Appendix O
Social Impact Assessment

This page has been left blank intentionally.

GHD

Level 3 GHD Tower 24 Honeysuckle Drive Newcastle NSW 2300
PO Box 5403 Hunter Region Mail Centre NSW 2310
T: (02) 4979 9999 F: (02) 4979 9988 E: ntlmail@ghd.com.au

© GHD 2010

This report has been prepared by GHD (pursuant to a contract between the members of the Hunter 8 Alliance) for use by the Hunter 8 Alliance, comprising GHD, John Holland Pty Ltd and ARTC. It has been prepared on the basis of specific instructions and/or information provided by one or more members of the Hunter 8 Alliance. This report is intended for the sole use of the Hunter 8 Alliance. The contents and conclusion of this report cannot be relied upon by any third party.

This report should not be altered, amended or abbreviated, issued in part or issued incomplete in any way without prior checking and approval by GHD.

Document Status

Rev No.	Date	Revision Description	Prepared	Reviewed		Approved	
				Name	Signature	Name	Signature
0	11/12/09	Original issue	K Smith	A Mithieux		D Chubb	
1	18/05/10	Revision 1	K Smith	A Mithieux		D Chubb	

This page has been left blank intentionally.

Contents

Table Index

Figure Index

Executive Summary

This Social Impact Assessment (SIA) (this report) has been undertaken by the Hunter 8 Alliance on behalf of the Australian Rail Track Corporation (ARTC) for the Maitland to Minimbah Third Track Project (hereafter described as "the Project"). The SIA report has been prepared to provide an assessment of the social impacts of the Maitland to Minimbah Third Track Project as an input to the environmental assessment. The key objective of the SIA report is to address the requirements of the Director-General of the NSW Department of Planning (the Director-General's Requirements) dated 29 May 2009, particularly those relating to land use and access.

The Project alignment passes through urbanised areas at Maitland, Greta and Branxton, and a smaller urban area at Lower Belford. These rural townships feature numerous residential properties located within 200 metres of the existing rail corridor. In addition, there are various rural residential properties located between Maitland and Minimbah with residential buildings within 200 metes of the existing rail corridor. The rural environment is characterised by expanses of open and undulating land used for small scale rural and commercial activities (such as hobby farms) and larger scale rural and commercial activities such as cattle grazing, pet motels and horse breeding and training. There are also various industrial properties neighbouring the existing rail corridor.

Within the Project's local study area, Rutherford is clearly the most populated town, while Greta, Telarah and Branxton are the next most populated areas. The majority of the local study area towns have similar proportions of residents that require assistance with their core activities, with this proportion ranging between 3% and 6% of the population (ABS, 2007).

The nature and scale of Project's construction and operational activities is likely to give rise to several impacts on the local community. The potential social impacts have been broadly categorised into construction impacts and operational impacts, and relate to direct impacts on private property (residents and businesses that constitute the Project's neighbouring landholders) and / or impacts on the broader community.

The key direct property and community impacts anticipated during the Project's construction period include:

- Direct property impacts:
  - Land acquisitions.
  - Noise.
  - Property damage.
  - Impacts on flora and fauna.
  - Changes to property infrastructure.
  - Reduced access to private property.
  - Reduced security.
- Community impacts:
  - Reduced road safety.

- Reduced access - roads and traffic mobility.
- Construction employment opportunities.

The key direct property impacts anticipated during the Project's operational period are listed below. The impact on the broader community brought about by the Project's operation would likely be less pronounced and result from indirect change processes.

- Direct property impacts:
  - Noise.
  - Vibration.
  - Drainage.
  - Property devaluation.
  - Reduced viability of development plans.
  - Reduced access to private property.

Various mitigation and management measures have been suggested for each of the social impacts identified. These measures range from the provision of sufficient information to enable stakeholders to understand the likely nature, extent and duration of the social impacts, to the implementation of attenuation measures to screening sensitive receptors. These suggested measures are recommended to be incorporated in detailed construction planning and ongoing management of the Project.

The severity of the potential social impacts that have been identified is likely to be limited as the Project is fundamentally an upgrade of existing infrastructure. In general, it is concluded that adverse social impacts are likely to be experienced at an individual / household / business level. At this level, there are a greater number of adverse social impacts likely to occur during the Project's construction. However, the direct property impacts may be adequately compensated / managed.

While there is also likely to be some adverse impacts experienced by the broader community, namely during the Project's construction, these impacts are able to be minimised and managed and will be offset by the community benefit created by the Project.

1. Introduction

The Social Impact Assessment (SIA) (this report) has been undertaken by the Hunter 8 Alliance on behalf of the Australian Rail Track Corporation (ARTC) for the Maitland to Minimbah Third Track Project (hereafter described as "The Project") Environmental Assessment. The Environmental Assessment has been prepared in accordance with the requirements of Part 3A of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Background

ARTC was created by the Commonwealth and State Governments in 1998 to provide a single body responsible for the National Interstate Rail Network. ARTC is a Commonwealth Government corporation and currently has responsibility for the management of over 10,000 route kilometres of standard gauge interstate rail track in South Australia, Victoria, Western Australia and New South Wales (NSW), as well as the Hunter Valley Rail Network and other regional rail links in NSW.

The Hunter Valley Rail Network extends from the Port of Newcastle to Ulan and Narrabri in the west. It is used by passenger services, freight, wheat and coal services. The majority of trains carry coal from mines located across the Hunter Valley to either Carrington (Port Waratah) or Kooragang Island ports at Newcastle for loading onto ships for export.

Due to the forecast increase in coal throughput at the Port of Newcastle to 190 million tonnes per annum (mtpa) by 2012, a number of rail infrastructure improvements to the Hunter Valley Rail Network have been proposed by ARTC. One of the key improvement projects included in the ARTC ten-year strategic plan is a proposed third track adjacent to the existing Main Northern Railway between Maitland and Whittingham, known as the Maitland to Whittingham Third Track Project.

The Maitland to Whittingham Third Track Project is divided into two stages. Stage 1 consists of the construction of the third track between Minimbah and Whittingham. Project Approval for this project was granted by the Minister of Planning on 26 May 2009 and construction commenced in July 2009.

Stage 2 consists of the construction of the third track between Maitland and Minimbah, known as the Maitland to Minimbah Third Track Project. Stage 2 is the subject of this SIA and is referred to as 'the Project'.

The purpose of the Project is to increase rail reliability and future capacity between the Hunter Valley and the Port of Newcastle. In addition to providing increased track capacity, the Project aims to improve operational performance along the route. These improved efficiencies would be created through:

- Reduced impacts on coal traffic due to track maintenance activities.
- Reduced loss of freight train paths due to shadow effects from passenger services.

- Reduced loss of available train paths due to train breakdowns.
- The Project would also bring benefits to the local and broader community by generating up to 650 full time jobs during construction, creating opportunities for local and regional goods and service providers, and providing greater security for existing coal industry jobs.

1.2 Objectives of this Report

The key objective of the SIA report is to address the requirements of the Director-General of the NSW Department of Planning (the Director-General's Requirements) dated 29 May 2009, particularly those relating to land use and access.

Table 1-1 outlines the Director-General's Requirements relating to social impacts and where these have been addressed in this report.

Table 1-1 Director-General's Requirements - Social Impacts

Director-General's Requirements	Where Addressed in this Report
◗ Land use and access impacts to affected properties including acquisition, severance, business viability, and property infrastructure impacts. ◗ Local community (services, access and amenity) related changes and the potential to enhance station facilities.	Chapter 5 and 6

1.3 Purpose of this Report

This SIA report has been prepared to provide an assessment of the social impacts of the Maitland to Minimbah Third Track Project as an input to the Environmental Assessment. The major elements of the Project are described in Chapter 2, and the local and regional study areas are defined. Chapter 3 provides a detailed profile of the relevant characteristics of the local and regional areas of interest, while the methodology used to undertake the SIA is outlined in Chapter 4. Potential social impacts that could arise from the Project's construction and operation are identified in Chapter 5. Mitigation and management measures to maximise potential positive social impacts, avoid or minimise potentially adverse impacts, or offset / compensate stakeholders for significant adverse impacts that cannot be reduced to an acceptable level are proposed in Chapter 6. Finally, the conclusions arising from the SIA are presented in Chapter 7.

2. Description of the Project

The Hunter 8 Alliance, on behalf of the ARTC, is proposing to construct a third track adjacent to the existing Main Northern Railway between Maitland and Minimbah. The proposed third track would commence in Farley approximately 2 kilometres west of Maitland Station at approximate chainage 194.500 kilometres and would run adjacent to the Main Northern Railway for approximately 30 kilometres concluding at Minimbah at approximate chainage 224.200 kilometres.

The proposed third track would be predominantly located on the Up side of the Main Northern Railway. Approximately 3 kilometres of track, from chainages 210.170 kilometres to 211.180 kilometres and 214.060 kilometres to 216.000 kilometres, would be located on the Down side.

The Project would involve the construction of approximately 30 kilometres of new rail track as well as construction and/ or modification of major infrastructure along the Main Northern Railway. A summary of the major elements of the Project is provided in Table 2-1.

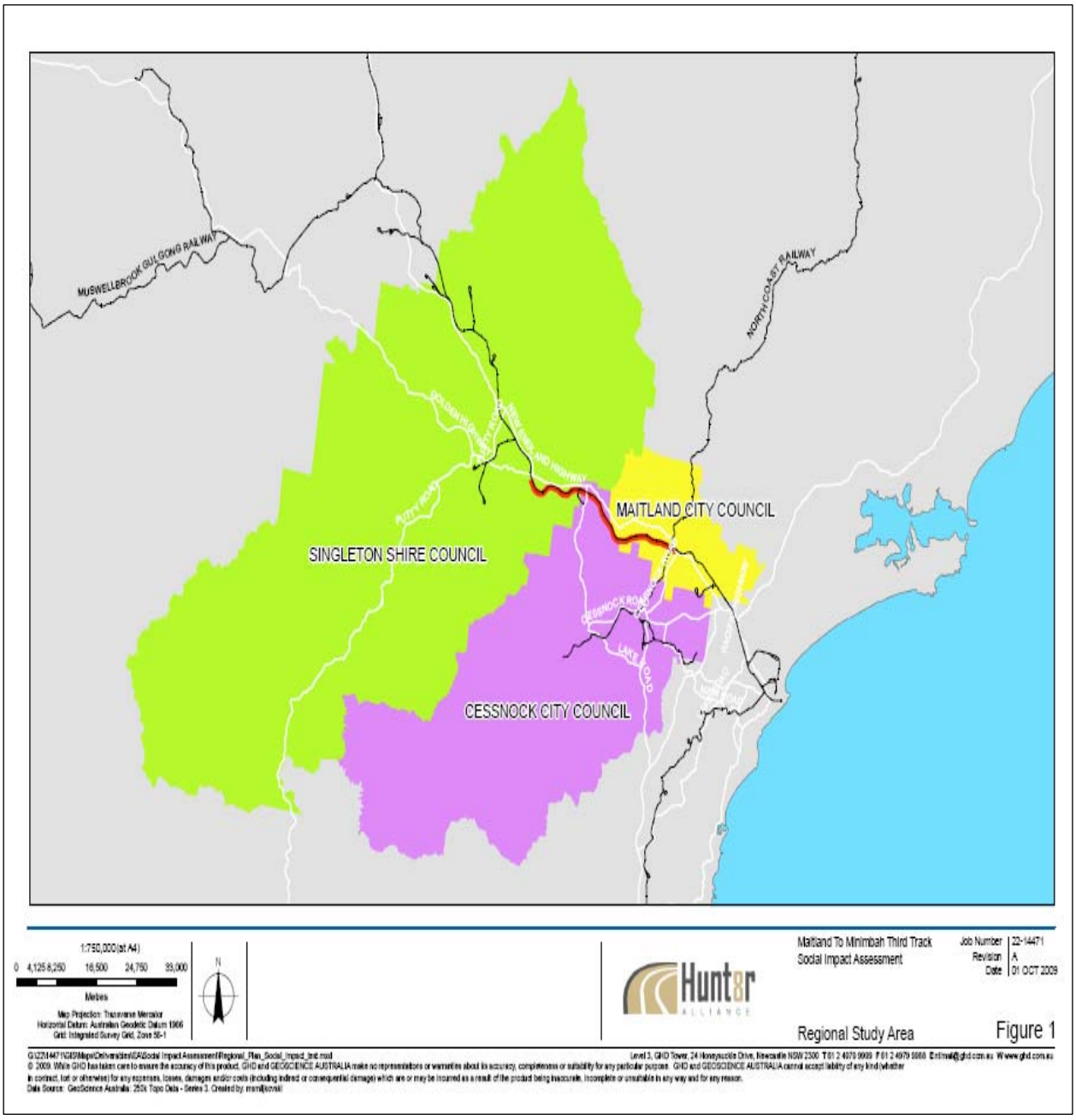
Table 2-1 Major Project Elements

Project Elements	
Earthworks	Major cut and fill earthworks along the route. Other minor earthworks.
Track	Approximately 30 km of new track including turnouts and junctions. Relocation of turnouts from Minimbah and Branxton to Belford. Upgrade of maintenance siding turnouts at Branxton. Track reconditioning of existing Up Main at Greta and Branxton Stations and of the Branxton crossovers.
Drainage	Central and cess track drainage. Amendments to 53 culverts for cross drainage. Re-alignment of Sawyers Creek. Other drainage works around new structures.
Bridges	A new rail underbridge at Stony Creek and Wollombi Road, Farley. Closure of the stock crossing at Farley. Demolition of the existing rail overbridge at Old North Road, Allandale. A new rail underbridge at Allandale Road, Allandale. A new rail underbridge for an unnamed tributary of Anvil Creek (chainage 207.776 km). Demolition and replacement of the existing rail underbridge at an unnamed tributary of Anvil Creek, Greta (chainage 209.989 km). A new rail underbridge at Sawyers Creek, Greta.

Project Elements	
	Modification of the existing rail overbridge at Bridge Street, Branxton. A new rail underbridge at Black Creek, Belford. A new rail underbridge at Jump Up Creek, Belford.
Station Modifications	Modifications to Lochinvar Railway Station. Modifications to Greta Railway Station. Modifications to Branxton Railway Station.

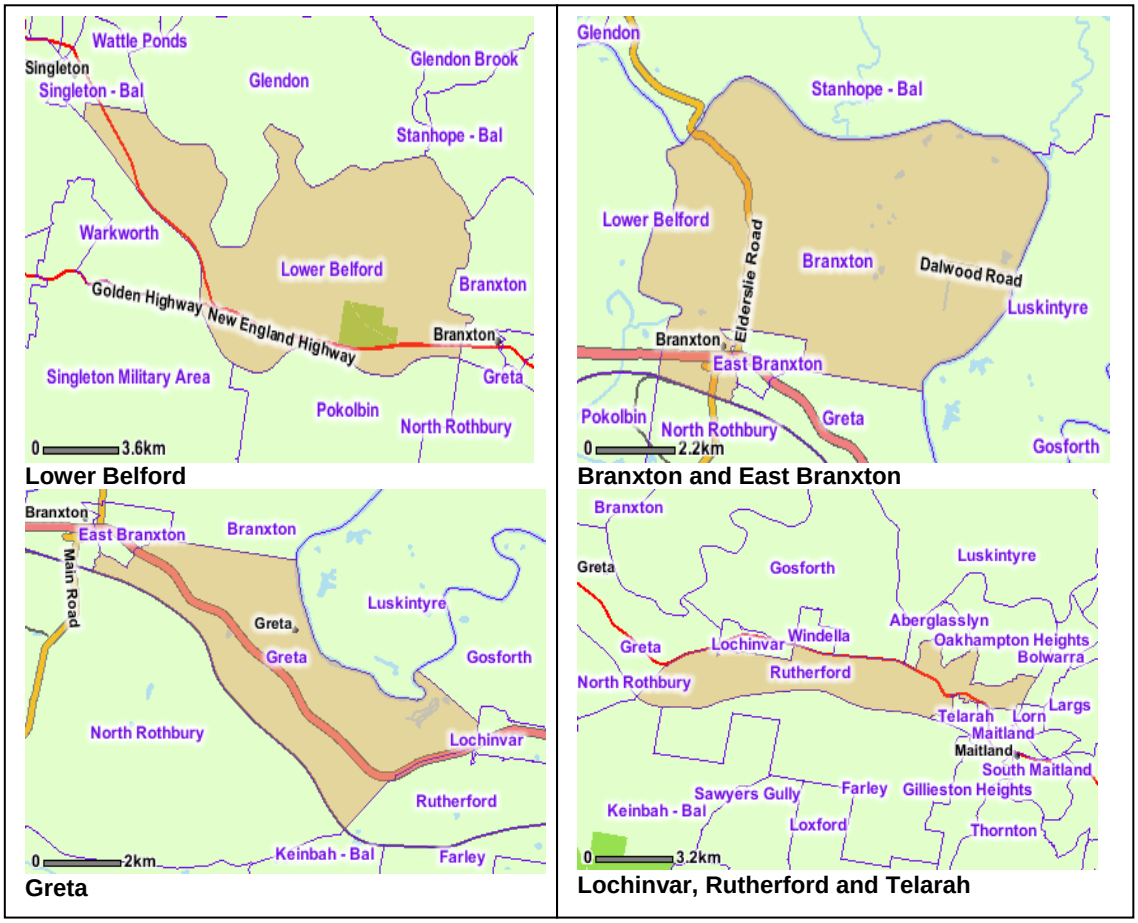
2.1 Local and Regional Study Areas

The local government areas of Maitland, Cessnock and Singleton make up the regional study area for the purpose of the SIA (refer to Figure 2-1). The local study area includes the 10 areas defined as 'State Suburbs' by the Australian Bureau of Statistics (ABS), located adjacent to the existing rail line between Maitland and Minimbah Bank (hereafter referred to as the ABS Collection Districts). The ABS collection districts that make up the local study area for the purpose of the SIA are depicted in Figure 2-2 and Figure 2-3 and include: Branxton, East Branxton, Farley, Greta, Lochinvar, Lower Belford, North Rothbury, Pokolbin, Rutherford and Telarah. The local study area is the area which is most likely to experience the majority of the social impacts resulting from the Project.



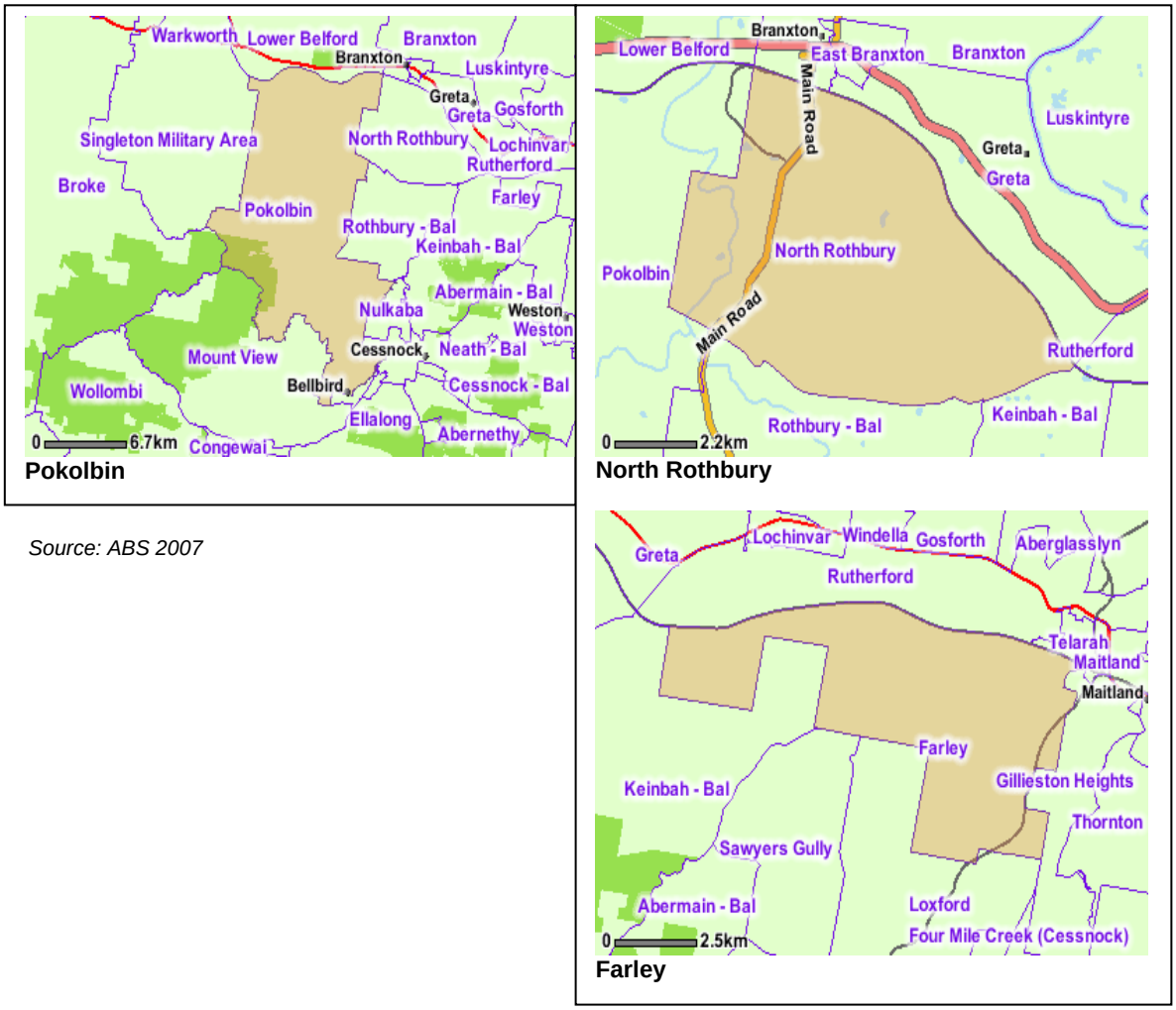
Source: ABS 2007

Figure 2-1 Regional Study Area



Source: ABS 2007

Figure 2-2 Local Study Area: ABS Collection Districts North of the Main North Line



Source: ABS 2007

Figure 2-3 Local Study Area: ABS Collection Districts South of the Northern Railway

3. Existing Environment

This section provides a profile of the local and regional study areas, which acts as a basis on which social impacts can be identified and a baseline against which social change can be measured. The existing social environment profile includes information on:

- The local and regional areas.
- Demographic characteristics.
- Local employment and income.
- Housing and accommodation.
- Transportation.
- Community services.
- Community values.

3.1 Local and Regional Profile

The three local Government areas (LGA) that make up the regional study area are Governed by Maitland City Council, Cessnock City Council and Singleton Council. Both the Maitland and Cessnock LGAs are located within the Lower Hunter Region, which is Australia's sixth largest urban area and also includes the LGAs of Newcastle, Lake Macquarie and Port Stephens (Department of Planning 2006). The region is rich in natural resources, characterised by key industries of mining, wine production and tourism, and is one of the NSW's major centres of economic activity (Department of Planning 2006).

Newcastle is the main city of the Lower Hunter Region and NSW's second largest urban centre (Department of Planning 2006: 3). The Newcastle port supports the region's strong mining and industrial manufacturing activities and is currently being developed into the world's largest coal exporting facility (Department of Planning 2006: 3). Newcastle is also the region's main commercial and administration centre and is the regional headquarters for a number of state government agencies and private businesses (MCC 2009a:107).

The Maitland LGA is a 396 square kilometre area located approximately 35 kilometres from Newcastle and 170 kilometres from Sydney (MCC 2009a:21). The Hunter River runs directly through the centre of the LGA from northwest to southeast. The main existing centres within Maitland LGA are focused along the New England Highway and the Hunter River (MCC 2009a:21). The *Maitland Urban Settlement Strategy* (MCC 2009c) separates the Maitland LGA into three geographic sectors – the East, Central and West sectors. The Western Sector, which intersects with the Project, comprises the area west of Maitland and south west of the Hunter River (MCC 2009a:22).

The city of Maitland is regionally significant, being the second largest city after Newcastle in the Lower Hunter Region. The city is considered a major regional centre[1], provides commercial and government facilities and services and is a focal point for employment for Maitland residents and surrounding LGAs (MCC 2009a:71). Other significant centres within the Maitland LGA include East Maitland, Rutherford, Thornton and Lochinvar (emerging) (Department of Planning 2006).

Maitland City is a focal point for intra and inter-regional transport as it lies at the centre of the major growth corridor of the Hunter Valley. The city is sited at a junction in the rail network and in close proximity to two railway stations, Maitland Railway Station and the High Street Railway Station (MCC 2009b: 3). Maitland is also located close to the New England Highway and has easy access to Newcastle Airport (MCC 2009a:19).

The Cessnock LGA is another sub-region of the Lower Hunter Region. It is located approximately 40 kilometres west of Newcastle and covers approximately 1950 square kilometres (CCC 2009). The majority of the LGA's population live in the urban centres of Kurri Kurri and Cessnock, and a thin urban belt joining the two towns (CCC 2009). There are also numerous small communities throughout the LGA, including part of the semi-rural areas of Branxton and Greta.

The Singleton LGA is located directly west of the neighbouring Maitland LGA, to the north of the Main Northern Railway. The LGA's Rural South East planning area contains the western end of the Project. The town of Singleton acts as the LGA's commercial centre and supports the region's vibrant industrial sector. Outside of Singleton the LGA is characterised by rural and rural residential development, and mining (Singleton Council 2008:8).

The following ABS Collection Districts are considered potentially affected communities due to their close proximity the Project:

- Branxton (Cessnock LGA and Singleton LGA):

  The town of Branxton is located 18 kilometres northwest of Maitland on the New England Highway. The town is mostly in Cessnock City Council, but part of it is in Singleton Shire. Branxton is heavily associated with Greta and has many combined sporting ventures. Branxton has a railway station on the CityRail Hunter line.

- East Branxton (Maitland LGA):

  East Branxton is located in close proximity to Branxton and occupies an area on the northern side of the New England Highway and is characterised by rural residential and residential development.

- Farley (Maitland LGA):

  Farley is located immediately west of Maitland, and neighbours Rutherford and Telarah. The area is characterised by rural residential and residential development.

[1] Major regional centres are defined as concentration of business, higher order retailing, employment, professional services and generally including civic functions and facilities. A focal point for subregional road and transport networks and may service a number of districts (Department of Planning 2006: 15).

- Greta (Cessnock LGA):

  Greta is a small town situated approximately 23 kilometres to the northwest of Maitland on the New England Highway (a section of the highway that will be bypassed by most through traffic when the Hunter Expressway is completed). It is largely a commuter town located midway between Cessnock, Singleton and Maitland. Greta has a railway station, which opened in 1869 on the CityRail Hunter line.

- Lochinvar (Maitland LGA):

  Lochinvar is located within Maitland's Western Sector (MCC 2009c), approximately 11.6 kilometres to the northwest of the Maitland Central Business District (MCC 2009a:101). Lochinvar is classified as a "Neighbourhood Centre" in the Maitland Centres Strategy (MCC 2009a) and an "Emerging Town Centre" by the Lower Hunter Regional Strategy2 (Department of Planning 2006: 15). The centre is considered to be emerging as a result of the significant residential development expected in the area due to future land releases (MCC 2009a:101).

- Lower Belford (Singleton LGA):

  Lower Belford is located within the Rural South East planning area of the Singleton LGA, at the western end of the Project. The area is characterised by rural land uses with a small area of rural residential development.

- North Rothbury (Maitland LGA):

  North Rothbury is located south of Branxton and is characterised by rural and rural residential development.

- Pokolbin (Cessnock LGA):

  Pokolbin is the centre of the Lower Hunter Valley wine region. It is a rural locality located between the towns of Cessnock and Branxton. Pokolbin is considered a specialised centre due to its extensive vineyard and tourism precincts (Department of Planning 2006: 15).

- Rutherford (Maitland LGA):

  Rutherford is located within Maitland's Western Sector (MCC 2009c), approximately 7.4 kilometres to the northwest of Maitland Central Business District (MCC 2009a:83). Rutherford is classified as a Town Centre by the Lower Hunter Regional Strategy (Department of Planning 2006) and the Maitland Urban Settlement Strategy (MCC 2009c). The Rutherford area is characterised by residential development and established industrial and commercial areas.

- Telarah (Maitland LGA):

  Telarah is located in the south of Maitland's Western Sector (MCC 2009c) and is considered an outer Maitland suburb. The area is characterised by residential development with some industrial and rural residential areas.

[2] The *Lower Hunter Regional Strategy* is the NSW Government's 25-year land use strategy for the region.

3.1.1 Land Use and Development History

Archaeological studies suggest Aboriginal occupation of the Lower Hunter began 30,000 years ago (Department of Planning 2006: 41).The areas around Greta and Branxton are thought to have been occupied by the Wanaruah people prior to white settlement, while the Darkinjung people were the major inhabitants around the Cessnock and Maitland districts at the time of European contact. The Darkinjung tribe was divided into a number of clans, with the area around Maitland recognised as the land of the Wonarua tribe (CCC 2009).

The Indigenous people of the Lower Hunter Region had frequent contact with early European settlers due to their proximity to land routes between the important European settlements of Sydney, the Hawkesbury and the Hunter. Contact with Europeans has been described as disastrous for the local Indigenous people with many murdered or killed as a result of European diseases (CCC 2009).

Maitland was first settled by Europeans around 1910. By the 1820's Maitland had became an industrious area, home to trade and commerce and a wide range of business. During the 1850's a series of riverside merchants traded, while a central retail area developed around a selection of services and outlets (Maitland Tourism 2009). Various smaller townships grew throughout the 18th and 19th centuries as the Hunter Valley was further opened up beyond Maitland.

In 1820 John Howe led an expedition to the fertile valley of St Patrick's Plains in the Singleton district. Many settlers followed and began raising stock on their grants of land and within a generation the pastoral district was flourishing.

The small settlement known as Black Creek was renamed Branxton in 1848 when the land was subdivided. By 1860's the village consisted of about 500 residents, a steam mill, post office, mechanics institute and four hotels. The township of Branxton was further developed during the late 19th Century due to its location as a road junction and its accessibility to water and rich agricultural land (CCC 2009).

The land at Lochinvar was granted in 1823 and a village was laid out in 1840. Several older buildings in the area reflect Lochinvar's history. For example, the original Windermere homestead (on Windermere Road) was built of hand-made sandstone bricks by convicts in the 1820's for a wealthy and successful pastoralist and businessman, Thomas Winder, who first took up 4000 acres near Lochinvar in the mid-1820's. The two-storey home known as Clifton was built prior to 1855 by Samuel Clift for his son Joseph. The historic home is located on Station Lane in close proximity to the Main Northern Railway.

Greta appears to have started as a small community around Anvil Creek in the 1830s and was surveyed and named in 1842. During World War II the Greta Army Camp was set and housed an estimated 60,000 soldiers. After the War it became one of the largest migrant camps in Australia, with an estimated 100,000 people spending some time at the centre during its operation from 1949 to 1960. Many of Cessnock's current population are descendants of the European immigrants who lived in the camp.

During the 1860's, land settlement was extensive between Nulkaba and Pokolbin with wheat, tobacco and grape growing the main crops. The Hunter Valley wine growing area in Cessnock is now one of Australia's oldest and most famous commercial wine regions with around 4500 acres under vine (CCC 2009).

The agricultural industry dominated the broader region for the first one hundred years of its European history. However, since the discovery of vast resources of coal the area has had a twofold industrial profile based on the diversity of its resources (Singleton Council 2009).

Coal Mines and Regional Rail

Coal mining and rail development have had a long and associated history throughout the Lower Hunter Region. Coal mining commenced around Anvil Creek (today's Greta) in 1862, the year the railway arrived. However, it was the establishment of the Anvil Creek Coal Mine in 1874 that prompted the first substantial industrial development. The region's coal development expanded in 1886 with the discovery of the substantial Greta coal seam and by 1907 ten collieries were in operation (CCC 2009).

Townships sprang up adjacent to pit tops and the rail heads on the Greta seam, with the township of Kurri Kurri established at the northern end of the coal seam (CCC 2009). Coal mining remained the principal industrial base of the Cessnock area for the first half of last century. However, the latter part of the century saw the gradual closure of mines and downturn in manufacturing in the area. This downturn has led to a decline in population and closure of community services such as schools and shops in some of the villages which grew up around the pit tops (CCC 2009).

The establishment of the South Maitland Coalfield generated extensive land settlement between 1903 and 1923. Maitland's current pattern of urban development, transport routes and industrial landscape was laid at this time.

More recently, the discovery of vast resources of coal has transformed the Singleton area. Singleton is now the State's largest producer of coal and continues to experience further mining developments and diversification (Singleton Council 2008).

The region's rail network was developed primarily for linking coal mines to the Port of Newcastle. The Northern Railway opened to Maitland in 1857, to Singleton in 1863 and was the original mainline between Sydney and Brisbane.

The original railway line into the Hunter Valley began as a single line, which now forms the existing Down Main alignment. This line was later duplicated to provide what is now the existing Up Main alignment. The existing track between Maitland and Minimbah consists of the Up and Down Main. Although the trackform along the lines has since been upgraded, some of the existing formation is in its original condition.

Current operations along the rail corridor consist of a mixture of general freight, passenger and coal services. The Hunter railway line now operates as part of a regional railway system within Sydney's CityRail network. The current functional rail stations between Maitland and Minimbah are Lochinvar, Greta and Branxton. Historic stations that are no longer in use are Farley, Belford and Allandale.

3.1.2 Existing Land Use Proximal to the Maitland to Minimbah Rail Corridor

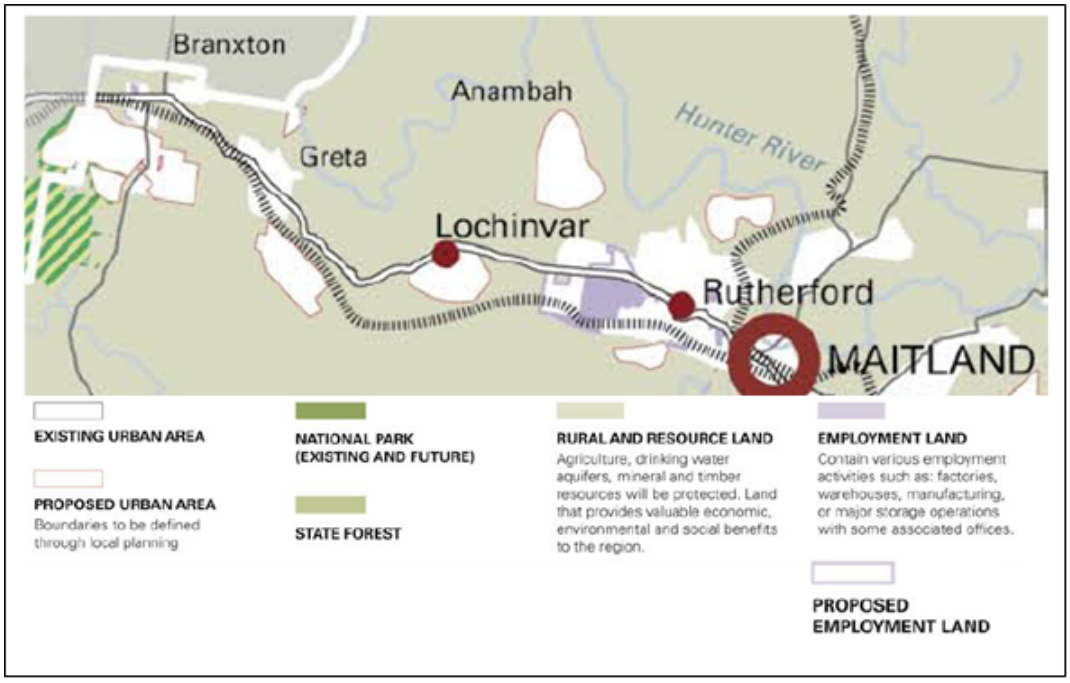
The alignment between Maitland and Minimbah passes through urbanised areas at Maitland, Greta and Branxton, and a smaller urban area at Lower Belford. These rural townships feature numerous residential properties located within 200 metres of the existing rail corridor. In addition, there are various rural residential properties located between Maitland and Minimbah with residential buildings within 200 metres of the existing rail corridor. The majority of the residential buildings are owner occupied, with only a small percentage operating as rental properties.

The existing rail corridor intersects an area characterised by expanses of open and undulating rural land and areas of forested land. Consultations with neighbouring landholders revealed that many of the rural and rural residential properties (46% of consulted landholders) are used for small scale rural and commercial activities that do not constitute the main source of household/property income or employ staff outside of the property occupants. Small scale land uses include sheep, horse and cattle grazing and breeding, dog breeding and training (predominantly greyhounds) and storage for business operations.

Various properties neighbouring the existing rail corridor are used for larger scale rural and commercial activities that constitute the main source of household/property income and/or employ staff outside of the property occupants. Rural and commercial activities include large scale cattle grazing, commercial premises (for example office, business storage, shop), pet motels, horse breeding and training, viticulture and one operational quarry.

There are also various industrial properties neighbouring the existing rail corridor. Industrial properties are predominantly associated with rail stations and town centres, with the majority located in the vicinity of Maitland. The Rutherford Industrial Area (Racecourse Business Park) is located approximately 1.2 kilometres north-west of Rutherford Town Centre, bounded by the New England Highway in the north and the existing rail line in the south. The Rutherford Industrial Area has an approximate area of 258 hectares (based on the existing Maitland Zoning Map) and is used for industrial purposes of varying intensities, with some lots occupied by bulky goods. The majority of the land is zoned 4(a) General Industrial, while a smaller section in the east is zoned 4(b) Light Industrial (MCC 2009a:111).

Section 14 of the Environmental Assessment provides more information on land zoning and existing property infrastructure in close proximity to the Main North line.



Source: Department of Planning 2006

Figure 3-1 Current and Future Land Uses in the Local Area

3.2 Population and Demographics

The following section provides a profile of the local community's population and demographic characteristics. The population and demographic information is drawn from an analysis of ABS Census data and from local council planning studies, which give a broader regional perspective on population growth.

3.2.1 Local Population

Table 3-1 summarises the total populations of the 10 ABS Collection Districts that make up the Project's local study area. Rutherford is clearly the most populated town, while Greta, Telarah and Branxton are the next most populated areas. The remaining towns generally had 2006 populations below 1000 people.

Table 3-1 Total Population Across the Local Study Area

ABS Collection District	Population (2006)
Branxton	1973
East Branxton	1098
Farley	478
Greta	2322
Lochinvar	498
Lower Belford	702
North Rothbury	943
Pokolbin	624
Rutherford	8702
Telarah	2140
Total	**19,480**

Source: ABS (2009), CDataOnline customised table.

3.2.2 Regional Population Growth

The Lower Hunter Region's population continues to grow strongly, averaging one per cent per annum (or approximately 4400 persons per year) in the period 1991–2001 and accelerating in more recent years to more than 6200 people in 2004–05 (Department of Planning 2006: 4). The *Lower Hunter Regional Strategy* predicts this growth will continue, projecting a total population growth of 160,000 people by 2031 (Department of Planning 2006).

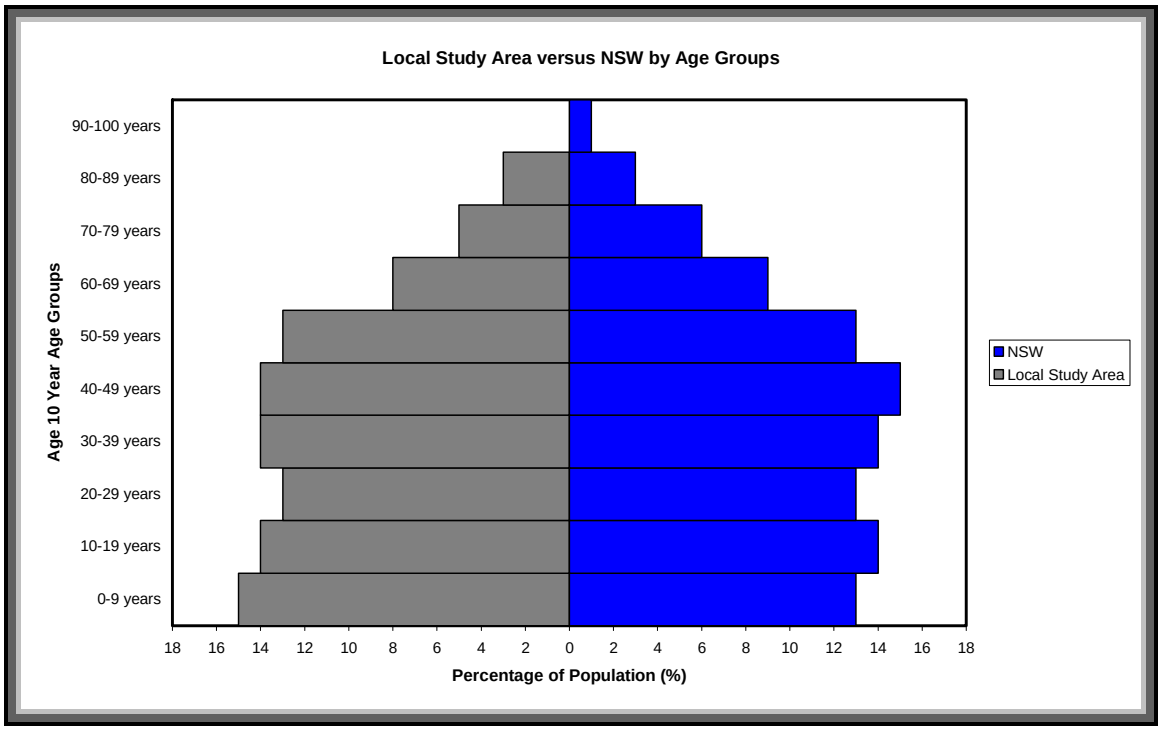
The population growth patterns within the Project's relevant LGAs are as follows:

- The Maitland LGA (with a total population of 61,880 as of the 2006 ABS census) has experienced significant population growth in recent years, being the fastest growing LGA in NSW during 2004 – 2005 (MCC 2009a:19). Between 2005 and 2006, Maitland City was the fastest growing city in NSW (MCC 2009a:19). The LGA is anticipated to experience significant population growth over the next 25 years due to its close proximity to transport corridors, Newcastle Regional Centre and Greenfield land with potential for urban release (MCC 2009a:21).
- The population of the Cessnock LGA (currently approximately 47,000 people), has declined by two thirds since 1954, with various areas continuing to experience negative growth (MCC 2009b: 3).
- Population growth in the Singleton LGA has been predicted at 1.5% per annum (average 300 persons per year) until 2032 (Singleton Council 2008: 30). However, most growth is expected to occur in Singleton Heights/North Singleton, therefore not relevant to the Project's local study area.

3.2.3 Age Density

The age distribution of the local study area population is shown in Figure 3-2, which compares the local study area population to the NSW state population. The local study area population generally has a similar age distribution compared to NSW.

This result is in contrast to the broader Lower Hunter Region, which is experiencing high levels of out-migration by young people and is consequently characterised by a population which is older than and continuing to age at a rate faster than the NSW average (Department of Planning 2006: 5). Both the Cessnock and Singleton councils also anticipate an increase in the proportion of aged residents and a further ageing of population (Singleton Council 2008: 9; CCC 2009).



Source: ABS (2009), CDataOnline customised table.

Figure 3-2 Age Distribution: Local Study Areas and NSW

3.2.4 Need for Assistance

Table 3-2 summarises the number of people within the local study area suburbs that required assistance with their core activities in 2006. To be described as requiring assistance with core activities, a person must sometimes or always need help or assistance with self-care, mobility and/or communication due to disability, a long-term health condition (lasting six months or more) or old age. The data indicates the largest number of people requiring assistance reside in Rutherford, this being reflective of the town's larger population. The majority of the local study area towns have similar proportions of residents that require assistance with their core activities, with this proportion ranging between 2.70% and 5.82% of the population. The only exception to this is Pokolbin, which has a relatively small number (6) and proportion (0.96%) of its population requiring assistance.

Table 3-2 Local Study Area Population with Core Activity Need For Assistance

ABS Collection District	Numbers	% of Town's Total Population
Branxton	57	2.89
East Branxton	44	4.01
Farley	18	3.77
Greta	105	4.52

ABS Collection District	Numbers	% of Town's Total Population
Lochinvar	23	4.63
Lower Belford	19	2.70
North Rothbury	31	3.29
Pokolbin	6	0.96
Rutherford	506	5.82
Telarah	121	5.65
Total	**930**	**4.77**

Source: ABS (2009), CDataOnline customised table.

3.3 Employment and Income

The following section analyses the local labour force's employment status and industry of employment. Information is also presented on employment self sufficiency and future employment prospects for the local study area and broader region.

3.3.1 Local Labour Force Status

As of the 2006 Census, 45% of the local study area's population was active in the workforce, with approximately 6% of this group being unemployed (refer to Table 3-3). Rutherford clearly had the largest labour force of the local study area towns. Branxton, Greta and Telarah also had sizable labour forces.

Table 3-3 Labour Force Status of Local Study Area and Individual ABS Collection Districts

Labour Force Status	Local Study Area	
	Number	%
Total labour force	*8794*	*45.14*
of which employed	*8203*	*93.28*
of which unemployed	*591*	*6.72*
Not in the labour force	5459	28.02
Not stated	769	3.95
Not applicable	4458	22.89
Total	**19,480**	**100.00**

Total labour force of ABS Collection Districts		
ABS Collection District	**Number**	**% (of Total Labour Force)**
Branxton	937	10.65
East Branxton	508	5.78
Farley	375	4.26
Greta	1008	11.46
Lochinvar	399	4.54
Lower Belford	368	4.18
North Rothbury	486	5.53
Pokolbin	304	3.46
Rutherford	3763	42.79
Telarah	902	10.26
Total	**8794**	**100.00**

Source: ABS (2009), CDataOnline customised table.

3.3.2 Industry of Employment

Table 3-4 below shows that as of 2006, the most significant industry generating employment within the local study area was manufacturing at 5.63% or 1096 jobs. Other major industries included: Retail Trade (5.07% or 987 jobs); Mining (3.65% or 710 jobs), Health Care and Social Assistance (3.64% or 708 jobs), Construction (3.47% or 675 jobs) and Accommodation and Food Services (3.42% or 666 jobs).

In interpreting these results, it should be noted that over half (57.91%) of the surveyed population responded with “Not applicable” to the industry of employment question in the 2006 Census. These respondents are likely to mainly include children, retired persons and other persons not in the workforce, as the data captures the local study area’s total population. The high level of “Not applicable” responses significantly influences the percentages calculated for the other industry of employment categories.

Table 3-4 Local Study Area Industry of Employment

Industry of Employment	Local Study Area	
	Number	**%**
Agriculture, Forestry and Fishing	237	1.22
Mining	710	3.65
Manufacturing	1096	5.63

Industry of Employment	Local Study Area	
	Number	%
Electricity, Gas, Water and Waste Services	105	0.54
Construction	675	3.47
Wholesale Trade	262	1.35
Retail Trade	987	5.07
Accommodation and Food Services	666	3.42
Transport, Postal and Warehousing	385	1.98
Information Media and Telecommunications	71	0.36
Financial and Insurance Services	127	0.62
Rental, Hiring and Real Estate Services	116	0.60
Professional, Scientific and Technical Services	289	1.48
Administrative and Support Services	259	1.33
Public Administration and Safety	319	1.64
Education and Training	454	2.33
Health Care and Social Assistance	708	3.64
Arts and Recreation Services	79	0.41
Other Services	448	2.30
Inadequately described	88	0.45
Not stated	119	0.61
Not applicable	11,280	57.91
Total	**19,480**	**100.00**

Source: ABS (2009), CDataOnline customised table.

3.3.3 Employment Self Sufficiency

The Lower Hunter Region has a high level of employment self sufficiency, with a large percentage of employees residing within the LGA where they work (Department of Planning 2006: 7). As of the 2006 Census, a large proportion of the Maitland workforce (43%) was employed within the LGA. The additional 57% of Maitland's workforce travelled outside of the LGA for employment, with 24% commuting to Newcastle LGA and the remaining 33% working in a range of other Lower Hunter LGAs and Sydney (MCC 2009a:12, 42).

The Singleton LGA benefits from a relatively prosperous economy and strong employment opportunities (Singleton Council, 2008:5). A large proportion of the workforce is employed in the mining industry (Singleton Council, 2008:9). Significant employment in the Singleton LGA is also generated by agriculture and related commercial activities, with tourism in agricultural areas also being economically important (Singleton Council, 2008:76).

With a decline in mining activity within the Cessnock LGA, approximately 15% of the Cessnock LGA's workforce travels out of the area to work in mines in Singleton and Lake Macquarie (CCC 2009). Manufacturing has become increasingly important to the area, with activities such as aluminium production, explosive equipment processing and mining support services being prominent local employers (CCC 2009).

3.3.4 Future Employment

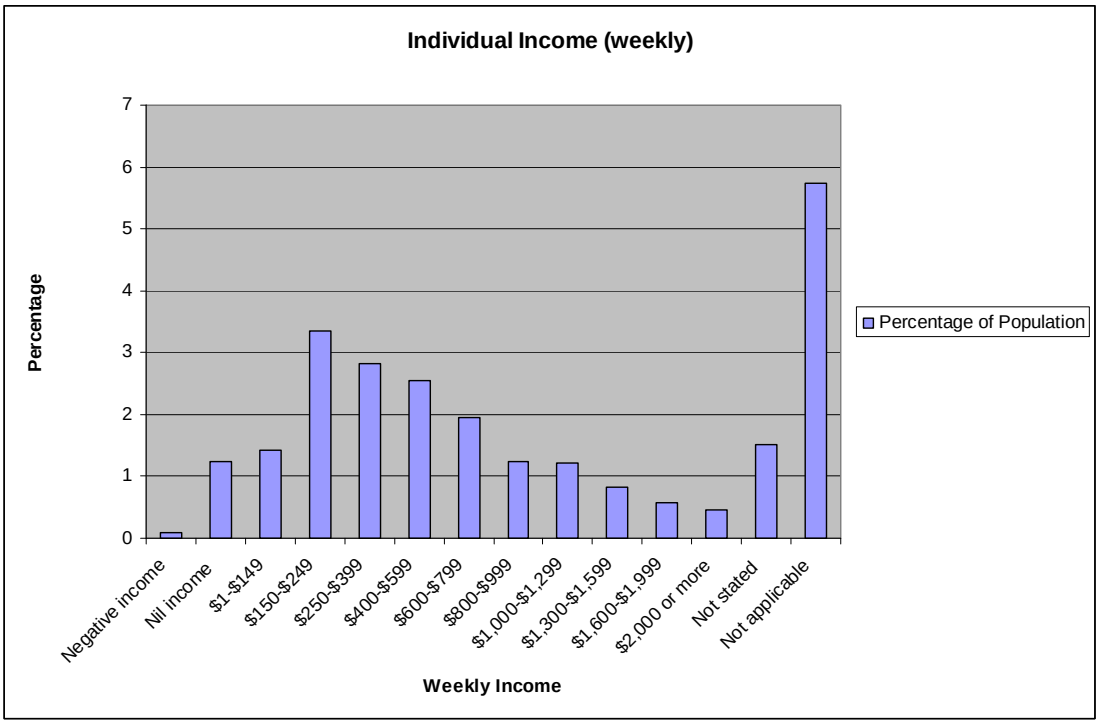
The three LGAs that make up the local study area can expect healthy growth in local employment opportunities over the coming years. The *Maitland Urban Settlement Strategy 2001- 2020* (MCC 2006c) identified suitable commercial and employment land within the LGA which will help to provide a range of employment opportunities to meet the needs of the area's growing population (MCC 2009a:19). The Maitland LGA is forecast by the Department of Planning to gain 8% of all new jobs within the Lower Hunter Region by 2031 (MCC 2009a:12).

Coal mining production and employment with the Singleton LGA is expected to be stable or increase over the next 10 – 15 years, and then progressively decline as easily accessible coal resources are depleted (Singleton Council, 2008:77). The Department of Primary Industries has emphasised the importance of maintaining commercial activity within the LGA (Singleton Council, 2008:76). Rural tourism is increasingly significant in Singleton, with pressure for diversified tourism development particularly in vineyard areas such as Hermitage Road and Broke Fordwich (Singleton Council, 2008:73).

The Cessnock LGA can expect continuing growth of wine related tourism, hospitality/service industries and light and secondary industry and manufacturing (CCC 2009). An application has been lodged with the Department of Planning for the rezoning of approximately 800 hectares of land for industrial zoning in an area known as Hunter Economic Zone (CCC 2009).

3.3.5 Income

Figure 3-3 identifies gross individual weekly income levels for the local study area population. The data shows that the highest proportion of the local study area population were within middle range income brackets ($150-$799) in 2006.



Source: ABS (2009), CDataOnline customised table.

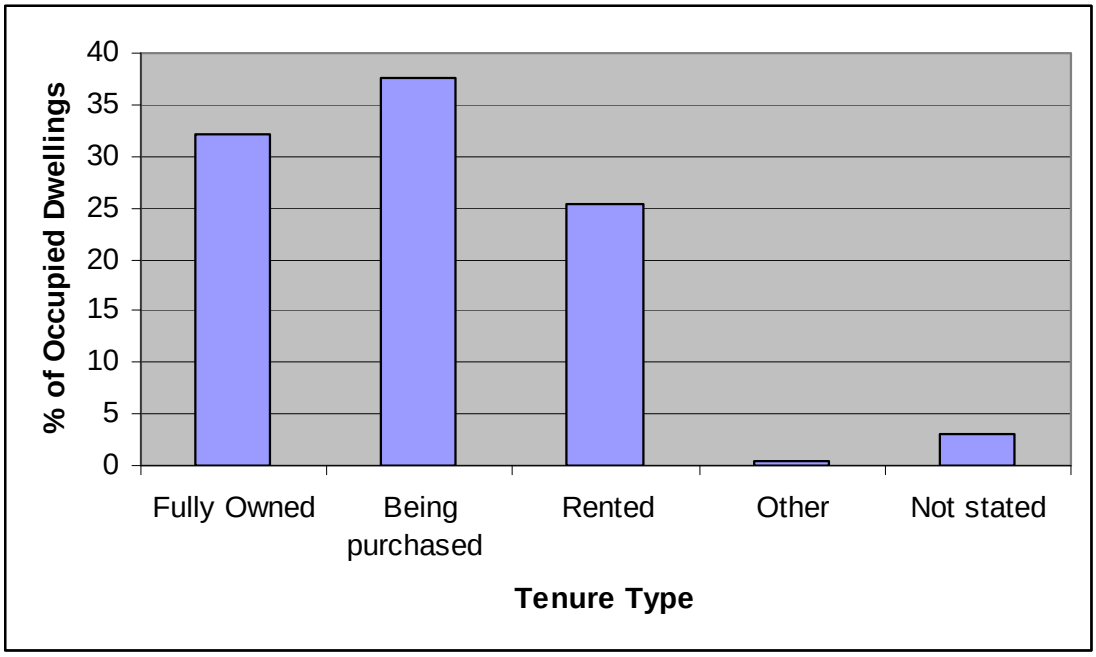
Figure 3-3 Gross Individual Weekly Income

3.4 Accommodation and Housing

The following section analyses local accommodation and housing characteristics. Information is also presented on future housing activity in the local study area and broader region.

3.4.1 Dwelling Tenure

Figure 3-4 shows that a high proportion of dwellings in the local study area are either being purchased (38% or 2603 properties) or are fully owned (32% or 2228 properties). There are a significantly lower proportion of dwellings functioning as rental properties (25% or 1763 properties).



Source: ABS (2007), 2006 Census Community Profile Series, Basic Community Profile, Branxton SSC, East Branxton SSC, Farley SSC, Greta SSC, Lochinvar SSC, Lower Belford SSC, North Rothbury SSC, Pokolbin SSC, Rutherford SSC and Telarah SSC, table B33

Figure 3-4 Tenure Type within the Local Study Area

3.4.2 Future Housing

The Lower Hunter Region currently faces the challenge of supplying sufficient land and development opportunities to provide housing for the future growth of its population (Department of Planning 2006: 6). The Lower Hunter currently has approximately 205,000 dwellings[3], and the *Lower Hunter Regional Strategy* aims to provide for 115,000 new homes by 2031 to cater for a projected population growth and changing housing demands (Department of Planning 2006).

Currently, approximately 3500 new dwellings are being approved each year in the Lower Hunter Region, with 80 per cent of these dwellings located in the Newcastle, Lake Macquarie and Port Stephens local Government areas (Department of Planning 2006: 24). The region has traditionally focused on new urban land releases for housing supply, with greenfield housing or 'new release' areas representing 75 per cent of all new housing, and the remaining 25 per cent of housing being located in existing zoned urban areas (Department of Planning 2006: 5).

[3] These dwellings comprise of 85% single detached cottages, with 15% units, flats and townhouses (Department of Planning 2006: 5).

Much of the planned future housing development focuses on rural and rural residential development[4]. There is currently almost 7000 hectares of land zoned for rural residential purposes in the Lower Hunter Region. This area is supplemented by another 700 hectares of yet to be rezoned land identified for rural residential development within endorsed local council strategies (Department of Planning 2006: 36).

The relative affordability (compared to coastal areas) of land in the Maitland area has lead to strong residential growth in housing in the Maitland LGA (Department of Planning 2006: 4). This growth is expected to continue with the Maitland LGA forecast to experience significant population growth and residential development until 2031 (MCC 2009a:17). The Department of Planning has established a dwelling growth projection of 26,500 dwellings by 2031 for the LGA. This represents 23 per cent of all new residential dwellings forecast for development within the Lower Hunter Region (MCC 2009a:12).

In 2001, the Maitland City Council (MCC) adopted the *Maitland Urban Settlement Strategy 2001- 2020* (MCC 2006c), to accommodate the projected population growth. The strategy focuses on the strengthening of existing centres (such as encouraging infill development and urban consolidation) and the development of various greenfield land areas with potential for urban release (MCC 2009a:19; MCC 2009b:3).

Singleton Council's *Singleton Land Use Strategy* (2008)[5] outlines key land use policies and principles for the LGA over a 25 year period (until 2032). Rural residential subdivision and development is flagged as a key land use planning issue and current demand exists for general rural residential development including rural fringe development[6] and rural living lots[7] (Singleton Council 2008: 59). The *Singleton Land Use Strategy* anticipates new dwelling demand averaging 200 dwellings per annum within the LGA until 2032 (Singleton Council 2008: 9). However, approximately 60% of the total LGA growth is expected to occur within Singleton Heights/North Singleton, with 5% in Singleton Town (via available infill opportunities), both of which are outside of the Project's area of direct influence (Singleton Council 2008: 31).

The *Lower Hunter Regional Strategy* (Department of Planning, 2006) and subsequent local planning initiatives have identified various locations within the local study area as priority areas to accommodate regional population growth. However, in many cases no clear timing is available for land supply and it is unlikely that this housing growth will occur within 5 years as urban boundaries are yet to be defined through future local planning (Singleton Council 2008: 10). In addition, various areas still require the provision of full urban services prior to development.

[4] Rural residential zoning applies to areas that are effectively being used for rural living without significant agricultural production.

[5] The Singleton Land Use Strategy (2008) also provides the planning context for the preparation of local environmental plan provisions, identifies infrastructure requirements to support development, identifies where growth and change is expected to occur and outlines land use planning objectives and strategies to guide this growth (Singleton Council, 2008:1).

[6] Rural fringe development is generally in estates adjacent to an urban area with services provided, and with lot sizes of 4,000 square metres to 2 hectares.

[7] Rural living lots typically comprise residential use within a rural environment, generally with no services and lots 2 hectares or larger.

Future housing areas relevant to the Project area are shown in Figure 3-1and include:

- Lochinvar

  Lochinvar has been identified in the Lower Hunter Regional Strategy as a priority area to accommodate regional population growth and by Maitland Council as an investigation area[8] to accommodate additional dwellings. The Lochinvar Structure Plan (2007) has been prepared as a strategic planning tool to manage the future development. Under the plan, Lochinvar will comprise of a mix of uses including community, retail, commercial, and residential, with up to 5000 dwellings and details of a new civic centre and commercial area included as initial planning provisions (Department of Planning 2006: 25).

- Rutherford and Telarah

  Maitland Council has also identified Rutherford and Telarah as priority areas for future infill development and urban consolidation (MCC 2009a:124).

- Farley

  Lands at Farley have been identified for medium term (5-10 years) residential development and will be sequenced following the initial first priority lands (MCC 2006b).

- Lower Belford

  There is a total area of 277 hectares in 17 existing lots around Lower Belford. Proposed zoning is Environmental Living, with a minimum area of five hectares. There is a maximum potential of approximately 30 lots.

- Greta

  Future housing planning in and around Greta include: Greta Migrant Camp (up to 2000 dwellings) and Greta Wyndham Street Precinct (approx 300 dwellings). These new residential estates are recognised in Cessnock council planning.

- Branxton

  Various areas around Branxton are anticipated to experience increasing urban development pressure (Singleton Council 2008: 9). This includes areas within the Cessnock LGA and parts of Singleton's Rural South East planning area. Much of this area is primarily related to the foreshadowed extension of the F3 Freeway to Branxton and the identification in the Lower Hunter Regional Strategy of significant areas of land for investigation for potential urban development.

  Rural residential policies outlined in the Singleton Rural Residential Development Strategy (2005) and subsequent agreements between the Council and the Department of Planning include the provision of around 30 rural residential lots per year around Branxton and the future zoning of approximately 350 lots around Branxton for between 5 and 10 years supply (Singleton Council 2004).

  Based on local planning initiatives, proposed candidate areas for future rural residential development around Branxton include:

  – Branxton South (Branxton–Huntlee New Town): providing for up to 7000 lots9 and a new overall potential population of 15,000-20,000 people (Singleton Council 2008: 10).

[8] Lochinvar is classified as a Category 1 Investigation Area under the Maitland Urban Settlement Strategy (MCC 2006c).

[9] Around 2,000 of these lots would be within the Singleton LGA, with the remainder within the Maitland LGA.

– Branxton North West: with a total area of 88 hectares in seven existing lots. Proposed zoning is Large Lot Residential with minimum subdivision area of 4000 square metres (if sewer services are made available). Maximum potential approximately 180 lots. Land adjoining to the south may have potential for rezoning to Environmental Living to provide a transition to agricultural lands.
– Branxton North East: with a total area of 41 hectares in five existing lots. Proposed zoning is Large Lot Residential10 and there is a maximum potential of approximately 87 lots.
– Branxton South West: with a total area of 8 hectares in 8 existing lots. Proposed zoning is Large Lot Residential and there is a maximum potential of approximately 17 lots.

3.5 Local Transportation

As noted previously, a large portion of the region's workforce travel outside of their LGA for employment. Table 3-5 shows that most of the local study area population used only one method to travel to work in 2006 (98.5%), with the most common method of travel being the use of private transport.

Trains were used by the local study area population to travel to work as a sole means of transportation or in combination with other transportation methods. However, in total only about 1.74% (or 115 people) of the local study area population used trains to get to work in 2006.

The local study area thus appears to be heavily dependent on private motor vehicles for personal transportation. This reliance is supported by an extensive network of roads running throughout the region and the close proximity of all centres to major road transport corridors, particularly the New England Highway.

The heavy dependence on private transport may also indicate that there are difficulties associated with travelling to employment destination by public transport (train or bus) or via walking/cycling. These difficulties are a reflection of a number of factors including the distance to employment destinations, the lack of direct access by public transport to these destinations and/or the lack of public transport frequency at necessary travel times (for shift workers). Public transport journey to work travel (both inter and intra regional) is also hindered by the location of public transport nodes such as train stations which are all centre located, making access limited for employees living and/or working outside of centres (for example, people working in industrial precincts or bulky goods centres) (MCC 2009a:43).

Table 3-5 Local Study Area Method of Travel to Work

	Local Study Area	
One Method	**Number**	**%**
Train	86	1.30
Other public transport[11]	38	0.57

[10] Large Lot Residential has a minimum subdivision area of 4000 square metres and maximum lot size two hectares.

[11] Includes bus, ferry and tram.

	Local Study Area	
Private Transport[12]	6082	91.93
Bicycle or walking	277	4.19
Other	32	0.48
Total	*6515*	*98.47*
Two Methods		
Including train	22	0.33
Other	69	1.04
Total	*91*	*1.38*
Three Methods		
Including train	7	0.11
Other	13	0.20
Total	*20*	*0.30*
Total	**6616[13]**	**100%**

Source: ABS (2007), 2006 Census Community Profile Series, Basic Community Profile, Branxton SSC, East Branxton SSC, Farley SSC, Greta SSC, Lochinvar SSC, Lower Belford SSC, North Rothbury SSC, Pokolbin SSC, Rutherford SSC and Telarah SSC, table B45

3.5.1 Transport Infrastructure

An extensive road system operates throughout the Project area. This includes National and State Highways, urban roads and rural roads (sealed, gravel and dirt). The New England Highway is the major transport route through the Project area, providing the only direct link to inner Newcastle. Traffic volumes in the Lower Hunter Region have, on average, increased by 3.4 per cent per annum and strong residential growth in the Maitland corridor has led to increased congestion on the Maitland Road–New England Highway (Department of Planning 2006: 29). Traffic movement east of Singleton has also experienced increasing traffic flows (mainly along the New England Highway), namely due to commuting mine workers.

Local planning initiatives recognise that there are long term capacity limitations with existing roads and access links, and without careful planning a number of key congestion points will likely arise or worsen (Department of Planning 2006:30; Singleton Council 2008: 42). Major planned actions outlined in the *Lower Hunter Regional Strategy* to improve road congestion include the extension of the F3 Freeway to New England Highway west of Branxton (the Hunter Expressway) and the Hunter River third crossing at Maitland.

[12] Included car as driver, car as passenger, taxi, truck and motorbike/scooter.

[13] Does not include people who worked at home, did not go to work and did not state a method of travel to work.

Current rail services include passenger trains, which provide limited public transport services. There are currently four Hunter Line *CityRail* passenger trains per day operating in each direction between Newcastle and Scone. Passenger rail services from Scone pass through Greta, Branxton and Lochinvar stations around 7.00 am, 11.00 am, 8.00 pm and 9.45 pm; while services from Newcastle pass at around 4.00 am, 9.00 am, 5.00 pm and 6.30 pm (RailCorp, 2009). Public transport is also provided by privately operated regional buses, limited private town bus services operating in major centres such as Singleton and Maitland and an extensive school bus network that services a large proportion of the local area (Singleton Council 2008: 19).

Continuing population dispersal (especially in rural areas) is expected to increase reliance on car transport, and reduce opportunities for viable public transport by declining transport accessibility (Singleton Council 2008: 31). However, some policy requirements for future residential land areas include ensuring public transport accessibility for all residential developments (Singleton Council 2008: 32).

3.6 Community Services

The major centres of Maitland, Cessnock and Singleton are well supported with education, health, recreational, cultural, commercial and community services and facilities. The respective local councils provide a range of facilities (such as libraries, museums, sporting and recreation facilities and parks) and services to target groups such as youth and senior citizens.

Maitland LGA contains four high schools, Maitland TAFE, numerous entertainment and hospitality businesses, varied retail facilities[14], the Maitland Regional Art Gallery and specialty medical and government services (MCC 2009a:71). The Maitland Hospital services the population of the Maitland LGA and the population of a number of other surrounding LGAs (MCC 2009a:71).

Cessnock LGA has three high schools, two TAFE campuses and a range of child and aged care options. The region is serviced by a wide variety of community based services targeting groups such as youth, Aboriginal and Torres Strait Islanders, culturally and linguistically diverse groups and disability and support groups (CCC, 2008). Health services are provided by two hospitals (located at Kurri Kurri and Cessnock) and a range of general practitioners, specialised medical practices and other community based health services (CCC, 2008).

The smaller regional towns/centres within the local study area have a more limited range of services. Branxton features a medical centre, swimming school, and an art school. The Rutherford retail centre has a number of community services located within or close to the centre (MCC 2009a:83). The existing Lochinvar centre consists of two schools, one hotel and a few retail premises which front the New England Highway (MCC 2009a:101).

[14] The Maitland centre comprises of 354 commercial premises (MCC 2009a:72).

Water supply and some sewage services to the local area are provided by Hunter Water Corporation under an agreement with the local councils. There are potential limits on water and sewer provision to service new residential areas which will require investment and upgrading of infrastructure, and may limit the actually availability of residential land (Singleton Council 2008: 31). The future boundary of water and sewerage supply has not been determined, with the provision of water infrastructure being a key strategic action outlined in council planning (Singleton Council 2008: 18).

3.7 Community Values

Community values are concepts that are sometimes difficult to quantify and measure. Nevertheless, they are important as they indicate how the community feels about its local area, what they value about it, and how they envisage their own future.

Community values have been identified for this assessment through direct consultation with community members and a review of relevant local council plans and reports.

Consultation with local community members revealed that community values are associated with:

- Employment and economic opportunities available in the local area.
- The necessity of industrial development.
- The availability of community services (such as health services) and facilities (such as schools).
- The rural character and history of the local area.
- The natural environment.

A review of relevant local council plans and reports suggests community values are in line with:

- Lower Hunter Region:
  - The *Lower Hunter Regional Strategy* (2006) recognised that residents are attracted to the area by a combination of economic opportunity, affordability and lifestyle assets such as the proximity of coastal and rural landscapes (Department of Planning 2006: 4). The communities that live in rural areas are seen to identify with a rural landscape that is valued for its scenic amenity and recreation and tourism opportunities (Department of Planning 2006: 36).
  - The *Lower Hunter Regional Strategy* also recognises the importance of the area's cultural heritage that reflects its rich history (Department of Planning 2006). A desired action from the strategy is that councils ensure that Aboriginal cultural and community values are considered in the future planning and management of their local government areas (Department of Planning 2006: 41).
- Maitland LGA

  The Maitland City Council is currently undertaking community consultation for a variety of planning initiatives such as the Central Maitland Structure Plan and the Maitland Local Environment Plan 2011. Unfortunately, records of consultation feedback from these initiatives were not available at the time of writing.

- Singleton LGA

  The Singleton Land Use Study (2009) recognises the value and importance of sites and landscapes that have cultural heritage significance and scenic values; and some of which have also been identified by the National Trust of Australia (Singleton Council, 2008:92).The report also recognises the importance of protecting rural character through the maintenance of environmental amenity.

- Cessnock LGA

  The Cessnock City Council suggests that their community values access to employment, relative affordability, clean air and the proximity to the region's services and facilities. Cessnock is also home to a number of Aboriginal residents and certain areas of Cessnock, particularly in and around the Wollombi Valley, are of significant spiritual value to the Aboriginal people.

  Important values identified in the Community Attitudes Towards Services Provided by Cessnock City Council survey included lifestyle (encompassing local shopping, local employment, accessibility and closer links to the environment) and security (including a focus on comfort, confidence and a future for residents and their families).

The Social and Community Plan (CCC 2008) recognises that a number of internal and external factors (such as increasing unemployment due to local industry closures, crime and vandalism) are contributing to a substantial decline in community pride. Issues raised in community focus groups consultations conducted in developing the Social and Community Plan reflect community values and have been categorised into shared themes as follows:

- Physical Environment.
- Unemployment.
- Crime and vandalism.
- Cultural opportunities and community celebrations.
- Transport.
- Education.
- Leadership.
- Bias and stigma.

In response to the *Social and Community Plan*, Council developed a *Community Renewal Strategy*[15] in collaboration with the local community. The strategy reflects community values and focuses on new employment industries and opportunities, community capacity building and the development of an integrated transport system to overcome local and sub-regional barriers (CCC, 2008: 16).

[15] The Cessnock Community Renewal Strategy is a partnership between the NSW Premiers Department, Cessnock City Council and the community.

4. Methodology

The SIA has been undertaken addressing the Project's potential construction and operational social impacts at various levels, including:

- Direct property impacts affecting individuals, businesses and rural land uses, including land impacts and impacts relating to amenity and livelihoods.
- Impacts to the broader community.

The SIA has been undertaken drawing on qualitative and quantitative research approaches. Preparation of the SIA has involved:

- Preliminary site visits.
- Community profiling - utilising existing data and information (including State Government departmental information, local government planning literature, web-based reference materials and ABS census data) to develop profiles of the immediately affected (local) and broader regional communities in terms of their populations, demographic composition, income levels and other attributes.
- Information provided by the Hunter 8 Alliance technical specialists, including cooperation with the Land Acquisition and Consultation Team to determine the extent of landholder and land user impacts.
- Direct landholder consultations – the Social Team developed a brief questionnaire and interview format to implement during landholder interviews to better understand the nature of land use and key landholder concerns / issues. In total, 87 landholder interviews were conducted for the purpose of informing the SIA.
- The methodology used to predict, analyse and manage potential impacts follows four steps, including:
  - Scoping (including identification of Project stakeholders, study areas and likely social impacts).
  - Developing a local area profile (as a baseline to assist in identifying impacts and to serve as a benchmark against which social change can be monitored).
  - Identifying potential social impacts (based on desktop research, stakeholder consultations and informed by Alliance technical specialists).
  - Developing social impact mitigation and management measures.

4.1 Limitations of the Study

Some of the potential social impacts that have been identified will depend on final construction methods (for example choice of plant and equipment) and details that are either not currently known or finalised. In these instances, consideration has been given to the proposed construction methods and based on these assumptions generic possible impacts and mitigations have been offered.

Impacts would vary from individual to individual and property to property. Impacts have been listed at a broader user-group scale, not on a case by case basis for individual properties or landholders. However, some of the mitigation measures would need to be implemented at an individual level. The Hunter 8 Alliance will continue their community engagement practices and landholder negotiations to account for this.

5. Impact Assessment

This section identifies and discusses the potential social impacts associated with the proposed construction and operation of the Project. All of the social impacts identified below are considered potential impacts only. While their identification has been based on informed predictions made by the Project team, future social impacts brought about by the Project cannot be foreseen with absolute certainty.

The social impact identification has been based on a review and analysis of the local area profile, technical studies undertaken for the EA, and input from stakeholder consultations.

Impacts have been broadly categorised into construction impacts (temporary impacts during the 1-2 year construction period) and operational impacts (ongoing / long term impacts during Project operation). The potential social impacts may relate to impacts on individuals and businesses (often relating to direct impacts on the Project's immediate community) and / or impacts on the broader community (often relating to indirect impacts).

5.1 Construction Impacts

The nature and scale of construction activities would potentially result in several impacts on the community. This section discusses the social impacts that may arise during the Project's construction. The direct property and community impacts anticipated during the Project's construction are listed in Table 5-1, along with the level of concern for the issues expressed by landholders[16] during consultations.

Subject to all necessary environmental approvals being received and economic factors being considered, construction of the Project is programmed to commence in 2010 and be completed in 2012.

Table 5-1 Construction Related Impacts and Level of Landholder Concern

Potential Social Impact	Number of landholder that Raised Issues/Concern	% of Total Landholders Consulted
Direct Property Impacts		
Land acquisitions	N/a[17]	N/a
Noise	2	2%
Vibration	0	-
Property damage	22	25%
Construction dust	3	3%

[16] The term 'landholder' means the registered owner or the lessee of the land and applies to owner/occupiers neighbouring the existing Main North Rail line.

[17] Section 12 Land use provides information on the properties that would be directly impacted by land acquisitions.

Potential Social Impact	Number of landholder that Raised Issues/Concern	% of Total Landholders Consulted
Impacts on pets	3	3%
Impacts on flora and fauna	19	22%
Reduce visual amenity	2	2%
Increased light pollution	0	-
Changes to property infrastructure	21	24%
Reduced access – private property	9	10%
Reduced security	5	6%
Reduced privacy	1	1%
Community Impacts		
Reduced road safety	5	6%
◗ Reduced access - roads and traffic mobility	0	-
◗ Reduced access - rail	0	-
◗ Impacts on community values	N/a	N/A
◗ Formation of opinions and attitudes about the Project	N/a	N/A
◗ Increased local and regional employment	0	-
◗ Increased local business opportunities	0	-
◗ Increase in direct local expenditure	0	-
◗ Increased demand for housing and accommodation	0	-

Direct Property Impacts

The following impacts may be considered direct social impacts that are likely to affect individual community members and/or businesses. The impacts relate to potential changes to individual properties, property access, livelihoods and amenity.

Land Acquisitions

A summary of proposed Property Acquisitions are outlined below.

Table 5-2 Summary of Proposed Property Acquisition

Local Government Area	Number of Properties	Number of Private Properties	Number of Government Properties
Singleton	13	11	2
Cessnock	22	13	9
Maitland	102	75	27

The acquisition and isolation of lands for the Project would inevitably involve impacts to existing and future land uses and the users of this land. Given the nature of this acquisition, as an expansion of an existing corridor, the significance of this land loss for the viability of most land uses is relatively low.

Noise

The results of the noise assessment suggest that construction related noise would impact on the amenity of some sensitive residential receivers in the near vicinity of the corridor, as outlined in the Noise and Vibration Impact Assessment.

Hours of construction are proposed to be 6:00 am till 8:00 pm Monday to Saturday and 8:00 am till 5:00 pm Sunday. Additionally, some specific activities would need to be completed outside of these hours (up to 24 hours a day) to allow for works to occur in track possession periods where trains are not operating.

Increased construction noise, including traffic and activity in compound areas, could reduce the amenity of some residential neighbourhoods in close proximity to construction activities and would have a lower impact in industrial areas. Particularly sensitive receptors include houses along transport routes and houses located in close proximity to the existing rail line.

Construction noise may be a particular concern for shift workers. Due to the nature of local employment opportunities (such as coal mining operations throughout the Singleton LGA) there are numerous shift workers that live next to the existing rail line, as well as other shift workers located throughout the broader local community. Despite this, there was minimal (2% of consulted landholders) concern expressed during landholder consultations regarding noise levels generated by construction activities.

Vibration

The results of the vibration assessment suggest that construction related vibration will significantly impact on the amenity of sensitive residential receivers.

Construction activities could generate vibrations and ground movement. Significant construction vibration levels would reduce the amenity of residential neighbourhoods and have a lower impact in industrial areas. Significant levels of vibration and ground movement may also affect the structural integrity of buildings and infrastructure.

Concerns relating to construction vibration were not raised during landholder consultation.

Property Damage

The close proximity of neighbouring private property to the existing rail corridor creates the potential for property damage during Project construction. The potential impact of Project construction activities on private property was a concern for 25% of consulted landholders. Property damage concerns raised by landholders included:

- Paddock damage due to construction vehicle access in wet conditions.
- Property fencing and gates being dropped or damaged during construction activities. There is also concern that fences would be re-erected to an inferior standard, not replaced in a timely manner or not put back on the correct boundary line.
- Escape of livestock due to construction impacts on fences and gates. This may cause a danger to livestock, especially when they gain access to the rail corridor.
- Construction materials left on property. There is particular concern over land not being returned to the original condition after the storage of ballast rock. Ballast rock and construction scraps materials may also be projected into neighbouring properties during construction.
- Effects on water courses and resulting impacts on irrigation water quality.

Construction Dust

Dust is likely to be created throughout the Project's construction period. Construction activities including ground excavation, earthworks, the movement and exposure of spoil and vehicle movements would be in close proximity to private property and residential and commercial premises. This creates the possibility of dust impacts on neighbouring landholders.

Landholder consultations revealed some concern (3% of consulted landholders) that construction activities, including construction vehicle use of unsurfaced roads, would generate dust that may impact on neighbouring properties. There was particular concern over potential impacts on household tank water supplies.

Impacts on Pets

Various private properties along the Project corridor have pets and/or accommodate animals for breeding/training and commercial purposes. There are four properties neighbouring the rail corridor that undertake greyhound training/breeding, one property undertaking dog breeding and two properties that provide pet accommodation.

Consultations undertaken for the Project revealed some level of concern in regard to impacts on animals (3% of consulted landholders). Concerned landholders were particularly worried about potential impacts on domestic and racing dogs. Greyhounds are particularly sensitive to disturbance, as jumping may cause leg injury. Other dogs may be sensitive to construction noise, particularly explosive detonations, which can cause stress.

Impacts on Flora and Fauna

Vegetation would be removed as a consequence of widening the existing rail corridor.

Project consultations revealed that numerous landholders (22% of consulted landholders) were concerned over the potential removal of trees along the existing rail corridor as they are eager for existing trees and bushland to be maintained. These landholders have invested in planting and maintaining trees along the rail corridor. Other sections of vegetation are in a natural/native state.

The vegetation is considered important as a natural noise barrier, as improving visual amenity and as adding to the character of individual properties. Some landholders' concern over loss of vegetation is due to its provision of habitat for native fauna. Some landholders have invested in improving conditions for native fauna on their properties.

Reduced Visual Amenity

Temporary visual impacts would relate to the introduction of plant and equipment, compound facilities, and earthworks during the construction period. These impacts are likely to be exacerbated by the semi rural nature of the landscape, clearing of vegetation and lack of screening in areas characterised by large open spaces. The presence of machinery and construction compounds would change the visual quality of the landscape character in a given area for the duration of the construction period.

Landholder consultations revealed minimal specific concern over impacts on visual amenity (2% of consulted landholders), however, impacts on visual amenity do relate to loss of vegetation, which was a major landholder concern. Landholder concerns specific to reductions in visual amenity during the Project's construction period include concern over the potential for rubbish from construction workers left on site and waste construction materials left in communal areas.

Increase Light Pollution

The proposed construction hours are 6:00am to 8:00pm, Monday to Saturday and 8:00am to 5:00pm on Sundays. As such, security lights, vehicle lights and lighting for the safe movement of construction workers could spill from the construction areas and compounds, and be visible from residences and businesses close to the rail corridor. This could potentially reduce amenity for people living and working close to the Project, particularly those near construction compounds.

Changes to Property Infrastructure

The potential impact of Project construction activities on property infrastructure is a concern for 24% of consulted landholders. The most commonly sited concern was in relation to potential impacts on dams which are in close proximity to the existing rail corridor. The proximity of sheds/carports to the rail corridor was also a concern for various landholders. Other property infrastructure impacts of concern include an irrigation spring, established crops (including grape vines and olive trees) and one working quarry site.

Reduced Access – Private Property

Property access may be temporarily impacted by Project construction activities. One commercial property would be particularly impacted through the closure of their existing private rail crossing. The majority of property access impacts would likely be as a result of the proposed works on existing rail underbridges, overbridges and road crossings, some of which have been assessed under individual Review of Environmental Factors (REF) reports prepared in accordance with Part 5 of the EP&A Act. For some residents in the vicinity of these crossings, temporary closure of road crossings and delineation of alternative routes would pose an inconvenience in additional travel time to access properties.

The potential impact of Project construction activities on property access is a specific concern for 10% of consulted landholders. Some concern was expressed in regard to the potential for frequent construction vehicle movements to reduce the quality of unsurfaced access roads such as Pothana Lane.

Reduced Security

The presence of construction workers and construction materials along the rail corridor may reduce the security of neighbouring properties. This is of particular concern when construction workers numbers are high and when valuable materials are left on site. Anecdotally, there are occurrences of crime in the Project area. There have been cases where rail hardware and fuel has been stolen from construction sites and private property has been stolen from neighbouring residential premises. This presents a risk to the Project in terms of time and cost and a risk to public health and safety. Some consulted landholders expressed concern over the reduced security of their private property due to contractors working on the rail track. Some landholders also expressed the concern that vandals could access private properties via the ARTC access roads.

Reduced Privacy

Residents living in the vicinity of the construction corridor and/or compounds may experience a temporary reduction in privacy with the presence of construction workers. Stakeholders likely to experience a reduction in privacy in their homes include residents living within 100m of the existing rail line without appropriate screening. During landholder consultations, 1% of landholders expressed concern regarding reduced privacy.

5.1.1 Community Impacts

The following impacts are considered indirect social impacts that would affect broader groups of the local community or the community as a whole.

Reduced Road Safety

It is proposed to use conventional road truck movements to transport some construction materials including specialised equipment, materials (including imported fill) and personnel. This will lead to increased road usage by heavy vehicles and reduced real or perceived road safety. Mud and debris carried out onto the streets by construction vehicles may also create a traffic hazard and present a risk to road safety.

The Project's construction workforce would also add additional traffic to the local road system when commuting to and from the site. Further information regarding traffic movement during the construction period can be found in Chapter 15 of the Environmental Assessment.

Stakeholders impacted by the reduced road safety include road users (including the Project's construction workforce), local residents and workers in nearby businesses and industries. While the perception of decreased road safety is not a severe impact, the potential consequences of a real decrease in road safety, such as serious accidents, can be extreme.

Approximately 6% of consulted landholder revealed some concern regarding the potential for increased heavy vehicle movements on rail access roads (such as Old North Road and Winders Lane) to lead to reduced levels on safety. There was particular concern regarding the safety of children playing in the vicinity of such roads. Some landholders also expressed concerns regarding the conduct of construction workers, who have been sighted travelling too fast and making unsafe manoeuvres on access roads and the rail maintenance track. This was sighted as causing safety concerns for other road users.

Reduced Access - Roads and Traffic Mobility

The road haulage outlined above may place pressure on the local and regional road networks, potentially resulting in delays and delineation of alternative routes. Earth moving equipment and trucks transporting construction materials to site would likely utilise the New England Highway for access to and from construction sites. Increases in construction traffic and construction workers vehicles could also impact on access to roads and traffic mobility in the local area.

Consequently, temporary disruption to daily vehicle movements of local residents is likely for the duration of the construction phase. An increase in heavy vehicle traffic and / or road closures is also likely to disrupt local business activity. Traffic engineers have advised that traffic associated with construction activities will exceed road capacity along transport routes, in particular at a number of intersections. Further information on road capacity impacts can be found in Chapter 15 of the Environmental Assessment.

Some disruption to road access and traffic mobility is also expected as construction and/or modification of major road infrastructure would be required as part of the Project. The level of modification of existing infrastructure would be determined as the design works progress.

Road access and traffic mobility was not raised as a specific concern in landholder consultation. However, as noted earlier, a large portion of the region's workforce travel outside of their LGA for employment, with the most common method of travel being the use of private transport. This makes the local population more vulnerable to disturbances to traffic movement.

Reduced Access – Rail

The proposed Project would require the modification of three existing rail station platforms:

- Lochinvar Station.
- Greta Station.
- Branxton Station.

These works would likely temporarily change community access to rail infrastructure. This may be of particular concern for community members that required assistance with their core activities (approximately 5% of the local study area population). As noted earlier, trains were used by only around 2% of the local study area population to travel to work in 2006.

Reduced Access – Pedestrian

There are five pedestrian footbridges that go over or under the existing rail line[18]. Construction works could temporarily change access to rail infrastructure and community connectivity. This may be of particular concern for community members that do not have access to private transportation. However, as noted previously, the local study area appears to be heavily dependent on private motor vehicles for personal transportation. The prominence of private transportation in the local area will help reduce the severity of any reduction in pedestrian access associated with the Project's construction.

Impacts on Community Values

Community consultation undertaken for the Project revealed a divergence between preserving and protecting the environment and character of the local area, and the importance of industrial development. Therefore, the potential for the Project to impact on community values may be considered neutral, as community values and aspirations may align or conflict with the Project.

Key community values apparent in the local area relate to the rural character, natural environment and history of the area. Various consulted stakeholders value the corridor and adjacent areas due to (perceived or quantified) environmental value and place value on the area's natural assets. Other stakeholders identify strongly with the areas cultural heritage (Indigenous and non-Indigenous). It is likely that these people value the maintenance of the area's environmental and historical value and aspire to conserve the area on these grounds. Therefore, there is potential for the development of the Project to be perceived as directly conflicting with the community values of such individuals.

Conversely, other community values may align with the proposed Project. Key community values apparent in the local area relate to employment, economic opportunities and continued industrial development. Much of the local community work with large private industrial groups or small/medium businesses that provide support and services to industry. Various consulted stakeholders noted the importance of continued development in supporting local employment and economies. As such, community members may perceive the Project as aligning with their values, reinforcing aspirations of employment and industrial development.

Formation of Opinions and Attitudes About the Project

The level of expressed or anticipated community concern is a key criteria in determining whether a social impact is significant or not (Gold Coast City Council, n.d). Real social impacts can occur as soon as a Project is announced, with stakeholders forming opinions and attitudes about the Project (Burdge, 2004: 24). Public opinions may be positive, in general supportive to the Project, or negative, in general opposition to the Project.

[18] These include Maitland Footbridge, Greta Footbridge, Branxton Footbridge, Black Creek Underbridge, Branxton and Jump Up Creek Underbridge, Belford.

Throughout the consultation process it was evident that there were already some strong attitudes in opposition to the Project. Some consulted stakeholders expressed negative opinions formed from previous experiences with rail contractors and past and present management authorities. There were also some broader concerns expressing opposition to the Project's contribution to unsustainable development patterns. Opinions and attitudes in opposition to the Project have also been expressed in the local media (for example, refer to Sharpe 2009).

Various stakeholders expressed no opposition to the Project throughout the consultation process. However, if community expectations are different from their experience once construction starts, community opposition to the Project may develop. Opinions and attitudes about the Project will also continue to be influenced by the nature of future information about the Project and the accessibility of this information.

Increased Local and Regional Employment

The Project's construction would result in direct short-term employment opportunities with an expected creation of approximately 500 full time jobs during the construction phase. The Project is expected to employ some people from the local area, as construction works would be carried out predominantly by a contractor. Consequently the labour market impacts for the local labour force, which consisted of 8794 persons in 2006, are likely to be minor.

In addition to the direct employment opportunities, the Project would lead to the creation of indirect jobs throughout the local and regional community. The major indirect employment opportunities would likely result from increased activity for local and regional goods and services providers, as discussed below. In this way, the Project would likely result in additional indirect jobs being generated by support services catering to the construction activities and workforce.

The direct and indirect job creation associated with the Project's construction would support the local and regional economies and have a minor positive impact on the local labour market. Any positive impact may be particularly beneficial to the local unemployed, which constituted approximately 7% of the local study area population in 2006.

Increased Local Business Opportunities

In addition to the employment related impacts, the Project has the potential to generate business opportunities for local and regional goods and services providers. Local services likely to be required for the Project include accommodation, catering, entertainment, fuels and oils, vehicle hire, minor engineering and fabrication works and plant maintenance and hire. While the increased business opportunities associated with the Project's construction may not lead to the establishment of new businesses, it would most likely result in increased trading and potential opportunities for diversification of services and products by existing businesses over the construction period. It is not presently possible to quantify the expected local spend generated by the Project.

Increase in Direct Local Expenditure

The Project would also likely result in further stimulation of the economic growth of the region through increases in direct local expenditure. Most obviously, it is expected that the construction workforce would have an impact on the existing local commercial facilities, particularly through increased trade and increased demand for goods including food and beverages. Less direct impacts would also come as a result of the construction's direct and indirect employment opportunities resulting in greater disposable income for local and regional community members.

Increased Demand for Housing and Accommodation

As outlined above, the Project's construction period is likely to create a demand for 500 full time jobs and is expected to employ a limited number of people from the local area. As such, the Project would require workers to be brought in from outside the local area. Any importation of workers will create additional demand for local and regional housing and accommodation.

How this impact would be experienced depends largely on the situation of the local rental and temporary accommodation market and the Project timing. Accommodation within the local area is dominated by privately owned and occupied dwellings, with only around 25% of occupied dwelling functioning as rental properties (ABS 2007). There are various facilities (particularly hotels, motels, serviced apartments and caravan parks) located throughout the broader regional area that provide temporary accommodation options.

Increased demand for housing can be experienced negatively by someone seeking to enter the rental market (in particular people seeking access to affordable housing, as competition for rental properties is likely to increase rental costs), while it would be experienced positively for a landlord seeking to let out accommodation (due to the potential for higher rental returns). An increased demand for housing may also have some beneficial effects in terms of increasing wealth and stimulating investment back into the local and regional housing market.

Any additional housing demand associated with the Project's construction may contribute to a shortage of available housing. This may lead to housing affordability impacts, including increases in rents and medium property values. In general, housing affordability impacts are likely to be felt most by lower socio-economic groups and lower income earners who are reliant on either moderately priced private rental housing or community/public housing.

5.2 Operational Impacts

This section discusses the social impacts that may arise during the Project's operation. The direct property and community impacts anticipated during the Project's operational period are summarised in Table 5-3, along with the level of concern for the issues expressed by landholders during consultations.

Subject to all regulatory approvals being received, operation of the Project could commence in 2012.

Table 5-3 Operation Related Impacts and Level of Landholder Concern

Potential Social Impact	Number of Landholder that Raised Issues / Concern	% of Total Landholders Consulted
Direct Property Impacts		
Noise	48	56%
Vibration	24	28%
Increased dust and air pollution	8	9%
Increased light pollution	1	1%
Interruption to television (TV) reception	3	4%
Drainage	14	16%
Property devaluation	10	12%
Permanent disruption to business operations	3	4%
Reduced viability of development plans	17	21%
Reduced access – private property	19	23%
Reduced visual amenity	3	3%
Community Impacts		
Improved access to rail services	0	-
Formation of opinions and attitudes about the Project	N/A	N/A
Operational employment opportunities	0	-
Indirect economic benefits	0	-

5.2.1 Direct Property Impacts

The following impacts may be considered direct social impacts that are likely to affect individual community members and / or businesses. The impacts relate to potential changes to individual properties, livelihoods, property access, safety and security.

Noise

Construction of a third track would increase the frequency of train movements and reduce the distance between rail movements and traffic and neighbouring properties, particularly those located in the urbanised areas. As such, rural and urban residential properties may be adversely affected by the cumulative effect of operational noise.

The potential noise impact associated with the Project's operation was raised by 56% of landholders during consultations. Many of these landholders reported already experiencing substantial noise impacts and there is a common concern that the existing noise impacts would be more severe due to the increased frequency of trains. The level of concern varies between stakeholders, with some feeling that noise is not a major concern, while others feel that the third rail track would make their residence "unliveable".

Noise is a particular concern when trains are braking or accelerating. Other major factors contributing to noise impacts including the squeaking wheels of empty trains (generally on the down approach) and sounding horns (for example, before existing road crossings). The severity of the noise impact also seems dependent on the number and type of engines in use and the style of driving. Some neighbouring landholders have experienced increased noise levels since the new rail signalling system was implemented.

Noise is a particular issue at night and sleep disturbance is reportedly already common. Some landholders also experience noise impacts more on weekends. Common noise related issues include the need to keep doors and windows closed, and interruption to TV, radio and phone conversation. Such noise related impacts lead to general lifestyle quality changes.

Vibration

The Project may increase the existing levels of vibration experienced by neighbouring stakeholders. Significant levels of vibration and ground movement could affect the structural integrity of buildings and infrastructure. Stakeholders likely to experience this impact include the owners of residential and commercial properties and owners of infrastructure close to the proposed rail alignment.

The level of vibration above baseline conditions and the extent of the impact of vibration is further addressed in Section 17 of the Environmental Assessment.

Vibration caused by train movements is a concern for 28% of consulted landholders. Vibration is mainly experienced in house doors and windows and is also linked to property damage. Property damage concerns were mainly regarding vibrations leading to cracks in building walls (external and internal) and damage to building foundations. The movement of foundations and walls can also cause problems with the alignment of doors and windows. There is substantial landholder concern over the subsequent repair costs due to the vibration impacts on their properties from the increased train frequency associated with Project operations.

Increased Dust and Air Pollution

It is likely that the Project's operation would lead to increased levels of dust and air pollution in the immediate vicinity of the Project corridor. Coal dust is a common consequence of coal transportation and already occurs due to existing operations. The most common air pollution would likely be as a result of diesel fumes from locomotive engines.

Increased dust and air pollution is a concern for 9% of consulted landholders. The majority of concerns expressed related to coal dust. There was particular concern over coal dust impacts on tank water quality, as tanks are the only water source for some properties. Some stakeholders commented that the coal dust was noticeable in drinking water and when washing clothes. There was also some concern expressed over the environmental impact from coal dust infiltrating local water courses.

Some stakeholders are concerned about the impact of coal dust and diesel residue on their ability to keep their houses, cars and washing clean. Increased dust may be both an inconvenience and a cost – in terms of increased cleaning and maintenance costs – for residents and businesses.

Increased Light Pollution

The increased frequency of train movements as a result of the Project could increase existing levels of light pollution through additional light spillage. Only 1% of consulted landholders expressed concern regarding increased levels of light pollution into their house due to more frequent train movements.

Interruption to TV Reception

Existing train movements cause interruption to TV reception in a number of neighbouring residential premises. The increased frequency of train associated with the Project's operation would therefore potentially cause more frequent interruptions to TV reception. During landholder consultation, approximately 4% of landholders expressed concern regarding the potential increased interruption to TV reception.

Drainage

The existing rail corridor influences overland water movement throughout the Project area. Landholder consultations revealed that approximately 16% of consulted landholders were concerned about drainage issues. Concern is in regard to the level of water that flows off the rail corridor into private properties. In some cases, rail causeways drain directly into private properties, causing boggy conditions and flooding during heavy rain events. There is particular concern over flooding at the Allendale Road underpass, which is considered a common event. Various stakeholders feel that this flooding has become worse since the bridge was rebuilt.

Some property owners feel that insufficient drainage measures have been put into place. Some of these landholders have consequentially done drainage work at their own expense. Other property owners would like to see current water drainage patterns maintained, as stormwater flows currently feed property dams.

Property Devaluation

Adverse impacts, such as increased noise levels, associated with the Project's operation may devalue impacted properties. Approximately 12% of consulted landholders expressed concerns over the potential negative impact the Project may have on their property value. There is also some concern that such impacts would dissuade future potential buyers.

Permanent Disruption to Business Operations

Four (4) properties are likely to be directly and permanently impacted by the Project's operation. These impacts include changes to current access arrangement, including the loss of one private rail crossing and a reduction of a truck turning area. An additional property is likely to be affected by impacts to business infrastructure, namely dams which are currently used as part of an operational fish farm. One existing viticulture property is likely to be impacted through loss of vines located in close proximity to the existing rail track.

Reduced Viability of Development Plans

As noted in Section 14 of the Environmental Assessment, there are numerous locations throughout the Project area that currently have future development plans. These plans pertain to approved residential / rural residential subdivisions and industrial / commercial developments.

Anecdotally, there are also various neighbouring landholders with future development plans that are dependent on rezoning under future council planning regimes. Substantial areas are anticipated to be rezoned to residential/rural residential in 2011.

Approximately 21% of consulted landholders expressed concern regarding the Project's potential impact on their future development plans. Key concerns in relation to planned major subdivisions include:

- Changes to subdivision plans due to the Project's impact on property boundaries.
- Reduced viability of future planning approvals due to property boundaries changes.
- The Project's impact on the potential to sell future residential blocks (due to increased noise levels).
- In some cases planning for future developments is well advanced at considerable cost.

Other landholders have relatively smaller scale development plans, generally involving single dwelling / business developments. These plans are in various stages of development approval.

Reduced Access – Private Property

The proposed changes to the existing rail corridor would likely impact on some secondary private property access arrangements. Approximately 23% of consulted landholders expressed some concern regarding the loss of access to their properties.

Various properties, particularly those at the eastern end of Railway Street in Branxton, currently have rear access due to a rail maintenance track that runs parallel to the rail corridor. The rear property entrances are currently used to access sheds/carports. Maintaining this access is a major concern for the property owners.

Other landholder concerns expressed in regard to property access related to the potential loss of property gates onto the rail corridor. This concerned various rural landholders who currently use the gates for movement between paddocks and to retrieve escaped livestock. These landholders are keen to maintain the existing property gates as future access points.

Reduced Visual Amenity

The visual impact assessment undertaken for the Project identified some landscape or visual impacts due to the proposed development. In addition, the proposed development may create a disruption of views for residential homes or local businesses. As such, residents and persons who work adjacent to the project route are the main stakeholders that would be impacted by any reduction of visual amenity created by the Project. Such groups already experience visual amenity impacts from the existing rail operations and therefore may be sensitive to any further impacts.

Landholder consultations revealed that only around 3% of neighbouring landholders are specifically concerned with impacts on visual amenity. All landholder concerns specific to reductions in visual amenity during the Project's operation period were in relation to the potential for noise barriers to block views form residential premises. Direct consultation with affected property owners should be undertaken in developing appropriate mitigation measures.

5.2.2 Community Impacts

The following impacts are considered indirect social impacts that would affect broader groups of the local community or the community as a whole.

Improved Access to Rail Services

The Project works includes the modification of three existing station platforms at Lochinvar, Greta and Branxton. While the Lochinvar Rail Station is currently partially wheelchair accessible, Greta and Branxton stations platforms currently have no wheelchair access.

All three stations will be upgraded to be fully wheelchair accessible. While this signifies a potential Project benefit to the local community, the extent of this benefit is difficult to access. As stated previously, only around 2% of the local study area population use trains to travel to work and only around 5% of the local study area population was in need of assistance in 2006. As such, the benefit to local community members created by an improvement in access to the local rail station is likely to be minimal.

Formation of Opinions and Attitudes about the Project

Community opinions about the Project would likely to be influenced after operation commences, especially if the community's expectations are different from their experience.

Throughout the consultation process it was evident that there were already some negative attitudes about the management of rail operations in the local area. Issues of concern included:

- Lack of notification regarding maintenance works and property access.
- Timeliness in responding to landholder complaints.
- Scepticism that ARTC care about landholder impacts.

Industrial developments in neighbouring areas have raised community concern. Some community groups have been active in objecting to perceived impacts on the local environment, character and cultural heritage. These groups will be particularly sensitive and have the potential to actively oppose the Project if operational impacts are not managed appropriately.

Operational Employment Opportunities

The Project's operation would result in direct long-term employment opportunities with an expected creation of approximately 300 full time jobs. Consequently, the labour market impacts for the local labour force, which consisted of 8794 persons in 2006, are likely to be negligible.

Indirect Economic Benefits

The Project would create an overall positive economic impact, as its operation would allow increased line coal carrying capacity. This would generate benefits to Australian export income through improved transportation of coal. In addition, the Project's operation would facilitate future and protect existing coal mine industry jobs in NSW.

6. Mitigation Measures

This section recommends mitigation and management measures for each of the social impacts identified above. Input to the management responses was sought via consultation with key stakeholders and discussions within the Hunter 8 Alliance technical specialists. Table 5-3 provides a summary of the proposed mitigation and management measures in relation to each of the identified potential construction impacts. These strategies and actions are recommended to be incorporated in detailed construction planning and ongoing management of the Project.

The purpose of the mitigation and management measures is to:

- Maximise potential positive social impacts.
- Avoid significant adverse impacts in the first place.
- Minimise significant adverse impacts, where they cannot be avoided.
- Consider community compensation for significant impacts that cannot be reduced to an acceptable level.

Table 6-1 Mitigation and Management of Social Impacts

Impact	Proposed Mitigation or Management Measures: CONSTRUCTION PERIOD
Direct Property Impacts	
Land acquisitions	◗ Negotiate land acquisitions and implement appropriate compensation measures. ◗ Implement mitigation measures described in Section 14.4 of the Environmental Assessment.
Noise and Vibration	◗ Provide sufficient information to enable relevant stakeholders to understand the likely nature, extent and duration of noise impacts. ◗ Implement mitigation measures described in the Noise and Vibration Impact Assessment.
Property damage	◗ Measures to minimise property damage to be included in the construction methodology for construction contractors. ◗ Implement ARTC and contractor conduct protocols. ◗ Monitor the performance of construction contractors and the quality of their work.
Construction dust	◗ Provide sufficient information to relevant stakeholders to understand the likely nature, extent and duration of dust impacts. ◗ Record any complaints/grievances regarding construction dust and respond to stakeholder issues as they arise. ◗ Implement mitigation measures described in Section 16.4 of the Environmental Assessment.
Impacts on residents	◗ Communicate localised construction activities and timeframes to relevant stakeholders so they can take measures to minimise impacts on themselves an their properties if required.
Reduce visual amenity	◗ Communicate future changes (via Project newsletter / updates, advertisements) to help ensure the community understands what the proposal site will look like after construction activities. ◗ Implement mitigation measures described in the Landscape and Visual Impact Assessment.

Impact	Proposed Mitigation or Management Measures: CONSTRUCTION PERIOD
Increased light pollution	◗ Where adverse light impacts may occur, implement attenuation measures, such as screening of sensitive receptors. ◗ Implement mitigation measures described in the Landscape and Visual Impact Assessment.
Changes to property infrastructure	◗ Implement measures to compensate / offset significant impacts on dams and buildings. Measures to be developed in consultation with affected landholders.
Reduced access – private property	◗ Communicate construction related road changes to relevant local residents to ensure awareness of changed access arrangements. ◗ Implement measures to maintain safe access to residential properties. ◗ Implement mitigation measures described in the Traffic Study.
Reduced security	◗ Implement ARTC and contractor conduct protocols.
Reduced privacy	◗ Where landholder privacy may be compromised, consider the implementation of attenuation measures to screen sensitive receptors.
Community Impacts	
Reduced road safety	◗ Implement ARTC and contractor OH&S procedures, and develop a traffic management plan, as discussed in the Chapter 15 of the Environmental Assessment. ◗ Record any incidents involving accidents or near misses with pedestrians and cars on local roads, and report in an OH&S register. ◗ Further details are provided at Appendix J of the Environmental Assessment.
Reduced access - roads and traffic mobility	◗ Develop a traffic management plan, as discussed in the Traffic Study. ◗ Define traffic movement areas during construction, including the use of signage onsite and along transport routes, to ensure awareness of increased heavy traffic along transport routes. ◗ Further details are provided in the Traffic Study.

Impact	Proposed Mitigation or Management Measures: CONSTRUCTION PERIOD
Reduced access - rail	◗ Maintain access to all operational rail stations.
Impacts on community values	◗ Implement a communications program that addresses community values to help improve the public perception of the Project. ◗ Implement complaint monitoring and response measures.
Formation of opinions and attitudes about the Project	◗ Implement a communications program to inform the community about the nature of construction activities, the Project timeline, the proposed benefits (including employment and local development) and to generate awareness about future consultation opportunities. ◗ Communicate updates regarding construction activities through established communication channels and local media. ◗ Ensure the community has adequate opportunity to obtain further information about the Project if required. ◗ Implement complaints monitoring and response measures.
Impacts on local and regional employment	◗ Prioritise local employment in ARTC and construction contactor recruitment. ◗ Include appropriate levels of local recruitment as a condition for engaging sub-contractors, where suitable.
Increased local business opportunities	◗ Where feasible, include appropriate local spend targets as a condition for engaging contractors.

Impact	Proposed Mitigation or Management Measure: OPERATIONAL PERIOD
Direct Property Impacts	
Noise and Vibration	◗ Implement mitigation measures described in the Noise and Vibration Impact Assessment.
Increased dust and air pollution	◗ Refer to mitigation and management measures outlined in Section 16.4 of the Environmental Assessment.
Increased light pollution	◗ If the impact of operational light pollution is severe, consider the implementation of attenuation measures, such as landscaping or barriers, to screen sensitive receptors.
Interruption to TV reception	◗ If the impact on TV reception is directly attributable to train movements, consider the installation of antenna and/or cabling at individual properties.
Drainage	◗ Refer to mitigation and management measures outlined in the Surface Water Assessment.
Property devaluation	◗ Implement appropriate attenuation measures for impacts likely to affect property values (such as noise).
Reduced viability of development plans	◗ Implement appropriate compensations measures where approved development plans are shown to be adversely impacted.
Reduced access – private property	◗ Maintain property access points where appropriate. If any existing access points need to close, alternative access arrangements would be provided. Further details are provided in the Traffic Study.

Impact	Proposed Mitigation or Management Measure: OPERATIONAL PERIOD
Community Impacts	
Improved access to rail services	◗ Not applicable.
Formation of opinions and attitudes about the Project	◗ Maintain communication lines between ARTC and the community.
Operational employment opportunities	◗ Impact is likely to be minor.
Indirect economic benefits	◗ Not applicable.

7. Conclusions

This SIA report has been prepared to provide an assessment of the Social Impacts of the Maitland to Minimbah Third Track Project (the Project) as an input to the Environmental Assessment. This SIA considers the potential social impacts on the local (the 10 ABS collection districts adjacent to the existing rail line between Maitland and Minimbah Bank) and regional communities (the local government areas of Maitland, Cessnock and Singleton).

There are numerous social impacts identified as potential consequences of the construction and operation of the Project. These relate to impacts on individuals, businesses and the broader community. The Project's neighbouring landholders, which include residents and business operators, would be impacted during the Project's construction due to construction activities such as land acquisition, clearing of flora and fauna and changes to property infrastructure. The broader community may be impacted during the Project's construction due to various construction activities such as heavy vehicle movements on local roads and the creation of local and regional employment opportunities.

The Project's neighbouring landholders would be impacted during the Project's operation due to operational related impacts such as increases in noise and vibration, and changes to existing drainage patterns and property access arrangement. The impact on the broader community brought about by the Project's operation would likely be less pronounced and result from indirect change processes.

There are numerous social impact mitigation and management measures that could be implemented to maximise potential positive social impacts, avoid or minimise potentially adverse impacts or offset/compensate stakeholders for significant adverse impacts that cannot be reduced to an acceptable level. The report has proposed mitigation and management measures in relation to each of the identified potential construction and operation impacts. These strategies and actions are recommended to be incorporated in detailed construction planning and ongoing management of the Project.

Any implemented management program would need to be flexible and reactive to capture social impacts that have not previously been identified. It would also need to factor in the ability to make the distinction between the social impacts of the Maitland to Minimbah Third Track Project as opposed to impacts caused by other major projects and the existing Main Northern Railway operations.

The severity of the potential social impacts that have been identified is likely to be limited as the Project is fundamentally an upgrade of an existing service and existing infrastructure, and direct property impacts may be adequately compensated / managed. However, while the adverse impacts likely to affect individual residents, businesses and the local community during the Project's operation may be minor; the long-term nature of these impacts increases their severity. Regardless, the Project is not likely to result in the instigation of any major social change processes.

In general, it is concluded that adverse social impacts are likely to be experienced at an individual/household/business level. At this level, there are a greater number of adverse social impacts likely to occur during the Project's construction, though many of these can be managed through the implementation of appropriate mitigation measures. While there is also likely to be some adverse impacts experienced by the broader community, namely during the Project's construction, these impacts may be offset by the community benefit created by the Project.

8. References

Australian Bureau of Statistics, 2009. CDataOnline customised tables. http://www.abs.gov.au/CDATAOnline.

Australian Bureau of Statistics, 2007, *Branxton (SSC 16453) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *East Branxton (SSC 17051) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Farley (SSC 17175) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Greta (SSC 17395) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Lochinvar (SSC 17877) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Lower Belford (SSC 17903) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *North Rothbury (SSC 18393) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Pokolbin (SSC 18553) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Rutherford (SSC 18701) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au.

Australian Bureau of Statistics, 2007, *Telarah (SSC 18993) Basic Community Profile*, 2006 Census Community Profile Series. www.abs.gov.au

Burdge, R.J., 2004. *A Community Guide to Social Impact Assessment* (3rd Edition). Social Ecology Press, Wisconsin.

Cessnock City Council, 2008. *Social and Community Plan, November 2004 – November 2009*. Revised edition. http://www.cessnock.nsw.gov.au/resources/file/Publications/Revised%20%20Social%20and%20Community%20Plan%2004-08.pdf

Cessnock City Council, 2009. http://www.cessnock.nsw.gov.au.

Department of Planning, 2006. *The Lower Hunter Regional Strategy*. NSW Government. http://www.planning.nsw.gov.au/PlansforAction/Regionalplanning/HunterRegion/tabid/187/Default.aspx.

Gold Coast City Council. (n.d). *Draft SIA Planning Scheme*. Gold Coast City Council.

Maitland City Council, 2009a. *Draft Maitland Centres Strategy*. Prepared by Hill PDA. http://www.maitland.nsw.gov.au.

Maitland City Council, 2009b. *Draft Central Maitland Structure Plan*. Prepared by City Plan Urban Design. http://www.maitland.nsw.gov.au.

Maitland City Council, 2009c. *Maitland Urban Settlement Strategy 2001-2020: A strategy for urban growth in the Maitland Local Government Area*. Prepared by the Maitland City Council, Strategic Services Division. http://www.maitland.nsw.gov.au.

Maitland Tourism, 2009. http://www.maitlandhuntervalley.com.au/pages/area-history.

RailCorp, 2009. http://www.cityrail.info/timetables/timetables_by_line.htm#landingPoint.

Sharpe, D., 2009. *Residents oppose coal rail link Maitland to Singleton*. Newcastle Herald. http://www.theherald.com.au/news/local/news/general/residents-oppose-coal-rail-link-maitland-and-singleton/1498686.aspx. 29 April 2009.

Singleton Council, 2004. *Singleton Rural Residential Development Strategy 2005 Final Report.*

Singleton Council, 2008. *Singleton Land Use Strategy*. Prepared by Planning Workshop Australia. http://www.singleton.nsw.gov.au/templates/singleton_content_2.aspx?pageID=1218.