIA. Key sources of data include:

- ABS data, including (but not limited to):
 - 2006 and 2011 Census data (explained in more detail below);
 - National Regional Profiles 2005-2009 (ABS, 2010a) and 2006-10 (ABS, 2010b); and
 - Tourist Accommodation, Small Area Data, New South Wales (ABS, 2011c).
- NSW Department of Education, Employment and Workplace Relations (DEEWR), Regional Market Information (DEEWR, 2011b);
- NSW Department of Planning & Infrastructure (DP&I) State and Regional Population Projections (DP&I, 2008);
- DP&I Local Development Performance Monitoring Reports (DP&I, 2008b; DP&I, 2009; DP&I, 2010);
- RPDData Pty Ltd (RPData) Regional Housing Market Data (RPData, 2012 and 2013);
- Other quantitative data from the above sources and elsewhere, as referenced in the range of documents published by GSC, Liverpool Plains Shire Council (LPSC) and Tamworth Regional Council.

ABS Census Data

A key source of data for this SIA is the Census data published by the ABS. Data from the 2006 and 2011 Censuses is the primary source of data used, while some 2001 and previous data was also sourced.

The Census data presented in the SIA is described for the following geographic areas, primarily based on the 2006 Census areas, which are shown at **Figure 2**.

- LGAs - predominantly for Gunnedah, Liverpool Plains and Tamworth Regional (within the Sub Regional Study Area). Selected data is also presented for Narrabri and Upper Hunter (within the Regional Study Area);
- The 2006 '*Urban Centre / Localities*' of Gunnedah, Curlewis, Quirindi, Werris Creek and Tamworth and comparable 2011 areas where available;
- The 2006 '*State Suburbs*' of Curlewis, Breeza, Spring Ridge, Blackville, Carroona, Willow Tree and Currabubula and comparable 2011 areas where available; and
- The amalgamated 2006 Census Collector Districts that form the village of Carroll (and updated with the Carroll State Suburb area in 2011).

It is important to note that Census geographic classifications changed substantially between the 2006 and 2011 Census. **Table 76 in Appendix A** lists the small geographic areas that were sourced from the 2006 Census and describes their compatibility with the 2011 Census geographic areas that provided the 'best fit'.

Both NSW and either the 2006 Census Statistical Division (SD) of 'Northern' or the 2011 Statistical Area Level (SA) 4 of 'New England and North West' are used for comparative analysis throughout this SIA. The Northern SD and New England and North West SA4 (NENWSA4) include various LGAs in the northern sector of NSW, including Gunnedah, Liverpool Plains, Tamworth, Armidale, Narrabri, Glen Innes and up to the Queensland border.

The 2006 and 2011 ABS Census data is presented in various 'profiles', of which the following were used for the 2006 Census:

- Basic Community Profiles;
- Expanded Community Profiles;
- Time Series Profiles;
- Indigenous Profiles; and
- Working Population Profiles.

Data from the 2011 Census was primarily sourced from the Basic Community Profile and from *Tablebuilder*, an on-line resource that customises 2011 Census data.

The *Gunnedah Community Portrait 2006* (GCP 2006) (The Public Practise Pty Ltd, 2007) also provided more detailed Census data analysis of the Gunnedah LGA, particularly in comparing 2006 data to the 2001 Census. However, the same level of detail has not been published for Liverpool Plains LGA or Tamworth Regional LGA.

Limited Census data regarding employees in the mining industry in the Muswellbrook and Singleton LGAs has been used as an indication for some impacts that the Study Area may face. These geographic areas were chosen for this comparative analysis since they represent an established mining area containing regional towns and villages, located in the Upper Hunter region of NSW.

In the presentation of any data in this SIA, all care has been taken to ensure that data figures are correct, but in some cases totals may not equal 100% or the appropriate total number due to rounding.

Literature Review and Policy Collation

A key focus of this SIA was to review the wide range of local policies and documents published by Gunnedah Shire, Liverpool Plains Shire and Tamworth Regional Councils (within the Sub Regional Study Area) that are applicable to the social, economic and land use planning issues analysed in this SIA. There are also a range of regional social, economic and land use planning documents prepared, or that are under preparation, by various state government agencies and / or collaborations of local councils that relate to issues raised in this SIA.

In particular, these local and regional planning documents provided a significant amount of information that has been sourced from recent community consultation undertaken by those Councils and other agencies. This information regarding community opinions and views was directly relevant to the issues analysed in the SIA.

Background data, policy directions and community opinions and values described in these documents are referenced throughout the SIA. A more detailed discussion of these documents is provided at **Section 3**, supported by **Appendix C**.

EIS Project Consultation

Extensive stakeholder consultation for the Project was undertaken as an integral part of the EIS process and is described in full in Section 6 (Stakeholder Consultation) of the Main Volume of the EIS. This includes:

- *Ongoing stakeholder engagement activities* undertaken by Shenhua Watermark, which have been occurring since the granting of EL 7223, as outlined in Section 6 (Stakeholder Consultation) of the Main Volume of the EIS; and
- *Project consultation* which has been conducted through the development of the EIS, as also outlined in the Section 6 (Stakeholder Consultation) of the Main Volume of the EIS.

The *Community Information Session Report January 2012* (CISR) prepared by Hansen Bailey reports on the community consultation for the Project that was undertaken in December 2011 in the Sub Regional Study Area, and is the stage of the community consultation that was most relevant to this SIA.

Consultation information sessions were held at:

- Tamworth Community Centre - 13 December;
- Breeza Community Hall – 14 December;
- Gunnedah Civic Centre – 15 December (2 sessions); and
- Quirindi Royal Theatre – 16 December.

Participants, in groups, were asked to brainstorm responses to the following questions:

- *'I would like to see the Watermark EIS include...';* and
- *'I am concerned about.....'.*

The CISR lists all of the issues identified by stakeholders in response to these questions.

"The concerns raised the most...were socially orientated, focused on the socio-economic impact that the Project will have on the region". Over 40 responses given were categorised as 'social'. The next highest category of issues had less than 20 responses (Hansen Bailey, 2012).

These socio-economic concerns are reported and addressed in the relevant sections of this SIA.

SIA-specific Consultation

Additional SIA-specific consultation was also undertaken as part of the development of the SIA, being interviews with key local government staff and staff of key NSW Government agencies, as detailed below.

Face to face interviews were held with key Council staff in their offices on the following days:

- Gunnedah Shire Council – 17 November 2011;
- Liverpool Plains Shire Council – 18 November 2011; and

- Tamworth Regional Council – 20, 21 and 22 December 2011.

Additional phone and email discussions were held with some staff before and after those meetings.

Face to face interviews were held with relevant staff of NSW Government agencies on the following days and locations:

- NSW Family and Community Services – 20 December 2011, Tamworth;
- Gunnedah Aboriginal Child and Family Health Centre (NSW Family and Community Services) - 20 December 2011, Tamworth; and
- Department of Education and Training - 21 December 2011, Tamworth.

Phone interviews were held with relevant staff of NSW Government agencies on the following days:

- TAFE New England Institute – 25 January 2012;
- Hunter New England Local Health District – Peel Cluster – 9 February 2012;
- Hunter New England Local Health District – Quirindi Health Service – 15 February 2012;
- Hunter New England Local Health District – Werris Creek Health Service – 8 March 2012;
- District Emergency Management Office, Peel District – 16 January 2012;
- Ambulance Service of NSW – 14 February 2012;
- Fire and Rescue NSW – 14 February 2012;
- NSW Rural Fire Service – 14 February 2012;
- NSW Police – Oxley Local Area Command – 23 February 2012; and
- NSW Housing – 6 March 2012.

Additional email information was also received from some of the key NSW Government agency staff after the phone interviews.

2.4.3 Impact Identification and Assessment

The purpose of impact identification and assessment is to predict and evaluate the significance of any potential impacts of the Project on the communities of the Study Area. These impacts are presented in **Section 6**.

Impact Identification

Potential social impacts were identified based on the information collected during baseline profiling and the results of stakeholder consultation, and with consideration of the cumulative impacts from other developments taking place in the Gunnedah Basin. In identifying the range of impacts and assessing their magnitude, the SIA team has also drawn upon experience from similar projects as well as other NSW and Queensland case studies / experiences to make assumptions about potential social impacts.

Project layout plans and project information such as workforce numbers and workforce arrangements were also reviewed in detail and considered in the context of the social setting, in order to assist in identifying key areas of potential impacts. **Section 2.3** lists other EIS technical studies that were considered in also assisting to identify key areas of socio-economic impacts.

Potential social impacts of both the construction and operations phase of the Project were identified with a focus on the impacts expected in the Sub Regional Study Area (i.e. the LGAs of Gunnedah, Liverpool Plains and Tamworth Regional).

Impact Assessment

Key potential social impacts of the Project operational workforce were assessed under three 'workforce hiring scenarios', which each detail the proportion of the workforce that are expected to be employed as either 'local hires' (those currently residing within the Sub Regional Study Area) or 'non-local hires' (those that are expected to be sourced from outside the Sub Regional Study Area).

The social impacts of the following three Workforce Hiring Scenarios were assessed:

- Scenario 1 – that 80% will be local hires and 20% non-local hires;
- Scenario 2 – that 50% will be local hires and 50% non-local hires; and
- Scenario 3 – that 20% will be local hires and 80% non-local hires.

These Workforce Hiring Scenarios are described in detail in **Section 6.3.5**.

In assisting to identify the geographical spread of potential impacts, the SIA also makes critical assumptions about the:

- Current residential location of local hires; and
- The expected final residential location in the Study Area of non-local hires.

These assumptions are given in **Section 6.5.3**.

The characteristics of each potential social impact were also analysed with reference to the following:

- *Desirability* – whether the impact is positive, negative or neutral;
- *Project or Cumulative* – whether the impact is likely to be caused by the Project and / or as a result of cumulative mining resources in the Gunnedah Basin – cumulative impacts were assessed where appropriate, but not to the same level of detail as Project impacts;
- *Project Phase* - whether the impact is likely to be as a result of the construction and / or operations phase of the Project;
- *Geographic extent* – the geographical area(s) which the impact will affect (it is noted previously that this SIA focuses on the impacts expected in the Sub Regional Study Area); and
- *Timing and duration* – whether the impact is likely to be immediate (either at the beginning of the Project construction or operations phase) or delayed (at certain years of the Project, which has a 30 year horizon).

2.4.4 Impact Mitigation

The potential impacts identified in the SIA are both positive and negative in nature. Potentially positive impacts of the Project may result in positive social changes (for example in increased employment, induced economic growth and resident population). In contrast, negative potential impacts of the Project may result in negative social changes (for example increased demand for social services and changes in community identity). Some impacts may be either positive or negative, depending on the impacted communities' differing points of view.

The opportunity therefore exists for the proponent to manage predicted impacts in order to maximise positive impacts and minimise negative impacts – in other words to '*mitigate*' the effects of the impacts. **Section 6** lists the proposed mitigations for the social impacts of the Project.

The final two steps shown in **Figure 3** (*monitoring and reporting* and *evaluation and review*) relate to the post-approval Social Impact Management Plan (SIMP) process which is addressed in **Section 6.16**.

3 LOCAL AND REGIONAL SOCIAL AND ECONOMIC PLANNING

3.1 INTRODUCTION

Within the Sub Regional Study Area, GSC, LPSC and TRC have all prepared a number of policies and documents relating to social planning and economic development over the last 10 years, some in response to legislative requirements (e.g. Social Plans, Community and Strategic Plans and Section 94 Contributions Plans) and some as strategic policies to inform and guide their LGAs' future development. Some documents have been collaborative projects between the Councils and / or with other agencies. In the recent past, there has also been substantial collaborative work prepared by a range of NSW government agencies and local Councils addressing the likely impacts of forecast substantial growth in the mining and resource sectors in the region.

These documents and collaborative works:

- Form a significant '*body of knowledge*' about the Sub Regional Study Area;
- Contain information sourced from recent consultations with their communities;
- Give a clear picture of the intended future of the LGAs and region; and
- Outline responses by Councils and government agencies to the cumulative impacts of growth in the mining and resource sectors.

This section (supported by **Appendix C**) will outline these documents and highlight initiatives and strategies relevant to this SIA. Specific details from these documents, particularly relating to specific topics (for example recreation or cultural development) are referenced through this SIA.

3.2 STATE-BASED PLANNING

There are a number of processes and projects coordinated through the NSW State Government that are relevant to this SIA.

3.2.1 Regional Processes Co-ordinated through Department of Premier and Cabinet

In anticipation of the proposed growth of the minerals and resources sector in the region, the NSW Department of Premier and Cabinet (DPC), Regional Coordination Program New England North West coordinates a range of '*Joint Service Delivery Planning*' projects involving representatives from a wide range of local and state government and industry organisations across the region.

Joint Service Delivery Planning

During 2011, DPC and partner organisations collaborated on a number of issues, which will inform ongoing planning in the region. The '*Minerals and Energy Working Group*', discussed below, form one of the groups involved in these discussions, as did '*Place Teams*' from Gunnedah, Tamworth and Narrabri. A number of other government and non-government organisations were also involved.

The discussions developed '*strategic actions*' focussing on four areas:

- Cooperative cross sector planning;
- Housing impacts;
- Informed demographic projection; and
- Education and training.

Significant projects that are currently occurring are:

- Discussions between TAFE and industry regarding future education and training needs, as discussed in **Section 5.11.1**; and
- Research into the accommodation impacts on the region. DPC coordinated '*accommodation forums*' in Narrabri and Gunnedah in 2011, aiming to bring together government agencies, community housing providers and other stakeholders to consider the effects of the minerals and energy resources sector growth on housing and housing-related issues in the region. Information prepared by NSW Family and Community Services for these forums is referenced in this SIA. In 2012, a Tamworth Accommodation Forum was established as a sub-committee of the Tamworth PLACE Team. A separate Tamworth Youth Accommodation Group has also been established.

Minerals and Energy Working Group

The New England North West Regional Manager's Network, coordinated through the DPC has been working with the Namoi Councils since 2009 to establish the '*Minerals and Energy Working Group*' (the Group). Established in response to the recognised need for increased tripartite dialogue and consultation with the industry sector, the Group aims to deliver improved community outcomes for the areas impacted by minerals and energy resource expansion. The Group is chaired independently by the University of New England with representatives from Namoi Councils, NSW Government Departments, individual Local Government authorities, mining and energy companies and the Namoi Catchment Management Authority (CMA). The role of the Group is to share information and build trust and confidence among the three sectors for the purpose of delivering co-ordinated positive mutual outcomes and regional community benefits from minerals and energy resource expansion.

The New England North West Regional Manager's Network considers the growth of the minerals and energy industries as perhaps the most significant factor in the shaping of the communities in the Gunnedah Basin and Liverpool Plains over the next 20 - 50 years and considers it vital that consequent future demands on service delivery are responded to appropriately. The Group also actively engages with industry, other government and community partners in better understanding the nature of change likely to occur, and in developing strategies to both shape, and cope with, those changes (DCP, 2011).

3.2.2 New England North West Strategic Regional Land Use Plan

The *New England North West Strategic Regional Land Use Plan* (SRLUP) was published by the NSW State Government in September 2012.

In social impact terms, it is significant that for the first time this document (and the Upper Hunter Strategic Regional Land Use Plan) constitutes a state based planning document that recognises the regional impacts of specific social issues as a result of mining and resource development. Further, the SRLUP recommends specific policy responses to these issues.

Chapters of the SRLUP that are directly relevant to this SIA are:

- Infrastructure – including social facilities;
- Economic development and employment;
- Housing and settlement;
- Community health and amenity;
- Cultural heritage; and
- Implementation.

Specific policy responses suggested by the SRLUP that are relevant to the impacts and mitigations analysed in this SIA are included in **Section 6**.

3.3 REGIONAL PLANNING INITIATIVES

3.3.1 Namoi 2030 Regional Resource Strategy

The *Namoi 2030 Regional Resource Strategy* (Namoi 2030) (PB, ELP and CARE, 2010) was commissioned by GSC, TRC, LPSC, Narrabri Shire Council (NSC) and the Namoi CMA, with funding from the NSW DP&I and GSC as the lead agency. It was completed by consultants in 2010. It recognises that the Namoi Region is currently embracing the potential growth from its coal and gas reserves. Namoi 2030 aims to provide an overview of a range of issues to help determine a range of co-ordinated actions and recommendations to improve short and long term planning for the region as it approaches 2030, and to ensure the future of the Namoi Valley is sustainable.

The areas of focus in Namoi 2030 include:

- Analysis of the resource stocks in the Namoi Region to 2030, and identification of opportunities and constraints to future utilisation;
- Qualitative assessment of environmental, social and economic impacts associated with resource utilisation in the region;
- Identification of infrastructure needs associated with future scenarios for the region;
- Identification of the resources of each LGA in the region; and
- An overview of the potential future impacts to help determine a framework of recommendations that will inform and strengthen future regional planning and policy direction.

Namoi 2030 developed a number of '*future development scenarios*' for the region, based on a number of premises, broad trends and assumptions. The scenarios are:

- Scenario 1: '*More of the same*'. The population projections from this scenario reflect a continuation of past trends in population growth and industry structure;
- Scenario 2: '*Cruising the commodity surge*'. Under this scenario, there is a trend to real growth in commodity prices that brings additional revenue into agriculture and stimulates further development of the coal and gas resources in the region. This scenario represents growth of the region at a rate faster than in the recent past;
- Scenario 3: '*Local economic development impetus*'. This scenario assumes that local economic development initiatives will stimulate the region's economy, in response to issues currently faced by the region. It generates a growth rate that is similar to that from a sustained period of favourable commodity prices and as such provides an alternative way of building growth in the economy. It is not dependent on a particular change in global conditions, but is mostly within control of the region; and
- Scenario 4 '*Ultimate economic opportunity (the best of everything)*'. This scenario represents a situation where strong commodity prices reinforce the economic development initiatives described in Scenario 3 – hence '*the best of everything*'.

Population and dwelling projections to 2030 for each of the LGAs in the region were then developed based on those Scenarios. The population projections are discussed in **Section 5.2.3** and the dwelling projections at **Section 5.10.8**.

Namoi 2030 then carries through Scenarios 2 and 3 to outline the range of impacts that could be expected in the Region as a result of these Scenarios under the following topics:

- Roads;
- Rail;
- Water;
- Energy / utilities;
- Mining / gas infrastructure;
- Infrastructure related to agriculture, forestry and other commodities;
- Housing; and
- Education and childcare.

For each topic, the impacts expected under Scenarios 2 and 3 are outlined and '*key triggers and actions*' listed.

Recommendations and conclusions are then given, including priorities for further planning analysis and investment and key actions under the following topics:

- Co-operation and coordination;
- Water availability;
- Infrastructure – road, rail, utilities;

- Infrastructure – social services and facilities;
- Mining and Gas;
- Land Use; and
- Biodiversity.

Although Namoi 2030 has not been formally adopted as policy by any of the region's Councils, GSC as the lead agency is widely promoting its use and referencing of the information presented within it.

3.3.2 Gunnedah Liveable Communities Assessment 2011

An assessment of the living conditions of the Gunnedah Shire was prepared by Hunter New England Population Health (HNEPH) in 2011 (HNEPH, 2011). The objectives of the assessment were to:

- Identify social, health and wellbeing needs of current and future residents of the Gunnedah Shire;
- Use assessment data to more broadly inform planning across the Gunnedah LGA; and
- Inform the development of strategic planning documents (particularly urban and social planning) such as:
 - Council's Community Strategic Plan;
 - Council's planning instruments and development guidelines, including the SIA policy; and
 - The development of community infrastructure.

Data for the Gunnedah Liveable Communities Assessment (GLCA) was gathered from three sources:

- Community telephone interviews conducted with people residing across the Gunnedah LGA (338 from Gunnedah township; 108 from the villages of Carroll, Curlewis and Tambar Springs, and 93 from other rural areas);
- Existing information sources (including ABS); and
- Consultation with Aboriginal and Torres Strait Islander people - 97 interviews.

A draft '*Liveability Index*', a measureable indicator of community liveability, was developed and various indicators were also given for the principles of accessibility, connectivity, sustainability and flexibility. Data for each of these measures is reported from data sources, the results of the telephone interviews and consultations described above.

Results of the assessments are divided into chapters that focus on specific topics e.g. employment or education. Specific results of the assessments and consequent recommendations of the GLCA are referenced in the relevant sections of this SIA.

3.3.3 Regional Homelessness Action Plan 2010-2014 New England / North West, 2010

A Regional Homelessness Action Plan (HAP) for the New England / North West Region was prepared by the Department of Human Services and Housing (DHS) in 2010 (DHS, 2010) to prevent and reduce homelessness in the region. The New England / North West Homelessness Planning Committee, coordinated through DHS, are currently addressing issues regarding regional homelessness, as outlined in the HAP.

Key target groups identified in the HAP included:

- Rough sleepers;
- Aboriginal homeless in Supported Accommodation Assistance Program (SAAP) accommodation (Services funded under the SAAP including emergency shelters, hostels and refuges);
- Women escaping domestic violence;
- People with mental illness or drug and alcohol issues who are at risk of homelessness; and
- Young people.

Actions under the HAP focus on five priority areas:

- Flexible, integrated service system;
- Housing and support for people with mental illness;
- Finding and sustaining appropriate long-term accommodation;
- Prevention and early intervention housing; and
- Support for young people.

3.4 LOCAL GOVERNMENT PLANNING DOCUMENTS

A range of policies, strategies and environmental planning instruments relevant to this SIA that were prepared by or for GSC, LPSC and TRC are summarised in **Appendix C**.

3.4.1 Gunnedah Shire Council

The following policies, strategies and environmental planning instruments prepared by GSC that are relevant to this SIA are summarised in **Appendix C**:

- *Gunnedah Community Strategic Plan 2012-2022* (GCSP) (GSC, 2012);
- *Gunnedah Shire Council 2011/12 Management Plan* (GSC Management Plan) (GSC, 2011f);
- *Gunnedah Shire Council Section 94A Contributions Plan 2007* (Gs94A Plan) (GSC, 2007);
- *Gunnedah Shire Social Plan 2005* (GSSP) (GSC, 2005b);
- *Gunnedah Shire Council Draft Open Space Strategy 2009* (GOSS) (ROSS Planning Pty Ltd, 2009);
- *Gunnedah Crime Prevention Plan 2007-2009* (GCPP) (GSC, 2005a);
- *Economic Development Plans* (The Public Practise Pty Ltd, 2007);

- *Gunnedah Local Environmental Study 1982* (GLES 1982) (Planning Workshop Pty Ltd, 1982);
- *Gunnedah Local Environmental Study 2003* (GLES 2003) (Planning Workshop Australia, 2003);
- *Gunnedah Shire Rural Strategy 2007* (GSRS) (Edge Land Planning, 2007a);
- *Gunnedah Shire Commercial and Industrial Land Use Strategy 2008* (CaILUS) (Collie Pty Ltd, 2008); and
- *Gunnedah Local Environmental Plan 2012* (GLEP) (GSC, 2012b).

3.4.2 Liverpool Plains Shire Council

The following policies, strategies and environmental planning instruments prepared by LPSC that are relevant to this SIA are summarised in **Appendix C**:

- *Liverpool Plains Shire Council Community Strategic Plan 2012-2022* (LPSCCSP) (LPSC, 2010b);
- *Liverpool Plains Shire Council Management Plan 2010/11* (LPSCMP) (LPSC, 2010c);
- *Liverpool Plains Shire Council Social Plan 2010-2015* (LPSCSP) (LPSC, 2010d);
- *Liverpool Plains Shire Council Section 94A Contributions Plan 2012* (LPSC s94A Plan) (LPSC, 2012b);
- *Liverpool Plains Shire Cultural Plan 2005/2010* (LPSCP) (LPSC, 2005);
- *Liverpool Plains Shire Council 2009-2012 Tourism Plan* (LPSC TP) (LPSC, 2009);
- *Liverpool Plains Shire Growth Management Study and Strategy 2009* (LPSC GMSS) (Edge Land Planning, 2009); and
- *Liverpool Plains Local Environmental Plan 2011* (LP LEP 2011) (LPSC, 2011a).

3.4.3 Tamworth Regional Council

The following policies, strategies and environmental planning instruments prepared by TRC that are relevant to this SIA are summarised in **Appendix C**:

- *Keychange 2022 – Draft Community Strategic Plan* (TRC DCSP) (TRC, 2011b);
- *Tamworth Regional Council s94 Contributions Plans* (TRC various dates);
- *Tamworth Region Key Industry SWOT Analysis 2008* (SWOT 2008) (AEC Group, 2008);
- *Tamworth Regional Economic Development Strategy: Stage 2, Final Strategy* (TREDs) (SGS Economics and Planning, 2010);
- *Tamworth Regional Council 2011 – 2014 Management Plan* (TRC Management Plan) (TRC, 2011d);
- *Tamworth Regional Council Social Plan 2006* (TRCSP) (TRC, 2006);
- *Tamworth Regional Council Cultural Plan 2010-2015* (TRCCP) (TRC, 2010b);
- *Tamworth Regional Council Recreation and Open Space Plan 2008* (TRCROSP) (ROSS Planning Pty Ltd, 2008);

- *Tamworth Regional Council Tamworth Regional Development Strategy 2008* (TRDS) (GHD Pty Ltd, 2008);
- *Tamworth Regional Local Environmental Plan 2010* (TR LEP 2010) (TRC, 2010a); and
- *Tamworth Regional Council Affordable Housing Strategy 2011* (TRAHS) (TRC, 2011a).

4 ECONOMIC PROFILE

4.1 INTRODUCTION

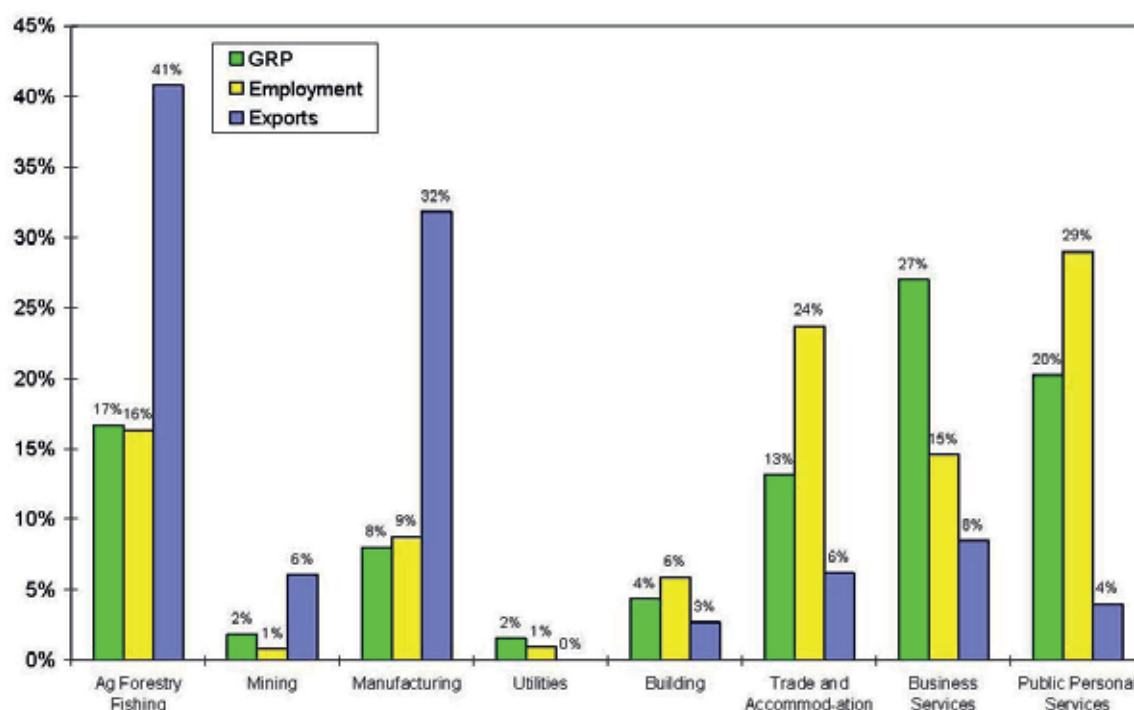
A separate Economic Impact Assessment (EIA) has been prepared by Gillespie Economics (2012) to accompany the Watermark Coal Project EIS.

To complement the information presented in the EIA, and to provide a context to the information provided in the **Section 5** of this SIA, this section briefly describes the economic profile of the Namoi Valley and the Study Area, focussing on relevant recent economic data. It also describes the current economic planning directions of the LGAs within the Sub Regional Study Area.

4.2 CHARACTERISTICS OF THE REGIONAL ECONOMY

The Study Area of the SIA is situated in the Namoi Valley, which defines the '*regional economy*' referred to in this section. A geographic description of the Namoi Valley is given at **Section 1.5**. Namoi 2030 provides extensive details regarding the regional economy, as summarised below.

Figure 4 shows the contribution of the main industry groups in the Namoi Valley to the key measures of gross regional product (GRP), employment and exports.



Source: PB, ELP and CARE, 2010

Figure 4
Industry structure of the Namoi Region economy, 2005-6

Namoi 2030 notes the following trends, as shown in **Figure 4**:

- The critical importance of the agricultural industries;
- The beginnings of significant coal mining;
- The substantial manufacturing sector, which includes a large cereal and meat processing complex located in Tamworth and supplying most of the exports from the region;
- Modest levels of activity in utilities and building; and
- Substantial service industry activities across all of the industries with the highest levels located in Tamworth as the regional centre.

Namoi 2030 describes the dominance of agriculture in the Namoi Valley economy. Agriculture directly accounted for nearly 20% of the economy in 2006 and indirectly provided essential inputs into many of the manufacturing operations in the region. It also supported a range of input suppliers and households. Namoi 2030 states that close to 50% of the regional economy is directly or indirectly dependent on agriculture and that dependence brings with it volatility associated with agricultural production and the vagaries of international commodity markets.

A more detailed view of the industry structure of the Namoi Valley economy is shown in **Figure 5**.

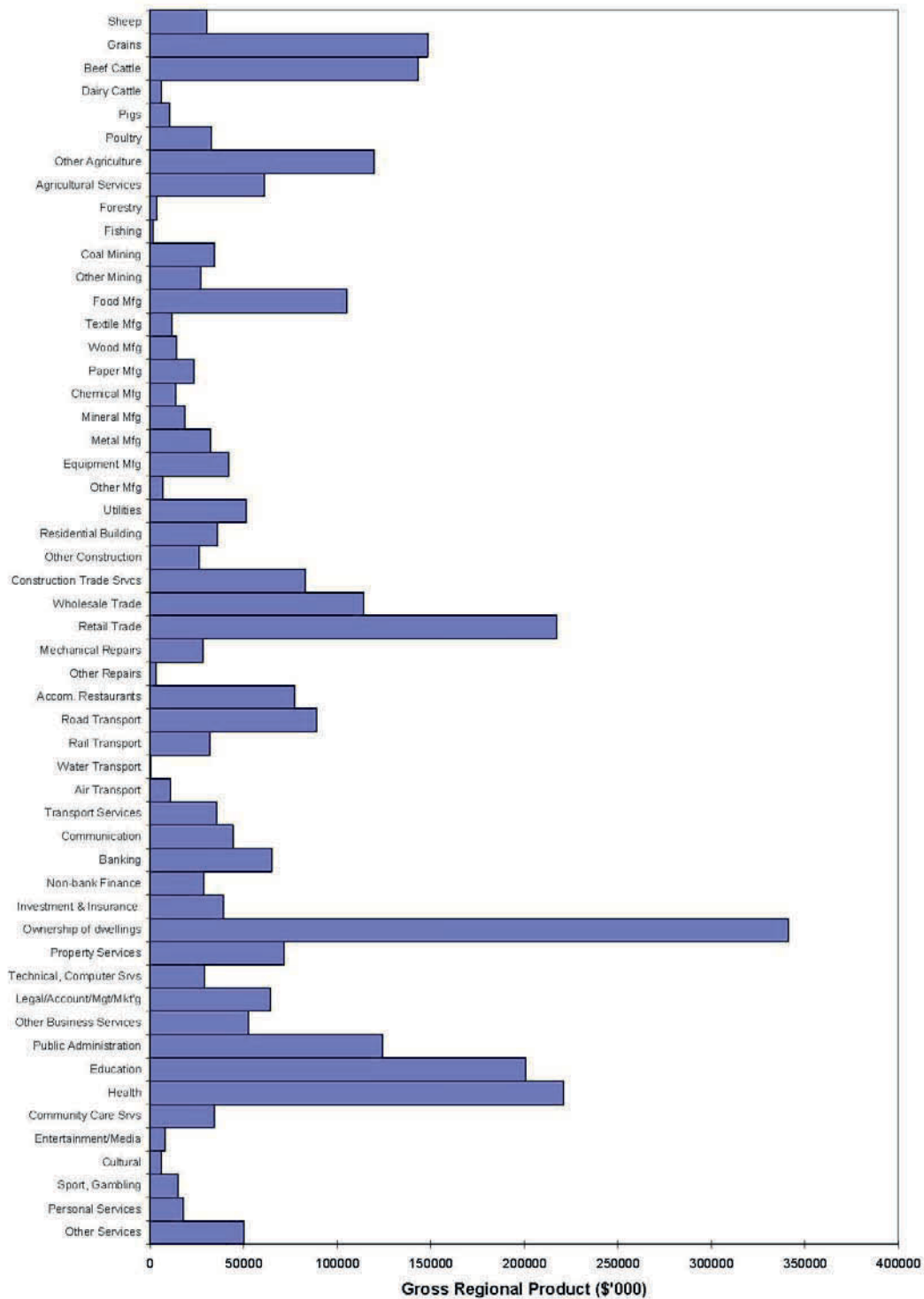
Namoi 2030 states that **Figure 5** confirms the importance of agriculture and the associated food manufacturing industries. Other leading industries include construction trades, retail trade, accommodation and restaurants, road transport, some parts of business services, public administration, education and health. The ownership of dwellings includes housing rentals and imputed rents to owner-occupied housing, being a major value creator in the Namoi Valley.

Namoi 2030 states that in employment terms, the dominant industry in the Namoi Valley is retail trade, although many of those positions are part-time. The industries of public administration, education, health, and the legal and accounting and scientific industries all have a high proportion of professionals in their employment, so their importance as sources of household income are higher than in terms of the number employed. Further details of employment in the Study Area are given in **Section 5.8**.

Namoi 2030 further describes that exports from the Namoi Valley are dominated by agricultural products in both their unprocessed and processed forms. Imports of a variety of inputs are required by most industries, but the most important category of imports is for household consumption at almost 45% of all imports.

Namoi 2030 provides further extensive details regarding the Namoi Valley economy, including:

- Location quotients;
- Coefficients of specialisation (measures of economic diversity);
- Employment change by industry 2001-2006;
- Shift-share analysis;
- Agricultural production 2001 and 2006; and
- Industry service level index.



Source: PB, ELP and CARE, 2010

Figure 5
Industry structure of Gross Regional Product, Namoi 2005-6

4.3 CHARACTERISTICS OF THE LOCAL ECONOMY

This section provides a brief overview of the economies of the Sub Regional Study Area, consisting of the Gunnedah, Liverpool Plains and Tamworth LGAs. Some data is also provided for the Regional Study Area which also includes the Narrabri and Upper Hunter LGAs.

Section 5 details various demographic statistics, including the industry sectors and occupations of employed people in the Sub Regional Study Area, which also forms part of the understanding of the local economy.

4.3.1 Local Government Area Economic Overview

Gunnedah LGA

Gunnedah, 77 km by road to the west of Tamworth, is the service and retail hub of the Gunnedah LGA and beyond. Agriculture, coal mining and coal seam gas exploration are important driving industries that together with local manufacturing and Gunnedah's expanding retail, service and commercial sectors, provide a growing employment base for a stimulated economy (GSC, 2011e).

Liverpool Plains LGA

The Liverpool Plains LGA has a diverse agricultural industry focused mainly on cropping and grazing. Animal production includes the grazing of cattle and sheep with some production of goats, poultry and pigs. Mineral and extractive industries are also important to the LGA with identified and potential resources in coal, manganese, granite, zeolite, hard rock aggregate, construction sand and gravel and shale (de Greenlaw Consultancy, 2006).

The smaller towns of the LGA, particularly Quirindi, Werris Creek and Willow Tree, provide service and retail centres for the surrounding agricultural areas.

Tamworth Regional LGA

Tamworth City is NSW's third largest inland city situated approximately mid way between Sydney and Brisbane (approx 6 / 7 hours each way). It is located at the junction of transport networks from north / south and east / west and has strong agricultural and retail trade industries with Tamworth City being a major livestock and service centre for the region (AEC Group, 2008). Its role as an increasingly dominant regional service centre is underpinned by a strong regional economy based in manufacturing, health and community services, education, logistics, wholesale trades, and tourism and hospitality (TRC, 2012a).

4.3.2 Current Business Activity

The Sub Regional Study Area has an economy that is dominated by the agricultural sector. In the Gunnedah LGA in 2007, 46% of total businesses were in the '*agriculture, forestry and fishing*' sector. In the Liverpool Plains LGA, this was even higher at 53%, while in the Tamworth LGA it was 27%. These proportions compare to NSW where only 9% of businesses in 2007 were from the '*agriculture, forestry and fishing*' sector. The next highest sector for the Gunnedah, Liverpool Plains and Tamworth Regional LGAs was '*property and business services*' at 13%, 10% and 16% respectively (ABS, 2010a).

Table 80 in **Appendix D** shows the number of businesses in the various industry sectors of the LGAs within the Study Area in 2005, 2006 and 2007 and 2011.

Before analysing the data, it should be noted that industry sector categories were altered between the 2007 and 2011 data, with three industry sectors being added in 2011. This means that the data changes between 2011 and previous years must be compared with caution.

Table 80 shows that in terms of the number of businesses in the Study Area:

- The '*agriculture, forestry and fishing*' sector was the largest industry sector in the 2005 to 2007 period for all LGAs in the Study Area and for the three LGAs in the Sub Regional Study Area in 2011. There were:
 - More than 1,000 businesses in the '*agriculture, forestry and fishing*' sector in the combined Gunnedah and Liverpool Plains LGAs in all periods, with approximately another 1,500 in the Tamworth Regional LGA at that time. Narrabri LGA had almost 1,000 businesses in that sector in 2007, with the Upper Hunter LGA registering around 700;
 - From 2005 to 2007, the number of businesses in the '*agriculture, forestry and fishing*' sector fell slightly in the Gunnedah, Tamworth Regional, Narrabri and Upper Hunter LGAs and increased slightly in the Liverpool Plains LGA; and
 - From 2007 to 2011, the number of businesses in the '*agriculture, forestry and fishing*' increased slightly in the Gunnedah LGA and decreased slightly in the Liverpool Plains and Tamworth Regional LGAs.
- In the *mining* sector, there were:
 - 6 businesses in both the Gunnedah and Tamworth Regional LGAs between 2005 and 2011;
 - 3 businesses in the Liverpool Plains LGA in 2005 and 2006, none in 2007 and 3 again in 2011 (the 2007 figure of 0 could be a data error);
 - An increase from 9 to 12 businesses from 2005 to 2007 in the Narrabri LGA (with comparable data not available in 2011); and
 - An increase from 3 to 6 businesses from 2005 to 2007 in the Upper Hunter LGA (with comparable data not available in 2011).

Interpretation of **Table 80** also shows that the number of businesses in each of the LGAs reflects the relative roles and sizes of each of the major towns in those LGAs.

Other published data relating to business activity in the Gunnedah LGA includes:

- Of the 1,341 businesses registered in the Gunnedah LGA at June 2007; 61% were non-employing (i.e. sole trader) (The Public Practice Pty Ltd, 2010); and
- From 2001–2006, the industries which grew most in employment were accommodation and food (101 more jobs), public service (74 more) and other services (63 more) (The Public Practice Pty Ltd, 2010).

4.3.3 Agricultural Economy

Details of the agricultural economy in the Gunnedah and Liverpool Plains LGAs are given in the **Agricultural Impact Statement**, including the value of agricultural production and agricultural industry employment. The **Agricultural Impact Statement** also identifies agricultural enterprises and resources in the Project Area and surrounding locality.

4.3.4 Economic Activity – Past and Present

This section describes the economic changes in the Namoi Valley from 1981 to the present, and describes current economic activity in the LGAs in the Sub Regional Study Area.

Economic Changes 1981 to 2006

Namoi 2030 states that between 1981 and 2006, there were several changes in the economic situation in the Namoi Valley, including:

- Agriculture adjusted, with high productivity growth associated with less on-farm employment;
- Rationalisations occurred in many key industries through the 1990s, with the application of new telecommunication technologies and the restructuring of public enterprises (affecting the banking, wholesale trade, electricity, rail and communications and government administration industries);
- Industries responded to changing international and national market conditions;
- Industries coped with droughts that were severe in the mid 1990's and in the early years of the 2000's; and
- Households and industries responded to changes in the adequacy of essential infrastructure and the costs of using it.

Namoi 2030 states that these changes have caused constraints to growth in population and employment, even though the real level of production in the Namoi Valley has been increasing, albeit at an uneven rate because of the instability arising from the agricultural industries. Over the period up to 2000, there had been limited impacts from booms in agricultural commodity prices. Coal mining activities that had operated in the region were mostly closed in the 1990's due to low profits.

The factors listed above also accorded with anecdotal information collated during interviews particularly with Council staff (GSC, 2011, pers. comm., 17 November; LPSC, 2011, pers. comm., 18 November).

Detailed input-output tables for the Namoi Valley in 2000-2001 and 2005-2006 are given in Namoi 2030.

Recent Economic Activity – Development Approvals and Values

Economic activity since 2006 has been dominated by the growth in the mining and resources sector in the Study Area.

The recent level of economic activity in the Sub Regional Study Area can be partly measured by development statistics generated by the GSC, LPSC and TRC as reported through the NSW DP&I's *Local Development Performance Monitoring Report* program statistics from 2007 to 2010 (DP&I, 2008b; DP&I, 2009; DP&I, 2010), as shown in **Table 4**.

Table 4
Development Approvals and Values - Gunnedah, Liverpool Plains and Tamworth Regional Councils, 2007-2010

Year	Number of Development Applications Approved	No of Complying Development Certificates Issued	Value of Development Applications approved and Complying Development Certificates issued
Gunnedah Shire Council			
2007-8	106	3	\$13,464,640
2008-9	154	17	\$29,177,640
2009-10	182	17	\$42,036,501
TOTAL	442	37	\$84,678,781
Liverpool Plains Shire Council			
2007-8	120	113	\$17,943,647
2008-9	77	64	\$10,328,965
2009-10	76	59	\$12,134,879
TOTAL	273	236	\$40,407,491
Tamworth Regional Council			
2007-8	776	262	\$143,841,878
2008-9	625	267	\$199,133,241
2009-10	549	288	\$136,273,372
TOTAL	1,950	817	\$479,248,491

Source: DP&I, 2008b; DP&I, 2009; DP&I, 2010.

Table 4 shows that both the number and value of Development Applications (DAs) and Complying Development Certificates (CDCs) in the Gunnedah LGA increased from 2007 to 2010; the number and value in Liverpool Plains LGA decreased, and the number and value fluctuated in Tamworth Regional LGA in the same period.

Table 4 also indicates the relative size of the three LGAs' economies, with the total value of DAs approved and CDCs issued in the Tamworth LGA being more than 10 times as much as that in the Liverpool Plains, and more than five times as much as that in the Gunnedah LGA.

Table 5 provides more detail as to the type of developments approved in the Gunnedah and Liverpool Plains LGAs from 2007 to 2010. Note that there is a difference in the total number of development approvals between **Table 4** and **Table 5**, since **Table 5** does not include 'alterations and additions'.

Table 5
Development Approval Types, Gunnedah and Liverpool Plains LGAs, 2007-2010

Sector	2007-8	2008-9	2009-10	TOTAL
	No of DAs Determined and CDCs Issued			
Gunnedah Shire Council				
Residential	36	26	49	111
Tourist	1	5	2	8
Commercial / retail / office	9	23	19	51
Mixed development	0	2	2	4
Infrastructure	0	2	5	7
Industrial	2	17	6	25
Community facility	0	8	9	17
Subdivision only	Not supplied (presumably included in 'other')	14	14	28
Other	8	2	12	22
Total DAs determined and CDCs issued	56	99	118	273
Liverpool Plains Shire Council				
Residential	88	34	19	141
Tourist	5	1	0	6
Commercial / retail / office	15	4	14	33
Mixed development	0	0	0	0
Infrastructure	7	2	0	9
Industrial	1	2	0	3
Community facility	17	1	10	28
Subdivision only	Not supplied (presumably included in 'other')	5	7	12
Other	65	29	15	109
Total DAs determined and CDCs issued	198	78	65	341

Source: DP&I, 2008b; DP&I, 2009; DP&I, 2010

Table 5 demonstrates that the housing sector of both LGAs experienced the greatest level of activity, although the number of housing sector applications determined in the Liverpool Plains LGA declined substantially from 2007 to 2010. The commercial sector was the next largest sector of activity for both LGAs, with Gunnedah particularly experiencing an increase in the latter two reporting periods. Industrial activity was also strong in Gunnedah in 2008/9, although it fell back in 2009/10.

Tourism

The tourism industry in the LGAs of the Sub Regional Study Area contributes substantially to the local economy. For example, in 2007, the Tamworth Region recorded \$20.3 million in takings from accommodation, while short stay accommodation takings in caravan parks across the Tamworth Region were \$2.3 million. There were approximately 1,449 businesses in the Tamworth Region participating in tourism activities in 2007 (TRC, 2010c).

Information regarding tourism accommodation establishments in the Sub Regional Study Area is covered in **Section 5.10.4**, while applicable Council strategies regarding tourism in the Sub Regional Study Area are discussed in the next section.

4.3.5 Planning for Future Economic Development

As recognised in Namoi 2030, the Namoi Valley region is facing major economic structural changes, particularly with regard to the:

- Agricultural sector;
- Mining and resources sector; and
- Choice of housing locations and consequent patterns of increased commuting to work across the region.

This Section will outline the current economic development position, strategies and projects of the three Councils within the Sub Regional Study Area, being Gunnedah Shire, Liverpool Plains Shire and Tamworth Regional Council.

Gunnedah LGA

GSC does not have a specific economic development strategy; however Gs94A Plan recognises that one is required, listing Item *C6.1 Economic Development Strategy for Gunnedah Shire*, costing \$200,000 as a short to medium term item in its Works Schedule.

The most relevant policy document relating to economic development in the Gunnedah LGA is the *Gunnedah Community Strategic Plan 2010-2012* (GCSP) which is outlined in **Appendix C**.

The GCSP recognises that Council plays an important role in supporting economic opportunities for the business community, including:

- Ongoing collaboration with Gunnedah District Development Board and local businesses;
- Partnerships with the Namoi Councils (Namoi ROC) to extend the economic value and potential of the region;
- Work with Village Progress Associations; and
- Strategies for encouraging the growth of industry in the area including appropriately zoned and serviced land.

The GCSP recognises that one of the greatest challenges for the LGA is to diversify its economic base, stating that such diversification is particularly important in:

- Overcoming the trend of Gunnedah Shire losing its younger people;
- Effectively managing the risk of one or more industries experiencing a decline; and

- Attracting and retaining people of all income levels, skills and experience.

Strategies relevant to future economic development that are proposed by the GCSP are:

- Develop a marketing strategy to position Gunnedah as an attractive place for business and investment;
- Foster partnerships between farming, business, mining, community and government to identify economic opportunities; and
- Support a diversified economy that is a balance of all current economic contributors and encourage new industry to set up in the area.

There are other outcomes proposed by the GCSP that also relate to economic development, but these are detailed elsewhere in this SIA in more relevant subject areas, particularly children's services, and secondary and tertiary education.

Tourism Planning

Although GSC does not have an adopted Tourism Strategy, its general aim is to extend visitor nights in the area, and to encourage touring along the Kamilaroi Highway (GSC, 2011, pers. comm., 17 November). There are a number of strategies relevant to tourism that are proposed by the GCSP which are detailed in the GCSP, particularly relating to promotion of partnership events, communication strategies and branding.

Although Gunnedah has a Visitor Information Centre, Gs94A Plan recognises the need for a new Centre.

Liverpool Plains LGA

Although LPSC does not have a specific economic development strategy, its directions for future economic development are articulated in other Council policies and documents, particularly the *Liverpool Plains Shire Council Community Strategic Plan 2010/11 – 2020/21* (LPSCCSP).

Key strategies relevant to future economic development that are proposed by the LPSCCSP are to:

- Promote Liverpool Plains Shire and the environs as a place for families, lifestyle and business;
- Ensure Shire infrastructure and services can facilitate a successful base for industries or businesses established in the Shire;
- Establish regular forums with local business in conjunction with the promotion and marketing of Shire attributes;
- Examine opportunities for joint ventures involving public and private sectors;
- Develop a comprehensive approach to tourism in conjunction with existing agencies;
- Determine the role of Council in the promotion and expansion of selected sustainable investments in the area;
- Identify and pursue sources of funding for infrastructure development linked to investment and economic growth;

- Promote the Shire as an ideal business location for retail, industrial, manufacturing industries and agribusiness; and
- Strengthen and grow the economic prospects of the Shire.

In 2010, before the adoption of the LPSCCSP, LPSC recognised one of its future priorities as “*insulating the community from agricultural downturn*”, explaining in the LPSCSP that Council is continuing to promote new industry and investment within the LGA, not aligned to the regional rural economy, so that economic diversification to protect existing businesses from fluctuations is ensured. The LPSCSP quoted the then recent opening of McVicar’s sawmill and possible expansion of coalmines in the region as examples of economic diversification.

Tourism Planning

LPSC has produced the *Liverpool Plains Shire Council 2009-2012 Tourism Plan* (LPSCTP). Further details regarding the tourism attractions and strategies of the LPSC can be found in the Tourism Plan, in the LPSCSP and the LPSCCP.

Council is part of New England North West Tourism organisation and is a member of the Kamilaroi Highway Affiliation. The relatively new Liverpool Plains information centre is sited on the New England Highway at Willow Tree as a deliberate gateway into the Liverpool Plains Shire.

Tamworth Regional LGA

Tamworth Regional Council’s Regional Economic Development Program provides a platform for the strategic co-ordination of resources and planning for the next 10 to 15 years (TRC, 2012a).

Tamworth Regional Development Corporation (TRDC) is a not-for-profit joint venture between TRC and the local business community and exists to facilitate economic growth across the Tamworth region (TRC, 2012a).

TRC published the *Tamworth Regional Economic Development Strategy: Stage 2, Final Strategy* (TREDs) in July 2010, which was informed in turn by the *Tamworth Region Key Industry SWOT Analysis 2008* (SWOT 2008)(AEC Group, 2008). These documents are discussed in more detail in **Appendix C**.

The *Taminda Revitalisation and Economic Development Strategy* was prepared for TRC in 2008 and commenced with the rezoning and release of approximately 24 hectares of additional industrial lands and 12 hectares for business development (DUO & EJE Architecture, 2008). The rezoning intended to address the previous shortage of industrial land in Tamworth, support the creation of new jobs and boost economic development.

A recent economic development initiative that the TRDC and TRC have been involved in is the ‘*Evocities*’ campaign. Seven of NSW’s leading regional cities united to form the campaign and encourage people to live, work and invest in an ‘*Evocity*’, being Albury, Armidale, Bathurst, Dubbo, Orange, Tamworth and Wagga Wagga. The Evocity name was coined because the cities are centres of ‘Energy, Vision and Opportunity’. The main objective of the campaign is to encourage capital city residents to make the move to an Evocity and invest in the opportunities the cities have to offer. The campaign aimed to showcase the opportunities in these regional cities due to their lower cost of living, strong career and business opportunities and enhanced lifestyle (Evocities, 2012).

5 SOCIAL PROFILE, HOUSING, COMMUNITY INFRASTRUCTURE AND SOCIAL VALUES

5.1 INTRODUCTION

This section contains:

- A demographic profile of the Study Area, with a focus on the Sub Regional Study Area;
- A description of current housing and accommodation characteristics of the Study Area, with a focus on housing demand and supply, cost and future growth issues in the Sub Regional Study Area;
- A description of the current community infrastructure (facilities and services) in the Sub Regional Study Area, along with issues regarding their current provision and an outline of strategies for their future provision; and
- An outline of current perceptions of the following social values in the Sub Regional Study Area, with a focus on the Gunnedah and Liverpool Plains LGAs:
 - Community identity, values, aspirations and lifestyle;
 - Community cohesion;
 - Health and wellbeing; and
 - Social order and community safety.

Presentation and analysis of ABS 2006 and 2011 Census data for the Study Area is a key component of this section.

5.2 POPULATION

The geographic location of the Study Area is shown in **Figure 1** and described at **Section 1.5**. This section describes the population of the component parts of the Study Area in more detail.

5.2.1 Current Population

Gunnedah LGA, in which the Project is located, had a population of 12,066 at the 2011 Census, while neighbouring Liverpool Plains LGA had a population of 7,480 and Tamworth Regional LGA had a 2011 population of 56,292 (ABS, 2012b).

Each year, the ABS publishes Estimates of Resident Populations (ERP) of areas of Australia. At 30 June 2011, the ERP for Gunnedah LGA was 12,353, Liverpool Plains LGA was 7,997 and Tamworth Regional LGA was 60,167 (ABS, 2012a). It can be seen that the actual population taken at the August 2011 Census varies from the ERPs given for June 2011.

Table 6 shows the 2006 and 2011 Census populations of the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, as well as the component urban settlements within those LGAs. The 2006 and 2011 populations of neighbouring LGAs and the Northern SD / NENWSA4 are also listed in **Table 6**.

To describe populations of small areas within Australia, the Census uses a range of ‘*Geographic Areas*’ which in this SIA are (in descending population sizes):

- Statistical Divisions (2006) / SA4s (2011);
- LGAs;
- State Suburbs;
- Urban centres or localities; and
- Collection Districts (which can be amalgamated into larger areas) (2006 only).

The ABS 2006 Geographic Areas used in this SIA are shown on **Figure 2**. It should be noted that some Geographic Areas outlined on **Figure 2** are not used in the SIA; hence their names are not given in the text of **Figure 2**. It should be further noted that the Curlewis area is represented in the 2006 ABS Census by two Geographic Areas that are both referred to in this SIA – one is the ‘*Curlewis Urban Centre*’ which covers the extent of the Curlewis village area; the other is the ‘*Curlewis State Suburb*’, which represents the rural area that includes the Project Boundary and areas immediately adjoining it.

In 2011, the boundaries of many State Suburbs and Urban Centres and Localities had changed from 2006, some substantially. **Table 76** in **Appendix B** shows the comparability between the Census Geographic Areas. Many areas are not comparable, hence the notes in **Table 6** below.

Table 6 also shows ‘*estimated population*’ for some villages in the Study Area that are covered by a 2006 and 2011 ‘*State Suburb*’ Census classification. Since these ‘*State Suburb*’ classifications include a larger area than the actual settled village area, an estimate of the 2011 population of each village has been made by counting the number of dwellings in each village area (by aerial photo interpretation) and applying the Liverpool Plains LGA’s 2011 occupancy rate of 2.4 to reach an estimated population.

Also note that the 2006 populations shown for each of the LGAs in **Table 6** do not represent the total of the urban centre / localities and / or state suburbs in the rows above them. This is because the urban centre / localities and state suburbs do not represent the total population of the LGA. The ‘*remainder*’ of the LGAs’ rural areas (i.e. outside those urban centre / localities and state suburbs) are not shown specifically in this table.

Table 6
Local and Regional Populations

Geographic area and 2006 Census Geographic Classification	2006 Census Population	2011 Census Population	Estimated Number of Dwellings in Village area (a)	Estimated Population of Village Area 2011 (a)
Gunnedah (Urban Centre / Locality)	7,541	7,888 (partly comparable)	N/A	N/A
Curlewis (Urban Centre / Locality)	604	589 (partly comparable)	N/A	N/A
Curlewis (State Suburb)	755	Not comparable	N/A	N/A
Breeza (State Suburb)	135	Not comparable	25	63
Carroll (Collector Districts amalgamation)	198	176 (partly comparable)	N/A	N/A
Gunnedah LGA	11,524	12,066	N/A	N/A
Quirindi (Urban Centre / Locality)	2,607	2,580 (partly comparable)	N/A	N/A
Werris Creek (Urban Centre / Locality)	1,489	1,437 (partly comparable)	N/A	N/A
Spring Ridge (State Suburb)	439	389 (partly comparable)	50	120
Blackville (State Suburb)	179	Not comparable	15	36
Carroona (State Suburb)	179	90 (partly comparable)	16 at Carroona and 40 at Walhallow	134
Willow Tree (State Suburb)	168	Not comparable	N/A	N/A
Currabubula (State Suburb)	388	321 (partly comparable)	41	98
Liverpool Plains LGA	7,540	7,480	N/A	N/A
Tamworth (Urban Centre / Locality)	32,405	36,131 (partly comparable)	N/A	N/A
Tamworth Regional LGA	53,590	56,292	N/A	N/A
Narrabri LGA	13,117	12,925	N/A	N/A
Upper Hunter LGA	12,975	13,754	N/A	N/A

Geographic area and 2006 Census Geographic Classification	2006 Census Population	2011 Census Population	Estimated Number of Dwellings in Village area (a)	Estimated Population of Village Area 2011 (a)
Northern SD (2006) and New England and North West SA4 (2011)	172,396	176,194	N/A	N/A

Source: ABS, 2007; ABS, 2011b; ABS 2012b & aerial photo interpretation:

Note (a): Estimated population of defined urban settlement as interpreted from approximate count of dwellings using aerial photo interpretation and 2011 occupancy rate of 2.4 for Liverpool Plains LGA

Note: Population based on place of place of usual residence

A brief description of the urban settlements (i.e. villages, towns and Tamworth City) in the Sub Regional Study Area (in order of proximity to the site) is given below. A description of the Northern SD / NENWSA4 is also given.

Breeza

Breeza is the nearest settlement to the Project, being 3 km to the south on the Kamilaroi Highway, which had a 2006 Census population of 135. However, Breeza's 'State Suburb' geographic classification used by the Census incorporates a larger area than the apparent settled village area. Breeza village contains approximately 25 dwellings (GoogleMaps, 2011) and therefore its current estimated population is 63, based on Gunnedah LGA's 2006 occupancy rate of 2.5. The 2011 Census population was not comparable with 2006.

Curlewis

Curlewis township is located 9 km north of the Project Boundary and 13 km from Gunnedah, and had a 2006 Census population of 604 (5% of the population of the Gunnedah LGA). In 2011, the population was 589, although the geographic boundaries of the Census area had changed from 2006.

Caroona / Walhallow

Caroona / Walhallow is 24 km south of the Project Boundary, and straddle the boundary of the Gunnedah and Liverpool Plains LGAs. It had a 2006 Census population of 179 (2% of the Liverpool Plains LGA population). However, Caroona's 'State Suburb' geographic classification used by the Census incorporates a larger area than the apparent settled village area. The combined Caroona / Walhallow current (2011) estimated population is therefore 134, based on 16 dwellings at Caroona and 40 at Walhallow, ascertained from aerial photo interpretation.

In 2011, the Census population of the State Suburb was 90, although the geographic boundaries of the Census area had changed from 2006.

Currabubula

Currabubula village is located 31 km east of the Project Boundary (via Currabubula-Breeza Road), and had a 2006 Census population of 388 (5% of the Liverpool Plains LGA population). However, Currabubula's 'State Suburb' geographic classification used by the Census incorporates a larger area than the apparent settled village area. Currabubula village's current (2011) estimated population is therefore 98, based on 41 dwellings from aerial photo interpretation, 2011.

In 2011, the Census population of the State Suburb was 321, although the geographic boundaries of the Census area had changed from 2006.

Spring Ridge

Spring Ridge is 30 km south-west of the Project Boundary and had a 2006 Census population of 439 (6% of the Liverpool Plains LGA population). However, Spring Ridge's 'State Suburb' geographic classification used by the Census incorporates a larger area than the apparent settled village area. Spring Ridge village's current (2011) estimated population is therefore 120, based on 50 dwellings ascertained from aerial photo interpretation.

In 2011, the Census population of the State Suburb was 389, although the geographic boundaries of the Census area had changed from 2006.

Werris Creek

Werris Creek is 31 km south-east of the Project Boundary and had a 2006 Census population of 1,489 (20% of the Liverpool Plains LGA population). In 2011, the Census population was 1,437, although the geographic boundaries of the Census area had changed from 2006.

Gunnedah

The largest urban settlement in the Gunnedah LGA is the town of Gunnedah, 35 km north of the Project Boundary, with a 2006 Census population of 7,541, which constituted 65% of the population of the Gunnedah LGA. In 2011, the Census population was 7,888, although the geographic boundaries of the Census area had changed from 2006.

Quirindi

Quirindi is 43 km south-east of the Project Boundary, and had a 2006 Census population of 2,607 (35% of the Liverpool Plains LGA population). In 2011, the Census population was 2,580, although the geographic boundaries of the Census area had changed from 2006.

Willow Tree

Willow Tree is 58 km south-east of the Project boundary, and had a 2006 Census population of 168 (2% of the Liverpool Plains LGA population). The 2011 Census population was not comparable with 2006.

Blackville

Blackville is 60 km south of the Project Boundary, and had a 2006 Census population of 179 (2% of the Liverpool Plains LGA population). However, Blackville's 'State Suburb' geographic classification used by the Census incorporates a larger area than the apparent settled village area. Blackville village's current (2011) estimated population is therefore 36, based on 15 dwellings ascertained from aerial photo interpretation. The 2011 Census population was not comparable with 2006.

Carroll

Carroll township is located 61 km north of the Project Boundary (via Gunnedah) on the Oxley Highway, and had a 2006 Census population of 198. In 2011, the Census population was 176, although the geographic boundaries of the Census area had changed from 2006.

Tamworth

The regional city of Tamworth is located 76 km to the east of Gunnedah (via the Oxley Highway), and 80 km north-east of the Project Boundary (via Werris Creek). The urban centre of Tamworth had a 2006 Census population of 32,405. The 2011 Census population was not comparable with 2006.

Northern Statistical Division (2006) and New England and North West SA4 (2011)

The 2006 Census SD of 'Northern' and the 2011 Census SA4 of 'New England and North West' are used for comparative analysis in this section and had a 2006 population of 172,396 and 2011 population of 176,194. They include LGAs in the northern sector of NSW, including Gunnedah, Liverpool Plains, Tamworth, Armidale, Narrabri, Glenn Innes and up to the Queensland border. In 2006, Gunnedah and Liverpool Plains LGAs contained 7% and 4% of the Northern SD's population, respectively, while Tamworth LGA accounted for 19% of the SD's population.

5.2.2 Past Population Growth

Population Change Pre-2006

Census data for the Gunnedah, Liverpool Plains and Tamworth Regional LGAs from the Census years of 1996, 2001, 2006 and 2011 are given in **Table 7**. It should be noted that the figures in this table differ from that in **Table 6**, as **Table 6** sources population 'based on place of usual residence', while **Table 7** sources Census Time Series Profiles (ABS 2007d and ABS 2012c), which only use population 'based on place of enumeration'.

Table 7
Population - Gunnedah, Liverpool Plains and Tamworth Regional LGAs, 1996 to 2011

Census Year	Population, Gunnedah LGA	Population, Liverpool Plains LGA	Population, Tamworth Regional LGA
1996	12,819	7,374	51,147
2001	11,846	7,352	51,957
2006	11,524	7,310	53,695

Census Year	Population, Gunnedah LGA	Population, Liverpool Plains LGA	Population, Tamworth Regional LGA
2011	12,203	7,284	56,089
Change 1996-2006	-1,295 (-10%)	- 64 (- 0.1%)	2,548 (5.0%)
Change 2006-2011	679 (5.9%)	-26 (-0.4%)	2,394 (4.5%)

Source: ABS, 2007d and ABS, 2012c . Note : Population based on place of enumeration

Table 7 shows that from 1996 to 2006:

- Gunnedah LGA's population declined 10%;
- Liverpool Plains LGA's population fell marginally at -0.1%; and
- Tamworth Regional LGA's population increased by 5%.

In addition, LPSC recognises that between 1986 and 2001, the LGA's population declined by nearly 9% (LPSC Cultural Plan 2005/2010).

Table 7 also shows that from 2006 to 2011:

- Gunnedah LGA's population reversed its previous decrease by increasing by almost 6%;
- Liverpool Plains LGA's population continued to fall marginally at -0.4%; and
- Tamworth Regional LGA's population continued its previous increase at 5%.

Population change between 2001 and 2006 of selected towns and villages within the Gunnedah and Liverpool Plains LGAs, as well as Tamworth, is given in **Table 8**.

Table 8
Population change, 2001 – 2006, selected towns and areas

Area	Population 2001	Population 2006	2001-2006 change	
			Number	Percent
Caroona / Walhallow	147	178	31	21%
Curlewis	575	604	29	5%
Gunnedah	8,300	8,046	-254	-3%
Quirindi	2,540	2,608	68	3%
Spring Ridge	132	80	-52	-39%
Tamworth	33,203	34,117	914	3%
Werris Creek	1,446	1,488	42	3%
Willow Tree	190	168	-22	-12%

Source: Modified from PB, ELP & CARE, 2010

Table 8 shows a decline in population for Gunnedah between 2001 and 2006. This is supported with anecdotal evidence that the population of the town declined after the closure of local coal mines (Pers comm. Interviews with GSC staff, 17 November 2011). Willow Tree and Spring Ridge also experienced some decline, while all the other areas increased population. However, it is not known whether the geographic areas cited in this table are the same geographic areas that are presented in this SIA. For this reason, population change in these areas has not been provided for the period 2006 to 2011, as the geographic areas of comparison could be incompatible.

Regarding historical population growth in the Gunnedah LGA, GSC 2001 states that population growth increased by 1.92% between 1981 and 1986 and by 1.96% between 1987 and 1990. However, between 1991 and 1996, the population of the Gunnedah LGA declined.

Estimated Resident Population 2006-2011

Estimates of the resident population (ERP) for the LGAs in the Study Area are listed in **Table 9** from 2006 (the date of the last Census) to the most recent ERP in 2011.

Table 9
Estimated Resident Population, 2006-2011

LGA	2006	2007	2008	2009	2010	2011	Change 2006 - 2011	Annual Average Growth Rate 2006 - 2011
Gunnedah LGA	12,007	12,039	12,038	12,150	12,244	12,353	2.9%	0.6%
Liverpool Plains LGA	7,865	7,884	7,915	7,933	7,951	7,997	1.7%	0.3%
Tamworth LGA	55,939	56,709	57,434	58,515	59,357	60,167	7.6%	1.5%
Narrabri LGA	13,734	13,589	13,566	13,693	13,717	13,769	0.3%	0.1%
Upper Hunter LGA	13,589	13,607	13,846	14,043	14,173	14,373	5.8%	1.2%
NSW	6,816,087	6,904,942	7,014,887	7,127,168	7,220,020	7,302,174	7.1%	1.4%

Source: ABS, 2012a

Table 9 shows that there has been:

- A small but positive turnaround in population growth in the Gunnedah and Liverpool Plains LGAs from 2006 to 2011. In this time, the ABS estimated that Gunnedah LGA increased by 346 people (2.9%) and Liverpool Plains LGA by 132 people (1.7%). This growth is in contrast to the negative growth experienced by both LGAs (but particularly Gunnedah LGA) between 1996 and 2006, as shown in **Table 7**;
- Significant growth in Tamworth Regional LGA from 2006 to 2011 with a 7.6% increase (or 4,228 people) over that time;
- Minimal growth in the Narrabri LGA; and
- Strong growth in the Upper Hunter LGA, of 5.8% from 2006 – 2011.

Discussions with GSC staff indicated possible reasons for the population decline in the LGA in the 1990s and early 2000s. Staff considered that the decline at that time was due to:

- The decline in the size of the then Department of Agriculture and Water Resources in the mid 1990's. For example, government extension officers were moved to Tamworth;
- The local abattoir reduced employment from 1995 from its peak of 450 employees and eventually closed;
- The closure of local coal mines, losing approximately 250 employees; and
- Drought causing a decline in the agricultural industry (GSC, 2011, pers. comm., 17 November).

5.2.3 Future Population Growth

There are various sources of data for the Study Area that provide future population estimates. Population growth for LGAs across NSW is provided annually by the DP&I, however recent studies and strategies prepared in the region provide more accurate estimates of likely future population growth.

NSW Department of Planning and Infrastructure Population Projections

Table 10 details projected population and growth rates for the LGAs in the Study Area, and adjoining LGAs, from 1996 to 2036. These projections are supplied by the DP&I for each LGA in NSW and use standardised demographic modelling, including expected natural increase in population (i.e. births over deaths) and net migration assumptions.

Table 10
NSW Department of Planning and Infrastructure - Projected Population and Growth Rates, 1996 - 2036

Year	Gunnedah		Liverpool Plains		Tamworth Regional		Narrabri		Upper Hunter	
	Resident Population at 30 June	Annual Growth Rate for Previous 5 Years	Resident Population at 30 June	Annual Growth Rate for Previous 5 Years	Resident Population at 30 June	Annual Growth Rate for Previous 5 Years	Resident Population at 30 June	Annual Growth Rate for Previous 5 Years	Resident Population at 30 June	Annual Growth Rate for Previous 5 Years
1996	12,900		8,000		52,300		14,300		13,400	
2001	12,400	-0.8%	8,000	0	54,000	0.6%	14,500	0.3%	13,500	0.2%
2006	12,000	-0.7%	7,900	-0.4%	55,900	0.7%	13,700	-1.1%	13,600	0.1%
2011	11,700	-0.5%	7,800	-0.3%	57,600	0.6%	13,200	-0.8%	13,500	-0.2%
2016	11,300	-0.7%	7,600	-0.4%	59,200	0.5%	12,600	-0.9%	13,400	-0.1%
2021	10,900	-0.7%	7,400	-0.5%	60,600	0.5%	12,000	-1.0%	13,300	-0.1%
2026	10,400	-0.9%	7,200	-0.6%	61,900	0.4%	11,400	-1.1%	13,200	-0.2%
2031	9,900	-1.0%	7,000	-0.6%	62,900	0.3%	10,700	-1.3%	13,000	-0.2%
2036	9,400	-1.1%	6,800	-0.8%	63,400	0.2%	9,900	-1.4%	12,900	-0.3%

Source: ABS, 2011b; NSW DoP, 2010

Note: Data for 1996, 2001 and 2006 are final estimated resident population.

Note: Annual growth rates may not be exact due to rounding in DoP 2010 data

For Gunnedah LGA, the projections in **Table 10** predicted a decreasing population from 1996 to 2036, with a population of only 9,400 projected for 2036. The components of this decreasing growth assume a gradual decline in natural increase and net migration of -440 people in most five year periods.

Liverpool LGA exhibits similar, although less pronounced characteristics, showing a decreasing population from 1996 to 2036, with a 2036 population projection of 6,800. Also similar to Gunnedah LGA, the components of this decreasing growth assume a gradual decline in natural increase and net migration of people of -160 people in each five year period.

Upper Hunter LGA also shows a slight decrease in population from 1996 to 2036, with a 2036 population projection of 12,900.

Narrabri LGA also shows a decline in population from 1996 to 2036, with a 2036 population projection of 9,900.

Tamworth Regional LGA is the only LGA to show forecasted positive growth, with a 2036 population projection of 63,400, which is 11,100 more than 1996.

However, these DP&I projections do not take into account local conditions, such as the likely increase in population that will accompany future coal and resource projects in the Study Area.

Namoi Regional Resource Strategy

The Namoi 2030 developed a set of population projections for the Namoi Region, based on four scenarios that are explained at **Section 3.3.1**.

Population projections in Namoi 2030 were prepared for all the LGAs within the Namoi Region for each year from 2006 to 2030. **Table 11** shows selected Namoi 2030 projections for each of the four scenarios for the LGAs within the Study Area of this SIA (Gunnedah, Liverpool Plains, Narrabri and Tamworth Regional). The years shown in **Table 11** are for 2006, 2011 and 2012 (to coincide with the publication of this SIA) and then for the forthcoming Population Census years of 2016, 2021, 2026 and 2030. Note that the DP&I population projections are shown as '*State Projections*'.

Table 11
Namoi 2030 Population Projections 2006 - 2030

LGA Scenario	2006	2011	2012	2016	2021	2026	2030
Gunnedah							
Scenario 1: More of the Same	11,524	11,644	11,668	11,764	11,884	12,004	12,100
Scenario 2: Cruising the Commodity Surge	11,524	12,508	12,705	13,493	14,477	15,461	16,249
Scenario 3: Local Economic Development Impetus	11,524	12,220	12,359	12,916	13,613	14,309	14,866
Scenario 4: The Best of Everything	11,524	12,628	12,849	13,733	14,837	15,942	16,825
State Projections	11,980	11,610	N/A	11,290	11,030	10,790	10,530
Liverpool Plains							
Scenario 1: More of the Same	7,541	7,620	7,635	7,698	7,777	7,855	7,918
Scenario 2: Cruising the Commodity Surge	7,541	8,185	8,314	8,829	9,473	10,118	10,633
Scenario 3: Local Economic Development Impetus	7,541	7,997	8,088	8,452	8,908	9,363	9,728
Scenario 4: The Best of Everything	7,541	8,264	8,408	8,986	9,709	10,432	11,010
State Projections	7,850	7,690	N/A	7,550	7,440	7,350	7,240
Narrabri							
Scenario 1: More of the Same	13,118	13,255	13,282	13,391	13,528	13,665	13,774
Scenario 2: Cruising the Commodity Surge	13,118	14,238	14,463	15,359	16,479	17,600	18,496
Scenario 3: Local Economic Development Impetus	13,118	13,911	14,069	14,703	15,496	16,288	16,922
Scenario 4: The Best of Everything	13,118	14,375	14,627	15,632	16,889	18,147	19,152
State Projections	14,060	13,530	N/A	13,070	12,670	12,290	11,900

LGA Scenario	2006	2011	2012	2016	2021	2026	2030
Tamworth							
Scenario 1: More of the Same	53,597	56,634	57,242	59,671	62,708	65,746	68,175
Scenario 2: Cruising the Commodity Surge	53,597	58,175	59,091	62,753	67,331	71,909	75,572
Scenario 3: Local Economic Development Impetus	53,597	58,287	59,225	62,976	67,666	72,356	76,108
Scenario 4: The Best of Everything	53,597	59,571	60,766	65,545	71,518	77,492	82,271
State Projections	54,690	55,910	N/A	57,410	59,180	61,030	62,830

Source: PB, ELP & CARE, 2010

Comparison of regional population predictions

Table 12 shows that the DP&I population projections (shown as 'State Projections' in **Table 11**) are significantly lower than the projections in the Strategy under all four Namoi 2030 scenarios.

Table 12
Difference between Namoi 2030 Population Projection and NSW DP&I Projections

LGA and Namoi 2030 Scenario	2030 Population Projection #	Difference between State Projection* and Namoi 2030 Scenario Projection (population)	
		No	%
Gunnedah			
Scenario 1: More of the Same	12,100	1,570	15%
Scenario 2: Cruising the Commodity Surge	16,249	5,719	54%
Scenario 3: Local Economic Development Impetus	14,866	4,336	41%
Scenario 4: The Best of Everything	16,825	6,295	60%
State Projection	10,530		
Liverpool Plains			
Scenario 1: More of the Same	7,918	678	9%
Scenario 2: Cruising the Commodity Surge	10,633	3,393	47%
Scenario 3: Local Economic Development Impetus	9,728	2,488	34%
Scenario 4: The Best of Everything	11,010	3,770	52%

LGA and Namoi 2030 Scenario	2030 Population Projection #	Difference between State Projection* and Namoi 2030 Scenario Projection (population)	
		No	%
State Projection	7,240		
Narrabri			
Scenario 1: More of the Same	13,774	1,874	16%
Scenario 2: Cruising the Commodity Surge	18,496	6,596	55%
Scenario 3: Local Economic Development Impetus	16,922	5,022	42%
Scenario 4: The Best of Everything	19,152	7,252	61%
State Projection	11,900		
Tamworth			
Scenario 1: More of the Same	68,175	5,345	9%
Scenario 2: Cruising the Commodity Surge	75,572	12,742	20%
Scenario 3: Local Economic Development Impetus	76,108	13,278	21%
Scenario 4: The Best of Everything	82,271	19,441	31%
State Projection	62,830		

Source: PB, ELP & CARE, 2009; NSW DoP, 2010

For all LGAs in 2030, the Namoi 2030 Scenario 1 '*More of the same*' is still 9-16% higher than the DP&I's population predictions. The Namoi 2030 Scenario 4 '*The Best of Everything*' is 60% higher than the DP&I's population projections for the Gunnedah LGA, 61% for the Narrabri LGA, 52% for the Liverpool Plains LGA, and 31% for Tamworth LGA.

These differences have significant implications for the planning of facilities and services in the region into the future, as discussed in later sections. Dwelling projections, based on these population projections, are given in **Section 5.10.8**.

Gunnedah Shire Council Population Projections

Various GSC documents reference population projections, as outlined below.

Section 94A Contributions Plan 2007

Gs94A Plan states that recent (pre 2007) development activity primarily associated with coal mining development and associated industrial activities in and adjoining the LGA suggests that after a relatively dormant period of growth that Gunnedah is likely to experience a significant population increase. It is projected that the town may increase in population by 1,500 persons within five years or 3.33% annually. These projections were based on current (2007) and expected development, together with rezoning proposals known at that time across the LGA.

Commercial and Industrial Land Use Study 2008

The CaLLUS noted that recent (pre 2008) housing and dwelling activity suggested that the population was about to enter a growth phase. The extent and magnitude of this growth phase duration was not then clear, and there was uncertainty at the time about future levels of industrial development in the LGA. A series of population projections reflecting high, medium and low growth scenarios were presented in the CaLLUS. The population projection scenarios prepared for the CaLLUS are given in **Table 13**, while the assumptions used in these population projections are given in the CaLLUS.

Table 13
Population Projection Scenarios, Gunnedah Shire – 2016 and 2031

Location	2016 Estimated Population			2031 Estimated Population		
	High Growth Scenario	Medium Growth Scenario	Low Growth Scenario	High Growth Scenario	Medium Growth Scenario	Low Growth Scenario
Gunnedah Township	8,660	8,400	8,170	10,640	10,070	9,340
Rural Balance	3,860	3,860	3,660	3,720	3,720	3,400
Total shire of Gunnedah	12,520	12,260	11,830	14,360	13,790	12,740

Source: Collie Pty Ltd, 2008

Table 13 shows that by 2031, there could be a difference in population between the high and low scenario for the Shire of 1,620 people.

For the Gunnedah Township from 2006 to 2016, under a high growth scenario, the population would increase from approximately 7,500 to 8,660, an increase of approximately 1,160 or 15%. Under a low growth scenario, from 2006 to 2016, the township would increase to 8,170, an increase of approximately 670 or 9%.

At the same time, the population of the '*rural balance*' of the LGA would continue to decline, from a 2006 population of approximately 4,000 to a low growth scenario of 3,660 (a decline of 340, or -8.5%) or a high growth scenario of 3,860 (a decline of 140, or -3.5%).

These figures extrapolate further to 2031, where the Gunnedah township under a high growth scenario would increase from approximately 7,500 (in 2006) to 10,640 in 2031, an increase of approximately 3,140 or 42%. Under a low growth scenario, from 2006 to 2031, the township would increase to 9,340, an increase of approximately 1,840 or 25%. Similar to the 2006-2016 projections, the population of the '*rural balance*' of the Shire would continue to decline to 2031, from a 2006 population of approximately 4,000 to a low growth scenario of 3,400 in 2031 (a decline of 600, or -15%) or a high growth scenario of 3,720 (a decline of 280, or -7%) (PB, ELP & CARE, 2010).

Gunnedah Open Space Strategy 2009

The population growth assumption in the GOSS was that an additional 750 people would be added to the LGA's population every five years, with nearly all this growth occurring in Gunnedah. It was recognised that some growth may occur in Curlewis but it was unlikely to be sufficient to affect the supply of open space. Other villages are likely to stay steady or decline slightly.

Gunnedah Economic Development Portrait 2010

A more recent study commissioned by GSC states that from 2004 to 2009, the estimated population rose by 139, an annual rate of 0.2%. At this rate, it would be 12,190 by 2010 and 12,331 by 2015. This figure is above the 11,300 projected by the DP&I in **Table 10**, which assumes a growth rate of between -0.5% to -0.7%.

Namoi 2030 Regional Resource Strategy 2010

Although the Namoi 2030 has not been formally adopted as policy by GSC, the information presented in it is being widely used. GSC staff are currently using Scenario 2 '*Cruising the commodity surge*' as a reference for future planning (GSC, 2011, pers. comm., 17 November). As shown in **Table 11** above, the projections for this Scenario are significantly higher than for any of the projections quoted in the various Council documents above.

Liverpool Plains Shire Council Population Projections

LPSC recognised in its LPSCCP that data from the 2001 Census showed a negative population trends, but that recent (pre 2005) economic development within the LGA suggested that the population would be likely to increase by about 4% per year and a best case of about 6%.

In 2007, the then LPSC s94A Plan projected that the LGA may increase in population by 2% per annum annually for the period 2001 – 2015, leading to a projected population of 9,556. These population projections were based on both current and expected development, together with rezoning proposals known at that time across the LGA.

In 2012, the LPSC s94A Plan adopted the Namoi 2030 'cruising the commodity surge' scenario for Liverpool Plains LGA's population projections, stating that the population would rise to 10,000 by 2025.

Tamworth Regional Council Population Projections

The *Tamworth Urban Section 94 Contributions Plan 2006-2011* (TRC, 2005), makes a projection of population only until 2011, using population Census data from 1981 to 2001 to form the basis of its projection. It projects a population for the Tamworth urban area in 2011 to be 39,198, while establishing the level of population growth in the whole LGA at 1,903 people per annum (1%) between 2006 and 2011. Assumptions regarding this level of growth are given in the TU s94 Plan, but they do not include consideration of an increase in population as a result of potential resource development in the Gunnedah Basin.

Recent planning documents from TRC do not appear to give alternate population projections to that of the DP&I's given in **Table 10**.

5.3 AGE STRUCTURE

This section documents the current age structure of the Study Area and the past and projected age structures for the LGAs within the Sub Regional Study Area.

5.3.1 Current Age Structure

The median age of the LGAs within the Study Area for 2006 and 2011 and the component urban settlements of the LGAs within the Sub Regional Study Area for 2006 are outlined in **Table 14**. As explained previously, some Census geographic areas were not compatible between the 2006 and 2011 Censuses, so data for these areas is noted as 'not comparable'. The table also shows the 2006 and 2011 median ages for the Northern SD / NENWSA4 and NSW.

Table 14
Median Age, 2006 and 2011

Geographic Area	Median age of persons	
	2006	2011
Gunnedah Urban Centre / Locality	41	39
Curlewis Urban Centre / Locality	37	40
Breeza State Suburb	40	Not comparable
Carroll Amalgamated CDs	36	Not comparable
Gunnedah LGA	40	40
Quirindi Urban Centre / Locality	44	43
Werris Creek Urban Centre / Locality	46	46
Spring Ridge State Suburb	43	42
Blackville State Suburb	43	Not comparable
Carroona State Suburb	33	31
Currabubula State Suburb	43	49
Willow Tree State Suburb	50	Not comparable
Liverpool Plains LGA	43	44
Tamworth Urban Centre / Locality	36	Not comparable
Tamworth Regional LGA	38	39
Narrabri LGA	37	39
Upper Hunter LGA	39	39
Northern SD (2006) and New England North West SA4 (2011)	38	40
NSW	37	38

Source: ABS, 2007a and ABS, 2012b

Table 14 shows that in 2011, Liverpool Plains LGA's median age of 44 is higher than any of the other LGAs. All LGAs had a higher median age in 2011 than that of NSW (38). Most urban settlements within the Gunnedah and Liverpool Plains LGAs show higher than average median ages in 2011, with Currabubula the highest of all (53) and Caroona being the lowest by far (31).

This higher than average median age correlates with the trend outlined below showing a decline in the proportion of younger people and an increase in the proportion of older people.

The 2011 age structure of the LGAs within the Study Area is outlined in **Table 15** which compares the LGAs to the NENWSA4 and NSW.

Table 15 shows that:

- All LGAs in the Study Area except Liverpool Plains LGA have a higher proportion of younger people (under 15) than NSW (20%); and
- Similarly, all LGAs have a higher proportion of older people (over 55) than NSW (27%), particularly Liverpool Plains LGA with 35%.

Further analysis of 2006 Census data for smaller geographic areas within the Sub Regional Study Area (ABS, 2007a) shows that:

- The Gunnedah Urban Centre had a similar proportion of people under 15 (21%) as the Gunnedah LGA (22%), while the Curlewis Urban Centre (also within Gunnedah LGA) had a much higher proportion of young people (28%);
- The Gunnedah Urban Centre had a higher proportion of people over 55 (32%) as the Gunnedah LGA (29%), while the Curlewis Urban Centre had a much smaller proportion of people over 55 (24%);
- In the Liverpool Plains LGA, Caroona had the highest proportion of younger people (under 15) being 29%, compared to the Liverpool Plains LGA of 21%, while Willow Tree had the lowest proportion of younger people at 16%. The other urban settlements in the Liverpool Plains LGA range between 18-24%;
- Werris Creek, Willow Tree and Quirindi had the highest proportion of people over 55 in the Liverpool Plains LGA, at 39%, 38% and 38% respectively, while Caroona had the lowest proportion at 17%. The other urban settlements in the Liverpool Plains LGA range between 27-31%;
- These figures for the Liverpool Plains LGA mirror the median age figures in **Table 14**, especially for Caroona and Willow Tree; and
- Tamworth Urban Centre exhibited a similar proportion of young people under 15 (22%) as Gunnedah Urban Centre, with a slightly lower proportion of older people (over 55) than Gunnedah Urban Centre (27% compared to 32%).

5.3.2 Past Changes in Age Structure

Table 16 shows the population of each five year age group in the Gunnedah LGA over a 15 year period from 1991 to 2006.

Table 15
Age Distribution, 2011

Age	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Narrabri LGA		Upper Hunter LGA		New England & North West SA4	NSW
	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	% of total persons	% of total persons
0-4 years	888	7%	454	6%	3,934	7%	1,003	8%	985	7%	7%	7%
5-14 years	1,665	14%	1,004	13%	7,859	14%	1,867	14%	1,921	14%	14%	13%
15-19 years	828	7%	442	6%	3,869	7%	819	6%	807	6%	7%	6%
20-24 years	655	5%	332	4%	3,153	6%	661	5%	771	6%	6%	7%
25-34 years	1,288	11%	692	9%	6,113	11%	1,433	11%	1,622	12%	10%	14%
35-44 years	1,411	12%	887	12%	7,035	12%	1,645	13%	1,772	13%	12%	14%
45-54 years	1,662	14%	1,055	14%	7,691	14%	1,854	14%	1,871	14%	14%	14%
55-64 years	1,484	12%	1,102	15%	7,161	13%	1,612	12%	1,751	13%	13%	12%
65-74 years	1,154	10%	852	11%	5,203	9%	1,167	9%	1,232	9%	10%	8%
75-84 years	763	6%	489	7%	3,087	5%	635	5%	734	5%	6%	5%
85 years and over	268	2%	170	2%	1,186	2%	229	2%	287	2%	2%	2%
Total population	12,066		7,479		56,291		12,925		13,753			

Source: ABS, 2012b

Table 16
Age trends, 1991 - 2006, Gunnedah LGA

Age	1991 Census	1996 Census	2001 Census	2006 Census	Difference 1991-2006	
					Number	Percent
0-4	1,165	1,044	912	741	- 424	- 36%
5-9	1,176	1,121	1,011	881	- 295	- 25%
10-14	1,170	1,077	977	970	- 200	- 17%
15-19	955	837	789	748	- 207	- 22%
20-24	792	667	525	551	- 241	- 30%
25-29	980	783	652	492	- 488	- 50%
30-34	1,066	917	736	604	- 462	- 43%
35-39	976	1,020	830	718	- 258	- 26%
40-44	917	924	913	785	- 132	- 14%
45-49	719	843	812	871	152	21%
50-54	718	715	759	820	102	14%
55-59	623	652	672	745	122	20%
60-64	603	561	621	648	45	7%
65-69	465	546	515	576	111	24%
70-74	375	427	463	509	134	36%
75-79	300	305	366	398	98	33%
80-84	194	194	225	267	73	38%
85-89	85	116	136	200	115	135%
90 years and over	42	49	62	No data given	N/A	N/A
Total	13,331	12,819	11,993	11,524	- 1,807	- 14%

Source: Lowe et al, 2007

Table 16 shows a significant decrease in the number of people under 45 between 1991 and 2006, with a corresponding significant increase in the number of people over 45 during that time period.

The GSSP also notes that from 1996 and 2001, the age group that declined most in relative size was 25 to 39 year olds, leaving the town with much lower than the NSW average 18 to 40 year olds. This trend is similar to other rural areas, whose young population leave for metropolitan areas to obtain education, employment and experience.

The GCP 2006 reports that from 2001 to 2006 in the Gunnedah LGA, the retiring (55–69 years) group experienced the greatest increase (2%) as a proportion of Gunnedah's residents, with the oldest (70+ years) group also increasing by 1.3%. Offsetting this were declines in the relative size of other life stages, such as the birthing age (25–39 years) group, down by 2.5%, and the pre-school (0–4 years) group down by 1.1%.

The LPSCSP states that the median age of the Liverpool Plains LGA rose from 41 in 2001 to 43 in 2006.

5.3.3 Projected Age Structure

Table 81 in **Appendix D** details projected age distribution for the LGAs in the Sub Regional Study Area from 2011 to 2036. These projections are supplied by the NSW DP&I for each LGA in NSW, and use standardised demographic modelling, including expected natural increase in population (i.e. births over deaths) and net migration assumptions. They should be read in conjunction with **Table 10** which shows the DP&I's population projections and growth rates for that same period. **Table 81** shows:

- The current proportion of young people under 15 in the LGAs is predicted to continue to decline until 2036; and
- The current proportion of older people over 55 in the LGAs will continue to increase until 2036. In the Liverpool Plains LGA, older people are expected to comprise 49% of the total population in 2036.

These projections however would not have taken into account the likely increase in a younger population that will accompany future coal and resource projects in the region. This will be discussed further in **Section 6.4**.

5.4 HOUSEHOLD AND FAMILY STRUCTURE

Table 17 shows the 2006 and 2011 household types in the LGAs in the Sub Regional Study Area, as well as the percentages of the Northern SD / NENWSA4 and NSW.

Table 17
Household Type, 2006 and 2011

Geographic Area	Census Year	Family Household		Lone Person Household		Group Household		Total Households
		Number	%	Number	%	Number	%	
Gunnedah LGA	2006	3,074	71%	1,176	27%	105	2%	4,355
	2011	3,135	70%	1,234	28%	118	3%	4,487
Liverpool Plains LGA	2006	2,009	70%	821	28%	58	2%	2,888
	2011	2,040	69%	831	28%	78	3%	2,949
Tamworth Regional LGA	2006	14,295	72%	5,155	26%	522	3%	19,972
	2011	14,946	71%	5,609	27%	586	3%	21,141
Northern SD / NENWSA4	2006		70%		27%		3%	
	2011		70%		28%		3%	
NSW	2006		72%		24%		4%	
	2011		72%		24%		4%	

Source: ABS, 2007b and ABS, 2012d

Table 17 shows that in 2011:

- Gunnedah LGA's residents lived in 4,487 households, of which 70% were family households, 28% were lone person households and 3% were group households (shared households of unrelated people);
- In the Liverpool Plains LGA, there were 2,949 households, of which 70% were family households, 28% were lone person households and 2% were group households;
- In the Tamworth Regional LGA, there were 21,141 households, of which 71% were family households, 27% were lone person households and 3% were group households; and
- The proportion of lone person households in all LGAs was higher than NSW's 24%, while the proportion of group households was less than the proportion of NSW's 4%.

Table 17 also shows that the proportions of household types only changed marginally (1% maximum) across the Study Area from 2006 to 2011.

Table 18 displays the proportions of different family types for the LGAs in the Sub Regional Study Area in 2011, and compares them to the NENWSA4 and NSW.

Table 18
Families by Type, 2011

Family Composition	Gunnedah LGA %		Liverpool Plains LGA		Tamworth Regional LGA		NENW SA4	NSW
	No	%	No	%	No	%	%	%
Couple family without children	1,282	40.3	946	45.6	6,223	40.9	42.2	36.6
Couple family with children	1,318	41.5	745	35.9	5,929	39	39	45.5
One parent family	532	16.7	346	16.7	2,837	18.7	17.3	16.3
Other family	46	1.4	39	1.9	219	1.4	1.5	1.7

Source: ABS, 2012d

Table 18 shows that there is a higher proportion of couple families without dependent children in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs (40.3%, 45.6% and 40.9% respectively) than NSW (36.6%). This could reflect the number of 'middle aged' couples whose children have grown up and left home, and accords with the data in **Table 16** showing an increase in older age groups. Other notable differences to the NSW rates are:

- Tamworth LGA has a higher proportion of one parent families; and
- Liverpool Plains LGA has a lower proportion of couple families with children.

The GCP 2006 states that the biggest difference from NSW in the types of families is that Gunnedah LGA has more couples without children and fewer couples with children. Since 2001, the proportion of couples without children has increased by 3% while the proportion of couples with children has decreased by 4%. Further, the average size of 'nuclear' families in Gunnedah LGA in 2006 was 4.0 persons (i.e. 2.0 children), which was very similar to NSW and virtually unchanged from 2001.

The GLCA Final Report (HNEPH, 2011) shows that a higher proportion of Indigenous households consist of one parent families with children under 15 years and couple families with children under 15 years, compared to non-Indigenous households.

5.5 INDIGENOUS COMMUNITY

This section presents key statistics, sourced from the 2006 and 2011 Census, regarding the number, proportion and age profile of Indigenous people in the Study Area.

Other parts of **Section 5** present 2006 and 2011 Census statistics regarding specific characteristics of the Indigenous community in the Study Area, for example income statistics.

5.5.1 Indigenous Proportion of Population

Table 19 lists the 2006 and 2011 proportions of Indigenous people of both Aboriginal and Torres Strait Islander origin in the Gunnedah, Liverpool Plains, Tamworth Regional, Narrabri and Upper Hunter LGAs as well as the percentages for the Northern SD / NENWSA4 and NSW. The component urban settlements of the LGAs of the Study Area are also shown.

Table 19
Indigenous persons, 2006 and 2011

Location	Indigenous Persons		% of total population	
	2006	2011	2006	2011
Gunnedah (Urban Centre / Locality)	932	1,105	12%	14%
Curlewis (Urban Centre / Locality)	76	69	13%	12%
Breeza (State Suburb)	23	Not comparable	17%	Not comparable
Carroll (Amalgamated CDs/ State Suburb)				
Gunnedah LGA	1,272	1,362	10%	11%
Quirindi (Urban Centre / Locality)	307	341	12%	13%
Werris Creek (Urban Centre / Locality)	194	248	13%	17%
Spring Ridge (State Suburb)	16	26	4%	7%
Blackville (State Suburb)	0	Not comparable	0%	Not comparable
Carroona (State Suburb)	103	N/A	58%	N/A
Currabubula (State Suburb)	12	3	3%	1%

Location	Indigenous Persons		% of total population	
	2006	2011	2006	2011
Willow Tree (State Suburb)	6	19	4%	5%
Liverpool Plains LGA	794	817	10%	11%
Tamworth (Urban Centre/Locality)	2,856	Not comparable	9%	
Tamworth Regional LGA	4,027	4,722	7%	8%
Narrabri LGA	1,318	1,388	10%	11%
Upper Hunter LGA	435	535	3%	4%
Northern SD / NENWSA4			8%	9%
NSW			2.2%	2.5%

Source (for LGAs, Northern Statistical Division and NSW): ABS, 2010a

Source (for smaller geographic areas): ABS, 2007a and Source for 2011 data: ABS, 2012b

Table 19 shows that in 2011:

- The LGAs of Gunnedah, Liverpool Plains, Tamworth Regional, Narrabri and Upper Hunter all have a significantly higher proportion of Indigenous people than NSW (2.5%), at 11%, 11%, 8%, 11% and 4% respectively;
- The highest proportion of Indigenous people in 2006 was at Carroona, being 58% of the 'State Suburb' area. The second highest proportion was at the State Suburb of Breeza, at 17%;
- In 2011, the highest proportion of Indigenous people was in Werris Creek (17%), followed by Gunnedah (14%) and Quirindi (13%). Note that Carroona was not a comparable area for the 2011 Census;
- In 2011, the Gunnedah LGA urban centres of Gunnedah and Curlewish had 14% and 12% respectively, being higher than the LGA proportion of 11%;
- Quirindi and Werris Creek Urban Centres showed 13% and 17% respectively, being higher than the LGA proportion of 11%; and
- The lowest proportions of Indigenous people were at Spring Ridge, Willow Tree (7% and 5% respectively) and Currabubula (1%).

Table 19 shows that in 2011 the proportion of Indigenous people had increased slightly in all LGAs in the Study Area, the NENWSA4 and NSW. The proportion of Indigenous people decreased between 2006 and 2011 in Curlewish UCL and Currabubula State Suburb.

5.5.2 Growth in Indigenous Population

Table 20 shows the number of Indigenous people recorded at the 1996, 2001, 2006 and 2011 Censuses for the Gunnedah, Liverpool Plains, Tamworth, Narrabri and Upper Hunter LGAs, and the change during that time.

Table 20
Indigenous Persons, 1996 - 2011

LGA	Indigenous People				Change 1996-2011	
	1996	2001	2006	2011		
	No	No	No	No	No	%
Gunnedah LGA	999	1,063	1,180	1,364	365	37%
Liverpool Plains LGA	479	737	700	810	331	69%
Tamworth Regional LGA	2,101	2,778	3,740	4,701	2,600	124%
Narrabri LGA	1,003	1,084	1,219	1,389	386	38%
Upper Hunter LGA	246	301	403	528	282	115%

Source: ABS, 2007d and ABS, 2012c

Note: Based on place of enumeration

Table 20 shows that from 1996 to 2011, the Indigenous population grew significantly in all LGAs. The increase was greatest in Tamworth Regional LGA (124%) followed by the Upper Hunter LGA (115%) and then Liverpool Plains LGA (69%).

The increase in Gunnedah was explained in the GSSP by three main factors:

- More people may be identifying as Indigenous in a national climate more responsive to Aboriginal needs;
- A perception amongst the Gunnedah Indigenous community that there are more Indigenous families from other areas settling in Gunnedah; and
- The high birth rate among Indigenous women.

5.5.3 Indigenous Age Structure

The GCP 2006 described that the median (mid-point) age of Indigenous people in the Gunnedah LGA in 2006 was 15–19 and the average was about 24 years. By comparison, non-Indigenous residents had a median age of 40–44 and an average age of about 40. The age structure of the Indigenous population is very different from the non-Indigenous community, and young people form a larger share of the Indigenous population.

The GSSP analysed 2001 Census data to show that while the proportions of younger children declined, the Indigenous child population was growing at that time by 17%. Approximately 42% of the Indigenous population in Gunnedah is under 15 years of age, compared with just 22% of the non-Indigenous population in Gunnedah.

Table 21 shows the median age of Indigenous people in 2006 and 2011 in the Study Area, and compares it to the median age of non-Indigenous people.

Table 21
Indigenous people - median age, 2006 and 2011

Geographic Area	Median age, 2006		Median age, 2011	
	Indigenous persons / households with Indigenous persons (a)	Non-Indigenous persons (b) / other households	Indigenous persons / households with Indigenous persons (a)	Non-Indigenous persons (b) / other households
Gunnedah (Aboriginal Location)	17	44	19	43
Gunnedah (Aboriginal Area)	17	42	19	42
Caroona (Aboriginal Location) (Walhallow Reserve in 2011)	33	34	26	31
Quirindi (Aboriginal Location)	26	47	27	45
Werris Creek (Aboriginal Location)	26	49	26	50
Liverpool Plains (Aboriginal Area)	26	44	24	46
Tamworth (Aboriginal Location)	18	38	20	39
Tamworth (Aboriginal Area)	18	40	19	41
Narrabri (Aboriginal Area)	18	39	21	41
Upper Hunter (Aboriginal Area)	18	40	19	39
NSW	20	37	21	38

Source: ABS, 2007c and ABS, 2012e

Notes:

For the purposes of 2006 Census statistics, an 'Aboriginal Location' is the same geographic area as an 'Urban Centre/Locality'.

Note that the corresponding 2011 'Indigenous Location' may not be the exact geographic area of the 2006 'Aboriginal Location'.

For the purposes of 2006 Census statistics, an 'Aboriginal Area' is the same geographic area as a 'Local Government Area'.

(a) A household with Aboriginal person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as being of Aboriginal and/or Torres Strait Islander origin.

(b) Includes persons who did not state their Aboriginal status.

Median age of persons excludes overseas visitors.

Table 21 shows that in both 2006 and 2011, there was a significant difference in median age between Indigenous and non-Indigenous people in all parts of the Study Area and in NSW. The lowest median age for Indigenous people in 2006 (17) was in Gunnedah, closely followed by Tamworth, Narrabri and the Upper Hunter at (18). By 2011, the median age for Indigenous people in these areas had risen slightly to 19.

Only the Aboriginal locations in the Liverpool Plains showed a higher median age in 2011 than the NSW median of 21, with Quirindi being the highest at 27. In contrast, the median ages for non-Indigenous people were often more than double the Indigenous median age – particularly for Gunnedah and Tamworth.

5.6 EDUCATION AND TRAINING

Education is a strong determinant of income and social status. Two indicators of a community's education level are the proportions of people with tertiary qualifications and the average school leaving age. Data relating to post-school qualifications is given in **Section 5.8.4**, while information relating to tertiary, secondary and primary education facilities is given in **Section 5.11.1**.

Table 22 shows the highest year of school completed for residents of the LGAs in the Sub Regional Study Area, and NSW, recorded in 2011 as well as a comparison with 2006.

Table 22
Highest Year of School Completed, 2006 and 2011

Highest Year of School Completed	Gunnedah LGA			Liverpool Plains LGA			Tamworth Regional LGA			NSW	
	2011		2006	2011		2006	2011		2006	2011	2006
	No	%	%	No	%	%	No	%	%	%	%
Year 12 or equivalent	2,701	30%	25%	1,616	28%	24%	14,041	33%	29%	49%	42%
Year 11 or equivalent	505	6%	6%	355	6%	6%	2,541	6%	7%	5%	6%
Year 10 or equivalent	3,195	35%	37%	2,060	36%	35%	14,492	34%	35%	24%	26%
Year 9 or equivalent	997	11%	13%	692	12%	13%	4,349	10%	11%	7%	8%
Year 8 or below	779	9%	10%	553	10%	10%	2,932	7%	9%	6%	7%
Did not go to school	39	0.4%	0.3%	29	0.5%	0.5%	152	0.4%	0.3%	1.0%	1%
Highest year of school not stated	873	10%	9%	480	8%	12%	3,865	9%	9%	9%	10%
Total	9,089			5,785			42,372				

Source: ABS, 2007a and ABS, 2012b

Note: Count of persons aged 15 years and over

Table 22 shows that in 2011, the proportion of people who completed Year 12 or the equivalent in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs was significantly lower than the NSW proportion of 49%. Similarly, the proportions of people who only completed school to Year 8 or 9 equivalents in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs was significantly higher than the NSW proportions of 6% and 7% respectively. This situation was similar in 2006, although the situation had improved in each of the LGAs between 2006 and 2011.

Section 5.8.4 outlines the level of tertiary qualifications of the labour force.

GCP 2006 stated that in the Gunnedah LGA, 43% of residents aged 15+ stated they had a tertiary qualification, and the average schooling completed was 10 years. By comparison, NSW had 54% with tertiary qualifications and average schooling of 10 years and 6 months. In 2001, 38% in the Gunnedah LGA had a tertiary qualification, with the most noticeable changes since then (to 2006) being a 2.5% rise in the proportion with a certificate and a rise of 0.9% in the proportion with a bachelor degree.

The GLCA states that at the 2006 Census, 40.5% of people had completed Year 12 in the Gunnedah rural areas in 2006 compared to Gunnedah township (31.4%) and the Gunnedah villages (20.8%). However, these proportions are all lower than the NSW average of 49.4%. The proportion of Indigenous people who had completed Year 12 in Gunnedah LGA was 18.5% compared with 31.8% among the non-Indigenous population. This trend is also evident across NSW.

5.7 EMPLOYMENT, UNEMPLOYMENT AND LABOUR FORCE PARTICIPATION

This section will provide an overview of employment, unemployment and the labour force in the Study Area, including a brief analysis of labour supply and demand. Current issues in labour force planning are also presented in this section.

5.7.1 Employment, Unemployment and the Labour Force

Table 23 lists recent estimated unemployment rates - those for each of the LGAs within the Study Area and NSW for the September quarters of 2010 and 2011 and for the June quarter of 2012. The number of unemployed people and the size of the labour force are also provided.

Table 23
Estimated Unemployment Rates and Labour Force, 2010 – 2012

LGA	Estimated Unemployment						Labour Force			
	Sep 2010		Sept 2011		June 2012		Sep 2010	Sep 2011	June 2012	Change Sep 2010-June 2012
	Unemployed (no)	Unemployment Rate (%)	Unemployed (no)	Unemployment Rate (%)	Unemployed (no)	Unemployment Rate (%)				
Gunnedah	446	7.0	418	6.6	419	6.7	6,386	6,359	6,216	-170
Liverpool Plains	259	6.4	271	6.8	257	6.6	4,018	4,002	3,912	-106
Tamworth Regional	1,861	5.9	1,958	6.3	1,919	6.3	31,329	31,181	30,480	-849
Narrabri	416	5.4	429	5.6	392	5.2	7,749	7,718	7,544	-205
Upper Hunter	143	1.7	95	1.2	126	1.7	8,253	7,984	7,542	-711
NSW	204,800	5.5	193,900	5.1	197,000	5.2	3,705,800	3,794,800	3,798,800	93,000

Source: DEEWR, 2011b and 2012b

Table 23 shows that the estimated unemployment rate for all LGAs within the Study Area, with the exception of the Upper Hunter LGA (which was substantially below), were above the NSW rate in all reporting periods - September 2010 and 2011 and June 2012, although Narrabri LGA was equal to the NSW rate in June 2012. The highest unemployment rate for June 2012 was recorded in Gunnedah LGA (6.7%), followed by Liverpool Plains LGA (6.6%), Tamworth Regional (6.3%), Narrabri (5.2%) and Upper Hunter with a contrasting low rate of 1.7%. From 2010 to 2012, the unemployment rate fell marginally in the Gunnedah LGA (at the same rate as NSW), while Liverpool Plains and Tamworth LGAs experienced a slight increase in unemployment, Narrabri LGA's fell slightly and Upper Hunter LGA's remained stable. Also during this time, the labour force in each of the LGAs decreased.

Table 24 shows the total labour force for each of the LGAs in the Study Area at the 2006 and 2011 Censuses.

Table 24
Total Labour Force, 2006 and 2011

LGA	Total Labour Force, 2006	Total Labour Force, 2011	Change 2006-2011
Gunnedah LGA	5,107	5,561	454
Liverpool Plains LGA	3,214	3,282	68
Tamworth Regional LGA	25,070	26,422	1,352
Narrabri LGA	6,197	6,175	-22
Upper Hunter LGA	6,489	6,771	282

Source: ABS, 2007a and 2012b

Table 24 shows a total labour force in 2011 in the Study Area of 48,211, an increase of 4.6% from 2006, with Tamworth Regional LGA providing more than half of the labour force in the Study Area.

Table 25 details the 2006 and 2011 Census unemployment rate, labour force participation rate and employment to population ratio for the LGAs within the Study Area, as well as the component urban settlements of the LGAs in the Sub Regional Study Area. The Northern SD / NENW SA4 and NSW are also shown.

Table 25
Labour Force Status, 2006 and 2011

Geographic Area	% Unemployment (a)		% Labour Force Participation (b)		% Employment to Population (c)	
	2006	2011	2006	2011	2006	2011
Gunnedah (Urban Centre / Locality 2006)	9.6	6.9	52.7	54.9	47.6	51.1
Curlewis (Urban Centre / Locality)	14.2	6.7	51.6	49.2	44.3	45.9
Breeza (State Suburb)	12.1	Not comparable	55.8	Not comparable	49.0	Not comparable
Gunnedah LGA	8.3	6.0	57.2	58.4	52.4	54.9
Quirindi (Urban Centre / Locality)	6	6.3	48.2	50.0	45.4	46.9
Werris Creek (Urban Centre / Locality)	10.4	9.6	38.5	45.2	34.5	40.8
Spring Ridge (State Suburb)	4.3	1.4	74.9	65.2	71.7	64.3
Blackville (State Suburb)	0.0	Not comparable	69.0	Not comparable	69.0	Not comparable
Caroona (State Suburb)	16.3	33.3	38	32.1	31.8	21.4
Currabubula (State Suburb)	7	6.1	64.7	62.5	60.2	58.7
Willow Tree (State Suburb)	20	8.8	39.3	52.9	31.4	48.3
Liverpool Plains LGA	5.9	6.0	53.3	54.5	50.2	51.2
Tamworth (Urban Centre / Locality)	7.7	6.4	59	58.2	54.4	54.5
Tamworth Regional LGA	6.8	5.8	59.5	59.4	55.4	55.9
Narrabri LGA	7.1	5.5	61.3	61.4	56.9	58.0
Upper Hunter LGA	4.5	3.6	62.7	62.4	59.9	60.2
Northern SD / NENW SA4	7.2	6.2	57.9	57.6	53.7	54.1
NSW	5.9	5.9	58.9	59.7	55.4	56.2

Source: ABS, 2007a and ABS 2012b

Notes:

(a) The number of unemployed persons expressed as a percentage of the total labour force.

(b) The number of persons in the labour force expressed as a percentage of persons aged 15 years and over.

(c) The number of employed persons expressed as a percentage of persons aged 15 years and over.

Table 25 shows that the LGAs in the Study Area all had unemployment rates almost comparable, or lower than NSW's (5.9%), as follows (ranked from lowest to highest):

- Upper Hunter LGA (3.6%);
- Narrabri LGA (5.5%);
- Tamworth Regional LGA (5.8%); and
- Gunnedah and Liverpool Plains LGAs (6%).

There was a wide variation in unemployment levels across the Study Area in 2006 and 2011. In 2011, Spring Ridge (State Suburb) recorded 1.4% unemployment and the highest labour force participation rate at 65.2%. Caroon and Willow Tree (State Suburbs) recorded the highest unemployment rates at 33.3% and 8.8% respectively (noting that these areas have very low populations and as such the data is skewed). Other settlements in the Liverpool Plains LGA recorded a range of unemployment rates in 2011 from 6.1% to 9.6%. Labour force participation rates for the LGA ranged from 38% to 74.9% (the LGA labour force participation rate being 53.3%).

In 2006, Gunnedah (Urban Centre) and Curlewis (Urban Centre) recorded higher unemployment rates (6.9% and 6.7%) than the Gunnedah LGA (6.0%) and correspondingly low rates of labour force participation at 54.9% and 49.2% respectively, as compared to the Gunnedah LGA of 58.4%.

Between 2006 and 2011, unemployment rates decreased in all LGAs, with the exception of Liverpool Plains LGA, which increased slightly.

Previous Unemployment Rates

Table 26 shows the unemployment rates for the LGAs within the Study Area, the Northern SD and NSW for each of the June quarters from 2005 to 2010.

Table 26
Unemployment rate 2005-2010

June Quarter	2005	2006	2007	2008	2009	2010
LGA	%					
Gunnedah LGA	7.1	6.3	7.1	6.5	6.8	7.0
Liverpool Plains LGA	5.1	4.4	4.4	4.2	4.9	6.2
Tamworth Regional LGA	6.5	5.8	6.2	5.4	5.5	*Pt A 6.0 Pt B 5.8
Narrabri LGA	5.1	4.2	5.2	5.0	5.4	5.3
Upper Hunter LGA	3.3	5.3	2.9	3.2	3.1	2.3
Northern SD	6.2	5.5	6.0	5.6	5.8	6.2
NSW	5.3	5.3	5.0	4.6	5.7	

Source: ABS, 2010; ABS, 2010b

Note: Tamworth Regional LGA was amalgamated in 2004, and its statistics are sometimes presented for Part A (previously Tamworth City) and Part B (the previous rural LGAs that were amalgamated into Tamworth Regional)

Table 26 shows that the Gunnedah LGA has consistently had a higher unemployment rate than the Northern SD and NSW, with the highest rate being 7.1% in 2005 and 2007. Conversely, the Liverpool Plains LGA has consistently had a lower unemployment rate, with the lowest being 4.2% in 2008. Tamworth Regional LGA's unemployment rate from 2005 – 2010 was between that of NSW and Gunnedah, while Narrabri's unemployment rate most resembled NSW's during that time. Upper Hunter LGA's unemployment rate was the lowest of all the LGAs in the Study Area, and significantly lower than NSW's.

The GLCA suggests that the high unemployment levels at 2006 could be partly explained by the fact that the area was subject to significant drought conditions which were affecting the level of employment in agricultural pursuits and support industries. Like many rural communities, the flow-on effects from drought affect the whole community. At the time Gunnedah was experiencing a period of change within the mining industry as well.

The GCP 2006 reported that from 2001 to 2006, the participation rate for the Gunnedah LGA rose by 0.7% and the unemployment rate fell by 1.0%.

The LPSCSP reported that the total number of people unemployed in 2006 in the LGA was at an all time low (5.9% of labour force), while total unemployed peaked in 1991 at 9.8% of the labour force.

Part Time Work and Underemployment

Table 27 shows the full time and part time employment rates for the LGAs within the Study Area as well as the Northern SD / NENW SA4 and NSW in 2006 and 2011.

Table 27
Employment - Part Time and Full Time, 2006 and 2011

LGA	Employed Full Time			Employed Part Time			Total Labour Force	
	No	% of Labour Force	% of Labour Force	No	% of Labour Force	% of Labour Force		
	2006		2011	2006		2011	2006	2011
Gunnedah LGA	3,030	59.3	59.8	1,338	26.2	28.7	5,107	5,561
Liverpool Plains LGA	1,877	58	58.8	906	28	28.4	3,214	3,282
Tamworth Regional LGA	14,874	59	59.7	7,020	28	28.6	25,070	26,422
Narrabri LGA	3,705	59	62.7	1,593	25.7	25.0	6,19	6,175
Upper Hunter LGA	4,132	63.7	63.7	1,711	26.3	26.5	6,489	6,771
Northern SD / NENW SA4	46,113	58.9	59.2	21,658	27.7	28.7	78,288	80,552
NSW	1,879,628	60.7	60.2	842,713	27.2	28.2	3,092,603	3,334,856

Source: ABS, 2007a and 2012b

Note: Count of employed persons aged 15 years and over

Table 27 shows that in 2011 approximately 60% of employed people in the Study Area are employed full time, with between 25% and 29% being employed part time, depending on their LGA. These proportions are consistent with the Northern SD and NSW. The percentage of people working full time increased slightly from 2006 to 2011 in all areas, except the Upper Hunter which remained stable and NSW which decreased slightly. Similarly, the percentage of people working part time also increased in all areas except the Narrabri LGA.

The extent of '*underemployment*' in the Study Area (the number of part time workers who are would like to be employed full time) is not known.

Unemployment by Age and Gender

Table 82, Table 84 and Table 86 in **Appendix D** show the labour force and number and rate of unemployment of males and females in 10 year age brackets for Gunnedah, Liverpool Plains and Tamworth Regional LGAs respectively for 2006 and **Table 83, Table 85 and Table 87** in **Appendix D** show the same information for 2011.

Table 82, Table 84 and Table 86 (for 2006) and **Table 83, Table 85 and Table 87** (for 2011) show that:

- For all LGAs in 2011, the rate of unemployment (between 13% and 19%) is highest for 15-19 year olds. In the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, male unemployment is higher than female unemployment in this age group, with the Liverpool Plains male unemployment for 15-19 year olds being 23.7% ;
- Unemployment rates fall as the age groups become older, with the exception of the 45-54 age group in Gunnedah LGA and the 55-64 year old grouping in Liverpool Plains LGA, where unemployment rates are higher than the previous age bracket. Male unemployment in these categories is higher than female unemployment;
- The two oldest age brackets (i.e. 65 years plus) show minimal and even 0% unemployment, but still a sizeable workforce;
- The key change between 2006 and 2011 for Gunnedah LGA is that unemployment rates in all age brackets declined, although unemployment rates for young male and females increased;
- The key changes for Liverpool Plains LGA between 2006 and 2011 were that unemployment rates for people under 45 increased (particularly in the under 25s) and decreased for the over 45 age bracket; and
- Key changes for the Tamworth Regional LGA between 2006 and 2011 were that unemployment rates in all age brackets declined except for the 65-74 years.

The GCP 2006 reported that women tend to have lower workforce participation rates on average, with greater time spent in child raising, housework and caring. In the Gunnedah LGA in 2006, women's workforce participation was 50%, compared with 65% for men.

The LPSCSP states that in the Liverpool Plains LGA, the percentage of females employed in part time work has gradually increased since 2001, while the percentage of females employed full time (as a percentage of the labour force) has increased by 8% since 2001.

5.7.2 Indigenous Labour Force

Table 88 and **Table 89** in **Appendix D** show labour force status data for Indigenous and non-Indigenous people in the Study Area, as well as NSW in 2006 and 2011.

Table 88 and **Table 89** show significant differences in the unemployment level between Indigenous and non-Indigenous people in 2006 and 2011 in the Study Area.

The unemployment rate was above 20% in 2011 for Indigenous people in:

- Gunnedah Indigenous Location (both males and females);
- Gunnedah Indigenous Area (which is the same as the Gunnedah LGA) for both males and females;
- Walhollow Reserve Indigenous Location (both males and females);
- Tamworth Indigenous Location for males;
- Tamworth Indigenous Area (which is the same as the Tamworth Regional LGA) for males; and
- Liverpool Plains Indigenous Area for females.

In contrast, the highest unemployment rate for non-Indigenous people was 11.9% in 2006 for Werris Creek males. However, by 2011, the unemployment rate for non-Indigenous people was above 20% in both the Quirindi and Werris Creek Indigenous Locations for males.

Between 2006 and 2001, unemployment for indigenous persons increased in:

- Gunnedah Indigenous Location for both males and females;
- Gunnedah Indigenous Area for females;
- Caroon / Walhollow Indigenous Location for both males and females;
- Quirindi Indigenous Location for both males and females;
- Werris Creek Indigenous Location for males;
- Liverpool Plains Indigenous Area for both males and females; and
- Upper Hunter Indigenous Area for males.

Indigenous unemployment decreased across NSW by 1.7% for males and 3% for females between 2006 and 2011. However, the highest increase in the unemployment rate for indigenous persons between 2006 and 2011 was recorded for indigenous females in the Liverpool Plains Indigenous Area, at an increase in unemployment of 17%. Comparatively, the highest increase in unemployment for non-Indigenous persons was an increase of 13.6% for non-Indigenous males in Werris Creek Indigenous Location.

The labour force participation rate of Indigenous people was generally lower than that of non-Indigenous people in the Study Area in 2011.

The GSSP states that the employment patterns of Indigenous people in the Gunnedah LGA indicate significant disadvantage. In 2001, for each Indigenous worker there were 1.4 dependants, compared with 0.8 for each non-Indigenous worker. In all, 386 Indigenous people were in the workforce in 2001, representing 52% of those aged 15+, with an unemployment rate of 21%. By comparison, 60% of non-Indigenous people over 15 were in the labour force, and their unemployment rate was just 8%.

The GSSP further reports that the unemployment rate among Indigenous men in the labour force in 2001 ranged from 44% of 25–34 year-olds and 34% of 15–24 year-olds to none of 55–64 year-olds. Amongst women, it ranged from 25% of 15–24 year-olds and 22% of 25–34 year-olds to none of 55–64 year-olds. The GSSP explains that unemployment rates tend to fall over the age of 50 because many people leave the workforce, through retirement or disability.

The GSSP reported that in 2001, unemployment in the Indigenous workforce was higher (compared to the non-Indigenous unemployment rate) among men aged 25–34 (36% higher), men aged 15–24 (16% higher), men aged 35–44 (14% higher) and women aged 15–24 (11% higher).

The GLCA reported that the highest level of Indigenous unemployment in 2006 in the Gunnedah LGA was in the villages, where 32.6% of Indigenous or Torres Strait Islander residents were unemployed, whilst in Gunnedah township the figure drops to 26.6% and drops further to 12.5% in the rural areas. These figures were well above the NSW Indigenous unemployment figure of 19.3%.

5.7.3 Labour Supply-Demand Balance

The balance between local labour supply (residents of an area who are employed) and demand (jobs located in an area) is a useful indicator of where jobs are needed and where job opportunities might lie. A labour surplus occurs when there are more resident workers than jobs in the local workforce, which means that some residents have to work outside the locality. Conversely, a labour deficit means there are more jobs locally than working residents, so some workers must come from outside the local area to fill some local jobs.

Labour supply and demand statistics for the Gunnedah, Liverpool Plains and Tamworth Regional LGAs in 2006 and 2011 are presented in **Table 90** to **Table 95** in **Appendix D**. These tables show that in both 2006 and 2011 there was a labour surplus in each of the age groups, for both males and females, in all LGAs in the Sub Regional Study Area. However, this analysis does not take into account:

- The actual locations at which people work. For example Journey to Work data, described at **Section 5.8.1**, shows that a proportion of employed people still travel out of all LGAs to work. Therefore there will be some movement between each of these LGAs that may mean for example that a proportion of the labour surplus in one LGA is in reality travelling to be employed in one of the other LGAs (and vice versa); and
- Underemployment – the table counts people who are employed, regardless of whether they are full or part time, and regardless of whether part time employees have desires to work longer hours.

The labour balance for Gunnedah LGA was explored by the *Gunnedah Economic Development Portrait, 2010* (GSC Economic Portrait) (The Public Practice Pty. Ltd., 2010), commissioned by GSC. Using 2006 Census data, it compared the characteristics of residents with those of local workers. The GSC Economic Portrait noted that in 2010, significant labour imbalances noticed in 2006 are likely to be still evident in the local economy, which is borne out by the above.

The GSC Economic Portrait showed that in the Gunnedah LGA in 2006:

- There were 4,680 working residents and 4,186 local workers (i.e. jobs in Gunnedah LGA). This means that Gunnedah was a net exporter of 494 workers (usually to nearby employment centres). It could be assumed that the export of labour is most likely to be to the Liverpool Plains and Tamworth LGAs;
- All age groups had to export labour to surrounding areas due to a shortage of local jobs;
- The occupational groups where there were more local jobs than residents included female managers, female technicians and trades workers, male community and service workers, and male sales workers; and
- Across industries, the largest job surpluses (or local labour shortages) were for managers in rural production; professionals in technical services; administrative workers in retail trade and administrative workers in public service.

The GLCA reported that 27% of its telephone survey respondents from rural areas reported that they or a member of their household had to leave Gunnedah in order to gain employment. A lower proportion of respondents from villages (20%) and from Gunnedah Township (16%) reported having to leave for employment purposes. The age group with the highest proportion of people who reported having to leave Gunnedah for employment purposes were those in the 50 – 59 year old age group (34%), followed by those aged 18-24 years of age (31%). Using qualifications as an indicator, those with post graduate qualifications reported most that they had left Gunnedah to gain employment (39%), followed by those with degrees (31%). This fell to 14% for those with no trade certificate or other tertiary qualification. Of those who had previously left Gunnedah for employment purposes, 45% from Gunnedah township and 44% from rural areas returned to Gunnedah. A lower proportion of respondents from the villages reported returning to Gunnedah (24%).

The same level of detail has not been previously published for the Liverpool Plains LGA or Tamworth LGA.

5.7.4 Labour Force Issues and Future Planning

Several documents in the Sub Regional Study Area investigate current labour force issues and planning strategies. This section will focus on the information and strategies prepared in the Gunnedah LGA, and present information relevant to skills shortages. The same issues and strategies could equally be applied to the Liverpool Plains and Tamworth Regional LGAs.

Gunnedah Shire Social Plan 2005

One of the main findings of the GSSP was to attract, train and retain qualified staff. The GSSP highlighted that a major barrier to providing local services is the lack of sufficient qualified staff. The list includes registered nurses, doctors, podiatrists, trained counsellor volunteers, secretarial office staff, mental health, drug / alcohol workers, qualified special education teachers, well-trained teachers' aides, psychologists, counsellors, heavy machinery mechanics, engineers, cultural awareness trainers (for Indigenous and farming communities), tradespeople, business managers, childcare workers and babysitters.

The GSSP referenced interviews with people who had left Gunnedah and worked for a period of time elsewhere. One commonly cited issue was that there was a general '*feeling of limitation*' in the town experienced by people who had been used to a more cosmopolitan lifestyle.

The GSSP recognises that it is essential for Gunnedah to be well marketed to potential professional workers and for the town to continue to welcome diversity in population, culture and recreation and sporting activities, whilst continuing to work for the provision of essential services.

The sentiments above regarding attracting, training and retaining qualified staff were supported in a number of the interviews held with Council and government agency staff for this SIA (GSC, 2011, pers. comm., 17 November; LPSC, 2011, pers. comm., 18 November).

Gunnedah Liveable Communities Assessment

The GLCA recommends that the following strategies regarding '*Access to Quality Employment*' should be considered for the planning and development of Gunnedah LGA:

- The development of transitional employment opportunities, e.g. traineeships, is recommended for increasing local employment opportunities for young people;
- With the employment needs of the new and expanding industries in Gunnedah LGA, consideration of appropriate post school training courses to enable greater employment opportunities across all age groups is recommended;
- The reasons for the high number of people who need to leave Gunnedah for employment should be examined, particularly for those with degrees or post graduate qualifications;
- Consideration should be given to the development of opportunities for on-line businesses, especially in respect of training and educational programs to encourage such development; and
- With regard to increasing access to local employment for people with disabilities, consideration needs to be given to access to premises, stigma associated with disability, cost of technical aids and public transport.

Gunnedah Community Strategic Plan

Strategies relating to labour force issues proposed by the GCSP are to:

- Encourage new residents with skills to move to the area to supplement the skilled workforce shortage; and

- Provide education and training facilities for older people including employment retraining and leisure opportunities.

Skills Shortages

Table 28 presents the occupations relevant to the Project which are experiencing skill shortages in NSW and at a national level, as assessed in 2011-12 by the Department of Education, Employment and Workplace Relations (DEEWR). The list reflects research undertaken to 30 June 2012.

Table 28
Skill Shortages by Occupation, NSW and National, 2012

Occupation (ANZSCO)*	Geographic Level
Surveyor	NSW
Civil Engineering Professionals	NSW
Electrical Engineer	NSW
Civil Engineering Draftspersons and Technicians	NSW
Electrical Engineering Draftspersons and Technicians	NSW
Automotive Electrician	NSW
Motor Mechanics	NSW
Metal Machinist (First Class)	NSW
Metal Fabricator	NSW
Engineering Manager	National
Production Manager (Mining)	National
Mining Engineer (excluding Petroleum)	National
Agricultural Consultant / Scientist	National
Geologist	National
Geophysicist	National
Mine Deputy	National

Source (DEEWR, 2012)

*Notes: * The Australian and New Zealand Standard Classification of Occupations (ANZSCO) is published by the Australian Bureau of Statistics to provide uniformity in the collection, analysis and dissemination of occupational statistics in Australia and New Zealand.*

Skills shortage data is not available for local areas.

Regional Workforce Plan

It is significant that the SRLUP identifies the need to prepare a Regional Workforce Plan, in cooperation with Regional Development Australia Northern Inland, local employers and industry groups, to address workforce and skills issues. The SRLUP states that the Workforce Plan will clarify current and future demand and supply of skills in the region and devise skills and workforce development strategies, including apprenticeship programs, to address critical shortages. The lead agencies identified for this action are the NSW Department of Education and Communities and the Department of Primary Industries, and the nominated timeframe is 2013 (NSW DP&I, 2012).

5.8 LABOUR FORCE CHARACTERISTICS

This section documents and analyses the following characteristics of the labour force in the Sub Regional Study Area:

- Residence of workers, including ‘*Journey to Work*’ data;
- Industry of employment;
- Occupation; and
- Qualifications.

The *Gunnedah Economic Development Portrait, 2010* (The Public Practice Pty. Ltd., 2010), details various labour force characteristics for the Gunnedah LGA, sourced from Census and Tax Office data:

- The average age of Gunnedah's workforce was 3 years older than Northern NSW's, with relatively more workers aged 50–54 yrs, 45–49 yrs and 15–19 yrs;
- In the 2006 Census, 70% of Gunnedah's workforce were employees, 23% were small-business owner-managers and 7% worked in a family business;
- The private sector engaged 88% of Gunnedah's workforce in 2006, with 7% employed by the State Government and 3% employed by a Local Government; and
- The fastest growing occupations in Gunnedah over 2001–2006 were labourers and related workers, professionals, tradespersons and intermediate clerical, sales, service workers.

5.8.1 Residence of Workers

Understanding the movement of people to and from work within and across local areas and regions is crucial to understanding how the local economy functions and is also a key factor in understanding employees' choices in work, travel methods and their place of residence.

Journey to Work Data

‘*Journey to Work*’ (JTW) data obtained from the ABS Population Census and compiled by the NSW Bureau of Transport Statistics provides vital information as to where and how people travel from their place of residence to their place of work. JTW data from 2006 for the ‘*Origin LGAs*’ (i.e. where people live) of Gunnedah, Liverpool Plains and Tamworth LGAs is provided in **Table 29**. JTW data based on the 2011 Census is not yet available.

Table 29 shows that of the 4,658 employed people who resided in the Gunnedah LGA in 2006, 81% of them worked within the Gunnedah LGA, while 2% travelled to work in the Liverpool Plains LGA, 4% travelled to work in the Tamworth Regional LGA, 3% worked in the Narrabri LGA and only 0.2% worked in the Upper Hunter LGA.

Tamworth Regional LGA attracted more workers from the Liverpool Plains LGA, with 11% of employed people residing in the Liverpool Plains LGA travelling to work in Tamworth LGA. Of the 3,011 employed people residing in the Liverpool Plains LGA, 75% of them worked within that LGA, and only 1% travelled to the Gunnedah LGA to work.

As expected for a regional city, 88% of the 23,272 employed people who resided in the Tamworth Regional LGA also worked within the LGA. Only minimal numbers of people travelled out to work in Gunnedah and Liverpool Plains LGAs.

JTW data from the 2011 Census (not yet available) will need to be analysed to determine the changes in commuting patterns in the region that have occurred over the last five years, particularly to determine the commuting patterns of people employed in the mining industry that has been growing over that time.

Namoi 2030 recognises an increased number of people commuting into the region from other areas. This is a net figure from a comparison of the resident and workplace employment, so that the total number commuting will be much larger than this. It is also evident that the commuting pattern is in both directions (i.e. in and out of the region). Namoi 2030 further recognises that there is a considerable amount of commuting within the region, stating that Tamworth is the main commuter destination, while Liverpool Plains is also a net destination region (i.e. more travelling in than travelling out). Namoi 2030 states that the other LGAs in the Namoi Valley are all net suppliers of commuters to work.

Table 29
Journey to Work - Origins and Destinations, 2006

Origin LGA	Destination LGA										Total		
	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Narrabri LGA		Upper Hunter LGA			Other LGAs or not stated	
	No	%	No	%	No	%	No	%	No	%			
Gunnedah LGA	3,781	81%	81	2%	183	4%	120	3%	7	0.2%	485	10%	4,658
Liverpool Plains LGA	24	1%	2,264	75%	325	11%	0	0%	40	1.3%	357	12%	3,011
Tamworth LGA	101	0.4%	142	0.6%	20,568	88%	0	0%	0	0%	2,461	11%	23,272

Source: NSW Bureau of Transport Statistics, 2006

Note: Counts employed persons

Namoi 2030 explains that the growing numbers of commuters across LGA boundaries is a widespread characteristic in regional NSW. Improved road infrastructure, better vehicles, the use of telecommunications technologies and the need to find jobs for more than one household member are some of the factors in this trend, as is the limited advanced skills training and range of job opportunities in the regions.

Namoi 2030 shows that commuting from the region is represented by small numbers in the coal mining, manufacturing, construction, and legal and accounting services industries. Most commuter movements are into the region to various parts of agriculture, retail trade and services, accommodation and restaurants, education and health. Some of this is the movement of professionals, but it is likely to also involve the movement of young females from rural areas to major urban centres where there is a variety of jobs for women.

5.8.2 Industry of Employment

The industry of employment of people over 15 years in the Sub Regional Study Area in 2006 is outlined in Table 96, which also shows the Northern SD and NSW. The 2011 data is shown in **Table 97 in Appendix D**.

Table 97 shows that the 'agriculture, fishing and forestry' sector employed the highest percentage of employed people in 2011 in both the Gunnedah LGA (17%) and Liverpool Plains LGA (24%). This compares with the Northern SD (15%) and NSW (2%). The next highest sector for the Gunnedah LGA was 'retail trade' at 10%, while for the Liverpool Plains LGA it was both 'retail trade' and 'health care and social assistance' at 9% each. The highest industry proportion in the Tamworth Regional LGA in 2011 was the 'health care and social assistance' sector at 14%, followed by 'retail trade' at 12%. Industry sector proportions were more evenly spread for NSW.

A total of 1,629 people were employed in the 'agriculture, fishing & forestry' sector in 2011 in both the Gunnedah and Liverpool Plains LGAs, with Gunnedah LGA comprising just over half of these.

A total of 475 people were employed in the 'mining' sector in 2011 in both the Gunnedah LGA (390) and Liverpool Plains LGA (85). The mining sector has more than doubled in employment numbers in the Liverpool Plains LGA since 2006 and has more than tripled in the Gunnedah LGA. In 2011, this equated to 3% and 7% of the total employed people for those LGAs respectively, up from 2% and 1% respectively in 2006. The number of people employed in the 'mining' sector in Tamworth Regional LGA almost tripled from 2006 (75) and 2011 (194).

The proportion of employed people in the 'agriculture, fishing and forestry' sector declined in the Liverpool Plains LGA between 2006 and 2011 (from 28% to 24%) at the same time that the mining sector increased. Although the proportion of people in the 'agriculture, fishing and forestry' sector declined slightly in the Gunnedah LGA between 2006 and 2011 (from 18% to 17%), the actual number of people increased by 32.

In the Gunnedah LGA in 2011, 285 mining employees were from the Gunnedah Urban Centre (up from 85 in 2006) and 25 from Curlewis Urban Centre (up from 9 in 2006).

In 2011 in the Liverpool Plains LGA, Quirindi Urban Centre, Werris Creek Urban Centre, Willow Tree Urban Centre, Currabubula State Suburb and Carroona State Suburb showed employment in the 'mining' sector, showing 30, 9, 7, 3 and 3 people respectively. These figures have all increased since 2006. Since the Liverpool Plains LGA had a total of 85 people employed in the 'mining' sector in 2011, the other 33 people in the industry must reside in other rural areas of the LGA.

Further analysis of 2006 and 2011 Census data for smaller geographic areas within the Sub Regional Study Area (ABS, 2007a and 2012g) reveal patterns reflecting the high proportion of people employed in the 'agriculture, fishing and forestry' in the study area, often with minimal people employed in the 'mining' sector. This was especially evident in the smaller settlements in 2006, including:

- Breeza (State Suburb) had 57 employed people, with 63% of those employed in 'agriculture' and none employed in 'mining';
- Blackville (State Suburb) had 104 employed people, with 74% of those employed in 'agriculture' and none employed in 'mining';
- Spring Ridge (State Suburb) had 248 employed people, with 65% of those employed in 'agriculture' and none employed in 'mining';
- Breeza, Blackville and Spring Ridge had minor numbers of people employed in all other industry sectors;
- Carroona (State Suburb) had 45 employed people, with 16% of those employed in 'agriculture' and none employed in 'mining'. 24% were employed in 'public administration and safety'; and
- Willow Tree (State Suburb) had 51 employed people, with 14% of those employed in 'agriculture' and none employed in 'mining'. 'Retail trade' and 'Transport, postal and warehousing' each employed 22%.

In 2006 and 2011, some of the larger settlements showed different patterns of industry employment:

- In 2006, Quirindi (Urban Centre) had 6% of its 956 employed people being employed in 'agriculture, fishing and forestry', with 1% in mining, and the largest sector being 'retail trade'. This reflects its function as a small town servicing its surrounding rural area. By 2011, the proportion of people employed in 'agriculture, fishing and forestry' had decreased to 5% and 'mining' had increased to 3%;
- In 2006, Curlewis (Urban Centre) had 9% of its 191 employed people being employed in 'agriculture, fishing and forestry', 5% in mining, with the largest sectors at 10% each being 'retail trade' and 'manufacturing'. This reflects its proximity to Gunnedah. By 2011, the situation had changed, with the largest sectors being 'agriculture, fishing and forestry' (13%) and mining (12%);
- In 2006, Werris Creek had 5% employed in 'agriculture, fishing and forestry', 2% in mining, with the largest sector being 'Transport, postal and warehousing' at 18%. This reflects its role as a railway servicing town. The situation was similar in 2011;

- In 2006, Gunnedah (Urban Centre) had 6% of its 2,836 employed people being employed in 'agriculture, fishing and forestry', with 3% in mining, with the largest sectors being 'retail trade' (13%) and 'health care and social assistance' (11%). This reflects its role as a regional town. In 2011, the largest sectors were still the same, while agriculture had fallen slightly to 5% and mining had increased to 9%; and
- In 2006, Tamworth (Urban Centre) had only 2% of its 14,298 employed people being employed in 'agriculture, fishing and forestry', with 0.2% in mining, with the largest sectors being 'retail trade' (14%) and 'health care and social assistance' (13%). This reflects its role as a regional city. In 2011, the proportions were similar, although 'health care and social assistance' was the largest sector at 15%,

Table 30 shows the number of people employed in the mining industry in each of the LGAs in the Study Area in 2011.

Table 30
Employment in Mining by LGAs, 2011

LGA	Gunnedah (A)	Liverpool Plains (A)	Tamworth Regional (A)	Narrabri (A)	Upper Hunter Shire (A)	Total
Mining, nfd	14	9	5	3	40	71
Coal Mining	327	70	114	179	604	1294
Oil and Gas Extraction	3	0	3	17	0	23
Metal Ore Mining	0	0	8	0	4	12
Non-Metallic Mineral Mining and Quarrying	5	4	44	0	14	67
Exploration and Other Mining Support Services	41	3	21	29	48	142
Total	390	86	195	228	710	1609

Note: Count of persons at place of usual residence

Source: ABS, 2012g

Table 30 shows that over 80% of mining employment in the Study Area is in the coal industry, with the majority of this employment recorded from residents in the Upper Hunter and Gunnedah LGAs.

The GCP 2006 states that since 2001 (to 2006), the fastest-growing employers in the Gunnedah LGA were the food and accommodation, public administration, and mining industries, whose share of local workers rose by 2.5%, 2.0% and 1.5%, respectively.

The LPSCSP states that in the Liverpool Plains LGA, despite the impacts of drought, traditional industries of agriculture, forestry and fisheries still account for the majority of employment but declined from 935 jobs in 2001 to 814 in 2006 while growing employment sectors include mining, manufacturing, retail and health services.

5.8.3 Occupation

The GCP 2006 explains that occupations are a good indicator of socio-economic status, and communities with more people in more highly educated occupations tend to be wealthier.

The occupation of employed people over 15 years in the LGAs of the Sub Regional Study Area in 2006 and 2011 are outlined in **Table 31**, which compares the LGAs to the Northern SD and NSW.

Table 31
Occupation, 2006

Occupation	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Northern SD	NSW
	Persons	% of Employed Persons	Persons	% of Employed Persons	Persons	% of Employed Persons	% of Employed Persons	% of Employed Persons
Managers	1,024	22%	788	26%	3,529	15%	20%	14%
Professionals	581	12%	328	11%	3,788	16%	15%	21%
Technicians & trades workers	573	12%	342	11%	3,381	14%	13%	14%
Community & personal service workers	385	8%	240	8%	2,007	9%	9%	9%
Clerical & administrative workers	502	11%	301	10%	2,956	13%	12%	15%
Sales workers	388	8%	191	6%	2,469	11%	9%	10%
Machinery operators & drivers	447	10%	307	10%	1,555	7%	7%	6%
Labourers	711	15%	480	16%	3,322	14%	14%	10%
Inadequately described / Not stated	69	1%	44	1%	355	2%	2%	2%
Total	4,680		3,021		23,362			

Source: ABS, 2007a

Note: Count of employed persons aged 15 years and over.

Table 32
Occupation, 2011

Occupation	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Northern SD	NSW
	Persons	% of Employed Persons	Persons	% of Employed Persons	Persons	% of Employed Persons	% of Employed Persons	% of Employed Persons
Managers	1,007	19%	691	22%	3,368	14%	18%	13%
Professionals	664	13%	336	11%	4,191	17%	16%	23%
Technicians	665	13%	347	11%	3,618	15%	13%	13%
Community & personal service workers	469	9%	275	9%	2,430	10%	10%	9%
Clerical & administrative workers	541	10%	298	10%	3,241	13%	12%	15%
Sales workers	459	9%	216	7%	2,486	10%	9%	9%
Machinery operators & drivers	649	12%	381	12%	1,733	7%	8%	6%
Labourers	693	13%	478	16%	3,434	14%	13%	9%
Inadequately described / Not stated	79	2%	60	2%	393	2%	2%	2%
Total	5,226	100%	3,082	100%	24,894	100%	100%	100%

Table 31 show the Gunnedah, Liverpool Plains and Tamworth Regional LGAs in 2011 having:

- A higher proportion of '*managers*' (19%, 22% and 14% respectively) than NSW's 13% This reflects the large number of people self-employed in agriculture who are managing their own farming enterprises. This occupation employed the highest proportion of persons for the Gunnedah and Liverpool Plains LGAs and the third highest for the Tamworth Regional LGA;
- A lower proportion of '*professionals*' (13%, 11% and 17% respectively) than NSW's 23%; and
- A higher proportion of '*labourers*' (13%, 16% and 14% respectively) than NSW's 9% and Northern SD's 13%.

Tamworth's function as a regional city is demonstrated in the higher proportion of '*sales workers*' and '*clerical and administrative workers*' in the Tamworth Regional LGA than the Gunnedah and Liverpool Plains LGAs.

Between 2006 and 2011, the proportions of '*professionals*' and '*technicians*' both increased across the Gunnedah, Liverpool Plains and Tamworth Regional LGAs. The proportion of '*managers*' decreased across these LGAs.

Further analysis of 2006 and 2011 Census data for smaller geographic areas within the Sub Regional Study Area reveal patterns of occupations consistent with the LGAs' statistics. Most smaller rural geographic areas showed the overwhelming proportion of employed people being '*managers*' with '*labourers*' or '*machinery operators and drivers*' being the next proportion:

- Breeza (40% '*managers*' and 21% '*labourers*' in 2006 – no comparable data in 2011);
- Blackville (58% '*managers*' and 13% '*labourers*' in 2006 – no comparable data in 2011);
- Spring Ridge (52% '*managers*' and 17% '*labourers*' in 2006 – decreased to 40% and increased to 18% respectively by 2011);
- Willow Tree (20% '*managers*', 18% '*machinery operators and drivers*' and 18% '*technicians and trade workers*' in 2006 – changed to 23%, 8% and 15% by 2011);
- Curlew State Suburb (25% '*managers*', 21% '*labourers*' and 13% '*machinery operators and drivers*' in 2006 – no comparable data in 2011); and
- Currabubula showed an unusual pattern of 15% '*professionals*', with 32% '*managers*' in 2006, while in 2011 the proportion had changed to 9% '*professionals*', 31% '*managers*', 12% '*clerical and administrative workers*' and 11% of '*technicians and trade workers*' and '*community and personal service workers*'.

In 2006, Caroon's 45 employed people exhibited a unique proportion of occupations, with no managers, professionals or technicians and trade workers, but 40% labourers and 20% community and personal service workers. By 2011, there were only 15 employed people.

Larger settlements such as Quirindi, Curlew and Werris Creek had smaller proportions of '*managers*' (10%, 10%, 9% respectively in 2006 and 9%, 6% and 7% respectively in 2011) and exhibited a spread of occupations across the sectors, consistent with their '*service centre*' functions. However, each of these towns had '*labourers*' as either the highest or second highest proportions (18%, 25% and 18% respectively in 2006 and 17%, 22% and 20% respectively in 2011).

Gunnedah and Tamworth Urban Centres both showed a more evenly spread range of occupations, with the highest proportion in Gunnedah in 2006 still being '*labourers*' (16% and 14% in 2011). Tamworth's highest proportion in 2006 was '*professionals*' at 17%, reflecting its regional city function.

The GCP 2006, explains that many occupations have a significant gender bias. In the Gunnedah LGA in 2006, there were 8.6 men per woman among drivers and operators and 2.5 men per woman among technicians and tradesmen, but only 1.9 women per man among administrative workers and 1.8 women per man among community / personal workers.

The GCP 2006 further explains that occupational changes between 2001 and 2006 were difficult to measure at the local level because of changes to the classification system used in the 2006 Census. Some occupational classifications changed little; of those, labourers gained about 8% of the workforce in the Gunnedah LGA, but drivers and operators remained a constant proportion.

Industry and Occupation

Table 98, Table 99 and Table 100 in Appendix D show the occupation and industry of employment of residents of the Gunnedah, Liverpool Plains and Tamworth Regional LGAs in 2011.

Analysis of **Table 98, Table 99 and Table 100 in Appendix D** show that in the Gunnedah and Liverpool Plains LGAs in 2006:

- More than half of the employed people in the 'mining' industry were machinery operators and drivers; and
- Approximately three quarters of employed people in the 'agriculture, forestry and fishing' industry were managers, reflecting the number of self employed farmers in those LGAs.

5.8.4 Qualifications

Table 33 lists the level of post-school qualifications of people aged 15 years and over in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, the Northern SD / NENWSA4 and NSW in 2006 and 2011.

Table 33
Level of post-school qualifications, 2006 and 2011

Qualification	NSW		Northern SD / NENWSA4		Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA	
% of total population aged 15 years and over										
	2006	2011	2006	2011	2006	2011	2006	2011	2006	2011
Postgraduate Degree	3.1	4.3%	1.5	1.8%	0.4	0.6%	0.3	0.4%	1.0	1.2%
Graduate Diploma and Graduate Certificate	1.3	1.5%	1.1	1.2%	0.7	0.8%	0.6	0.7%	1.1	1.1%
Bachelor Degree	12.1	14.1%	7.3	8.2%	6.0	6.7%	5.3	5.6%	6.9	8.0%
Advanced Diploma and Diploma	7.4	8.3%	5.5	6.1%	5.0	5.3%	4.8	5.3%	5.9	6.6%
Certificate	16.8	17.7%	18.1	20.5%	18.7	21.2%	16.5	20.1%	20.3	22.9%
Inadequately Described / Not Stated	13.8	11.4%	12.9	12.2%	12.5	12.7%	15.8	11.3%	12.8	12.2%
Total with qualifications	54.5	57.2%	46.3	50.0%	43.3	47.3%	43.3	43.4%	47.9	52.1%

Source: ABS, 2010a and 2012g

Table 33 shows that while 19.9% of NSW's population over 15 in 2011 had a bachelor degree or higher (16.5% in 2006), less than half that proportion was noted in Gunnedah LGA in 2011 (8.1%, being an increase on 7.1% in 2006). The situation was similar in the Liverpool Plains LGA (6.7%, being an increase on 6.2% in 2006). The proportion in the Tamworth LGA was slightly higher at 10.3% in 2011 (9% in 2006). The proportion of the population over 15 with a certificate qualification in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs was higher than NSW (17.7%, an increase on 16.8% in 2006). In 2006, the certificate level was lower than NSW's (16.8%) in the Liverpool Plains LGA but higher in the Gunnedah and Tamworth Regional LGAs.

5.9 INCOME

5.9.1 Median Income Indicators

Table 34 lists the median weekly individual, family and household incomes in 2006 and 2011 for the LGAs in the Study Area as well as the Northern SD / NENWSA4 and NSW. Median incomes indicate where half of the individuals / families / households (whichever is relevant) earn more and half less.

Table 34
Income Indicators, 2006 and 2011

Geographic Area	Median Individual Income (\$/Weekly)	Median Total Personal Income (\$/Weekly)	Median Family Income (\$/Weekly)	Median Total Family Income (\$/Weekly)	Median Household Income (\$/Weekly)	Median Total Household Income (\$/Weekly)
	2006	2011	2006	2011	2006	2011
Gunnedah (Urban Centre / Locality)	356	478	862	1,180	654	888
Curlewis (Urban Centre / Locality)	298	428	697	987	630	777
Curlewis (State Suburb)	310	Not comparable	764	Not comparable	658	Not comparable
Gunnedah LGA	366	485	915	1,200	714	937
Quirindi (Urban Centre / Locality)	349	433	793	970	644	777
Werris Creek (Urban Centre / Locality)	279	373	674	897	559	706
Spring Ridge (State Suburb)	462	523	1,005	1,068	806	866
Blackville (State Suburb)	517	Not comparable	1,014	Not comparable	843	Not comparable

Geographic Area	Median Individual Income (\$/Weekly)	Median Total Personal Income (\$/Weekly)	Median Family Income (\$/Weekly)	Median Total Family Income (\$/Weekly)	Median Household Income (\$/Weekly)	Median Total Household Income (\$/Weekly)
	2006	2011	2006	2011	2006	2011
Caroona (State Suburb)	229	350	589	744	568	646
Currabubula (State Suburb)	355	479	922	1,052	700	888
Willow Tree (State Suburb)	239	Not comparable	585	Not comparable	454	Not comparable
Breeza (State Suburb)	383	Not comparable	1,019	Not comparable	817	Not comparable
Liverpool Plains LGA	351	433	857	988	666	797
Tamworth (Urban Centre / Locality)	418	Not comparable	1,048	Not comparable	809	Not comparable
Tamworth Regional LGA	405	515	1,041	1,181	818	958
Narrabri LGA	410	520	1,034	1,246	792	982
Upper Hunter LGA	438	552	1,091	1,392	882	1,071
Northern SD / NENWSA4	381	479	999	1,123	753	902
NSW	461	561	1,181	1,477	1,036	1,237

Source: ABS, 2007 and ABS, 2012b

Table 34 shows that on all measures of 2006 and 2011 income (individual, family and household), the Liverpool Plains LGA had the lowest median of the LGAs in the Study Area, followed (in increasing order) in 2006 by Gunnedah LGA, the Northern SD, Narrabri LGA, Tamworth Regional LGA and Upper Hunter LGA, while NSW had the highest median. However, by 2011, Gunnedah LGA's indicators were also higher than the NENWSA4, although all LGAs were still lower than the NSW medians in 2011.

Between 2006 and 2011, median incomes also rose in all small areas within the Study Area reported in **Table 34**. The highest rate of growth was experienced in Caroona State Suburb, followed by Curlewis UCL.

This growth also accords with the growth in mining employment during that time.

Apart from Tamworth Urban Centre and Currabubula State Suburb, the '*black soil plains*' areas of Spring Ridge, Breeza and Blackville consistently showed the highest medians in 2006 in the Study Area, with Spring Ridge and Blackville's median individual incomes being higher than NSW's. In 2011, no small area in the Study Area had higher median incomes than NSW, due to strong growth in state income levels.

Willow Tree, Werris Creek and Carroona had the lowest median incomes in 2006, with Willow Tree's median household income being less than half of that of NSW, and likewise Carroona's median individual income being half of NSW's. In 2011, Werris Creek and Carroona had the lowest median incomes.

Indigenous Median Income Indicators

Table 101 in **Appendix D** lists the median weekly individual and household incomes of Indigenous and non-Indigenous people and households in 2006 and 2011 for the Census Indigenous Locations and Areas in the Study Area, as well as NSW.

Table 101 shows that the median individual income difference between Indigenous and non-Indigenous people in the Study Area is significant. In 2011, median incomes of indigenous people in all areas were lower than those of non-Indigenous people. Werris Creek showed the lowest median individual income for indigenous people in 2011.

Median household income differences between indigenous and non-Indigenous people show a different pattern. In the Liverpool Plains and Narrabri LGAs in 2011, the median household income was higher for Indigenous households than non-Indigenous households, with all other areas showing the reverse. The lowest median household income in the Study Area in both 2006 and 2011 was at Carroona / Walhallow Reserve.

5.9.2 Average Income Indicators

The GCP 2006, states that in 2006, the average (as opposed to median) income from all sources of adults (aged 15+) in the Gunnedah LGA was around \$500 a week, which was \$139 lower than the \$639 average for NSW. The average income of local women was \$412 and the average of local men was 44% higher than this at \$594.

From 2001 to 2006, the average income in the Gunnedah LGA rose by 26%. Male average incomes went from \$469 in 2001 to \$594 in 2006, up by 27%; women's from \$662 in 2001 to \$412 in 2006, down by 38%.

The average weekly family income in the Gunnedah LGA in 2006 was \$1,183, which was 17% lower than the \$1,432 average for NSW. The family income was equivalent to 2.4 individual incomes, compared to 2.2 for NSW.

5.9.3 Taxation Statistics

Table 35 lists taxation statistics for the LGAs in the Sub Regional Study Area and NSW for 2006-2009.

Table 35
Taxation statistics, 2006-2009

Year Ended 30 June			2006	2007	2008	2009	% Change 2006- 2009
Gunnedah LGA	Taxable individuals	no.	4,584	4,421	4,591	4,292	-6%
	Average taxable income (taxable individuals)	\$	39,710	44,455	50,079	51,001	28%
Liverpool Plains LGA	Taxable individuals	no.	2,895	2,762	2,916	2,675	-8%
	Average taxable income (taxable individuals)	\$	40,725	45,367	47,314	49,121	21%
Tamworth Regional LGA	Taxable individuals	no.	23,358	22,795	23,591	22,121	-5%
	Average taxable income (taxable individuals) – average taken of Tamworth Pt A and Pt B averages	\$	39,464	42,253	43,599	47,220	20%
NSW	Average taxable income (taxable individuals)	\$	49 830	54 742	56 295	59,782	20%

Source: ABS, 2010a; ABS, 2010b

Table 35 shows a variable, although slightly declining, number of taxable individuals from the Sub Regional Study Area over the 4 year period. While the number of taxable individuals has remained relatively stable, there has been an increase in average taxable income for each LGA, with the Gunnedah LGA showing a 28% increase between 2006 and 2009, Liverpool Plains LGA showing a 21% increase and Tamworth Regional a 20% increase in that period.

Although the LGAs had average taxable incomes well below the NSW average in each of the years, the Gunnedah and Liverpool LGAs had stronger growth in average taxable income than NSW's 20% growth.

5.10 HOUSING AND LAND

This section presents data and analysis regarding the following housing and land issues in the Study Area:

- Current housing stock;
- Housing tenure;
- Housing costs and affordability issues;
- Temporary accommodation;
- Crisis accommodation;
- Recent housing growth;
- Local residential land supply;
- Regional and local housing and development policy and initiatives; and
- Future housing growth.

5.10.1 Current Housing Stock

Dwelling Stock and Types

Table 36 shows the total number of occupied private dwellings and their forms in the LGAs of the Sub Regional Study Area in 2006. A comparison is also made to the Northern SD and NSW.

Table 36
Dwelling type, Occupied Private Dwellings, 2006

Geographic Area	Separate House		Semi-Detached, Row or Terrace House, Townhouse etc		Flat, Unit or Apartment		Other Dwelling		Not Stated		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Gunnedah LGA	3,952	91%	41	1%	299	7%	52	1%	9	0.2%	4,353
Liverpool Plains LGA	2,757	95%	18	1%	74	3%	38	1%	0	0%	2,887
Tamworth Regional LGA	17,522	88%	505	3%	1,772	9%	165	1%	6	0.2%	19,970
Northern SD		89%		2%		7%		1%		0.1%	
NSW		71%		10%		18%		1%		0.1%	

Source: ABS, 2007a

Table 37 shows the total number of occupied private dwellings and their forms in the LGAs of the Sub Regional Study Area in 2011, as well as a comparison to the NENWSA4 and NSW.

Table 37
Dwelling type, Occupied Private Dwellings, 2011

Geographic Area	Separate House		Semi-Detached, Row or Terrace House, Townhouse Etc		Flat, Unit or Apartment		Other Dwelling		Not Stated		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Gunnedah LGA	4,009	89%	124	3%	302	7%	50	1%	3	0.1%	4,487
Liverpool Plains LGA	2,825	96%	44	1%	53	2%	22	1%	7	0.2%	2,951
Tamworth Regional LGA	18,488	87%	917	4%	1,513	7%	193	1%	31	0.1%	21,142
NENWSA4		89%		3%		7%		1%		0.1%	
NSW		70%		11%		19%		1%		0.1%	

Source: ABS, 2012b

Table 37 clearly shows that the dominant housing form in the Sub Regional Study Area is a 'separate house', which formed 89% of the Gunnedah LGA housing stock in 2011, 96% of Liverpool Plains LGA and 87% of Tamworth Regional LGA, compared to the NENWSA4 of 89% and NSW of 70%.

Medium density development (i.e. a semi-detached, row or terrace house, townhouse, flat, unit or apartment) accounted for only 10% of the Gunnedah LGA housing stock, 3% for Liverpool Plains LGA, and 11% for Tamworth Regional LGA in 2011.

The percentage of medium density development increased by 2% in the Gunnedah LGA between 2006 and 2011, and fell slightly in the Liverpool Plains and Tamworth Regional LGAs.

Table 36 and Table 37 show that there has been an increase in the number of dwellings in all LGAs in the Study Area from 2006-2011. Gunnedah LGA increased by 134 dwellings, Liverpool Plains LGA by 64 and Tamworth Regional LGA by 1,172. Between 2006 and 2011, the proportion of semi-detached and townhouse dwellings had increased in the Gunnedah and Tamworth Regional LGAs, with a concurrent decrease in the proportion of separate houses in those LGAs.

Occupancy Rate

The 'occupancy rate' is a measure of the average number of people per dwelling (or an average household size) in any given geographic area.

Table 38 shows the occupancy rates in 2006 and 2011 for the LGAs within the Sub Regional Study Area and for the Northern SD / NENWSA4 and NSW. Not all data for component settlements of the Sub Regional Study Area was comparable in 2011.

Table 38
Average household size (occupancy rate), 2006 and 2011

Geographic Area	Average Household Size (Persons)	
	2006	2011
Gunnedah (Urban Centre / Locality)	2.4	2.4
Curlewis (Urban Centre / Locality)	2.8	2.1
Curlewis (State Suburb)	2.8	Not comparable
Gunnedah LGA	2.5	2.5
Quirindi Urban (Centre / Locality)	2.3	2.3
Werris Creek (Urban Centre / Locality)	2.2	2.2
Spring Ridge (State Suburb)	2.4	2.3
Blackville (State Suburb)	2.7	Not comparable
Carroona (State Suburb)	2.8	2.7
Currabubula (State Suburb)	2.4	2.3
Willow Tree (State Suburb)	2.2	Not comparable
Breeza (State Suburb)	2.6	Not comparable
Liverpool Plains LGA	2.4	2.4
Tamworth (Urban Centre / Locality)	2.4	Not comparable
Tamworth Regional LGA	2.5	2.5
Northern SD / NENWSA4	2.5	2.4
NSW	2.6	2.6

Source: ABS, 2007a and ABS, 2012b

Table 38 shows a variable occupancy rate across the Study Area. In 2011, some urban areas showed a lower occupancy rate than NSW (2.6), particularly the towns of the Liverpool Plains LGA (2.4) being Werris Creek (2.2) and Quirindi (2.3). Gunnedah LGA had a slightly higher rate of 2.5, similar to Tamworth Regional LGA (2.5). The occupancy rates of the LGAs in the Sub Regional Study Area and NSW did not change between 2006 and 2011, while the rate of the NENWSA4 decreased by 0.1. Across the smaller State Suburbs and Urban Centres of the study area, the occupancy rate decreased slightly, with the exception of Curlewis State Suburb, which recorded a decrease in occupancy rate from 2.8 to 2.1 between 2006 and 2011.

The GCP 2006 showed that in the Gunnedah LGA in 2006, there was a significant difference between the occupancy rate for family households (3.2) compared to non-family households (1.1) and the average of all dwellings (2.6).

The GLCA showed that relatively more people live together in Indigenous households in the Gunnedah LGA than non-Indigenous households. For example, 44% of Indigenous households contain more than four residents compared with 23% of non-Indigenous households. Conversely, 12% of Indigenous households in the LGA have only 1 person, compared with 27% of non-Indigenous households.

5.10.2 Housing Tenure

Table 39 outlines the tenure of occupied private dwellings in 2006 for the LGAs within the Sub Regional Study Area and provides a comparison with the Northern SD and NSW.

Table 39
Tenure type of occupied private dwellings, 2006

Tenure Type	Gunnedah LGA		Tamworth Regional LGA		Liverpool Plains LGA		Northern SD	NSW
	Dwellings	% of Total Occupied Private Dwellings	Dwellings	% of Total Occupied Private Dwellings	Dwellings	% of Total Occupied Private Dwellings		
Fully owned	1,796	40%	7,540	42%	1,349	44%	34%	33%
Being purchased	1,180	26%	6,306	24%	655	22%	31%	30%
Rented	1,245	28%	5,623	29%	764	25%	28%	28%
Other tenure type	59	1%	199	1%	47	2%	1%	1%
Tenure type not stated	231	5%	933	5%	227	7%	6%	7%
Total occupied private dwellings	4,511		20,601		3,042			

Source: ABS, 2012c

Table 39 shows that the proportion of occupied private dwellings that were being rented in 2006 was similar across most areas – 28% in the Gunnedah LGA, Northern SD and NSW, 29% in Tamworth Regional LGA, with a lower proportion of 25% in the Liverpool Plains LGA.

Although there are more dwellings fully owned in the Gunnedah and Liverpool Plains LGAs (40% and 44% respectively) than NSW (33%), the total either fully owned or being purchased is similar across the various areas – 66% in the Tamworth Regional, Gunnedah and Liverpool Plains LGAs, 65% in the Northern SD and 63% in NSW.

Table 39 outlines the tenure of occupied private dwellings in 2011 for the LGAs within the Sub Regional Study Area and provides a comparison with the NENWSA4 and NSW.

Table 40
Tenure type of occupied private dwellings, 2011

Tenure Type	Gunnedah LGA		Tamworth Regional LGA		Liverpool Plains LGA		NENWSA4	NSW
	Dwellings	% of Total Occupied Private Dwellings	Dwellings	% of Total Occupied Private Dwellings	Dwellings	% of Total Occupied Private Dwellings		
Fully owned	1,718	36%	7,457	34%	1,274	42%	39%	33%
Being purchased	1,279	27%	6,805	31%	733	24%	27%	30%
Rented	1,384	29%	6,232	28%	869	29%	28%	28%
Other tenure type	53	1%	181	1%	29	1%	1%	1%
Tenure type not stated	317	7%	1,334	6%	144	5%	6%	7%
Total occupied private dwellings	4,751		22,009		3,049			

Source: ABS, 2012c

Table 39 and **Table 40** show that while the proportion of occupied private dwellings that were being rented in 2006 and 2011 remained constant in NENWSA4 and NSW at 28%, the proportion of dwellings being rented in the Gunnedah LGA increased 1% to 29% in 2011 and increased 4% to 29% in the Liverpool Plains LGA. The proportion in Tamworth Regional LGA fell 1% to 28% in 2011.

The proportion of dwellings either fully owned or being purchased in 2011 still remained similar across the various areas – 65% in Tamworth Regional LGA, 63% in the Gunnedah LGA, 66% in the Liverpool Plains LGA, 66% in the NENWSA4 and 63% in NSW.

The GCP 2006 explains that generally, more fully-owned dwellings indicate an older, longer-settled population. Tenures tend to vary with dwelling types, with people more likely to rent flats or units (particularly when they are young) but to own houses when they are older. In Gunnedah LGA in 2006, 43% of houses were fully owned, compared with 29% of the semi-detached or townhouses and 12% of the flats. Conversely, 76% of flats / units, 24% of houses and 39% of semis or townhouses were rented.

The GLCA reports that the proportion of Indigenous people who fully own or are in the process of purchasing their own home is consistently lower than non-Indigenous populations in all areas. In Gunnedah LGA, 35% of Indigenous, compared to 68% of non-Indigenous people, fully own or are in the process of purchasing their own home.

GSC staff report that during the population decline in the 1990s and early 2000s, subsidised housing (provided through subsidised rent) that was previously supplied to Police, Department of Agriculture staff and teachers in the 1980's and 1990's was sold off (GSC, 2011, pers. comm., 17 November).

Another type of '*tenure*' that is not specifically recognised by the Census is that of a '*boarder*' in a private home, of which anecdotal evidence suggests that there is an increasing number, particularly in Gunnedah, because of mining and construction employees seeking accommodation (GSC, 2011 pers. comm., 17 November).

Social Housing

NSW F&CS 2011, (NSW Family & Community Services, 2011) explains that social housing is provided to low income earners in the form of:

- Public housing, which is provided by Housing NSW and accessed either directly through Housing NSW or a community housing provider; or
- Community housing, which is either Public Housing head leased to community housing providers, housing owned by a community housing provider or private rental housing head leased to community housing providers.

NSW F&CS 2011 reports that social housing availability in the Narrabri and Gunnedah area is reducing due to private rental owners withdrawing stock in order to chase higher rents, or to public housing stock not being replaced. The challenges for public housing in the area will be to maintain and increase levels of social housing stock as demand increases.

The following number of social housing properties were provided in the Sub Regional Study Area in 2012 (approximate):

- Gunnedah – 280. Note that in Gunnedah, all public housing previously managed by NSW Housing is now managed by Homes North Community Housing Ltd;
- Quirindi – 36;
- Werris Creek – 28; and
- Tamworth – 1,200, including approximately 100 one and two bedroom units that were built between 2009 and 2011 under the Nation Building Economic Stimulus Plan.

These properties include houses provided by:

- Community housing providers;
- NSW Housing;
- NSW Aboriginal Housing Office; and
- Community Aboriginal Housing providers.

In Tamworth, it is expected that the recent building of the 100 social housing properties will help to give a buffer to assist in easing the impact of rising house prices that could be expected as part of the mining and resource sector growth in the region (Northern NSW - Department of Family and Community Services, 2012, pers. comm., 6 March).

Rental Vacancy Rate

The vacancy rate for the region, which includes Narrabri, Moree, Armidale, Tamworth, Gunnedah, Inverell, Glen Innes and Quirindi, was 2.1 per cent for January 2011. In Gunnedah the property market has become so strained by the growth of the mining industry, the Council is organising a forum of stakeholders to address the property crisis. Local real estate has seen strong demand for rentals for the past three years in Gunnedah, sometimes with two and three months going by at a time without a vacancy. The demand has driven up residential rent prices by approximately 20 per cent over the past year (Ferguson, 2011).

The GLCA reports that anecdotal evidence suggests that an increasing number of mining employees are expected to move to the Gunnedah area, which may have an impact on the availability of rental accommodation. The GLCA also reports that there has been a decline in the amount of government housing available for rent as many previously government owned houses have been sold to private buyers.

GSC staff reported that a typical complex of 6-8 medium density units may only have vacancies in individual units for one week at a time, as demand is so high for rental accommodation. Staff also noted that home hosting for the 2011 AgQuip event in Gunnedah was noticeably down, probably being a result of properties that were previously being available for home hosting now being placed on the general rental market (GSC, 2011, pers. comm., 17 November).

5.10.3 Housing Costs and Affordability

The SRLUP states that the region has seen housing prices increase since 2000, proportional to the majority of housing markets across the state. Housing affordability varies across the region depending on supply and demand in a particular area. Overall affordability is strongly linked to the economic strength of the local area, and affordability has become a significant issue in the LGAs of Gunnedah, Narrabri and Liverpool Plains where demand for housing is increasing as the coal and coal seam gas industries expand.

Housing Market Prices

Housing market data utilised in SIAs is typically sourced from the quarterly *Rent and Sales Reports* published by the NSW Department of Housing. This data shows median sale prices for the preceding quarter for residential property sales in each rural NSW LGA, and shows changes in the last quarter and year. However, for most rural LGAs, the number of residential sales is too small to show meaningful data, and as a result, quarterly and annual changes are sometimes not able to be provided, or are patchy depending on sales each year. Also, the data includes all sales where a residence was included on the land, regardless of the land size, meaning that rural farms could also be included in the data, giving an inaccurate picture of the urban property market.

For that reason, detailed property sales data for the Sub Regional Study Area has been sourced instead from *RPdata* (RPdata Ltd, 2012 and 2013) and has been analysed for specific submarkets and towns.

Gunnedah LGA

Table 102 in **Appendix D** shows a range of data relating to residential property sales in the Gunnedah 2380 postcode at two yearly intervals from 2003 to 2011 and also for 2012. The data is presented for the following sub-markets of all residential properties:

- All houses;
- 3 bedroom houses on land size less than 2,000sqm;
- 3+ bedroom houses on land size more than 2,000sqm;
- All units; and
- 2 bedroom units.

The distinctions in the sub markets were made to determine more accurate data regarding residential property price movements in the last eight years. For example, data solely for 'all houses' will not recognise the range of housing types that are sold in the market. For this reason, data for a 'typical' country town house, being on a lot size of less than 2,000sqm (approximately half an acre) was extracted so that houses on larger lots were excluded. Similarly, it could be expected that larger (3+ bedrooms) rural residential homes would attract higher sales prices, so data for those types of houses on lots more than 2,000sqm were extracted separately. The same is presented for units – data for 'all units' is shown, as is the submarket of a 2 bedroom unit.

Each cell in **Table 102** shows, for the applicable year and housing sub market, the:

- Number of properties sold;
- Lowest sale price;
- Highest sale price;
- Median value of all properties sold; and
- Average value of all properties sold.

Table 102 shows that from 2003 to 2012 in Gunnedah:

- For houses:
 - There have been approximately 100-165 houses sold in each reported year;
 - The median value of all houses increased steadily from \$108,000 to \$280,000 in 2012 (an increase of almost \$172,000 or approximately 160%);
 - The average value of all houses increased steadily from \$120,519 to \$296,498 in 2012 (an increase of approximately \$176,000 or approximately 146%);
 - However, for a 'typical' house, being 3 bedrooms on land size less than 2,000 sqm, the median and average value also increased, but the average value in 2012 was approximately \$33,500 less than for 'all houses'; and

- Although the number of houses sold in the '3+ bedroom on land size more than 2,000 sqm' was a lot smaller (only 15 in 2012), the 2012 median (\$442,000) and average (\$417,500) values of those properties was significantly more than for 'all houses'.
- For units:
 - The number of units sold increased from nine in 2003 to 24 in 2011 (almost three times as many) but was less in 2012 at 17;
 - The median value of all units increased steadily from \$135,500 to \$272,500 in 2012 (an increase of \$137,000 or just over 100%);
 - The average value of all units almost doubled from \$143,277 to \$283,395 in 2011 (an increase of \$140,118) but declined in 2012;
 - In 2007, 2009 and 2011, 2 bedroom units comprised approximately half of all units sold; and
 - The median and average values of 2 bedroom units were lower than for 'all units' in 2012, being \$206,250 and \$205,083 respectively. These values were significantly less than the respective values for 'all units'.

Table 103 in **Appendix D** shows a range of data relating to residential property sales in Curlewis (postcode 2381) in 2003, 2007 and 2011 and also for 2012. The data is presented separately for all houses and all units.

Table 103 shows that from 2003 to 2012 in Curlewis:

- There are a limited number of properties sold each year in Curlewis, with between 3 and 11 houses being on offer in the four reported years and only two 'units' on offer in one year only;
- The median and average values of houses fell between 2003 and 2007. This may partly be explained by the fact that there were only three properties sold in 2003;
- The median and average value of houses more than doubled between 2007 and 2011 to values of \$175,000 and \$181,227 respectively in 2011, with a fall in both to 2012; and
- The median and average value of houses in Curlewis in 2011 was approximately \$100,000 less than for those in Gunnedah at that time.

Liverpool Plains LGA

Table 104 in **Appendix D** shows a range of data relating to residential property sales in Quirindi (postcode 2343) and Werris Creek (postcode 2341) in 2003, 2007 and 2011 and also for 2012. The data is presented separately for all houses and all units.

Table 104 shows that:

- In Quirindi from 2003 to 2012:
 - There were between 35 and 48 houses sold in each reported year, with 2012 being the lowest;
 - The median value of houses almost doubled from \$87,000 to \$170,000;

- The average value of houses also almost doubled from \$102,333 to \$202,805;
- There were only six units sold in the four reported years, with not enough sales to make meaningful comparisons; and
- Houses in Quirindi were generally more expensive than in Curlewis.
- In Werris Creek from 2003 to 2012:
 - There were between 32 and 38 houses sold in each reported year from 2003 to 2011, with a drop to 19 in 2012;
 - The median value of houses more than doubled from \$58,000 to \$143,500;
 - The average value of houses also more than doubled from \$69,781 to \$160,382 in 2011, with a fall to \$149,441 in 2012;
 - There were no units sold in the four reported years; and
 - Houses in Werris Creek were the cheapest of those analysed in the Sub Regional Study Area.

Tamworth Regional LGA

In **Appendix D, Table 105** and **Table 106** show median house and unit sale prices for various urban suburbs within Tamworth City, while **Table 107** and **Table 108** show capital growth median prices for houses and units for those suburbs. These tables were sourced from RPdata as referenced in the *Tamworth Regional Affordable Housing Strategy* (TRC, 2011a).

Representative Land Values

NSW Land and Property Information (LPI) publishes *Representative Land Values* to assist in understanding typical land values and market trends over time in LGAs across the state. **Table 41** shows the representative land value of a standard serviced housing allotment in Gunnedah and Tamworth in 1996, 2006, 2010 and 2011. The values are indexed to the 1996 value and indicate the market trend for that property type.

Table 41
Representative land values for standard serviced allotment, 1996-2011

LGA	Dimensions of allotment (metres)	1996 (\$)	2006 (\$)	2010 (\$)	2011 (\$)	Change 2010-2011	Change 2006-2011
Gunnedah	21 x 51	38,500	84,900	114,000	114,000	0%	34%
Tamworth	22 x 41	40,500	94,100	99,100	99,100	0%	5%

Source: NSW Land & Property Information, 2011

Note: The selected allotment is considered to be representative for that locality and will indicate the market trend. Market trends are identified in the table and not by the values of specific properties at a given date.

Table 41 shows that while Gunnedah's representative housing land values were lower than Tamworth's in 1996 and 2006, the values exceeded Tamworth's in 2010. Gunnedah experienced an increase of 34% from 2006 to 2011, while Tamworth only experienced 5% in the same timeframe.

This data accords with GSC staff observations that “as it was in the 1980s, current (2011) housing is 20% dearer in Gunnedah than it is in Tamworth. In contrast, when Gunnedah was at its lowest economic point in 2003/4, the Gunnedah housing prices were well below Tamworth’s.... the price rocketed up in 2005 and has continued to do so” (GSC, 2011, pers. comm., 17 November).

Mortgage Prices

The GCP 2006 states that the average monthly mortgage paid by the 1,166 households in the Gunnedah LGA who were paying off their home in 2006 was about \$1,040, which was 40% less than NSW. The median mortgage for the Gunnedah LGA was in the range \$750-\$949. The average mortgage generally varies with the type of dwelling, and ranged in the Gunnedah LGA from about \$1,400 per month for attached houses and \$1,030 for separate houses, down to \$977 for flats or units. The GCP 2006 further estimates that the average mortgage in the Gunnedah LGA rose by about \$247 (31%) between 2001 and 2006.

Rental Prices

Median rents in 2006 and 2011 for LGAs within the Study Area are listed at **Table 42**. Comparable data was only available for some of the component urban settlements of the Sub Regional Study Area for both 2006 and 2011.

Table 42
Median Rent, 2006 and 2011

Geographic Area	Median rent (\$/week)	
	2006	2011
Gunnedah (Urban Centre / Locality)	130	200
Curlewis (Urban Centre / Locality)	120	198
Curlewis (State Suburb)	110	Not comparable
Gunnedah LGA	120	190
Quirindi (Urban Centre / Locality)	121	165
Werris Creek (Urban Centre / Locality)	110	160
Spring Ridge (State Suburb)	60	50
Blackville (State Suburb)	0	Not comparable
Carroona (State Suburb)	80	120
Currabubula (State Suburb)	90	168
Willow Tree (State Suburb)	95	Not comparable
Breeza (State Suburb)	33	Not comparable
Liverpool Plains LGA	100	150
Tamworth (Urban Centre / Locality)	160	Not comparable
Tamworth Regional LGA	150	200
Narrabri LGA	110	140

Geographic Area	Median rent (\$/week)	
Upper Hunter LGA	120	170
Northern SD / NENWSA4	130	175
NSW	210	300

Source: ABS, 2007 and ABS, 2012b

Table 42 shows that in 2011, the Tamworth LGA and Gunnedah Urban Centre had the highest median rent in the study area, at \$200 per week. Median rents for the towns and localities of the Liverpool Plains LGA were below that of the NENWSA4, while all towns and localities in the Sub Regional Study Area were considerably less than the NSW median of \$300 per week. In 2011, Gunnedah LGA's median rent of \$190 per week almost matched Tamworth Regional LGA's of \$200, while Liverpool Plains LGA was \$150 per week and, Narrabri LGA \$140 and Upper Hunter LGA \$170. These patterns were to be expected for the relative population sizes and functions of each of the towns and villages in the Sub Regional Study Area in 2011.

All median rents increased between 2006 and 2011, with the highest percentage increase being for Currabubula State Suburb's of 86.7%.

Rental properties and rental prices listed by property data specialists RPdata (at 1 February 2012) are listed in **Table 64**. The table shows any properties listed for rent in the six months previous to February 2012. Each cell in the table shows the number of properties listed for rent / the highest rental price / the median rental price / the average rental price (all per week). Data was not available for time periods previous to this.

Table 43
Rental properties listed and rental prices per week, February 2012

LGA and Town / Locality	All Units	2 Bedroom Unit	3 Bedroom Unit	All Houses	3 Bedroom House on Land Size Under 2000 sqm	3+ Bedroom House on Land Size Over 2000 sqm
Gunnedah LGA						
Gunnedah 2380	22 / \$549 / \$220 / \$237	13 / \$290 / \$220 / \$224	5 / \$549 / \$350 / \$354	99 / \$1,200 / \$280 / \$302	55 / \$450 / \$284 / \$287	3 / \$599 / \$399 / \$424
Curlewis	No properties listed			1 / \$249 / \$249 / \$249	Not retrieved – data set too small	
Carroll	No properties listed			1 / \$230 / \$230 / \$230		
Breeza	No properties listed					
Liverpool Plains LGA						
Quirindi	No properties listed			31 / \$329 / \$249 / \$248	Not retrieved – data set too small	

LGA and Town / Locality	All Units	2 Bedroom Unit	3 Bedroom Unit	All Houses	3 Bedroom House on Land Size Under 2000 sqm	3+ Bedroom House on Land Size Over 2000 sqm
Werris Creek	No properties listed			25 / \$300 / \$179 / \$201	Not retrieved – data set too small	
Willow Tree	No properties listed			1 / \$179 / \$179 / \$179		
Currabubula	No properties listed			1 / \$269 / \$269 / \$269		
Tamworth LGA						
Tamworth 2340	108 / \$500 / \$230 / \$238	75 / \$399 / \$225 / \$231	19 / \$500 / \$320 / \$314	355 / \$730 / \$300 / \$312	197 / \$420 / \$285 / \$287	14 / \$595 / \$365 / \$391

Source: RPdata Ltd, 2012

Note: Each cell shows the number of properties listed for rent / the highest rental price / the median rental price / the average rental price (all per week)

Table 43 shows that in February 2012:

- 99 houses were offered for rent in Gunnedah, with the average weekly rental price being \$302;
- 31 houses were offered for rent in Quirindi, with the average rental price being approximately \$50 less than Gunnedah's at \$248;
- 25 houses were offered for rent in Werris Creek, with the average rental price being approximately \$100 less than Gunnedah's at \$201;
- Other smaller localities only had one property on offer for rent; and
- The Gunnedah rental market had more variation in the type of houses and units on offer:
 - There were 22 units on offer, with an average weekly rental price of \$237 (\$70 less than for houses);
 - Almost half of the units on offer were for 2 bedroom units and had average rental prices slightly cheaper than for 'all units';
 - The five '3 bedroom units' on offer had a significantly higher average rental price (\$354) than those for 2 bedroom units (\$224);
 - Of all the houses on offer for rental, more than half were for a 'typical' house of 3 bedrooms on land size under 2,000 sqm, where the average rental price (\$287) was slightly less than that for 'all houses' (\$302); and
 - The three '3+ bedroom houses on land size over 2,000 sqm' on offer had a significantly higher average rental price (\$424) than those for 'all houses' (\$302).
- The Tamworth rental market showed that:

- There were 108 units on offer, with an average weekly rental price of \$238 (\$74 less than for houses);
- Approximately three-quarters of the units on offer were for 2 bedroom units and had average rental prices slightly cheaper than for 'all units';
- The 19 '3 bedroom units' on offer had a significantly higher average rental price (\$314) than those for 2 bedroom units (\$231);
- Of all the houses on offer for rental, more than half were for a 'typical' house of 3 bedrooms on land size under 2,000 sqm, where the average rental price (\$287) was slightly less than that for 'all houses' (\$312);
- The 14 '3+ bedroom houses on land size over 2,000 sqm' on offer had a significantly higher average rental price (\$391) than those for 'all houses' (\$312); and
- Rental prices in Tamworth in February 2011 were similar to those of Gunnedah's.

The GCP 2006, states that the average rent paid by the 1,218 households renting in the Gunnedah LGA in 2006 was \$124 a week, which was 47% less than the NSW average. The most common rents in 2006 in the Gunnedah LGA were in the range \$100-\$139, \$140-\$179 then \$50-\$99. These three ranges included 71% of rental households.

The GCP 2006 estimated that the average rent in the Gunnedah LGA decreased by \$10 (7%) in real terms from 2001 to 2006.

The GLCA reports that anecdotal evidence suggests that rent has increased considerably in the Gunnedah Shire since the 2006 Census.

The GSC Mayor stated in March 2011 that *"there is a chronic rental shortage within the Gunnedah region and that the 'elephant in the room' is housing and accommodation"*. He also stated that *"the average rental price increase last year was above 30% and the average sale price also increased above 20%"* (Watermark Coal Project CCC minutes 8 March 2011).

GSC staff also reported that houses rented by mining companies can currently fetch to \$1,400 per week (GSC, 2011, pers. comm., 17 November).

Mortgage and Rental Stress

Housing stress (either mortgage or rental) is indicated where a household spends more than 30% of its income on either a mortgage or rental. **Table 44** shows mortgage and rental stress in 2006 for the LGAs of Gunnedah, Liverpool Plains and Tamworth Regional.

Table 44
Mortgage and rental stress, 2006

LGA	Low Income Households with Mortgage Stress (A)	Mortgaged Private Dwellings	% Mortgage Stress	Low Income Households with Rental Stress (B)	Rented Private Dwellings	% Rental Stress
Gunnedah LGA	124	1,180	10.5	324	1,247	26.0

LGA	Low Income Households with Mortgage Stress (A)	Mortgaged Private Dwellings	% Mortgage Stress	Low Income Households with Rental Stress (B)	Rented Private Dwellings	% Rental Stress
Liverpool Plains LGA	59	655	9.0	136	764	17.8
Tamworth Regional LGA	589	6,303	9.3	1,557	5,622	27.7
Country NSW	26,748	272,534	9.8	72,529	248,253	29.2
New South Wales	69,653	745,335	9.3	175,715	700,655	25.1

Source: Public Health Information Development Unit, 2009: *Social Health Atlas of Australian LGAs, 2009*; ABS, 2006

(a) Includes households in bottom 40% of income distribution (with less than 80% of median income) spending more than 30% of income on mortgage repayments

(b) Includes households in bottom 40% of income distribution (with less than 80% of median income) spending more than 30% of income on rent

Table 44 shows that in 2006, a higher percentage of households in the Gunnedah LGA were experiencing both mortgage and rental stress than the NSW proportion. Gunnedah LGA also had the highest level of mortgage stress of the three LGAs described. Rental stress was highest in Tamworth Regional LGA at 27.7%, being slightly lower than the 'Country NSW' proportion, and contrasting with the low proportion of 17.8% for the Liverpool Plains LGA. Rental and mortgage stress data is not yet available for 2011.

Lower Income Residents and Homelessness

NSW F&CS 2011 reported the following information in regard to low income residents have been noted for the Narrabri and Gunnedah areas:

- Lower income residents are being forced out of the private rental market in both Narrabri and Gunnedah;
- Anecdotal reports from community housing providers highlight instances of tenants being terminated from a private tenancy at the end of the lease in order for landlords to make minor adjustments to attract higher rental returns. The vacating tenant, unable to compete for the higher rental property then struggles to find comparable accommodation in the town;
- Low income earners are moving to outlying villages which increases rental prices in those villages. This has further ramifications for social service provision and transport in these towns;
- Many properties are offered for rent as fully furnished properties targeting the fly in fly out / drive in drive out (FIFO / DIDO) workforce which increases the cost of rentals, consequently limiting the affordability of these properties for others; and

- Reports from services that monitor emergency relief funding indicate an increase in requests for such funding above the seasonal averages.

The *HAP* states that the 2006 Census counted 104 homeless households in Tamworth, 98 in Armidale, 94 in Narrabri and 62 in Gunnedah.

The GLCA reports that anecdotal evidence from various agencies reports regular occurrences of homelessness in Gunnedah, particularly among Indigenous families.

GSC staff also noted the issue, stating that homelessness is already apparent in Gunnedah and that there is “*plenty of couch surfing and families co-locating together, because they cannot afford homes individually*” (GSC, 2011, pers. comm., 17 November).

5.10.4 Temporary Accommodation

Temporary accommodation relates to those types of accommodation that are typically provided to visitors or tenants for a short period of time - for example motels, serviced apartments, caravan and camping, although the length of tenancy in these forms of accommodation can often extend to lengthy stays, depending on accommodation availability, price and the personal circumstances of visitors.

Tourism Accommodation

Local tourism accommodation businesses in the Study Area provide temporary accommodation not only to tourism visitors but to mining staff, temporary contracting workforces and personnel visiting the town for meetings, inspections etc.

Table 45 lists the number of accommodation establishments with 15 or more rooms in the Study Area in the September quarter of 2011. Data is no longer presented by the ABS for LGAs, meaning that current data cannot be reported.

Table 45
Hotels, motels and serviced apartments statistics, September quarter, 2011

LGA	No of Establishments*	No of Rooms	Room Occupancy Rate	Guest Nights Occupied
Gunnedah	6	141	71.2	12,676
Liverpool Plains	2	Data not available for publication		
Tamworth Regional	26	896	54.2	74,504
Narrabri	8	209	78.1	23,303

Source: ABS, 2011c

Note: Establishments included are hotels and resorts with 15 or more rooms, motels, private hotels and guest houses with 15 or more rooms and serviced apartments with 15 or more units

Table 45 only lists tourist accommodation establishments with 15 or more rooms. There are also a number of smaller accommodation establishments in the Study Area. The GSC website on 12 February 2012 showed a total of 33 accommodation listings for the Gunnedah LGA, including a caravan park, several motels (some of which are included in **Table 45**) and smaller options including self contained cottages and serviced apartments.

In February 2012 there were only two accommodation options within the Liverpool Plains LGA – an 18 room motel in Quirindi and a bush retreat east of Quirindi (New England North West website, 2012).

As at February 2012 (YellowPages, 2012), there were the following number of caravan and tourist parks in the Sub Regional Study Area:

- Gunnedah – 1;
- Tamworth – 3; and
- Quirindi – 1.

Gunnedah LGA

GSC staff report that the current occupancy rate of local motels mid week is approximately 85 - 95%, primarily caused by the use of motels by contractors working in the resource and other industries. On weekends, this rate falls when those contractors return home.

GSC proposes to develop the Gunnedah Showground to accommodate a site for large vehicles and camping, which would suit itinerant workers and would be welcoming to tourists with recreation vehicles. It is proposed that the area will initially accommodate 20 sites, with a later expansion being able to accommodate a further 20 sites.

GSC staff also report that although no data is kept on the development of serviced apartments (since the servicing of dwellings does not require development approval), there has been a significant increase in the provision of this type of housing in the recent past.

GSC staff also report that there are two motel developments (of a combined total of approximately 60 bedrooms) that have been given development consent, but they have not been developed for financial reasons. GSC staff consider that one may yet be constructed, and there is room in the market for other similar developments (GSC, 2011, pers. comm., 17 November).

Liverpool Plains LGA

LPSC staff report a similar situation to that in Gunnedah, with occupancy rates of accommodation in the Liverpool Plains area being high mid week, mainly due to gas and mine exploration contractors, Australian Rail Track Corporation (ARTC) contractors and other subcontractors. Occupancy on weekends is dependent on weekend events. Other information regarding temporary accommodation options reported by LPSC staff:

- A caravan park is located at Quirindi, which is under a private lease;
- A future motel site is available in Quirindi;
- ARTC subcontractors use their own vans for accommodation; and

- The free camping areas at Wallabadah and Premier are well used by tourists with recreational vehicles.

(LPSC, 2011, pers. comm., 18 November).

Purpose-built Workforce Accommodation

On 17 November 2011, the Joint Regional Planning Panel (JRPP) gave approval to DA 37/2011, which was submitted to LPSC by The MAC Services Group for a Workforce Accommodation Facility (WAF) at 76 Gap Road, Werris Creek. The WAF is proposed to be located approximately 1 km west of the village of Werris Creek, approximately 30 km south-east of the Project Boundary.

The WAF approval consists of 1,500 relocatable accommodation units and associated facilities to primarily accommodate workers servicing the mining industry. Additionally, 15 vacant lots will provide 15 caravan / tourist sites open for public use. Each room will have a floor area of 16 m² and contain an ensuite. The development proposes to ultimately feature amenities and facilities such as:

- Commercial kitchen and restaurant with seating for up to 250 persons at any given time;
- 'Crib' room for the self-preparation and consumption of meals;
- Indoor recreation facilities in the form of a TV room and gymnasium etc; and
- Dedicated green space for outdoor pursuits, sports and recreation.

As part of the conditions of consent of the development, a 'Community Benefit Plan' (CBP) is to be provided by the applicant to LPSC. The CBP will identify strategies to encourage and facilitate integration of the WAF with the Werris Creek community and shall specify intended implementation measures and associated timeframes (NSW Joint Regional Planning Panel, 2012).

It appears that the facility will be available for workers from any mining project in the region.

The MAC Services Group Pty Ltd build and manage accommodation units around Australia, housing single employees, usually in the mining industry. The MAC's first village in NSW, opened in 2011, is at Narrabri, with 240 en-suited rooms (The MAC Services Group 2012, 2012). Approval was given for stages 2-5 of this facility, for 650 rooms, by the JRPP in January 2012 (NSW Joint Regional Planning Panels, 2012). Accommodation at the Narrabri MAC Village is priced at \$161 per night or \$1,127 per week inclusive of meals (NSW Family & Community Services, 2011).

DA 138/2012 for an 850 room MAC Workforce Accommodation Facility at Boggabri was approved by the Joint Regional Planning Panel in October 2012 (NSW Joint Regional Planning Panels website, 2012). The *Namoi Valley Independent* reported on 22 November 2011 that the then proposal includes a maximum of 850 single rooms, a kitchen, restaurant, gymnasium and social meeting areas and is proposed to be constructed 2 km west of Boggabri.

The *Namoi Valley Independent* on 22 November 2011 stated that the MAC Group does not have any plans for the Gunnedah district to build an accommodation complex.

Crisis Accommodation

The 12 bed Narrabri Family Crisis Centre is the nearest crisis accommodation to the Project. It is currently operating at below capacity, however, the 'turn aways' of new clients has increased due to a lack of suitable transition housing to exit clients to. In 2007, there were 7 individuals turned away and from approximately January to end November 2011 there were 147 individuals turned away (NSW Family & Community Services, 2011).

5.10.5 Recent Housing Growth

Table 46 shows the number and value of residential building approvals granted in the LGAs in the Sub Regional Study Area from 2006 to 2010.

Table 46
Residential Building Approvals, 2006-2010

Gunnedah LGA	Year Ending 30 June	2006	2007	2008	2009	2010
Private sector houses	no.	34	35	39	24	39
Total dwelling units	no.	49	38	63	29	56
Value of total residential building	\$ Million	12.5	9.7	14.9	8.2	13.5
Liverpool Plains LGA						
Private sector houses	no.	16	1	34	17	9
Total dwelling units	no.	16	1	34	19	9
Value of total residential building	\$ Million	3.3	0.5	8.6	5.2	3.4
Tamworth Regional LGA						
Private sector houses	no.	310	312	289	235	289
Total dwelling units	no.	402	403	352	296	537
Value of total residential building	\$ Million	83	89	82	72	124

Source: ABS, 2010b

Table 46 shows the relative sizes of the level of residential development in each of the LGAs. In 2010, Tamworth LGA reached \$124 million in the value of total residential building, 36 times that of the value of Liverpool Plains LGA and 9 times that of the value of Gunnedah LGA.

Table 46 also shows a peak of residential building approvals in both the Gunnedah and Liverpool Plains LGAs in 2008, with Gunnedah LGA achieving 63 dwelling units and Liverpool Plains LGA 34 dwelling units in that year. Both LGAs show a significant drop to 2009, and then Gunnedah climbs again to 56 dwellings in 2010, while Liverpool Plains continues to fall. Tamworth Regional LGA had two peaks in dwelling units – the first in 2007 with 403 units, the larger peak in 2010 with 537.

Table 47 shows further details regarding dwelling approval and complying development certificate details for the Gunnedah and Liverpool Plains LGAs from 2007/8 to 2009/10.

Table 47
Dwelling approvals, Gunnedah and Liverpool Plains Councils, 2007-2010

Dwelling Type	2007-8	2008-9	2009-10	Total
No of DAs determined and CDCs issued				
1. GSC				
Single new dwellings	25	24	38	87
New second occupancy	10	1	5	16
New multi-unit	1	1	5	7
Seniors living	0	0	0	0
Other residential	0	0	1	1
Total residential DAs determined and CDCs issued	36	26	49	111
2. LPSC				
Single new dwellings	58	31	19	108
New second occupancy	0	0	0	0
New multi-unit	3	1	0	4
Seniors living	0	0	0	0
Other residential	27	2	0	29
Total residential DAs determined and CDCs issued	88	34	19	141
Both LGAs - total residential DAs determined and CDCs issued	124	60	68	252

Source: NSW Department of Planning, 2008b; 2009; 2010

Table 47 shows that the majority of residential dwellings determined by the Gunnedah and Liverpool Plains LGAs between 2007 and 2010 were for single new dwellings. Although the number of DAs determined does not necessarily mean that those dwellings have actually been constructed, it is assumed that the majority of them have been. Regarding medium density developments, there were 16 additional '*dual occupancies*' constructed in the Gunnedah LGA from 2007 - 2010, and seven new '*multi unit*' developments. However, this figure does not reveal how many dwellings were within these '*multi unit*' developments. During the same period, the Liverpool Plains LGA had only four multi unit developments. It is not clear what the 29 '*other residential*' developments comprise.

In the 2010-2011 financial year, GSC approved 74 dwellings. Of these, 40 were '*urban dwellings*' and 43 were '*rural dwellings*'. GSC also approved 14 '*urban units*' (GSC, 2011).

5.10.6 Local Residential Land Supply

A brief assessment of the local residential land supply of the LGAs in the Sub Regional Study Area is made in this section.

Gunnedah LGA

Map 26 *'Recommended Staging'* of the GLES 1982 shows residential land zoning staging in and around Gunnedah township and is still referenced for strategic planning background.

At the end of 2011, all the *'Stage 1'* areas marked on Map 26 of the GLES, approximately 1000 lots, had all been rezoned to Residential (R2) (GLEP, 2012). Rezoning has commenced on the eastern *'Stage 2'* areas of approximately 60 lots. The Stage 2 area to the south is the *'South Wondabah'* rezoning of approximately 50 lots, while the Stage 2 area marked to the north is now an Industrial zoning. The Stage 3 and 4 areas are not expected to be commenced in the near future. Major sewerage augmentation is required for these areas to be able to be zoned residential. The current system has a current extra capacity of 1,000 equivalent tenements (ET), which will only service the current rezoned areas and industrial development (GSC, 2011, pers. comm. 17 November).

Commenting on the number of dwellings approved in the 2010-2011 financial year, the GSC Mayor stated that *"with new residential subdivisions due to come online in the Gallen and Mornington Estates this year, as well as further rural residential subdivisions to the south of Gunnedah, it is anticipated the growth in the housing sector will continue through 2012. Gunnedah is well placed to accommodate this growth, spurred by new residents moving to our community and investors, with close to 1000 urban residential blocks zoned and awaiting approval and more than 70 rural residential lots available for market"* (Namoi Valley Independent, 19 January 2012).

Liverpool Plains LGA

The LPSCSP recognises that a future opportunity for the LGA is to release new land to meet future demands associated with the area's growth. The LPSCSP states that Quirindi and Werris Creek, like many other regional centres, are experiencing a boom with demand far outweighing supply. There is a critical shortage of rental accommodation and this is an issue for potential new residents.

The LPSGMSS contains a detailed assessment of residential demand and supply in the towns and villages of the LGA, and demonstrates that there is enough supply of zoned land for housing in the foreseeable future, particularly in Werris Creek and Quirindi.

Tamworth Regional LGA

The TRDS notes that the majority of settlements across the Tamworth Region have capacity for additional housing. A detailed land audit estimates that a total of 195 ha of residential land is available for additional housing in Tamworth City. Of this 195 ha, 114 ha has already been approved for development. A potential lot yield of 987 lots is anticipated for the remainder of the land not under consent. The majority of this land is located in the suburbs of East Tamworth (517), North Tamworth (174), Oxley Vale (119) and Westdale (96).

In addition to the existing developed areas, the Hills Plain area north of Tamworth has been identified to accommodate Tamworth's long term residential and rural residential development.

In relation to rural residential housing, the TRDS notes that there is significant demand for rural residential development in the Tamworth Region, but that as demand generally outstrips supply, it is inappropriate to seek to satisfy demand. Given that there was a 2008 supply of 2,603 unconstrained lots available in the Tamworth Region, this TRDS acknowledged that this represented a significant over supply of rural residential land.

5.10.7 Future Housing Development

This section outlines how the environmental planning instruments and strategic plans of the LGAs within the Sub Regional Study area are expected to influence the supply of local housing.

Gunnedah LGA

The GLEP 2012 is the LEP applicable to the Gunnedah LGA. The LEP sets the following zones and minimum lot sizes in relation to housing supply:

- R2 Low Density Residential is the predominant residential zone for Gunnedah township, and also applies to recently rezoned but undeveloped land on the edges of the current town urban area. The minimum lot size is 650 sqm. There is current potential for further subdivision in this zone, as outlined below in the discussion of the GLEP 1982;
- R3 Medium Density Residential covers some of the existing residential areas in Gunnedah town, with typical current lot sizes of 2,000 sqm. The minimum lot size under the LEP is 450 sqm. These zoning provisions are intended to encourage battleaxe subdivision of individual lots, leaving the existing house on one lot, and allowing up to eight medium density units to be constructed on the remaining lot;
- R5 Large Lot Residential zones are in close proximity to Gunnedah, and are generally a 1.2 ha or 3,000 sqm minimum lot size. There is current potential for further subdivision in this zone; and
- RU5 Village zones cover the villages in the LGA, including Breeza and Curlewis near the Project Area. The village of Breeza has a LEP minimum lot size of 1,000 sqm while Curlewis has a minimum lot size of 650 sqm. There is potential in both villages for intensification of housing.

The Gunnedah LGA's strategic planning relating to housing provision is primarily informed by the following Council studies:

- GLEP 1982;
- GLEP 2004; and
- GSRS 2007.

GLEP 1982, despite its age, still contains the most relevant '*blueprint*' for the future development of Gunnedah (GSC, 2011, pers. comm., 17 November). In particular, Map 25 '*Preferred Structure Plan*' clearly delineates areas for future residential growth. Map 26 '*Recommended Staging*' is still relevant for outlining the staging of residential growth. The stages already zoned, and the future of the other land shown on that map, is described above.

The GLEP 2004 confirmed the housing supply outlined in GLEP 1982 (GSC, 2011, pers. comm., 17 November).

The GSRS 2007 presented '*implementation strategies*' and '*policy actions*' for a range of categories, including '*Growth Management*' and '*Land Use Planning*'. The strategies and actions relevant to housing supply within the LGA are:

- Implementation Strategy - Prepare a hierarchy of settlements:
 - Policy actions:
 - Adopt the (following) settlement hierarchy:
 - Regional Centre - Tamworth;
 - Town - Gunnedah;
 - Villages - Breeza, Carroll, Curlewis and Tambar Springs; and
 - Rural Centres - Kelvin and Willala.
 - Allow for the growth and future development of the town of Gunnedah;
 - Allow for the growth and future development of the villages within the existing zoned boundaries;
 - Provide a mix of housing opportunities which includes urban, rural residential surrounding specified settlements and farm housing; and
 - Allow for the growth of certain villages provided that the particular constraints can be overcome.

The '*policy actions*' listed above are essentially given effect by GLEP 2012.

Liverpool Plains LGA

Liverpool Plains LEP 2011 (Liverpool Plains LEP) is the LEP applicable to the Liverpool Plains LGA. The LEP provides for a range of housing choices, including village, sewerred and unsewerred lots in a range of sizes, and larger rural residential properties.

The Liverpool Plains LGA's strategic planning is set out in the LPSGMSS.

Key strategies and actions relevant to housing and land supply that are proposed by the LPSCCSP are:

- Policies will ensure that planning instruments for the availability of residential and industrial land are appropriate to attract development interests; and
- Determine options for future water supplies to towns and villages including new bores for Wallabadah and Willow Tree, increasing the capacity of Quipolly Dam, constructing new holding tanks, installation of a new water treatment plant and new pipelines connecting Quirindi and Werris Creek.

Tamworth Regional LGA

The Tamworth Regional LGA's strategic planning is set out in the TRDS. The TRDS outlines future residential land supply as given above. The TRDS gives specific recommendations regarding the following aspects of housing provision:

- Housing choice;

- Housing affordability (including the preparation of an Affordable Housing Strategy, which is detailed below);
- Housing Supply and Demand; and
- Built form and urban design.

These recommendations were then incorporated into the TR LEP 2010, which is the LEP applicable to the Tamworth Regional LGA. The TR LEP 2010 allows for minimum residential lot sizes of 600 sqm in most of the urban area of Tamworth City, with a range of other minimum lot sizes (1,000 sqm, 2,000 sqm, 4,000 sqm, 1 ha and 2 ha) being provided throughout other areas of the LGA.

Key recommendations of the TRAHS, detailed in **Appendix C**, should assist the supply of affordable housing in the Tamworth LGA in the future and include:

- Encourage more national affordable housing funding to the region through spreading knowledge of best practice, capacity building and promoting examples of success;
- Make use of Council resources such as land and buildings to help establish new affordable housing schemes;
- Coordinate existing affordable housing initiatives by establishing an Affordable Housing Reference Group. This will help form and strengthen alliances and allow information exchange between council, agencies and community groups;
- Facilitate better outcomes for the delivery of public housing by working closely with Housing NSW;
- Improve the efficiency of private sector housing supply through data collection and analysis;
- Review ways of encouraging more residential house builders to the area;
- Help address homelessness issues through working closely with state agencies, researchers and local community groups;
- Understand barriers faced by the development industry in building affordable housing stock and address factors influencing housing affordability, as far as practicable, within future revisions of the Tamworth Regional Local Environmental Plan 2010 (TRLEP) and Tamworth Regional Development Control Plan 2010 (TRDCP); and
- Increase focus on Indigenous housing issues such as design, availability and concentration of disadvantage, by including strategies within specific Council policies.

5.10.8 Regional Future Dwelling Projections

Namoi 2030 made an analysis of how many dwellings would be required in each of the LGAs in its study area in each year until 2030, under each of the four 'scenarios' presented by the Namoi 2030. The scenarios are explained in **Section 3.3.1**. The dwelling projections use the 2006 Census data as a base and are projected forward by Namoi 2030 in yearly intervals to 2030. **Table 48** summarises the total number of dwellings projected for each of the LGAs in five year intervals (as well as showing the current year of 2012). The table also shows the average number of dwellings per annum that could be expected to be required in each of the LGAs under each of the scenarios.

Table 48
Namoi 2030 Dwelling Projections 2006 - 2030

LGA / Namoi 2030 Strategy Scenario	Dwelling Projections							Dwellings per Annum
	2006	2011	2012	2016	2021	2026	2030	
Gunnedah								
Scenario 1: More of the Same	4,610	4,658	4,667	4,706	4,754	4,802	4,840	10
Scenario 2: Cruising the Commodity Surge	4,610	5,003	5,082	5,397	5,791	6,185	6,500	79
Scenario 3: Local Economic Development Impetus	4,610	4,888	4,944	5,167	5,445	5,724	5,946	56
Scenario 4: The Best of Everything	4,610	5,051	5,140	5,493	5,935	6,377	6,730	88
State Projections	4,792	4,644	N/A	4,516	4,412	4,316	4,212	- 30
Liverpool Plains								
Scenario 1: More of the Same	3,142	3,175	3,181	3,208	3,240	3,273	3,299	7
Scenario 2: Cruising the Commodity Surge	3,142	3,410	3,464	3,679	3,947	4,216	4,430	54
Scenario 3: Local Economic Development Impetus	3,142	3,332	3,370	3,522	3,712	3,901	4,053	38
Scenario 4: The Best of Everything	3,142	3,443	3,503	3,744	4,045	4,347	4,587	60
State Projections	3,271	3,204	N/A	3,146	3,100	3,063	3,017	- 13
Narrabri								
Scenario 1: More of the Same	5,247	5,302	5,313	5,357	5,411	5,466	5,510	11
Scenario 2: Cruising the Commodity Surge	5,247	5,695	5,785	6,144	6,592	7,040	7,399	90
Scenario 3: Local Economic Development Impetus	5,247	5,564	5,628	5,881	6,198	6,515	6,769	63
Scenario 4: The Best of Everything	5,247	5,750	5,851	6,253	6,756	7,259	7,661	101
State Projections	5,624	5,412	N/A	5,228	5,068	4,916	4,760	- 42
Tamworth								
Scenario 1: More of the Same	21,439	22,654	22,897	23,869	25,083	26,298	27,270	243
Scenario 2: Cruising the Commodity Surge	21,439	23,270	23,636	25,101	26,932	28,764	30,229	366

LGA / Namoi 2030 Strategy Scenario	Dwelling Projections							Dwellings per Annum
	2006	2011	2012	2016	2021	2026	2030	
Scenario 3: Local Economic Development Impetus	21,439	23,315	23,690	25,191	27,066	28,942	30,443	375
Scenario 4: The Best of Everything	21,439	23,828	24,306	26,218	28,607	30,997	32,909	478
State Projections	21,876	22,364	N/A	22,964	23,672	24,412	25,132	98

Source: PB, ELP & CARE, 2012

Table 49 is also sourced from Namoi 2030 and provides an estimate of the year that the current land supply will be exhausted for each of the four scenarios in each of the LGAs.

Table 49
Namoi 2030 - Estimated dwelling supply

LGA	Namoi 2030 Scenario			
	Scenario 1: More of the Same	Scenario 2: Cruising the Commodity Surge	Scenario 3: Local Economic Development Impetus	Scenario 4: The Best of Everything
Gunnedah	2030 +	2019	2025	2018
Liverpool Plains	2030 +	2030 +	2030 +	2030 +
Narrabri	2030 +	2030 +	2030 +	2026
Tamworth	2027	2020	2019	2016

Source: PB, ELP & CARE, 2012

As outlined in **Section 5.2.3**, the DP&I population projections (NSW Department of Planning, 2010) for each LGA are much lower than the Namoi 2030 population (and therefore dwelling) projections. In particular, **Table 48** shows that:

- Instead of -30 dwellings per year being required for Gunnedah LGA under the DP&I projections, the Namoi 2030 scenarios show between 10 and 88 dwellings per year will be required;
- This situation is similar for Liverpool Plains LGA, where instead of -13 dwellings per year being required under the DP&I projections, the Namoi 2030 scenarios show between seven and 60 dwellings per year will be required;
- This situation is also similar for Narrabri LGA, where instead of -42 dwellings per year being required under the DP&I projections, the Namoi 2030 scenarios show between 11 and 101 dwellings per year will be required; and
- In Tamworth Regional LGA, instead of the 98 dwellings per year being required under the DP&I projections, the Namoi 2030 scenarios show between 243 and 478 dwellings per year will be required.

The Namoi 2030 projections also show, in **Table 49**, that:

- Gunnedah LGA may exhaust its land supply for dwellings as early as 2018, depending on the Namoi 2030 scenario taken;
- Liverpool Plains LGA has enough land supply for dwellings post 2030;
- Narrabri LGA has enough land supply for dwellings post 2030, except for Scenario 4 which would mean the supply would be exhausted in 2026; and
- Tamworth LGA may exhaust its land supply for dwellings as early as 2016, depending on the Namoi 2030 scenario taken.

5.11 COMMUNITY INFRASTRUCTURE (FACILITIES AND SERVICES)

This section describes the current provision of a wide range of community infrastructure (or facilities and services) in the Sub Regional Study Area, with a particular focus on Gunnedah and Liverpool Plains LGAs as the closest LGAs to the Project. This section also outlines some issues currently being faced in the provision of this infrastructure, and where relevant, outlines strategies for the future provision of this infrastructure.

The types of community infrastructure included in this section are:

- Education facilities – primary, secondary and tertiary;
- Children's services;
- Youth services and facilities;
- Health services;
- Emergency services;
- Recreation, sporting and leisure services;
- Cultural facilities and cultural development;
- Social support services and community groups;
- Commercial and retail services; and
- Public transport.

It should be noted that this section does not reference every relevant facility, service or community group in the Sub Regional Study Area (for example each sporting facility or group in each LGA is not given). Each Council's '*Community Directory*' or equivalent provides comprehensive listings of these community facilities, services and groups in most of the subject areas covered in this section. References for each of the community directories are:

- Gunnedah LGA – GSC Community Services Directory (GSC, 2011b);
- Liverpool Plains LGA – LPSC, 2010: Community Services Directory (LPSC, 2010a); and
- Tamworth LGA - TRC, 2011: Tamworth Community Directory (TRC, 2011c).

5.11.1 Education Facilities

The GLCA states that education is an essential component of community well-being because it enables people to develop their intellectual potential, maximising capacity to deal with many aspects of life. Education and skill base influences capacity to gain employment and contributes to equity and the opportunity to make lifestyle choices.

A description of the range of education facilities provided in the Gunnedah, Liverpool Plains and Tamworth LGAs is given in this section, as well as information gained from interviews with key education providers on planning for future needs in education in the Sub Regional Study Area.

Primary and Secondary Facilities

Table 109 in Appendix D shows the school enrolments of public and private schools in the LGAs of Gunnedah, Liverpool Plains and Tamworth.

Gunnedah LGA

In the Gunnedah township, there are four primary schools - two public, one Catholic and one Christian Community School and two high schools - one public and one Catholic. There is also a school for children with intellectual and physical disabilities. There are also public primary schools located in villages within the LGA. These schools and their recent enrolment figures are shown in **Table 109**.

The GCP 2006, states that in 2006, there were 2,164 school students living in the Gunnedah LGA, of whom 233 were at pre-school, 1,160 were in primary / infants school, and 771 were at high school. Approximately 55% of all school students in the Gunnedah LGA were in public schools (58% for NSW), while there were 29% at Catholic schools (20% for NSW) and 6% were at other private schools (11% for NSW). From 2001 to 2006, the proportion of students attending Catholic primary schools rose by 5.7% and that at public schools fell by 8.1%, while in secondary school, the proportion of students attending private schools rose by 1.5% and that at Catholic fell by 2.3%.

The GLCA states that all schools in the LGA are supported by daily bus services by various operators. Some Gunnedah students also attend private schools in Tamworth and further afield. There is a daily bus service for private school students attending schools in Tamworth.

Liverpool Plains LGA

Schools in the Liverpool Plains LGA and their recent enrolment figures are shown in **Table 109**.

The LPSCSP states that there are bus services from both Gunnedah and Quirindi that transport students to schools in Tamworth. Some students also attend boarding schools in the Sydney and New England regions.

Tamworth Regional LGA

Key schools in the Tamworth Regional LGA and their recent enrolment figures are shown in **Table 109 in Appendix D**.

Public Schools

The Sub Regional Study Area is within the New England Region of the NSW Department of Education and Communities (DEC). In mid 2009, there were 124 schools in the New England Region, 101 of which were either part of the '*Priority Schools Funding Program*' or the '*Country Areas Program*'. Further, 19% of the New England Region's enrolments are Indigenous students. This proportion is the equal largest in the NSW regions (with the Western Region), with the State proportion being 5.5% (NSW Department of Education and Training, 2010).

Table 109 in Appendix D shows:

- For public schools within the Gunnedah LGA:
 - A fluctuating enrolment figure for Gunnedah High School (the only High School in the LGA), with almost 600 students in 2011;
 - A rapidly declining enrolment at Gunnedah Public School, whose enrolment almost halved from 2006 to 2011;
 - The Gunnedah South Public School is almost four times the size of Gunnedah Public School;
 - Declining enrolments at Curlewis Public School, with the enrolment falling 41% from 2006 to 2011; and
 - A decline, but then recent slight increase in enrolments at the small school at Carroll (13 students in 2011).
- For public schools within the Liverpool Plains LGA:
 - Quirindi High School is the only High School in the LGA and experienced a decline in enrolments from 2006 to 2008, from which point enrolments increased again to 434 in 2011;
 - A similar pattern at Quirindi Public School, where enrolments declined from 2006 to 2008, from which point enrolments increased again to 352 in 2011;
 - Werris Creek Public School has had fluctuating enrolments, with a 2011 figure of 108;
 - Willow Tree Public School has also had fluctuating enrolments, with a 2011 figure of 57;
 - Walhallow Public School had a doubling of enrolments from 2008 to 2009, with 25 enrolled in 2011;
 - Blackville Public School's enrolment declined to 8 in 2011; and
 - Spring Ridge Public School's enrolment stayed between 35-39 from 2006 – 2011.
- There are four High Schools in Tamworth, with Oxley High and Tamworth High Schools declining in enrolments, Peel High School gaining enrolments and Farrer Memorial Agricultural High School remaining relatively stable from 2006 – 2011;
- Two of the larger public Schools within Tamworth LGA experienced an increase in enrolments from 2006 -2011, while two other public Schools experienced a decrease in that time period; and

- There are two schools for ‘*Specific Purposes*’ in Tamworth with a combined enrolment of 49 in 2011.

Anticipating the expected growth in the mining and resources sector in the region, the Regional Director of the New England Region has been consulting closely in 2011 with regional school principals, local government representatives and industry representatives on current education delivery and asking “*what will it look like in five – 10 years?*”

Key issues raised to December 2011 in that consultation, relevant to this SIA, have included issues such as:

- Lower socio-economic families are being forced out of their current rental accommodation when rental prices increase, causing falling school enrolments in those areas, and also adding to the pressure on education and other lower socio-economic parts of the region where they move to. This is already noted in the movement out of Boggabri and Gunnedah;
- The relative difference in wages between school administrative staff and general assistants and similar wages in the mining industry mean that school staff may move to the mining industry when mines open nearby. Teachers are less likely to move to rural areas where the rent is very high;
- The number of mining workforce employees and families already moving into the region has not been matched by an adequate increase in the social support workforce, meaning that all social services are currently stretched;
- Employees moving to a mining resource area to work in social support services have on their ‘*relocation requirement*’ list good education and childcare and good health access; and
- The employment prospects of the non-mining workforce partner are crucial for families moving to the area for mining work.

These issues reflect other anecdotal reports and data presented elsewhere in this SIA.

A number of issues regarding the impacts of the proposed incoming workforce and population on education facilities and the wider range of social services raised by the Regional Director are also addressed in **Section 6.9.1**.

Some significant programs operating in schools in the DEC New England Region are:

- ‘*Mooki Murriss*’ Program at Quirindi High School has approximately 12 Indigenous men of different occupations mentoring boys;
- ‘*Quicksmart*’ Program, which has been implemented in 700 schools across Australia, including 30 schools in the DEC New England Region. The program has an aim of preparing students to become work-ready, with particular emphasis on literacy and numeracy. The DEC would like to expand this program to assist students in becoming ‘*mining ready*’; and

- The '*Clontarf Foundation*' is operating at Oxley (Tamworth), Moree, Armidale and Inverell High Schools. Indigenous boys in Years 7-12 are provided with mentors to encourage them to stay at school, and to link them with sporting opportunities (White, J., 2011, pers. comm., 21 December).

Private Schools

Table 109 shows the following for Catholic and other private schools in the Study Area:

- Gunnedah has a Catholic College (Years 7-12), a Catholic primary school and a Christian school;
- There is one Catholic primary school in the Liverpool Plains LGA, at Quirindi;
- In the Tamworth Regional LGA, there is a large Catholic College (Years 7-12) with a 2011 enrolment of 834, and 3 Catholic primary schools with a combined 2011 enrolment of over 1,000; and
- Calrossy Anglican School (Years K-12) has over 1,000 students.

Tertiary and Further Education Facilities

University of New England

The closest university is the University of New England (UNE) in Armidale, approximately two hours from Gunnedah. UNE Study Centres are also located on TAFE New England Institute's campuses in the Study Area at Quirindi and Gunnedah. These Centres provide 24 hour self access to state of the art facilities and technology, providing access to reliable internet services and improved connectivity with lecturers, teachers and support services. The Centres are also available for TAFE students (TAFE NEI, 2012a).

TAFE New England Institute

TAFE NEI has campuses in the Study Area at Tamworth, Gunnedah, Quirindi and Narrabri.

The Tamworth campus is the largest of the TAFE NEI campuses and offers an extensive range of programs and study options. It includes the Tamworth Trade School, which specialises in trade training. TAFE NEI also offers courses in arts, tourism and hospitality, nursing, welfare, computing, hairdressing and beauty, engineering, construction, bricklaying, transport, veterinary nursing, animal care, children's services, business and administration services, horticulture and aero skills.

The Gunnedah campus offers training in a large range of areas including mining, nursing, engineering, automotive, aged care and children's services, business administration and management, computing, general education, beauty therapy and animal care.

The Quirindi campus provides courses to meet the needs of rural communities and small businesses, as well as courses in retail, aged care, business studies, child studies, information technology and general and vocational education.

The Narrabri campus offers a range of courses including aged care, building and construction, business and financial services, children's services, information and communication technology, metal fabrication, visual arts and general education and work skills programs. Traineeships and targeted short courses are offered to support local industry (TAFE NEI, 2012b).

There is a high level of interest in the community regarding TAFE NEI's role in skills training in the growth of the resources industry in the region. Discussions with the TAFE NEI Director (Callaghan, P., 2012, pers. comm., 25 January) reveal that TAFE NEI has demonstrated a high level of commitment to working closely with the resources industry and the community to determine future training needs that could be met by TAFE NEI in the future, and is very proactive in assessing and planning future demand based on valid data. TAFE NEI are finalising research to capture what the future skills training needs in the region will be, including researching other similar resource regions in Australia. TAFE NEI has also been networking with resource industries in the Gunnedah Basin, and representatives of the wider industrial base in the region (including small business) to determine their needs and timeframes for skills training.

Skill sets that will be in demand will include heavy machinery, metals, electro technical and a variety of other trades. Research of future needs will inform future training at both the Gunnedah and Quirindi campuses.

TAFE NEI recognises that a customised mining / trades training facility may have to be constructed in either Narrabri or Gunnedah. TAFE NEI are also investigating other teaching modalities for these subjects, such as online delivery and work based learning, as is currently provided for other TAFE courses. TAFE NEI are in the process of completing a virtual broadcast studio in Gunnedah for flexible multimedia learning, similar to the Tamworth campus' current studio.

In addition to consulting with the mining resource companies in the Gunnedah Basin, TAFE NEI recognises the importance of providing skills training to small businesses, who it considers can experience loss of skilled tradespeople to the resources sector.

TAFE NEI has a good relationship with most of the schools in the region, to support delivery of the TAFE-delivered Vocational Education and Training (TVET). TVET gives Year 11 and Year 12 school students the opportunity to study TAFE courses which contribute units to their HSC and provide practical skills and training, along with a qualification and learning in an adult environment (TAFE Western Sydney Institute, 2012).

The TAFE NEI area has a high pro-rata level of TVET, with a particularly high uptake of apprenticeships. TAFE NEI intends running further pilot programs in this area.

TAFE NEI also has a commitment to social equity and social inclusion, and is active in local Indigenous communities. It is particularly interested in providing a model for lifelong learning and employability for these and other communities, and is promoting these concepts and models in the resources industries in the region.

(Callaghan, P., 2012, pers. comm., 25 January)

The Community College – Northern Inland Inc

The Community College – Northern Inland Inc has a campus in Gunnedah. Courses currently offered are related to community services and health, hospitality, technology, business and construction, safety and traffic control (Community College Northern Inland Inc, 2011).

Tamworth Community College has a campus at Quirindi, offering courses including compliance, first aid and business to general courses including needlecraft, photography and yoga (Tamworth Community College, 2011).

Gunnedah LGA data on tertiary education

The GCP 2006, reports that in 2006, Gunnedah LGA residents included 456 tertiary students, of whom 115 were at university, 295 at TAFE, and 46 at other tertiary colleges. From 2001 to 2006, the number of residents enrolled in tertiary courses decreased by 221. The proportion of the population aged 15+ who were tertiary students fell by 2.3%, while across NSW it fell by 1.0%.

The GLCA reports that although there is a TAFE College in Gunnedah, its community telephone survey respondents reported that 25% of people from the rural areas of the LGA had to leave the area to undertake post school education, followed by 15% from Gunnedah township and 7% from the villages. Of those who leave the LGA for post school education, respondents reported that 57% of those from the villages returned home on completion of their studies, but only 49% of those from Gunnedah township and 39% of those from the rural areas returned.

Gunnedah Community Scholarship Fund

To help address the education needs of the people of Gunnedah LGA and to encourage young people to obtain qualifications and return to the LGA, GSC initiated a Scholarship Fund in 2003 to encourage the youth of the Gunnedah community to undertake post high school educational pursuits.

School-Based Trainee Program

In 2012, a partnership between Shenhua Watermark and New England North West Group Training commenced, giving eight Year 10 school students an opportunity to pursue a career in Mechanical, Electrical and Metal Fabrication as part of a school-based trainee program. This program has been implemented initially for a two year period.

Education – Current and Future Needs

Several policy documents in the Sub Regional Study Area contain recommendations or strategies regarding future planning for education, as follows.

The GLCA recommends that, for the Gunnedah LGA:

- If possible, current levels of access to local primary schools in the Gunnedah Shire area should be preserved as they currently support more students travelling less than 30 minutes to school;
- It is predicted that the Gunnedah population will include a high proportion of young Indigenous children and provision should be made for culturally appropriate curriculum and support;

- Although current access to primary schools within Gunnedah township is good, it is important that primary schools in the villages attract sufficient numbers of children to ensure they retain teacher numbers and avoid closures; and
- Mechanisms through which local access to education can be encouraged include:
 - Early engagement of the NSW Department of Education and Training in planning for development in the area;
 - Links should be developed between schools, Council, TAFE and Universities to develop appropriate local education opportunities to reduce the numbers of students needing to leave the Shire to participate in post school education;
 - Programs should be investigated that give students who leave the Shire to obtain post school education the incentive to return to the Shire;
 - Opportunities for post school training should be developed in partnership with local employers and TAFE to encourage traineeships and apprenticeships;
 - The expansion of industries such as mining and gas exploration within the Shire will require new opportunities for post school qualifications and training;
 - Skills development programs should be developed for adults to permit those whose prior education opportunities were restricted the opportunity to obtain skills and qualifications to equip them to better meet the demands of the workforce;
 - Increased numbers of traineeships and apprenticeships should be considered to ensure the Shire has sufficient appropriately trained local people to meet the future needs of changing industries;
 - Education curricula should be monitored to ensure that current and future generations are adequately instructed in sustainable practices to balance the needs of industry (whether agricultural or mining) and the retention of productive land; and
 - In view of the Shire's significant Indigenous population, emphasis should be placed on education programs that increase understanding and appreciation of the Aboriginal heritage of the area.

Strategies relevant to secondary and tertiary education that are proposed by the GCSP are:

- Continue to provide access to the Council Scholarship Fund to assist youth to access further education opportunities;
- Consider development of a Community Education Trust to provide support for disadvantaged youth to continue their education;
- Encourage apprenticeships for training based on industry need;
- Provide education and training facilities for youth including employment re-training and leisure opportunities; and
- Lobby for training opportunities in secondary and tertiary sectors for facilities and courses which meet our regional training needs.

LPSC recommended in its LPSCSP that it develop a training strategy for young people.

5.11.2 Children's Services

A description of the range of children's services available in the Gunnedah, Liverpool Plains and Tamworth LGAs is given in this section, as well as an outline of issues related to future planning of children's services.

Gunnedah LGA

The following children's services are available in Gunnedah (Gunnedah Family Day Care, 2008):

- Gunnedah Preschool Kindergarten;
- Gunnedah Baptist Community Pre-school;
- Carinya Kindergarten Preparatory Class;
- Gunnedah Family Day Care – for family based care up to 12 years of age;
- Mary Ranken Childcare – for casual or regular childcare from 0-6 years;
- ABC Learning Centre;
- Ooranga Family Mobile Resource Unit Occasional Care – sessions weekly at Mullaley, Curlewis and Spring Ridge;
- Ooranga Family Mobile Resource Unit Occasional Care – after school care during school term and vacation care during school holidays;
- Nine different playgroups, including a mobile playgroup servicing Curlewis, Currabubula and Spring Ridge;
- Early childhood music classes at the Gunnedah Music Centre;
- Ooranga Toy Library;
- Gunnedah Early Childhood Intervention; and
- A range of services provided through Hunter New England (HNE) Health Services.

The GSSP states that:

- There is no before-school care available in Gunnedah;
- Only one centre offers after school care; and
- Anecdotal evidence suggests it is difficult to source adequate baby-sitters.

The GLCA reports that:

- Residents in both Gunnedah township and the rural areas are experiencing most difficulty in accessing childcare and preschool services;
- The main difficulties in accessing childcare and preschool were associated with waiting times and services being full; and
- Availability of both childcare and pre-school places for Indigenous children are in particularly short supply and urgent attention should be given to ensure that provision of places to meet the needs of this growing population.

The Gunnedah Aboriginal Child and Family Centre

Under the Aboriginal Early Childhood Development National Partnership Agreement, it was agreed that at least 35 '*children and family centres*' will be established across Australia by 2014, one of which will be opened in Gunnedah. While each centre will be suited to the community where it will be located, the centres will:

- Bring together important services for children and families including child care, early learning, parent and family support programs;
- Use existing community strengths and resources to help establish the centres and make sure every centre responds effectively to its community; and
- Connect with other services in the community to ensure families can easily access the services they need, for example maternal and child health services, playgroups or family literacy programs.

A Gunnedah Local Reference Group was set up in 2011, and represents the broader Gunnedah community. It is the group in charge of the decision making for every stage of progress for the Gunnedah Centre. The Centre will be constructed on Hunter Street, Gunnedah and is expected to open in 2013. Interim premises were opened in early 2012 in Uniting Church premises at Abbott Street. (Munro, S., 2012, pers. comm., 17 December)

The Centre will operate through the partnership of Relationships Australia NSW and Uniting Care Children's Services (Gunnedah Aboriginal Child and Family Centre, 2011).

It is expected that the Centre will offer, amongst other services (Munro, S., 2011, pers. comm., 20 December and pers. comm., 17 December 2012):

- A focus on 0-8 year old children's learning, development and health;
- A 35 place early childhood centre;
- Services for teenage reproductive health;
- Parenting and support services; and
- Visiting specialists.

Future Planning for Children's Services

The GLCA recommends that the following should be considered for the planning and development of the Gunnedah LGA:

- Gunnedah LGA is predicted to include a high proportion of young Indigenous families. Early consideration should be given to mechanisms to alleviate access difficulties and to ensure current services, in particular those servicing families in the rural and village areas are equipped to meet the demand and offer culturally appropriate services; and
- Mechanisms by which to enable access to childcare and children's services include:
 - Land use zoning which permits child care / children's services;
 - Advocating for out of school hours care programs to be provided by local schools;
 - Planning and controls that allow for home-based child care businesses;

- Planning for children's services to be located in neighbourhood centres and in mixed-use facilities; and
- Advocating for children's services to be accessible to all abilities and cultures.

Strategies relevant to child care that are proposed by the GCSP are:

- Create opportunities for after school care for children to support parents participating in the local workforce; and
- Advocate for out of school hours care programs to be provided by a variety of service providers and promote home-based child care businesses.

Liverpool Plains LGA

The LPSCSP (explained in detail in **Appendix C**) lists the following children's services in the LGA:

- Quirindi Pre School operates five days per week and is licensed for 30 children / day;
- Werris Creek District Pre-School operates five days per week and is licensed for 20 children / day;
- Willow Tree Pre-School is opened Monday to Wednesday and is licensed for 14 children / day;
- Currabubula Pre-School is opened Fridays and is licensed for 10 children / day;
- Beehive Occasional Day Care Centre provides a 2-day per week occasional care service;
- LPSC has developed and licensed a 45 place Long Day Care Centre which is operating at capacity; and
- The Holiday Fun Centre, coordinated by LPSC, offering school holiday activities.

Future Planning for Children's Services

The LPSCSP identifies a range of strategies to address the future needs of the '*children*' target group, including strategies relating to:

- Access to local pre-schools;
- Support for breast-feeding mothers;
- Sun protection on play equipment;
- Oral health services;
- After school care and family day care;
- Interagency support for children's groups; and
- Addressing social isolation of young families with no extended networks.

A key action relevant to children's services that is proposed by the LPSCCSP is '*provide adequate day care facilities*'. This action is included in the LPSCCSP under the strategy of '*ensure that the skills and expertise of women in the community can be utilised in the work force*'.

The LPSC's s94A plan lists '*childcare centre additions*' in its Works Schedule.

Tamworth Regional LGA

A range of children's services are available throughout the Tamworth LGA, with approximately 10 facilities offering childcare in Tamworth city. There are also two 'Year Round Care' centres, located in schools which provide before school care, after school care and vacation care (TRC, 2012).

The TRCSP (explained in detail in **Appendix C**) also analysed the children's services that were available at that time in the LGA and made an assessment of their level of service at that time.

5.11.3 Youth Services and Facilities

Gunnedah LGA

Gunnedah has a Youth Centre and a Police and Citizens Youth Club (PCYC).

In the GLCA's community telephone survey, respondents were asked if they had children aged 10-18 years old living in the household, and whether the child had used a youth centre in the last 12 months. Households in the Gunnedah township reported higher levels of use (57%) than households in the villages (32%) and rural areas (30%).

Future Planning for Youth Services

One of the strategies proposed by the GCSP (explained in detail in **Appendix C**) is to '*develop creative activities for young people after school and during school holidays*'.

Liverpool Plains LGA

The LPSCSP (explained in detail in **Appendix C**) reports that:

- Although there is no specific 'youth facility' in the Liverpool Plains LGA, the Quirindi Recreational Centre building provides an important recreation facility for the entire community, and that younger people that are not sport oriented can become involved with the Quirindi Youth Band;
- Council funds the Shire Youth Scholarship scheme to help young people pursue educational and training opportunities as well as interests in art, music, the sciences, sport and similar fields; and
- The local Rotary Club supports the Rotary Youth Leadership Award.

Future Planning for Youth Services

A key strategy relevant to youth that is proposed by the LPSCCSP is to '*maintain and enhance existing community consultation processes such as youth forums*' with the accompanying action of '*Council will conduct an annual Youth Forum to determine youth issues and priorities*'.

The LPSCSP identifies a range of strategies to address the future needs of the 'young people' target group, including strategies relating to:

- Outlying villages such as Willow Tree, Wallabadah, Werris Creek and Spring Ridge, where the community find it difficult to access entertainment;
- The lack of recreation facilities, including a range of suggestions for increasing local recreational and cultural opportunities; and

- Education, including issues of high staff turnover, affordability of tutoring and access to computers and the limited number and cost of school excursions.

Tamworth LGA

The 'Youthie' (Tamworth Youth Centre), operated by TRC, is a drop-in youth centre for young people aged 12 - 18 years and provides a range of recreational facilities and activities. Approximately 12,000 young people access the Youthie each year, an estimated 75% of whom are Indigenous (TSC, 2012c, TSC, 2012d).

The Tamworth Police and Community Youth Club (PCYC) is a non-profitable charity organisation and provides a variety of activities which cover a range of topics, both educational and recreational, in "*an attempt to divert young people away from a life of crime*" (Tamworth PCYC, 2012).

The TRCSP also analysed the youth services that were available at that time in the LGA and made an assessment of their level of service at that time.

5.11.4 Health Services

The HNE Local Health District services the Study Area and provides facilities at Gunnedah, Quirindi, Werris Creek and Tamworth. The Peel Cluster covers Tamworth and Gunnedah, while the Upper Hunter Cluster includes the services situated in the Liverpool Plains and Upper Hunter LGAs. The Tamworth Hospital is a '*stand alone*' service of the District.

This section will describe the HNE Local Health District facilities and services in the Sub Regional Study Area, as well as describing other allied health and medical facilities provided in each of the component LGAs. This section also includes some basic information about aged care and home and community care services, noting that these services are not a focus of this SIA.

Gunnedah LGA Facilities and Services

Gunnedah District Health Service

The Gunnedah District Health Service offers a wide range of services including cardiac rehabilitation, community nursing, child and family health, mental health, drug and alcohol counselling, palliative care, rehabilitation and therapy services, speech pathology, occupational therapy, counselling services as well as many other visiting services (HNEPH, 2011).

The Gunnedah Hospital, as part of the Gunnedah District Health Service, is a 48-bed acute health facility which provides acute care, emergency care and maternity services. The Health Service employs 75 staff and is supported by a large number of general practitioners, many of whom belong to the Barwon Division of General Practice and a variety of local and visiting specialists (NSW Department of Health, 2012).

Gunnedah Hospital services include theatre, recovery, day surgery, medical, surgical, maternity, paediatric, medical imaging and ultrasound and emergency services. The health service also has dental clinics for adults and children and a physiotherapy department (HNEPH, 2011).

Table 50 shows selected recent available statistics for Gunnedah, Quirindi, Werris Creek and Tamworth Hospitals.

Table 50
Hospital Statistics, 2010/11 and 2011/12

Aspect	Gunnedah	Quirindi	Werris Creek	Tamworth
Budget 2010	\$6.7 million	\$3.17 million	\$1.32 million	\$73.52 million
Number of overnight admissions 1/07/2010 – 30/06/2011	1,459	356	3	11,806
Number of overnight admissions 1/07/2011 – 30/06/2012	1,455	370	5	12019
Number of same day admissions 1/07/2010 – 30/06/2011	862	33	1	9,666
Number of same day admissions 1/07/2011 – 30/06/2012	918	22	1	10,224
Total Emergency Department attendances 1/10/2010 – 30/09/2011	10,633	3,712	404	42,542
Total Emergency Department attendances 1/10/2011 – 30/09/2012	10,470	3,661	346	40,574
Number of Emergency Department patients admitted to hospital 1/10/2010 – 30/09/2011	841	217	0	7,457
Number of Emergency Department patients admitted to hospital 1/10/2011 – 30/09/2012	790	246	N/A	7,513

Source: NSW Department of Health, 2012

The GLCA reports that:

- Gunnedah Shire rural residents reported the highest level of difficulty in accessing an emergency department;
- People aged 18 - 24 and 50 – 59 years appear to have the most difficulties with accessing this service; and
- People living alone appear to have the most difficulty in accessing the emergency department when needed.

Gunnedah's Community Health Centre services include the following:

- Indigenous health education, Indigenous antenatal clinic and Indigenous maternity service;
- After hours and home nursing;
- Aged care;
- Audiometry;
- Cardiac rehabilitation;

- Clinical psychology counselling;
- Diabetic care;
- Dietetics;
- Drug and Alcohol services;
- Early childhood services;
- Foot care / podiatry;
- Health education and promotion;
- Home modifications;
- Immunisation clinic;
- Mental Health, (adult and child and adolescent);
- Occupational Therapy;
- Palliative Care;
- Psychiatry;
- School-based programs;
- Sexual assault counselling;
- Social Work;
- Speech Pathology; and
- Women's health.

The GLCA (explained in detail in **Section 3.3.2**) reports that:

- A higher proportion of rural residents and those living in the villages reported difficulties in accessing community health services; and
- People aged 35-49 years old and families reported difficulty in accessing community health services.

Medical Practitioners and Allied Health Professionals

Gunnedah has two doctor's surgeries (Barber Street Medical Centre and Elgin Street Surgery), two dental surgeries (Gerald L Bartlett & Associates and Gunnedah Dental Centre), and other allied health practitioners including physiotherapists, chiropractors and pathology services (GSC, 2011b).

The GLCA reports that:

- Access to GP services was described as being very difficult across the Gunnedah LGA;
- Access difficulties were more than three times the level of those experienced in a similar study in Maitland;
- Access problems reported are associated with waiting time and 'closed books';

- People aged 25 - 35 years old have the most difficulty accessing GPs but the difficulties were experienced across the age spectrum, across all household compositions;
- Gunnedah residents reported waiting time, cost and service availability to be the main barriers to their access to dental services; and
- People aged 50 - 59 reported higher levels of difficulty in accessing a dentist, as did people living on their own.

These concerns were mirrored at the Project Community Information Sessions held in December 2011, where a Breeza resident was concerned about the “*lack of doctors and medical facilities*” (Hansen Bailey, 2012).

Gunnedah Rural Health Centre

The proposed Gunnedah Rural Health Centre (GRHC) is an innovative one-stop approach to rural health and was officially opened on 4th June 2012. The centre was built in the Gunnedah Hospital grounds and is managed by a 10 member board of local medical, allied health, business and community members. The centre provides a multi-faceted health and allied care services under one roof. It will also play a key role in tertiary education of rural medical and allied students. The aim of the GRHC is to ensure the future of health in the community by attracting and retaining quality health professionals (GRHC, 2011).

The development of the GRHC was supported by financial assistance from the Australian Government under the GP Super Clinics Program. Major sponsorship was gained from Shenhua Watermark, BHP Billiton - Caroon Coal Project, Santos and the Manildra Group, with other significant fundraising and support coming from the community. Construction began in May 2011 (GRHC, 2011).

This GLCA reports that the GRHC, with integrated primary health care services provided in a team-based environment, is expected to greatly improve access to health care in Gunnedah LGA.

HNE Health intend that the GRHC will be complemented with allied health services to provide integrated care. The GRHC will operate alongside the current Gunnedah Health Service, with planning for this arrangement underway (Heyman, S., 2012, pers. comm., 9 February and 25 October).

Gunnedah Aboriginal Child and Family Centre

The future Gunnedah Aboriginal Child and Family Centre is described in **Section 5.11.2**. The Centre will provide some health services.

Liverpool Plains LGA Facilities and Services

Quirindi Health Service

The Quirindi Health Service is located at the Quirindi Hospital site, and incorporates the Hospital and ‘*HealthOne*’, which was opened in 2011, funded by the State Government with additional funding from BHP Billiton.

Quirindi Health Service incorporates:

- Inpatient facility of 20 acute beds providing medical, paediatric, antenatal and postnatal services;
- 24 hour / seven day a week Emergency Department, with a Visiting Medical Officer on-call;
- Visiting Medical Clinics, each provided monthly, including Paediatrician, Gynaecology and Obstetrics; and
- A range of community health services, including:
 - Aboriginal Liaison Officer;
 - Aboriginal Education Officers;
 - Community Nursing;
 - Child and Family Health Nurses;
 - Occupational Therapy;
 - Physiotherapy;
 - Speech Pathology;
 - Aged Care Centre;
 - Counselling – Psychologist;
 - Counselling – Social Work;
 - Ante-natal clinic;
 - Respiratory Education;
 - Cardiac Rehabilitation;
 - Diabetic Education;
 - Mental Health Nurse;
 - Audiometry Services;
 - Dietician;
 - Women's Health Nurse;
 - Aged Care Assessment Team (ACAT);
 - Continence Advisor;
 - Antenatal Classes; and
 - Home Care (NGO).

In addition to accessing the community health services above, the following services are specifically provided to the Indigenous Community:

- Otis Media screenings for children under 10;
- Health prevention, promotion and education programs; and
- Primary health care clinics and screenings, including Chronic Care Risk Assessments and Diabetic Foot Care.

Walhallow Community Health Centre

The Walhallow Community Health Centre provides a range of community health services to the predominantly Indigenous community at Walhallow. Services offered include after hours and home nursing, audiometry, blood collection, clinical psychology, continence clinics, counseling, diabetic care, dietetics, drug and alcohol services, early childhood services, podiatry, health education and promotion, home modifications, occupational therapy, palliative care, physiotherapy, psychiatry, school-based programs, sexual assault services, social work, speech pathology and women's health.

Werris Creek Community Hospital

The Werris Creek Community Hospital is a 14-bed hospital which provides general medical care, aged care and community health services for the people of Werris Creek and the surrounding district. A Day Care service for aged and disabled clients operates three days per week. No emergency service is available; however, nursing staff provide a first aid service. Meals on Wheels are also provided through the Hospital kitchen.

Werris Creek Multi Purpose Service

The Werris Creek Multi Purpose Service (MPS) began in its new location in July 2012, with relocation of the Werris Creek Hospital and Werris Creek Community Health Centre into the new MPS. The services of the Werris Creek Health Service are transitioning into the MPS under a multi-purpose services model. The services to be offered at the MPS are:

- A range of community health services (described below), provided by local and visiting staff;
- Flexible consulting and examination rooms for use by GP practice 'Northwest Health' (which includes 2 GPs), practice nurse and other visiting health professionals;
- Four low care hospital beds (including respite and palliative care);
- 10 high care Residential Aged Care Beds;
- Two low care Residential Aged Care Beds;
- A Level 1 first aid and treatment service;
- Home and Community Care (HACC);
- Aboriginal Health Services;
- Aged Day Care Centre;
- Early Childhood Health Clinic;
- Telehealth facilities;
- Clinical and operational support services; and
- Staff accommodation.

The existing hospital will eventually be demolished.

(HNE Local Health District, 2012; NSW Ministry of Health, 2011; Marquart, K., 2012, pers. comm., 8 March and 25 October)

The Community Services section of the MPS is currently staffed by one permanent community nurse, and the Centre also offers visiting services, which together include:

- Home nursing;
- Continence clinics;
- Diabetic care;
- Dietetics;
- Early childhood services;
- Foot care / podiatry;
- Health education and promotion;
- Occupational therapy;
- Palliative care;
- Physiotherapy;
- School-based programs;
- Social work;
- Speech pathology; and
- Women's health.

Medical Practitioners and Allied Health Professionals

Quirindi is well served by three general practitioners and three dentists. (LPSC, 2010d). In addition to providing general medical services to the township and surrounding area, the North West Slopes Division of General Practice supports a '*More Allied Health Services program*' (MAHS), which currently provides the following contracted services:

- Physiotherapy – private provider in privately rented room, providing MAHS services 1 day per week;
- Counselling – based at Quirindi Health Service, providing MAHS services two days per week;
- Dietetics – private provider visiting one day / fortnight, providing MAHS services one day per month; and
- Podiatry – based in one of the General Practices, providing MAHS services 0.5 days per fortnight.

The North West Slopes Division of General Practice also has Mental Health funding, which they use to contract a Clinical Nurse Consultant to provide counselling services, based in one of the General Practices one day per week.

A private podiatrist provides a clinic service on-site at Quirindi Health Service one to two days per month (Sams, L., 2012, pers. comm., 15 February).

Tamworth Regional LGA Facilities

Tamworth Hospital

Tamworth Hospital is a rural referral hospital with a 24-hour emergency department, high level surgical and medical services, including a diagnostic and interventional cardiac catheterization laboratory, intensive care, coronary care, rehabilitation services (including brain injury), diabetes centre, mental health unit, renal services, paediatrics, maternity, oncology, radiology and pathology. Outpatient clinics link the New England area with specialist tertiary hospitals in Newcastle and Sydney (NSW Ministry of Health, 2012).

In 2011, the NSW Government announced \$100 million of funding, together with \$120 million of Federal Government funding, for the redevelopment of Tamworth Hospital. The project includes clinical service priorities in the areas of medical, surgical (including perioperative / day surgery and short-stay), paediatrics, maternity and birthing, special care nursery, palliative care, emergency including emergency resuscitation, renal, dental / oral health, operating suite and recovery spaces, cardiac catheterisation laboratory, medical imaging, nuclear medicine and pharmacy (Skinner, 2011).

Tamworth Community Health Centre

The Tamworth Community Health Centre is the largest community health centre in the HNE Health Network outside Newcastle. The Centre offers services on-site and also has an outreach service to Gunnedah and the Liverpool Plains LGAs. Services offered through the centre include (HNE Local Health District, 2012; Heyman, S., 2012, pers. comm., 9 February):

- Child and Family Health services, including Aboriginal Mother and Babies Service, a Child Development Service and a Family Care Cottage;
- Therapy and support services, including genetic counselling, occupational therapy, physiotherapy, psychology, social workers and speech pathology; and
- Community nursing, continence advisor, diabetic services, hearing services, Aged Care Assessment Team, alcohol and other drugs service, palliative care, podiatry, respiratory services, sexual health, women's health, and primary health staff for surrounding communities.

Medical Practitioners and Allied Health Professionals

Tamworth City has a substantial number of GPs, specialists and allied health professionals (including dental, physiotherapy and podiatry) that reflect the City's function as a regional service centre.

The TRCSP states that other (non HNE Health) health facilities located in Tamworth are:

- The Tamworth Aboriginal Medical Service also provides services to the Indigenous community of the Tamworth Region;
- Tamara Private Hospital; and
- Billabong Club House – a place where people who have experienced mental illness go to rebuild their lives.

Aged Care

This section provides a brief description of aged care services in the Sub Regional Study Area. Aged care includes retirement homes, nursing homes, assisted living, aged care hostels and respite accommodation.

Gunnedah LGA

The GLCA reports that:

- Gunnedah has a Nursing Home with 58 beds in 34 rooms (10 single and 24 double), Alkira has a total of 32 beds, McAuley Aged Care has 22 units, Yalambi has 13 units and the Frail Aged Hostel gives 24 hour per day care to people;
- While Gunnedah is relatively well supplied with aged care accommodation, respondents to their community telephone survey still expressed some difficulty in accessing aged care accommodation, especially those aged 60-69 years; and
- Difficulty in accessing assessments for care is a problem.

Liverpool Plains LGA

Quirindi Retirement Homes Limited privately manages:

- Quirindi and District Nursing Home, a 36 bed high care facility located adjacent to Quirindi Hospital;
- Elmswood, a 32 bed low care facility currently located away from the hospital site;
- The Gables, 12 independent living units;
- The Villas, six independent living units; and
- Cunningham Court, two independent living units.

A recent major redevelopment of the supported aged care residential services was undertaken adjacent to the HealthOne facility. The redevelopment resulted in a merged residential aged care service with a total of 68 beds incorporating high care beds, low care beds and 12 dementia care beds.

Tamworth Regional LGA

A number of aged care homes and services are available in the Tamworth Regional LGA. A full listing of services available to senior citizens and people with disabilities in the Tamworth Regional LGA can be found in the Tamworth Regional Directory (TRC, 2011c).

Home and Community Care

A range of Home and Community Care (HACC) services are available in the in the Sub Regional Study Area. Home care includes meals on wheels, home nursing, respite care, assistance with self-care, body movement or communication activities.

The GLCA reports that:

- Residents in rural areas found the greatest level of difficulty in accessing home care services, which is possibly due to their distance from major centres; and

- Families were most likely to have difficulty accessing the home care services.

In the Gunnedah LGA, HACC services are coordinated by GSC, while in the Liverpool Plains LGA, they are provided by LPSC, including community transport and Meals on Wheels.

Key Issues for Future Health Services Provision

Several policy documents in the Sub Regional Study Area contain specific strategies and recommendations for the future provision of health services and facilities, as outlined below. In addition, HNE Health have briefly explained their approach to health care planning in the future.

HNE Health recognises that a focus on primary health care is a key strategy for the provision of future health facilities in the region. In particular, HNE Health needs to be able to respond in an integrated way to the community's primary health and preventative health care needs (Heyman, S, 2012, pers. comm., 9 February).

In 2005, the GSSP (explained in detail in **Appendix C**) reported that the main issue in relation to health care provision in the LGA is the recruitment, retention and / or training of qualified people to work in all aspects of medical care and allied health.

Since then, the GLCA (explained in detail in **Section 3.3.2**) has recommended that the following should be considered for the planning and development of the Gunnedah Shire:

- To enable effective ageing in place, planning and negotiation for effective public / community transport to key health services should be undertaken as early as possible;
- Providing information to new residents about available services, including GPs with open books may also assist in removing barriers to health service access, particularly in the first few years;
- Establishment of effective public transport links to health services;
- Possible re-introduction of a direct transport link to Tamworth;
- Re-examination of cost and availability of subsidisation of community transport costs to travel to medical appointments;
- Work with Division of General Practice to ensure appropriate liaison between all levels of health professionals to ensure access of eligible residents to all State and Federal funded benefits and services;
- Work with Division of General Practice and other health service providers to encourage all health service providers and staff to undertake cultural awareness training to reduce elements of racism;
- Advocate for improved access to aged care assessments;
- Advocate for improved access to Home Care Services for those located outside Gunnedah township; and
- Advocate for increased availability of Community Health services.

Strategies relevant to the provision of health facilities that are proposed by the GCSP (explained in detail in **Appendix C**) are:

- Partner with health agencies in promoting healthy lifestyles and disease prevention;
- Identify and address gaps in health services for the community, including gaps in mental health services and medical facilities; and
- Investigate options to increase access to health services from the centre of Gunnedah given the increase in train traffic.

Key strategies and actions relevant to health services proposed by the LPSCCSP (explained in detail in **Appendix C**) are:

- Health Advocacy - Council will monitor and advocate for the provision of health services to ensure residents have access to quality services and facilities that meet community expectations – ongoing time frame;
- Council will adapt to the needs of a changing population through:
 - Medical centre / HealthOne (medium time frame);
 - Advocate better services for people with special needs (ongoing time frame); and
 - Advocate services to address mental health issues (ongoing time frame).

5.11.5 Emergency Services

The emergency services that are described in this section are:

- NSW Police;
- Ambulance Service of NSW;
- Fire and Rescue NSW;
- NSW Rural Fire Service;
- State Emergency Services; and
- Volunteer Rescue Association.

Police

The Study Area is within the Oxley Local Area Command of NSW Police. Details of Police Stations in the Study Area and their current level of resourcing are described below:

- Gunnedah Police Station is staffed by 13 general duties officers, four highway patrol officers and two detectives;
- Curlewis Police Station is a '*single unit station*' i.e. with one officer;
- Quirindi Police Station is staffed by five general duties officers;
- Werris Creek Police Station is a single unit station;
- Willow Tree Police Station is a single unit station; and
- Tamworth Police Station is staffed by approximately 42 general duties officers, nine highway patrol officers, 11 general detectives and two rural crime investigators.

Stations are also located further away from the Project at Boggabri, Narrabri and other smaller communities in the Tamworth and Narrabri LGAs (Pheeney, 2012, pers. comm., 23 February; NSW Police Force, 2011; Telstra Corporation Pty. Ltd., 2012a).

Note that data and issues surrounding community safety are presented at **Section 5.15**.

Ambulance Service of NSW

Ambulance stations closest to the Project are located at Gunnedah and Quirindi. Stations are also located at Tamworth and Tamworth South. The Gunnedah station would be firstly called on to service the area near the Study Area and then the Quirindi station would be called. Werris Creek is serviced firstly by the Quirindi station, and then a station from Tamworth.

Gunnedah's current station was built approximately four years ago. Two ambulance crews a day are currently provided at Gunnedah (i.e. two paramedics and a vehicle) from 8:00 am to midnight, with on call availability after hours.

Quirindi is serviced with 1.5 crews, four days a week from 8:00 am to 11:00 pm, with one of those crew available seven days a week from 8:00 am to 5:00 pm (Collins, T., 2012, pers. comm., 14 February).

Fire Stations – Urban

Fire and Rescue NSW stations in the Study Area are located at Gunnedah, Werris Creek, Quirindi, Tamworth and West Tamworth. Gunnedah Fire Station has an establishment strength of 16 personnel and currently meets service delivery needs for the current population.

Fire and Rescue NSW personnel must live within 8 km of a Fire Station, preferably within 3-5 km. Fire and Rescue NSW requires cooperation with employers so that personnel can be released from their work to attend fire calls (Murgatroyd, P., 2012, pers. comm., 14 February).

NSW Rural Fire Service

The Rural Fire Service (RFS) Liverpool Range Zone incorporates the LGAs of Gunnedah, Liverpool Plains and Upper Hunter. The Rural Fire Service has a '*Stand Alone District*' in the Tamworth Regional LGA.

The Gunnedah Rural Fire District contains 12 brigades and a Headquarters, while the Liverpool Plains Rural Fire District contains 17 brigades. The nearest brigade to the Study Area is Curlewis, then Caroon, Werris Creek, Quipolly and Quirindi. Breeza is now serviced by the Curlewis Brigade. The availability of volunteers at Breeza decreased to a point which necessitated the truck being moved to the Curlewis Brigade three years ago (Luke, A., 2012, pers. comm., 14 February).

State Emergency Service

The NSW State Emergency Service (SES) is the lead agency in the response to floods, storms and tsunamis in NSW. The SES also supports other emergency services in times of other natural and manmade disasters.

The State Emergency Service Namoi Region office is located in Gunnedah. The following SES Units, which all perform flood and storm responses and flood rescue with volunteer staff, are located in the Study Area (Namoi Region SES, 2012, pers. comm., 14 February and 6 November).

- Gunnedah SES Unit – also the primary rescue agency for the Gunnedah LGA;
- Liverpool Plains SES Unit – based at Quirindi; and
- Tamworth SES Unit - based at Tamworth.

Volunteer Rescue Association

In the Liverpool Plains LGA, the primary rescue agency is the Volunteer Rescue Association, based in Quirindi. The SES is the primary rescue agency for the Gunnedah LGA and NSW Ambulance the primary rescue agency for the Tamworth Regional LGA (Namoi Region SES, 2012, pers. comm., 14 February and 6 November).

5.11.6 Recreation, Leisure and Sporting Facilities

This section outlines the recreation, leisure and sporting facilities that are provided in the Sub Regional Study Area, and presents relevant information regarding the future planning for these facilities by the Councils in the Sub Regional Study Area.

Gunnedah LGA

The GSSP states that Gunnedah LGA has an abundance of sport and recreational facilities and opportunities. The GLCA states that Gunnedah has always been an enthusiastic sporting community and there is a great variety of established sports and sporting facilities provided by over 50 sporting clubs. Some of these sporting clubs and their member numbers are described in the *Draft Gunnedah Open Space Strategy* (GOSS) (explained in detail in **Appendix C**).

Gunnedah – Discover the Facts (GSC, 2011e) lists the following facilities:

- World class gymnastic centre;
- Tennis courts;
- Basketball stadium;
- Skate park;
- Cycle ways;
- Playing fields,
- Parks and playgrounds;
- Gunnedah Memorial Pool complex has a 50 metre Olympic pool, a 25m indoor heated pool and toddler's wading pool;
- 18-hole golf course;
- Gunnedah Rugby Park;
- Wolseley Oval; and
- Kitchener Park.

The GLCA (explained in detail in **Section 3.3.2**) reported on the proportion of people who use local open space and recreation facilities in the LGA, and barriers to use of those various facilities. Just over a third of residents in their telephone survey from Gunnedah township use those facilities, compared with only 15% of residents of the villages and no residents of rural areas. Families reported using facilities, including the pool and sports facilities, at significantly higher levels.

The GLCA also reports on the use and satisfaction of the quality of neighbourhood cycle ways and the quality and flexibility of public space.

Future Planning for Recreation

ROSS Planning Pty Ltd prepared the *Draft Gunnedah Open Space Strategy* (GOSS) for GSC in 2009. Although the GOSS has not been formally adopted by GSC, it provides direction into the future for GSC's planning of recreation and open space needs.

The GOSS examines the Gunnedah LGA's current and future demand for open space areas and improvements to existing parks and walkways, while being cognisant of GSC's vision to have a high quality open space system. The GOSS identifies GSC's open space needs for the next 15 years.

The GOSS identifies that:

- There is generally a good distribution of parks and generally enough open space, with the exception of high level parkland. Recommendations are made that will improve the current and future supply of open space, for recreation and sport, at all catchment levels;
- Unlike many towns and cities, Gunnedah has not yet capitalised on the recreation value of the Namoi River. The development of a section of the Namoi River Parklands is a high priority recommendation of the GOSS. The GOSS states that the River is a very attractive recreation destination and Gunnedah has an opportunity to take advantage of it;
- There are many possibilities for improving the open space network;
- Council should review the services that it provides to the sporting community to establish if a better balance is required, freeing up some resources for addressing maintenance and improving parks, walking paths and other elements of the total open space system; and
- There is some backlog of park asset maintenance. Detailed planning has been undertaken for the first five years and projections out to 15 years. Council will need to find the budget resources to address these maintenance items.

Details of recommendations for each open space area in Gunnedah, Curlewis and Breeza (being the towns and villages in closest proximity to the Project) can be found in the GOSS.

The Gs94A Plan (explained in detail in **Appendix C**) recognises the need for a number of future open space embellishments and recreation facilities as a result of expected population growth, listing various facilities in its Works Schedule, summarised previously in **Table 77**.

The GLCA recommends that the following should be considered for the planning and development of the Gunnedah LGA:

- The amount of open space allocation in Gunnedah seems to be satisfactory according to current residents;
- The heritage / cultural and natural sites listed as important by residents of all three areas should be considered for inclusion in the development of identity for the area and as potential focal points for promotion of the area, in consultation with the relevant Aboriginal organisations, with regard to sites of Aboriginal cultural significance;
- Consideration should be given to connections to such facilities by means of active and public transport;
- Apply '*Crime Prevention Through Environmental Design*' principles to the development and management of open spaces and public places; and
- Incorporate community feedback with regard to design of public space, so as to ensure such places catering to different ages, access needs and cultural groups. This is particularly important in the acknowledgement of Aboriginal heritage wherever possible by the use of culturally appropriate signage and public art.

Strategies relevant to recreation that are proposed by the GCSP are:

- Encourage cycling and walking through developing safe tracks and paths; and
- Identify new activities, promotions and incentives to attract a broad range of people to use recreational areas and open space.

Liverpool Plains LGA

The Liverpool Plains LGA has a range of recreation, leisure and sporting facilities provided throughout its towns and villages.

The Quirindi Recreation Centre, which includes a gymnasium, is open during the week only (LPSC, 2012a). The LPSCSP reported that it was being well utilised by the squash and basketball clubs.

Future Planning for Recreation

Actions relevant to recreation that are proposed by the LPSCCSP are:

- Integrated sports precinct - long time frame for provision;
- Cycleway / fitness trail – short time frame;
- Quipolly Dam recreation area – short time frame;
- Develop forward works plans insuring that local parks, gardens, landscapes, swimming centre and playing fields continue to be enhanced to accommodate future needs - short time frame;
- Council will promote a healthy lifestyle for its community as a contributing factor to future investment and quality of life;

- Council in conjunction with the LPSC Sports Council and relevant member organisations will identify and apply for external grant funding to further develop and enhance sport and recreational opportunities in the LGA; and
- In partnership with user groups seek to further develop the Quirindi Racecourse and Showground as a true multipurpose centre capable of holding regional, state and national title events – short to medium time frame.

The LPSC s94A Plan recognises the need for a number of future open space embellishments and recreation facilities as a result of expected population growth, listing various facilities in its Works Schedule as shown in **Table 78**.

Tamworth Regional LGA

Tamworth Regional LGA is well-serviced by a variety of recreational facilities that cater for a wide spectrum of activities, with over 70 listed parks, gardens and reserves, four lookouts, six swimming pools, more than 40 sporting fields, three skate parks and over 150 sporting groups operating across the region. The new Tamworth Sports Dome is a multifunctional facility catering to many sports, as well as a meeting and function facility. Sport is a major economic and social driver for the regional economy (TSC, 2012e).

Details of many sport and recreation groups and facilities in the LGA are discussed in the TRCOSP 2008 (explained in detail in **Appendix C**).

Future Planning for Recreation

The establishment of an indoor aquatic centre remains a high priority for the Tamworth region. TRC has developed draft concept plans for the centre and is currently developing it into a detailed proposal for future construction (TRC, 2011g).

TRC's TU s94 Plan (explained in detail in **Appendix C**) recognises the need for local open space embellishments and dedication of land for open space as a result of expected population growth, as shown at **Table 79**.

The TRCOSP was prepared for TRC in 2008, after the preparation of the TU s94 Plan outlined above, and after the amalgamation of the previous five individual Councils into the TRC, so that recreation planning was integrated across the whole region.

In its recommendations, the TRCOSP states that the region is not in need of many new venues for sport and recreation, however existing facilities need a range of improvements to make them more functional and attractive to use.

The recommendations of the TRCOSP are grouped into five strategic areas, being:

- Viability of sport and recreation groups;
- Council policies, coordination and management arrangements;
- Maintenance and improvement of existing facilities and programs;
- New facilities, programs and initiatives; and
- Information and awareness.

Priorities are assigned for each action in the strategy areas.

5.11.7 Cultural facilities and cultural development

This section outlines the range of cultural facilities and organisations that are found in the Sub Regional Study Area. It also outlines each of the LGA's cultural development initiatives.

Gunnedah LGA

Cultural Facilities and Organisations

Gunnedah's cultural precinct incorporates the Town Hall, Civic Theatre complex and Bi-centennial Creative Arts Centre. It is the hub of many community activities and attractions including gallery displays, regular movies, theatre productions, meetings and receptions.

Gunnedah has a range of cultural organisations, which are listed in GSC's Community Services Directory (GSC, 2011b).

Gunnedah Public Library

Gunnedah has a Public Library, which is open 5 ½ days per week. The Curlewis Library is also open for four hours per week, as is the Tambar Springs Library.

The GLCA (explained in detail in **Section 3.3.2**) reports that:

- People aged 25-34 years old reported the lowest level of use of the library, compared to older age groups;
- The highest use was reported by those aged 35-49 years old; and
- Use of libraries increases with higher levels of education.

Gunnedah Creative Arts Centre and Gallery

The only council owned art gallery in the LGA is the Gunnedah Creative Arts Centre and Gallery.

The GLCA reports that:

- The highest use of the Creative Arts Centre was reported by residents from the rural areas (47%) while residents from the villages reported the lowest use (26%);
- People aged 60-69 years of age reported the highest use of the Creative Arts Centre, compared to other age groups (46%). People aged 18-24 reported the least use (8%); and
- There is an increasing trend in use of the Creative Arts Centre by those who have a higher level of education. Respondents who reported their highest level of education as a '*degree*' or other '*postgraduate qualifications*' reported the highest use of the Creative Arts Centre, compared to respondents a '*trade certificate or diploma*' or '*no tertiary qualifications*'.

Community Halls

There are 12 council owned community centres or halls located in the LGA. The Gunnedah Communities Assessment reports that those located in the villages and small communities become a focal point for local activities and are often maintained by local committees. Several have attracted grant funding for local special projects, including Breeza Community Hall in 2009. The GLCA reports on the use of halls by the community.

Future Planning for Cultural Facilities

GSC does not have a Cultural Plan, but Council expects to develop one in the future.

The Gs94A Plan (explained in detail in **Appendix C**) recognises the need for '*cultural improvement*', listing the Civic Centre redevelopment in its Works Schedule.

The GLCA recommends that the following should be considered for the planning and development of the Gunnedah LGA:

- Improvement of appropriate community facilities for those living outside the Gunnedah township, including library access and access to community halls / centres;
- Allowing or enabling the development of multi-use, flexible spaces will ensure that such public spaces and places are useable for a wide range of ages and access needs, and are welcoming to a wide range of cultural groups;
- Apply Crime Prevention Through Environmental Design principles to the development and management of public places; and
- Incorporate community feedback with regard to design of public space, so as to ensure such places catering to different ages, access needs and cultural groups. This is particularly important in the acknowledgement of Aboriginal heritage wherever possible by the use of culturally appropriate signage and public art.

Strategies relevant to cultural facilities and cultural development that are proposed by the GCSP are:

- Provide innovative and enhanced library services using multimedia options that encourage lifelong learning;
- Review Council and community programs and facilities in maximising the participation of all community members;
- Improve the marketing and promotion of existing facilities to people from different demographic groups;
- Support and promote Dorothea Mackellar National Poetry Competition, celebration of NAIDOC Week, the Red Chief Relief; the Oxleys Memorials, Ben Hall's Wall, the 150° meridian;
- Assess opportunities for better use, functionality and accessibility of existing cultural facilities and spaces;
- Recognise and resource Council's role in supporting and facilitating arts and cultural programs in partnership with the community;
- Enhance open spaces, villages and facilities with a broad range of arts and cultural activities;
- Assess opportunities for funding for existing or identified cultural activities;
- Partner with the community and other agencies to extend opportunities for best practice cultural and event programs e.g. Porchetta Day, Week of Speed, AgQuip;
- Extend programs to promote Indigenous heritage and culture; and

- Lobby to secure funding for culture and creative expression from government, private individuals and companies.

Liverpool Plains LGA

The Liverpool Plains LGA has a range of cultural organisations and facilities (LPSC, 2010a):

- Liverpool Plains Shire Library at Quirindi, which is open 5.5 days a week. The Werris Creek Library was provided with a new building in 2009. There is also a branch at Premer;
- The International School of Music - for children from preschool age upwards;
- Youth Band in Quirindi;
- Quirindi Art Society;
- Quirindi Arts and Craft Shop;
- Royal Theatre;
- Historical Cottage and Museum;
- Rail Journeys Museum;
- Rural Heritage Village;
- Wallabadah Cultural Centre;
- Liverpool Plains Arts Council, which was formed to coordinate and develop the various arts activities in the LGA; and
- Private clubs, which provide venues for entertainment in the absence of a larger cultural or entertainment centre, for example, the Quirindi RSL Club, Werris Creek Bowls and Tennis Club and the Quirindi Bowling Club.

Details are listed in LPSC's Community Directory.

Future Planning for Cultural Facilities

The LPSCCP contains a detailed inventory and description of local cultural assets, resources and infrastructure, and identifies '*Action Plans*' for:

- Cultural Spaces;
- Cultural Diversity;
- Cultural Education;
- Cultural Heritage;
- Cultural Events; and
- Cultural Links.

The LPSCSP reported that Council is working with a local Committee to develop the Railway Institute Building in Werris Creek for provision of a range of community activities. The LPSCSP recognises that Section 94 funding from the Werris Creek Coal Mine has been used to undertake works and provide equipment.

The LPSC s94A Plan recognises the requirement for cultural facilities, listing a number of items in its Works Schedule as shown in **Table 78**.

Tamworth Regional LGA

The Tamworth Regional LGA has a range of cultural organisations and facilities, which are listed in the *Tamworth Regional Community Directory* (TRC, 2011c).

The TRC's website (TRC, 2012d) offers the following information about the key cultural facilities in the LGA:

- Tamworth City Library in Tamworth is a modern purpose-built library facility, while smaller libraries are also provided at Barraba, Kootingal, Manilla, Nundle and South Tamworth;
- Tamworth Regional Gallery, established in 1919, contains a modern purpose built gallery established in 2004, which houses two main gallery spaces. The Gallery is home to the Tamworth Textile Biennial, which showcases the best of fibre textile art from across the country every two years;
- The Tamworth PowerStation Museum features displays recording the history of electricity and items reflecting the impact of the development of electricity on modern society, since the first municipal electric street lighting in Australia commenced in Tamworth in 1888; and
- There are 28 community centres and halls across the region, ranging from the purpose-built Tamworth Community Centre to small public halls.

Future Planning for Cultural Facilities

TRC's TU s94 Plan recognises the need for community and cultural facilities as a result of expected population growth, suggesting a range of cultural facilities as shown in **Table 79**. The TU s94 Plan is currently undergoing a review, and it is noted that these community and cultural facilities items may change in a forthcoming s94 Plan.

The TRCCP is described in **Appendix C**. The TRCCP contains detailed recommendations for future cultural development in its '*Summary Action Plan*', which contains a wide range of specific strategies and actions listed under a number of themes.

Three important initiatives recommended by the TRCCP are:

- The establishment of an Arts Advisory Committee of Council to provide advice to Council and work with the not for profit sector involved in the cultural life of the region;
- The appointment of a Cultural Development Officer to lead and co-ordinate the implementation of the Cultural Plan; and
- The implementation of a three year project, in association with Arts NSW and Museums and Galleries NSW to address a range of important issues relating to the preservation and development of Museums and Heritage collections and records of the Region.

5.11.8 Social Support Services and Community Groups

This section outlines a range of social support services and community groups that are located in the Sub Regional Study Area. Because of the diverse nature of these organisations, details of each of them were not able to be easily sourced and therefore not every organisation or group will be listed in this section.

Gunnedah LGA

Social support services are provided by various professional and community organisations in Gunnedah, including Gunnedah Family Support, Indigenous organisations, HNEAHS and HACC.

The Gunnedah Aboriginal Child and Family Centre, outlined at **Section 5.11.2**, is expected to start operating in 2012 and will provide family support services to Indigenous and other families.

Gunnedah does not have a refuge for women and children escaping domestic violence. The nearest such refuges are in Narrabri and Tamworth. Domestic violence services are listed on the Gunnedah Local Domestic Violence Committee's resource pamphlet '*I Have Nowhere to Stay Tonight*'.

Gunnedah has numerous community-based organisations, churches, groups and clubs, details of which can be found through Council's online Community Directory.

One of the submissions to the development of the GSSP cited the need for a dedicated Community Centre, staffed by volunteers, that serves as a multi-purpose centre for volunteers, aged people and other community members to meet and also have access to basic office facilities, envisaging that such a centre would become a common focal point for all organisations and pointing out that volunteers substantially reduce the operating costs of community services.

Liverpool Plains LGA

The LPSCSP (explained in detail in **Appendix C**) states that family services and support are provided by various organisations including HACC, HNEAHS, Tamworth Family Support and State Government Departments.

The Liverpool Plains does not have a refuge for women and children escaping domestic violence. The nearest refuge is in Tamworth.

The Liverpool Plains has a variety of community-based organisations, churches, groups and clubs, details of which can be found through Council's online *Community Directory*.

The LPSCSP notes that:

- Churches contribute significantly to the community of the LGA; and
- Local service clubs include Country Women's Association (CWA), Lions, Quota, Rotary and Toastmasters. The combined Services clubs support a number of the local charities including the Salvation Army, Smith Family and the St Vincent de Paul Society. The service clubs also provide funding for a broad range of community programs.

Tamworth LGA

Social support services are provided by various professional and community organisations in Tamworth, some of which provide outreach services to the Gunnedah and Liverpool Plains LGAs. Details of all organisations and groups can be found through Council's online Community Directory.

The TRCSP states that the Tamworth Women's Refuge provides support and crisis accommodation for women and children escaping domestic violence.

Tamworth has numerous community-based organisations, churches, groups and clubs, details of which can be found through Council's online Community Directory.

5.11.9 Commercial and Retail Facilities

Gunnedah LGA

The *Gunnedah Shire Community Profile 2009* (GSC, 2009) notes that from a commercial and retail viewpoint, Gunnedah is self sufficient, with residents having little need to travel to larger centres for goods and services. In 2006 there were over 102 retail establishments with a total turnover of around \$80 to \$100 million, employing 480 employees.

There are a wide variety of businesses in Gunnedah, including supermarkets, pharmacies, banks, printeries, bakers, drycleaners, fashion clothing and gift shops as well as real estate, stock and station agents, travel agents, motor dealerships and machinery service centres. These businesses offer a broad range of high quality goods and services at prices competitive with other major retail centres in the region.

Commercial activity offers professional and retail services to the community both within and outside the Shire.

Liverpool Plains LGA

The towns and villages of the Liverpool Plains provide shopping and commercial services to their surrounding districts.

The LPSCSP states that a future opportunity for the Shire is to '*promote local shopping opportunities*', recognising that consumers within the community are purchasing goods and services from Tamworth and other centres.

Tamworth Regional LGA

Tamworth City provides regional level retail and commercial facilities. Tamworth has the largest shopping floor space in the region, with other large centres being as far away as Dubbo and Maitland, with Armidale being relatively close.

There were 2,840 people employed in the retail sector in 2006 in the Tamworth Regional LGA, which comprised 13% of all jobs (Essential Economics, 2011).

5.11.10 Public Transport

The Sub Regional Study Area is serviced by a number of public transport options, as described in this section.

Air

Gunnedah Aerodrome does not have any regular passenger transport services, but supports occasional charter flights. The main runway can support larger 50 seat turbo-prop aircraft if required (GSC, 2009).

Regarding previous air travel patronage from Gunnedah Aerodrome, Gunnedah's previous patronage of Big Sky Express was variable. After about two years without an air service, following the closure of Yanda Airways in late 2000, regular air travellers needed to be won from the Tamworth carriers. This did not happen and although somewhat inconvenient, Tamworth remained the preferred option for many. Under new management, Big Sky Express addressed those issues during its last year of operation, 2006, but inevitably the change was too late and the service closed. Ironically, since 2006, Gunnedah has experienced growth as previously described in this SIA (GSC, 2011g).

Tamworth Regional Airport is approximately 50 minutes' drive from Gunnedah. It is the largest of the regional airports in Australia and capable of operations for aircraft as large as B737 / A320 series. It has 24 hour operations, with no curfew and offers significant airspace potential, with a capability of sustaining substantially more air movements.

Currently, QantasLink operates several turboprop and Q400 air services to and from Sydney daily, with a flying time of approximately 50 minutes. Brindabella Airlines operates daily direct services between Brisbane and Tamworth. Flying time is approximately 70 minutes in Brindabella's turbo-prop Metroliner aircraft (TRC, 2011g).

The Tamworth Regional Airport Passenger Terminal Building is expected to undergo significant modifications in accordance with the new security requirements of the Federal Government, including \$3 million modifications to the terminal building including a new departures lounge and upgrades to the arrivals and airline check-in areas (TRC, 2012).

Quirindi Aerodrome does not have any regular passenger transport services, although it supports occasional charter flights. It is mainly used as a training ground. It is designed to take up to 40-50 seater planes (McGarry, N., 2011, pers. comm., 18 November; Civil Aviation Safety Authority, 2012).

Rail

Gunnedah, Werris Creek, Quirindi and Willow Tree are located on the North-Western Railway Line and are serviced by the daily '*Countrylink Xplorer*' train service to and from Sydney via Newcastle. The journey from Sydney to Gunnedah takes about 6.5 hours, leaving Sydney at 10:00 am and arriving in Gunnedah late afternoon; while the return trip leaves Gunnedah late morning, arriving in Sydney at 5:00 pm. The Countrylink service continues from Gunnedah to Moree.

The GLCA states that although there is a station at Curlewis, the train does not stop there and intending passengers must travel to Gunnedah to join the train. However, the train has been observed to stop at Curlewis station. Further research on Countrylink's attitude to this may be required.

Namoi 2030 reports that the main use of the Railway Line is for freight, especially coal transport. Grain, fuel, cotton and flour are also transported. The ARTC operates and leases the rail line in the Namoi Region and the Hunter Valley (ARTC, 2012).

Tamworth is also served by a daily Countrylink service. The train '*separates*' from the North-Western Railway Line service to Moree at Werris Creek, and continues through to Tamworth and then Armidale.

Bus Services

Gunnedah LGA

The GLCA outlines the bus services and ticketing types that are available to Gunnedah LGA residents. It also reports on its telephone survey respondents' satisfaction levels with the town bus services, which are very positive.

In addition to the town bus routes, several school bus services are provided throughout the LGA, which adults may also travel on if there is spare capacity. Importantly, the school bus service from Gunnedah to Tamworth provides a service for adults and TAFE students are also able to use this service (Hopes and Macphersons Buses) to access the Tamworth Campus. However, the GLCA reports that adult concession tickets on the Gunnedah to Tamworth service are not available, meaning that the only public transport concession option for Gunnedah residents to travel by public transport to Tamworth is a long train trip to Werris Creek and then a change onto the Tamworth Bus lines service to Tamworth. When people reach Tamworth they have less than an hour and a half to do their business before catching the bus again for the return trip.

Community Transport Options

The following community transport options are available in the Gunnedah and Liverpool Plains LGAs:

- The *Gunnedah Community Transport Service* caters for Gunnedah, Carroll, Curlewis, Kelvin, Emerald Hill and Breeza. It assists elderly people, people with a disability and their carers, isolated and disadvantaged people and provides affordable transport for all types of medical appointments locally and in Tamworth, social activities and shopping. It uses a combination of wheelchair accessible vehicles (including a bus), volunteer drivers, volunteer cars, taxi vouchers and project owned vehicles to assist with transport for almost any purpose. It sends an accessible bus to Tamworth every weekday (HNEPH, 2011);
- The Moree to Tamworth Transport Corridor Service for HACC clients provides transport twice weekly to HACC clients in towns and villages from Moree to Tamworth (including Gunnedah). Another service runs twice a month from Wee Waa, Narrabri and Boggabri to Gunnedah and Tamworth (HNPH, 2011); and
- Various community transport services are provided to the Liverpool Plains LGA through the Quirindi HACC office, including (Quirindi Home and Community Care, n.d.):
 - A weekly shopping access bus in Quirindi town area only;
 - HACC monthly Medical Bus to Tamworth;
 - Weekly Hydrotherapy Pool Bus Run;

- Bus runs from Premer every two months picking up Carroona, Spring Ridge, Werris Creek and Currabubula; and
- Car transport for medical appointments outside the 50 km limit or for isolated clients needing shopping in Quirindi.

Taxi Services

Taxi services are provided in Gunnedah, Werris Creek and Tamworth (Telstra Corporation Pty. Ltd., 2012b).

Planning for Future Public Transport

There are some policy documents that make specific recommendations for future planning of public transport in the Sub Regional Study Area.

The GLCA recommends that the following should be considered for the planning and development of Gunnedah LGA:

- Given that the Gunnedah population is predicted to become significantly older, planning for adequate public transport is important and should include the availability of easy access buses to suit the elderly;
- Ensure services are available and accessible, particularly for those in the villages and rural areas, including access to public or community transport;
- Establish better public transport links to Tamworth and participate in the subsidised transport opportunities available for physically and economically disadvantaged members of the community;
- Advocating for the provision of suitable public transport vehicles to accommodate the needs of the elderly, the disabled and young mothers with children, including those with prams and strollers; and
- Advocating for improved train services.

Strategies relevant to public transport that are proposed by the GCSP are:

- Develop strategies for sustainable local and regional transport, including options for public transport to connect with existing transport services;
- Lobby for the provision of upgraded rail infrastructure. This includes an additional overpass or diversion of coal trains in Gunnedah township and review of impacts on surrounding villages and neighbouring Councils; and
- Develop an airport master plan to assess future viability of the facility and options for future use.

Key actions relevant to public transport that are proposed by the LPSCCSP are to:

- Advocate for increased access to public transport – ongoing time frame, under the key strategy of ‘*Council will adapt to the needs of a changing population*’; and

- Negotiate lease fees at the airport which cover maintenance costs and investigate lease of airport to independent organisation – short time frame under the key strategy of '*ensure that Quirindi Aerodrome operates safely and at no cost to ratepayers*'.

5.11.11 General Community Infrastructure

This section has described the range of community infrastructure in the Sub Regional Study Area. The section has also outlined issues regarding the current provision of that infrastructure, and where relevant, has listed strategies already published for the future provision of specific infrastructure types.

There are also a number of strategies and suggestions from GSC and LPSC that generally relate to the provision of community infrastructure that are listed below.

Gunnedah LGA

Strategies relevant to the provision of general community infrastructure that are proposed by the GCSP are:

- Improve community information and referrals to existing services and lobbying for increased government support;
- Continue to provide quality services that meet changing needs of our residents, including key services, such as library and community services; and
- Create a better understanding within the community of the services and facilities Council provides.

Liverpool Plains LGA

Key strategies and accompanying actions relevant to the provision of general community infrastructure that are proposed by the LPSCCSP are:

- Provide a range of community and human services that accord with Council policy and ensure the quality of services provided directly or facilitated through Council. (Accompanying action - Council will seek to have more government decisions and activity decentralised to the regional and local level provided that appropriate levels of funding are made available);
- In consultation with the community review the social and cultural plans to promote the LGA as a place for families, lifestyle and business. (Accompanying action - Council will establish a partnership culture between Council and its residents through conducting community workshops for both plans);
- Develop mechanisms for promotion of the range and quality of services and facilities in the Shire through newsletters, brochures and broadsheets;
- Investigate opportunities that would result in additional events, festivals or promotions throughout the LGA. (Accompanying action - planning and promotion through the Arts Council and Tourism Committee);

- Identify gaps in current service provision. Accompanying actions are:
 - Council will strive to achieve a more effective level of co-ordination between Local, State and Federal governments with particular emphasis on the place of LPSC in that structure; and
 - In terms of actual service delivery, Council will seek out appropriate partnerships with organisations or groups who have the capability to manage and / or deliver the Shire's community facilities and services;
- Advocate for funding or service provision by other organisations. (Accompanying action - In conjunction with other levels of Government, Council will seek to achieve a more integrated approach to the planning and provision of core community services);
- Community and social services provided by or through Council will be directed to meeting community lifestyle needs. (Accompanying action - establish appropriate mechanisms for consultation with youth, the aged and special needs groups within the LPSC community); and
- Council will adapt to the needs of a changing population.

5.12 COMMUNITY IDENTITY, VALUES, ASPIRATIONS AND LIFESTYLE

The following section outlines the LGAs in the Sub Regional Study Area in terms of their perceived community identity, values, aspirations and lifestyle.

A range of recent consultation processes, mostly undertaken by GSC, LPSC and TRC, provide considerable insight into these communities' identity and aspirations and are outlined below. Issues raised during consultation on the Project, discussed below, also provided additional insight into some of the communities' values.

Community comments regarding the communities' values and aspirations for their areas, in the context of the expansion of the mining and resources industry in the Gunnedah Basin, were also documented as part of the consultation undertaken by DP&I during the preparation of the *NSW Coal and Gas Strategy*, which has been incorporated into the New England North West SRLUP (DP&I, 2012).

It is recognised that the comments and information referenced in the following documents are not assumed to represent the opinions and perceptions of the whole community. Rather, they provide a snapshot of the range of current concerns of the community.

5.12.1 Watermark Coal Project Consultation

As described in **Section 2.4**, community consultation was undertaken as part of the Project. The range of issues raised at the Gunnedah, Breeza, Quirindi and Tamworth consultations in 2011 reflect the range of aspirations and concerns for the future that the residents hold.

Although issues relating to social impact constituted the largest category of issues documented at the sessions, the sheer range of issues and concerns recorded show that there is significant concern about a range of issues that affect the future '*liveability*' of the Study Area (Hansen Bailey, 2012).

5.12.2 Gunnedah LGA

There are a number of recent documents produced by GSC and other agencies that articulate the Gunnedah LGAs residents' attitudes to community identity, values, aspirations and lifestyle. In addition, comments gathered during consultation for the Project are referenced in this section.

Gunnedah Community Strategic Plan 2012-2022

The GCSP is explained in detail in **Appendix C**. In early 2011, GSC engaged Blackadder Associates to undertake community consultation associated with the development of Council's then forthcoming GCSP, and a *Community Consultation Outcomes Paper* (Blackadder Associates, 2011) was produced. During the consultation, participants were asked:

- What is great about living in Gunnedah Shire today?
- What are the challenges facing the Gunnedah Shire Community in the next 20 years? and
- What are the actions that can be taken to address the key challenges?

Participants were able to clearly articulate their aspirations for the next 20 years – both in what they would like to see and what they would not like to see. The consultation also identified a number of challenges to maintaining the lifestyle enjoyed by the community and suggestions to improve the lifestyle, presented in four themes. Each of these themes and the outcomes sought by the community in those themes is given below in **Table 110 in Appendix D**.

GSC then developed the outcomes from the community consultation as shown in **Table 110** into the draft GCSP. Relevant sections from the GCSP are referenced in relevant sections of this SIA.

One theme of the GCSP is titled '*retaining our quality of life*'. Relevant sections of this theme that express Gunnedah LGA residents' attitudes to their quality of life are included in the GCSP:

- The Shire is a fantastic place to live. It is centrally located with access to a range of services. Workshop participants identified how great it is to live in a community with strong friendships, friendly people and a safe environment in which to raise children. In a small community like ours, it does not take long to get to anywhere within the Shire. In addition, we are close to Tamworth, Narrabri, Coonabarabran and Quirindi and consequently, from a regional perspective there are a range of lifestyle opportunities. We need to hang onto the values that characterise the Shire – a strong sense of community, a balance between farming and mining and good services and facilities for our population size;
- Our challenges include an ageing population, mobile youth, limited access to health services and transport. Other concerns raised at workshops included anti-social behaviour and alcohol related crime and violence;
- We not only need to consider the consequences of an ageing population, but also provide an environment in which we retain more of our younger people;
- We must manage more effectively the significant opportunities and impacts associated with a potentially temporary, but large, mining population; and
- The big challenge is to get the balance right between economic considerations for the future and keeping our country quality of life intact.

Another theme of the GCSP is titled '*protecting and enjoying our beautiful surrounds*'. Relevant sections of this theme that express Gunnedah LGA residents' attitudes to this subject are included in the GCSP:

- We are justly proud of our Shire's beauty. Whilst our Shire is known for its koalas we have so much to be proud of including the Namoi and Mooki Rivers, Porcupine Lookout, the heritage of Maitland Street and the Shire's well maintained open spaces. We also have attractive quality parklands and urban spaces;
- Challenges - There are concerns that this beauty could be tarnished due to industry which could impact upon water quality and sustainability, as well as native vegetation and potentially our heritage. Coal mining and coal seam methane extraction are significant concerns of the community. There is concern that coal dust could create air pollution as well as contaminate rainwater tanks and groundwater resources. Our community is heavily reliant on water and contamination of ground and surface waters would create significant problems for the whole community. Maintaining the health of the Namoi River and ground water supplies is therefore a high priority;
- Not only do the trees and plants contribute so much to our Shire's beauty, but they also play a fundamental role as shelters, burrows and other kinds of homes for native wildlife with continued clearing of trees, the diversity of wildlife found in the area will drop dramatically;
- Maintaining balanced and sustainable ecosystems is critical. Coexistence of mining, agriculture and other industries is a major challenge facing our community; and
- Our heritage has contributed so much to our identity and will continue to do so. It is vital that any development within the Shire takes all reasonable means to protect items or buildings of heritage significance.

Particular strategies put forward in the GSCP relating to community identity, values, aspirations and lifestyles relevant to this SIA are:

- Encourage and develop strategies to attract young people and families to our area to maintain the population balance;
- Lobby for planning controls that balance the need for mining, agriculture and protection of the environment; and
- Encourage co-operation between industry (including mining) and environmental groups to rehabilitate negatively impacted areas.

Gunnedah Liveable Communities Assessment 2011

The GLCA, prepared by HNE Population Health in 2011, is explained in detail in **Section 3.3.2**. Amongst other issues, it contained an assessment of residents' satisfaction with a number of community facilities or services in the Gunnedah LGA, reported in relevant sections of this SIA. The following three sections of the GLCA also give insight into Gunnedah residents' perceptions of the following aspects of their community:

- Natural sites;

- Quality of the natural environment; and
- Expectations and future development desires.

These aspects are detailed below.

Natural Sites

Respondents to the GLCA's telephone survey were asked to nominate an attractive natural site within their neighbourhood that should be conserved **Table 111 in Appendix D** shows the most commonly identified natural sites for each study area of the Assessment (i.e. township, villages and rural areas).

Table 111 shows that residents particularly value their '*local lookouts*' (being the high places above the surrounding plains), '*riverbank, creeks, gullies, dams and waterways*', '*bushland, mountains and hills*' and '*views, vistas, townships and plains*'.

Quality of Natural Environment

The GLCA also asked its telephone survey respondents about their perceived quality of the natural environment, with the following results:

- The level of satisfaction with the water quality of rivers, lakes and creeks in the neighbourhood is significantly higher among residents in the Gunnedah township (79%) and the rural areas (71%), compared to village residents (47%);
- Respondents across all three study areas reported high levels of satisfaction with air quality in their neighbourhood (90% to 97%); and
- A number of residents commented on the need to clean water ways or preserve water supplies within the Gunnedah Shire.

Expectation and Future Development Desires

The GLCA asked respondents to the telephone survey to provide comments regarding the future of their communities. The comments were compiled word for word from the telephone survey interview tapes and are reported in the GLCA. The GLCA also specifically lists community comments regarding '*mining*'.

5.12.3 Liverpool Plains LGA

Recent documents produced by LPSC articulate the Liverpool Plains LGAs residents' attitudes to community identity, values, aspirations and lifestyle. In addition, comments gathered during the Watermark Coal Project Community Information Sessions in Quirindi are provided in the CISR.

Liverpool Plains Shire Council Community Strategic Plan 2012-2022

The LPSCCSP is explained in detail at **Appendix C**.

A SWOT analysis prepared as part of the LPSCCSP identified a range of strengths, weaknesses, opportunities and threats to the LGA, as nominated by the community participants, as shown in **Table 112 in Appendix D**.

Key strategies put forward in the LPSCCSP relating directly to community identity, values, aspirations and lifestyles relevant to this SIA are:

- Promote the LGA as a place for families, lifestyle and business;
- Advocate for an increase in the resources committed by the Commonwealth and State Government to Local Government and LPSC, in particular for infrastructure;
- Contribute actively to regional leadership to ensure the further provision of quality services to the community;
- Ensure the importance of the black soil Liverpool Plains to agricultural production and wealth of the Shire, Region and State will be recognised. Accompanying actions are to:
 - Advocate for declaration of State Significant Land and protection from mining; and
 - Develop a policy on mining and increase communication with community;
- Council will work for the retention, restoration and protection of the Shire's heritage.

Many other strategies and actions listed in the LPSCCSP also relate to community identity, values, aspirations and lifestyles, however they are listed in other more relevant sections of this SIA.

Liverpool Plains Shire Council Social Plan 2010-15 Consultation

As part of the LPSCSP consultation, residents were surveyed in 2009 about what they liked about the Liverpool Plains. Answers were categorised in five sections – lifestyle, community, location, services and facilities and other. The detailed answers can be found in the LPSCSP.

Residents were also surveyed about what their highest priority issues were over the next 10 years. Answers were categorised in six sections:

1. Services / facilities (70 responses);
2. Roads / footpaths (59 responses);
3. Mining (46 responses);
4. Environment (37 responses);
5. Development (27 responses); and
6. Other (45 responses).

Detailed answers can be found in the LPSCSP.

5.12.4 Tamworth Regional LGA

Introduction

Recent documents produced by TRC articulate the LGAs residents' attitudes to community identity, values, aspirations and lifestyle. In addition, comments gathered during consultation on the Project are referenced in this section.

Keychange 2022 – Draft Community Strategic Plan

TRC's DCSP is explained in detail at **Appendix C**.

The TRC DCSP states that “*our community believes that ‘spirit’ is the essence of the heart and soul of our region, our city and our towns and villages. We need to nurture and protect our community spirit and ensure our communities are vibrant, resilient and embrace their diversity and unique culture*”. The TRC DCSP section ‘A spirit of community’ lists a number of objectives as listed below:

- C1 – Unique character, identity and culture within localities, villages, towns and city;
- C2 – Active, healthy communities;
- C3 – Resilient, empowered communities; and
- C4 – Safe places to live, work, play and visit.

Strategies to achieve each of these objectives are listed, as well as measures of success for each strategy.

Specific ideas given by residents to achieve the above objectives, gathered during the development of the TRC DCSP, are listed in the accompanying Big Book.

5.13 COMMUNITY COHESION

The GLCA acknowledges that social cohesion and participation is a crucial element of liveability. Being included in the society in which one lives is vital to the material, psychosocial, and political aspects of empowerment that underpin social well-being and equitable health.

The following section outlines current perceptions in the Sub Regional Study Area relating to community cohesion, with a particular focus on:

- Descriptions of ‘*sense of neighbourhood*’;
- Stability of residency; and
- Volunteering.

The range of recent consultation processes, mostly undertaken by GSC, LPSC and TRC, provide some insight into perceptions of community cohesion.

As discussed in the previous section, it is recognised that the perceptions reported below, which in turn are referenced from other consultation documents, are not assumed to represent the opinions and perceptions of the whole community. Rather, they provide a snapshot of the range of current concerns of the community.

5.13.1 A Sense of Neighbourhood

Perceptions of peoples’ ‘*sense of neighbourhood*’ give an excellent insight into community cohesion. Information on recent ‘*sense of neighbourhood*’ perceptions is only available for the Gunnedah LGA, as reported in the GLCA, which reports that:

- A large proportion of current residents from all three study areas (Gunnedah township, villages, and rural areas) feel a strong sense of belonging to their neighbourhood;
- A lower proportion of respondents aged 25-34 reported feeling that they belong to their neighbourhood, compared to other age groups;
- The sense of belonging increases with length of time at current address;

- A high proportion of respondents across all three study areas, and across all age groups reported that their neighbourhood is a good place to live; and
- Respondents who have lived at their current address for less than one year reported that their neighbourhood is a good place to live at lower levels, compared to respondents who have lived at their address for longer periods.

Regarding attending community events:

- The proportion of people who attend community events within the Gunnedah Shire is lowest among residents from the villages;
- More than 80% of respondents across all age groups attend community events within the Gunnedah Shire;
- People who live with a partner or with a family reported attending community events within the Gunnedah Shire more so than those who live alone; and
- A higher proportion of people who have lived at their current address for 1-10 years reported attendance at community events within the Gunnedah Shire.

The GLCA also details the '*most commonly identified places in the neighbourhood where people come together*', as reported by respondents to its telephone survey and shown in **Table 113** in **Appendix D**.

Table 113 shows that '*community venues*' were nominated at a much higher rate than '*licensed premises*', while '*recreation areas*' and '*sporting venues*' also rated highly, depending on whether the respondent was from Gunnedah town or a village or rural area.

5.13.2 Stability of Residency

The GCP 2006 states that the time that residents have lived in a community affects the extent to which they develop relationships and networks with other residents and build social capital. The longer that more residents have lived in a place, the stronger their community networks are likely to be. The Census provides valuable indicators of community stability by asking people where they lived one and five years ago.

Table 114 to **Table 117** in **Appendix D** detail the relative stability or turnover of residents within the LGAs in the Study Area, at both one and five years previous to the 2006 and 2011 Censuses.

The tables show whether respondents lived at:

- The same address;
- Another address within the Statistical Local Area (being the LGA of the same name i.e. Gunnedah, Liverpool Plains or Tamworth Regional) (for 2006 only);
- Another address in Australia outside the LGA (for 2006) or at another address (for 2011);
- Overseas; or
- Not stated.

Table 114 and **Table 116** both show that in 2006, Gunnedah and Liverpool Plains LGAs had a slighter higher level of stability of residents than for NSW, for both one and five years previous to 2006. The NSW proportion of people who had lived at the same address one year ago was 80%, with 55% having lived at the same address five years previously; the corresponding proportions for Gunnedah LGA were 82% - one year ago and 58% - five years ago; while for Liverpool Plains LGA it was 81% - one year ago and 60% - five years ago. For Tamworth Regional LGA, slightly less residents lived at the same address one year ago (53% compared to NSW's 55%) and 80% did so five years previously, the same as for NSW.

Table 115 and **Table 117** show that in 2011, all LGAs across the Study Area had a higher level of longer-term stability than NSW or the NENWSA4, with larger proportions of persons responding that they had lived in the same address 5 years previously. The Study Area LGAs generally displayed similar proportions to NSW of people who had lived in the same address 1 year previously.

Between 2006 and 2011, both Gunnedah and Tamworth Regional LGAs experienced a decrease in the proportion of persons who lived in the same address 1 year ago. Gunnedah, Liverpool Plains and Tamworth Regional LGAs also experienced declines in the proportion of persons who had lived in the same address 5 years ago during this period. This data accords with anecdotal perceptions of the increase in a transient population in the Sub Regional Study Area, particularly in Gunnedah LGA, associated with the currently increasing mining sector workforce.

Analysis of 2006 '*stability of residency*' data for urban settlements within the Sub Regional Study Area show that the Gunnedah Urban Centre showed similar proportions to the NSW average, being 80% - one year ago and 56% - five years ago. Closer examination reveals that 90% of respondents, even if they had moved address, were still residents of the Gunnedah LGA one year previously.

This was also the case for the Liverpool Plains LGA in 2006, where 87% of respondents were still residents of that LGA one year previous to 2006. Tamworth Urban Centre also recorded 89% of respondents being residents of Tamworth Regional LGA one year previously. These are all higher than NSW, where 86% of respondents were residents of the same Statistical Local Area (often correlating to the same LGA) one year previously.

Analysis of the smaller geographic areas within the Sub Regional Study Area in 2006 reveals a much higher level of stability than those of the larger towns. For example Breeza (State Suburb) recorded 96% of people being resident at the same address one year ago, and 68% being resident five years ago. Interestingly, 41 people, almost a third of the respondents in 2006, had moved into Breeza in those five years.

Other smaller areas showing stability higher or similar to NSW in 2006 were:

- Spring Ridge (State Suburb) with 85% - one year ago and 66% - five years ago;
- Curlewis (State Suburb) with 86% - one year ago and 58% - five years ago;
- Currabubula (State Suburb) with 84% - one year ago and 57% - five years ago;
- Curlewis (Urban Centre) with 84% - one year ago and 54% - five years ago; and
- Quirindi (Urban Centre) with 81% - one year ago and 58% - five years ago.

Caroona (State Suburb) was a stark contrast, showing a high turnover of residents. Only 51% of residents in 2006 had lived at the same address one year previously, while 53% had lived there five years previously.

The GCP 2006 states that from 2001 to 2006, the proportion of Gunnedah LGA residents who had lived over five years in the same house rose by 1%. The proportion that moved home within the last year fell by 1%.

Long term stability of residency in Gunnedah is reflected in the results of the GLCA, where almost 70% of telephone respondents to the survey reported living in the LGA for more than 20 years, followed by 68% of rural residents and 65% of village residents.

The GLCA also reports that:

- A high proportion of respondents across its three study areas reported that they plan to remain a resident of their neighbourhood;
- Respondents aged 18-34 years of age reported that they would remain a resident of their neighbourhood at significantly lower levels compared to the older age groups; and
- Respondents who have lived at their current address for less than one year aged reported that they would remain a resident of their neighbourhood at significantly lower levels, compared to those who have lived at their current address for longer periods.

5.13.3 Volunteering

People volunteer for many reasons including an opportunity to extend skills for future employment, contribute to society, establish a social network, for a specific interest or to fulfil a requirement (TRCSP, 2006).

A high rate of volunteerism can reflect a high level of community cohesion, where people in the community willingly cooperate to assist and support each other.

Table 51 shows, for the LGAs and relevant component urban settlements of the Sub Regional Study Area, the proportion of people over 15 years who spent time doing unpaid voluntary work through an organisation or group in the twelve months prior to the 2006 and 2011 Census Nights. This question was asked for the first time in the 2006 Census. It excludes work done in a family business or as part of paid employment. It also excludes people whose main reason for undertaking voluntary work was to qualify for government benefits.

Table 51
Unpaid Work - Voluntary Work for an Organisation or Group, 2006 and 2011

Geographic Area	% Volunteers of Total Respondents	
	2006	2011
Gunnedah Urban Centre / Locality	24%	23%
Curlewis Urban Centre / Locality	20%	17%
Curlewis State Suburb	20%	Not comparable
Gunnedah LGA	28%	25%
Quirindi Urban Centre / Locality	23%	24%
Werris Creek (Urban Centre / Locality)	23%	25%
Spring Ridge (State Suburb)	29%	N/A
Blackville (State Suburb)	32%	Not comparable
Caroona (State Suburb)	14%	9%
Currabubula State Suburb	32%	32%
Willow Tree (State Suburb)	20%	Not comparable
Breeza (State Suburb)	21%	Not comparable
Liverpool Plains LGA	29%	29%
Tamworth Regional LGA	22%	23%
Northern SD / NENWSA4	28%	26%
NSW	19%	18%

Source: ABS, 2007a and ABS, 2012b and 2012g

Note: Count of persons aged 15 years and over

N/A – data not available for 2011

Table 51 shows that in 20011, apart from Caroona and Curlewis, all urban settlements studied in the Gunnedah and Liverpool Plains LGAs had a higher proportion of people involved in voluntary work than the NSW proportion of 18%. The situation was almost similar in 2006. The LGAs themselves had 25% (Gunnedah LGA), 29% (Liverpool Plains LGA) and 23% (Tamworth Regional LGA) participation in voluntary work. Settlements within the Gunnedah and Liverpool Plains LGAs ranged between 9%-32% participation.

Between 2006 and 2011, the proportion of volunteers in the Gunnedah LGA fell 3% to 25%, the NENWSA4 fell 2% to 26%, while the proportions of the Liverpool Plains LGA, Tamworth Regional LGA and NSW remained relatively static.

Various documents reference information on volunteering in the Gunnedah LGA, as described below.

The GSSP in 2005 recognised that Gunnedah has an exceptionally strong volunteer base in the community. The GCP 2006, states that volunteering tends to be highest amongst middle-aged people, and seems to only decline with incapacity as old age sets in. In the Gunnedah LGA in 2006, the rate of volunteering was highest amongst those aged 35-44 years when 32% volunteered, and next highest in the 45-54 years and 55-64 years age groups, with 30% and 29% volunteering, respectively. In terms of volunteer numbers, the largest groups of volunteers in the Gunnedah LGA in 2006 were 502 aged 45-54 years, 474 aged 35-44 years and 408 aged 55-64 years. Volunteering also tends to be more common amongst women than men across most age groups.

The GLCA reports that whilst the proportion of people involved in volunteering is higher than the NSW averages, there is still an on-going need for more volunteers across all the organisations. The GLCA's community telephone survey results show that:

- Respondents from the rural areas volunteer at a higher rate compared to the Gunnedah township and villages;
- The proportion of people undertaking voluntary work is higher in the 35-49 and over 85 year old age groups;
- A higher proportion of respondents who live with a family reported volunteering; and
- A higher proportion of people who have lived at their current address for 6-10 years reported doing voluntary work at slightly higher levels.

Although similar data was not available for the Liverpool Plains LGA, it is expected that the sentiments portrayed above regarding volunteering in Gunnedah could be expected to be similar in the rural Liverpool Plains LGA.

The TRCSP reported that volunteers in the Tamworth Region come from a wide range of age groups and backgrounds and that matching skills and abilities of volunteers with work, particularly people with a disability, is difficult. However, Council's Volunteer Referral Service maintains a register of organisations seeking specific skills. An active training program is also available through the Referral Service to support the needs of organisations.

Many of the volunteer organisations consulted by the TRCSP faced the problem of recruiting volunteers, matching volunteers with work and maintaining a pool of volunteers. Some organisations have older volunteers nearing retirement but young volunteers are not replacing them. Attracting volunteers with flexible working hours during the week is also difficult. Organisations which rely on volunteers tend to share the same pool of volunteers.

GSC recognises that support is required to assist people to be willing and effective volunteers, and support is also required to assist the community groups who rely on volunteers. In Gunnedah, a need was expressed in 2005 for the provision of a multi-purpose community centre, as such a centre would *"promote and support the role of volunteers in the community to ensure that their contribution can continue in the Gunnedah Community"* (GSSP 2005).

Several key local and state government staff interviewed for this SIA commented that it is already noticeable that an increase in the mining and resources workforce has lead to lower rates of volunteering, as the shift work of the industry is not conducive to employees being able to give regular volunteer time to their favourite organisations. Anecdotal evidence from the Upper Hunter Valley, with its recent growth in mining employment, also supports these observations.

5.13.4 Future Issues in Social Cohesion

The GLCA states that the Gunnedah community currently has a strong connection to community and place, and report high levels of social cohesion and social capital. The GLCA proposes that these feelings and beliefs should be fostered and built upon in order to ensure that future changes in the employment situation do not significantly reduce these intangible community assets. The GLCA considers that this could be achieved through:

- Continued effective consultation and involvement of the Gunnedah community in the development of new industries led by Council as well as advocating for, or facilitating, such community consultation / participation with State agency planning;
- Encouraging employees in new industries to become long-term residents of the community; and
- Allowing and enabling the development of centrally-located, multi-use, flexible spaces and places that encourage social interaction, to be useable for a wide range of ages and that are welcoming to a wide range of cultural groups.

The GLCA further recommends that events which are Council promoted or organised may increase social interaction, as well as contribute to other key elements of liveability and should be encouraged, including:

- Local fresh produce / farmers markets;
- Open days at local heritage sites or other local places;
- Local festivals;
- Local events recognising the area's significant Indigenous heritage; and
- Culturally appropriate signage recognising the area's Indigenous heritage.

The TRCSP makes recommendations to:

- Continue to support the promotion of volunteering to raise the community profile of volunteers;
- Encourage young people to volunteer by providing volunteer experience to high school students as part of their work experience;
- Promote partnerships with local service clubs to support volunteering to its business community;
- Support funding for the development of an Information Kit for volunteer groups; and
- Consider the feasibility of developing a Volunteer webpage on Council's website to increase information exchange.

5.14 HEALTH AND WELLBEING

This section briefly outlines issues in the Sub Regional Study Area relating to health and wellbeing.

The range of recent consultation processes and subsequent documents undertaken by Councils and other agencies in the Sub Regional Study Area, as discussed in **Section 2**, provide insight into their communities' health and wellbeing. In particular, the GLCA provides detail on health and wellbeing measures.

There appear to be growing concerns regarding the consumption of alcohol in the community, and the prevalence of mental health, domestic violence and relationship issues, which generally reflects a national concern (Local Government staff, 2011, pers. comm., November and December), (HNE Health, 2011, pers. comm., November and December). Current issues regarding alcohol related crime and current local strategies to reduce such crime are discussed in **Section 5.15**.

The following issues, related to health and wellbeing, are included in the relevant technical study accompanying the Watermark EIS as follows:

- Air quality - *Air Quality and Greenhouse Gas Impact Assessment*;
- Water quality - *Surface Water Impact Assessment and Groundwater Impact Assessment*;
- Biodiversity - *Ecological Impact Assessment; Koala Plan of Management, Stygofauna Impact Assessment, Report; Matters of National Environmental Significance*;
- Noise - *Acoustics Impact Assessment*;
- Hazard – *Preliminary Hazard Analysis*
- Contamination – *Preliminary Contamination Assessment*;
- Traffic and Transport – *Traffic and Transport Assessment*;
- Economics – *Economics Impact Assessment*.

It is also acknowledged that the issues of 'community cohesion' (**Section 5.13**) and 'social order and community safety' (**Section 5.15**) also have a relationship to the community's health and wellbeing.

5.15 SOCIAL ORDER AND COMMUNITY SAFETY

This section includes a discussion of the following issues relating to social order and community safety in the Sub Regional Study Area:

- Crime statistics;
- Community perceptions of safety; and
- Alcohol related crime.

This section places a focus on the Gunnedah LGA, being the LGA that the Project is situated within. Information about current collaborative processes aimed at managing crime prevention is also outlined for the Gunnedah and Tamworth LGAs.

Information about the policing of social order and community safety issues is given in **Section 5.11.5**.

5.15.1 Recorded Crime Statistics

Table 118 in Appendix D shows recorded crime statistics for Gunnedah LGA, Liverpool Plains LGA and Tamworth Regional LGA in 2007 and 2011, sourced from the NSW Bureau of Crime Statistics and Research. **Table 118** shows the number of recorded incidents in each of those years, the 60 month trend over that time and the LGA ranking of each of those offence types, noting that there are 154 LGAs in NSW.

Table 118 shows that from 2007 to 2011:

- In the Gunnedah LGA:
 - The only offence which recorded an increase in incidence was '*steal from motor vehicle*' which recorded an 18% average annual increase. This placed Gunnedah LGA the fourth in NSW for that offence;
 - The 60 month trend for many of the offence types was not significant and was therefore not calculated; and
 - The 60 month trend for '*break and enter dwelling*' was stable, as it was for '*break and enter non-dwelling*', '*steal from dwelling*', '*fraud*' and '*malicious damage to property*';
- In the Liverpool Plains LGA:
 - The 60 month trend for most of the offence types was not significant and was therefore not calculated;
 - The 60 month trend for '*assault*' and '*malicious damage to property*' was stable; and
 - The LGA's highest NSW ranking in 2011 for an offence was '*sexual assault*' at No 30;
- In the Tamworth Regional LGA:
 - Offences which recorded an average annual increase in incidence were '*assault – domestic violence related*' (11%), '*indecent assault*' (20%) and '*steal from a retail store*' (20%);
 - The only offence which recorded a decrease in incidence was '*steal from a motor vehicle*' (-5%);
 - The 60 month trend for some offence types was stable;
 - The 60 month trend for some offence types was not significant and were therefore not calculated; and
 - The LGA's highest NSW rankings in 2011 for an offence were '*assault – non domestic violence related*' and '*steal from retail store*', both at No 11.

As stated in the GCPP 2007 – 2009 (GSC, 2005a), it is clear from community consultations that under reporting of crime has an impact on any reliance that can be made on the statistics alone.

5.15.2 Gunnedah LGA

Perceptions of Safety

The GLCA reported on residents' perceptions of safety:

- A high proportion of respondents from all study areas reported feeling safe while at home alone during the day;
- Respondents from rural areas report feeling safe while home alone at night at significantly higher levels than respondents from either Gunnedah township or the villages;
- The proportion of people who feel safe while home alone at night increases with increasing age;
- Respondents across all areas generally reported feeling safe while walking alone around their neighbourhood during the day. Those aged over 70 years of age felt slightly less safe walking alone during the day than other age groups;
- Feelings of safety while walking alone at night are lower amongst younger and older residents (as opposed to those in middle age); and
- The proportion of people who feel safe walking alone around their neighbourhood at night is significantly higher among respondents from the rural areas, compared to the other study areas.

Respondents to the GLCA's telephone survey had many specific comments regarding community safety, as reported in the GLCA.

Alcohol-Related Crime

The GLCA reported on the number of licensed premises in Gunnedah, and on alcohol-related assaults.

Table 52 shows the type and number of licensed premises in the Gunnedah LGA in 2011.

Table 52
Gunnedah LGA - Liquor Licences and Authorised Extended Trading Hours, 2011

Licence Type	Liquor Licenses	
	Number	%
Liquor – club licence	5	13.5%
Liquor – hotel licence	9*	24.3%
Liquor – limited licence	7	18.9%
Liquor – on-premises licence	10	27.0%
Liquor – packaged liquor licence	5	13.5%
Liquor – producer wholesaler licence	1	2.7%
Total	37	100%

Source: HNEPH, 2011

Note: 3 of the 9 licenses have authorised extended trading hours.

Although the date of the liquor licences in **Table 52** is not specified, it is presumably from 2008, the date of the source data from the NSW Office of Liquor, Gaming and Racing.

Gunnedah has a higher rate of liquor licenses than the NSW rate (321 per 100,000 and 220 per 100,000 respectively) (HNPH, 2011; NSW Office of Liquor Gaming and Racing 2008).

The rate of alcohol related crime is markedly above the NSW rate per 100,000 population. Alcohol attributed assaults per 100,000 population in Gunnedah are 833 per 100,000, more than 1.6 times the NSW rate, at weekends they are 1.45 times the NSW rate, whilst the number of drink driving incidents is 1.7 times the NSW rate per 100,000 population (HNPH, 2011).

Over 50% of violent crime in Gunnedah has alcohol as an associated factor. Domestic violence makes up 40% of violent crime of which nearly half has alcohol as an associated factor (GSC, 2005a).

Gunnedah Liquor Accord

Gunnedah has a Liquor Accord. A liquor accord is an agreement by licensees and other stakeholders to take certain actions in local communities which aim to improve safety in entertainment areas and reduce alcohol-related anti-social behaviour, offences and violence. Activities can include education campaigns to help patrons understand the high personal cost of anti-social behaviour, explanations of licensing laws, projects undertaken with councils and police to address street design, lighting, transport, late-night trading, alcohol-free zones and the conduct of tourists (NSW Office of Liquor, Gaming and Racing, 2012).

The GLCA recommends that GSC should continue to work with the Gunnedah Liquor Accord to improve its rates of alcohol related crime by:

- Encouraging the re-introduction of the sale of mid-strength alcohol only at venues after midnight, and at sporting events;
- Supporting the re-introduction / continuation of subsidised cab fares to return patrons home from licensed premises (Gunny Gets You Home);
- Supporting the Liquor Accord to work with schools in such endeavours as “*Think the Drink*” to improve understanding of patron responsibility for young drinkers and responsible service of alcohol;
- Advocating with and supporting the police for higher visibility to reduce the number of drink driving incidents;
- Increasing surveillance of parks and areas where alcohol is consumed, particularly by under-aged drinkers; and
- Monitoring and enforcing alcohol-free zones.

Planning to Reduce Crime

Gunnedah Crime Prevention Plan 2007-2009

The GCPP is an initiative of the Gunnedah Shire Crime Prevention Committee, which is constituted as a committee of Council. The Committee was formed in 2000 and provides a whole of community initiative to discuss strategies for reducing crime and improving the safety amenity of the Gunnedah LGA.

The priority areas of the GCCP are:

- Assault;
- Property crime;
- Support for youth at risk of engaging with the criminal justice system; and
- Safety through community development.

For each of these priority areas, the GCCP gives aims, objectives, strategies, outputs, outcomes and a timeframe for action. The organisations given responsibilities under the Plan include Council, Police, NSW Health, HNE Area Health Service, Schools, PCYC, Indigenous organisations, Department of Housing, TAFE and Family Support amongst others.

Gunnedah Community Strategic Plan 2012-2022

Strategies relevant to crime prevention that are proposed by the GCSP are:

- Foster crime prevention through partnerships with the police and increased police presence 24 hours a day;
- Identify joint opportunities with government agencies to strengthen community self regulation and compliance with local laws;
- Increase community use of major areas by encouraging appropriate activity and use of public places during the weekends and at night;
- Encourage crime prevention by incorporating appropriate design principles in new development;
- Working in partnership with state government and local organisations to identify and develop solutions to address anti-social behaviour including alcohol related incidents; and
- Investigate and implement strategies to reduce vandalism across the LGA.

5.15.3 Liverpool Plains LGA

Even though the same level of information provided above for Gunnedah LGA was not available for the Liverpool Plains LGA, the following social order and community safety issues are relevant for the LGA:

- The LPSCSP recognised that the LGA's crime statistics rankings fluctuated over time (from 2003-2008), however it concludes that across most areas, the LGA is a relatively safe environment in which to live; and
- It is expected that the proposed Workforce Accommodation Facility (MAC Werris Creek) may have social order and community safety impacts on the urban area of Werris Creek (GSC, 2011, pers. comm., 18 November). It is understood that management of these impacts is being addressed in the proposal's '*Community Benefit Plan*'.

5.15.4 Tamworth Regional LGA

TRC has established the *Tamworth Regional Council Crime Prevention Working Group* (CPWG) to oversee and develop various measures to make the community safe. The broad purpose of the CPWG is to project manage the *Tamworth Regional Crime Prevention Plan 2005 – 2007 Stage 1 – City Plan* (TRC, 2011e) and oversee:

- Implementation of the *Tamworth Crime Prevention Plan 2005-2007 Stage 1 - City Plan*; and
- Development of Stage 2 – Towns, Villages and Rural Areas.

The Regional Crime Prevention Plan will assist Council, the community, local police and relevant state government departments and agencies to create a safe community environment at a regional level. It is intended to identify key community safety issues and implement strategies which will prevent crime and reduce the overall impact of crime on the regional community.

Membership of the CPWG includes Councillors and staff, police from the Oxley Local Area Command, Tamworth and District Chamber of Commerce and Industry, the Tamworth and District Liquor Accord, local security providers, the State Member of Parliament for Tamworth and a member of the Coledale Community Centre (TRC, 2012d).

6 POTENTIAL SOCIAL IMPACTS AND MITIGATION

6.1 INTRODUCTION

This section provides:

- A description of the estimated construction and operational workforces of the Project (**Section 6.3**);
- Projections of the size and final residential locations of the population expected as a result of the Project workforces (**Section 6.5**);
- Estimates of the population expected as a result of flow-on employment effects of the Project (**Section 6.5**);
- An analysis of the expected social impacts of the Project on the Sub Regional Study Area, (throughout this **Section**) including where relevant:
 - An assessment of the impact of the construction and operational workforces and related population increases; and
 - Acknowledgement of the cumulative impacts of current and expected mining and resource projects in the region; and
- Appropriate mitigation measures to address social impacts and to maximise community benefits of the Project (throughout **this Section** and summarised at **Section 6.17**).

6.2 MEASURES AVAILABLE TO ASSIST SOCIAL IMPACT MITIGATION

There are a number of direct measures or methods that are available to the proponent to assist in the mitigation of social impacts. These measures can include monetary and non-monetary measures. They include, but are not limited, to the following:

- Statement of Commitments within the EIS;
- Voluntary Planning Agreements (VPAs) under the EP&A Act;
- Direct non-monetary assistance to affected organisation(s); and
- Direct negotiation with affected organisation(s).

This range of measures is reflected in the individual SIA mitigations that are proposed through this section.

6.3 PROJECT EMPLOYMENT PROJECTIONS AND WORKFORCE HIRING SCENARIOS

6.3.1 Introduction

This section outlines:

- The estimated size and duration of the construction workforce of the Project;
- The estimated size of the operational workforce of the Project over the duration of the Project life;
- Estimations of the indirect workforce expected to be generated by the Project; and

- Presentation of three Workforce Hiring Scenarios of the proportions of the workforce that are expected to be employed that:
 - Currently reside within the Sub Regional Study Area ('local hires'); and
 - Are expected to be sourced from outside the Sub Regional Study Area ('non-local hires').

6.3.2 Construction Workforce

The construction workforce is estimated to be approximately 600 full time equivalent employees, and the construction period will be approximately 18 months prior to commencement of operations. It is assumed that the peak construction workforce will be reached at approximately month six.

6.3.3 Operational Workforce

The operational workforce is estimated to be approximately 600 full time equivalent employees at full production (Year 21), with an average workforce of 425, as shown in **Table 53** and **Figure 6**. The initial operational workforce (Year 1) is estimated to be approximately 200, with a similar number estimated for the final year of the Project (Year 30).

The proposed working roster for the Project's operation and maintenance is '*four days on - four days off*', and consists of 12 hour shifts.

Table 53
Project Operational Workforce by Year

Workforce / Occupation	Operation Year						
	Year 1	Year 5	Year 10	Year 15	Year 21	Year 25	Year 30
Staff Labour	63	63	63	63	63	63	63
Mine Operating Labour	74	200	214	266	393	300	81
Maintenance Labour	16	58	62	79	100	89	18
CHPP Labour	24	24	24	24	24	24	24
Other	20	20	20	20	20	20	20
Total Labour	197	364	383	452	600	497	206
Production Mtpa ROM	0.1	10.0	10.0	10.0	10.0	10.0	2.0

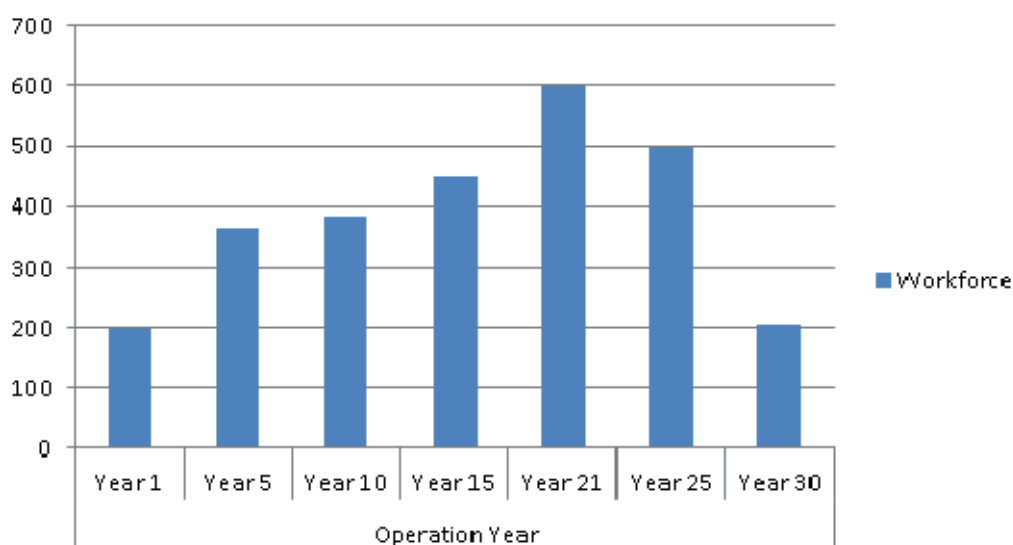


Figure 6
Project Operational Workforce

6.3.4 Employee Recruitment

The required workforce will be sourced through a range of recruitment processes including local and national recruitment, apprentice, trainee and graduate programs and contract labour.

Project workforce requirements will need to be considered against a backdrop of other major projects and labour demands in the Regional Study Area, other parts of NSW (particularly the Upper Hunter Valley) and other parts of Australia.

Project timing will significantly influence the ability for the Project to draw from national labour resources. The recent downturn in the Australian resource and construction sector has seen a softening of the labour market particularly in the areas of trade and skilled labour.

6.3.5 Workforce Hiring Scenarios of Local and Non-local Employees

Shenhua Watermark intends to source as much of its construction and operational workforce as possible from the Sub Regional Study Area. It is acknowledged that the urban settlements in the Sub Regional Study Area, and some within the Regional Study Area, are within a daily commuting distance to the Project, enabling local employees to remain in their current residential location and commute on a daily shift basis to the Project site.

However, it is also acknowledged that the range of specialist skills required for the Project will not necessarily all be able to be sourced from the current local labour force.

This SIA will therefore measure the social impacts of the operational workforce on the Study Area under three Workforce Hiring Scenarios, which each detail the proportion of the workforce that are expected to be employed as either '*local hires*' (i.e. those currently residing within the Sub Regional Study Area) or '*non-local hires*' (i.e. those that are expected to be sourced from outside the Sub Regional Study Area).

The three Workforce Hiring Scenarios are:

- Scenario 1 – that 80% will be local hires and 20% non-local hires;
- Scenario 2 – that 50% will be local hires and 50% non-local hires; and
- Scenario 3 – that 20% will be local hires and 80% non-local hires.

The Workforce Hiring Scenarios are illustrated in **Figure 7**.

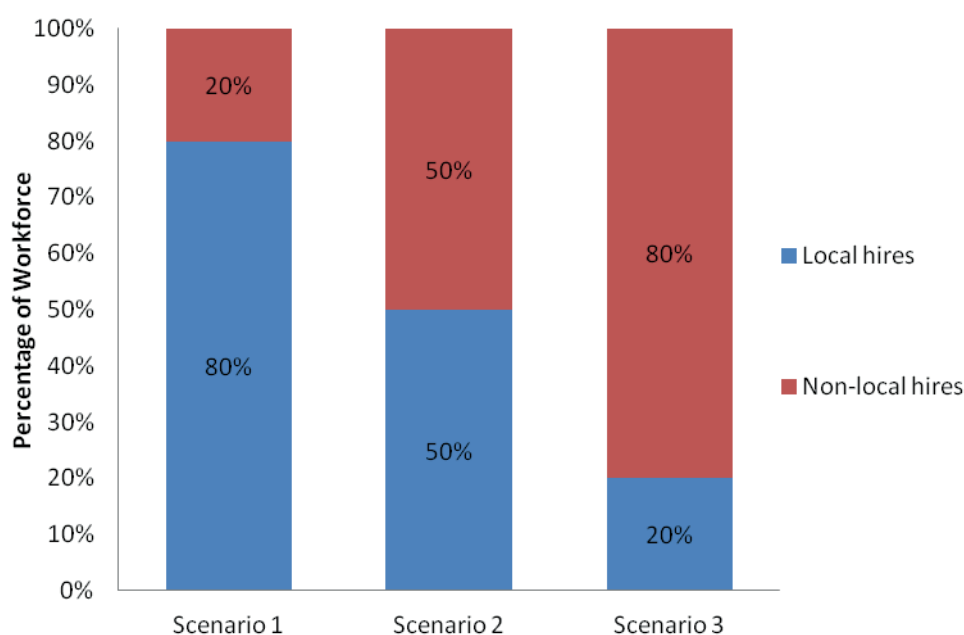


Figure 7
Workforce Hiring Scenarios

As stated above, because the urban settlements in the Sub Regional Study Area, and some within the Regional Study Area, are within a daily commuting distance to the Project site (estimated at approximately 1 hour maximum), this enables the workforce to reside in a wide geographical area, offering a choice of residential locations to non-local hires. Modelling of where non-local hires are expected to eventually settle in the Study Area are given in **Section 6.5.3**.

The underlying workforce planning assumption is that all non-local hires will relocate permanently to within a one hour commute of the Project site and that no employee will conduct their employment on a fly-in / fly-out (FIFO) or drive-in / drive-out (DIDO) basis. This acknowledges the concerns raised by the community during the Project Community Information Sessions held in December 2011 (Hansen Bailey, 2012) and is supported by the proponent's proposed assistance to employees with securing suitable permanent accommodation within one hour's drive of the Project site.

Regardless of the actual proportion of non-local hires that transpires, Shenhua Watermark would strongly prefer that the non-local hires be encouraged to eventually settle locally in the Sub Regional Study Area, therefore avoiding a FIFO or DIDO workforce.

For these reasons, this SIA does not include any modelling of a separate FIFO / DIDO workforce.

Community members raised various concerns about the composition of the Project workforce at the Project Community Information Sessions held in December 2011, including:

- “Where will the employees come from?”;
- Proportions of fly-in / fly-out employees;
- Jobs, qualifications and training opportunities for locals;
- Opportunities for local Indigenous people;
- Local sourcing of Project contracts;
- The definition of a ‘local’ employee; and
- The use of contract labour.

(Hansen Bailey, 2012)

These concerns are addressed in this and following sections.

6.4 FLOW-ON EMPLOYMENT

The *Economic Impact Assessment* (Gillespie Economics, 2012) prepared for the Project has estimated flow-on employment as a result of production and consumption induced effects of the Project.

For the construction phase of the Project, an additional 956 jobs are estimated to be generated within NSW, with 398 of these jobs estimated to be generated in the ‘Regional Economy’ (i.e. on the Study Area of this SIA), and 382 of those Regional jobs estimated to be within the ‘Local Economy’ (i.e. the Sub Regional Study Area of this SIA).

For the operational phase of the Project, an additional 2,826 jobs are estimated to be generated within NSW for the 30 years of the Project, with 585 of these jobs estimated to be generated in the ‘Regional Economy’ (i.e. on the Study Area of this SIA), and 539 of those Regional jobs estimated to be within the ‘Local Economy’ (i.e. the Sub Regional Study Area of this SIA). The estimates of the flow-on employment in the operations phase of the Project was based on average annual production levels of 10 Mtpa ROM (Gillespie Economics, 2012).

6.5 POPULATION GROWTH AND MOVEMENT IMPACTS

An increase in population is expected as a result of the Project, and from the cumulative effects of future mining and resource projects in the Study Area. This section will forecast what the population increase as a result of the Project is expected to be over the Project’s 30 year mine life, and will also estimate the location pattern of that population growth, with a focus on the Sub Regional Study Area.

Population movements have already occurred on the Project Area as a result of purchase of properties by Shenhua Watermark, which will also be discussed in this section.

The impacts of the population growth and movement outlined in this section have direct relevance to the impacts described in the following sections of this SIA. Relevant mitigations are presented for each of these topics of impact. There are no specific mitigations for population growth and movement.

Community members raised concerns about a range of issues relating to potential population growth and movement impacts of the Project at the Project Community Information Sessions held in December 2011, including:

- The difficulty of encouraging people to live in the region; and
- The lack of incentives for more people and families to move to Gunnedah.

(Hansen Bailey, 2012)

6.5.1 Population Movements that have Already Occurred in the Project Area

During 2009/2010, Shenhua Watermark purchased 39 properties in the Project Area, which included one property that had contiguous land in and adjoining the Project Area. Of these properties, 26 of them had dwellings located on them, and the total population of these 26 properties at the time of sale was 44 people. Twenty six of these 44 people have since moved off site. Of those 26 people, 10 moved to elsewhere in the Gunnedah LGA, 10 moved to a neighbouring LGA (being the Liverpool Plains, Tamworth Regional or Warrumbungles LGAs) and six moved further afield. As at April 2012, 26 of the original 44 residents have remained connected with their properties, through either licensing the land, a tenancy agreement or employment with the licensee. Also, 12 new residents have moved onto the Project Area, either as tenants or as employees of licensees of the properties.

This means that there was a net population loss of 14 as a result of the purchase of the properties.

The two Census 'State Suburbs' of Curlewis and Breeza that include and surround the Project Area, as shown on **Figure 2** had a combined 2006 population of 890. The relevant Census areas of 2011 were too large in area to be compared to the 2006 population. The population of 44 who were resident on the purchased properties before they were sold therefore represents 5% of the immediate population in 2006. The 26 people who moved away from those properties represent 3% of that immediate population in 2006.

6.5.2 Construction Phase Population Impacts

It is likely that the construction workforce will be predominantly male and sourced from non-local hires, as the size of the workforce in the short time frame they are needed is not able to be absorbed from the available local labour pool. Coakes Consulting, 2009 estimates that approximately 80% of a construction workforce will generally be required to be sourced from outside the local area due to the specialised nature of the work.

The population increase associated with the construction workforce is likely to correlate mainly to the number of employees, with only a minor percentage of those employees bringing partners and / or families to the local area. If 20% (or 120) are hired locally, this would mean a temporary increase in population consisting of 480 non-local hire workforce, with possibly up to an additional 100 people (i.e. partners and children) estimated to accompany them.

This temporary increase in population would mainly impact on the Gunnedah and Liverpool Plains LGAs, being the closest to the Project Area.

It should also be noted that a number of these construction workforce may ‘*transfer*’ over into the operational workforce, or they could also later become part of the ‘*cumulative*’ increase in the regional workforce if they move on to another construction or operational project in the region after the Project is constructed.

Section 6.4 shows that 398 construction flow-on jobs are estimated to be generated in the Study Area, with only 4% of these jobs likely to be outside the Sub Regional Study Area. However, the *Economic Impact Assessment* does not quantify how many of these jobs are likely to be local or non-local hires. Taking the same assumption above that 20% will be hired locally, this would mean that approximately 80% (or 318) non-local hires could be expected to move temporarily to the Sub Regional Study Area. There could also be additional partners and children accompanying some of these workers.

The housing implications of this temporary increase in population are addressed at **Section 6.6.2**.

6.5.3 Operational Phase Population Impacts

The population increase as a direct impact of the operational phase of the Project will be a function of:

- The number of the estimated workforce who will be non-local hires who eventually settle in the Study Area; and
- The likely family and / or household formations resulting from this workforce.

In addition, there will be a population increase resulting as an indirect impact of the operational phase of the Project, which will be a function of:

- The number of the people who move to the Study Area to take up work opportunities that arise in other industries that service the Project (here-in termed as flow-on employment); and
- The likely family and / or household formations resulting from this immigration of local workforce.

At the same time as population growth as a result of the Project, ‘*natural population change*’ will continue concurrently in the Study Area – i.e. the number of births, deaths, and net migration of the current population. In particular, outmigration from the Gunnedah and Liverpool Plains LGAs may still occur from continuing structural change in the agricultural sector, but this should be surpassed by the incoming migration as a result of the mining and resources sector.

Table 54, **Table 55** and **Table 56** provide estimates of the population increase that could be expected in the Study Area as a result of the direct impact of the Project’s operational workforce, under the three Workforce Hiring Scenarios described in **Section 6.3.5**.

However, before discussing the estimates shown in these tables, it is necessary to outline the assumptions used in determining the locational impacts of the population increase that is also shown in those tables.

Locational Assumptions of Population Increase

When individuals take up employment with the Project, or take up work opportunities in other industries that service the Project, they will each make a choice as to their immediate, and then longer-term, place of residence. This applies to local hires, who may sometimes move to a different location within the Study Area, but applies more to non-local hires, who will be encouraged to settle locally. As stated in **Section 6.3.5**, Shenhua Watermark intends to source as much of its operational workforce as possible from the Sub Regional Study Area and to encourage non-local hires to settle locally.

Each locality, village, town and city within the Study Area offers different opportunities to potential residents – in the choice of:

- Settlement size;
- Housing cost;
- Housing types;
- Commuting distance;
- Lifestyle;
- Local services and facilities, including education, health and commercial; and
- Opportunities for employment for partners.

These factors have been profiled in **Section 4** and **Section 5**.

It is therefore difficult to determine with accuracy the exact number of people who will be settling in any particular location, or even LGA, as a result of the Project.

JTW data obtained from the 2006 Census was presented in **Section 5.8.1** and documents the 'destination' LGA of the place of work of employed residents of each of the LGAs in the Study Area.

However, previous JTW data should not be used as an indication of the likely travelling patterns of employees in the future. JTW data in NSW generally confirms that country towns well away from metropolitan areas (e.g. Gunnedah) and regional cities (e.g. Tamworth) have the majority of their employed residents working in their own town or LGA. Even though the 2006 JTW patterns show minimal movements from Gunnedah to Tamworth (and the reverse) and Gunnedah to Liverpool Plains (and the reverse), the location of the Project would be expected to change those patterns.

Therefore, for modelling purposes, the following have therefore been chosen as the likely final residential LGA of the additional population expected as a result of the non-local hires of the operational phase of the Project, taking into account the range of 'choice' factors in the list above:

- Gunnedah LGA – 40%;
- Liverpool Plains LGA – 25%;
- Tamworth Regional LGA – 25%; and

- Other LGAs, particularly Narrabri and Upper Hunter – 10%.

This is illustrated in **Figure 8** below. These percentages are used throughout the remainder of the SIA in assessing the impacts on population size and subsequent housing and services.

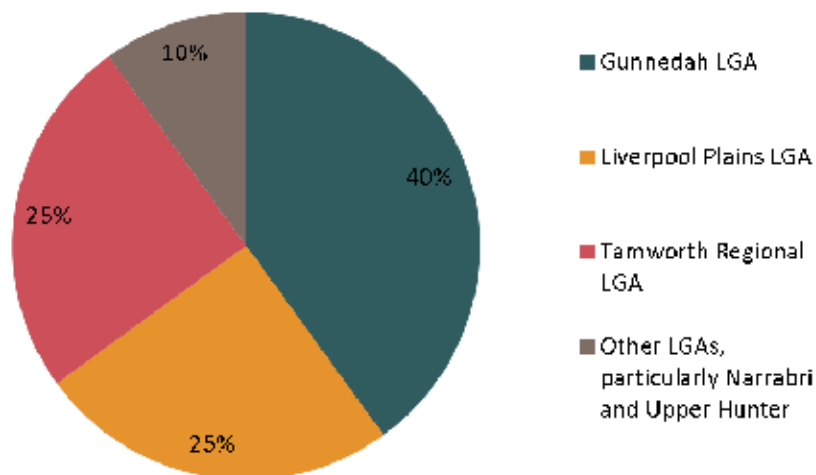


Figure 8
Assumption regarding likely LGA where non-local hires will eventually settle

Further, the following estimates have been made in relation to the proportion of 'local hires' and their current residential locations:

- Gunnedah LGA – 55% (including Gunnedah 45%, Curlewis 5% and rural Gunnedah LGA 5%);
- Liverpool Plains LGA – 20% (including Quirindi 10%, Werris Creek 5%, other Liverpool Plains LGA locations 5%); and
- Tamworth Regional LGA – 25%.

This is illustrated in **Figure 9** below. These percentages are used throughout the remainder of the SIA in assessing impacts on population size.

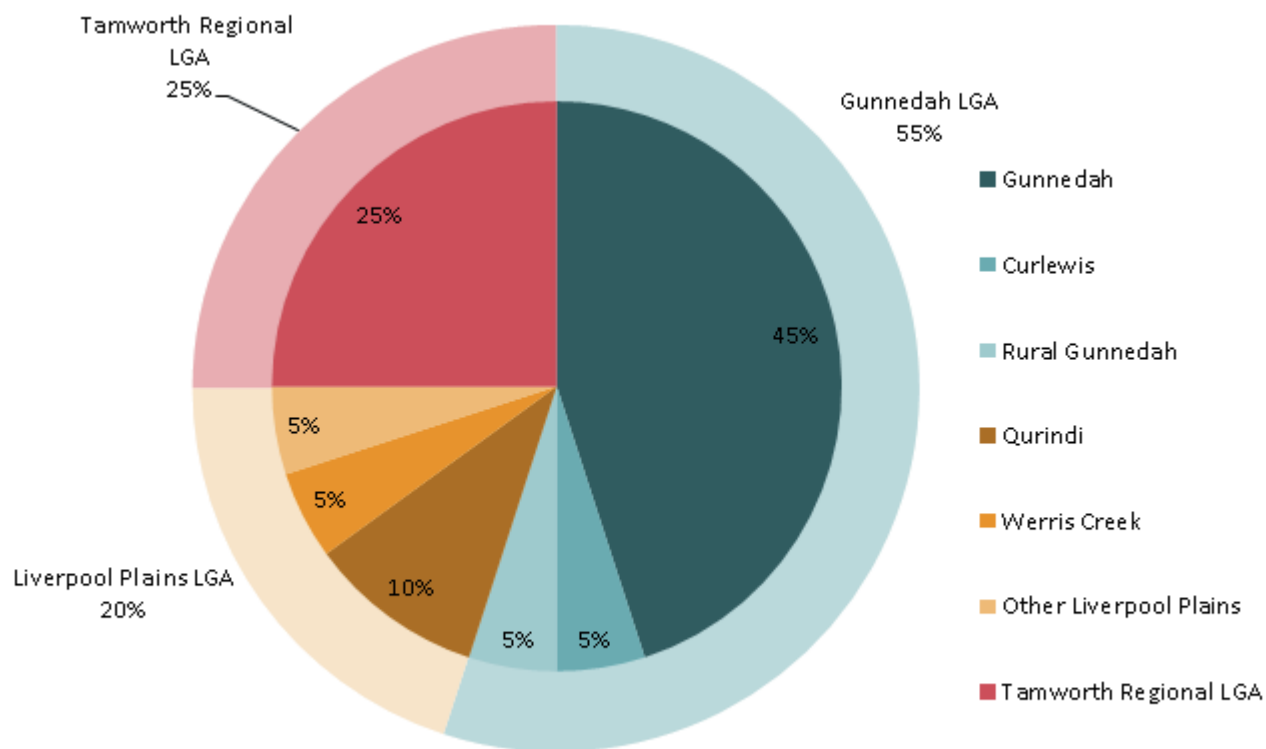


Figure 9
Assumptions regarding current residential locations of 'local hires'

Population Increase and Likely Residential Locations as a Result of Direct Impact of Project Operational Workforce

Table 54, Table 55 and Table 56 provide estimates of the population increase and residential locations that could be expected in the Study Area at Year 21 of the Project as a result of the direct impact of the Project Operational workforce. These tables are based on the following assumptions:

- The estimated current residential location of local hires, as explained above;
- The expected final residential location of non-local hires, as explained above;
- An occupancy rate (people per household) of 2.5, derived from the Northern SD at the 2006 Census. (Note that although the occupancy rate of the equivalent region (NENW SA4) in 2011 decreased to 2.4, the occupancy rates of the three LGAs in the Sub Regional Study Area remained stable between 2006 and 2011. Therefore, the Northern SD occupancy rate of 2.5 at the 2006 Census will be used throughout the following tables); and
- A conservative assumption that each employee (and where applicable their family) has the opportunity to be housed in a separate dwelling.

A table is presented for each of the three Workforce Hiring Scenarios outlined in **Section 6.3.5**.

Table 54
Likely final residential location of peak operational workforce - Workforce Hiring Scenario 1

Expected Final Residential Location of Operational Workforce	Local Hire Workforce and Population (i.e. Already Located Within Sub Regional Study Area)			Non-Local Hire Workforce and Population (i.e. Migrating From Outside Sub Regional Study Area)			Total Workforce and Population	
	Current Residential Location of Local Hire Workforce (i.e. Existing Residents) (%)	No of Local Hire Workforce at Peak (Year 21)	Local Hire Population* at Peak (Year 21)	Expected Residential Location of Non-Local Hire Workforce (%)	No of Non-Local Hire Workforce at Peak (Year 21)	Non-Local Hire Population* at Peak (Year 21)	No of Workforce at Peak (Year 21)	Total Population Associated With Workforce at Peak (Year 21)
Gunnedah Urban	45	216	540	35	42	105	210	525
Curlewis	5	24	60	5	6	15	30	75
Quirindi	10	48	120	10	12	30	60	150
Werris Creek	5	24	60	10	12	30	60	150
Other rural areas in GSC or LPSC	10	48	120	5	6	15	30	75
Tamworth Regional LGA	25	120	300	25	30	75	150	375
Other areas outside GSC, LPSC and TRC	0	0	0	10	12	30	60	150
Total	100	480	1,200	100	120	300	600	1,500

Note: * The population is a function of the workforce multiplied by the occupancy rate (people per household) of 2.5 – derived from the Northern Statistical Division

Table 55
Likely final residential location of peak operational workforce – Workforce Hiring Scenario 2

Expected Final Residential Location of Operational Workforce	Local Hire Workforce and Population (i.e. Already Located Within Sub Regional Study Area)			Non-Local Hire Workforce and Population (i.e. Migrating From Outside Sub Regional Study Area)			Total Workforce and Population	
	Current Residential Location of Local Hire Workforce (i.e. Existing Residents) (%)	No of Local Hire Workforce at Peak (Year 21)	Local Hire Population* at Peak (Year 21)	Expected Residential Location of Non-Local Hire Workforce (%)	No of Non-Local Hire Workforce at Peak (Year 21)	Non-Local Hire Population* at Peak (Year 21)	No of Workforce at Peak (Year 21)	Total Population Associated With Workforce at Peak (Year 21)
Gunnedah Urban	45	135	338	35	105	263	210	525
Curllewis	5	15	38	5	15	38	30	75
Quirindi	10	30	75	10	30	75	60	150
Werris Creek	5	15	38	10	30	75	60	150
Other rural areas in GSC or LPSC	10	30	75	5	15	38	30	75
Tamworth Regional LGA	25	75	188	25	75	188	150	375
Other areas outside GSC, LPSC and TRC	0	0	0	10	30	75	60	150
Total	100	300	750	100	300	750	600	1,500

Note: * The population is a function of the workforce multiplied by the occupancy rate (people per household) of 2.5 – derived from the Northern Statistical Division

Table 56
Likely final residential location of peak operational workforce - Workforce Hiring Scenario 3

Expected Final Residential Location of Operational Workforce	Local Hire Workforce and Population (i.e. Already Located Within Sub Regional Study Area)			Non-Local Hire Workforce and Population (i.e. Migrating From Outside Sub Regional Study Area)			Total Workforce and Population	
	Current Residential Location of Local Hire Workforce (i.e. Existing Residents) (%)	No of Local Hire Workforce at Peak (Year 21)	Local Hire Population* at Peak (Year 21)	Expected Residential Location of Non-Local Hire Workforce (%)	No of Non-Local Hire Workforce at Peak (Year 21)	Non-Local Hire Population* at Peak (Year 21)	No of Workforce at Peak (Year 21)	Total Population Associated With Workforce at Peak (Year 21)
Gunnedah Urban	45	54	135	35	168	420	210	525
Curllewis	5	6	15	5	24	60	30	75
Quirindi	10	12	30	10	48	120	60	150
Werris Creek	5	6	15	10	48	120	60	150
Other rural areas in GSC or LPSC	10	12	30	5	24	60	30	75
Tamworth Regional LGA	25	30	75	25	120	300	150	375
Other areas outside GSC, LPSC and TRC	0	0	0	10	48	120	60	150
Total	100	120	300	100	480	1,200	600	1,500

Note: * The population is a function of the workforce multiplied by the occupancy rate (people per household) of 2.5 – derived from the Northern Statistical Division

Workforce Hiring Scenario 1

Table 54 shows that if Workforce Hiring Scenario 1 is achieved (i.e. 80% of the Project operational workforce are local hires and 20% are non-local hires) the peak workforce and subsequent population at Year 21 will consist of:

- 480 local hires and 120 non-local hires;
- 480 existing households, containing at least one local hire, totalling 1,200 population; and
- 120 new households, containing at least one non-local hire, totalling 300 population.

The operational workforce at Year 1 is estimated to be approximately one third the size of the peak workforce at Year 21. Therefore, at Year 1 the operational workforce and subsequent population will consist of approximately:

- 160 local hires and 40 non-local hires;
- 160 existing households, containing at least one local hire, totalling 400 population; and
- 40 new households, containing at least one non-local hire, totalling 100 population.

Workforce Hiring Scenario 2

Table 55 shows that if Workforce Hiring Scenario 2 is achieved (i.e. 50% of the Project operational workforce are local hires and 50% are non-local hires) the peak workforce and subsequent population at Year 21 will consist of:

- 300 local hires and 300 non-local hires;
- 300 existing households, containing at least one local hire, totalling 750 population; and
- 300 new households, containing at least one non-local hire, totalling 750 population.

The operational workforce at Year 1 is estimated to be approximately one third the size of the peak workforce at Year 21. Therefore, at Year 1 the operational workforce and subsequent population will consist of approximately:

- 100 local hires and 100 non-local hires;
- 100 existing households, containing at least one local hire, totalling 250 population; and
- 100 new households, containing at least one non-local hire, totalling 250 population.

Workforce Hiring Scenario 3

Table 56 shows that if Workforce Hiring Scenario 3 is achieved (i.e. 20% of the Project operational workforce are local hires and 80% are non-local hires) the peak workforce and subsequent population at Year 21 will consist of:

- 120 local hires and 480 non-local hires;
- 120 existing households, containing at least one local hire, totalling 300 population; and
- 480 new households, containing at least one non-local hire, totalling 1,200 population.

The operational workforce at Year 1 is estimated to be approximately one third the size of the peak workforce at Year 21. Therefore, at Year 1 the operational workforce and subsequent population will consist of approximately:

- 40 local hires and 160 non-local hires;
- 40 existing households, containing at least one local hire, totalling 100 population; and
- 160 new households, containing at least one non-local hire, totalling 400 population.

Summary

Table 57 summarises the additional population associated with the operational workforce that is expected in locations in the Study Area at both Year 1 and Year 21 (peak) of the Project.

Table 57
Additional Population as a Result of Operational Workforce – Year 1 and Year 21

Expected Final Residential Location of the Non-local Hire Operational Workforce	Additional Population Expected as a Result of Operational Workforce					
	Year 1			Year 21		
	Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3	Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3
Gunnedah Urban	35	88	140	105	263	420
Curlewis	5	13	20	15	38	60
Quirindi	10	25	40	30	75	120
Werris Creek	10	25	40	30	75	120
Other rural areas in GSC or LPSC	5	13	20	15	38	60
Tamworth Regional LGA	25	63	100	75	188	300
Other areas outside GSC, LPSC and TRC	10	25	40	30	75	120
Total	100	250	400	300	750	1,200

As previously stated, it should also be considered that a small proportion of this incoming population may have previously been part of the construction workforce associated with the Project.

Table 57 is illustrated in **Figure 10** and **Figure 12** below.

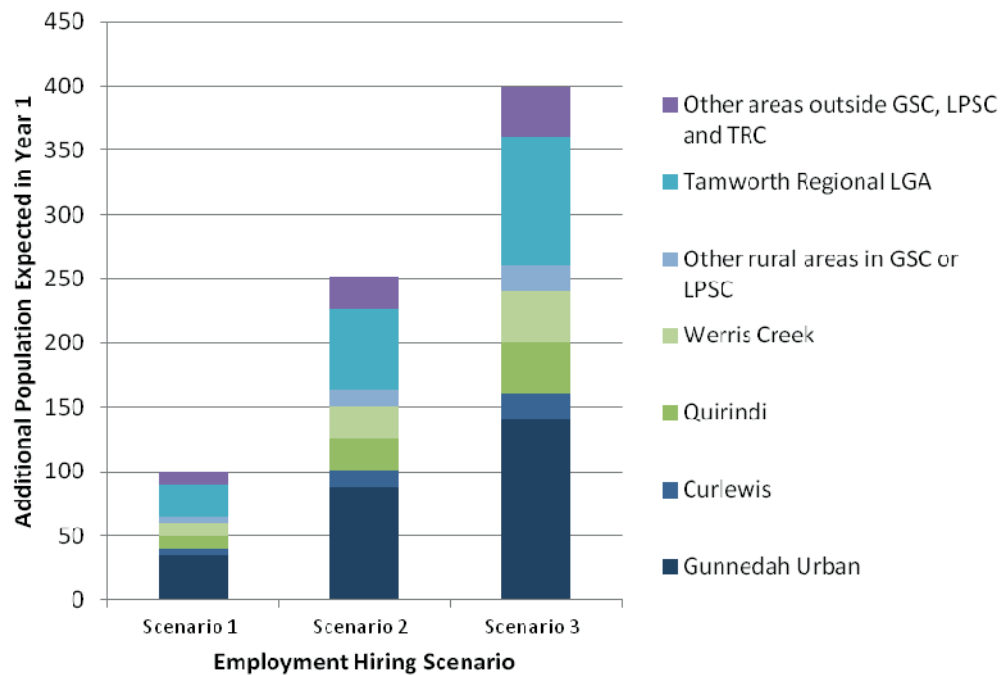


Figure 10
Additional Population Expected as a Result of Operational Workforce – Year 1

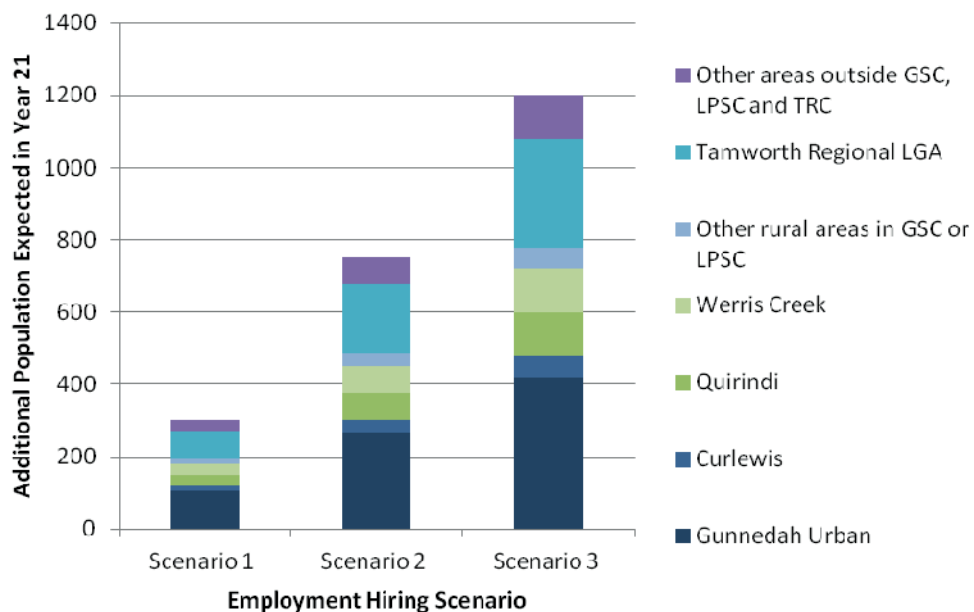


Figure 11
Additional Population Expected as a Result of Operational Workforce – Year 21

Table 57, Figure 10 and Figure 12 show that depending on the Workforce Hiring Scenario, at:

- Year 1, there could be between:
 - 100 and 400 additional population in the Study Area;
 - 40 and 160 additional population in the Gunnedah and Curlewis urban areas;
 - 10 and 40 additional population in Werris Creek;
 - 10 and 40 additional population in Quirindi; and
 - 25 and 100 additional population in Tamworth Regional LGA.
- Year 21 (the peak workforce), there could be between:
 - 300 and 1,200 additional population in the Study Area;
 - 120 and 480 additional population in the Gunnedah and Curlewis urban areas;
 - 30 and 120 additional population in Werris Creek;
 - 30 and 120 additional population in Quirindi; and
 - 75 and 300 additional population in Tamworth Regional LGA.

The differences between the Year 1 and Year 21 figures for each Workforce Hiring Scenario are illustrated in **Figure 12** below.

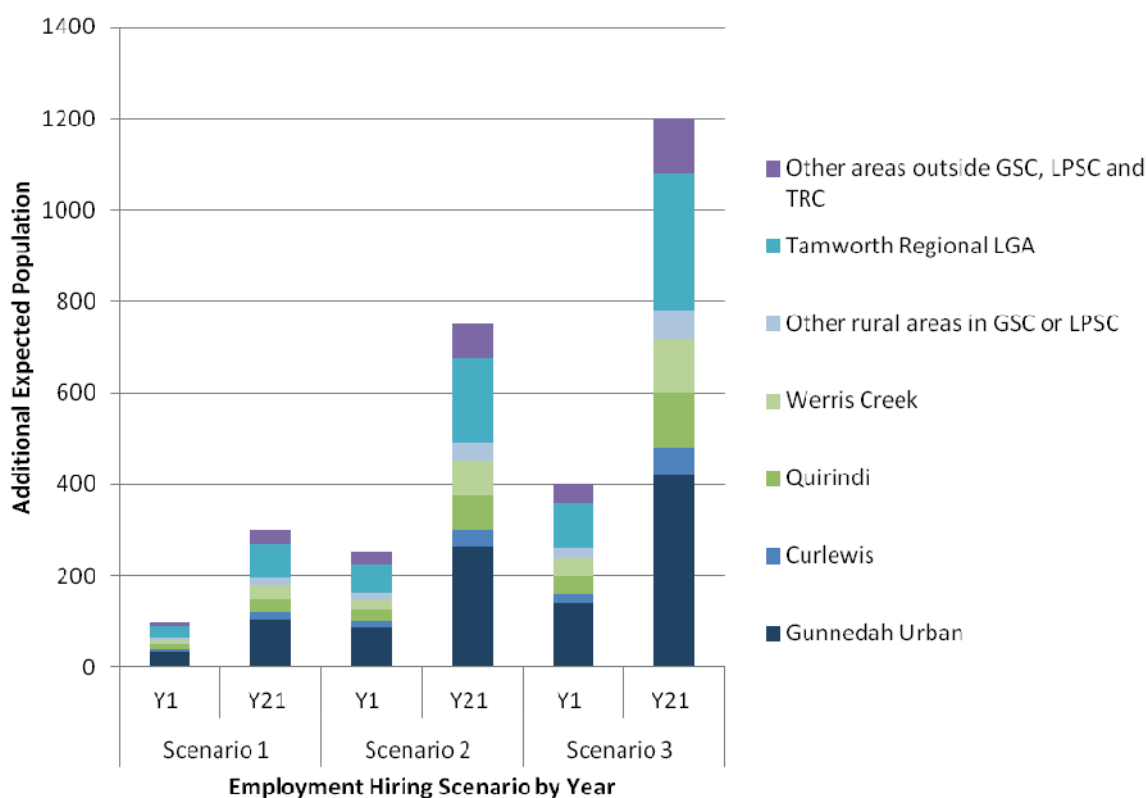


Figure 12
Comparison of Year 1 and Year 21 Additional Population Expected as a Result of Operational Workforce

Table 58 and **Figure 12** show the additional population associated with the non-local hire operational workforce that will be expected each year between Year 1 and Year 21 (the peak workforce). These calculations source information from **Table 57** which shows that there will be:

- An additional 200 people expected in the Study Area between Year 1 (100 people) and Year 21 (300 people) under Workforce Hiring Scenario 1;
- An additional 500 people expected in the Study Area between Year 1 (250 people) and Year 21 (750 people) under Workforce Hiring Scenario 2; and
- An additional 800 people expected in the Study Area between Year 1 (400 people) and Year 21 (1,200 people) under Workforce Hiring Scenario 3.

The increase each year shown in **Table 58** assumes the same rate of increase each year. The additional population each year is presented for each Workforce Hiring Scenario.

Table 58
Additional Population Expected Each Year between Year 1 and Year 21

Expected Final Residential Location of the Non-Local Hire Operational Workforce	Expected Residential Location of Non-Local Hire Workforce (%)	Additional Population Associated with Non-Local Hire Operational Workforce Expected each year between Year 1 and Year 21		
		Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3
Gunnedah Urban	35	4	9	14
Curlewis	5	1	1	2
Quirindi	10	1	3	4
Werris Creek	10	1	3	4
Other rural areas in GSC or LPSC	5	1	1	2
Tamworth Regional LGA	25	3	6	10
Other areas outside GSC, LPSC and TRC	10	1	3	4
Total	100	10	25	40

Table 58 is illustrated in **Figure 13** below.

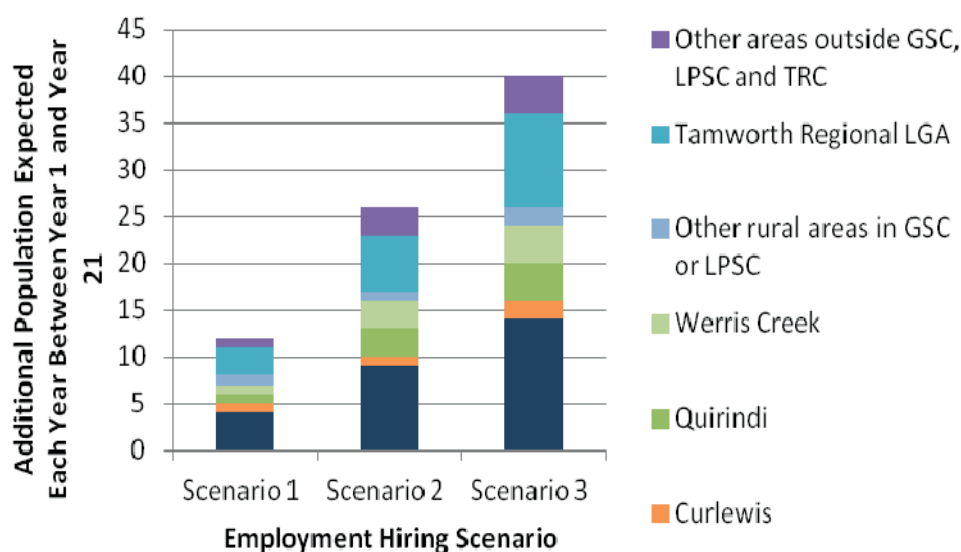


Figure 13
Additional Population Expected Each Year between Year 1 and Year 21

Table 58 and **Figure 13** show that the population increase in the Study Area associated with the non-local hire operational workforce is expected to be gradual between Year 1 and Year 21. Under Workforce Hiring Scenario 1, the increase will only be 10 persons a year during that period.

The increase would be 25 persons per year under Workforce Hiring Scenario 2 and 40 persons per year under Workforce Hiring Scenario 3. The majority of the increase would be in Gunnedah urban area, although this is expected to be only between four and 14 additional persons per year, dependent on the Workforce Hiring Scenario.

Population and Residential Locations as a Result of Flow-On Employment

Table 59 provides estimates of the population and their likely residential locations that could be expected in the Study Area as a result of flow-on employment generated through the entire 30 years of the Project.

The regional and local flow-on employment estimates provided in **Table 59** are drawn from the Economic Impact Assessment (Gillespie Economics, 2012). Key assumptions are summarised in **Section 6.4**.

Table 59 does not provide estimates of employment under the three Workforce Hiring Scenarios given in **Section 6.3.5**, as flow-on employment cannot be subject to any employment policies that seek to maximise local employment opportunities in the same way that the policies can be applied by Shenhua Watermark to the direct Project workforce.

The following percentages have been chosen for the likely residential locations of flow-on employment:

- Gunnedah LGA - 46%;

- Liverpool Plains LGA – 22%;
- Tamworth Regional LGA – 24%; and
- Other LGAs, particularly Narrabri and Upper Hunter - 8%

These percentages take into account estimates presented in the *Economic Impact Assessment* (Gillespie Economics, 2012), notably that only 8% of regional flow-on employment will occur in the Upper Hunter and Narrabri LGAs. The distribution of flow-on employment in the Sub Regional Study Area LGAs is based on an averaging of the previous assumptions of:

- Where local hires (of the operational workforce) are already living; and
- Where non-local hires (of the operational workforce) are likely to move to.

This table also assumes an occupancy rate (people per household) of 2.5, derived from the Northern Statistical Division at the 2006 Census. Even though the regional occupancy rate decreased slightly in the 2011 Census, the rate for the component LGAs remained stable, hence the 2006 is being retained for modelling purposes.

Table 59
Population as a Result of Flow-On Employment in the Regional* Economy

LGA	Percentage of Flow-on Employment	Flow-on Employment	Total Population as a Result of Flow-on Employment***
Gunnedah LGA	46%	269	673
Liverpool Plains LGA	22%	129	322
Tamworth Regional LGA	24%	140	351
Upper Hunter LGA	4%	23	59
Narrabri LGA	4%	23	59
Total	100%	585**	1463

Notes:

* 'Regional economy' is the same as this SIA's Study Area

** Total figure derived from Economics Assessment (Gillespie Economics, 2012)

*** Based on an occupancy rate of 2.5 derived from Northern Statistical Division, 2006

Gillespie Economics, 2012 does not distinguish between the flow-on employment effects on the population already living in the Study Area as opposed to the population that will migrate into the Study Area over the 30 year Project life. Hence, **Table 59** cannot provide any conclusions as to how much of the flow-on employment and subsequent population will increase the population in the Study Area. It should also be appreciated that the estimates given in **Table 59** represent the total flow-on employment over 30 years of the Project life, which if apportioned equally over the life of the Project, would equate to approximately 50 people per year.

Summary of Additional Population Impacts for the Gunnedah LGA

Table 54, Table 55 and **Table 56** show that of the LGAs in the Study Area, Gunnedah LGA will be the most impacted by the population increase caused as a result of the Project's operational workforce.

In particular, Gunnedah Urban area is expected to absorb the majority of the population increase, which occurs at Year 21 of the Project. However, this increase varies from 105 (assuming Workforce Hiring Scenario 1) to 420 persons (assuming Workforce Hiring Scenario 3).

Curlewis can expect an increase in population of between 15 (assuming Workforce Hiring Scenario 1) and 60 persons (assuming Workforce Hiring Scenario 3). The remainder (i.e. rural areas) in the LGA would expect a similar increase, which would be scattered throughout the LGA.

Table 59 shows that the estimated flow-on employment arising from the Project could support a population of 673 in the Gunnedah LGA. However, the proportion of this population already living in the LGA is unknown, making it difficult to estimate the population increase expected as a result of this flow-on employment.

The impacts of the population increase on housing in the Gunnedah LGA are addressed in **Section 6.6**.

Summary of Additional Population Impacts for the Liverpool Plains LGA

Table 54, Table 55 and **Table 56** show that the Liverpool Plains LGA will absorb a population increase caused as a result of the Project's operational workforce. At Year 21 of the Project, this could vary from 68 persons (assuming Workforce Hiring Scenario 1) to 270 (assuming Workforce Hiring Scenario 3).

Quirindi can expect an increase in population of between 30 (assuming Workforce Hiring Scenario 1) and 120 persons (assuming Workforce Hiring Scenario 3). Werris Creek could expect similar increases to Quirindi.

The remainder (i.e. other rural areas and villages) in the LGA would expect a small increase of between eight and 30, which would be scattered throughout the LGA. It is difficult to predict whether these increases will offset any likely decreases in population in any of the villages or rural areas that may happen irrespective of the Project.

Table 59 shows that the estimated flow-on employment arising from the Project could support a population of 322 in the Liverpool Plains LGA. However, the proportion of this population already living in the LGA is unknown, making it difficult to estimate the population increase expected as a result of this flow-on employment.

The impacts of the population increase on housing in the Liverpool Plains LGA are addressed in **Section 6.6**.

Summary of Additional Population Impacts for Tamworth Regional LGA

Table 54, **Table 55** and **Table 56** show that the Tamworth LGA is expected to absorb a population increase caused as a result of the Project's operational workforce, but only a slightly larger increase than that expected for the Liverpool Plains LGA. At Year 21 of the Project, this could vary from 75 (assuming Workforce Hiring Scenario 1) to 300 persons (assuming Workforce Hiring Scenario 3).

Table 59 shows that the estimated flow-on employment arising from the Project could support a population of 351 in the Tamworth Regional Council LGA. However, the proportion of this population already living in the LGA is unknown, making it difficult to estimate the population increase expected as a result of this flow-on employment. The impacts of the population increase on housing in the Tamworth Regional LGA are addressed in **Section 6.6**.

Impact on Previous Population Forecasts

The population projections of the Namoi 2030 report are described at **Section 5.2.3**.

Table 60 shows how the LGA population forecasts of the Namoi 2030 report will be affected by the population projections given above. It is understood that the Namoi 2030 report did not take into account the 600 full time equivalent estimated peak operational workforce of the Project.

Table 60 shows the 2030 population projections of the Namoi 2030 report, giving each 'scenario' of the Namoi 2030 report for each LGA, and compares these to the additional population expected in 2035 as part of the Project's peak operational workforce.

The Namoi 2030 report models population projections to 2030, while the peak Project operational workforce (Year 21) is not expected until at least 2035. Therefore, although not preferable, 2030 projections are compared with 2035 projections in this modelling.

Table 60
Impact of Watermark Project Peak Operational Workforce and Population on Namoi 2030 Population Projections

LGA / Namoi 2030 Scenario	Current population*	Projected Populations						
		Namoi 2030*	Additional population from Watermark Project at peak operational workforce **			% Difference between Namoi 2030 projections and additional impact of Watermark Project at peak operational workforce		
			Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3	Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3
	2012	2030	Approx 2035***					
Gunnedah LGA								
More of the Same	11,668	12,100	128	320	510	1.0%	2.6%	4.0%
Cruising the Commodity Surge	12,705	16,249				0.8%	1.9%	3.0%
Local Economic Development Impetus	12,359	14,866				0.9%	2.1%	3.3%
The Best of Everything	12,849	16,825				0.8%	1.9%	2.9%
State Projections (2011)	11,610	10,530				1.2%	2.9%	4.6%
Liverpool Plains LGA								
More of the Same	7,635	7,918	68	169	270	1.6%	3.9%	6.1%
Cruising the Commodity Surge	8,314	10,633				1.2%	2.9%	4.6%
Local Economic Development Impetus	8,088	9,728				1.3%	3.2%	5.0%

LGA / Namoi 2030 Scenario	Current population*	Projected Populations					
		Namoi 2030*	Additional population from Watermark Project at peak operational workforce **			% Difference between Namoi 2030 projections and additional impact of Watermark Project at peak operational workforce	
			Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3	Workforce Hiring Scenario 1	Workforce Hiring Scenario 2
		2030	Approx 2035***				
The Best of Everything	8,408	11,010				1.1%	2.8%
State Projections (2011)	7,690	7,240				1.7%	4.2%
Tamworth Regional LGA							
More of the Same	57,242	68,175	75	188	300	0.2%	0.5%
Cruising the Commodity Surge	59,091	75,572				0.2%	0.4%
Local Economic Development Impetus	59,225	76,108				0.2%	0.4%
The Best of Everything	60,766	82,271				0.2%	0.4%
State Projections (2011)	55,910	62,830				0.2%	0.5%

Notes:

* Data from PB, ELP & CARE, 2009, p144

** 'Additional population' includes the population increase that arises as a result of households forming from non-local hires to the Watermark Project (with a peak operational workforce of 600 at Year 21)

***Assumes Year 21 of Project will be at least 2035

Table 60 shows that for each of the Namoi 2030 scenarios, the additional population expected in each of the LGAs as a result of the Project's peak operational workforce (under different Workforce Hiring Scenarios) makes a 0.2% to 6.1% difference. The difference between the Project's additional population and projections modelled by the NSW DP&I however show discrepancies of up to 6.6%.

Key points are:

- The additional population expected to settle in the Tamworth Regional LGA by 2035 as a result of the Project is the least different to the projections modelled by Namoi 2030 – only increasing the expected population by between 0.2% and 0.7%;
- The additional population expected to settle in the Liverpool Plains LGA by 2035 as a result of the Project shows differences to the Namoi 2030 projections of between 1.1% and 6.1%; and
- The additional population expected to settle in the Gunnedah LGA by 2035 as a result of the Project shows differences to the Namoi 2030 projections of between 0.8% and 4.0%.

These differences all depend on the scenario used by Namoi 2030, and the Workforce Hiring Scenario used for the Project.

'*Cruising the Commodity Surge*' appeared to be the Namoi 2030 scenario most favoured by local government staff in the Sub-Regional Study Area at the time of the SIA interviews with them (late 2011). The modelling shows that the addition of population caused by the Project peak operation workforce in this scenario:

- Has a minimal effect on each of the LGAs' population projections by 2030 if Workforce Hiring Scenario 1 is used, increasing the population at this time by 0.8%, 1.2% and 0.2% in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, respectively;
- Has a larger effect on each of the LGAs' population projections by 2030 if Workforce Hiring Scenario 2 is used, increasing the population at this time by 1.9%, 2.9% and 0.4% in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, respectively; and
- Has a more significant effect on each of the LGAs' population projections by 2030 if Workforce Hiring Scenario 3 is used, increasing the population at this time by 3%, 4.6% and 0.7% in the Gunnedah, Liverpool Plains and Tamworth Regional LGAs, respectively.

Further, considering that **Table 60** compares 2030 projections from the Namoi 2030 report with the Project's Year 21 projections (not expected until at least 2035), it could therefore be assumed that by the time the 2030 projections have been modelled out to 2035, then the difference between the two would not be so great, if the growth rate of both projections is a linear one.

Forecast Gender Structure

At the 2011 Census, there were 7,949 people who worked in the mining industry in the LGAs of Muswellbrook and Singleton, 88% of whom were male (ABS, 2012i). The Muswellbrook and Singleton LGAs have been used as a comparison, since they are situated in an established mining region.

Similarly, it is expected that the majority of the Project's operational workforce will be male.

Forecast Age Structure

An estimate has been made of the number of young people who are likely to be part of the population associated with the Project's non-local hire operational workforce at Year 1 and at the peak workforce at Year 21. These estimates will assist in determining impacts on a range of community facilities relating to young people, as discussed later.

The estimates are based on Workforce Hiring Scenario 3, which includes the highest non-local hire percentage of 80%. Basing these estimates on Workforce Hiring Scenario 3 gives a 'worst case' scenario for additional population increase.

It is expected that the new population associated with the Project's non-local hire operational workforce will nearly all be under 55 years of age. The estimates therefore use the age structure percentages of the population aged 0-54 years only in the NENWSA4 in 2011, rather than using the age structure percentages of the total population, which would make the proportion of young people lower.

Table 61 shows the estimate of the number of young people that are likely to form part of the population associated with the Project's non-local hire operational workforce at Year 1 of the Project, while **Table 62** shows the number of young people that are likely to form part of the population associated with the Project's peak non-local operational workforce at Year 21. Both tables present estimates in various locations in the Study Area for the age categories of 0-4; 5-14 and 15-19 years.

Table 61

Estimate of 0-19 year olds associated with the population relating to the Project's non-local hire operational workforce – Year 1 (Workforce Hiring Scenario 3)

Location of operational workforce and therefore population	Population associated with non-local hire operational workforce	No of 0-4 year olds (10% of population*)	No of 5-14 year olds (20% of population*)	No of 15-19 year olds (10% of population*)
Gunnedah Urban	140	14	28	14
Curlewis	20	2	4	2
Quirindi	40	4	8	4
Werris Creek	40	4	8	4
Other rural areas in GSC or LPSC	20	2	4	2
Tamworth Regional LGA	100	10	20	10
Other areas outside GSC, LPSC and TRC	40	4	8	4
Total	400	40	80	40

*Note: * Age proportions derived from 2011 Census NENWSA4, using age structure for 0-54 years only.*

Table 61 shows that at Year 1 of the Project under Workforce Hiring Scenario 3, there are likely to be 40 0-4 year olds that form part of the population associated with the Project's operational workforce, 80 5-14 year olds and 40 15-19 year olds. Approximately a third of these young people are estimated to live in Gunnedah Urban Centre, with approximately a quarter estimated to live in the Tamworth Regional LGA and a similar proportion in the Liverpool Plains LGA.

Table 62

Estimate of 0-19 year olds associated with the population relating to the Project's non-local hire operational workforce - Year 21 (peak) (Workforce Hiring Scenario 3)

Location of operational workforce and therefore population	Population associated with 'non-local hire' operational workforce	No of 0-4 year olds (10% of population*)	No of 5-14 year olds (20% of population*)	No of 15-19 year olds (10% of population*)
Gunnedah Urban	420	42	84	42
Curlewis	60	6	12	6
Quirindi	120	12	24	12
Werris Creek	120	12	24	12

Location of operational workforce and therefore population	Population associated with 'non-local hire' operational workforce	No of 0-4 year olds (10% of population*)	No of 5-14 year olds (20% of population*)	No of 15-19 year olds (10% of population*)
Other rural areas in GSC or LPSC	60	6	12	6
Tamworth Regional LGA	300	30	60	30
Other areas outside GSC, LPSC and TRC	120	12	24	12
Total	1,200	120	240	120

Note: * Age proportions derived from 2011 Census NENWSA4, using age structure for 0-54 years only.

Table 62 shows that the number of young people that will form part of the population associated with the peak operational workforce at Year 21 of the Project will be triple that of Year 1, meaning there are likely to be 120 0-4 year olds that form part of the population associated with the Project's operational workforce, 240 5-14 year olds and 120 15-19 year olds. **Table 62** shows that there is likely to be:

- 168 young people in the Gunnedah Urban Area;
- 120 young people in the Tamworth Regional LGA; and
- Approximately 108 young people in the Liverpool Plains LGA.

It should be noted that the estimates provided for Year 21 only account for the likely proportion of young people associated with the peak operational workforce of the Project at the time.

The natural population growth between Year 1 and 21 of the Project will also affect the proportion of young people at Year 21. More significantly, the cumulative effects of population growth as a result of the increase in workforce from expected mining and resource projects in the Study Area will have a more significant effect on population and age structure at that time.

Further, if Workforce Hiring Scenario 1 is achieved (with only 20% non-local hires), the additional population (and therefore number of young people) associated with the non-local hires of the operational workforce will be a quarter of Workforce Hiring Scenario 3 above (as shown in **Table 61** and **Table 62**). If Workforce Hiring Scenario 1 is achieved (with 50% non-local hires), the additional population (and therefore number of young people) associated with the non-local hires of the operational workforce will be almost two thirds of Workforce Hiring Scenario 3 above.

The details of **Table 61** and **Table 62** will be used in later sections in assessing impacts on a range of young peoples' facilities and services including child care, education and youth facilities.

The population increase expected with the Project may also mean:

- The median age of the population in various areas may decrease over time if a younger workforce resides in the Study Area; and

- A reversal of the decline in proportion of younger and working age people, as modelled by the DP&I and shown in **Section 5.3.3**.

6.5.4 Cumulative Population Impacts

The cumulative growth of the mining and resources sector in the Study Area will be significantly more than the impacts of the Project alone, as demonstrated by **Table 2** and **Table 63** below which summarises the likely cumulative population impacts on the Study Area. The table sources data on the number of mining and resource personnel from **Table 2**.

Table 63
Cumulative population in the Study Area, 2012-2022

Year	Personnel Employed in Mining and Resource Projects in the Gunnedah Basin*	No of Watermark Project Personnel*	Population associated with Mining Personnel**
2012	1,037	0	2,593
2016	3,364	300	8,410
2022	3,117	383	7,793
Difference 2012-2016	2,327	300	5,817
Difference 2012-2022	2,080	383	5,200

Source: *Table 2

Note: ** Using the occupancy rate of 2.5 of the Northern Statistical Division at 2006

Table 63 shows:

- In 2022, the Project operational workforce (383) will represent 11% of the total personnel expected to be employed in mining and resource industry projects in the Gunnedah Basin;
- The potential cumulative mining and resource industry workforce for the Gunnedah Basin in 2016 is estimated to be approximately three times the size of the estimated existing (2012) workforce; and
- There is the potential for an additional 5,817 people associated with mining and resource project personnel in the Study Area by 2016 as a result of cumulative resource projects, with a decrease to 5,200 people by 2022.

No assumptions can be made about the proportion of local or non-local hires of the cumulative resource projects in these calculations, due to the lack of data and detailed information about workforce components of those projects. Therefore, the size of the *additional* population that could be expected as a result of the cumulative population impact is not estimated in this SIA.

6.6 HOUSING AND RESIDENTIAL LAND IMPACTS AND MITIGATIONS

Pressure on local housing options and the local housing rental and purchase market is expected as a result of the construction and operational phases of the Project. The cumulative impact of mining and resource projects in the Study Area will also magnify this impact. This section will outline these likely impacts on housing and residential land and present mitigation measures for these impacts.

The GCSP recognises that if the LGA is to retain its residents within the Shire as well as attract new residents, it must have housing available for individuals and families of all income levels. The GCSP states that this is particularly the case where mining and resource project growth will impact upon supply and demand and consequently influence house prices and rental fees. This observation could also be applied to the Liverpool Plains and Tamworth Regional LGAs.

This concern, and other similar issues relating to housing impacts, was expressed many times in interviews conducted with key local and state government staff to inform the EIS for the Project.

Community members raised concerns about potential impacts of the Project on housing at the Project Community Information Sessions held in December 2011, including:

- Providing housing for the increased workforce;
- Cumulative housing affordability;
- Ways of mitigating housing impacts, including offering low interest loans for new homes or building projects for homes to attract families; and
- Concern about MAC Workforce Accommodation Villages.

(Hansen Bailey, 2012)

6.6.1 Academic Research Regarding Housing Impacts

There are a number of academic research reports that investigate housing issues in mining and resource regions. Although specific research on the Study Area was not included in any of these reports, some of the findings of this research are relevant for the housing impacts of the Project and of cumulative mining and resource projects on the Study Area. Two reports are outlined in this section.

Housing Dynamics in Resource Boom Towns

A 2009 report for the Australian Housing and Urban Research Institute highlights the role of housing in the economic and social wellbeing of regional towns with a mining industry. The report found that *“business and community development is stymied by the high housing costs as workers who service the mining industry and the community as a whole are unable to afford housing in the town, thus it is likely that local businesses and services may experience difficulty attracting and retaining staff due to accommodation stress”* (Haslam McKenzie, et al., 2009).

NSW Department of Housing Quoting Hillier et al, unknown date

Hillier et al suggest that as the economic base of a region changes and diversifies, there is a need for housing to support this by catering for and attracting a diversity of people moving into the region, who may at first be largely transient or uncertain of their commitment to the area. Hillier et al suggest that this requires the provision of:

- A wider-than-traditional range of dwellings to cater for different types of households;
- Adequate and affordable rental options;
- Good quality subsidised accommodation for key professional service providers in both the public and private sectors; and
- Housing for people with special physical, social and cultural needs.

They suggest that where the market fails to deliver, intervention may be required in order to achieve the following goals (NSW Department of Housing, n.d.):

- Develop mechanisms to normalise areas of employment-tied housing in areas where the industrial base is changing, including individual title and sale or purchasing housing and either renting or selling it to residents;
- Provide appropriate key worker housing of adequate quality in order to attract police, education and health and other key private sector professionals to the regions, and
- Develop strategies to ensure the needs-identification and provision of housing suitable for young people who might otherwise leave the area, the elderly to be able to remain in the area, crisis accommodation and culturally appropriate accommodation that incorporates appropriate modifications for disabled residents.

6.6.2 Construction Phase Impacts on Housing and Residential Land

The introduction of the Project construction workforce will have impacts on short term accommodation in the Sub Regional Study Area. An outline of short term accommodation options and its current utilisation by the mining and resources sector was given in **Section 5.10.4**.

Local caravan parks, hotels and motels are already “*utilised at vastly increased rates by mining staff, contractors and normal tourism / business visitations*” (NSW Family & Community Services, 2011). Challenges arising from this include:

- Lack of availability for tourist, travellers, normal business visitations;
- Lack of availability for social housing temporary accommodation clients;
- Lack of availability for social housing transition accommodation; and
- Increased cost of short term accommodation (NSW Family & Community Services, 2011).

It is expected that this situation will continue, with short term accommodation being sought by the Project construction workforce, and also by the operations workforce during the initial operations phase. In addition, flow-on employment related to the construction phase will also generate additional demand for short term accommodation as non-local hires seek short term accommodation.

The introduction of the direct Project workforce and the associated indirect workforce means that it is likely that further pressure will be placed on the short term rental market in the Study Area, particularly Gunnedah, Curlewis and the towns and villages of the Liverpool Plains. Vacancy rates are expected to be very low, and rental prices to increase.

Assuming that the majority of the Project construction workforce will be non-local hires, the best available option to relieve short term accommodation pressures is the use of the proposed Workforce Accommodation Facility (MAC Werris Creek).

The Werris Creek facility proposes 1,500 units, indicating ample capacity for the accommodation of the workforces of other resource projects after the construction workforce of the Watermark Project has been accommodated.

6.6.3 Operational Phase Impacts on Housing and Residential Land

The potential for the operational phase of the Project to give rise to housing impacts in the Sub Regional Study Area relates primarily to the proportion of non-local hires for the Project and their associated housing demands as they relocate to the Sub Regional Study Area.

In addition, the local hires of the operational workforce (those already residing in the Sub Regional Study Area) will also need to retain suitable housing in the Sub Regional Study Area through the life of the Project. Suitable and reasonably priced housing must also be available to the wider community over the long term.

This section will outline the expected impacts on housing as a result of the operational phase of the Project.

Additional Housing Required as a Result of Direct Impact of the Project

Table 54, **Table 55** and **Table 56** provide estimates of the population increase and residential locations that could be expected in the Sub Regional Study Area as a result of the direct impact of the Project's non-local hire operational workforce.

Table 64, **Table 65** and **Table 66** are based on **Table 54**, **Table 55** and **Table 56** and show the additional housing requirements generated as a result of the non-local hire operational workforce and their families moving to the Study Area. The tables are presented for each of the Workforce Hiring Scenarios as outlined in **Section 2**.

Each table shows:

- Estimates of the expected final residential location of the non-local hire operational workforce and the percentage of employees expected to reside in each of those areas; and
- The number of additional dwellings therefore required to accommodate the non-local hire workforce and their families at both Year 1 and Year 21 (peak workforce).

The number of additional dwellings required is the same as the number of the Project's expected non-local hire operational workforce. As described previously, this includes a conservative assumption that each employee (and where applicable their family) has the opportunity to be housed in a separate dwelling.

Table 64
Additional dwellings required by location at Year 1 and Year 21 – Workforce Hiring
Scenario 1

Expected final residential location of the non-local hire operational workforce	Expected residential location of non-local hire workforce (%)	No of additional dwellings required*	
		Year 1	Year 21
Gunnedah Urban	35	14	42
Curlewis	5	2	6
Quirindi	10	4	12
Werris Creek	10	4	12
Other rural areas in GSC or LPSC	5	2	6
Tamworth Regional LGA	25	10	30
Other areas outside GSC, LPSC and TRC	10	4	12
Total	100	40	120

*Note: * The number of additional dwellings required is the same as the number of the Project's expected non-local hire operational workforce as sourced from Table 54.*

Table 65
Additional dwellings required by location at Year 1 and Year 21 – Workforce Hiring
Scenario 2

Expected final residential location of the non-local hire operational workforce	Expected residential location of non-local hire workforce (%)	No of additional dwellings required*	
		Year 1	Year 21
Gunnedah Urban	35	35	105
Curlewis	5	5	15
Quirindi	10	10	30
Werris Creek	10	10	30
Other rural areas in GSC or LPSC	5	5	15
Tamworth Regional LGA	25	25	75
Other areas outside GSC, LPSC and TRC	10	10	30
Total	100	100	300

*Note: * The number of additional dwellings required is the same as the number of the Project's expected non-local hire operational workforce as sourced from Table 55.*

Table 66
Additional dwellings required by location at Year 1 and Year 21 – Workforce Hiring
Scenario 3

Expected final residential location of the non-local hire operational workforce	Expected residential location of non-local hire workforce (%)	No of additional dwellings required*	
		Year 1	Year 21
Gunnedah Urban	35	56	168
Curlewis	5	8	24
Quirindi	10	16	48
Werris Creek	10	16	48
Other rural areas in GSC or LPSC	5	8	24
Tamworth Regional LGA	25	40	120
Other areas outside GSC, LPSC and TRC	10	16	48
Total	100	160	480

*Note: * The number of additional dwellings required is the same as the number of the Project's expected non-local hire operational workforce as sourced from Table 56.*

Table 64 shows that under the Workforce Hiring Scenario 1, 40 additional dwellings are required in the Study Area in Year 1, with a total of 120 being required by Year 21. In respect to individual locations:

- Gunnedah Urban area would be impacted the most, as that area could experience demand for 14 additional dwellings by Year 1, and 42 by Year 21;
- Tamworth Regional LGA could experience demand for 10 additional dwellings by Year 1, and 30 by Year 21;
- Quirindi and Werris Creek could experience demand for 4 additional dwellings each by Year 1, and 12 each by Year 21; and
- Other rural areas in the Gunnedah and Liverpool Plains LGAs could experience demand for two additional dwellings by Year 1, and 6 by Year 21.

Table 65 shows that under Workforce Hiring Scenario 2, 100 additional dwellings are required in the Study Area in Year 1, with a total of 300 being required by Year 21. In respect to individual locations:

- Gunnedah Urban area would be impacted the most, as that area could experience demand for 35 additional dwellings by Year 1, and 105 by Year 21;
- Tamworth Regional LGA could experience demand for 25 additional dwellings by Year 1, and 75 by Year 21;

- Quirindi and Werris Creek could experience demand for 10 additional dwellings each by Year 1, and 30 each by Year 21; and
- Other rural areas in the Gunnedah and Liverpool Plains LGAs could experience demand for five additional dwellings by Year 1, and 15 by Year 21.

Table 66 shows that under Workforce Hiring Scenario 3, 160 additional dwellings are required in the Study Area in Year 1, with a total of 480 being required by Year 21. In respect to individual locations:

- Gunnedah Urban area would be impacted the most, as that area could experience demand for 56 additional dwellings by Year 1, and 168 by Year 21;
- Tamworth Regional LGA could experience demand for 40 additional dwellings by Year 1, and 120 by Year 21;
- Quirindi and Werris Creek could experience demand for 16 additional dwellings each by Year 1, and 48 each by Year 21; and
- Other rural areas in the Gunnedah and Liverpool Plains LGAs could experience demand for eight additional dwellings by Year 1, and 24 by Year 21.

The yearly increase in demand for housing will be gradual, with the operational workforce expected to increase from approximately 200 in Year 1 to 600 in Year 21 – an average increase of approximately 20 per annum over 20 years. When this gradual increase over 20 years is applied to the three Workforce Hiring Scenarios, the number of dwellings required per year between Year 1 (i.e. after the Year 1 employees are housed) and Year 21 (when the peak dwelling need is predicted) for non-local operational hires and their families can be estimated, as shown in **Table 67**. The figures in **Table 67** are calculated by firstly subtracting the number of additional dwellings required in Year 1 from Year 21 (as shown in Table 64, Table 65 and Table 66), then dividing that figure by 20 years.

Table 67
Additional dwellings required each year between Year 1 and Year 21 by location

Expected final residential location of non-local hire operational workforce	Additional dwellings required each year between Year 1 and Year 21		
	Workforce Hiring Scenario 1	Workforce Hiring Scenario 2	Workforce Hiring Scenario 3
Gunnedah Urban	1.4	3.5	5.6
Curlewis	0.2	0.5	0.8
Quirindi	0.4	1.0	1.6
Werris Creek	0.4	1.0	1.6
Other rural areas in GSC or LPSC	0.2	0.5	0.8
Tamworth Regional LGA	1.0	2.5	4.0
Other areas outside GSC, LPSC and TRC	0.4	1.0	1.6
Total	4.0	10.0	16.0

Table 67 is illustrated in Figure 14 below.

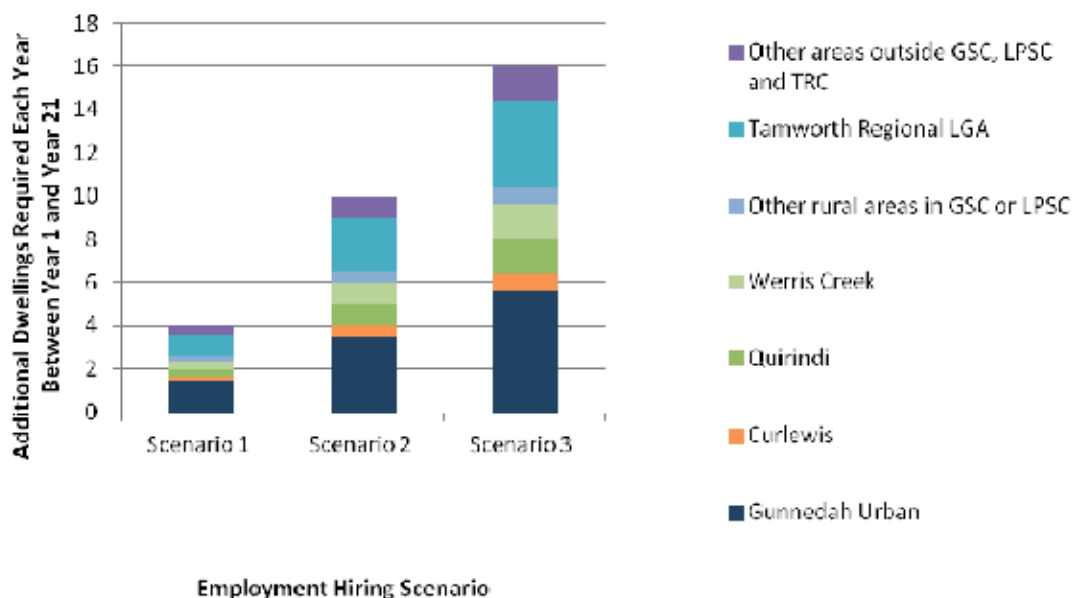


Figure 14
Additional dwellings required each year between Year 1 and Year 21 by location

Table 67 and Figure 14 show that:

- Under Workforce Hiring Scenario 1, only four additional dwellings per year will be required across the entire Sub Regional Study Area between Year 1 and Year 21, which increases to 10 additional dwellings a year for Workforce Hiring Scenario 2 and 16 additional dwellings a year for Workforce Hiring Scenario 3;
- The area likely to be most impacted is the Gunnedah urban area, which could require between one and six dwellings per year, depending on the Workforce Hiring Scenario; and
- Tamworth Regional LGA could expect additional demand of between one and four dwellings per year.

These gradual increases would appear compatible with the amount of land and redevelopment sites that are already available for future housing in the respective LGAs in the Sub Regional Study Area, as shown in **Section 5.10**, and are within the levels of rates of housing development shown in the past by each of those areas, as shown in **Section 5.10**. Consequently, the Project is not expected to place any undue pressure on planning for infrastructure required for that housing development (e.g. water, sewer and roads), which should be able to be absorbed by the LGAs as part of their incremental growth.

Additional Housing Required as a Result of Flow-on Employment

Table 59 presents the likely population in the Study Area as a result of flow-on employment from the Project. The figures show a total of 1,463 people in the Study Area over the life of the Project as a result of flow-on employment, equating to approximately 50 people per year.

Table 68 shows the likely dwellings in the Study Area that will be occupied as a result of flow-on employment from the Project.

Table 68
Dwellings as a Result of Flow-On Employment in the Regional* Economy

LGA	Percentage of flow-on employment attributed to each LGA	Flow-on employment	Total dwellings as a result of flow-on employment***
Gunnedah LGA	46%	269	269
Liverpool Plains LGA	22%	129	129
Tamworth Regional LGA	24%	140	140
Upper Hunter LGA	4%	23	23
Narrabri LGA	4%	23	23
Total	100%	585**	585

Notes:

* 'Regional economy' is the same as this SIA's Study Area

** Total figure derived from Economics Assessment (Gillespie Economics, 2012)

*** Based on the need for one dwelling per flow-on employee

Table 68 shows that 585 dwellings will be occupied as a result of flow-on employment from the Project.

As discussed in **Section 6.5.3**, the *Economic Impact Assessment* does not distinguish between the flow-on employment effects on the population already living in the Study Area as opposed to the population that will migrate into the Study Area over the 30 year Project life. Therefore this SIA cannot provide any firm conclusions as to how much of the flow-on employment shown in **Table 68** will increase the dwelling demand in the Study Area or its component LGAs.

However, it would be expected that the 585 dwellings would be gradually occupied over the 30 year life of the Project and that a sudden demand of dwellings would not be likely.

Impacts on Short Term Accommodation

The impacts of the construction workforce on local short term accommodation are described above in **Section 6.6.2**. This section discusses the impact of the Project operations phase on short term accommodation.

It is expected that non-local hires associated with the Project operations phase will also place additional demand on short term accommodation at the commencement of their employment as they look for suitable accommodation. It is expected that these employees would ultimately transition out of the short term accommodation market and into a purchased home or a longer term rentals.

To relieve pressure on the short term accommodation market, those new non-local hires will be encouraged to make short term use of the proposed Workforce Accommodation Facility (MAC Werris Creek).

As the Werris Creek facility proposes 1,500 units, it would appear that there would be ample capacity for the short term accommodation of the Project operational workforce, even if there are other resource construction projects occurring at the same time.

6.6.4 Housing Choices

A range of housing choices needs to be available to meet the needs of the incoming workforces and their families. There are likely to be a range of household types formed by the incoming population, from single person households, to group (share) households, couple only households and family households of varying sizes.

At present, the dwelling types available in the Sub Regional Study Area are predominantly 'separate houses', as shown in **Section 5.10**. There is scope to increase the types of available dwellings across the Sub Regional Study Area, including various forms of smaller dwellings, particularly to suit single person households and share or couple only households.

For comparative purposes, **Table 69** shows that in 2011, Singleton Urban Centre (a NSW town with an established mining population) had a proportion of 'Semi-detached, row or terrace house, townhouses' that was significantly higher than Gunnedah Urban Centre's (8% and 4% respectively), although Gunnedah Urban Centre had a higher proportion of 'flats, units or apartments' than Singleton (10% and 7% respectively).

The proportion of ‘Semi-detached, row or terrace house, townhouses’ in 2006 was lower in both Gunnedah and Singleton, at 5% and 1% respectively.

The proportion of ‘flats, units or apartments’ in 2006 did not change significantly to 2011 in both Gunnedah and Singleton (10% and 8% respectively in 2006).

Table 69
Dwelling type, Gunnedah and Singleton, 2011

Location	Separate house	Semi-detached, row or terrace house, townhouse etc	Flat, unit or apartment	Other dwelling	Total
Gunnedah Urban Centre	85.4%	4.0%	9.7%	0.9%	3,067
Singleton Urban Centre	83.0%	7.9%	7.1%	2.0%	4,984

Source: ABS, 2012d

Note: % of Total Occupied Private Dwellings, excluding Dwelling Structure Not Stated

A range of lot sizes also need to be available to meet market requirements in both urban and rural areas. For example, a range of rural residential and ‘rural living’ lot sizes would need to be available across the Sub Regional Study Area, as well as a range of sizes of urban housing lots. Each Council has made allowance for a range of lot sizes, as demonstrated in their LEPs as described in **Section 3**. Regarding rural land choices, LPSC is encouraging families to move to the area with suitable ‘small acreage’ properties, while GSC is rezoning land to allow for rural residential sized properties near the edge of Gunnedah urban area.

6.6.5 Housing Prices and Affordability

The impact on housing prices and affordability as a result of the Project is difficult to predict, although evidence would suggest that prices and affordability will continue to rise with demand as the mining and resources sector workforce size increases.

Anecdotal evidence suggests that the price movements that have recently occurred in the Study Area, as shown in **Section 5.10.3**, could partly be a result of speculative purchasers who are anticipating the future growth in the housing market. Several local and state government staff interviewed for this SIA suggested that such speculation has been too soon, as the “*boom hasn’t even started yet*” (GSC, 2011, pers. comm., 17 November).

However, the growth in housing prices has also been as a result of the cumulative growth in the mining and resources sector in the Study Area, particularly from that occurring north of the Study Area in the Narrabri LGA. GSC staff estimate that “*one third of the employees at Whitehaven and Boggabri Mines are based in Gunnedah*” (GSC, 2011, pers. comm., 17 November).

As **Table 67** demonstrates, the increase in dwellings required as a result of the Project is expected to be distributed predominantly across the three LGAs in the Sub Regional Study Area at a total rate of between 4 and 16 dwellings per year (between Year 1 and Year 21), depending on the Workforce Hiring Scenario used. Further, this distribution of dwelling demand will be across the range of urban settlements and rural areas across these 3 LGAs. This scattered distribution of dwelling demand will help to ensure that housing affordability impacts on any one particular LGA or urban area as a result of the Project are minimised.

Even if the exact magnitude of effects on housing prices and affordability cannot be predicted, the key issue is how to best manage those impacts so that affordability is achieved and equitable accessibility to housing is available to the whole community.

6.6.6 Cumulative Impacts on Housing and Residential Land

The cumulative growth of the mining and resources sector in the Study Area and associated population growth will exacerbate all the impacts on housing and residential land that have been described above.

The cumulative impacts will be significantly more than the impacts of the Project alone, as demonstrated by **Table 2** and **Table 70** below which summarises the likely cumulative housing impacts on the Study Area. The table sources data on the number of mining and resource personnel from **Table 2**.

Table 70
Cumulative housing impacts in the Study Area

Year	Personnel Employed in Mining and Resource Projects in the Gunnedah Basin*	No of Watermark Project Personnel*	Dwellings in Study Area for Mining Personnel**
2012	1,037	0	1,037
2016	3,364	300	3,364
2022	3,117	383	3,117
Difference 2012-2016	2,327	300	2,327
Difference 2012-2022	2,080	383	2,080

Source: *Table 2

**Assumes one dwelling per employee

Table 70 shows that there is the potential for a need for 2,327 dwellings in the Study Area by 2016 as a result of cumulative mining and resource projects, with a slight decline in demand by 2022.

As explained in **Section 6.5.4**, the size of the *additional* population that could be expected as a result of the cumulative population impact is not estimated in this SIA. Therefore an estimate of the additional dwelling demand (i.e. over and above those which are already being occupied by local hires of cumulative projects) also cannot be made.

The SRLUP acknowledges the issues and challenges of timely housing and land provision in the New England North West, and puts forward actions to help address this. Co-operation between mining and resources companies and relevant Councils and agencies will be the key to addressing the cumulative impacts of mining and resource projects on housing and residential land demand, supply and affordability.

6.6.7 Mitigation Measures

The following mitigation measures address housing and residential land impacts.

Specific recommendations relating to amelioration of housing impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Monitor housing affordability and availability in the local area and report in the regulatory required Annual Review.

Mitigation Measure No 2

Implement an Employee Incentive Scheme which will include policies on items such as encouraging progressive re-location to the local area by provision of financial assistance to relocate.

Mitigation Measure No 3

Facilitate the use of the Workforce Accommodation Facility (MAC Werris Creek) by non-local hires of the construction workforce.

Mitigation Measure No 4

Encourage the short term use of the Workforce Accommodation Facility (MAC Werris Creek) by non-local hires of the operational workforce while they settle in to their work and familiarise themselves with the local housing market.

Mitigation Measure No 5

Provide bus transport for the Project workforce during the construction phase between the Workforce Accommodation Facility (MAC Werris Creek) and the Project.

Mitigation Measure No 6

Shenhua will, through the Gunnedah Basin Coal Developers Group & Namoi Mining Working Group, continue to work with local government and other mining companies to monitor workforce size, the workforce's previous and current residential location, local housing demand and supply, housing prices and affordability.

6.7 ECONOMIC IMPACTS AND MITIGATIONS

The Project will have both direct and indirect (or flow-on) economic impacts on the Study Area, which are detailed in the *Economic Impact Assessment* prepared for the Project. These economic impacts also have direct social relevance and are outlined in this section.

6.7.1 Direct Economic Impacts

The *Economic Impact Assessment* (Gillespie Economics, 2012) prepared for the Project has estimated and presented the direct economic impacts of the Project.

6.7.2 Indirect Economic Impacts

The *Economic Impact Assessment* (Gillespie Economics, 2012) prepared for the Project has also estimated and presented the indirect economic impacts of the Project.

Construction Phase Indirect Economic Impacts

The introduction of the construction workforce will generate significant indirect economic benefits to the Sub Regional Study Area over the 18 month construction period. These indirect benefits will largely accrue through flow-on spending by Project construction employees in the local area, particularly on accommodation, food, leisure and recreation, and personal services. The geographic spread of this spending is difficult to determine, and will depend on where each employee resides during that time and their personal preferences for travelling to different centres for various products and services. Further detail regarding the construction phase indirect economic impacts are given in the *Economic Impact Assessment*.

It is however acknowledged that the majority of the construction workforce will not reside permanently in the Sub Regional Study Area, so the long-term indirect economic benefits of their incomes will not be absorbed in the Sub Regional Study Area.

Operational Phase Indirect Economic Impacts

Flow-on spending by the operational workforce in the Sub Regional Study Area will produce significant indirect economic benefits to the Sub Regional Study Area, whether that workforce are 'local hires' continuing to live in the Sub Regional Study Area, or will be new residents as a result of being 'non-local hires'. Further detail regarding the operational phase indirect economic impacts are given in the *Economic Impact Assessment*.

6.7.3 Impacts on Economic Diversity

Community members raised concerns about potential impacts of the Project on the economic diversity of the Study Area at the Project Community Information Sessions held in December 2011, including:

- Impacts on the local economy and community in 30 years, after the mine closes;
- The need to create a self-sustaining economy;
- The cost of living for the non-mining sectors of the community; and
- Incentives for local banking.

(Hansen Bailey, 2012)

These concerns are addressed in this and following sections.

The Project will result in an increase in the number of employees in the mining and resources industry in the Sub Regional Study Area.

In 2011 there were approximately 500 people employed in '*coal mining*' who were residents in the Sub Regional Study Area (ABS, 2012g as per **Table 30**). The addition of the Project's peak operational workforce (600 persons by Year 21) is a 120% increase in the number of people employed in coal mining living in the Sub Regional Study Area compared to 2011. The commencement of approximately 200 operational employees in Year 1 of the Project is a 40% increase from 2011.

However, it is the cumulative impact of the growing resources sector in the Gunnedah Basin that will have a far more significant impact and will present a challenge for the economic diversity of the Study Area. The cumulative impact is demonstrated by **Table 2 of Appendix A**, which shows that in 2022, the Project operational workforce will represent 11% of the total personnel expected to be employed in mining and resource industry projects in the Gunnedah Basin. **Table 2 of Appendix A** also shows that the potential cumulative mining and resource industry workforce for the Gunnedah Basin in 2016 is estimated to be approximately three times the size of the estimated existing workforce.

As the projected increase in employment in the mining and resources sector occurs, one of the key issues for the Study Area is to ensure its long term economic diversity and resilience of the local and regional economy.

Namoi 2030 recognises that building economic diversity remains a major development issue for the Namoi region, stating that there will be considerable challenges for the Namoi Region as it needs to involve the development of substantial businesses that are based on knowledge and technology rather than natural resources. Namoi 2030 suggests that the Namoi Region may need to focus more effort, infrastructure and services to raise basic education levels and increase access to technology, research and advanced business capacities to underpin those industries.

Each Council in the Sub Regional Study Area has also recognised the need for long-term economic diversity in their areas and regions, and each Council is at the stage of needing to plan for that future vision.

As described in **Section 4.3.5**, the Gs94A Plan recognises that an Economic Development Strategy for the Gunnedah LGA is required. Similarly, LPSC does not have an Economic Development Strategy, although it recognises the need to diversify beyond agriculture and mining and resources. TRC has previously prepared the TREDs to guide economic development in the region.

6.7.4 Mine Closure Impacts

Cessation of the Project after more than 30 years of operation may lead to a reduction in economic activity at that time. The impacts on the economy after Project closure will entirely depend on the structure of the mining and resource sector at that time, which is not able to be predicted at present. The significance of these cessation impacts would depend on the degree to which any displaced workers and their families remain within the region, even if they remain unemployed. This is because continued expenditure by these people in the Study Area (even at reduced levels) contributes to final demand. If there are other as-yet-unconstructed or unknown projects operating at that time, then the impacts of the gradual decrease of the Project workforce will be lessened as other projects absorb the excess labour. In addition, if Project cessation takes place in a declining economy the impacts might be felt more greatly than if it takes place in a growing and diversified economy.

The proponent is committed to actively planning for mine closure throughout the life of the mine and to adapting this planning as the local context requires. **Section 7.21 of the Main Volume of the EIS** addresses mine closure.

6.7.5 Impacts on Other Sectors of the Economy

In addition to direct economic impacts, it is expected that both the Project and the cumulative effects of expected mining and resources projects in the Study Area could also have impacts on other (non-mining) sectors of the economy in the following ways:

- The competition for labour for the mining sector may mean that other sectors of the economy have difficulty retaining or recruiting appropriate levels of staff (addressed at **Section 5.7**);
- The demand for training in mining related skills sets has the potential to divert the focus from non-mining related skills training (training and education is addressed at **Section 5.7**);
- The increase in the number of mining and resource projects in the Study Area could negatively affect the image that the area currently portrays to attract tourists; and
- The increased demand for accommodation for the expected workforces and their families could limit the availability of tourism accommodation for tourists.

As described above, the cumulative effects of the expected mining and resources projects in the Study Area are likely to have a far larger impact on these issues than the impacts of the Project alone.

6.8 LABOUR FORCE IMPACTS AND MITIGATIONS

The introduction of the Project's workforce is expected to have a number of impacts on the labour force in the Sub Regional Study Area. This section particularly addresses the following aspects:

- Employment growth;
- Available labour supply for the Project;
- Availability of the labour force for the non-mining sector;

- Youth employment;
- Indigenous employment;
- Women's labour force participation;
- Labour force qualifications; and
- Workforce transport arrangements.

Community members raised concerns about a range of potential labour force impacts of the Project at the Project Community Information Sessions held in December 2011, including:

- Sustainability of labour for non-mining industries;
- Jobs, qualifications, scholarships and training for locals;
- Opportunities for local indigenous people, *"including jobs, education programs, infrastructure, opportunities, day care for mums in jobs"*;
- Employment and training opportunities for young people;
- The effect of the loss of jobs from the properties which have been purchased for the Project; and
- The gender balance of the workforce.

(Hansen Bailey, 2012)

These concerns are addressed in **Section 6.7** and this section as below.

6.8.1 Employment Growth

Section 6.7.3 describes the predicted increase in the number of employees in the mining and resources industry in the Sub Regional Study Area as a result of both the Project and the cumulative impacts of the current and expected mining and resources projects in the Study Area.

Section 6.4 also outlines the expected indirect employment that will be generated in the Study Area as an indirect impact of the Project.

6.8.2 Available Labour Supply for the Project

The available labour supply for any given geographic area is the sum of:

- The number of unemployed people in that area; plus
- The '*labour surplus*' in that area, which is the number of working residents (i.e. people living in the area who are employed) minus the number of local workers (i.e. people whose place of work is in the area, regardless of whether or not they live in that area).

Table 71 provides an indication of available labour in 2006 in the Sub-Regional Study Area, being Gunnedah, Liverpool Plains and Tamworth Regional LGAs. The table also provides applicable comparative data for NSW.

Table 72 provides an indication of available labour at June 2012 in the Sub-Regional Study Area, using 2011 Census data for labour surplus and part time employment (the most recent data available) and applying June 2012 unemployment rates.

The percentage and number of part time people in the labour force is also given in these tables. There is no available data to ascertain how many of these part timers would aspire to full time work.

Table 71
Available labour in Gunnedah, Liverpool Plains and Tamworth Regional LGAs, 2006

Aspect	Gunnedah LGA	Liverpool Plains LGA	Tamworth LGA	NSW
Total labour force	5,107	3,214	25,070	
Labour surplus	494	422	1,634	
Unemployment rate (%)	8.3	5.9	6.8	5.9
Unemployed (no)	427	190	1,709	
Available labour supply (i.e. labour surplus plus unemployed)	921	612	2,575	
Part time (no)	1,338	906	7,020	
Part time (%)	26.2	28	28	27.2

Source: ABS, 2007a

Table 72
Available labour in Gunnedah, Liverpool Plains and Tamworth Regional LGAs, June 2012

Aspect	Gunnedah LGA	Liverpool Plains LGA	Tamworth LGA	NSW
Total Labour Force (June 2012)*	6,216	3,912	30,480	
Unemployment rate % (June 2012*)	6.7	6.6	6.3	5.2
Unemployed (June 2012*)	419	257	1,919	
Labour surplus**	591	477	2,755	
Available labour supply (i.e. labour surplus plus unemployed)	1,010	734	4,674	
Part time (no)***	1,596	1,111	1,337	
Part time (%)***	28.7	28.4	28.6	28.2

Sources:

*DEEWR, 2012

**Based on Table 72

*** ABS, 2012b

Table 71 and **Table 72** show that the labour force in each of the LGAs has increased substantially between 2006 and 2012, with Gunnedah LGA's labour force increasing by 1,109, Liverpool LGA's increasing 698 and Tamworth Regional LGA's increasing 5,410 (all increasing 22%).

Table 72 shows that in 2012, there was predicted to be:

- 2,595 unemployed people living in the Sub Regional Study Area;
- An available labour supply of 1,010 people in the Gunnedah LGA (up from 921 in 2006), including a labour surplus of 591 (427 in 2006);
- An available labour supply of 734 people in the Liverpool Plains LGA (up from 612 in 2006), including a labour surplus of 477 (422 in 2006); and
- An available labour supply of 4,674 people in the Tamworth Regional LGA (up substantially from 2,575 in 2006), including a labour surplus of 2,755 (1,634 in 2006).

Table 71 and **Table 72** also show that although there has been considerable change in the structure of the economy of the Sub-Regional Study Area since 2006 (as described in **Sections 4 and 5**), there was still a labour surplus in each of the LGAs in 2012.

However, caution must be taken when applying data regarding the labour force surplus data to the Project. In particular, the labour force surplus shown for each LGA masks the fact that much of the surplus of each LGA will be workers travelling to one of the other two LGAs in the Sub Regional Study Area. These travelling patterns were shown in the Journey to Work data in **Section 5.8.1**.

It is also acknowledged that the skills and working intentions of the available labour force is not known. However, it appears from **Table 72** that the Sub Regional Study Area will be able to absorb a substantial proportion of the jobs created by the Project.

As outlined previously, Shenhua Watermark has a commitment to employing as much of the Project workforce as possible from local hires.

Labour force participation rates for the Study Area were outlined in **Section 5.7.1**. These rates show low participation rates for some areas of the Sub Regional Study Area, particularly parts of the Liverpool Plains LGA, and to a lesser extent for the Gunnedah and Curlewis urban areas. These low participation rates indicate that there is further opportunity for the Sub Regional Study Area to absorb a substantial proportion of the jobs created by the Project.

Despite these predictions, the SRLUP acknowledges the lessons to be learnt from the Upper Hunter mining region, where the demand for labour from mining has not been able to be met by the local labour supply.

To assist the available labour supply to access employment with the Project, a focus on skills training is required, and is addressed in **Section 6.9.3** and **Section 6.9.4**.

6.8.3 Available Workforce for the Non-Mining Sector

Table 72 shows a substantial available labour supply in each LGA in the Sub Regional Study Area. However, as stated above, the skills and working intentions of that available labour are not known and therefore it is difficult to predict the industry sectors and occupations that this available labour may be placed in the future. It is also difficult to predict how many people currently working in other industry sectors in the Study Area will move to new occupations in the mining and resources sector as a result of the Project, or as a result of other mining and resource projects in the Study Area.

This sentiment was also echoed by interviews with local and state government staff, conducted as part of this SIA, who consider that the mining industry with its higher wages is able to attract existing skilled and experienced employees away from their current jobs in the Study Area. Such anecdotal evidence is also prevalent in the Upper Hunter region, where there have been reports over a long period of the difficulty of the non-mining sector to attract and retain appropriately skilled and experienced staff.

The SRLUP states that skilled labour in the New England North West region is currently in short supply and if the region's population grows significantly due to the development of new or expanding industries such as mining and mining related industries, the pressure on this undersupply of skilled labour will only be exacerbated.

The Regional Workforce Plan proposed by the SRLUP should be the mechanism by which these labour issues are investigated in further detail in the Study Area.

These labour force issues also have implications for the long term economic resilience or diversity of the Study Area, which is outlined in **Section 6.7.3**.

6.8.4 Youth Employment

It is expected that the high youth unemployment levels shown in **Section 5.7.1** will improve as a consequence of the Project, and as a consequence of cumulative mining and resources development in the region. The extent to which it improves is difficult to determine, but Shenhua Watermark's focus on providing jobs and training to local young people will help to alleviate the currently high rate.

6.8.5 Indigenous Employment

It is expected that the high Indigenous unemployment levels shown in **Section 5.7.2** will improve as a consequence of the Project, and as a consequence of cumulative mining and resources development in the region. The extent to which it improves is difficult to determine, but Shenhua Watermark's focus on providing jobs and training to local Indigenous people will help to alleviate the currently high rate.

6.8.6 Women's Labour Force Participation

As shown in **Section 5.7.1**, the female participation rate in the labour force was lower than the male rate in Gunnedah in 2006. The participation rate of females in the workforce is expected to improve as a consequence of the Project, and as a consequence of cumulative mining and resources development in the region. The extent to which it improves is difficult to determine, but Shenhua Watermark's encouragement of local women taking up mining and mining support service employment, particularly in part time roles, may help to increase their participation rate.

6.8.7 Labour Force Qualifications

Table 73 shows the level of post secondary qualifications in 2006 and 2011 for the Muswellbrook and Singleton LGAs, showing data for both 'employees in all industry sectors' and 'employees only in the mining sector'. The Singleton and Muswellbrook LGAs are within an established mining region and hence provide useful comparison.

Table 73
Post secondary qualifications in mining sector, Singleton and Muswellbrook LGAs, 2006 and 2011

Level of post-secondary qualification	% of all employed persons in <i>mining</i> industry sector		% of all employed persons in <i>all</i> industry sectors	
	2006	2011	2006	2011
Postgraduate degree	1.4%	1.5%	1.1%	1.4%
Graduate Diploma and Graduate Certificate	0.4%	0.8%	1.1%	1.1%
Bachelor Degree	8.6%	9.9%	8.2%	9.2%
Advanced Diploma and Diploma	5.3%	6.8%	7.0%	7.6%
Certificate	41.8%	43.2%	31.7%	33.8%
Inadequately described / not stated	3.8%	3.1%	5.3%	4.3%

Source: ABS, 2007b and 2012f

Table 73 shows that there is a high level of '*certificate*' qualifications in the mining industry as compared to all industries, and a slightly higher than average bachelor and postgraduate degree qualification level in the mining industry. The table also shows that there has been an increase in the percentage of employees holding such qualifications from 2006 to 2011.

Comparing **Table 73** to similar data for the Gunnedah and Liverpool Plains LGAs at **Table 33** shows that in 2011:

- Mining industry employees in the Singleton and Muswellbrook LGAs had a much higher rate of certificate qualification (43%) than all employees in the Singleton and Muswellbrook LGAs (34%) and also than people over 15 in the Gunnedah LGA (21%), Liverpool Plains LGA (20%) and Tamworth Regional LGA (23%); and
- The Singleton and Muswellbrook LGAs had a higher level of Bachelor Degree or higher qualification than those of Gunnedah LGA, Liverpool Plains LGA and Tamworth Regional LGA regardless of whether or not the respondents from the Singleton and Muswellbrook LGAs were mining industry employees.

The implications of these comparisons between the regions suggests that:

- There is likely to be an increased demand for more Certificate level training locally; and
- An incoming mining workforce could mean a higher proportion of people holding Bachelor or postgraduate qualifications people than currently reside in the Study Area. This can correlate to a higher demand for a wider range of cultural services and incoming residents seeking a range of leisure and cultural activities in the community, since people with higher qualifications tend to desire these activities when moving into a new area.

6.8.8 Workforce Transport Arrangements

Sections 6.6.2 and **6.6.3** recognise that the proposed Workforce Accommodation Facility (MAC Werris Creek) should be utilised by the Project construction workforce, and to a lesser extent by the Project operational workforce. It is proposed to offer a workforce bus service between the Accommodation Facility and the Project during the construction phase of the Project.

6.8.9 Mitigation Measures

The following mitigation measures address labour force impacts.

Note that other mitigation measures that may also relate to the labour force are listed in the most relevant topic sections of this section (e.g. Housing or Education).

Specific recommendations relating to amelioration of labour force impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Provide the following employment options for Gunnedah, Liverpool Plains and Tamworth LGA residents:

- Apprenticeships;
- Traineeships; and
- Graduate placement programs.

The employment options will include:

- Positions for suitable candidates from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs based on merit;

- Positions for suitable Indigenous candidates from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs based on merit; and
- Positions, including 'transitional employment opportunities', for young people from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs.

Mitigation Measure No 2

Continuation of Shenhua's School-based Trainee Program. This program will support 8 students per year for the life of the Project. This includes Indigenous and non-Indigenous students.

Mitigation Measure No 3

Provide part time and / or flexible employment opportunities to encourage a higher rate of labour force participation.

6.9 COMMUNITY INFRASTRUCTURE IMPACTS AND MITIGATIONS

This section outlines the likely impacts of the Project on the range of community infrastructure that is located in the Sub Regional Study Area and presents mitigations for these impacts. Brief analysis is also made of the cumulative impacts of mining and resource projects in the Study Area on that infrastructure. Impacts on the following types of community infrastructure are examined in this section:

- Primary and secondary education;
- Tertiary education;
- Children's services;
- Youth services;
- Health services;
- Emergency services;
- Recreation, leisure and sporting facilities;
- Cultural facilities and cultural development;
- Social support services and community groups; and
- Public transport.

Community members raised issues about the impacts on community infrastructure and the community's access to it at the Project Community Information Sessions held in December 2011, including:

- Impact on schools;
- Training for locals;
- Infrastructure for local Indigenous people, e.g. education programs and day care;
- Education / mining interaction with schools and the potential for a university; and
- Youth training and development.

(Hansen Bailey, 2012)

These concerns are addressed in this section.

6.9.1 Primary and Secondary Education

The impacts on education facilities in the Sub Regional Study Area as a result of the construction workforce are expected to be negligible, as the workforce profile is likely to be predominantly single men without families.

An increase in families and therefore school aged children is likely to be experienced as a result of the population increase caused by the incoming operational workforce.

Table 61 and **Table 62** describe the number of young people that are expected to form part of the additional population associated with the Project's non-local hire operational workforce under Workforce Hiring Scenario 3 at Year 1 and at the peak workforce (Year 21).

For Year 1, this includes:

- 28 young people between 5-14 years within Gunnedah Urban Area;
- Four young people between 5-14 years within Curlewis;
- Eight young people between 5-14 years within Quirindi;
- Eight young people between 5-14 years within Werris Creek; and
- 20 young people between 5-14 years within Tamworth Regional LGA.

For Year 21 (at the peak workforce), these numbers are tripled.

Note that these numbers represent the additional population that is associated with the Project's non-local hire operational workforce (i.e. families or households where at least one person is in the operational workforce).

These increases are expected to cause:

- An increase in local public and private school enrolments, particularly in Gunnedah township; and
- An increase in the number of students travelling from Gunnedah and the Liverpool Plains LGAs to private schools in Tamworth.

Namoi 2030 (PB, ELP & CARE, 2010) states reports the following capacities of schools in some of the Sub Regional Study Area:

- Gunnedah – 86% of capacity for primary and 60% capacity for secondary; and
- Tamworth - recent information from NSW Department of Education and Training has shown steady decreases in the number of school aged children residing in Tamworth in past 1986, 1991, 1996 and 2001 Censuses.

Assuming this trend has continued to recent times, it appears the number of schools will not need to increase, given that there is current capacity within the schooling system.

An increase in enrolments will nonetheless cause a subsequent demand for the range of educational programs and opportunities that are offered at the schools.

The relative difference in wages between school administrative, maintenance, support and teaching staff and similar wages in the mining industry may encourage some existing staff to move to the mining workforce, placing pressure on appropriately staffing schools with increasing enrolments.

6.9.2 Mitigation Measures

The following mitigation measure addresses secondary education impacts.

Specific recommendations relating to amelioration of education impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Contribute funds and assistance to the value of \$5,000 per year for 20 years to relevant school programs currently offered throughout the region and to new programs. For public schools, this assistance will be delivered by coordination through the New England Regional Director of the Department of Education and Communities. For private schools, this assistance will be delivered in direct consultation with specific schools.

For example, the following current programs could be assisted:

- The Mooki Murris Program, currently at Quirindi High School;
- The Clontarf Foundation program currently operating at Oxley High School, Tamworth;
- The Quicksmart Program, currently at 30 schools within the New England Education Region; and
- Other programs as appropriate and agreed to by the New England Regional Director of the Department of Education and Communities.

6.9.3 Tertiary Education

In order for as many local people as possible to be employed in the 600-strong construction workforce over an 18 month period, there is an immediate need for construction skills training to be appropriately delivered. The operational workforce of 600 will also have an immediate impact on local training, especially for the initial 200 employees expected in Year 1 of the Project.

The impact of the Project on tertiary education facilities in the Sub Regional Study Area will be varied, depending on the level of training required locally to skill local employees. Since Shenhua Watermark has a strong preference to employ local labour, then it could be expected that the demands on local training providers will be relatively high.

However, the cumulative impacts of the increasing mining and resources sector workforce in the Study Area (as described at **Section 1.6**) will have the largest and most crucial impact on tertiary education facilities, particularly if the growth of workforces at different companies increases concurrently. The cumulative impact will also increase demand for appropriate tertiary education and training opportunities delivered through local schools.

This presents a strong challenge for Shenhua Watermark and other mining and resource companies to assist education and training providers in increasing the range and size of their programs, both in the mining sector and in wider skills sets that support the mining industry.

Education and training providers will also need to provide programs in non-mining skills sets that are applicable to the wider economy.

TAFE NEI currently commits to working closely with the mining and resources sector and suggests wider industries should be supported. The exact size and type of programs can only be decided on collaboratively and TAFE NEI is the best placed organisation to do this.

The New England Region of the Department of Education and Communities (DEC) has also been working closely with principals, Local Government and industry representatives to determine the effect of an increase in population on their secondary education and training provision.

As discussed above, TAFE NEI is the ideal organisation to determine the exact size and type of programs for skills in the mining and wider support industries that should be offered in the Region.

Further information regarding the exact size and expected skills sets of each of the proposed mining and resource projects in the Region needs to be available before TAFE NEI can commit to the provision of targeted training.

As mentioned previously in **Section 5.7.4**, the Regional Workforce Plan proposed by the SRLUP could be the mechanism by which these tertiary level training issues are investigated in further detail in the Study Area.

6.9.4 Mitigation Measures

The following mitigation measures address tertiary education impacts.

Specific recommendations relating to amelioration of tertiary education impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Provide an annual scholarship fund of \$10,000 for 20 years for locally based students to study a mining related course at University.

Mitigation Measure No 2

Provide seed funding of \$250,000 towards the construction of the proposed Mining Skills Centre in Gunnedah. This will be done in collaboration with other mining and resource companies in the Study Area.

6.9.5 Children's Services

The impacts on children's services in the Sub Regional Study Area as a result of the construction workforce are expected to be negligible, as the workforce profile is likely to be predominantly single men without families.

An increase in families and therefore pre-school aged children is likely to be experienced as a result of the population increase caused by the incoming operational workforce.

Table 61 and **Table 62** describe the number of young people that are expected to form part of the additional population associated with the Project's non-local hire operational workforce under Workforce Hiring Scenario 3 at Year 1 and at the peak workforce (Year 21).

For Year 1, this shows:

- 14 additional people between 0-4 years within Gunnedah Urban Area;
- 2 additional people between 0-4 years within Curlewis;
- 4 additional people between 0-4 years within Quirindi;
- 4 additional people between 0-4 years within Werris Creek; and
- 10 additional people between 0-4 years within Tamworth Regional LGA.

For Year 21 (at the peak workforce), these numbers are tripled.

These numbers represent the additional population that is associated with the Project's non-local hire operational workforce (i.e. families or households where at least one person is in the operational workforce). These numbers also represent the maximum number of additional young people expected, as Workforce Hiring Scenario 3 is based on the highest proportion of non-local hires.

This increase in young people is expected to:

- Increase demand on enrolments for pre-schools within the Sub Regional Study Area;
- Increase demand on child-care centres within the Sub Regional Study Area;
- Increase demand on before and after school care and informal childcare arrangements in the Sub Regional Study Area;
- Increase the demand for playgroups and activities for pre-school children; and
- Increase the use of children-specific recreational and cultural activities – e.g. attractive and safe playgrounds, library readings, music appreciation classes etc.

Modelling of the exact number of places required at the various children's services in the three LGAs of Gunnedah, Liverpool Plains and Tamworth Regional over the life of the Project are difficult to determine, however it can be expected that the need particularly for child-care places will be influenced by:

- The number of full-time female employees with children that will be part of the workforce;
- The number of part-time female employees with children that will be part of the workforce;
- The number of families who have both a father and mother in the mining workforce;
- The proposed shift work nature of employment; and
- The locations and distance from the Project that employees reside.

Since the peak workforce is not expected until Year 21, the increase in child care is expected to be gradual, rather than full demand occurring immediately.

Anecdotal evidence from the Hunter Valley indicates that child care places are always in demand, and are particularly crucial for mining families where both parents may work alternating shift work and do not have family and friends' support available to them.

Because of the number of factors influencing the demand for child care, an interactive approach of continual consultation with children's service providers, facilitated through the three Councils in the Sub Regional Study Area, will be able to determine much clearer local needs as the population increases.

6.9.6 Mitigation Measures

The following mitigation measure addresses children's services impacts.

Specific recommendations relating to amelioration of children's services impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Provide an annual scholarship fund of \$5,000 for 10 years for locally based students to study a child care related course as well as sponsoring a traineeship program for child care workers.

6.9.7 Youth Issues and Services

The impacts on youth services in the Sub Regional Study Area as a result of the construction workforce are expected to be negligible, as the workforce profile is likely to be predominantly single men without families.

An increase in families and therefore youth is likely to be experienced as a result of the population increase caused by the incoming operational workforce. **Table 61** and **Table 62** describe the number of young people that are expected to form part of the additional population associated with the Project's non-local hire operational workforce under Workforce Hiring Scenario 3 at Year 1 and at the peak workforce (Year 21).

For Year 1, this shows:

- 14 additional people between 15-19 years within Gunnedah Urban Area;
- Two additional people between 15-19 years within Curlewis;
- Four additional people between 15-19 years within Quirindi;
- Four additional people between 15-19 years within Werris Creek; and
- 10 additional people between 15-19 years within Tamworth Regional LGA.

For Year 21 (at the peak workforce), these numbers are tripled. These numbers also represent the maximum number of additional young people expected, as Workforce Hiring Scenario 3 is based on the highest proportion of non-local hires.

This increase is expected to:

- Increase demand on recreation, activities and entertainment for young people, particularly after school and during school holidays, when parents are likely to still be at work;
- Increase the demand on locations for young peoples' activities i.e. age appropriate recreation;

- Increase the number of young people available and / or willing to be trained and employed in the mining industry;
- Have an effect on the way in which young people view the nature of their growing communities; and
- Have a positive effect on young people's hope for future work in their local communities.

6.9.8 Health Services and Facilities

The expected increase in population in the Sub Regional Study Area as a result of the Project will have various impacts on the provision of health facilities and services in the Sub Regional Study Area, which are outlined in this section.

The focus of this section is on impacts on health services and facilities. Health related impacts on individuals and the community are discussed in **Section 6.12**.

General Impacts

HNE Health staff identified a range of health-related impacts and issues that may be expected as a result of the introduction of a substantial mining workforce and subsequent population increase in population in the Study Area.

These impacts are particularly related to the Gunnedah and Liverpool Plains LGAs:

- An increase in demand for emergency health services, primary health care providers (both GPs and hospitals) and the range of allied health professionals. These increases in demand are likely to arise from two sources – one as a result of mining accidents or work-related illness, and the other as a result of a general increase in population;
- An increase in the number of males, especially young males, may necessitate an increased focus on men's health, particularly primary health and mental health care related to the likely increase in high risk behaviour and alcohol-fuelled violence;
- Dental services may need to be increased;
- There may be an increase in demand for private physiotherapy and allied health professionals;
- The working patterns of the workforce (long working hours and a rostering system) may have physical, mental and social impacts;
- Relationship breakdown issues may become apparent when families move, or when men are separated from their partners or families;
- There may be an impact on the health of local Indigenous communities; and
- There may be difficulties in attracting and retaining all levels of health sector employees in the Study Area – from wards people to doctors. The increase in housing costs may also have an impact on this issue.

HNE Health recognise that detailed demographic projections of the incoming population's characteristics will assist in future health planning, particularly age and gender related data (Heyman, S., 2012, pers. comm., 9 February; Sams, L., 2012, pers. comm., February 2012).

The issues raised above are ones mirrored by the recommendations of relevant reports and Council policies described in **Section 2**, particularly the GLCA, GCSP and LPSCCSP.

It is also acknowledged that similar impacts can be expected, but to a lesser extent as a direct result of an increase in population, in the Tamworth Regional LGA.

Primary Health Care

As outlined in **Section 5.11.4**, HNE Health Service consider that a focus needs to be placed on the provision of relevant, accessible and integrated primary health care services to the community as the population grows.

This is also articulated by both GSC and LPSC in their planning documents described in **Section 2**. The focus on integrated primary health care is also evident in the recent or forthcoming developments of:

- Gunnedah Rural Health Centre (to which Shenhua Watermark has already contributed \$1 million);
- Gunnedah Aboriginal Child and Family Health Centre;
- HealthOne Quirindi; and
- Werris Creek Multi Purpose Service.

The continuing provision of relevant primary health care services is relevant to both the construction and operational stages of the Project. However, it is the cumulative effects of mining and resource projects in the Study Area (as described in **Section 1.6**) that will have a more significant impact on the provision of primary health care services.

The introduction of the Project's construction and operational workforce to the Sub Regional Study Area will impact on the provision of health services in the Sub Regional Study Area, as described below.

Construction Phase Impacts

The initial impact of the Project's construction workforce and its associated population is likely to be the most significant impact on health services caused by the Project.

As stated in **Section 6.5.2**, there could be an additional population of 580 people over an 18 month period associated with the Project's construction workforce. As stated in **Section 6.6.2**, the majority of the single male construction workforce could be expected to live in the proposed Workforce Accommodation Facility (MAC Werris Creek) with the rest of the workforce and their families living in the remainder of the Study Area.

If the majority of the construction workforce resides in the proposed Workforce Accommodation Facility (MAC Werris Creek), the largest impact on health services is expected to be on the closest health facility to the Accommodation Facility. It is considered that the developer of the Accommodation Facility will need to address these impacts as part of its development consent.

The introduction of the construction workforce and associated population will also have an impact, to a lesser extent, on the health services provided in Gunnedah and Quirindi.

Operational Phase Impacts

The additional population expected as a result of the operational workforce in the LGAs in the Study Area is modelled under three Workforce Hiring Scenarios, as outlined in **Section 6.3.5**.

Table 57 shows the additional population associated with the operational workforce that is expected in locations in the Study Area at both Year 1 and Year 21 (peak) of the Project, under the three Workforce Hiring Scenarios.

This table, in addition to **Table 61** and **Table 62**, showing the expected proportion of 0-19 year olds, will assist HNE Health Service and other health providers and partner organisations to quantify the impact on health services as a result of the Project operational workforce and associated population.

Table 57 shows that depending on how many non-local hires are employed under the three Workforce Hiring Scenarios, at Year 1 there could be between 100 and 400 additional population in the Study Area and at Year 21 (the peak workforce), there could be between 300 and 1,200 additional population in the Study Area.

Between Year 1 and Year 21, the additional population associated with the incoming non-local hire operational workforce increases gradually in the Study Area, as shown at **Table 58**. Under the Workforce Hiring Scenario 1, the increase will only be 10 persons a year in the Study Area during that period. The increase would be 25 persons per year under Workforce Hiring Scenario 2 and 40 persons per year under Workforce Hiring Scenario 3. The majority of the increase would be in Gunnedah urban area, although this is expected to be only between four and 14 additional persons per year, dependent on the Workforce Hiring Scenario.

These yearly incremental population increases caused by the operational workforce appear to be gradual enough such that the impact on health services in Study Area can be absorbed easily by the general growth in health services that would otherwise happen irrespective of the Project.

There will also be a small gradual impact on outreach services (based in Tamworth) that are provided in the Liverpool Plains and Gunnedah LGAs.

Continual monitoring and planning will be critical in assessing the exact nature of these impacts, and in informing relevant mitigations, but they would be expected to include impacts on the services of:

- The current Gunnedah Health Service;
- The future Gunnedah Rural Health Centre;
- The future Gunnedah Aboriginal Child and Family Health Centre;
- Tamworth Hospital;
- HealthOne Quirindi;
- Werris Creek Multi Purpose Service; and
- Outreach services to Gunnedah and Liverpool Plains LGA, mostly based in Tamworth.

In particular, the gradual increase in population and the existence of a mining workforce, will contribute to the increased requirement for GPs and allied health professionals in the Sub Regional Study Area.

Cumulative Impacts

The cumulative impacts of the mining and resources sector will have a more substantial impact on the health services and facilities in the Sub Regional Study Area than the Project alone. The extent of the cumulative increase in the sector is described at **Section 1.6**. The cumulative impacts of the incoming mining and resources workforces and their accompanying families on health services will need to be monitored closely by relevant authorities as discussed above.

6.9.9 Mitigation Measures

The following mitigation measures address impacts on health facilities and services.

Specific recommendations relating to amelioration of health impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Commitment to financial contributions of up to \$20,000 per year for 20 years to encourage retainment retention of medical staff at the Gunnedah Rural Health Centre.

Mitigation Measure No 2

Provide information on mental health, counselling and family support programs to support the Project workforce and their families.

Mitigation Measure No 3

Provide information to new employees about available health services in the community.

Mitigation Measure No 4

Partner with health agencies in promoting healthy lifestyles and disease prevention to the Project workforce.

Mitigation Measure No 5

Provide health information on the impacts of mining to residents, including those living in mine owned houses, in the zone of mitigation or acquisition.

6.9.10 Emergency Services

Discussions with emergency service providers have indicated that the following impacts will be likely to be experienced by the various providers as a result of the incoming Project workforces and accompanying population.

General Emergency Planning

Emergency Management Committees for each of the LGAs will need to consider the increased risks associated with an increase in population. Significant new developments (such as mining and resource projects) will become new '*vulnerable communities*', needing to be considered and included in Emergency Risk Management Studies which are required as part of the NSW disaster planning processes.

NSW Police

The Oxley Local Area Command of NSW Police recognises that the growth of the mining and resources sector in the Study Area will have impacts on policing within their Command. A Working Party including Oxley Local Area Command and the Northern Police Region (incorporating parts of the Upper Hunter and Mudgee Local Area Commands) has already been addressing impacts.

NSW Police advises that the increase in population expected as a result of the workforce from the Project alone would not necessarily cause an immediate need for an increase in policing numbers in any one particular Police Station in the Sub Regional Study Area. However, the impacts of a growing population as a result of the cumulative growth in the mining and resource sector (as described in **Section 1.6**) will necessitate an increase in policing.

The exception to this would be Werris Creek, where the construction of the proposed Workforce Accommodation Facility (MAC Werris Creek) will strain the single unit station there, with a subsequent requirement for additional general duties officer(s). This will need to be addressed by the MAC Accommodation Facility proponent.

In addition, the current growth of the mining and resources sector in the Study Area is already placing pressure on the Tamworth Police Station, and this is only expected to increase.

NSW Police recognise that there are difficulties in attracting staff to smaller Police Stations, particularly where housing prices are increasing, such as in the Study Area. This situation is already being experienced by the Gunnedah Police Station. Recruitment to the Quirindi Police Station is already difficult, which poses challenges to providing a rapid 24 hour policing response for the community.

The impacts of a growing mining and resources sector workforce on community safety are noted separately in **Section 6.13.1**. The impacts noted in that section will have direct effect on the resourcing of Police Stations in the Sub Regional Study Area as discussed above (Pheeney, 2012, pers. comm., 23 February).

Fire and Rescue NSW

When towns that are serviced by a fire station grow, Fire and Rescue NSW needs to ensure that the local Station can still meet its service delivery needs. Contiguous growth of towns means that continuing service is more likely, while new development at a distance from current town boundaries makes it difficult. The future growth of Gunnedah, Tamworth, Quirindi and Werris Creek is likely to be contiguous growth and appropriate consultations would presumably be held between the respective Council and Fire and Rescue NSW as growth is planned.

Fire and Rescue NSW advises that it also needs cooperation with employers to release personnel for fire calls. The increase in mining jobs in the area is expected to have a detrimental effect on the number of personnel able to perform fire calls at any one time, because mining employees may be less able to be released from work duties, or to attend calls on their hours between shifts (Murgatroyd, P., 2012, pers. comm., 14 February).

NSW Rural Fire Service

The NSW Rural Fire Service (RFS) identified three issues which it considers arise from the impacts of mining and resource growth in the region (Luke, A., 2012, pers. comm., 14 February):

- The difficulty of it being able to maintain volunteer numbers to maintain its service. This is caused by various factors:
 - The loss of population from rural areas that have been purchased by mining companies;
 - The decrease in availability of volunteers when they move to mining employment. Mining employment with long shifts and mandatory '*rest time*' is not conducive to attending emergency responses; and
 - The resulting increased demand on a smaller available volunteer base and risk of '*burn out*' of volunteers.
- The increased fire risk that results as a result of a previously managed landscape (i.e. agricultural) to a disused land (such as buffers to mine sites); and
- The increased risk of incidents and accidents as a consequence of the increase in population, particularly from an increase in vehicular traffic and accidental ignition.

State Emergency Services

The State Emergency Service (SES) has identified the following impacts on its operations as a result of the growth of the mining and resource sector in the Study Area (Namoi Region SES, 2011):

- Pressure for better flood and road closure warnings;
- An increase in rescues for mine employees stranded in vehicles on flooded roads and causeways whilst trying to reach their place of work;
- The likelihood of increased severe weather events, with consequent flash flooding and subsequent rescue implications;
- Pressure to reopen roads after flood events to maintain business continuity for mining projects;
- Increased traffic movements on both rail and road (particularly heavy vehicles used to transport to and from mines) leading to a potential increase in accidents; and
- A subsequent increase in the demand on rescue services that are predominately provided by volunteers.

These issues have relevance for the Project, particularly relating to local flood events, but are more relevant to the cumulative impact of mining and resource projects in the Study Area (the extent of which is described at **Section 1.6**).

NSW Ambulance

NSW Ambulance advise that during the construction and operational phases of the Project, there is not likely to be a significant impact on ambulance resources. However, it is likely that there will be a per capita increase in workload, leading to an impact on resource levels that will be experienced as a result of the cumulative impacts of coal and resource projects in the area (the extent of which is described in **Section 1.6**). The NSW Government will need to be aware of and plan for such impacts.

NSW Ambulance also advises that the limitations of the current Quirindi low level railway crossing need to be considered, as emergency services will be unable to access the other side of the railway line for the time that the crossing is closed to traffic as a result of the increase in trains. Both sides of the Gunnedah town area can still be accessed over the railway line, as the high level bridge can still be used (Collins, T., 2012, pers. comm., 14 February).

6.9.11 Mitigation Measures

The following mitigation measures address emergency services impacts.

Mitigation Measure No 1

Provide investment of approximately \$50,000 per year for 20 years into capital equipment for services such as the bushfire brigade, ambulance and other valued community services in the Gunnedah and Liverpool Plains LGAs.

Mitigation Measure No 2

Implement a salary sacrifice program among all employees with proceeds going to the Westpac Rescue Helicopter.

Mitigation Measure No 3

Develop employee policies that enable emergency services personnel to be released from duties to attend emergency calls and to allow release of employees to perform crucial volunteer actions.

Note that mitigations that are also relevant to emergency services regarding volunteer support are included at **Section 6.11.4**, while mitigations regarding community safety are included at **Section 6.13**.

6.9.12 Recreation, Leisure and Sporting Facilities

This section will outline the impacts on recreation, leisure and sporting facilities in the Sub Regional Study Area and give mitigation measures.

General Impacts

Both Gunnedah and Tamworth Regional LGAs have recently prepared extensive Open Space Strategies that are described in **Section 5.11.6**. Both these strategies identify that those LGAs are generally provided with a sufficient level and distribution of open space to meet the needs of their current communities, with both LGAs identifying that particular facilities may need to be enhanced and better planned and that services need to be reviewed to best service the community.

While the Liverpool Plains LGA does not have a specific open space strategy, various items were suggested in the LPSCCSP.

The introduction of the Project workforce and their associated families to the Sub Regional Study Area will place additional, although not unreasonable, demand on the wide range of recreation and leisure facilities and services in the Sub Regional Study Area.

The addition of a mostly male construction workforce may have immediate impacts on some facilities and boost numbers of some local sports groups. Since the operational workforce and their associated families will increase steadily over the life of the Project, as shown in **Section 6.5**, there is scope for the recreational facilities to grow accordingly with the population. In addition, there is scope for information about local recreational facilities to be made known to the incoming workforce.

Mention was made by several key local government staff about the negative impact that mining work rosters can have on the availability of volunteers to fill positions in local community groups, including sporting groups. This is discussed in more detail in **Section 6.11.4**.

6.9.13 Mitigation Measures

The following mitigation measure addresses recreation, leisure and sporting facility impacts.

Mitigation Measure No 1

Promote the Gunnedah, Liverpool Plains and Tamworth Regional LGAs' recreational, cultural and social support facilities and community organisations to the incoming workforce and their families.

Mitigation Measure No 2

Shenhua will make an offer to enter into Voluntary Planning Agreements on the following basis:

- Contribute a total of \$6 million to Gunnedah Shire Council for the construction of a facility for the benefit of the community in the Gunnedah LGA;
- Contribute a lump sum amount of \$350,000 to Tamworth Regional Council. This money will go towards the construction of a regional outdoor play / multipurpose centre (\$250,000) and the construction of Stage 2 of the Tamworth Marsupial Park (\$100,000); and
- Contribute a lump sum payment to Liverpool Plains Shire Council of \$1.2 million to go towards the construction of a regional indoor sports centre located in Quirindi.

6.9.14 Cultural Facilities and Cultural Development

This section will outline the impacts on cultural facilities and cultural development in the Sub Regional Study Area and present mitigation measures.

The ACHA outlines specific impacts on Indigenous cultural facilities and cultural development.

General Impacts

The introduction of the Project workforce and their associated families to the Sub Regional Study Area will place additional, although not unreasonable, demand on the wide range of cultural facilities and services in the Sub Regional Study Area. This situation is similar to the impact on recreation and leisure facilities as described above.

In particular, the growth of the mining workforce will mean that the number of professional and managerial employees is expected to increase. Growth in this sector of the community can often lead to an increased demand for a wider range of cultural activities. Families that are relocating from larger urbanised areas with more cultural opportunities also often seek a range of cultural activities in their new home town, and are prepared to assist these opportunities to happen.

The addition of a mostly single male construction workforce is expected to have limited impacts on the demand for cultural facilities. Since the operational workforce and their associated families will increase steadily over the life of the Project, there is scope for cultural facilities in the Sub Regional Study Area to grow accordingly during that time. Cultural facilities and activities will all be unique to their geographic areas. Facilities will range from small projects to large ongoing institutions, such as the Regional Art Gallery in Tamworth. Similarly, cultural activities could be singular one day events, or ongoing activities that attract a wide audience.

Mention was made by several key local government staff about the negative impact that mining work rosters can have on the availability of volunteers to fill positions in local community groups, including cultural groups. This is discussed in more detail in **Section 6.11.4**.

The expected growth in population as a result of the cumulative mining and resource projects in the Sub Regional Study Area (as described at **Section 1.6**) will hasten the need for each LGA in the Sub Regional Study Area to either prepare a Cultural Plan, or continue implementing the recommendations of their current Cultural Plans, as described in **Section 5.11.7**.

6.9.15 Mitigation Measures

Mitigation measures numbers 1 and 2 in **Section 6.9.12** address cultural facilities and cultural development impacts.

Specific recommendations relating to amelioration of cultural development impacts on the Indigenous community are contained in the ACHA.

6.9.16 Social Support Services and Community Organisations

The introduction of the Project workforce and their associated families to the Sub Regional Study Area will place additional demand on the wide range of social support services and community organisations in the Sub Regional Study Area.

The addition of the construction workforce is expected to have some short term impacts on the demand for social support services, mainly allied with the areas of health and wellbeing that are outlined in **Section 6.12**.

The introduction and incremental growth of the operational workforce and their associated families will mean that increased demand is placed on the range of social support services provided in the Sub Regional Study Area, particularly in the areas of family support and general counselling. Some of these services may currently be provided locally and may therefore require assistance to expand their services locally. Other current services are outreach services, particularly from Tamworth, that may need to be expanded.

The growth in population expected in the Sub Regional Study Area as a result of the Project's operational workforce should contribute to an increase in the number and range of community groups operating in the Sub Regional Study Area. However, mention was also made by several key local government staff about the negative impact that mining work rosters can have on the availability of volunteers to fill positions in local community groups. This is discussed in more detail in **Section 6.11.4**.

The cumulative impact of population growth as a result of the expected mining and resources projects in the Study Area (as described at **Section 1.6**) will be the main impact felt by social support services and organisations, as they grow and adapt to meet the demand of the additional population.

6.9.17 Mitigation Measures

Mitigation measure number 1 in **Section 6.9.12** addresses social support facilities.

Specific recommendations relating to amelioration of impacts on the social support services for the Indigenous community are contained in the ACHA.

6.9.18 Commercial and Retail Facilities

The introduction of the Project workforce and their associated families to the Sub Regional Study Area will place considerable additional demand on the range of commercial and retail facilities in the Sub Regional Study Area. It is expected that the retail and business sectors of all the urban centres in the Sub Regional Study Area will grow as a result of the Project. The range of commercial services and retail outlets in all the urban centres could also be expected to increase to service a growing population. The cumulative impacts of population growth as a result of mining and resource projects in the Study Area (as described at **Section 1.6**) will have a greater impact on commercial and retail expansion than that of the Project workforce alone. Again, it is expected that the commercial and retail sector will respond appropriately.

General economic impacts expected in the Sub Regional Study Area are outlined in **Section 6.7** and issues associated with sourcing labour for the non-mining industry have been outlined in **Section 6.7.4**.

There are no specific mitigations given in this section, as the 'market' is expected to respond appropriately to the demand for increased retail and commercial sectors. Nonetheless, the Councils in the Sub Regional Study Area will need to continue to plan appropriately for subsequent growth in this sector.

6.9.19 Public Transport

The introduction of the Project workforce and their associated families to the Sub Regional Study Area will place additional demand on public transport in the Sub Regional Study Area, as will the cumulative impacts of other mining and resource projects in the Study Area (as described at **Section 1.6**). This section will outline those impacts on air, rail, bus, community transport and taxi services.

Air

As specified in **Section 6.3**, Shenhua Watermark has a preference to employ as many local hires as possible, and to encourage non-local hires to relocate to the local area. This means that the use of Gunnedah, Tamworth and Quirindi Aerodromes is not critical to the Project as a form of public transport for employees.

Rail

Both the construction and operational phase workforces and their families could be encouraged to make use of the daily Countrylink rail service that connects the Sub Regional Study Area with the Hunter Valley and Sydney, as outlined in **Section 5.11.10**.

To encourage local use of train travel by the incoming Project workforce and their families, it is recommended that Countrylink's intentions as to whether the daily Xplorer service will stop in Curlewis for pick up and / or set down should be explored.

Bus Services

Local and regional bus services could both be affected by the introduction of the construction and operational phase workforces and their families to the Sub Regional Study Area. These impacts would be magnified by the cumulative impacts of population growth as a result of the expected mining and resources sector in the Study Area (the extent of which is described at **Section 1.6**).

In particular:

- Local services within Gunnedah township, and between villages and towns of the Gunnedah and Liverpool Plains LGAs may experience increased demand;
- Regional links between Gunnedah - Tamworth and between Werris Creek / Quirindi - Tamworth may experience increased demand;
- Pressure may be extended to reintroduce the public Gunnedah - Tamworth service (not just on the school bus service as described in **Section 6.9.1**); and
- Demand for regional bus services may be more pronounced in the school bus services on those regional links.

Section 6.8.8 discusses company transport options for the construction and operational workforces, suggesting that an employee bus service for the construction workforce be considered between the Project site and the proposed Workforce Accommodation Facility (MAC Werris Creek).

Community Transport

As the population ages, additional demand will be placed on the various community transport options in the Sub Regional Study Area. This in turn may have an affect on how some of the other public transport options are provided. However, the aging of the population will be offset to some extent by an increase in the proportion of younger people in the Study Area as a result of population growth associated with the mining workforce expected from future mining and resources projects.

Taxi Services

Local taxi services will experience an increase in demand with the introduction of the Project construction and operational phase workforces and their families to the Sub Regional Study Area.

In particular, demand is likely to come from:

- General increased use in taxis around each town;
- Increased demand for taxis at night after patrons leave places of entertainment;
- Use of taxis to transport visitors to the Project site during the construction and operational phases; and
- Use of taxis to transport employees home after overtime (and possibly back to work for the next shift) to comply with safety policies regarding fatigue.

Demand for taxis will increase further as a result of population growth associated with the mining workforce expected from future mining and resources projects in the Study Area. It is expected that as taxi services are a private business, they would respond according to demand.

6.10 COMMUNITY IDENTITY, VALUES, ASPIRATIONS AND LIFESTYLE - IMPACTS AND MITIGATIONS

The Project will be the first mining and resource development of its workforce size to commence in the Gunnedah LGA. As such, it will have an impact on the Sub Regional Study Area's identity, values, aspirations and lifestyle, although the exact impacts are difficult to quantify, as discussed in this section. The Sub Regional Study Area's current identity, values, aspirations and lifestyle are described in **Section 5.12**.

The Project's impact on the Sub Regional Study Area's identity, values, aspirations and lifestyle also has close links to impacts on the following values which are discussed in related sections:

- Economic impact (**Section 6.7**);
- Community cohesion (**Section 6.11**);
- Health and wellbeing (**Section 6.12**); and
- Social order and community safety (**Section 6.13**).

Community members raised concerns about future community identity and values that may be impacted by the Project at the Project Community Information Sessions held in December 2011, stating that they "*were concerned about*":

- Changes to way of life, e.g. *“Little consideration is given to the lifestyle of European settlers”*;
- Ensuring fly-in fly-out workers can be part of the local community;
- The impact of shift work hours upon the community;
- Changes in the cultural life of the area; and
- Community division.

(Hansen Bailey, 2012)

6.10.1 Impact of Incoming Population on Identity and Values

There were concerns raised during Project consultation regarding the extent of the perceived non-resident population and their perceived impacts on existing communities.

Perhaps the largest impact on the current identity, values, aspirations and lifestyle of the Sub Regional Study Area will be from the construction workforce, who will be present in the Sub Regional Study Area over a relatively short time period of 18 months. It could be expected that the construction workforce will generally have limited direct links or affinity to the existing community. As discussed in **Section 6.6.2**, the construction workforce will be encouraged to live in the proposed Workforce Accommodation Facility (MAC Werris Creek).

Section 6.5.3 has shown that the additional population that can be expected as a result of the non-local hires of the operational phase of the Project, over the life of the Project, will be minimal compared to the existing size of the populations of the various urban settlements in the Sub Regional Study Area.

In this sense, the towns and villages of the Sub Regional Study Area are likely to be able to absorb the additional population without undue stress on the existing population. Additionally, Shenhua Watermark have a commitment to employing as many local people as possible, therefore avoiding a large non-resident population.

This situation is different to other remote mining towns, particularly in Queensland and Western Australia, where a large non-resident workforce moves into a relatively small existing settlement, and quickly outnumbers the existing residents, with associated impacts (Petkova *et al.*, 2009).

However, it is recognised that although the population increase as a result of the Project will be incremental and minimal, there will still be impacts on the existing community and on the incoming population who attempt to settle into their new lives in the Sub Regional Study Area.

6.10.2 Changes to Community Identity

Perhaps the largest impact on community identity in the Sub Regional Study Area will be to Breeza, which is the settlement closest to the Project. **Section 6.5.1** describes the minimal net changes to the population surrounding the Project Area, adjacent to Breeza. The projected impacts on the agricultural sector and land uses in the vicinity of Breeza are assessed in the Agricultural Impact Statement, while the visual impact of the change is assessed in the Visual Impact Assessment and traffic impacts are assessed in the Traffic and Transport Impact Assessment.

Similar, although less pronounced, changes to community identity are likely to be experienced by other nearby settlements, particularly Curlewis and the towns of the Liverpool Plains.

Changes to community identity and values for all settlements in the Sub Regional Study Area are likely to be more attributable to population growth associated with the cumulative effects of mining and resource projects in the Study Area than to the impacts of the Project alone.

6.10.3 Adjusting to 'New' Neighbours and a 'New' Community

An influx of population into an existing town or locality means that both the existing and new residents need to settle in and adjust to their new neighbours and community, and the differing expectations that each group may hold about the other. The incoming population may well be different to the existing community in a number of ways, such as:

- They are obviously employed only in the mining industry and bring a particular set of skills and attitudes to mining with them;
- They may have a different, or limited, understanding of the agricultural base of the region they are moving to;
- They may be more demographically diverse, particularly in their ethnicity, language or religion;
- They may have relocated from other areas that do not have the same characteristics and lifestyles as the rural community to which they are moving into (e.g. they may have moved from other mining towns or from cities);
- They may therefore have differing expectations about the level and quality of the services and facilities that they hope for in their new town; and
- They may have differing expectations regarding housing prices.

For both groups, there are a number of ways of assisting them. For the incoming residents, information about their new community and its services is important, as well as programs to welcome them and help them settle in. For existing residents, well structured and timely information about the Project, its likely workforce characteristics and their social and housing needs is also crucial. Encouraging social bridging between the existing and incoming populations is crucial.

6.10.4 Mitigation Measures

The following mitigation measure addresses impacts on community identity, values, aspirations and lifestyle.

Specific recommendations relating to amelioration of community identity impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Assist new residents and families to integrate into the community by collaborating with GSC, LPSC, TRC and other mining and resource companies in the region to produce the following information, projects and policies:

- Information for incoming residents, regarding their new community, region, facilities and services;
- Welcoming events or programs for new residents;
- Information for existing residents regarding information about the Project, it's likely workforce characteristics and their needs;
- Holding 'family fun days' to help new families who have relocated here meet other families in the area and on the project; and
- Enforcing, by company policy, employees to remove their high-visibility mining jackets if they intend to visit public places in the Sub Regional Study Area's towns and villages before and after work.

6.11 COMMUNITY COHESION – IMPACTS AND MITIGATIONS

The increase in population expected as a result of the Project's construction and operational workforces will impact on the Sub Regional Study Area's community cohesion, although the exact impacts are difficult to quantify.

The sense of cohesion will be examined through the impacts on:

- The displacement of the population from the Project Area;
- A 'sense of neighbourhood';
- The stability of residency of the population; and
- Volunteering.

A description of the Sub Regional Study Area's current community cohesion is given in **Section 5.13**.

The Sub Regional Study Area's sense of community cohesion is also related to values discussed in the respective sections:

- Community identity, values, aspirations and lifestyle (**Section 6.10**);
- Health and wellbeing (**Section 6.12**); and
- Social order and community safety (**Section 6.13**).

The ACHA contains information on the impacts on community cohesion for the Study Area's Indigenous community.

6.11.1 Movement of Population from the Project Area

Section 6.5.1 outlines the population movements that have already occurred in and adjoining the Project Area as a result of the Project. It concludes that as a result of the purchase of properties by Shenhua Watermark, 26 people moved from their properties, although a net population loss of only 14 has occurred, since others have moved onto those properties since.

It is likely that a number of those individuals or families who moved from their properties after they were sold had their '*sense of community*' disrupted as a consequence. Once these people moved, it is likely that their local knowledge and skills were also a loss to their local community.

Although their departure from the area has probably had a negative effect on social cohesion on the immediate surrounding area of Breeza, it is unlikely that their relocation had a major effect on social cohesion in the wider Gunnedah or Liverpool Plains LGAs. Further, the additional people moving on to the properties since their purchase, as described above, are likely to add to the area's sense of community, as it will also be by those people who have remained on their properties.

6.11.2 Impacts on a Sense of Neighbourhood

Information regarding the existing community's '*sense of neighbourhood*' is given at **Section 5.13.1**. The likely impacts of the Project on the current '*sense of neighbourhood*' experienced by communities in the Sub Regional Study Area are difficult to quantify. However it is acknowledged, as outlined in the previous section, that current residents' understanding of their '*sense of community and neighbourhood*' may be challenged by the expected incoming population. There are ways to assist the current and incoming populations to understand each other better, also as outlined in the previous section.

Changes to the sense of neighbourhood in the Sub Regional Study Area are likely to be more impacted as a result of population growth associated with the cumulative effects of mining and resource projects in the Study Area than the Project alone (the extent of which is described at **Section 1.6**).

6.11.3 Stability of Residency

As stated in **Section 5.13.2**, "*the time that residents have lived in a community affects the extent to which they develop relationships and networks with other residents, and build social capital*" (The Public Practice Pty Ltd, 2007). Data regarding the stability of residency (or how long people have lived at the same address or locality) of the current population are given in **Section 5.13.2**.

It is difficult to predict how the stability of residency may change in component areas of the Sub Regional Study Area over the life of the Project. Anecdotal evidence from the Upper Hunter Valley suggests that individuals and families associated with mining workforces move out of the area as a result to take up new job opportunities more often than the general population did in the past.

Changes in stability of residency in the Sub Regional Study Area are likely to be more impacted as a result of population movements associated with the cumulative effects of mining and resource projects in the Study Area (the extent of which is described at **Section 1.6**) than the Project alone. Also, a higher rate of moving residences (both within a local area and outside it) may merely reflect wider society rather than being particularly attributable to the mining industry.

Regardless of the reason, it is possible to foster a better '*sense of community*' and to foster social capital, even if people move in and out of localities or towns more regularly, by various means which are outlined in previous sections and also discussed below.

6.11.4 Volunteering

There are a number of positive impacts for volunteering as a result of the additional population expected as a result of the Project workforce:

- The potential for additional volunteers as the population grows;
- The introduction of a wider range of skills from the new population to assist volunteering;
- An incoming younger population may be able to reverse the ageing volunteer force in Gunnedah and the observation that volunteers are not as forthcoming as they have been in the past (GSC, 2005b); and
- The potential for mining and resource companies to assist in resourcing volunteer organisations.

However, there are also a number of negative impacts for volunteering as a result of the additional population expected as a result of the Project workforce:

- The increased demands on the range of volunteer services from the new population;
- The shift patterns of mining employment may impede the ability of employees to be involved in community activities and take on volunteering roles;
- Their employees' shift patterns may also place particular strains on family members who may also be then less able to contribute their time as volunteers; and
- The construction phase workforce is unlikely to commit to volunteering roles.

Some of these issues were raised by the NSW SES and NSW Rural Fire Service, as outlined in **Section 5.11.5**.

While the shift pattern arrangements of mining projects may limit the ability of their workforces to contribute to their community, which may then ultimately reduce the pool of volunteers available, the possible future decline of community participation in the Sub Regional Study Area may also be related to a much broader issue of a cultural shift towards greater individualisation and less participation in communities nationwide.

6.11.5 Mitigation Measures

Mitigation measure number 3 in **Section 6.9.10** addresses impacts on volunteers.

Specific recommendations relating to amelioration of community cohesion impacts for the Indigenous community are contained in the ACHA.

6.12 HEALTH AND WELLBEING – IMPACTS AND MITIGATIONS

The Project will have impacts on the health and wellbeing of the component communities within the Sub Regional Study Area. This section will address the impacts of the Project with a focus on the following key issues:

- Fatigue management;
- Family issues;
- Mental health issues; and
- Drug and alcohol issues.

A description of the Sub Regional Study Area's current issues regarding health and wellbeing are given in **Section 5.14**.

The health and wellbeing of the community in the Sub Regional Study Area is also related to the following values which are discussed in the respective sections:

- Community identity, values, aspirations and lifestyle (**Section 6.10**);
- Community cohesion (**Section 6.11**); and
- Social order and community safety (**Section 6.13**).

The ACHA contains information relating to health and wellbeing issues and impacts for the Study Area's Indigenous community.

It is acknowledged that the cumulative health impacts of air quality, water quality and noise have caused increasing concern in mining communities, particularly in the Upper Hunter Valley, and that increasing focus is being given by state government to addressing these impacts at a regional level, as outlined in the SRLUP.

However, as shown by the Project's *Air Quality & Greenhouse Gas Impact Assessment*, *Surface Water Impact Assessment* and *Acoustics Impact Assessment*, amenity levels for these impacts will be met for the Project and health thresholds for each of these impacts are far below these levels. It is likely that these impacts will need to be managed only as result of the cumulative impacts of expected mining and resources projects in the Study Area, (the extent of which are described in **Section 1.6**).

6.12.1 Fatigue Management

Several key local and state government staff raised the issue of fatigue management for mining employees, stating that long shifts and country roads are not conducive to road safety for employees and the wider community, citing fatigue-related road accidents in the Hunter Valley (NSW Police, 2012, pers. comm., November), (NSW Ambulance, 2011, pers. comm., November), (SES, 2012, pers. comm., November).

Fatigue management of the Project workforce was also raised in Project consultation. In particular, the shift and overtime patterns of the Project's operational phase workforce mean that sleep cycles are not necessarily kept regular, which can have negative impacts on health and wellbeing.

It is anticipated that company policies will be implemented to ensure that employees do not have to drive home if they are overly fatigued. Other workforce transport arrangements are outlined in **Section 6.8.8**.

6.12.2 Family Impacts

The impact of shift and overtime patterns on sleep patterns of employees can also have a subsequent effect on their families. For example, anecdotal evidence in the Hunter Valley reveals that the partners (usually mothers) of mining shift workers are often encouraged by their partners to 'stay out of the house' all day with their young babies and / or children so that the mining employee can get enough sleep to be refreshed for the next shift. Since the shifts do not correlate to weekly schedules, this makes time management and community commitments for the non-mining partner difficult.

The changing shift patterns of operational employees also make it difficult for the employee themselves to plan useful recreation time, to attend to necessary family duties or to make commitments to be involved in local organisations such as sporting teams or volunteer clubs.

There may also be impacts on family transport choices where an employee who had previously worked close to home will then have to start commuting (for example between towns in the region) to work.

Arranging before and after school care for school aged children may also become more difficult as the mining workforce increases. The impacts on children's services are outlined in **Section 6.9.5**.

Issues regarding perceptions of domestic violence in the Sub Regional Study Area are described in **Section 5.14**. There is also a perception in the Study Area that domestic violence services may need to be expanded to cope with the increasing population. There is no evidence to suggest that the Project will increase the levels of domestic violence in the community. However, there are opportunities for raising awareness of domestic violence in the community.

6.12.3 Mental Health

Section 6.9.8 includes mental health and relationship issues that have been identified by HNE Health as being possible impacts of a growing mining and resources workforce in the Sub Regional Study Area.

As with a growth in population in any community, it could be expected that the demand for mental health services will increase as the mining related population of the Study Area increases. Although the impacts of the Project on mental health are difficult to estimate, particular issues that may contribute to the mining related population seeking mental health assistance could be:

- Family and partner relationship issues as a result of changing shift patterns and subsequent sleep patterns;
- Separation issues if a mining employee is living away from their friends or family; or
- Issues relating to not being able to settle in well to their new community.

6.12.4 Drug and Alcohol Issues

Alcohol consumption issues in the Sub Regional Study Area have been described in **Section 5.15**.

Some key local and state government staff raised concerns that the level of dangerous alcohol consumption and associated violence in the Study Area may increase with an increased mining community and that appropriate drug and alcohol services may need to be expanded (Local Government, 2011, pers. comm., November), (HNE Health, 2012, pers. comm.).

Although there is no evidence to link increased dangerous alcohol consumption and associated violence with an increase in mining workforce, there is still the opportunity to provide safe alcohol messages and strategies to the Project workforce and general community. Shenhua Watermark will also have strict company drug and alcohol policies and testing regimes.

6.12.5 Mitigation Measures

The following mitigation measures address health and wellbeing impacts.

Mitigations that also relate to health and wellbeing but that are primarily relevant to other sections are included in those other sections, for example in **Section 6.9.8 Health Services**.

Specific recommendations relating to amelioration of health and wellbeing impacts on the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Provide detailed information about managing sleep cycles and the impact on lifestyle and relationships to employees and their families.

Mitigation Measure No 2

Identify programs in the community and within local schools to involve working parents, especially fathers, in children's activities.

Mitigation Measure No 3

Implement zero tolerance drug and alcohol policies and testing regimes for the Project workforce.

Mitigation Measure No 4

Encourage and support organisations to identify and address gaps in mental health, family support and domestic violence services in Gunnedah and surrounding areas.

6.13 SOCIAL ORDER AND COMMUNITY SAFETY – IMPACTS AND MITIGATIONS

The Project will have impacts on the social order and community safety of the component communities within the Sub Regional Study Area. A description of the Sub Regional Study Area's current issues regarding social order and community safety are given in **Section 5.15** while a description of the current level of policing is given at **Section 5.11.5**.

Social order and community safety in the Sub Regional Study Area is also related to the following values which are discussed in the respective sections:

- Community identity, values, aspirations and lifestyle (**Section 6.10**);

- Community cohesion (**Section 6.11**); and
- Health and wellbeing (**Section 6.12**).

The Traffic & Transport Assessment investigates the Project's road safety issues.

The listings of impacts in this section are sourced from interviews with NSW Police, local government staff and other NSW state government agency staff. The recognition of social order and community safety issues in the Sub Regional Study Area is also apparent from their discussion in the Councils' Community Strategic Plans and Crime Prevention Plans.

6.13.1 Impacts on Social Order and Community Safety

Project consultation showed that there is specific concern regarding impacts on social order and community safety as a result of an increasing mining and resources sector workforce. These concerns relate to:

- An increase in domestic violence;
- An increase in anti-social behaviour;
- An increase in alcohol related assaults and other crime; and
- Associated concerns for the personal safety of women and younger people.

Some of these issues have been discussed in the previous sections.

There is no evidence to suggest that a decrease in social order and community safety will result as a consequence of an incoming mining and resources workforce. The recorded crime statistics presented in **Section 5.15.1** show that most crime categories in the Sub Regional Study Area have been stable, or are not significant enough to be recorded, from the period 2007 to 2011. This time period coincides with growth in the mining workforce in the Study Area.

It could be possible that the perceptions of community safety impacts are heightened in the Sub Regional Study Area as a result of the expected predominantly male workforce, and particularly because in the construction and early operational phase workforces of the Project, a significant number of the workforce may be single men without accompanying families.

However, the extent of these potential impacts should not be considered out of context, as any community, with any number of demographic factors influencing its growth or decline (not just an increase in a predominantly male mining workforce) may also experience a decrease in social order and community safety. Also, impacts on social order and community safety are expected to be experienced more as a result of the cumulative impacts of population growth as a result of the expected mining and resources sector in the Study Area (the extent of which is described at **Section 1.6**), rather than the Project alone.

However, there are still opportunities to contribute to existing community safety projects that benefit the whole community.

There is specific concern about the impact on community safety and social order as a result of some of the Project workforce residing at the proposed Workforce Accommodation Facility (MAC Werris Creek). These impacts should be addressed by the proponent of any development.

The impact on policing levels in the Oxley Local Area Command of NSW Police is outlined at **Section 6.9.10**.

There are current collaborative processes set up to manage crime prevention in both the Gunnedah LGA (Gunnedah Shire Crime Prevention Committee and the Gunnedah Liquor Accord) and in the Tamworth Regional LGA (Tamworth Regional Council Crime Prevention Working Group). These organisations and their respective Crime Prevention Plans are the most appropriate forums to manage impacts expected as a result of the increase in the mining related population.

6.13.2 Mitigation Measures

The following mitigation measure addresses social order and community safety impacts.

Specific recommendations relating to amelioration of social order and community safety impacts for the Indigenous community are contained in the ACHA.

Mitigation Measure No 1

Participate in the Gunnedah *Crime Prevention Committee* and become a Partner in the *Gunnedah Liquor Accord*.

6.14 GENERAL MITIGATIONS

The following mitigation measure relates to the overarching social and economic impacts of the Project.

In addition, the proponent will make an offer to enter into Voluntary Planning Agreements with GSC, LPSC and TRC, as outlined in mitigation measure number 2 of **Section 6.9.12**.

Mitigation Measure No 1

A Social Impact Management Plan (SIMP) will be prepared to the satisfaction of the Director-General to manage the potential social impacts of the Project.

6.15 CUMULATIVE SOCIAL IMPACT AND MITIGATION

As demonstrated in **Section 1.6**, there is potential for significant expansion of the mining and resources sector in the Gunnedah Basin. As such there is the potential for significant cumulative social impacts on the Gunnedah Basin and therefore the Study Area.

Table 2 demonstrates that:

- In 2022, the Project operational workforce (383) will represent 11% of the total personnel expected to be employed in mining and resource sector projects in the Gunnedah Basin; and
- The potential cumulative mining and resource sector workforce for the Gunnedah Basin in 2016 is estimated to be approximately three times the size of the estimated existing workforce, with a slight decline to 2022.

The SRLUP acknowledges cumulative impacts and states that the NSW Government will “develop a cumulative impact assessment methodology to manage the cumulative health and amenity impacts of mining and coal seam gas proposals. This methodology will consider whether cumulative impact thresholds or tipping points can be adequately described and predicted. It will also address cumulative impacts on agricultural lands and water resources”, with a timeframe for completion of March 2013. It is not clear as to whether this methodology will extend to social infrastructure, housing and related social impacts.

Shenhua Watermark will support the NSW Government and relevant organisations in establishing this methodology.

Cumulative social impacts expected as a result of the expansion of the mining and resource sector in the Study Area have been addressed in relevant sections through this SIA.

6.16 MONITORING OF SOCIAL IMPACTS

The SIMP, outlined at **Section 6.14** will include a social impact monitoring program, incorporating key performance indicators and a review and reporting protocol, including reporting in the annual report.

The SRLUP recognises that the DP&I will work with Councils, industry and infrastructure providers to monitor the supply of residential and employment land and the delivery of new housing. Shenhua Watermark will take part in that monitoring process alongside other mining and resource companies.

6.17 SUMMARY OF MITIGATION MEASURES

The proponent acknowledges the potential social impacts associated with the Project and surrounding mining developments on the local community and has developed a number of management measures to mitigate these potential impacts on the community. In addition to the mitigation strategies outlined below, the proponent will continue to maintain its social licence to operate by continuing to engage with its community.

The proponent will endeavour to further enhance its relationship with Gunnedah, Liverpool Plains and Tamworth Regional Councils and community groups through the ongoing provision of information and advice to assist the region to prepare for the commencement of the Project. The company will encourage and support organisations to identify and address gaps in mental health, family support, and domestic violence services in Gunnedah and surrounding areas.

The proponent is committed to training and employing locally. As such, it will continue with its current traineeship program and develop training and employment strategies that will target all levels of education and various community groups, including women and the Indigenous community. The proponent's school-based Traineeship Program is the first step in the company's long-term employment and training strategy.

Table 74 is a summary of the social mitigation measures given in this SIA.

Table 74
Summary of Social Mitigation Measures

No.	Mitigation and Management Measures
General	
1	A Social Impact Management Plan will be prepared to the satisfaction of the Director-General to manage the potential social impacts of the Project.
Housing and Residential Land	
2	Monitor housing affordability and availability in the local area and report in the regulatory required Annual Review.
3	Implement an Employee Incentive Scheme which will include policies on items such as encouraging progressive re-location to the local area by provision of financial assistance to relocate.
4	Facilitate the use of the Workforce Accommodation Facility (MAC Werris Creek) by 'non-local hires' of the construction workforce.
5	Encourage the short term use of the Workforce Accommodation Facility (MAC Werris Creek) by 'non-local hires' of the operational workforce while they settle in to their work and familiarise themselves with the local housing market.
6	Provide bus transport for the Project workforce during the construction phase between the Workforce Accommodation Facility (MAC Werris Creek) and the Project.
7	Shenhua will, through the Gunnedah Basin Coal Developers Group & Namoi Mining Working Group, continue to work with local government and other mining companies to monitor workforce size, the workforce's previous and current residential location, local housing demand and supply, housing prices and affordability.
Labour Force	
8	Provide the following employment options for Gunnedah, Liverpool Plains and Tamworth LGA residents: • Apprenticeships; • Traineeships; and • Graduate placement programs. The employment options will include: • Positions for suitable candidates from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs based on merit; • Positions for suitable Indigenous candidates from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs based on merit; and • Positions, including 'transitional employment opportunities', for young people from the Gunnedah, Liverpool Plains and Tamworth Regional LGAs.
9	Continuation of Shenhua's School-based Trainee Program. This program will support 8 students per year for the life of the Project. This includes Indigenous and non-Indigenous students.
10	Provide part time and / or flexible employment opportunities to encourage a higher rate of labour force participation.

No.	Mitigation and Management Measures
11	Contribute funds and assistance to the value of \$5,000 per year for 20 years to relevant school programs currently offered throughout the region and to new programs. For public schools, this assistance will be delivered by coordination through the New England Regional Director of the Department of Education and Communities. For private schools, this assistance will be delivered in direct consultation with specific schools. For example, the following current programs could be assisted: • The Mooki Murris Program, currently at Quirindi High School; • The Clontarf Foundation program currently operating at Oxley High School, Tamworth; • The Quicksmart Program, currently at 30 schools within the New England Education Region; and • Other programs as appropriate and agreed to by the New England Regional Director of the Department of Education and Communities.
Tertiary Education	
12	Provide an annual scholarship fund of \$10,000 for 20 years for locally based students to study a mining related course at University.
13	Provide seed funding of \$250,000 towards the construction of the proposed Mining Skills Centre in Gunnedah. This will be done in collaboration with other mining and resource companies in the Study Area.
Children's Services	
14	Provide an annual scholarship fund of \$5,000 for 10 years for locally based students to study a child care related course as well as sponsoring a traineeship program for child care workers.
Health Services	
15	Commitment to financial contributions of up to \$20,000 per year for 20 years to encourage retainment of medical staff at the Gunnedah Rural Health Centre.
16	Provide information on mental health, counselling and family support programs to support the Project workforce and their families.
17	Provide information to new employees about available health services in the community.
18	Partner with health agencies in promoting healthy lifestyles and disease prevention to the Project workforce.
19	Provide health information on the impacts of mining to residents, including those living in mine owned houses, in the zone of mitigation or acquisition.
Emergency Services	
20	Provide investment of approximately \$50,000 per year for 20 years into capital equipment for services such as the bushfire brigade, ambulance and other valued community services in the Gunnedah and Liverpool Plains LGAs,
21	Implement a salary sacrifice program among all employees with proceeds going to the Westpac Rescue Helicopter.
22	Develop employee policies that enable emergency services personnel to be released from duties to attend emergency calls and to allow release of employees to perform crucial volunteer actions.

No.	Mitigation and Management Measures
Recreation, Leisure and Sporting Facilities	
23	Promote the Gunnedah, Liverpool Plains and Tamworth Regional LGAs' recreational, cultural and social support facilities and community organisations to the incoming workforce and their families.
Contributions to Community Services Through Voluntary Planning Agreements	
24	Shenhua will make an offer to enter into Voluntary Planning Agreements on the following basis: • Contribute a total of \$6 million to Gunnedah Shire Council for the construction of a facility for the benefit of the community in the Gunnedah LGA; • Contribute a lump sum amount of \$350,000 to Tamworth Regional Council. This money will go towards the construction of a regional outdoor play / multipurpose centre (\$250,000) and the construction of Stage 2 of the Tamworth Marsupial Park (\$100,000); and • Contribute a lump sum payment to Liverpool Plains Shire Council of \$1.2 million to go towards the construction of a regional indoor sports centre located in Quirindi.
Community Identity and Values	
25	Assist new residents and families to integrate into the community by collaborating with GSC, LPSC, TRC and other mining and resource companies in the region to produce the following information, projects and policies: • Information for incoming residents, regarding their new community, region, facilities and services; • Welcoming events or programs for new residents; • Information for existing residents regarding information about the Project, it's likely workforce characteristics and their needs; • Holding 'family fun days' to help new families who have relocated here meet other families in the area and on the project; and • Enforcing, by company policy, employees to remove their high-visibility mining jackets if they intend to visit public places in the towns and villages of Gunnedah, Liverpool Plains and Tamworth Regional LGAs before and after work.
Health and Wellbeing	
26	Provide detailed information about managing sleep cycles and the impact on lifestyle and relationships to employees and their families.
27	Identify programs in the community and within local schools to involve working parents, especially fathers, in children's activities.
28	Implement zero tolerance drug and alcohol policies and testing regimes for the Project workforce.
29	Encourage and support organisations to identify and address gaps in mental health, family support and domestic violence services in Gunnedah and surrounding areas.

No.	Mitigation and Management Measures
Social Order and Community Safety	
30	Participate in the Gunnedah <i>Crime Prevention Committee</i> and become a Partner in the <i>Gunnedah Liquor Accord</i> .

* * *

For

HANSEN BAILEY



Jan Fallding
Senior Social Planner



James Bailey
Director

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8 ABBREVIATIONS

Abbreviation	Description
ABS	Australian Bureau of Statistics
ARTC	Australian Rail Track Corporation
Big Book	<i>Tamworth Region's Big Book of Little, and Not So Little, Ideas</i>
CaLLUS	<i>Gunnedah Shire Commercial and Industrial Land Use Strategy 2008</i>
CARE	Centre for Agricultural and Regional Economics
CBP	<i>Community Benefit Plan</i>
CCC	Watermark Coal Project Community Consultative Committee
CDCs	Complying Development Certificates
CEF	Community Enhancement Funding
CGF	Coonarah Gas Fields
CHPP	Coal Handling and Preparation Plant
CISR	<i>Watermark Coal Project Community Information Session Report</i>
CMA	Catchment Management Authority
CWA	Country Women's Association
DA	Development Applications
DEEWR	NSW Department of Education, Employment and Workplace Relations
DGR's	Director-General's Requirements
DHSH	Department of Human Services and Housing
DIDO	Drive in / drive out
Director-General	Director-General of NSW Department of Planning & Infrastructure
DPI	NSW Department of Primary Industries
DP&I	NSW Department of Planning & Infrastructure
DPC	NSW Department of Premier and Cabinet
DRE	Division of Resources and Energy
SRLUP	<i>New England North West Strategic Regional Land Use Plan</i>
EA	Environmental Assessments
EIS	Environmental Impact Statement
EL	Exploration Licence
ELP	Edge Land Planning
EP&A Act	<i>Environmental Planning & Assessment Act 1979</i>
ERP	Estimates of Resident Populations

Abbreviation	Description
FIFO	Fly-in / fly-out
GCP	<i>Gunnedah Community Portrait, 2006</i>
GCPP	<i>Gunnedah Crime Prevention Plan 2007-2009</i>
GCSP	<i>Gunnedah Community Strategic Plan 2012-2022</i>
GLCA	<i>Gunnedah Liveable Communities Assessment Final Report 2011</i>
GLEP	<i>Gunnedah Local Environmental Plan 2012</i>
GLS 1982	<i>Gunnedah Local Environmental Study 1982</i>
GLS 2003	<i>Gunnedah Local Environmental Study 2003</i>
GOSS	<i>Gunnedah Shire Council Draft Open Space Strategy 2009</i>
GRHC	Gunnedah Rural Health Centre
GRP	Gross Regional Product
Gs94A Plan	<i>Gunnedah Shire Council Section 94A Contributions Plan 2007</i>
GSC	Gunnedah Shire Council
GSC Management Plan	<i>Gunnedah Shire Council 2011/12 Management Plan</i>
GSRS	<i>Gunnedah Shire Rural Strategy 2007</i>
GSSP	<i>Gunnedah Shire Social Plan 2005</i>
HACC	Home and Community Care
HAP	<i>Regional Homelessness Action Plan 2010-2014 New England / North West, 2010</i>
HNE	Hunter New England
HNEAHS	Hunter New England Allied Health Service
HNEPH	Hunter New England Population Health
LEP	<i>Local Environmental Plan</i>
JTW	Journey to Work
JRPP	Joint Regional Planning Panel
LGA	Local Government Area
LPI	NSW Land and Property Information
LP LEP	<i>Liverpool Plains Local Environmental Plan 2011</i>
LPSC	Liverpool Plains Shire Council
LPSCCSP	<i>Liverpool Plains Shire Council Community Strategic Plan 2012-2022</i>
LPSCMP	<i>Liverpool Plains Shire Council Management Plan 2010/11</i>
LPSCP	<i>Liverpool Plains Shire Cultural Plan 2005/2010</i>

Abbreviation	Description
LPSC s94A Plan	<i>Liverpool Plains Shire Council Section 94A Contributions Plan 2012</i>
LPSCSP	<i>Liverpool Plains Shire Council Social Plan 2010-2015</i>
LPSCTP	<i>Liverpool Plains Shire Council 2009-2012 Tourism Plan</i>
LPSGMSS	<i>Liverpool Plains Shire Growth Management Study and Strategy 2009</i>
MAHS	<i>More Allied Health Services program</i>
MPC	Multi Purpose Centre
Namoi 2030	<i>Namoi 2030 Regional Resource Strategy</i>
Namoi ROC	Namoi Councils
NCSG	Narrabri Coal Seam Gas
NENW	New England North West
NENWSA4	New England and North West Statistical Area Level 4 (2011 Census)
NSC	Narrabri Shire Council
OEA	Overburden Emplacement Areas
PB	Parsons Brinckerhoff Australia Pty Ltd
PCYC	Police and Community Youth Club
PEA	Preliminary Environmental Assessments
PEL	Petroleum Exploration Licence
RFS	Rural Fire Service
ROM	Run of Mine Coal
RPData	RPData Pty Ltd
SAAP	Supported Accommodation Assistance Program
SES	NSW State Emergency Service
SD	Census Statistical Division
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SWOT 2008	<i>Tamworth Region Key Industry SWOT Analysis 2008</i>
TAFE NEI	TAFE New England Institute
TRAHS	<i>Tamworth Regional Council Affordable Housing Strategy 2011</i>
TRC	Tamworth Regional Council
TRCCP	<i>Tamworth Regional Council Cultural Plan 2010-2015</i>
TRC DCSP	<i>Keychange 2022 – Draft Community Strategic Plan</i>
TRC Management Plan	<i>Tamworth Regional Council 2011 – 2014 Management Plan</i>

Abbreviation	Description
TRCROSP	<i>Tamworth Regional Council Recreation and Open Space Plan 2008</i>
TRCSP	<i>Tamworth Regional Council Social Plan 2006</i>
TRDCP	<i>Tamworth Regional Development Control Plan 2010</i>
TRDS	<i>Tamworth Regional Council Tamworth Regional Development Strategy 2008</i>
TREDS	<i>Tamworth Regional Economic Development Strategy: Stage 2, Final Strategy</i>
TR LEP 2010	<i>Tamworth Regional Local Environmental Plan 2010</i>
TU s94 Plan	<i>Tamworth Urban Section 94 Contributions Plan 2006-2011</i>
TVET	TAFE-delivered Vocational Education and Training
UNE	University of New England
VPA	Voluntary Planning Agreement
WAF	Workforce Accommodation Facility

APPENDIX A

Existing and Proposed Mining and Resource Projects in the Gunnedah Basin

Table 75
Existing and Proposed Mining and Resource Projects in the Gunnedah Basin

Project Type	Project Title	EP&A Act Status	Owner / Proponent	Comment	Workforce	Development Type	Approval Expiration	Production	Distance to Project
Coal	Caroona Coal Project	EL Only	BHP Billiton	Pre feasibility	Not Available. Assume 600 employees.	Underground	Not Available	Not Available	3 km south
	Werris Creek Mine	Approved	Whitehaven Coal Mining Ltd	Production phase	85 to 100 employees	Open cut	2032	2.5 Mtpa (ROM)	20 km south-east
	Canyon Mine	Approved	Whitehaven Coal Mining Ltd	Production ceased (2009)	Zero	Open cut	2012	1.25 Mtpa (ROM)	25 km north
	Sunnyside Mine	Approved	Namoi Mining Pty Ltd (Whitehaven Coal Mining Ltd)	Production ceased - placed on Care and Maintenance in 2012	Zero	Open cut	2015	1 Mtpa (ROM)	28 km north-west
	Vickery South Project	EL Only	Whitehaven Coal Mining Ltd	Pre feasibility	Not Available. Assume 100 employees	Open Cut	Not Available	3 Mtpa (ROM) (estimation)	44 km north
	Vickery Mine	Approved	Whitehaven Coal Mining Ltd	Production ceased (1998)	Zero	Open cut	2012	N/A	45 km north
	Vickery Coal Project	DGRs Issued	Whitehaven Coal Mining Ltd	PEA submitted	400 operational employees	Open cut	2043	4.5 Mtpa (ROM)	45 km north
	Rocglen Coal Mine	Approved	Whitehaven Coal Mining Ltd	Production phase	54-67 employees	Open cut	2022	1.5 Mtpa (ROM)	47 km north
	Tarrawonga Coal Mine	Approved	Whitehaven Coal Mining Ltd – 70%, Idemitsu Australia Resources Pty Ltd – 30%	Production phase	60-70 employees	Open cut	2017	2 Mtpa (Product)	62 km north north-west

Project Type	Project Title	EP&A Act Status	Owner / Proponent	Comment	Workforce	Development Type	Approval Expiration	Production	Distance to Project
Coal	Tarrawonga Coal Project	Assessment	Whitehaven Coal Mining Ltd – 70%, Idemitsu Australia Resources Pty Ltd – 30%	Under assessment	120 operational employees	Open cut	2030	3 Mtpa (Product)	62 km north north-west
	Goonbri Project	EL Only	Goonbri Coal Company Pty Limited	Early stages, pre exploration	Not available. Assume 70 full time	Not Available	Not Available	Not Available	62 km north
	Boggabri Coal Mine	Approved	Idemitsu Australia Resources Ltd	Production phase	Up to 500 full time equivalent employees	Open Cut	2033	7 Mtpa (Product)	64 km north
	Maules Creek Coal Project	Approved	Whitehaven Coal Mining Limited	Federal approval pending	340 construction employees 466 operational employees	Open cut	2033	13 Mtpa (ROM)	67 km north
	Narrabri Coal Mine	Approved	Narrabri Coal Pty Ltd (70% Whitehaven Coal Mining Ltd)	Production phase	211 operational employees	Underground	2031	8 Mtpa (Product)	76 km north north-west
Coal Seam Gas	Coonarah Gas Field	Approved	Eastern Star Gas Limited	Production phase	Not available. Assume 50 full time	N/A	Not available. Assume 2013	5.8 Petajoules (PJ) (proven and probable)	115 km north north-west
	Santos Gunnedah CSG Project	PEL only	Santos	Exploration phase	1,000 construction employees (over half of total project) 100 operational employees (half of total project)	N/A	2016	210 PJs	North West NSW Region, comprising 4 subregions.*

*Sub regions include Northern Slopes and Northern Central Plains where the majority of construction activity is expected to occur. These 2 sub regions overlap with the Project Study Area

APPENDIX B

2006 to 2011 Census Comparison

Table 76
Census Area Comparisons, 2006 to 2011

2006 Geographic Area	Area	Population	2011 Geographic Area	2011 Area	2011 Population	Compatibility	% of 2011 area compared to 2006	% of 2011 population compared to 2006
Urban Centre / Localities								
Gunnedah (Urban Centre / Locality)	21.7	7540	Gunnedah (Urban Centre / Locality)	33.4	7888	Partly comparable	54%	5%
Curlewis (Urban Centre / Locality)	1.3	604	Curlewis (Urban Centre / Locality)	4.9	589	Partly comparable	277%	-2%
Quirindi (Urban Centre / Locality)	12.9	2608	Quirindi (Urban Centre / Locality)	9.8	2580	Partly comparable	-24%	-1%
Werris Creek (Urban Centre / Locality)	3.6	1489	Werris Creek (Urban Centre / Locality)	2.5	1437	Partly comparable	-31%	-3%
Tamworth (Urban Centre / Locality)	36.5	33476	Tamworth (Urban Centre / Locality)	72	36131	Not comparable	97%	8%
State Suburb								
Curlewis (State Suburb)	422.6	755		1105.1	969	Not comparable	162%	28%
Breeza (State Suburb)			Breeza Gazetted Locality is within Curlewis SSC			Not comparable		
Spring Ridge (State Suburb)	1112.3	437	Spring Ridge (State Suburb)	791	389	Partly comparable	-29%	-11%

Appendix B

2006 Geographic Area	Area	Population	2011 Geographic Area	2011 Area	2011 Population	Compatibility	% of 2011 area compared to 2006	% of 2011 population compared to 2006
Blackville (State Suburb)			Blackville GL is within Pine Ridge SSC			Not comparable		
Caroona (State Suburb)	1	178	Caroona (State Suburb)	0.7	90	Partly comparable	-30%	-49%
Willow Tree (State Suburb)	0.8	169	Willow Tree (State Suburb)	254.5	422	Not comparable	31713%	150%
Currabubula (State Suburb)	354.1	388	Currabubula (State Suburb)	315.7	321	Partly comparable	-11%	-17%
Other								
Carroll (Collector Districts amalgamation)	1.8	198	Carroll SSC	3.2	176	Partly comparable	78%	-11%
Northern Statistical Division			New England and North West SA4			Comparable		
LGAs – all Local Government Areas are comparable								
Gunnedah LGA								
Liverpool Plains LGA								
Tamworth Regional LGA								
Narrabri LGA								
Upper Hunter LGA								

Source: ABS 2006 and 2011

APPENDIX C

Local Government Social and Economic Planning Documents

LOCAL GOVERNMENT SOCIAL AND ECONOMIC PLANNING DOCUMENTS

This section supports **Section 3** of the SIA. It summarises the range of policies, strategies and environmental planning instruments relevant to this SIA that were prepared by or for GSC, LPSC and TRC.

GUNNEDAH SHIRE COUNCIL

Gunnedah Community Strategic Plan 2012-2022

The GCSP is a 10 year plan, identifying the community's priorities and was adopted by Council in early 2012. It is the most recent of Council's planning documents relevant to this SIA, and particularly represents contemporary attitudes to Gunnedah's current quality of life, future development and servicing.

The GCSP identifies a range of outcomes, strategies and responsibilities relating to the Gunnedah LGA to achieve outcomes determined by an extensive consultation process. It determines the priorities for the LGA and the subsequent services and projects that Council will deliver over the next 10 years. Delivery of the strategies will be achieved through Council's forthcoming resourcing strategies, delivery and operational plans.

The GSCP recognises that the achievement of outcomes in the GSCP relies on a range of key stakeholders, including residents, local businesses, community organisations and government organisations, both state and Federal. Its success also relies heavily on funding provided from state and Federal Governments.

The GCSP's vision is "*a prosperous, caring and proud community reflected in the achievements and aspirations of the people*", while the GCSP's community values relate to community spirit, environmental care and lifestyle access.

The GSCP has four themes – '*Engaging and Supporting the Community*', '*Building our Shire's Economy*', '*Retaining our Quality of Life*' and '*Protecting and Enjoying our Beautiful Surrounds*'.

A range of information is listed under each of these themes, the most relevant to this SIA being each theme's outcomes and specific strategies which also identify Council's role, other organisations' responsibilities and a link to the NSW 2021 State Plan. Relevant strategies and other information from the GCSP are referenced in this SIA.

GSC also commissioned Blackadder Associates to assist in the development of the GCSP by producing a *Community Consultation Outcomes Paper* in March 2011 (Blackadder Associates, 2011). Relevant sections of this document are also reported in this SIA.

Gunnedah Shire Council 2011/12 Management Plan

LGAs in NSW are required to prepare yearly management plans to show income and expenditure expected for the forthcoming financial year, as well as providing statements of principal activities. The GSC Management Plan comprises a budget totalling \$46,884 million and encompasses a significant variety of council operations, as well as several major capital improvement works being undertaken at an estimated cost of \$16.102 million. Details of proposed expenditure items can be found in the Management Plan.

Gunnedah Shire Council Section 94A Contributions Plan 2007

The Gs94A Plan prepared under the EP&A Act establishes a relationship between expected development in the LGA and the consequent demand for public facilities in the LGA.

The Gs94A Plan notes the following types of facilities are required as a result of the following types of future developments:

- Residential development - open space provision, improvement and embellishment, stormwater drainage augmentation, community and cultural facilities, public domain and town centre improvements, transport, access and mobility improvements such as for walking, cycling, public transport and private vehicles, and environmental improvements;
- Commercial developments - public facilities, stormwater drainage augmentation, public domain and town centre improvements, cultural facilities, and transport, access and mobility improvements;
- Mixed use developments and recreation and tourism related developments - similar demands for public facilities as both residential and commercial development; and
- Industrial development - primarily transport, stormwater drainage, access and mobility improvements and environmental improvements.

Since 2007, some of the facilities prescribed in the Works Schedule of the Gs94A Plan have been constructed. A current version of Schedule 1 of the Gs94A Plan (i.e. excluding facilities already provided) is reproduced at **Table 77**, which shows facilities yet to be provided, their estimated costs at 2007 and staging.

Table 77
Works Schedule, GSC Section 94A Contributions Plan, 2007

Item	Public Facilities	Expenditure	Staging*
A. Completed works for which contributions will be recouped			
Nil			
B. Works in progress for which contributions will continue to be levied			
B1. Community Improvement -			
B1.1 (COMPLETED)	CBD Upgrade Program Public domain and townscape improvements - Conadilly Street - Side Streets	\$2,800,000 \$250,000	Short to Medium Medium to Long
B2. Stormwater Drainage			
B2.1 (COMPLETED)	Stormwater Drainage Trunk Stormwater Drainage Warranuna Industrial Area	\$250,000	Short to Medium

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Item	Public Facilities	Expenditure	Staging*
C. New Public facilities for which contributions will be sought			
C1. Community Improvement			
C1.1	Cultural Improvement - Civic Centre redevelopment	\$5,000,000	Ongoing
C1.2 (COMPLETED)	Public Toilet - Kitchener Park	\$225,000	Short
C1.3	Visitor Information Centre - New tourism facility in Kitchener Park	\$1,800,000	Long
C1.4	New Swimming Pool - Gunnedah Memorial Pool	\$3,000,000	Medium
C2. Stormwater Drainage			
C2.1	Stormwater Drainage Strategy for North Gunnedah	\$150,000	Short
C2.2	Trunk Stormwater Drainage in North Gunnedah	\$1,000,000	Medium to Long
C2.3	Interlot Stormwater Drainage to North Gunnedah and Medium Density Residential areas of Mornington	\$500,000	Medium to Long
C2.4	Pearson Street Drainage	\$450,000	Short
C3. Environmental Management			
C3.1	Riverine Development Control Plan and Riverine Strategy	\$10,000	Short
C3.2	Riverine Environmental Management and Improvement Program	\$500,000	Medium to long
C4. Parks			
C4.1	Pocket Parks embellishment / shade protection / playground equipment	\$300,000	Ongoing
C4.2	Village Parks improvement and embellishment	\$100,000	Ongoing
C4.3	Flood Lighting to Kitchener Park – upgrade of sports lighting	\$400,000	Short
C4.4	Flood Lighting to Wolseley Park – upgrade of sports lighting to eastern side	\$40,000	Medium
C4.5	Embellishment / upgrade of shade shelters at Wolseley Park	\$30,000	Medium

Item	Public Facilities	Expenditure	Staging*
C5. Transport			
C5.1	Lane Widening Program	\$1,000,000	Ongoing
C5.2	Mobility Improvements – Town Wide Cycleway plan implementation, pram ramps, walkways, pedestrian ways including surface treatment, lighting and signage	\$500,000	Medium to Long
C5.3	CBD Road Shoulder Upgrade (Conadilly Street)	\$750,000	Medium
C5.4	Urban Local Road reconstruction and upgrade	\$320,000	Medium to Long
C6. Strategic Management			
C6.1	Economic Development Strategy for Gunnedah Shire	\$200,000	Short to Medium

Source: GSC, 2007, as modified with advice from GSC, 2011.

Notes: * staging in this schedule means: Short Term 1-2 years; Medium Term 3-4years; Long Term 4-10 years; Ongoing, continuing works

The GSC Management Plan notes that a review of the Gs94A Plan will be undertaken in the 2011/2012 financial year. Presumably this review will draw on information on the likely population growth in the LGA particularly that expected to be generated by the resources industry. This population growth, and associated growth in the industrial and commercial sectors, will necessitate a review of the range of facilities and costs required under the Gs94A Plan.

Gunnedah Shire Social Plan 2005

Social Plans for LGAs have been a requirement of the NSW Department of Local Government since 1996. GSC adopted the GSSP in 2005. Intended as a five year document, it has now been superseded by the State Government's requirements for LGAs to produce Community Strategic Plans, detailed previously. However, the issues noted in the 2005 GSSP are still relevant, even if some background information is now outdated. The main findings of the GSSP included:

- Improving on opportunities for intersectoral collaboration;
- Marketing Gunnedah to young families for professional jobs; and
- Economic growth and development.

The GSSP reported that there were low levels of intersectoral collaboration amongst service providers in Gunnedah, stating that this was surprising given the relatively small population and service numbers in the town and the relatively stable population. Other main findings, subject areas and recommendations addressed by the GSSP were:

- Volunteers;
- The Ageing Population;

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- Loss of Young Adults from the Community;
- Aboriginal Community;
- Child Wellbeing;
- Men;
- Domestic Violence / Assault / Sexual Assault; and
- Farming Families Support.

Mandatory target population groups (as specified by the State Government at the time) addressed in the GSSP were:

- Older people;
- Children;
- Young people;
- Women;
- Aboriginal People;
- People from Non-English Speaking Background;
- People with a Disability; and
- Men.

Relevant data and findings from the GSSP are referenced throughout this SIA.

Gunnedah Shire Council Draft Open Space Strategy 2009

ROSS Planning Pty Ltd prepared the GOSS for GSC in 2009. Although the document has not been formally adopted by GSC, it provides direction into the future for GSC's planning of recreation and open space needs. The GOSS's aims and recommendations are outlined in **Section 5.11.6**.

Gunnedah Crime Prevention Plan 2007-2009

The GCPP is outlined in **Section 5.15.1**.

Economic Development Plans

Gunnedah does not have a current Economic Development Strategy. Council's contemporary future economic development issues and outcomes are contained in the GCSP.

Previous economic development studies and strategies include the *Community Strategic Plan*, prepared for *Gunnedah Main Street / Small Towns Program / Grow Gunnedah Program* (de Greenlaw Consultancy, 2003) and *Gunnedah Economic Development Portrait* (The Public Practice Pty Ltd, 2010) prepared for GSC. The Economic Development Portrait contains detailed economic and social data for the Gunnedah LGA and has been referenced throughout this SIA.

Gunnedah Local Environmental Study 1982

In 1982, GSC resolved to prepare a LEP, and commissioned the GLES 1982 to inform the preparation of the LEP. The GLES 1982 addressed emerging issues in the LGA, being a range of urban growth issues, transport issues and organisational and administrative issues. The GLES 1982 was a typical LES of that era, which:

- Comprehensively documented all aspects of land use issues in the LGA;
- Identified past and emerging issues;
- Identified planning needs and principles; and
- Analysed the above to provide recommendations for future planning of the LGA.

Relevant information from the GLES 1982 is referenced in this SIA.

Gunnedah Local Environmental Study 2003

In 2003, GSC commissioned a review of the GLES 1982. Since this review was undertaken in the economic '*recession*' in Gunnedah in the early 2000s, its recommendations are no longer as relevant as the original GLES 1982, which more closely matches the economic future experienced in the latter 2000s (GSC, 2011, pers. comm., 17 November).

Gunnedah Shire Rural Strategy, 2007

The GSRS was commissioned by GSC to supplement the information provided in the GLES 2003. It provides a future direction for rural areas of the LGA, providing a description of the physical, social and economic environment of the LGA as well as the planning context. The development pattern of the LGA is described in the GSRS as well as the issues facing the future of the LGA. Analysis of these issues is carried out to provide a set of options for the rural areas of the LGA, including a vision, growth management philosophy and conservation and development principles. Specific strategies, objectives, implementation strategies, policy actions, responsibilities and time frames for various aspects of rural planning in the LGA are also given.

Gunnedah Shire Commercial and Industrial Land Use Strategy, 2008

The overarching objective of the CalLUS which was commissioned by GSC, was to prepare a strategic platform on which to base Council's future direction in respect to the zoning and management of industrial and commercial land in the development of the then forthcoming Gunnedah LEP. As well as providing specific direction for the future of industrial and commercial zonings in Gunnedah, the CalLUS documents various data and contextual planning information to help inform its recommendations. Relevant information from the GLES 1982 and GLES 2003 is referenced in this SIA.

Gunnedah Local Environmental Plan

Gunnedah Local Environmental Plan 2012 (GLEP 2012) (GSC, 2012b) is the LEP applicable to the Gunnedah LGA. The planning documents described above all contributed to the development of the GLEP 2012.

LIVERPOOL PLAINS SHIRE COUNCIL

Liverpool Plains Shire Council Community Strategic Plan 2010/11 – 2020/21

The purpose of the LPSCCSP is to identify the Liverpool Plains communities' main priorities and expectations for the future and to plan strategies for achieving those goals.

Like the GCSP, the LPSCCSP is the most recent of Council's planning documents relevant to this SIA and represents the most contemporary published information on the community's attitudes to its current way of life, and to its vision for the future.

The LPSC vision, as stated in the LPSCCSP is that *"the Liverpool Plains Shire area achieves higher levels of growth and generates improved quality of life through expanded opportunities for economic and social development being realised within an environmentally and financially sustainable framework"*.

The LPSCCSP outlines key strategies and actions for the LGA for the next 10 years, with associated time frames, for four 'program' areas which address four main themes of social, environmental, economic and governance.

Key strategies and actions relevant to this SIA are presented in the relevant parts of this SIA.

Liverpool Plains Shire Council Management Plan 2010/11

The LPSCMP contains a range of information relating to the operation of Council in that financial year, including sections which detail Council's yearly expenditure and income.

Liverpool Plains Shire Council Social Plan 2010-15

The LPSC is intended as a five year document. It has now been superseded by the State Government's requirements for LGAs to produce Community Strategic Plans, as detailed previously. However, the issues noted in the LPSCSP are still relevant. Target populations addressed in the LPSCSP were:

- Children less than 12 years;
- Young people aged between 12 and 24 years;
- Women;
- Older people;
- People with disabilities;
- Aboriginal People;
- People from culturally and linguistically diverse backgrounds, including racial, ethnic, and ethno religious groups; and
- General community.

The key strategies of the LPSCSP were:

- Provide recreational opportunities;
- Aboriginal access to the community;
- Community development and participation;

- Maintain health care services at current levels;
- Maintain Home and Community Care Services;
- Increase cultural opportunities;
- Promote natural resource management and build on the Shire's environmental record; and
- Maintain aged care facilities and services.

'Future opportunities' outlined in the LPSCSP were:

- Release new land to meet future demands associated with the town's growth;
- Promotion of local produce;
- Promote Quirindi as a centre of equine sporting excellence;
- Maintain position of Community Services Co-ordinator;
- Promote local shopping opportunities; and
- Insulate the community from agricultural downturn.

Relevant data and findings from the LPSCSP are referenced throughout this SIA.

Liverpool Plains Shire Council Section 94A Contributions Plan 2012

The LPSC s94A Contributions Plan 2012 (LPSC s94A Plan) prepared under the EP&A Act establishes a relationship between expected development in the LGA and the demand for public amenities and services in the LGA to meet that development.

The Works Schedule of the LPSC s94A Plan is reproduced at **Table 78** showing each of the facilities nominated, their costs and staging.

Table 78
Works Schedule, LPSC Section 94A Contributions Plan 2012

Item		Expenditure	Staging*
A. Completed works for which contributions will be recouped			
B. Works in progress for which contributions will continue to be levied			
STORMWATER DRAINAGE			
B1.	Quirindi Stormwater Study / Strategy	\$40,000	Short Term
PUBLIC FACILITIES			
B2.	Quipolly Dam Recreation area	\$250,000	Short Term
ROAD TRANSPORT			
B3.	Werris Creek Main Street Improvements	\$600,000	Short – Medium Term
C. New Public facilities for which contributions will be sought			
PUBLIC FACILITIES			
C1.	Community Improvement		
	Quirindi Library Facilities	\$500,000	Long Term
	Quirindi New Swimming Pool	\$3,000,000	Long Term

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Item		Expenditure	Staging*
	Cultural – Werris Creek Rail Museum	\$1,000,000	Medium Term
	Childcare Centre Additions	\$800,000	Medium Term
	Werris Creek Pool Amenities	\$400,000	Long Term
	Quirindi Indoor Sports Stadium	\$1,600,000	Short – Medium Term
	Cinematic Museum	\$300,000	Long Term
	Animal Shelter	\$250,000	Long Term
C2.	Stormwater Drainage		
	Stormwater Works – Quirindi, Werris Creek, Willow Tree	\$2,500,000	Long Term
C3.	Environmental Management		
	Environmental Management and Improvement Program – Quirindi Creek, Jacob and Joseph Creek and Werris Creek	\$900,000	Medium Term
C4.	Parks		
	Village Parks improvement and embellishment	\$400,000	Medium Term
	Golland Fields Improvement Program	\$175,000	Medium Term
	Quirindi Racecourse / Showground Improvement Program	\$700,000	Medium to Long Term
	George V Park Willow Tree	\$80,000	Medium Term
C5.	Transport		
	Mobility Improvements		Medium to Long Term
	Quirindi	\$150,000	
	Werris Creek	\$100,000	
	Willow Tree	\$50,000	
	Pedestrian Pathways to Town Centres		
	Quirindi	\$450,000	
	Werris Creek	\$250,000	
	Willow Tree	\$250,000	
	Corridor Road Improvements		Short to Medium Term
	Quirindi East to Town Centre	\$800,000	
	Quirindi – Werris Creek Road Cycleway to Golf Course	\$500,000	
	Traffic Study – Quirindi	\$20,000	Short Term

Item		Expenditure	Staging*
	Study for Rail Overpasses – Quirindi, Werris Creek and Willow Tree	\$150,000	Short Term
	Main Street Upgrade - Quirindi	\$2,000,000	Medium Term
C6	Heritage		
	Werris Creek Main St Heritage Study	\$50,000	Short Term

Source: LPSC, 2012b

Notes: * staging in this schedule means: Short Term 1-2 years; Medium Term 3-4 years; Long Term 4-10 years; Ongoing-continuing works

Relevant sections of this SIA have listed the requirements for the facilities above.

Liverpool Plains Shire Cultural Plan 2005/2010

The LPSCP was prepared by LPSC as a requirement of the NSW State Government. Its purpose was to provide a framework for the Shire's role in cultural development through identifying:

- A cultural vision for the Shire;
- Aims;
- Key result areas; and
- Suggested strategies / means to achieve the identified aims and key result areas.

The LPSCP:

- Seeks to identify the various cultural needs of the Liverpool Plains community,
- Determines whether it is Council's responsibility to take action upon them; and
- Recommends action plans to meet those needs.

The LPSCP defines culture as *"the cumulative expression of community identity through the natural and built environment; heritage and shared languages; through the arts and crafts; recreation and leisure activities and the many other ways by which creative identity is expressed, interpreted and acknowledged"*.

The LPSCP addresses the following 'key result areas':

- Cultural Spaces;
- Cultural Diversity;
- Cultural Education;
- Cultural Heritage;
- Cultural Events; and
- Cultural Links.

For each of the Key Result Areas, there is a set of action plans, each including objectives, goals (which set out specific actions), means (how the goals will be achieved) and the proposed commencing year of the action. As such, there is a comprehensive and diverse list of specific actions that cover a wide geographic range of the LGA.

Relevant data and findings from the LPSCP are referenced in this SIA.

Liverpool Plains Shire Council 2009-2012 Tourism Plan

The LPSCTP is a document which:

- Outlines the future mission and vision of tourism in the Shire;
- Documents recent tourism data;
- Outlines strengths, weaknesses, opportunities and threats; and
- Details relevant marketing strategies for the Shire.

Liverpool Plains Shire Growth Management Study and Strategy 2009

The Liverpool Plains LGA's current strategic land use planning directions are set out in the LPSGMSS, which was commissioned by LPSC to provide a future direction for the settlements and land within the rural areas of the LGA. It was the first stage in the review of the then LEP. It provides a description of the physical, social and economic environment of the LGA as well as the planning context. The development pattern of the LGA is described as well as the issues facing the future of the LGA. Analysis of these issues was then carried out to provide a set of options, including a vision, growth management philosophy, development principles, objectives, strategies and policy actions for a number of matters that are all related to providing a sustainable future for the LGA.

The LPSGMSS then informed the development of the now current LP LEP 2011.

Liverpool Plains Local Environmental Plan 2011

The LP LEP 2011 is the LEP currently applicable to the Liverpool Plains LGA. The planning documents described above in this section all contributed to its development.

TAMWORTH REGIONAL COUNCIL

Keychange 2022 – Draft Community Strategic Plan

The TRC DCSP is TRC's first 10 year strategic plan developed for the Tamworth Region. It is the most recent of Council's planning and strategic documents relevant to this SIA, and particularly represents contemporary community attitudes to the Tamworth Region's current quality of life, future development and servicing.

Similar to all other Community Strategic Plans prepared by NSW Councils, it determines the priorities for the LGA and the services and projects that Council will deliver over the next 10 years. Delivery of the strategies within the TRC DCSP will be achieved through Council's forthcoming Resourcing Strategies, Delivery and Operational Plans.

The vision for the Tamworth Regional community is "*a region of opportunity and prosperity – a place to call home*". The meanings of '*opportunity*', '*prosperity*' and '*a place to call home*' are outlined in the TRC DCSP. The TRC DCSP incorporates four themes:

- A spirit of community;
- A prosperous region;
- An accessible region; and
- A region for the future.

For each of the four themes, a set of objectives, strategies and measures of success are given. Relevant information (particularly the strategies) from each of these themes are presented in the relevant parts of this SIA.

Accompanying the TRC DCSP is the *Tamworth Region's Big Book of Little, and Not So Little, Ideas* (Big Book) (TRC, 2011f) which contains all the ideas, suggestions and actions that were taken from various workshops held across the region as part of the TRC DCSP consultation. In listing all of the ideas given in the consultation, the Big Book demonstrates the linkages between the ideas, suggestions and actions identified by individual and high level strategies and objectives contained in the TRC DCSP. It is important to note that listing of ideas in the Big Book does not mean that each action or idea will automatically occur.

Tamworth Regional Council s94 Contributions Plans

TRC has separate s94 Contributions Plans reflecting the previous LGAs that were amalgamated into the TRC LGA:

- *Tamworth Urban Section 94 Contributions Plan 2006-2011* (TU s94 Plan) (TRC, 2005);
- *Hills Plain East Section 94 Contributions Plan* (TRC, 2003);
- *Parry Shire Council Section 94 Contributions Plan No 1 (Rural Roadworks)* (Parry Shire Council, n.d.);
- *Parry Shire Council Section 94 Contributions Plan No 2 (Bushfire Brigade Services)* (Parry Shire Council, n.d.);

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- *Parry Shire Council Section 94 Contributions Plan No 3 (Mines and Extractive Industries)* (Parry Shire Council, 1999);
- *Parry Shire Council Section 94 Contributions Plan No 4 (Rural Based Industry Traffic Generating Developments)* (Parry Shire Council, n.d.);
- *Nundle Section 94 Contributions Plan* (Nundle Council, n.d.);
- *Manilla Shire Council Contributions Plan 2004* (Manilla Shire Council, 2004); and
- *Barraba Shire Council Draft Contributions Plan* (Barraba Shire Council, n.d.).

The TU s94 Plan is the most relevant to this SIA and is discussed below.

Tamworth Urban Section 94 Contributions Plan 2006-2011

The TU s94 Plan applies to development consents issued in the urban area of TRC after August 2005. TRC has recently commenced a review of the TU s94 Plan.

The TU s94 Plan primarily applies to residential development which has the potential to increase population but also applies to retail, commercial or other business development within the CBD. A summary of the Works Schedule and supporting information of the TU s94 Plan is given at **Table 79**, showing each of the facilities, their costs and staging.

Table 79
Works Schedule and Supporting Information, Tamworth Urban s94 Plan

Public Facility	Estimated Capital Cost	Apportionment s94 - to 2011	Preferred Location	Estimated Staging
Open space embellishment – focus on local facilities	\$732,785	\$732,785 (100%)	Embellishment of open space facilities Tamworth urban area	2006-2011
Community Facilities – as identified in <i>Tamworth Cultural Plan 2003</i> , including: • Library augmentation; • Art Gallery facilities and stocks; • Public art; • Skate park upgrade • Archive facility	\$525,000	\$175,000 (33%)	Tamworth Urban Area	2006-2011
Cycleway – extending existing network toward outer residential areas	\$289,000	\$95,948 (33%)	Tamworth Urban Area Per Works Schedule	2006-2011
Urban Roads Maintenance and Upgrade Catchments 1-4 (as specified in s4.6.4 of TRC s94 Plan)	\$10,359,270	\$290,060 (2.8%)	Tamworth Urban Area	2006-2011

Public Facility	Estimated Capital Cost	Apportionment s94 - to 2011	Preferred Location	Estimated Staging
Urban Roads Catchment 5 Hills Plain (as specified in s4.6.4 of TRC s94 Plan)	\$8,664,000 (to complete)	\$736,440 (8.5%)	Hills Plain Area	2006-2011
CBD Car Parking (3 CBD car parks as specified in s4.6.5 of TRC s94 Plan)	\$1,030,000	\$12,900 per space not provided on site	Central Business District	2006-2011
Studies Recoupment – for s94 Plan preparation and administration	\$21,413	\$21,413 (100%)		Complete

Source: TRC, 2005

Relevant sections of this SIA list the requirements for the facilities above.

The forthcoming review of the TU s94 Plan will presumably take into account the population growth expected to be generated in the wider region by the resources industry. This population growth, and associated growth in the industrial and commercial sectors of the LGA, will necessitate a review of the range of facilities and costs required under the TU s94A Plan.

Tamworth Region Key Industry SWOT Analysis 2008

The SWOT 2008 report provides baseline information for economic development within the Tamworth region and identifies preliminary opportunities for economic development which informed the preparation of the TREDS in 2010, discussed below. The following priority areas for economic development initiatives were investigated in the SWOT 2008:

- Tamworth as a regional service centre;
- Food processing industry;
- Transport and distribution industry;
- Education industry;
- Equine industry;
- Tourism industry; and
- Aviation industry.

The SWOT 2008 contains a considerable amount of background data and analysis relating to the priority industries outlined above, including the following aspects:

- National perspective - Industry overview and current and emerging trends;
- Tamworth perspective – industry overview, support industries, current and emerging trends, activity and competition;
- SWOT analysis; and
- Moving forward – listing the strategic assets and the opportunities they support.

The SWOT 2008 then outlined economic development considerations of:

- Growth drivers and impediments;
- Key considerations in economic development, including:
 - Provision of existing industry programs;
 - Focus on specific sectors with competitive advantage;
 - Collaboration with regional and state groups;
 - Engage and foster relationships between private sector and universities; and
 - Focus on knowledge / value based industries for growth.
- Council's role in economic development.

Relevant data and findings from the SWOT 2008 are referenced in this SIA.

Tamworth Regional Economic Development Strategy Stage 2 Final Strategy 2010

Following on from the SWOT 2008 report described above, TRC published the *Tamworth Regional Economic Development Strategy: Stage 2, Final Strategy* (TREDS) in 2010.

The aim of the TREDS is given in the SWOT 2008 as “*TRC is seeking to develop a Regional Economic Development Strategy (REDS) to foster innovative business activities, which allow above average wage generation and business activity that will continue to grow into the future. These business activities will become the foundation for a long-term sustainable regional economy*” (AEC Group, 2008).

The TREDS concentrated on the three key industry sectors of:

- Education;
- Food Processing; and
- Transport and Distribution Services.

The TREDS includes an extensive list of strategies, specific actions and monitoring recommendations, as well as a considerable amount of background data and analysis relating to the priority industries outlined above.

The analysis of the ‘*Transport and Distribution Services*’ sector has the most relevance to the Project, as the TREDS acknowledges that the anticipated development of extensive mining activity in the Gunnedah Basin and the continued agricultural production from the Liverpool Plains will provide the basis of future transport demands.

Relevant data and findings from the TREDS are referenced in this SIA.

Tamworth Regional Council 2011 – 2014 Management Plan

The TRC Management Plan nominates that the ‘*major infrastructure development*’ projects for the term of the current plan are:

- Tamworth Westdale Wastewater Treatment Plant Augmentation and Effluent Reuse Farm Scheme;
- Split Rock Dam to Barraba Pipeline;

- Chaffey Dam Upgrade;
- Regional and Local Community Infrastructure Program – Round 3;
- Tamworth Regional Airport Security Upgrade; and
- Aquatic Centre.

Details of these and all other proposed expenditure items can be found in the TRC Management Plan.

Tamworth Regional Council Social Plan 2006

TRC prepared the TRCSP after the amalgamations of its five component LGAs two years previously. Its legal requirement has now been superseded by the State Government's requirements for LGAs to produce Community Strategic Plans, detailed previously. However, the issues noted in the TRCSP are still relevant. Target populations addressed in the TRCSP were:

- Children;
- Young people;
- Women;
- Aboriginal People;
- Older people;
- People with disabilities including HIV / AIDS;
- People from culturally diverse backgrounds;
- People from diverse sexual backgrounds;
- Low income people; and
- Volunteers.

The TRSCSP addresses the main community service sectors of:

- Family and Individual Support;
- Health;
- Recreation and Sport;
- Employment, Education and Training;
- Community Information;
- Community Safety;
- Cultural Development;
- Transport;
- Housing; and
- Economic Development.

For each of the population target groups, and for sectors of health, transport and culture, arts, heritage and recreation, the following are given:

- Broad context;
- A detailed listing of then current services; and
- Issues identified and subsequent recommendations to Council.

A concise summary of the recommendations of the TRCSP are provided.

Relevant data and findings from the TRCSP are referenced throughout this SIA.

Tamworth Regional Council Cultural Plan 2010-2015

The TRCCP aims to facilitate the development of arts and cultural life within the Tamworth Regional Council LGA.

The TRCCP details the current cultural facilities and activities in the LGA, and makes specific recommendations for future actions, which are diverse in their range and scope. Relevant data and findings from the TRCCP are referenced throughout this SIA.

Tamworth Regional Council Recreation and Open Space Plan 2008

The TRCROSP provides direction for TRC's future planning of recreation and open space needs. The TRCROSP's aims and recommendations are outlined in **Section 5.11.6**. The TRCROSP also documents the current facilities, groups and community needs for open space in the LGA.

Tamworth Regional Council Tamworth Regional Development Strategy 2008

The TRDS was commissioned by TRC in 2008. Its primary aim was to develop a comprehensive strategic planning framework for the then newly amalgamated Tamworth LGA that reflected the current and future needs of the community. It was intended as a document to provide Council with a strategic plan to manage growth and to provide strategic direction for urban and rural areas in the Tamworth LGA and to assist in co-ordinating future development activities by identifying an orderly and efficient supply of land in an environmentally acceptable way.

The TRDS gives a vision and guiding principles for a sustainable lifestyle, as well as strategic directions and specific actions for the following sectors:

- Strengthening the region and supporting centres;
- Meeting cultural and social needs;
- Meeting future housing needs;
- Supporting and protecting rural futures;
- Supporting employment and economic development;
- Caring for the natural environment;
- Improving transport and accessibility; and
- Improving infrastructure provision.

TRDS also gives '*local area strategies*' for Tamworth city, north-eastern rural residential land and the component towns and villages of the LGA, before completing with recommendations regarding implementation and monitoring.

Relevant data and findings from the TRDS are referenced throughout this SIA.

Tamworth Regional Local Environmental Plan 2010

The TR LEP 2010 is the LEP currently applicable to the Tamworth Regional LGA, and was primarily informed by the TRDS described above.

Tamworth Regional Council Affordable Housing Strategy 2011

The TRAHS was prepared by TRC and describes actions and policies that Council can develop to increase housing affordability within the Region. It suggests ways that Council can assist local projects by harnessing finance from State or Commonwealth government.

The TRAHS is based on external analysis of state, national and international trends, together with extensive local consultations. It notes that housing affordability issues could potentially impact on TRC's wider aspirations for the Region, since without sufficient affordable housing it will be difficult to attract additional businesses and industry to the region with limited affordable housing to accommodate employees.

The TRAHS provides background data on housing in the Tamworth LGA, and provides a number of '*strategic actions*' regarding improving housing affordability.

Key recommendations of the TRAHS are given in **Section 5.10.7**.

APPENDIX D

Social and Economic ‘Baseline’ Profile – Data Tables

This Appendix contains detailed data tables that should be read in conjunction with the text in **Section 4** and **Section 5**.

Table 80
Number of Businesses by Industry, 2005 to 2011

Sector *	2005	2006	2007	2011**	Change 2005-7***	Change 2007-11***
Gunnedah LGA						
Agriculture, Forestry and Fishing	621	615	612	636	-9	24
Mining	6	6	6	6	0	0
Manufacturing	69	66	66	48	-3	-18
Electricity, Gas, Water and Waste Services	0	0	0	0	0	0
Construction	105	99	99	153	-6	54
Wholesale Trade	36	42	42	45	6	3
Retail Trade	105	102	108	79	3	-29
Accommodation and Food Services	33	30	21	56	-12	35
Transport, Postal and Warehousing	75	72	63	72	-12	9
Information Media and Telecommunications	12	12	9	6	-3	-3
Financial and Insurance Services	36	36	36	44	0	8
Rental, Hiring and Real Estate Services	171	162	180	106	9	-74
Professional, Scientific and Technical Services	Not recorded			68	N/A	N/A
Administrative and Support Services				27	N/A	N/A
Public Administration and Safety				0	N/A	N/A
Education and Training	3	3	3	9	0	6
Health Care and Social Assistance	45	48	48	39	3	-9
Arts and Recreation Services	15	15	12	0	-3	-12
Other Services	33	36	36	66	3	30
Not Classified	Not recorded			25	N/A	N/A
Total	1,365	1,344	1,341	1485	-24	144
Liverpool Plains LGA						
Agriculture, Forestry and Fishing	498	498	513	508	15	-5
Mining	3	3	0	3	-3	3
Manufacturing	30	33	36	8	6	-28

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Sector *	2005	2006	2007	2011**	Change 2005-7***	Change 2007-11***
Electricity, Gas, Water and Waste Services	0	0	0	3	0	3
Construction	78	72	78	85	0	7
Wholesale Trade	21	21	21	21	0	0
Retail Trade	78	75	72	39	-6	-33
Accommodation and Food Services	36	30	27	24	-9	-3
Transport, Postal and Warehousing	63	57	42	60	-21	18
Information Media and Telecommunications	3	3	0	3	-3	3
Financial and Insurance Services	30	27	30	27	0	-3
Rental, Hiring and Real Estate Services	84	102	96	65	12	-31
Professional, Scientific and Technical Services	Not recorded			44	N/A	N/A
Administrative and Support Services				14	N/A	N/A
Public Administration and Safety				0	N/A	N/A
Education and Training	3	3	3	6	0	3
Health Care and Social Assistance	18	18	21	12	3	-9
Arts and Recreation Services	18	21	18	9	0	-9
Other Services	9	9	3	27	-6	24
Not Classified	Not recorded			6	N/A	N/A
Total	972	972	960	964	-12	4
Tamworth Regional LGA						
Agriculture, Forestry and Fishing	1,509	1,482	1,452	1416	-57	-36
Mining	6	6	6	6	0	0
Manufacturing	219	198	186	212	-33	26
Electricity, Gas, Water and Waste Services	3	3	3	21	0	18
Construction	732	759	786	864	54	78
Wholesale Trade	156	153	165	152	9	-13
Retail Trade	594	552	567	369	-27	-198
Accommodation and Food Services	135	132	162	231	27	69
Transport, Postal and Warehousing	324	324	339	367	15	28
Information Media and Telecommunications	36	27	30	22	-6	-8
Financial and Insurance Services	285	291	285	336	0	51

Sector *	2005	2006	2007	2011**	Change 2005-7***	Change 2007-11***
Rental, Hiring and Real Estate Services	840	840	849	452	9	-397
Professional, Scientific and Technical Services	Not recorded			346	N/A	N/A
Administrative and Support Services				157	N/A	N/A
Public Administration and Safety				12	N/A	N/A
Education and Training	36	33	36	52	0	16
Health Care and Social Assistance	207	216	243	220	36	-23
Arts and Recreation Services	90	96	105	76	15	-29
Other Services	144	147	132	278	-12	146
Not Classified	Not recorded			77	N/A	N/A
Total	5,316	5,259	5,346	5666	30	320
Narrabri LGA (2011 data not available for same geographic area)						
Agriculture, Forestry and Fishing	933	954	924		-9	N/A
Mining	9	9	12		3	N/A
Manufacturing	51	51	51		0	N/A
Electricity, Gas, Water and Waste Services	6	6	6		0	N/A
Construction	156	153	159		3	N/A
Wholesale Trade	42	42	39		-3	N/A
Retail Trade	135	138	138		3	N/A
Accommodation and Food Services	72	60	54		-18	N/A
Transport, Postal and Warehousing	129	120	120		-9	N/A
Information Media and Telecommunications	9	18	12		3	N/A
Financial and Insurance Services	30	24	27		-3	N/A
Rental, Hiring and Real Estate Services	228	249	237		9	N/A
Professional, Scientific and Technical Services	Not recorded				N/A	N/A
Administrative and Support Services					N/A	N/A
Public Administration and Safety					N/A	N/A
Education and Training	6	6	6		0	N/A
Health Care and Social Assistance	33	36	30		-3	N/A
Arts and Recreation Services	18	18	12		-6	N/A

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Sector *	2005	2006	2007	2011**	Change 2005-7***	Change 2007-11***
Other Services	33	39	30		-3	N/A
Not Classified	Not recorded				N/A	N/A
Total	1,890	1,923	1,857		-33	N/A
Upper Hunter LGA (2011 data not available for same geographic area)						
Agriculture, Forestry and Fishing	708	726	699		-9	N/A
Mining	3	6	6		3	N/A
Manufacturing	54	45	48		-6	N/A
Electricity, Gas, Water and Waste Services	0	0	0		0	N/A
Construction	189	177	174		-15	N/A
Wholesale Trade	54	39	39		-15	N/A
Retail Trade	102	105	96		-6	N/A
Accommodation and Food Services	60	54	60		0	N/A
Transport, Postal and Warehousing	84	84	87		3	N/A
Information Media and Telecommunications	18	9	6		-12	N/A
Financial and Insurance Services	45	54	39		-6	N/A
Rental, Hiring and Real Estate Services	129	123	165		36	N/A
Professional, Scientific and Technical Services	Not recorded				N/A	N/A
Administrative and Support Services					N/A	N/A
Public Administration and Safety					N/A	N/A
Education and Training	6	3	3		-3	N/A
Health Care and Social Assistance	39	33	36		-3	N/A
Arts and Recreation Services	51	42	48		-3	N/A
Other Services	45	39	42		-3	N/A
Not Classified	Not recorded				N/A	N/A
Total	1,587	1,539	1,548		-39	N/A

Notes:

*Note that categories are listed as they appear in 2011, and therefore sector names may not align with previous years' data

***Note also that changes in sectors over time may be affected by the changes in sector categorisations in 2011

Source: ABS, 2007a and **ABS, 2012h

Table 81
Projected Age Distribution, Gunnedah, Liverpool Plains and Tamworth LGAs, 2011 - 2036

LGA	Year		TOTAL 0-14 years	TOTAL 15-24 years	TOTAL 25-54 years	TOTAL 55 + years	TOTAL PERSONS
Gunnedah LGA	2011	Persons	2,380	1,390	4,170	3,720	11,700
		% of total persons	20%	12%	36%	32%	
	2016	Persons	2,180	1,280	3,810	4,030	11,300
		% of total persons	19%	11%	34%	36%	
	2021	Persons	2,060	1,130	3,540	4,190	10,900
		% of total persons	19%	10%	32%	38%	
	2026	Persons	1,930	1,020	3,270	4,200	10,400
		% of total persons	19%	10%	31%	40%	
	2031	Persons	1,810	950	3,060	4,140	9,900
		% of total persons	18%	10%	31%	42%	
	2036	Persons	1,680	880	2,860	3,980	9,400
		% of total persons	18%	9%	30%	42%	
Liverpool Plains LGA	2011	Persons	1,430	750	2,720	2,840	7,800
		% of total persons	18%	10%	35%	36%	
	2016	Persons	1,320	680	2,510	3,100	7,600
		% of total persons	17%	9%	33%	41%	
	2021	Persons	1,220	610	2,350	3,270	7,400
		% of total persons	16%	8%	32%	44%	
	2026	Persons	1,160	560	2,160	3,370	7,200
		% of total persons	16%	8%	30%	47%	
	2031	Persons	1,100	510	2,020	3,390	7,000
		% of total persons	16%	7%	29%	48%	
	2036	Persons	1,040	490	1,900	3,310	6,800
		% of total persons	15%	7%	28%	49%	

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LGA	Year		TOTAL 0-14 years	TOTAL 15-24 years	TOTAL 25-54 years	TOTAL 55 + years	TOTAL PERSONS
Tamworth Regional LGA	2011	Persons	11,530	7,730	21,430	16,950	57,600
		% of total persons	20%	13%	37%	29%	
	2016	Persons	11,440	7,550	21,130	19,040	59,200
		% of total persons	19%	13%	36%	32%	
	2021	Persons	11,410	7,280	20,840	21,060	60,600
		% of total persons	19%	12%	34%	35%	
	2026	Persons	11,410	7,100	20,510	22,890	61,900
		% of total persons	18%	11%	33%	37%	
	2031	Persons	11,260	6,990	20,080	24,550	62,900
		% of total persons	18%	11%	32%	39%	
	2036	Persons	11,010	6,890	19,750	25,820	63,400
		% of total persons	17%	11%	31%	41%	

Source: NSW Department of Planning, 2010

Table 82
Unemployment by age and gender, 2006 - Gunnedah LGA

Age	Male			Female			Total		
	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate
15-19	22	193	11.4%	34	186	18.3%	56	379	14.8%
20-24	30	256	11.7%	16	177	9.0%	46	433	10.6%
25-34	43	457	9.4%	44	356	12.4%	87	813	10.7%
35-44	52	621	8.4%	64	562	11.4%	116	1,183	9.8%
45-54	39	708	5.5%	33	609	5.4%	72	1,317	5.5%
55-64	33	451	7.3%	14	307	4.6%	47	758	6.2%
65-74	3	111	2.7%	0	65	0.0%	3	176	1.7%
75 years and over	0	34	0.0%	0	14	0.0%	0	48	0.0%
Total	222	2,831	7.8%	205	2,276	9.0%	427	5,107	8.4%

Source: ABS, 2007a

Note: Count of employed persons aged 15 years and over

Table 83
Unemployment by age and gender, 2011 - Gunnedah LGA

Age	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate
	Male			Female			Total		
15-19	34	230	14.78%	30	220	13.64%	64	450	14.22%
20-24	19	267	7.12%	27	226	11.95%	46	493	9.33%
25-34	27	548	4.93%	40	423	9.46%	67	971	6.90%
35-44	29	586	4.95%	35	525	6.67%	64	1,111	5.76%
45-54	32	702	4.56%	24	610	3.93%	56	1,312	4.27%
55-64	18	548	3.28%	15	395	3.80%	33	943	3.50%
65-74	3	144	2.08%	0	74	0.00%	3	218	1.38%
75 years and over	0	41	0.00%	0	20	0.00%	0	57	0.00%
Total	162	3,066	5.28%	171	2,493	6.86%	333	5,555	5.99%

Source: ABS, 2012b
Note: Count of employed persons aged 15 years and over

Table 84
Unemployment by age and gender, 2006 - Liverpool Plains LGA

Age	Male			Female			Total		
	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate
15-19	12	90	13.3%	12	74	16.2%	24	164	14.6%
20-24	15	121	12.4%	7	96	7.3%	22	217	10.1%
25-34	30	284	10.6%	12	207	5.8%	42	491	8.6%
35-44	18	394	4.6%	19	347	5.5%	37	741	5.0%
45-54	16	463	3.5%	14	351	4.0%	30	814	3.7%
55-64	25	331	7.6%	10	232	4.3%	35	563	6.2%
65-74	0	99	0.0%	0	54	0.0%	0	153	0.0%
75 years and over	0	49	0.0%	0	22	0.0%	0	71	0.0%
Total	116	1,831	6.3%	74	1,383	5.4%	190	3,214	5.9%

Source: ABS, 2007
Note: Count of employed persons aged 15 years and over

Table 85
Unemployment by age and gender, 2011 - Liverpool Plains LGA

Age	Male			Female			Total		
	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate
15-19	22	93	23.66%	11	78	14.10%	33	171	19.30%
20-24	22	132	16.67%	15	93	16.13%	37	225	16.44%
25-34	18	284	6.34%	21	239	8.79%	39	523	7.46%
35-44	17	373	4.56%	20	298	6.71%	37	671	5.51%
45-54	11	419	2.63%	10	371	2.70%	21	790	2.66%
55-64	26	398	6.53%	6	257	2.33%	32	655	4.89%
65-74	0	124	0.00%	0	66	0.00%	0	190	0.00%
75 years and over	0	36	0.00%	0	22	0.00%	0	58	0.00%
Total	116	1,859	6.24%	83	1,424	5.83%	199	3,283	6.06%

Source: ABS, 2012b
Note: Count of employed persons aged 15 years and over

Table 86
Unemployment by age and gender, 2006 – Tamworth Regional LGA

Age	Unemployed	Labour Force	Unemployment Rate	Male			Female			Total		
				Unemployed	Labour Force	Unemployment rate	Unemployed	Labour force	Unemployment rate	Unemployed	Labour force	Unemployment rate
15-19	160	1,074	14.9%	139	1,007	13.8%	299	2,081	14.4%			
20-24	161	1,294	12.4%	107	998	10.7%	268	2,292	11.7%			
25-34	186	2,485	7.5%	148	2,131	6.9%	334	4,616	7.2%			
35-44	153	2,849	5.4%	152	2,734	5.6%	305	5,583	5.5%			
45-54	124	3,114	4.0%	148	2,970	5.0%	272	6,084	4.5%			
55-64	157	2,086	7.5%	68	1,501	4.5%	225	3,587	6.3%			
65-74	0	439	0.0%	6	256	2.3%	6	695	0.9%			
75 years and over	0	86	0.0%	0	46	0.0%	0	132	0.0%			
Total	941	13,427	7.0%	768	11,643	6.6%	1,709	25,070	6.8%			

Source: ABS, 2007a
Note: Count of employed persons aged 15 years and over.

Table 87
Unemployment by age and gender, 2011 – Tamworth Regional LGA

Age	Unemployed	Labour Force	Unemployment Rate	Male			Female			Total		
				Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate	Unemployed	Labour Force	Unemployment Rate
15-19	138	1,005	13.73%	129	1,016	12.70%	267	2,021	13.21%	267	2,021	13.21%
20-24	126	1,277	9.87%	112	1,099	10.19%	238	2,376	10.02%	238	2,376	10.02%
25-34	187	2,506	7.46%	149	2,215	6.73%	336	4,721	7.12%	336	4,721	7.12%
35-44	129	2,876	4.49%	141	2,749	5.13%	270	5,625	4.80%	270	5,625	4.80%
45-54	126	2,998	4.20%	109	3,105	3.51%	235	6,103	3.85%	235	6,103	3.85%
55-64	113	2,407	4.69%	55	1,962	2.80%	168	4,369	3.85%	168	4,369	3.85%
65-74	14	636	2.20%	0	383	0.00%	14	1,019	1.37%	14	1,019	1.37%
75 years and over	0	125	0.00%	0	65	0.00%	0	190	0.00%	0	190	0.00%
Total	833	13,830	6.02%	695	12,594	5.52%	1,528	26,424	5.84%	1,528	26,424	5.84%

Source: ABS, 2012b
Note: Count of employed persons aged 15 years and over

Table 88
Indigenous People – Labour Force Status, 2006

Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force status not stated	% Unemployment (b)	% labour force participation (c)
Gunnedah (Indigenous Location)	Males	Indigenous people	104	36	140	84	19	25.7	57.6
		Non-indigenous people	1,432	117	1,549	851	54	7.6	63.1
		Indigenous status not stated	10	3	13	20	95	23.1	10.2
	Females	Indigenous people	86	19	105	149	21	18.1	38.2
		Non-indigenous people	1,197	122	1,319	1,360	61	9.2	48.1
Gunnedah (Indigenous Area)	Males	Indigenous status not stated	7	3	10	26	79	30.0	8.7
		Indigenous people	131	47	178	109	23	26.4	57.4
		Non-indigenous people	2,453	173	2,626	1,182	79	6.6	67.6
	Females	Indigenous status not stated	24	0	24	24	127	0.0	13.7
		Indigenous people	124	24	148	178	21	16.2	42.7
Caroona (Indigenous Location)	Males	Non-indigenous people	1,936	178	2,114	1,868	76	8.4	52.1
		Indigenous status not stated	13	3	16	37	99	18.8	10.5
		Indigenous people	23	3	26	13	0	11.5	66.7
	Females	Non-indigenous people	0	0	0	0	0	0.0	0.0
		Indigenous status not stated	0	0	0	0	24	0.0	0.0
Quirindi (Indigenous Location)	Males	Indigenous people	19	3	22	19	0	13.6	53.7
		Non-indigenous people	0	0	0	0	0	0.0	0.0
		Indigenous status not stated	0	0	0	0	25	0.0	0.0
	Females	Indigenous people	64	3	67	32	6	4.5	63.8
		Non-indigenous people	465	34	499	324	20	6.8	59.2
	Males	Indigenous status not stated	3	0	3	11	46	0.0	5.0

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Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force status not stated	% Unemployment (b)	% labour force participation (c)
Quirindi (Indigenous Location)	Females	Indigenous people	44	0	44	45	6	0.0	46.3
		Non-indigenous people	380	24	404	531	34	5.9	41.7
		Indigenous status not stated	5	0	5	9	35	0.0	10.2
Werris Creek (Indigenous Location)	Males	Indigenous people	46	3	49	20	4	6.1	67.1
		Non-indigenous people	193	26	219	252	18	11.9	44.8
		Indigenous status not stated	4	0	4	5	39	0.0	8.3
	Females	Indigenous people	25	5	30	30	5	16.7	46.2
		Non-indigenous people	153	15	168	313	17	8.9	33.7
Liverpool Plains (Indigenous Area)	Males	Indigenous status not stated	3	0	3	8	42	0.0	5.7
		Indigenous people	143	15	158	79	14	9.5	62.9
		Non-indigenous people	1,559	100	1,659	856	54	6.0	64.6
	Females	Indigenous status not stated	12	0	12	18	150	0.0	6.7
		Indigenous people	104	5	109	109	16	4.6	46.6
Tamworth (Indigenous Location)	Males	Non-indigenous people	1,191	69	1,260	1,276	75	5.5	48.3
		Indigenous status not stated	13	0	13	23	143	0.0	7.3
		Indigenous people	385	135	520	322	45	26.0	58.6
	Females	Non-indigenous people	9,408	617	10,025	4,091	292	6.2	69.6
		Indigenous status not stated	71	9	80	59	404	11.3	14.7
Tamworth (Indigenous Area)	Males	Indigenous people	341	108	449	484	34	24.1	46.4
		Non-indigenous people	8,329	515	8,844	6,669	415	5.8	55.5
		Indigenous status not stated	57	3	60	134	364	5.0	10.8
	Females	Indigenous people	454	157	611	394	54	25.7	57.7
		Non-indigenous people	11,938	772	12,710	5,412	378	6.1	68.7
Tamworth (Indigenous Area)	Males	Indigenous status not stated	94	12	106	88	519	11.3	14.9

Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force status not stated	% Unemployment (b)	% labour force participation (c)
Tamworth (Indigenous Area)	Females	Indigenous people	398	120	518	579	40	23.2	45.6
		Non-indigenous people	10,408	641	11,049	8,479	519	5.8	55.1
		Indigenous status not stated	71	6	77	170	470	7.8	10.7
Upper Hunter (Indigenous Area)	Males	Indigenous people	77	6	83	32	3	7.2	70.3
		Non-indigenous people	3,409	144	3,553	1,229	90	4.1	72.9
		Indigenous status not stated	35	0	35	20	165	0.0	15.9
	Females	Indigenous people	49	11	60	49	5	18.3	52.6
		Non-indigenous people	2,612	128	2,740	1,987	97	4.7	56.8
		Indigenous status not stated	16	0	16	41	140	0.0	8.1
NSW	Males	Indigenous people	18,538	4,676	23,214	15,760	2,196	20.1	56.4
		Non-indigenous people	1,538,349	94,083	1,632,432	679,021	43,677	5.8	69.3
		Indigenous status not stated	13,562	1,388	14,950	12,722	136,893	9.3	9.1
	Females	Indigenous people	16,738	3,747	20,485	21,650	2,017	18.3	46.4
		Non-indigenous people	1,311,808	78,345	1,390,153	1,052,077	52,995	5.6	55.7
		Indigenous status not stated	10,450	918	11,368	19,781	118,868	8.1	7.6

Source: ABS, 2007c

Notes:

- For the purposes of Census statistics, an 'Indigenous Location' is the same geographic area as an 'Urban Centre/Locality'.
For the purposes of Census statistics, an 'Indigenous Area' is the same geographic area as a 'Local Government Area'.
(a) Labour force is applicable to persons aged 15 years and over.
(b) The number of unemployed persons expressed as a percentage of the total labour force.
(c) The number of persons in the labour force expressed as a percentage of persons aged 15 years and over.

Table 89
Indigenous People – Labour Force Status, 2011

Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force not stated	% Unemployment (b)	% labour force participation (c)
Gunnedah (Indigenous Location)	Male	Indigenous	133	47	180	112	17	26.1	58.3
		Non-Indigenous	1,605	70	1,675	798	68	4.2	65.9
		Indigenous status not stated	12	3	15	8	130	20.0	9.8
	Female	Indigenous	120	41	161	174	18	25.5	45.6
		Non-Indigenous	1,321	77	1,398	1,256	119	5.5	50.4
		Indigenous status not stated	12	3	15	16	107	20.0	10.9
Gunnedah (Indigenous Area)	Male	Indigenous	187	47	234	136	21	20.1	59.8
		Non-Indigenous	2,692	112	2,804	1,155	104	4	69
		Indigenous status not stated	26	3	29	15	208	10.3	11.5
	Female	Indigenous	157	46	203	214	24	22.7	46
		Non-Indigenous	2,141	122	2,263	1,736	140	5.4	54.7
		Indigenous status not stated	23	3	26	25	174	11.5	11.6
Walhollow Reserve (Indigenous Location) (previously Caroona)	Male	Indigenous	5	3	8	21	0	37.5	27.6
		Non-Indigenous	0	0	0	0	0	0	0
		Indigenous status not stated	0	0	0	0	0	0	0
	Female	Indigenous	6	3	9	15	0	33.3	37.5
		Non-Indigenous	0	0	0	0	0	0	0
		Indigenous status not stated	0	0	0	0	0	0	0
Quirindi (Indigenous Location)	Male	Indigenous	53	4	57	40	7	7	54.8
		Non-Indigenous	39	10	49	61	4	20.4	43
		Indigenous status not stated	7	0	7	7	23	0.0	18.9

Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force status not stated	% Unemployment (b)	% labour force participation (c)
Quirindi (Indigenous Location)	Female	Indigenous	456	34	490	319	15	6.9	59.5
		Non-Indigenous	407	17	424	511	26	4	44.1
		Indigenous status not stated	3	0	3	4	16	0.0	13.0
Werris Creek (Indigenous Location)	Male	Indigenous	33	6	39	45	7	15.4	42.9
		Non-Indigenous	23	7	30	51	0	23.3	37
		Indigenous status not stated	3	0	3	3	9	0.0	20.0
	Female	Indigenous	222	26	248	233	8	10.5	50.7
		Non-Indigenous	141	14	155	324	7	9	31.9
		Indigenous status not stated	3	0	3	3	8	0.0	21.4
Liverpool Plains (Indigenous Area)	Male	Indigenous	117	16	133	123	11	12	49.8
		Non-Indigenous	1,613	96	1,709	870	43	5.6	65.2
		Indigenous status not stated	13	3	16	16	99	18.8	12.2
	Female	Indigenous	80	22	102	156	10	21.6	38.1
		Non-Indigenous	1,251	61	1,312	1,271	47	4.6	49.9
		Indigenous status not stated	10	0	10	15	80	0.0	9.5
Tamworth (Indigenous Location)	Male	Indigenous	475	151	626	404	42	24.1	58.4
		Non-Indigenous	8,198	450	8,648	3,752	234	5.2	68.5
		Indigenous status not stated	64	3	67	60	650	4.5	8.6
	Female	Indigenous	433	92	525	625	46	17.5	43.9
		Non-Indigenous	7,677	411	8,088	5,716	273	5.1	57.5
		Indigenous status not stated	50	6	56	125	608	10.7	7.1
Tamworth (Indigenous Area)	Male	Indigenous	629	178	807	513	52	22.1	58.8
		Non-Indigenous	12,272	649	12,921	5,741	340	5	68
		Indigenous status not stated	95	7	102	93	828	6.9	10.0

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Geographic Area	Gender	Indigenous Status	Employed	Unemployed	Total labour force (a)	Not in the labour force	Labour force status not stated	% Unemployment (b)	% labour force participation (c)
Tamworth (Indigenous Area)	Female	Indigenous	564	106	670	765	53	15.8	45
		Non-Indigenous	11,259	584	11,843	8,379	386	4.9	57.5
		Indigenous status not stated	77	4	81	171	754	4.9	8.1
Upper Hunter (Indigenous Area)	Male	Indigenous	99	8	107	50	7	7.5	65.2
		Non-Indigenous	3,500	118	3,618	1,284	86	3.3	72.5
		Indigenous status not stated	25	0	25	26	178	0.0	10.9
	Female	Indigenous	77	10	87	61	5	11.5	56.9
		Non-Indigenous	2,801	105	2,906	2,075	91	3.6	57.3
		Indigenous status not stated	25	3	28	37	176	10.7	11.6
NSW	Male	Indigenous	24,016	5,423	29,439	21,312	2,329	18.4	55.5
		Non-Indigenous	1,637,820	98,756	1,736,576	748,476	40,090	5.7	68.8
		Indigenous status not stated	12,577	1,198	13,775	11,166	121,140	8.7	9.4
	Female	Indigenous	22,794	4,115	26,909	27,897	2,153	15.3	47.2
		Non-Indigenous	1,431,527	86,201	1,517,728	1,108,058	46,377	5.7	56.8
		Indigenous status not stated	9,596	832	10,428	16,365	104,929	8.0	7.9

Source: ABS, 2012e

Notes:

For the purposes of Census statistics, an 'Indigenous Location' is the same geographic area as an 'Urban Centre/Locality'.

For the purposes of Census statistics, an 'Indigenous Area' is the same geographic area as a 'Local Government Area'.

(a) Labour force is applicable to persons aged 15 years and over.

(b) The number of unemployed persons expressed as a percentage of the total labour force.

(c) The number of persons in the labour force expressed as a percentage of persons aged 15 years and over

Table 90
Labour Supply and Demand, 2006 – Gunnedah LGA

Age	People whose place of work is in Gunnedah LGA			Residents of Gunnedah LGA who are employed			Labour surplus / shortage			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	153	140	293	171	152	323	18	12	30	110%
20-24	184	158	342	226	161	387	42	3	45	113%
25-34	360	298	658	414	312	726	54	14	68	110%
35-44	484	464	948	569	498	1,067	85	34	119	113%
45-54	582	530	1,112	669	576	1,245	87	46	133	112%
55-64	363	276	639	418	293	711	55	17	72	111%
65-74	97	55	152	108	65	173	11	10	21	114%
75 years and over	27	15	42	34	14	48	7	-1	6	114%
Total	2,250	1,936	4,186	2,609	2,071	4,680	359	135	494	112%

Count of employed persons aged 15 years and over
Source: Australian Bureau of Statistics 2006 Census: Community Profile Series: Working Population Profiles, Table W01 and Basic Community Profile Table B41

Table 91
Labour Supply and Demand, 2011 – Gunnedah LGA

Age	People whose place of work is in either Gunnedah or Liverpool Plains LGA			Residents of Gunnedah and Liverpool Plains LGAs who are employed			Labour surplus			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	175	177	352	196	190	386	21	13	34	110%
20-24	189	177	366	248	199	447	59	22	81	122%
25-34	430	343	773	521	383	904	91	40	131	117%
35-44	471	457	928	557	490	1,047	86	33	119	113%
45-54	583	548	1,131	670	586	1,256	87	38	125	111%
55-64	472	361	833	530	380	910	58	19	77	109%
65-74	130	70	200	141	74	215	11	4	15	108%
75 years and over	37	15	52	41	20	61	4	5	9	117%
Total	2,487	2,148	4,635	2,904	2,322	5,226	417	174	591	113%

Note: Count of employed persons aged 15 years and over

Source: Australian Bureau of Statistics 2011 Census: Community Profile Series: Working Population Profiles, Table W01b and Basic Community Profile Table B42b

Table 92
Labour Supply and Demand, 2006 – Liverpool Plains LGA

Age	People whose place of work is in Liverpool Plains LGA			Residents of Liverpool Plains LGA who are employed			Labour surplus			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	58	49	107	78	62	140	20	13	33	131%
20-24	82	65	147	106	89	195	24	24	48	133%
25-34	225	136	361	254	195	449	29	59	88	124%
35-44	350	279	629	376	328	704	26	49	75	112%
45-54	385	290	675	447	337	784	62	47	109	116%
55-64	282	199	481	306	222	528	24	23	47	110%
65-74	93	52	145	99	54	153	6	2	8	106%
75 years and over	41	16	57	49	22	167	8	6	110	293%
Total	1,516	1,086	2,602	1,715	1,309	3,024	199	223	422	116%

Count of employed persons aged 15 years and over
Source: Australian Bureau of Statistics 2006 Census: Community Profile Series: Working Population Profiles, Table W01 and Basic Community Profile Table B41

Table 93
Labour Supply and Demand, 2011 – Liverpool Plains LGA

Age	People whose place of work is in either Gunnedah or Liverpool Plains LGA			Residents of Gunnedah and Liverpool Plains LGAs who are employed			Labour surplus			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	63	49	112	71	67	138	8	18	26	123%
20-24	90	60	150	110	78	188	20	18	38	125%
25-34	229	164	393	266	218	484	37	54	91	123%
35-44	304	234	538	356	278	634	52	44	96	118%
45-54	375	283	658	408	361	769	33	78	111	117%
55-64	324	211	535	372	251	623	48	40	88	116%
65-74	110	58	168	124	66	190	14	8	22	113%
75 years and over	33	20	53	36	22	58	3	2	5	109%
Total	1,528	1,079	2,607	1,743	1,341	3,084	215	262	477	118%

Note: Count of employed persons aged 15 years and over
Source: Australian Bureau of Statistics 2011 Census: Community Profile Series: Working Population Profiles, Table W01b and Basic Community Profile Table B42b

Table 94
Labour Supply and Demand, 2006 – Tamworth Regional LGA

Age	People whose place of work is in Tamworth Regional LGA			Residents of Tamworth Regional LGA who are employed			Labour surplus			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	821	827	1,648	914	868	1,782	93	41	134	108%
20-24	1,023	878	1,901	1,133	891	2,024	110	13	123	106%
25-34	2,054	1,942	3,996	2,299	1,983	4,282	245	41	286	107%
35-44	2,376	2,479	4,855	2,696	2,582	5,278	320	103	423	109%
45-54	2,714	2,720	5,434	2,990	2,822	5,812	276	102	378	107%
55-64	1,750	1,383	3,133	1,929	1,433	3,362	179	50	229	107%
65-74	402	239	641	439	250	689	37	11	48	107%
75 years and over	78	41	119	86	46	132	8	5	13	111%
Total	11,218	10,509	21,727	12,486	10,875	23,361	1,268	366	1,634	108%

Source: ABS, 2007a; ABS 2007e

Note: Count of employed persons aged 15 years and over

Table 95
Labour Supply and Demand, 2011 – Tamworth Regional LGA

Age	People whose place of work is in Tamworth Regional LGA			Residents of Tamworth LGA who are employed			Labour surplus			Working residents as a % of workforce
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
15-19	750	824	1,574	867	887	1,754	117	63	180	111%
20-24	950	898	1,848	1,151	987	2,138	201	89	290	116%
25-34	1,919	1,979	3,898	2,319	2,066	4,385	400	87	487	112%
35-44	2,245	2,461	4,706	2,747	2,608	5,355	502	147	649	114%
45-54	2,422	2,869	5,291	2,872	2,996	5,868	450	127	577	111%
55-64	1,973	1,789	3,762	2,294	1,907	4,201	321	118	439	112%
65-74	552	351	903	622	383	1,005	70	32	102	111%
75 years and over	102	57	159	125	65	190	23	8	31	119%
Total	10,913	11,228	22,141	12,997	11,899	24,896	2,084	671	2,755	112%

Note: Count of employed persons aged 15 years and over
Source: Australian Bureau of Statistics 2011 Census: Community Profile Series: Working Population Profiles, Table W01b and Basic Community Profile Table B42b

Table 96
Industry of Employment, 2006

Sector	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Northern SD	NSW
	Persons over 15 years	%	Persons over 15 years	%	Persons over 15 years	%	% of total employed	% of total employed
Agriculture, forestry & fishing	852	18%	840	28%	1,889	8.1%	17%	3%
Mining	115	2%	40	1%	75	0.3%	1%	1%
Manufacturing	419	9%	162	5%	2,305	9.9%	7%	10%
Electricity, gas, water & waste services	49	1%	53	2%	236	1.0%	1%	1%
Construction	217	5%	154	5%	1,581	6.8%	6%	7%
Wholesale trade	151	3%	89	3%	844	3.6%	3%	5%
Retail trade	480	10%	256	8%	2,878	12.3%	11%	11%
Accommodation & food services	306	7%	125	4%	1,603	6.9%	6%	7%
Transport, postal & warehousing	218	5%	228	8%	1,217	5.2%	4%	5%
Information media & telecommunications	41	1%	21	1%	320	1.4%	1%	2%
Financial & insurance services	63	1%	28	1%	623	2.7%	2%	5%
Rental, hiring & real estate services	69	1%	26	1%	318	1.4%	1%	2%

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Sector	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Northern SD	NSW
	Persons over 15 years	%	Persons over 15 years	%	Persons over 15 years	%	% of total employed	% of total employed
Professional, scientific & technical services	157	3%	87	3%	830	3.6%	4%	7%
Administrative & support services	79	2%	53	2%	578	2.5%	2%	3%
Public administration & safety	274	6%	153	5%	1,482	6.3%	6%	6%
Education & training	356	8%	217	7%	1,909	8.2%	10%	8%
Health care & social assistance	432	9%	271	9%	2,862	12.3%	10%	10%
Arts & recreation services	38	1%	20	1%	209	0.9%	1%	1%
Other services	217	5%	104	3%	1,082	4.6%	4%	4%
Inadequately described / Not stated	147	3%	94	3%	520	2.2%	3%	3%
Total	4,680		3,021		23,361			

Source: ABS, 2007a

Table 97
Industry of Employment, 2011

Sector	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional		Northern SD	NSW
	Persons over 15 years	%	Persons over 15 years	%	Persons over 15 years	%	% of total employed	% of total employed
Agriculture, forestry & fishing	884	17%	745	24%	1,656	6.7%	15%	2%
Mining	390	7%	85	3%	194	0.8%	1%	1%
Manufacturing	368	7%	192	6%	2,315	9.3%	7%	8%
Electricity, gas, water & waste services	66	1%	36	1%	286	1.1%	1%	1%
Construction	271	5%	161	5%	1,862	7.5%	6%	7%
Wholesale trade	139	3%	116	4%	877	3.5%	3%	4%
Retail trade	515	10%	265	9%	2,859	11.5%	11%	10%
Accommodation & food services	358	7%	150	5%	1,750	7.0%	7%	7%
Transport, postal & warehousing	250	5%	219	7%	1,265	5.1%	4%	5%
Information media & telecommunications	28	1%	19	1%	285	1.1%	1%	2%
Financial & insurance services	66	1%	35	1%	591	2.4%	2%	5%
Rental, hiring & real estate services	63	1%	25	1%	367	1.5%	1%	2%

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Sector	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional		Northern SD	NSW
	Persons over 15 years	%	Persons over 15 years	%	Persons over 15 years	%	% of total employed	% of total employed
Professional, scientific & technical services	167	3%	99	3%	882	3.5%	4%	8%
Administrative & support services	109	2%	55	2%	652	2.6%	2%	3%
Public administration & safety	260	5%	147	5%	1,490	6.0%	6%	6%
Education & training	403	8%	211	7%	2,159	8.7%	10%	8%
Health care & social assistance	491	9%	289	9%	3,545	14.2%	12%	12%
Arts & recreation services	35	1%	30	1%	253	1.0%	1%	1%
Other services	228	4%	104	3%	1,089	4.4%	4%	4%
Inadequately described / Not stated	135	3%	98	3%	518	2.1%	2%	2%
Total	5,226	100%	3,081	100%	24,895	100.0%	100%	100%

Source: ABS, 2012g

Table 98
Occupation and industry type, 2011 - Gunnedah LGA

Occupation	Managers	Professionals	Technicians	Community	Clerical & Administrative Workers	Sales Workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Agriculture,	596	12	22	0	40	4	71	132	5	882	16.88%
Mining	23	29	67	0	27	0	232	10	3	391	7.48%
Manufacturing	41	7	96	3	30	14	59	110	6	366	7.00%
Electricity, gas,	4	0	27	0	10	0	12	10	5	68	1.30%
Construction	24	6	115	5	22	0	46	49	3	270	5.17%
Wholesale trade	20	15	10	0	12	49	17	15	3	141	2.70%
Retail trade	75	13	48	3	31	272	15	55	3	515	9.86%
Accommodation	76	0	25	68	21	42	3	119	3	357	6.83%
Transport, postal	33	4	13	4	36	8	137	9	4	248	4.75%
Information media & telecommunications	0	8	9	0	0	7	0	4	0	28	0.54%
Financial &	7	9	3	0	38	7	0	3	0	67	1.28%
Rental, hiring &	3	5	3	0	15	38	0	0	0	64	1.22%
Professional, scientific	6	76	21	0	56	0	0	6	0	165	3.16%

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Occupation	Managers	Professionals	Technicians	Community	Clerical & Administrative Workers	Sales Workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Administrative	3	18	6	0	11	0	7	67	0	112	2.14%
Public administration	29	34	17	36	79	5	32	24	3	259	4.96%
Education & training	23	245	5	84	35	0	0	14	0	406	7.77%
Health care &	17	150	25	225	38	3	0	30	5	493	9.44%
Arts &	6	3	4	13	3	3	0	3	0	35	0.67%
Other services	7	18	134	22	23	5	5	11	0	225	4.31%
Inadequately described /	13	10	15	5	13	3	14	22	38	133	2.55%
Total	1,006	662	665	468	540	460	650	693	81	5,225	100.00%
% of occupation	19.25%	12.67%	12.73%	8.96%	10.33%	8.80%	12.44%	13.26%	1.55%	100.00%	

Source: ABS, 2012g
Note: Count of employed persons aged 15 years and over

Table 99
Occupation and industry type, 2011 – Liverpool Plains LGA

Occupation	Managers	Professionals	Technicians	Community	Clerical & administrative workers	Sales workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Agriculture,	497	6	29	5	26	0	37	142	4	746	24.21%
Mining	3	4	7	0	5	0	58	8	0	85	2.76%
Manufacturing	23	10	41	0	8	3	28	78	0	191	6.20%
Electricity, gas,	0	0	16	0	3	5	5	7	0	36	1.17%
Construction	18	4	70	3	18	3	28	18	3	165	5.36%
Wholesale trade	13	9	3	0	26	22	16	27	0	116	3.77%
Retail trade	31	7	23	0	15	149	10	30	0	265	8.60%
Accommodation	37	0	19	51	10	4	0	28	3	152	4.93%
Transport, postal	7	8	7	0	27	5	157	8	0	219	7.11%
Information media & telecommunications	3	3	3	0	0	3	4	0	0	16	0.52%
Financial &	3	5	0	0	21	4	0	0	3	36	1.17%
Rental, hiring &	4	0	0	0	4	10	0	3	0	21	0.68%
Professional, scientific	0	35	14	0	45	4	0	0	3	101	3.28%

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Occupation	Managers	Professionals	Technicians	Community	Clerical & administrative workers	Sales workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Administrative	4	11	3	3	3	0	3	29	0	56	1.82%
Public administration	11	18	12	36	21	0	20	29	0	147	4.77%
Education & training	13	121	6	48	17	0	0	3	3	211	6.85%
Health care &	8	89	12	114	29	3	3	26	3	287	9.32%
Arts &	3	0	11	7	0	0	0	5	0	26	0.84%
Other services	5	7	64	6	10	3	3	9	0	107	3.47%
Inadequately described /	8	0	7	3	8	0	11	26	35	98	3.18%
Total	691	337	347	276	296	218	383	476	57	3,081	100.00%
% of occupation	22.43%	10.94%	11.26%	8.96%	9.61%	7.08%	12.43%	15.45%	1.85%	100.00 %	

Source: ABS, 2012g

Note: Count of employed persons aged 15 years and over

Table 100
Occupation and industry type, 2011 – Tamworth Regional LGA

Occupation	Managers	Professionals	Technicians	Community	Clerical & administrative workers	Sales workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Agriculture,	1,071	22	70	4	56	11	56	352	13	1,655	6.65%
Mining	19	18	42	3	7	3	96	7	0	195	0.78%
Manufacturing	265	86	569	14	179	112	229	825	35	2,314	9.30%
Electricity, gas,	24	27	106	0	53	8	36	27	4	285	1.14%
Construction	206	38	937	4	188	23	181	272	17	1,866	7.50%
Wholesale trade	127	50	86	5	130	207	118	141	13	877	3.52%
Retail trade	445	69	199	31	178	1,556	104	261	14	2,857	11.48%
Accommodation	292	14	195	406	75	226	33	504	5	1,750	7.03%
Transport, postal	98	30	97	12	285	25	641	67	9	1,264	5.08%
Information media & telecommunications	27	83	69	3	39	37	8	16	3	285	1.14%
Financial &	95	114	4	3	327	21	0	4	21	589	2.37%
Rental, hiring &	36	28	19	4	98	150	7	20	3	365	1.47%
Professional, scientific	42	399	116	3	278	17	9	10	8	882	3.54%

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Occupation	Managers	Professionals	Technicians	Community	Clerical & administrative workers	Sales workers	Machinery	Labourers	Inadequately described	Total	% of industry type
Administrative	33	90	35	41	84	3	27	338	3	654	2.63%
Public administration	144	299	150	288	373	14	114	92	19	1,493	6.00%
Education & training	140	1,330	76	298	219	0	7	74	16	2,160	8.68%
Health care &	180	1,366	160	1,135	458	15	28	176	28	3,546	14.24%
Arts &	38	37	35	62	35	8	3	34	0	252	1.01%
Other services	44	62	591	91	126	25	10	133	6	1,088	4.37%
Inadequately described /	40	29	63	25	53	25	26	81	175	517	2.08%
Total	3,366	4,191	3,619	2,432	3,241	2,486	1,733	3,434	392	24,894	100.00%
% of occupation	13.52%	16.84%	14.54%	9.77%	13.02%	9.99%	6.96%	13.79%	1.57%	100.00	%

Source: ABS, 2012g

Note: Count of employed persons aged 15 years and over

Table 101
Indigenous Income Indicators, 2006 and 2011

Geographic Area	Median individual income (\$/weekly)				Median household income (\$/weekly)			
	Indigenous persons / households with Indigenous persons (a)		Non-Indigenous persons (b) / other households		Indigenous persons / households with Indigenous persons (a)		Non-Indigenous persons (b) / other households	
	2006	2011	2006	2011	2006	2011	2006	2011
Gunnedah (Indigenous Location)	277	358	363	498	624	776	661	909
Gunnedah (Indigenous Area)	273	365	373	500	629	782	726	959
Caroona / Walhallow Reserve (Indigenous Location)	228	338	500	350	568	633	0	0
Quirindi (Indigenous Location)	295	386	354	441	743	861	637	765
Werris Creek (Indigenous Location)	280	334	279	366	687	769	541	612
Liverpool Plains (Indigenous Area)	274	788	359	802	682	1,083	664	1,160
Tamworth (Indigenous Location)	293	378	432	553	723	862	871	994
Tamworth (Indigenous Area)	715	377	829	527	715	866	829	968
Narrabri (Indigenous Area)	266	343	424	543	607	745	829	1,013
Upper Hunter (Indigenous Area)	377	413	439	557	788	1,136	885	1,070
NSW	296	375	464	566	727	941	1,042	1,247

Sources:
ABS, 2007c and 2012e

Notes:
For the purposes of 2006 Census statistics, an 'Indigenous Location' is the same geographic area as an 'Urban Centre/Locality'.
Note that the 2011 'Indigenous Locations' are not exactly the same geographical areas as the 2006 'Indigenous Locations'.
For the purposes of 2006 and 2011 Census statistics, an 'Indigenous Area' is the same geographic area as a 'Local Government Area'.
(a) A household with Indigenous person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as being of Aboriginal and/or Torres Strait Islander origin.
(b) Includes persons who did not state their Indigenous status.

Median individual income is applicable to persons aged 15 years and over.
Median household income is applicable to occupied private dwellings. It excludes households where at least one member aged 15 years and over did not state an income and households where at least one member aged 15 years and over was temporarily absent on Census Night. It excludes 'Visitors only' and 'Other not classifiable' households.

Table 102
House and unit sales, Gunnedah 2380, 2003-2012

Year	Sales Characteristics	All Houses (no and \$)	3 bedroom houses on land size less than 2000 sqm (no and \$)	3+ bedroom houses on land size more than 2000 sqm (no and \$)	All units (no and \$)	2 bedroom units (no and \$)
2003	Number of properties sold	98	23		9	1
	Lowest sale price	8,200	39,000		80,000	80,000
	Highest sale price	585,000	585,000	No properties sold	200,000	80,000
	Median value of all properties sold	108,000	90,000		135,500	80,000
2005	Average value of all properties sold	120,519	114,869		143,277	80,000
	Number of properties sold	135	35	4	14	3
	Lowest sale price	36,250	79,000	66,000	34,000	73,500
	Highest sale price	1,980,000	365,000	315,000	280,000	165,000
2007	Median value of all properties sold	160,000	155,000	205,000	148,250	130,000
	Average value of all properties sold	244,898	160,254	197,750	147,814	122,833
	Number of properties sold	121	3	3	15	6
	Lowest sale price	47,206	90,000	90,000	94,000	135,714
2009	Highest sale price	425,000	300,000	300,000	390,000	280,000
	Median value of all properties sold	195,000	275,000	275,000	220,000	180,000
	Average value of all properties sold	210,355	221,000	221,666	209,123	188,571
	Number of properties sold	162	110	9	15	7
2009	Lowest sale price	14,000	60,000	210,000	97,000	122,000
	Highest sale price	3,414,000	490,000	565,000	435,000	255,000
	Median value of all properties sold	212,500	225,000	396,000	230,000	212,000
	Average value of all properties sold	266,643	233,859	394,833	222,266	190,571

Year	Sales Characteristics	All Houses (no and \$)	3 bedroom houses on land size less than 2000 sqm (no and \$)	3+ bedroom houses on land size more than 2000 sqm (no and \$)	All units (no and \$)	2 bedroom units (no and \$)
2011	Number of properties sold	148	65	9	24	11
	Lowest sale price	5,000	111,000	184,000	65,000	65,000
	Highest sale price	900,000	550,000	800,000	740,000	253,000
	Median value of all properties sold	268,500	258,000	390,000	231,000	205,000
	Average value of all properties sold	285,359	253,061	429,681	283,395	197,727
2012	Number of properties sold	165	75	15	17	6
	Lowest sale price	95,000	115,000	20,000	110,500	110,500
	Highest sale price	750,000	420,000	660,000	305,000	270,000
	Median value of all properties sold	280,000	265,000	442,000	272,500	206,250
	Average value of all properties sold	296,498	263,006	417,500	247,950	205,083

Source: RPdata Ltd, 2012 and 2013

Table 103
House and unit sales, Curlewis 2381, 2003-2012

Year	Sales characteristics	All Houses (no and \$)	All units (no and \$)
2003	Number of properties sold	3 47,500 90,000 85,000 74,166	No properties sold
	Lowest sale price		
	Highest sale price		
	Median value of all properties sold		
2007	Average value of all properties sold	7 28,000 155,000 60,000 82,698	No properties sold
	Number of properties sold		
	Lowest sale price		
	Highest sale price		
2011	Median value of all properties sold	11 125,000 285,000 175,000 181,227	2 320,000 320,000 320,000 320,000
	Average value of all properties sold		
	Number of properties sold		
	Lowest sale price		
2012	Highest sale price	8 115,000 281,000 168,500 177,250	No properties sold
	Median value of all properties sold		
	Average value of all properties sold		
	Number of properties sold		

Source: RPdata Ltd, 2012 and 2013

Table 104
House and unit sales, Quirindi and Werris Creek, 2003-2012

Year	Sales characteristics	Quirindi 2343		Werris Creek 2341	
		All Houses (no and \$)	All units (no and \$)	All Houses (no and \$)	All units (no and \$)
2003	Number of properties sold	48	2	38	No properties sold
	Lowest sale price	17,000	77,500	17,000	
	Highest sale price	220,000	232,000	190,000	
	Median value of all properties sold	87,000	154,750	58,000	
	Average value of all properties sold	102,333	154,750	69,781	
2007	Number of properties sold	47	1	32	No properties sold
	Lowest sale price	38,500	515,000	7,652	
	Highest sale price	351,000	515,000	190,000	
	Median value of all properties sold	167,500	515,000	113,000	
	Average value of all properties sold	174,531	515,000	112,004	
2011	Number of properties sold	43	1	34	No properties sold
	Lowest sale price	30,000	165,000	50,000	
	Highest sale price	800,000	165,000	450,000	
	Median value of all properties sold	165,000	165,000	135,500	
	Average value of all properties sold	201,581	165,000	160,382	
2012	Number of properties sold	40	2	19	No properties sold
	Lowest sale price	68,000	180,000	57,000	
	Highest sale price	450,000	225,000	307,000	
	Median value of all properties sold	170,000	202,500	143,500	
	Average value of all properties sold	202,805	202,500	149,441	

Source: RPdata Ltd, 2012 and 2013

Table 105
Median House Sales Prices, Tamworth, 2010-2011

Period	Calala \$	East Tamworth \$	North Tamworth \$	South Tamworth \$	West Tamworth \$	Oxley Vale \$	Westdale \$	Hillvue \$	Tamworth Regional LGA \$
May 2010	320,000	340,000	237,000	255,000	161,000	294,000	287,500	320,000	270,000
June 2010	376,500	345,000	310,000	245,000	250,000	265,000	260,000	345,000	265,000
July 2010	270,000	288,245	280,000	220,000	262,000	260,000	251,000	370,000	265,000
August 2010	300,000	320,000	310,000	172,500	220,000	268,650	260,000	325,000	261,250
September 2010	249,000	345,000	230,000	218,000	213,750	237,500	268,500	350,000	238,000
October 2010	288,000	365,000	280,500	183,000	226,000	261,000	265,000	345,000	280,000
November 2010	313,157	270,000	326,250	207,500	207,000	288,000	265,000	387,000	238,000
December 2010	348,000	286,000	282,500	225,000	240,000	262,500	283,500	350,000	265,000
January 2011	267,000	327,000	242,000	242,500	266,000	266,000	260,000	312,000	265,000
February 2011	290,000	315,000	392,000	230,000	217,500	312,500	236,500	275,750	265,000
March 2011	203,000	270,000	240,000	254,000	165,000	312,500	236,500	357,500	240,000
April 2011	203,000	143,000	240,000	206,000	165,000	312,500	236,500	357,500	175,500
Average Median Price	286,471	300,354	281,604	222,542	216,021	277,586	256,417	341,228	250,729

Note: These figures were sourced from reports creation on the 27th April 2011.
If a sale has occurred within a particular month, then the previous median price is repeated until a sale occurred. As indicated in the above tables.
A repetition of the same figure may indicate that sale information has not been released for the month.

Source: TRAHS from RPdata Ltd, 2012

Table 106
Median Unit Sales Prices , Tamworth, 2010-2011

Period	Calala \$	East Tamworth \$	North Tamworth \$	South Tamworth \$	West Tamworth \$	Oxley Vale \$	Westdale \$	Hillvue \$	Tamworth Regional LGA \$
May 2010	136,000	330,000	165,000	247,500	158,750	169,000	265,000	266,500	247,500
June 2010	136,000	177,500	179,000	116,500	158,750	169,000	265,000	266,500	179,000
July 2010	136,000	136,000	179,000	116,500	144,500	165,000	265,000	266,500	140,000
August 2010	136,000	136,000	177,500	180,000	242,500	165,000	265,000	266,500	210,000
September 2010	136,000	185,000	182,500	87,500	172,000	165,000	265,000	266,500	175,500
October 2010	136,000	180,000	182,500	206,500	172,000	165,000	265,000	232,500	166,000
November 2010	136,000	181,000	275,000	206,500	270,000	165,000	265,000	232,500	251,250
December 2010	136,000	181,000	275,000	164,500	141,000	165,000	265,000	232,500	180,000
January 2011	136,000	191,000	302,500	154,500	219,000	165,000	265,000	232,500	260,750
February 2011	136,000	131,500	302,500	154,500	219,000	165,000	265,000	232,500	131,500
March 2011	136,000	131,500	151,000	230,000	219,000	165,000	265,000	232,500	230,000
April 2011	136,000	131,500	151,000	230,000	219,000	165,000	265,000	232,500	230,000
Average Median Price	139,000	176,833	210,208	173,708	194,625	165,667	265,000	246,667	199,542

Note: These figures were sourced from reports creation on the 27th April 2011.
If a sale has occurred within a particular month, then the previous median price is repeated until a sale occurred. As indicated in the above tables.
A repetition of the same figure may indicate that sale information has not been released for the month.

Source: TRAHS from RPdata Ltd, 2012

Table 107
Capital Growth Median Prices (Houses), Tamworth, 2001-2010

Period	Calala	East Tamworth	North Tamworth	South Tamworth	West Tamworth	Oxley Vale	Westdale	Hillvue	Tamworth Regional LGA
	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change
2001	4.8	5.9	11.1	-6.9	5.9	4.5	19.5	15.2	7.1
2002	16.8	14.9	22.9	23.7	14	21.3	14	23.9	21
2003	17.6	25.4	15.3	27.2	30.4	22.8	13	25.9	16.1
2004	25	20.7	27.8	22.1	30.1	20.6	29.5	5.2	30.5
2005	19	3.8	13	9.3	-6.1	11.4	16.2	13.8	9.1
2006	18.6	1.8	11.4	3.1	12.3	-6.5	5.7	-1.3	4.8
2007	9.4	9.1	-2	2.1	-0.4	16	-5.3	2.3	4.5
2008	-6.9	9.7	2.1	-1.7	-6.5	2.8	2.2	-3.9	-0.2
2009	4.2	-13.4	1.4	1.9	14.9	5.3	0.9	6.7	2.8
2010	8.3	5.9	13.7	3.4	15.5	3.3	7.2	5.3	7.2

Note: These figures were sourced from reports creation on the 27th April 2011.

Capital growth: A capital gain is a profit that results from investments into a capital asset, such as real estate, which exceeds the purchase price. It is the difference between a higher selling price and a lower purchase price, resulting in a financial gain for the investor.

Source: TRAHS from RPdata Ltd, 2012

Table 108
Capital Growth Median Prices (Units), Tamworth, 2001-2010

Period	Calala	East Tamworth	North Tamworth	South Tamworth	West Tamworth	Oxley Vale	Westdale	Hillvue	Tamworth Regional LGA
	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change
2001	0	5	-7.8	8.7	0.3	7.4	0	7.4	2.3
2002	185.5	59.5	7.5	17.7	-7.4	13.5	0	5.2	23.2
2003	-42.7	-3.1	44.6	10.5	52.9	16.3	0	7	22
2004	100	15.8	14.8	40.5	7.7	28.8	0	-12.9	12.8
2005	-2.8	12.4	13.9	-4	28.5	85.6	0	68.2	12.7
2006	34.1	-3.7	-2.8	2.7	16.7	-44.8	154.1	-35.7	-1.2
2007	-37.2	15.8	27.4	7.4	22.6	0	0	6.3	22.8
2008	0	-4.9	-20.4	-9.1	-34.5	68.5	-27.7	47.1	-14.6
2009	76.3	2.2	16	19.7	10.4	-32	47.2	-12	3.1
2010	-46.5	-13	2	-14.4	-9.2	-2.1	0	27.8	0.3

Note: These figures were sourced from reports creation on the 27th April 2011.

Capital growth: A capital gain is a profit that results from investments into a capital asset, such as real estate, which exceeds the purchase price. It is the difference between a higher selling price and a lower purchase price, resulting in a financial gain for the investor.

Source: TRAHS from RPdata Ltd, 2012

Table 109
School Enrolments, 2006-2011

Education Facility	2006	2007	2008	2009	2010	2011
Public Schools (Enrolment at February)						
Within Gunnedah LGA						
Gunnedah High School	616	640	608	621	595	590
Gunnedah Public School	229	211	187	175	155	132
Gunnedah South Public School	473	459	473	462	440	477
Carroll Public School	16	13	9	8	7	13
Curlewis Public School	80	70	53	52	43	47
Within Liverpool Plains LGA						
Currabubula Public School	27	28	23	25	33	37
Quirindi High School	392	382	368	377	409	434
Quirindi Public School	318	326	302	327	351	352
Werris Creek Public School	126	99	106	113	119	108
Spring Ridge Public School	37	35	39	38	34	39
Blackville Public School	12	14	15	15	11	8
Willow Tree Public School	53	47	58	54	56	57
Walhallow Public School	16	16	12	27	28	25
Within Tamworth Urban Area						
Hillvue Public School	351	339	310	309	293	255
Oxley High School	1,233	1,163	1,111	1,100	1,111	1,071
Oxley Vale Public School	309	274	273	291	274	290
Peel High School	436	437	436	460	464	491
Tamworth High School	891	861	844	782	762	780
Tamworth Public School	620	606	603	621	632	669
Tamworth South Public School	691	713	680	672	732	740
Tamworth West Public School	190	195	181	163	181	185
Farrer Memorial Agricultural High School	618	630	631	619	609	617
Public Schools for Specific Purposes						
G S Kidd Memorial School (Gunnedah)	Information not available					24
Parry School (Tamworth)						15
Bullimbal School (Tamworth)						34

Education Facility	2006	2007	2008	2009	2010	2011
Catholic and Private Schools						
Within Gunnedah and Liverpool Plains LGA						
St Mary's (Catholic) College Gunnedah (Years 7-12)	Information not available				343	340
St Xaviers (Catholic Primary) School Gunnedah					396	372
St Joseph's (Catholic) Primary School, Quirindi					55	42
Carinya Christian School (K-6) Gunnedah					NA	NA
Within Tamworth Urban Area						
St Edward's Primary School - South Tamworth	Information not available				552	548
St Nicholas' Primary School – Tamworth					395	387
St Joseph's Primary School - West Tamworth					127	122
McCarthy Catholic College - Tamworth (Years 7-12)					933	834
Calrossy Anglican School – Tamworth (Years K-12)					>1,000	

Source: NSW Department of Education and Training: 2006, 2007, 2008, 2009, 2010 and 2011 February Actual Student Enrolments for Primary Schools and High Schools; NSW Department of Education and Communities, 2011; Armidale Catholic Schools Office, 2012

Note: NA – Not Available

Table 110
Gunnedah Community Strategic Plan Community Consultation Outcomes Summary

Theme	Outcomes Sought by the Community Include
Engaging and supporting the community	• Community leadership encouraged and strengthened • Local co-ordination of funding from national, state and local sources • Population increases through targeted promotion of the shire identity and opportunities • Funding of local facilities and services through mining royalties • Retention of our young population through increased employment and social opportunities
Building Our Shire's Economy	• Our economic employment base diversified • Our infrastructure strategically managed • Our identity and reputation promoted to tourists • Entrepreneurs and developers contribute to local economic growth
Retaining Our Quality of Life	• Our older residents provided with the comfort and respect they deserve • Enhanced access to essential services • Improved housing affordability • Villages are sustainable • Police continue to work in partnership with the community • Reduced crime and anti-social behaviour within the Shire • Our younger people retained • Entertainment facilities, equipment and stimulation for community members of all ages • Enhanced delivery of key services within our villages • Our community values retained over time
Protecting and Enjoying Our Beautiful Surrounds	• Greater balance between development and environmental protection • Enhance the coverage of native vegetation within the Shire • A secure and high quality water supply • Protect our heritage

Source: Blackadder Associates, 2011

Table 111
Gunnedah LGA - Most commonly identified 'attractive natural site within the neighbourhood that should be conserved', 2011

'Attractive natural site within the neighbourhood that should be conserved'	% of respondents
Gunnedah Township (no of respondents = 383)	
Aboriginal sites, Red Chief, Gins Leap	1.3%
Riverbank, creeks, gullies, dams and waterways	16.2%
Farmlands and Landscaping	2.9%
Wildlife, koalas and Waterways wildlife park	4.4%
Parks, sporting fields, reserves and walking tracks	3.9%
Lagoons, Mullaba Lagoon	7.0%
Porcupine Hill, Pensioners Hill lookouts, other lookouts	42.0%
Wetlands Wondobah reserve	9.4%
Bushland, mountains and hills	3.9%
Views, vistas, townships and plains	6.0%
Wallaby Trap	2.6%
Mines	0.3%
Gunnedah Villages (no of respondents = 65)	
Aboriginal sites, Red Chief, Gins Leap	0.0%
Riverbank, creeks, gullies, dams and waterways	17.6%
Farmlands and Landscaping	8.1%
Wildlife, koalas and Waterways wildlife park	9.5%
Parks, sporting fields, reserves and walking tracks	8.1%
Lagoons, Mullaba Lagoon	1.4%
Porcupine Hill, Pensioners Hill lookouts, other lookouts	25.7%
Wetlands Wondobah reserve	6.8%
Bushland, mountains and hills	5.4%
Views, vistas, townships and plains	17.6%
Wallaby Trap	0.0%
Mines	0.0%
Gunnedah Rural Areas (no of respondents = 119)	
Aboriginal sites, Red Chief, Gins Leap	2.9%
Riverbank, creeks, gullies, dams and waterways	16.5%
Farmlands and Landscaping	6.8%
Wildlife, koalas and Waterways wildlife park	3.9%
Parks, sporting fields, reserves and walking tracks	3.9%
Lagoons, Mullaba Lagoon	6.8%

Appendix D

<i>'Attractive natural site within the neighbourhood that should be conserved'</i>	% of respondents
Porcupine Hill, Pensioners Hill lookouts, other lookouts	28.2%
Wetlands Wondobah reserve	7.8%
Bushland, mountains and hills	12.6%
Views, vistas, townships & plains	7.8%
Wallaby Trap	2.9%
Mines	0.0%

Source: HNEPH, 2011

Table 112
SWOT Analysis, LPSC Community Strategic Plan 2010/11 – 2020/21

Strengths	Weaknesses	Opportunities	Threats
Location	Black soil and cost of building roads	Sister City	Government decisions
Lifestyle	Off highway	Housing Develop	Terrorism for major trading partners
Railway	No National Parks	Retiree marketing	World economic downturn
Transport Links	No 24 hour Police	Tourism	Commodity prices
Diverse agriculture	Transport	Coal and gas resources	Low Police numbers
Skilled people	Ageing population	Grain Production	Oil prices
Water availability and pricing	Water Sharing plans	China – resource demand	Amalgamation with Tamworth or Gunnedah
Water Strategy	Lack of employment, government agencies, trades people and job variety	Renewable energy	Climate change
Tamworth airport and proximity to Tamworth	Climate	Strategic Alliance (other councils)	China – demand
Existing health and recreation infrastructure	Absentee landlords	Resource sharing	Transport
Main Street in Quirindi	Accommodation – tourist	Timber Resources	Low Doctor numbers
Scenic amenity	Restaurants – lack of	Ethanol production	Dam upgrade cost
Mt Helen communication site	Main Street trucks	Heavy industry	Coal / Gas Mining
Tourism	Tamworth Airport	Equine industry	Damage to water resources from mining
Low cost residential and commercial land and lot sizes	Attraction of qualified staff	Government funding	Staff losses
Educational facilities	Lack of culture, arts, innovation and youth activities	Transport Loading facility	Water utility review
Telecommunications	Mixed land ownership in Quirindi	F3 extension – Branxton	Inaccurate population estimates
Council size (Population)	Low population	Saleyards – Redevelop	Road network due to rail closures
Political support	Small size of LPSC	Medical centre	
Cemeteries	Adaption to change	Quipolly Dam upgrade	
Natural Resources	Retention of staff	Royal Theatre	
Environmental initiatives and sustainability	Flood prone land	Airport	

Appendix D

Strengths	Weaknesses	Opportunities	Threats
Bird varieties	Telecommunications	Cycleway / fitness trail	
Rail heritage assets	Railway line through towns	Promotion of bird varieties	
Climate	Limited range of training courses	Jobs in aged care	
Grain storage	Reducing volunteer numbers	Regional Planning	
Aboriginal population		Provide smaller acreage housing lots	
Black soil plains productivity		Railway overpass	
Potential for expansion		Promote Tamworth airport	
Local businesses		Bio technology	
Rural Fire Service		Gunnedah Flight school	
Quirindi Retirement Home			

Table 113
Gunnedah LGA - Most Commonly Identified Place in the Neighbourhood Where People Come Together

Most Commonly Identified Place in the Neighbourhood Where People Come Together	Percentage of Respondents
Gunnedah Township (N = 528)	
Community venues	38.4%
Sporting venues	18.8%
Licensed Premises	7.6%
Recreation areas	35.2%
Gunnedah Villages (N = 186)	
Community venues	65.6%
Sporting venues	7.0%
Licensed Premises	15.1%
Recreation areas	12.4%
Gunnedah Rural Areas (N = 107)	
Community venues	58.9%
Sporting venues	11.2%
Licensed Premises	13.1%
Recreation areas	16.8%

Source: HNEPH, 2011

Table 114
Place of Usual Residence One Year Ago, 2006

Status	Gunnedah LGA		Liverpool Plains LGA		Tamworth LGA		Northern SD	NSW
	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	% of total persons	% of total persons
Same usual address 1 year ago as in 2006	9,374	82%	6,062	81%	42,241	80%	80%	80%
Different usual address 1 year ago:								
Same Statistical Local Area (SLA)	917	8%	460	6%	4,547	9%	8%	6%
Different SLA in NSW	512	5%	405	5%	3,140	6%		
Different SLA in another state or territory	118	1%	49	1%	606	1%		
Overseas	12	0.1%	13	0.2%	129	0.2%		
Not stated (a)	11	0.1%	11	0.1%	103	0.2%		
Total	1,570	14%	938	13%	8,525	16%		
Not stated (b)	429	4%	458	6%	2,072	4%		
Total	11,373		7,458		52,838			

Source: ABS, 2007a

Note: Count of persons aged 1 year and over.

(a) Includes persons who stated that they were usually resident at a different address 1 year ago but did not state that address.

(b) Includes persons who did not state whether they were usually resident at a different address 1 year ago.

Table 115
Place of Usual Residence One Year Ago, 2011

	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Narrabri LGA		Upper Hunter LGA		Northern Statistical Division	NSW
	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	% of total persons	% of total persons
Same as in 2011	9,538	79.1%	6,108	81.6%	44,161	78.4%	10,312	79.8%	10,920	79.4%	78.8%	80.0%
Elsewhere in Australia	1,645	13.6%	906	12.1%	8,449	15.0%	1,678	13.0%	1,962	14.3%	14.2%	12.3%
Overseas in 2010	23	0.2%	19	0.3%	163	0.3%	41	0.3%	94	0.7%	0.5%	1.3%
Not stated	687	5.7%	354	4.7%	2,750	4.9%	697	5.4%	576	4.2%	5.1%	5.1%
Not applicable	171	1.4%	94	1.3%	769	1.4%	196	1.5%	200	1.5%	1.3%	1.3%
Total	12,064	100.0%	7,481	100.0%	56,292	100.0%	12,924	100.0%	13,752	100.0%	100.0%	100.0%

Source: ABS, 2012g

Note: Count of persons aged 1 year and over.

Table 116
Address 5 Years Ago, Census 2006

Status	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Northern SD	NSW
	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	% of total persons	% of total persons
Same usual address 5 years ago as in 2006	6,284	58%	4,198	60%	26,365	53%	55%	55%
Different usual address 5 years ago:								
Same Statistical Local Area (SLA)	1,995	19%	969	14%	9,841	20%	17%	13%
Different SLA in New South Wales	1,578	15%	1,154	16%	9,196	18%		
Different SLA in another state or territory	258	2%	132	1.9%	1,413	2.8%		
Overseas	54	0.5%	39	0.6%	448	0.9%		
Not stated(a)	43	0.4%	33	0.5%	254	0.5%		
Total	3,928	36%	2,327	33%	21,152	42%		
Not stated(b)	571	5%	520	7%	2,572	5%		
Total	10,783		7,045		50089			

Source: ABS, 2007a

Note: Count of persons aged 5 years and over

a) Includes persons who stated that they lived at a different address 5 years ago but did not state that address.

(b) Includes persons who did not state whether they were usually resident at a different address 5 years ago.

Table 117
Address 5 Years Ago, Census 2011

	Gunnedah LGA		Liverpool Plains LGA		Tamworth Regional LGA		Narrabri LGA		Upper Hunter Shire LGA		NENW SA4	NSW
	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	Persons	% of total persons	% of total persons	% of total persons
Same as in 2011	6,466	53.6%	4,352	58.2%	29,033	51.6%	7,134	55.2%	7,368	53.6%	32.8%	29.4%
Elsewhere in Australia	3,828	31.7%	2,238	29.9%	19,654	34.9%	3,906	30.2%	4,432	32.2%	1.4%	5.0%
Overseas in 2006	92	0.8%	62	0.8%	486	0.9%	99	0.8%	268	1.9%	53.2%	53.4%
Not stated	790	6.5%	372	5.0%	3,183	5.7%	785	6.1%	700	5.1%	5.8%	5.6%
Not applicable	888	7.4%	455	6.1%	3,935	7.0%	1,003	7.8%	984	7.2%	6.9%	6.6%
Total	12,064	100.0%	7,479	100.0%	56,291	100.0%	12,927	100.0%	13,752	100.0%	100.0%	100.0%

Source: ABS, 2012g

Note: Count of persons aged 1 year and over

Table 118
NSW Recorded Crime Statistics 2007-2011

Offence Type	Jan-Dec 2007		Jan-Dec 2011		60-month Trend*	2011 LGA Rank**
	Number of Incidents	Rate per 100,000 Population	Number of Incidents	Rate per 100,000 Population		
Gunnedah LGA						
Murder^	0	0.0	0	0.0	nc	
Assault - domestic violence related	62	515.0	87	709.3	Stable	15
Assault - non-domestic violence related	118	980.1	96	782.7	Stable	19
Sexual assault	16	132.9	13	106.0	nc	29
Indecent assault, act of indecency and other sexual offences	16	132.9	15	122.3	nc	
Robbery without a weapon	2	16.6	0	0.0	nc	110
Robbery with a firearm	0	0.0	0	0.0	nc	
Robbery with a weapon not a firearm	0	0.0	1	8.2	nc	
Break and enter dwelling	77	639.6	105	856.1	Stable	21
Break and enter non-dwelling	88	731.0	87	709.3	Stable	10
Motor vehicle theft	19	157.8	37	301.7	nc	37
Steal from motor vehicle	96	797.4	186	1,516.5	18%	4
Steal from retail store	13	108.0	39	318.0	nc	28
Steal from dwelling	62	515.0	73	595.2	Stable	13
Steal from person	6	49.8	0	0.0	nc	
Fraud	27	224.3	29	236.4	Stable	91
Malicious damage to property	303	2,516.8	251	2,046.5	Stable	19
Liverpool Plains LGA						
Murder^	0	0.0	0	0.0	nc	
Assault - domestic violence related	47	596.1	41	514.8	Stable	41
Assault - non-domestic violence related	76	964.0	40	502.2	Stable	64
Sexual assault	6	76.1	7	87.9	nc	30

Offence Type	Jan-Dec 2007		Jan-Dec 2011		60-month Trend*	2011 LGA Rank**
	Number of Incidents	Rate per 100,000 Population	Number of Incidents	Rate per 100,000 Population		
Indecent assault, act of indecency and other sexual offences	11	139.5	11	138.1	nc	
Robbery without a weapon	1	12.7	2	25.1	nc	72
Robbery with a firearm	0	0.0	0	0.0	nc	
Robbery with a weapon not a firearm	0	0.0	0	0.0	nc	
Break and enter dwelling	14	177.6	44	552.4	nc	55
Break and enter non-dwelling	28	355.1	24	301.3	nc	69
Motor vehicle theft	1	12.7	10	125.5	nc	96
Steal from motor vehicle	13	164.9	21	263.7	nc	124
Steal from retail store	9	114.2	2	25.1	nc	127
Steal from dwelling	19	241.0	33	414.3	nc	44
Steal from person	1	12.7	3	37.7	nc	73
Fraud	9	114.2	14	175.8	nc	111
Malicious damage to property	96	1,217.7	66	828.6	Stable	105
Tamworth Regional LGA						
Murder [^]	0	0.0	1	1.7	nc	
Assault - domestic violence related	240	423.2	366	615.5	11%	26
Assault - non-domestic violence related	443	781.2	551	926.7	Stable	11
Sexual assault	69	121.7	59	99.2	Stable	16
Indecent assault, act of indecency and other sexual offences	49	86.4	101	169.9	20%	
Robbery without a weapon	16	28.2	24	40.4	nc	34
Robbery with a firearm	2	3.5	2	3.4	nc	
Robbery with a weapon not a firearm	8	14.1	7	11.8	nc	
Break and enter dwelling	522	920.5	604	1,015.8	Stable	12
Break and enter non-dwelling	265	467.3	254	427.2	Stable	36
Motor vehicle theft	96	169.3	137	230.4	Stable	63

Appendix D

Offence Type	Jan-Dec 2007		Jan-Dec 2011		60-month Trend*	2011 LGA Rank**
	Number of Incidents	Rate per 100,000 Population	Number of Incidents	Rate per 100,000 Population		
Steal from motor vehicle	487	858.8	390	655.9	-5%	49
Steal from retail store	137	241.6	282	474.3	20%	11
Steal from dwelling	233	410.9	268	450.7	Stable	34
Steal from person	37	65.2	27	45.4	Stable	63
Fraud	147	259.2	186	312.8	Stable	61
Malicious damage to property	1,312	2,313.6	1,208	2,031.6	Stable	22

Source: Goh & Moffat, 2011

Notes: Trend information is not calculated if at least one 12 month period in the selected timeframe had less than 20 incidents

* Average annual percentage change is provided if the trend was significant

** There are 154 LGAs in NSW. Rates are only calculated for major offences. Ranks are not calculated for murder due to the low number of recorded victims per LGA.

^ For murder and manslaughter, the data are counts of recorded victims, not criminal incidents.