

CONTENTS

24.	SOCIAL VALUES AND MANAGEMENT OF IMPACTS	24-1
24.1.	Introduction and background	24-1
24.1.1.	Methodology	24-1
24.1.2.	Stakeholder consultation	24-1
24.1.3.	Social policy framework	24-2
24.2.	Description of the local community area	24-5
24.2.1.	Definition of the study area	24-5
24.2.2.	Townships	24-8
24.2.3.	Other relevant proposals and projects	24-10
24.2.4.	Features in the study area	24-12
24.3.	Profile of the local community	24-24
24.3.1.	Population size and growth	24-24
24.3.2.	Age profile	24-26
24.3.3.	Population mobility	24-27
24.3.4.	Households and families	24-27
24.3.5.	Cultural diversity	24-28
24.3.6.	Education	24-29
24.3.7.	Housing and accommodation	24-30
24.3.8.	Community capacity	24-33
24.3.9.	Community health and safety	24-35
24.3.10.	Local community values, vitality and lifestyles	24-37
24.4.	Profile of the local business community	24-39
24.4.1.	Directly affected properties and families	24-39
24.4.2.	Employment and income	24-40
24.4.3.	Agriculture, forestry and fishing	24-44
24.4.4.	Mining and industry	24-44
24.4.5.	Tourism	24-44
24.4.6.	Recreation	24-45
24.5.	Potential impacts and mitigation measures	24-45
24.5.1.	Property impacts	24-45
24.5.2.	Employment and education	24-48
24.5.3.	Local business and industry	24-53
24.5.4.	Population and demography	24-56
24.5.5.	Housing and accommodation	24-59
24.5.6.	Community services and social infrastructure	24-61
24.5.7.	Access and connectivity	24-66
24.5.8.	Community health and safety	24-68
24.5.9.	Community values and amenity	24-70
24.5.10.	Project workforce	24-73
24.6.	Cumulative impacts	24-73
24.6.1.	Potential cumulative social impacts	24-74
24.6.2.	Existing initiatives and potential alignment	24-76
24.7.	Social responsibility initiatives	24-78

24.8.	Impact assessment and residual risk	24-79
24.9.	Social impact management plan	24-88
24.9.1.	Background	24-88
24.9.2.	Methodology and schedule for SIMP development	24-88
24.9.3.	SIMP framework	24-89
24.10.	Summary	24-99

TABLES

Table 24-1 Central Queensland RFGM guiding principles	24-3
Table 24-2 Taroom Planning Scheme relevant desired environmental outcomes	24-4
Table 24-3 Chinchilla Shire Planning Scheme relevant desired environmental outcomes	24-4
Table 24-4 Dalby Town Planning Scheme relevant desired environmental outcomes	24-5
Table 24-5 Key demographic characteristics	24-9
Table 24-6 Existing projects, 2010	24-10
Table 24-7 Planned projects, 2010	24-11
Table 24-8 Childcare facilities and capacity in the study area	24-13
Table 24-9 Social infrastructure – dam and surrounds (Taroom)	24-15
Table 24-10 Social infrastructure – pipeline	24-18
Table 24-11 Population estimates – dam and pipeline area	24-24
Table 24-12 Change in estimated resident population, 2006-2009	24-25
Table 24-13 Projected estimated resident population, 2006-2031	24-25
Table 24-14 Age profile, 2006	24-26
Table 24-15 Population mobility, 2006 (%)	24-27
Table 24-16 Household type, 2006 (%)	24-27
Table 24-17 Family households, 2006 (%)	24-28
Table 24-18 Key demographic statistics for Indigenous people in the local community area, 2006	24-29
Table 24-19 Education institution attending, 2006 (%)	24-29
Table 24-20 Education levels, 2006 (%)	24-30
Table 24-21 Housing characteristics, 2006 (%)	24-31
Table 24-22 Landlord type, 2006 (%)	24-31
Table 24-23 Houses available for rent within the study area, December 2011	24-32
Table 24-24 Median house prices, November 2010 – October 2011*	24-32
Table 24-25 Housing affordability ratings, 2005 – 2010	24-33
Table 24-26 SEIFA indices for dam and pipeline communities, 2006	24-34
Table 24-27 Need for assistance, 2006	24-34
Table 24-28 Admissions to hospitals in Toowoomba and Darling Downs District, 2005/2006	24-35
Table 24-29 Crime statistics, reported offences 2008 - 2009	24-36
Table 24-30 Victim/offender relationship, 2008/2009	24-36
Table 24-31 Domestic and family violence orders by court, 2005-2006	24-37
Table 24-32 Business counts by employment size, 2006-2007	24-40
Table 24-33 Labour force participation, 2006 (%)	24-40
Table 24-34 Unemployment, December 2009-December 2010*	24-41
Table 24-35 Employment by industry	24-41
Table 24-36 Employment by occupation	24-42

Table 24-37 Agricultural enterprise in the Taroom SLA and WDRC, 2005-06	24-44
Table 24-38 Construction workforce, dam and surrounds	24-57
Table 24-39 Construction workforce, pipeline	24-58
Table 24-40 Potential alignment with existing cumulate impact initiatives	24-76
Table 24-41 Social risk assessment results – construction	24-80
Table 24-42 Social risk assessment results – operation	24-85
Table 24-43 Methodology for draft SIMP development	24-89
Table 24-44 Summary of key social impacts and benefits	24-90
Table 24-45 Employment and training action plan	24-92
Table 24-46 Local business development action plan	24-94
Table 24-47 Community services and infrastructure action plan	24-95
Table 24-48 Workforce housing and well-being action plan	24-96
Table 24-49 Stakeholder engagement and community well-being action plan	24-98

FIGURES

Figure 24-1 Local community area	24-7
Figure 24-2 Social infrastructure in the dam and surrounds	24-17
Figure 24-3a Social infrastructure along the pipeline	24-21
Figure 24-4 Age profile by gender, 2006	24-26
Figure 24-5 Cultural diversity, 2006 (%)	24-28
Figure 24-6 Participation in volunteer activities, 2006 (%)	24-38
Figure 24-7 Median individual weekly incomes, 2006	24-43
Figure 24-8 Project construction workforce	24-49
Figure 24-9 Other project developments in the study area	24-51
Figure 24-10 Glebe Weir Camping Reserve	24-62
Figure 24-11 Projected workforce for the Western Downs Region	24-74
Figure 24-12 Projected resident population impact for the Western Downs	24-75
Figure 24-13 SIMP development timeline	24-88

24. SOCIAL VALUES AND MANAGEMENT OF IMPACTS

24.1. Introduction and background

This chapter addresses Section 4 of the ToR and provides an assessment of the potential social impacts and benefits of the Project, including potential changes resulting from the construction and operation of the Project. Possible mitigation measures are also identified to maximise the benefits and minimise the impacts for local and regional communities.

24.1.1. Methodology

Social Impact Assessment (SIA) *"includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions [i.e. the Project] and any social change processes invoked by those interventions. The primary purpose of SIA is to bring about a more sustainable and equitable biophysical and human environment"* (International Association for Impact Assessment, 2003).

The initial phase of the assessment process involved scoping the range of potential social impacts for local and regional communities affected by the dam, pipeline or associated infrastructure. Scoping allows information collected for the existing environment to be tailored to support consultation and the analysis of the Project's potential social impacts.

The description of the existing social environment provides an overview of key social characteristics and conditions in the study area, including population and demography, social infrastructure and community values.

The demographic profile provides an analysis of key social indicators. Existing services, facilities and community networks in communities nearest the Project are also identified.

Community values relating to amenity and sense of place, access and connectivity and community safety are described. These have been informed by existing social policies and strategies relevant to the Project, outcomes of community consultation and observations of conditions in the Project area.

Potential benefits and impacts on the social environment were identified and evaluated, including the assessment of potential direct, indirect and cumulative impacts of the Project, and other local and regional projects. Measures to enhance the Project's benefits and avoid or reduce its impacts are also identified.

24.1.2. Stakeholder consultation

Community and stakeholder consultation, including with affected property owners, local communities and State and local government agencies was undertaken by SunWater. The process and key outcomes of this consultation are described in **Chapter 1** and **Appendix 1C** and have informed the assessment of social impacts. Consultation included individual consultations with affected landholders in the dam area as well as along the pipeline. In particular, surveys were undertaken with 15 (of 35) landholders in the dam area, and 107 (of 149) property owners and tenants along the pipeline.

In addition, specific consultation has been undertaken with key stakeholders for this SIA. This included consultation with:

- Banana Shire Council (BSC) and Western Downs Regional Council (WDRC);

- Government departments including the former Department of Infrastructure and Planning (DIP) – SIA Unit and Regional Offices, Communities (DoC), Employment, Economic Development and Innovation (DEEDI) and Education and Training (DET);
- Queensland Health;
- Queensland Police; and
- Murilla Community Centre.

24.1.3. Social policy framework

24.1.3.1. *Sustainable Resource Communities Policy*

In September 2008, the Queensland Government released the *Sustainable Resource Community Policy: SIA in the Mining and Petroleum Industries*, building on the Sustainable Futures Framework for Queensland Mining Towns (June 2007).

The policy seeks to strengthen SIA, and consequent social management, within the existing EIS process to deliver community outcomes, including the consideration of cumulative and regional impacts in decision making and planning for resource communities.

A number of initiatives are proposed in the policy, including the development of a Major Resource Projects Housing Policy (MRPHP) and the introduction of a requirement for proponents to prepare Social Impact Management Plans (SIMPs). A SIMP aims to provide detailed implementation measures to manage and mitigate social impacts throughout a project's lifecycle. The Queensland Government released *Social Impact Assessment: A Guideline for Developing a Social Impact Management Plan* in September 2010, and the MRPHP was released in August 2011.

The development of a SIMP is not required under the ToR for the Project. A preliminary framework, however, has been prepared to guide the future development of a SIMP for the Project. This is provided in **Section 24.9**. The SIMP would be further developed and completed prior to the commencement of construction.

24.1.3.2. *Surat Basin Scoping Study and Future Directions Statement*

The *Surat Basin Scoping Study* was commissioned by the Southern Inland Queensland Area Consultative Committee in June 2008 with the purpose of assessing potential impacts of energy resource development in the region.

The outcomes of the study included:

- conclusion 1 – Information sharing, communication and transparency is critical for enabling good governance and change management at the community level;
- conclusion 2 – Gain and revenue sharing will be essential to increase the social acceptability of mining operations and to increase the local economic opportunities from mining;
- conclusion 3 – Economic diversification leveraged off the energy boom is essential to the long term well-being of the region;

- conclusion 4 – Investment in hard and soft infrastructure will be crucial to meet the demands of an increased population; and
- conclusion 5 – Information is critical for effective ongoing management of regional opportunities from the energy boom.

The *Surat Basin Future Directions Statement* (July 2011) is a Queensland Government initiative to provide a framework for a coordinated, region-wide approach to maximise the economic benefits and minimise any unintended consequences of rapid growth. The Statement's key areas for action are:

- planning for growth;
- planning and developing infrastructure;
- building economic opportunities and capturing resilience;
- developing a skilled workforce;
- building and maintaining liveable communities; and
- sustaining regional environments.

Specific headline initiatives have been identified within these six key areas, of which those relating to the social environment include:

- developing guidelines to improve the consistency and quality of SIMPs;
- developing a resource town housing affordability strategy, to improve the availability of quality affordable land and housing;
- preparing an Economic Development Strategy, focusing on driving growth in energy, agriculture and food processing, and helping local businesses to improve their position and attract new investment; and
- preparing a coordinated Workforce Development Plan.

24.1.3.3. *Central Queensland Regional Framework for Growth Management*

The Project site and part of the pipeline is located in that area covered by the Central Queensland Regional Framework for Growth Management (RFGM). The policy areas relevant to the region's social environment include: Social and cultural development, and Planning and governance (Table 24-1). Other areas of the framework relevant to the Project are discussed in Section 7.1.2.2.

Table 24-1 Central Queensland RFGM guiding principles

Strategy Grouping	Guiding Principle
Social and cultural development	Social and cultural fabric and vitality of the community are underpinned by sound, ethically based planning, institutional support and investment that recognise the past and embrace the present.
Planning and governance	Planning and governance systems in the region recognise the uniqueness and diversity of the individual communities of Central Queensland, and are underpinned by the principles of participation, collaboration, intergovernmental cooperation, equity, accountability, integrity, ethics and transparency.

24.1.3.4. Local planning schemes

The existing planning framework for the Regional Council areas is based on the former Shires. This is described in detail in Section 7.1.2.3.

- the DEOs relevant to the social environment of the former Taroom Shire are outlined in Table 24-2; and
- the pipeline is located in the former shires of Taroom, Chinchilla and Dalby. The DEOs relevant to the social environment of these shires are outlined in Table 24-3 and Table 24-4.

Table 24-2 Taroom Planning Scheme relevant desired environmental outcomes

Theme	Desired Environmental Outcome
Community and services	<p>Development in Taroom Shire is consistent with community expectations and needs, and contributes to community well-being through the enhancement of core community elements (including the built environment, services, facilities and infrastructure).</p> <p>The settlement pattern is logical and sequenced and the built environment contributes to the overall rural amenity and character of Taroom Shire.</p> <p>People are connected to public spaces (including recreational areas) and community services through an appropriate land use structure and the provision of infrastructure, particularly within the urban centres of Taroom and Wandoan, and small town of Guluguba.</p> <p>Development contributes to the health and safety of people and provides a diverse range of housing types, services and facilities.</p> <p>Infrastructure (including water, sewerage and roads) reflects community expectations and needs, meets engineering and environmental standards and is provided in an orderly and logical sequence to ensure cost effectiveness.</p>

Source: Taroom Planning Scheme, 2006

Table 24-3 Chinchilla Shire Planning Scheme relevant desired environmental outcomes

Theme	Desired Environmental Outcome
Community and Services	<p>Development in Chinchilla Shire reflects community expectations and needs, and contributes to community well-being through enhancement of core community elements (including the built environment, services, facilities and infrastructure).</p> <p>The settlement pattern is logical and sequenced and the built environment contributes to the overall rural amenity and character of Chinchilla Shire.</p> <p>People are connected to public spaces (including recreational areas) and community services through an appropriate land use structure and the provision of infrastructure, particularly within the urban centre and small towns of the Shire.</p> <p>Development contributes to the health and safety of people and provides a diverse range of housing types, services and facilities.</p> <p>Infrastructure (including water, sewerage and roads) reflects community expectations and needs, achieves engineering and environmental standards and is provided in an orderly and logical sequence to ensure cost effectiveness.</p>

Source: Chinchilla Shire Planning Scheme, 2006

Table 24-4 Dalby Town Planning Scheme relevant desired environmental outcomes

Theme	Desired Environmental Outcome
Social	<p>To continually improve those elements of social and physical infrastructure valued by the community whilst protecting and identifying significant cultural heritage and identity that contribute to the well-being of all the community.</p> <p>Future development will be consistent with its safe and relaxed lifestyle, attractive setting exhibiting a distinctive character and sense of place.</p> <p>There will be effective conservation of historic architecture and places of cultural heritage significance.</p> <p>There will be convenient access to a diversity of housing, shopping and other business services, community and recreational facilities and jobs, all located and designed to sustain the significant ecological and economic resources of the town and amenity for all people.</p> <p>Dalby will further develop its social infrastructure and support systems.</p> <p>Community, recreational, cultural services and facilities shall be provided in a timely way and maintained so that public places for people to gather, meet and socially interact, both casually and formally, are attractive, comfortable, safe and convenient.</p> <p>Maximise access for all inhabitants with transport corridors and facilities which provide for the safe and efficient movement of people and goods through the district.</p> <p>To maximise community health and safety and implement strategies to mitigate impacts of natural hazards in accordance with the Natural Disaster Mitigation Plan for Dalby Town.</p>

Source: Dalby Town Planning Scheme, 2007

24.2. Description of the local community area

24.2.1. Definition of the study area

The study area and 'local community area' for the Project has been defined in consultation with the Queensland Government's SIA Unit.

The dam is located in the BSC of Central Queensland. The closest township to the dam is Cracow, approximately 23 km from the site, while Taroom is a larger township located around 75 km to the south-west. The worker's accommodation camp for the dam is to be located within a part of the Taroom township to be agreed with Council.

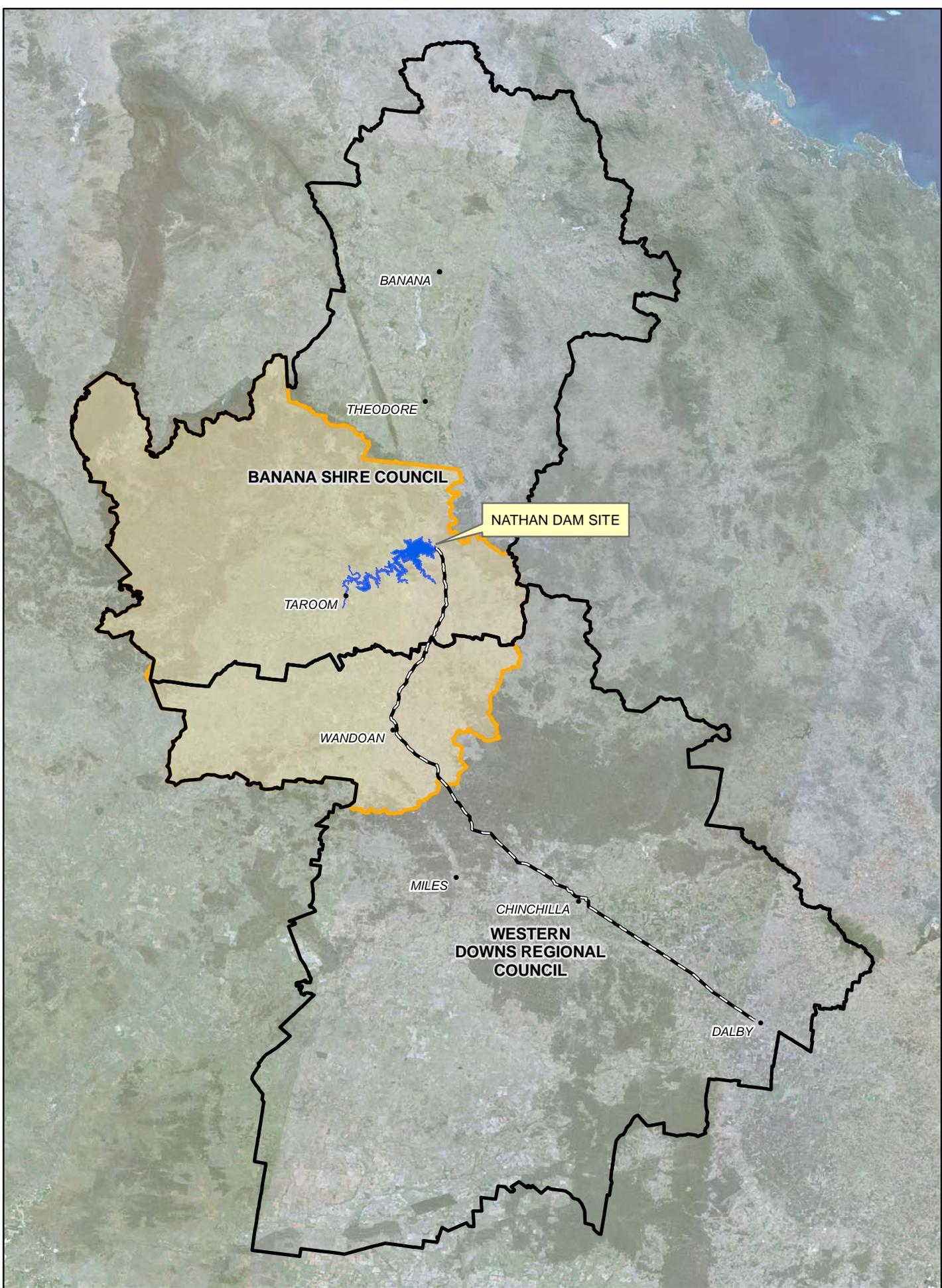
The 'local community area' for the dam site includes the Taroom Statistical Local Area (SLA), incorporating the township of Taroom (**Figure 24-1**). The downstream community of Theodore, located on the Dawson River, approximately 85 km north-east of the dam site, has also been included in this SIA where relevant to the assessment.

The pipeline is approximately 260 km in length and extends from the water storage area to Dalby. The pipeline is generally located within the WDRC area, apart from a section of the pipeline between the dam and Wandoan, which is located in the BSC. The worker's accommodation camps for the pipeline are proposed to be located in Wandoan and Chinchilla.

The 'local community area' for the pipeline focuses on the townships of Wandoan, Chinchilla and Dalby in the WDRC (**Figure 24-1**). The towns of Miles and Brigalow, as well as smaller townships are included in the 'local community area' and are assessed through use of data for WDRC.



This assessment of social impacts considers impacts at both the Project footprint (i.e. the 'local community area' of the dam and pipeline) and benefited area locations (i.e. those communities that may benefit from access to the water supply). These benefitted areas generally include the communities along the pipeline in the WDRC area, while water will also be released downstream to service new and existing customers.

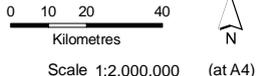


LEGEND

- Towns of Interest
- Proposed Pipeline
- Full Supply Level (183.5m AHD)
- Taroom Statistical Local Area
- ▭ Regional Council Boundary

Projection: GDA94 Zone 56

Figure 24-1



NATHAN DAM AND PIPELINES EIS
Local community area

24.2.2. Townships

The study area includes a number of townships that serve the needs of local communities and wider district communities.

Taroom

At June 2009, Taroom had an estimated residential population (ERP) of 607 people. The town had a relatively old population with a median age of 42 years, in 2006. However, proportions of children and older people were similar to Queensland.

The town's population was stable, reflecting relatively low population mobility rates over the five years to 2006. Approximately 37.6% of households in Taroom comprised households with children, which was lower than the proportion of this household type in Queensland, at 43.3%.

Local government administration and construction and transport related industries were the largest employers in Taroom, while agriculture was also an important industry.

Theodore

The town of Theodore had an ERP of 430 people in 2009. The median age in the town was 39 years in 2006, which was slightly higher than for Queensland, but lower than for other communities in the study area. Theodore had a high proportion of elderly people, with 22% of the population being aged 65 years or older.

The median weekly household income of the locality was higher than for other communities in the study area, but still lower than for Queensland as a whole. Mining employed a large proportion of the workforce, as did the construction and transport industries. Manufacturing and agricultural occupations were also important to the town's economy.

Wandoan

In 2009, the Wandoan township had an ERP of 791 people. At the 2006 Census, Wandoan had a relatively old population with a median age of 40 years. However, the proportions of children and older people in Wandoan were similar to the proportion of people in these age groups in Queensland.

Approximately 42.7% of households in Wandoan comprised family households with children, which was comparable to the proportion of this household type in Queensland. The township had an average household size lower than Queensland, at 2.2 persons per household.

A large proportion of workers in the township were employed in the sheep, cattle and grain farming industry. School education and local government administration also employed a large proportion of the town's working population.

Wandoan recorded a relatively low level of cultural diversity compared to Queensland. In 2006, almost 95% of the population being born in Australia and less than 5% of people speaking a language other than English (LOTE) at home. Less than 1% of the population in the township identified as Indigenous.

Chinchilla

Chinchilla is the second largest township along the pipeline. At June 2009, Chinchilla had an ERP of 4,242 people. The median age at the 2006 Census was 39 years old, while the township had a marginally lower proportion of children and slightly higher proportion of older people than Queensland.

Cultural diversity in Chinchilla was relatively low, with overseas born people comprising only 5.1% of the town's population. People who identified as Indigenous comprised 3.5% of the town's total population at the 2006 Census, which was slightly higher than the proportion of Indigenous persons in Queensland.

In 2006, approximately 3% of households in Chinchilla comprised group households, and the average household size was 2.4 persons per household. The town had a marginally lower proportion of families with children, compared to Queensland, with 39.2% of households in Chinchilla comprising couple families with children or one parent families.

In Chinchilla, 21.2% of workers were employed in construction or transport related occupations, while 5.2% were employed in agriculture and 14.7% were involved in retail trade.

Dalby

Dalby is the regional centre for the WDRC and the largest town along the pipeline corridor. In 2009, the town had an ERP of 10,846 people. The town had a young population, with a median age of 34 years in 2006. Approximately 24% of the town's population were aged 14 years or under, compared to approximately 21% in Queensland. The town also had a higher proportion of family households with children than Queensland.

Dalby had a high proportion of Indigenous people, comprising 6.1% of the total population.

The median household income at the 2006 Census was lower than Queensland, but higher than other towns near the dam and along the pipeline. Manufacturing, construction, transport and agricultural were once again the most important employers for the township's workforce.

Table 24-5 provides a summary of key demographic characteristics for each of the key townships in the study area. Key characteristics are also elaborated in latter sections of this chapter.

Table 24-5 Key demographic characteristics

Characteristic	Taroom	Theodore	Wandoan	Chinchilla	Dalby	QLD
Estimated Resident Population (2009)	607	430	791	4,242	10,846	4,425,103
Aged 14 years and younger (%)	20	20	20	20	24	21
Aged 65 years and older (%)	19	22	18	19	13	17
Families with children (%)	37.6	43.5	42.7	39.2	43.5	43.3
Group households (%)	3.6	2.5	2.5	3.0	3.9	4.2
Median household income (\$ per week)	795	927	623	921	940	1033
Employed in agriculture/ fishing/ forestry (%)	10.9	7.6	14.3	5.3	5.0	3.4
Employed in mining (%)	0.0	9.5	3.3	1.6	1.8	1.7

Characteristic	Taroom	Theodore	Wandoan	Chinchilla	Dalby	QLD
Employed in manufacturing (%)	0.9	12.4	9.9	6.3	11.3	9.9
Indigenous population (%)	3.0	13.3	1.0	3.5	6.1	3.3
Does not speak English at home (%)	0.0	4.0	4.1	6.2	9.1	13.6
Same address as five years previous (%)	65.4	47.8	58.2	46.2	44.8	45.0
SEIFA Advantage/ Disadvantage Score*	911	958	919	936	943	-
Average household size	2.1	2.2	2.2	2.4	2.6	2.6

* SEIFA Index is based on data for the former LGA area.

Sources: ABS Census 2006, ABS Estimated Residential Population 2009, and Local Government Area Profile, October 2008 compiled by the Queensland OESR

24.2.3. Other relevant proposals and projects

Several major projects are currently operating or planned for future development in the study area. The majority of these are in proximity to towns along the pipeline (Table 24-6 and Table 24-7). These projects have been considered as part of the cumulative impact assessment.

Table 24-6 Existing projects, 2010

Wilkie Creek Mine	
Company	Peabody Energy
Description	2.35 Mta thermal coal mine, 45 km north-west of Dalby. 250 km rail line to the Port of Brisbane
Workforce	No data
Darling Downs Power Station Project	
Company	Origin Energy
Description	630 MW gas fired power station located at Braemer, 40 km west of Dalby
Workforce	300
Kogan Creek Power Station	
Company	CS Energy Ltd
Description	750 megawatt coal fired power station approximately 35 km from Chinchilla Linked to the Kogan Creek Mine, supplying 2.8 Mta of coal
Workforce	Mine – 60 people Power station – 70 people

Table 24-7 Planned projects, 2010

Australian Pacific LNG Project	
Company	Australia Pacific LNG
Description	Further development of Australia Pacific LNG's existing coal seam gas fields in the Surat and Bowen basins. Construction of a gas transmission pipeline approximately 450 km long from the coal seam gas fields to an LNG plant at Gladstone.
Workforce	Construction – up to 1,700 direct jobs in the gasfields area, and 805 for the gas pipeline Operation – up to 470 direct jobs in the gasfields areas, and 20 for the gas pipeline
Accommodation	Temporary accommodation villages near project infrastructure areas (i.e. Wandoan for the gasfields, and Guluguba for the gas pipeline)
Construction date	2011
Surat Basin Railway – Southern Missing Link	
Company	Surat Basin Rail Joint Venture (Australian and Energy Corridor Pty Ltd (ATEC), Xstrata Coal and Queensland Rail)
Description	210 km railway joining the Surat Basin (at Wandoan) to the Moura Railway system near the township of Banana, facilitating the export of coal to the Port of Gladstone
Workforce	Construction – 1,000 people
Accommodation	Up to three temporary workers accommodation villages, located in proximity to major work fronts
Construction date	2012
Wandoan Coal Project	
Company	Xstrata Coal Queensland Pty Ltd
Description	Open cut coal mine producing 20 Mta, located directly west of the Wandoan township
Workforce	Construction – 1,375 people
Accommodation	Accommodation camp in or adjacent to the mining lease area. Construction of some houses in Wandoan
Construction date	2010 Early Works 2011-2013 Construction
Queensland Curtis LNG Project	
Company	Queensland Gas Company
Description	Integrated LNG project comprising expansion of Coal Seam Gas (CSG) operations in WDRC (primarily west of Chinchilla), and the development of a 380 km gas pipeline to Gladstone, transecting through Taroom SLA and BSC
Workforce	Construction –1,000 people (CSG operations), 400 people (export pipeline)
Accommodation	Temporary construction camp adjacent to CSG operations and pipeline.
Construction date	2011-2012

Gladstone LNG Project	
Company	Santos
Description	Integrated LNG project comprising expansion of CSG operations near the townships of Roma and Injune, and the development of a 435 km transmission pipeline to an LNG Facility in Gladstone, passing through the BSC area
Workforce	Construction – 2,000 people (CSG operations), 1,000 people (export pipeline)
Accommodation	Temporary construction camp adjacent to CSG operations and pipeline
Construction date	2011-2012
Surat Gas Project	
Company	Arrow Energy Ltd
Description	The project proposes to develop a major coal seam gas exploration, development and production project near the townships of Chinchilla, Dalby and Wandoan and the development of a 467 km transmission pipeline to Arrow Energy Ltd Curtis Island Project, starting in WDRC and traversing through BSC
Workforce	No Data
Accommodation	No Data
Construction date	2011-2012

24.2.4. Features in the study area

Social infrastructure is the basic framework or underlying foundation of the region to support human settlement, economic development and growth. There is a range of social infrastructure and services located in the study area.

24.2.4.1. *Childcare services*

In the study area there are a number of childcare providers (**Table 24-8**). The DET's Office of Early Child Care classifies childcare provision as follows:

- long day care centres: care and education provided to children ranging from babies to school age between 6am and 6pm for at least 48 weeks of the year;
- kindergartens: care and education provided to children ranging from three and a half years, with minimum of two educators per room;
- limited hours care services: operate no longer that 20 hours in a week; and
- school age care services: open before school usually from 6am, after school until 6pm and during school holidays.

Consultation with DET has indicated that there is limited spare capacity at childcare facilities in Taroom and Wandoan, and these facilities only operate on some days of the week, while there is also no provision for children under three years of age (DET, pers. comm., 24/08/2010). This is a common limitation in regional areas, and is a result of the higher teacher: child ratio required for this age group, as well as a lack of demand for these services.

In Chinchilla there is a planned new school-age care facility with 30 places, while in Miles, the long day care centre, kindergarten and school age care facilities are operating at almost full capacity.

In Dalby, childcare demands have fluctuated over time with the changing workforce requirements of local projects. Currently, capacity is stretched with many centres having significant waiting lists.

In Toowoomba, childcare centres are generally able to support additional demand, and a new 75 place centre was opened in August 2010, while there are also two new kindergartens planned.

Table 24-8 Childcare facilities and capacity in the study area

Locality	Long Day Care		Kindergarten		Limited Hours		School Age Care	
	Facilities	Places	Facilities	Places	Facilities	Places	Facilities	Places
Taroom	-	-	1	21	-	-	-	-
Wandoan	-	-	1	50	-	-	-	-
Chinchilla			1	24	3	109	2	104
Miles	1	29	1	70	-	-	1	30
Dalby	1	75	2	50	-	-	4	207

Source: Department of Education and Training, Office of Early Childhood Education and Childcare

24.2.4.2. Schools

The study area is located within the DET's *Darling Downs South West Region*, which includes the localities of Taroom, Wandoan, Miles, Chinchilla and Dalby.

Schools in Taroom and Wandoan provide education from prep to Year 10, after which students can complete Year 11 and Year 12 via distance learning or attend schools in other localities. In Wandoan, there is a bus service from Wandoan to Miles, so that students can complete Year 11 and Year 12 at Miles High School.

School enrolments have remained relatively stable in the study area between 2005 and 2010. In 2010, primary (prep – Year 7) enrolments at Wandoan and Taroom were recorded at 100 students each, while there were 33 secondary (Year 8 – Year 10) enrolments in Wandoan and 30 in Taroom (DET, pers. comm., 24/08/2010). In 2010 there were also 25 enrolments at St Mary's private school in Taroom.

In Miles, high school enrolments have remained stable since 2005 (at around 160 students), and in Chinchilla enrolments have increased slightly over the past five years, from 427 in 2005 to 493 in 2010. In Dalby, the high school has experienced increased enrolments over five years, from 625 students in 2005 to 810 students in 2010. There is also a boarding facility being established in Dalby which will likely attract further increased enrolments.

24.2.4.3. Tertiary education

In the dam and surrounds, there are no higher education facilities, although distance education services are available through open learning centres and other programs. The Southern Queensland Institute of TAFE has campuses at Chinchilla and Dalby along the pipeline.

The Queensland DET also operates a mobile customer service centre which visits Wandoan, Miles and Taroom. This service provides free support and advice on addressing skilling solutions, including providing information on training and career opportunities and information on registered training organisations, including those with the ability to provide recognition of prior learning advice (Wandoan Coal EIS, 2008). DEEDI also provides the Skilling Queenslanders for Work program, and is also a member of the Surat Basin Corporation, which is currently developing industry-related skills programs for the region.

24.2.4.4. Health

The study area is located in the *Darling Downs West Moreton Health District*. In Taroom and Wandoan, existing health service centres provide primary care, with acute patients transferred to hospitals in regional centres through the Royal Flying Doctor Service or helicopter. In Taroom some antenatal services are provided, with specialists from Toowoomba (e.g. podiatry and occupational therapy) visiting regularly. In Wandoan there is a full-time nurse at the health centre, with a doctor visiting twice a week.

Chinchilla has a fully equipped hospital, with its own operating theatre, accident and emergency ward, and maternity ward. It currently has 25 acute beds, four maternity beds and 20 long stay places. Other hospital services include inpatient and outpatient care, social work, physiotherapy, speech therapy, occupation therapy, mental health, community health services, a women's clinic and x-ray facility. There are five GPs practicing in Chinchilla.

Dalby Hospital is the largest hospital in the Surat Basin region, providing 116 beds. The hospital offers child, maternity, medical, surgical, accident and emergency, outpatient care, pathology and palliative care facilities. The Hospital is currently undergoing a \$10 million refurbishment to add to the hospitals existing facilities. There are three private GPs in Dalby, with these GPs generally able to perform some specialist functions, eg anaesthetics, where required.

There are a number of capacity challenges that affect the Darling Downs West Moreton Health District, with the recruitment of qualified professionals to the region and study area being the greatest (Queensland Health, pers. comm. 19/08/2010). This is primarily due to the national shortage of doctors, as well as the remote location of the area.

The Taroom Health Service includes age care facilities, which includes services for long stay patients and respite care. In Wandoan, there are no aged care facilities. In Chinchilla, there is no nursing home but the hospital provides beds which are designated for aged-care needs. An 80-bed aged care facility is available in Dalby.

24.2.4.5. Police services

There are police stations in Taroom, Wandoan, Chinchilla and Dalby. The Taroom and Wandoan stations each employ two officers, and the Chinchilla station has eight staff members. Police services in Dalby are provided on a 24 hour / 7 day basis, with 21 officers being employed at the local station.

Consultation with Queensland Police indicated that recruitment of police officers is currently a challenge in the study area, which is mainly attributed to the lack of affordable housing in local townships (Queensland Police, pers. comm., 24/08/2010). This suggests that, although statistics indicate an affordable housing market (**Section 24.3.7.2**), anecdotally housing affordability is a concern for some key service workers and other socio-economic groups in the community.

24.2.4.6. Social housing

Consultation with the DoC identified that there are currently 3,500 units of social housing in the region, which will increase by 150 units as part of the Federal Government's "Nation Building" initiative (DoC, pers. comm., 19/08/2010). There are also 300 units of Indigenous housing in the region, which are managed by the State government. The social housing waitlist (of people requiring and waiting for public affordable housing) has remained stable in Taroom, Wandoan, Miles and Chinchilla, suggesting that there is not an increasing need in this area and there are no identified capacity challenges.

24.2.4.7. Features in the dam and surrounds

The Taroom township includes a range of community facilities, which provide for the needs of residents living in the town and surrounding district. These are detailed in Table 24-9 and shown in Figure 24-2.

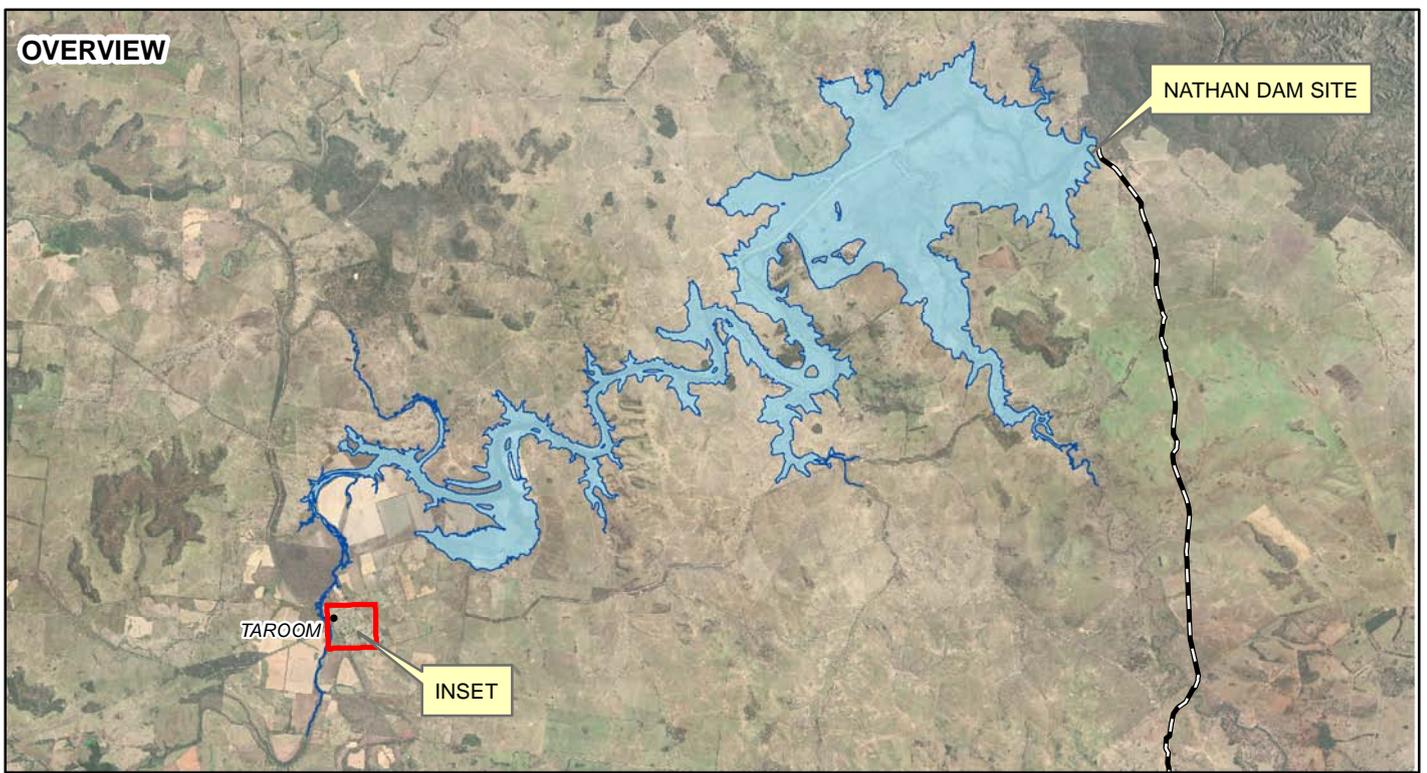
Table 24-9 Social infrastructure – dam and surrounds (Taroom)

Type	Facility
Shopping centres	<ul style="list-style-type: none"> ■ Shopping precinct on Yaldwyn St
Schools	<ul style="list-style-type: none"> ■ Taroom State School ■ St Mary's School
Childcare	<ul style="list-style-type: none"> ■ Taroom Kindergarten
Welfare organisations	<ul style="list-style-type: none"> ■ BSC ■ Taroom State School Funding Association
Policing	<ul style="list-style-type: none"> ■ Taroom Police Station
Emergency services	<ul style="list-style-type: none"> ■ Queensland Ambulance ■ Queensland Fire and Rescue Service ■ State Emergency Services
Areas of community congregation	<ul style="list-style-type: none"> ■ BSC ■ Taroom Library ■ Taroom Post Office ■ Taroom RSL Club ■ Senior Citizen's Club ■ Town Hall/Community Hall ■ Taroom Community Development Centre
Public transport	<ul style="list-style-type: none"> ■ Private bus services
Health care	<ul style="list-style-type: none"> ■ Taroom Health Service ■ General Practitioner ■ Taroom pharmacy ■ Leichhardt Villa Hostel
Recreation, leisure and sporting	<ul style="list-style-type: none"> ■ Taroom bowls club ■ Taroom golf course and club ■ Taroom rodeo club ■ Public swimming pool ■ Taroom racecourse club ■ Amateur swimming club ■ Arts and crafts club ■ Buffalo lodge ■ Dawson jockey club ■ Fishing club ■ Garden club ■ Lions club ■ Pony club ■ Polo crosse ■ Country Women's Association ■ Tennis club ■ Queensland Parks and Wildlife

Type	Facility
Cultural facilities	<ul style="list-style-type: none"> ■ St John's Lutheran Church ■ Anglican Church ■ Taroom Historical Society ■ Taroom Uniting Church ■ Taroom and District Historical Society Museum ■ Taroom Show Society
Water supply and sanitation	<ul style="list-style-type: none"> ■ Bore water from sub-artesian basin chlorinated in Taroom ■ Secondary sewerage treatment plant
Waste treatment and disposal	<ul style="list-style-type: none"> ■ Taroom landfill, which recycles scrap metal and motor oil
Housing (accommodation)	<ul style="list-style-type: none"> ■ Taroom Caravan Park ■ Leichhardt Hotel/Motel ■ Cattle Camp Motel ■ Country Rest Cabins
Power supply	<ul style="list-style-type: none"> ■ Callide A & B, Biloela
Transport and roads	<ul style="list-style-type: none"> ■ Leichhardt Highway ■ Cracow Road ■ Roma Taroom Road ■ Kinnoul Road
Banking facilities	<ul style="list-style-type: none"> ■ Westpac ■ Bank of Queensland
Communication facilities	<ul style="list-style-type: none"> ■ Public internet at Community Development Centre ■ Telephone

Parks and open space are also part of the social environment for Taroom and the area surrounding the dam. Recreational opportunities for residents and visitors to the Taroom region include Expedition National Park, Isla Gorge National Park and Precipice National Park. Other recreational opportunities are also available at Glebe Weir Camping Reserve, Lake Murphy Conservation Park and Shepherd's Peak Trail.

OVERVIEW



TAROOM INSET

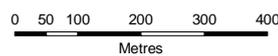


LEGEND

- Towns of Interest
- Proposed Pipeline
- Park/Reserve
- Cadastre
- Full Supply Level (183.5m AHD)

Projection: GDA94 Zone 56

Figure 24-2



Scale 1:12,000 (at A4)



NATHAN DAM AND PIPELINES EIS

Social infrastructure in the dam and surrounds

24.2.4.8. Features along the pipeline

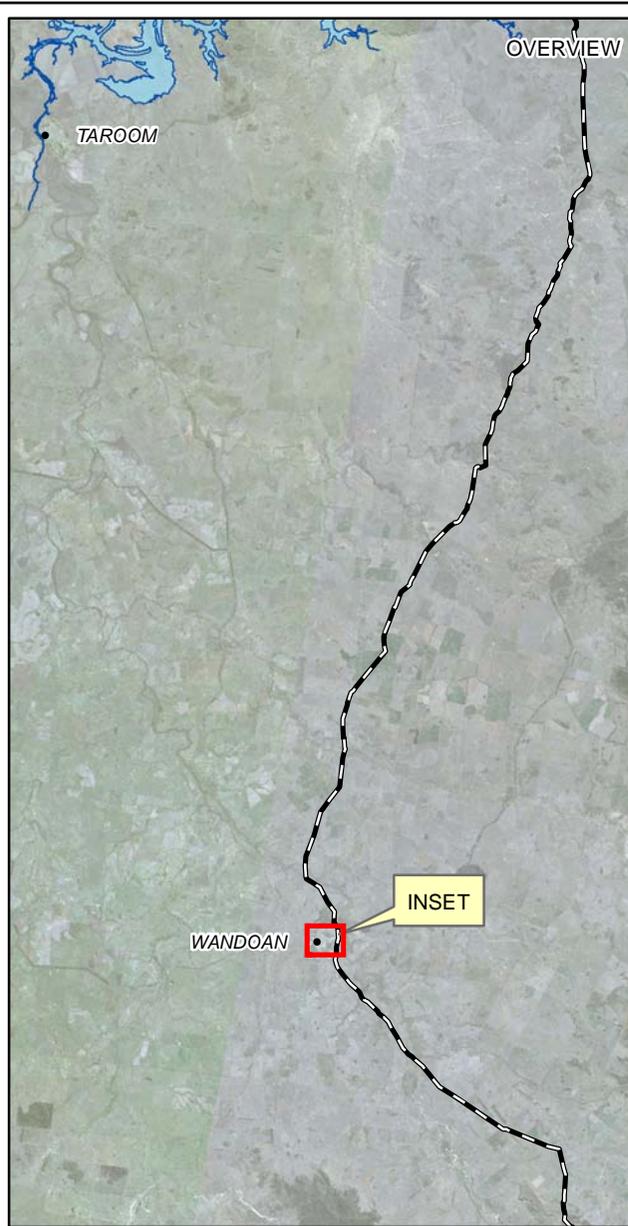
Social infrastructure and community facilities in townships along the pipeline corridor are detailed in Table 24-10 and shown in Figure 24-3.

Table 24-10 Social infrastructure – pipeline

Type	Facility
WANDOAN	
Shopping centres	■ Wandoan Shopping Precinct
Schools	■ Wandoan State School ■ Grosmount State School
Childcare	■ Wandoan and District Kindergarten
Welfare organisations	■ Wandoan State School Parents and Citizens Association
Policing	■ Wandoan Police Station
Emergency services	■ Queensland Police ■ Queensland Fire and Rescue ■ Queensland Ambulance
Areas of community congregation	■ Lions Park Wandoan ■ Apex Park Wandoan
Public transport	■ Wandoan Railway Station
Health care	■ Wandoan Primary Health Centre
Recreation, leisure and sporting	■ Wandoan Amateur Swimming Club ■ Wandoan Golf Club ■ Wandoan and District Pony Club ■ Wandoan Bowls Club
Cultural facilities	■ Wandoan Community and Cultural Centre ■ Juandah Heritage Society
Water supply and sanitation	■ 2 bores into sub-artesian basin ■ Primary and secondary treatment of bore water ■ Secondary sewage treatment plant
Waste treatment and disposal	■ Wandoan Waste Facility ■ General and Green Waste
Housing (accommodation)	■ Wandoan Accommodation Park ■ Wandoan Backpackers ■ Bushlander Motel ■ Jundah Hotel Motel ■ Wandoan Caravan Park
Power supply	■ Ergon Energy
Transport and roads	■ Leichhardt Highway ■ Jackson Wandoan Road
Banking facilities	■ Westpac
Communication facilities	■ Wandoan Community Cultural Centre and Information Centre ■ WDRC Customer Service Centre
CHINCHILLA	
Shopping centres	■ Chinchilla Shopping Precinct
Schools	■ Chinchilla State School ■ Chinchilla SS Special Education Program ■ Chinchilla SHS Special Education Program ■ Chinchilla Christian School ■ St Joseph's School
Tertiary Education	■ Southern Queensland Institute of TAFE ■ Chinchilla Open Learning Centre
Childcare	■ Charley's Place Early Learning Centre ■ Chinchilla Community Kindergarten

Type	Facility
	<ul style="list-style-type: none"> ■ Chinchilla and District Family Day Care ■ Chinchilla Early Childhood Centre ■ Chinchilla Christian School Kindergarten
Welfare organisations	<ul style="list-style-type: none"> ■ Family Support Centre ■ Adventist Development and Relief Agency
Policing	<ul style="list-style-type: none"> ■ Chinchilla Police Station
Emergency services	<ul style="list-style-type: none"> ■ Queensland Ambulance ■ Queensland Fire and Rescue
Areas of community congregation	<ul style="list-style-type: none"> ■ War Veterans Memorial Par ■ Chinchilla Park ■ Rotoract Park ■ Middleton Park ■ Railway Park ■ Jubilee Park ■ Old Bees Park ■ Lions Park
Public transport	<ul style="list-style-type: none"> ■ Chinchilla Rail Station ■ Chinchilla Air Strip
Health care	<ul style="list-style-type: none"> ■ Chinchilla Hospital
Recreation, leisure and sporting	<ul style="list-style-type: none"> ■ Chinchilla Family Sports Centre ■ Chinchilla Golf Club ■ Tennis Facilities ■ Indoor Sports Centre
Cultural facilities	<ul style="list-style-type: none"> ■ Chinchilla Library ■ Chinchilla Cultural Centre ■ Chinchilla Historical Museum
Water supply and sanitation	<ul style="list-style-type: none"> ■ Supplied by SunWater's Chinchilla Weir Scheme from the Condamine River ■ Tertiary sewage treatment plant
Waste treatment and disposal	<ul style="list-style-type: none"> ■ Chinchilla Waste Facility
Housing (accommodation)	<ul style="list-style-type: none"> ■ White Gums Motor Inn ■ Chinchilla Motel ■ Chinchilla Palms Motor Inn ■ Commercial Hotel Motel ■ Tattersalls Hotel ■ Cypress Pines Caravan Park ■ Central Motor Inn ■ Acacia Motel ■ The Laurels ■ Chinchilla Mobile Park ■ Sonsim ■ Chinchilla Mobile Park
Power supply	<ul style="list-style-type: none"> ■ Powerlink – Tarong Substation
Transport and roads	<ul style="list-style-type: none"> ■ Warrego Highway ■ Chinchilla Wondai Road ■ Chinchilla Tara Road ■ Chinchilla Air Strip
Banking facilities	<ul style="list-style-type: none"> ■ Commonwealth Bank ■ Heritage Building Society ■ Westpac ■ Bank of Queensland ■ NAB
Communication facilities	<ul style="list-style-type: none"> ■ WDRC and Customer Service Centre
DALBY	
Shopping centres	<ul style="list-style-type: none"> ■ Dalby Shoppingworld ■ Dalby Central Shopping Centre
Schools	<ul style="list-style-type: none"> ■ Dalby State School ■ Dalby State High School ■ Dalby Christian School ■ St Mary's College ■ Dalby South State School ■ Dalby SHS Special Education Program ■ Our Land of the Southern Cross College
Tertiary Education	<ul style="list-style-type: none"> ■ Southern Queensland Institute of TAFE – Dalby Campus ■ Australia Agricultural College Corporation – Dalby Campus ■ Dalby Open Learning Institute
Childcare	<ul style="list-style-type: none"> ■ Dalby PCYC After School Care and Vacation Care ■ A Country Garden Early Childhood Centre ■ Stuart Street Kindergarten and ■ Dalby Beck Street Kindergarten

Type	Facility
	<ul style="list-style-type: none"> ■ Preschool ■ Dalby Christian School Early Learning Centre ■ Dalby Day Nursery and Preschool
Welfare organisations	<ul style="list-style-type: none"> ■ Dalby Crisis Support Association
Policing	<ul style="list-style-type: none"> ■ Dalby Police Station
Emergency services	<ul style="list-style-type: none"> ■ Queensland Ambulance ■ Queensland Fire and Rescue Service
Areas of community congregation	<ul style="list-style-type: none"> ■ Dalby Park ■ George Anderson ■ Blue Hills Estate Park ■ Duffy's Green Park ■ Horace Street Park
Public transport	<ul style="list-style-type: none"> ■ Dalby Rail Station ■ Greyhound Australia
Health care	<ul style="list-style-type: none"> ■ Dalby Hospital ■ Karingal Residential Aged Care
Recreation, leisure and sporting	<ul style="list-style-type: none"> ■ Lake Broadwater Conservation Park ■ Scenic Circuit Track ■ Barker Street Circuit ■ Dalby Indoor Sports Centre ■ Dalby Olympic Swimming Pool ■ Dalby Tennis Club ■ Dalby Golf Course ■ Dick Aland Sporting Reserve
Cultural facilities	<ul style="list-style-type: none"> ■ Dalby Wambo Public Library ■ Dalby PCYC Facility ■ Dalby Art Group ■ Dalby Potters Club ■ Dalby Players Little Theatre ■ Dalby & District Horticultural Society
Water supply and sanitation	<ul style="list-style-type: none"> ■ Bores from sub-artesian basin ■ Bore water treated by chlorination and fluorination ■ Mid tertiary biological nutrient removal sewage plant
Waste treatment and disposal	<ul style="list-style-type: none"> ■ Dalby waste facility ■ Oil recycling facility ■ Dalby waste water recycling plant
Housing (accommodation)	<ul style="list-style-type: none"> ■ Best Western Country Pathfinder Motor Inn ■ Dalby Mid Town Motor Inn ■ Dalby Homestead Motel ■ The Gallery Motor Inn ■ Dalby Manor Motor Inn ■ Kobbbers Motor Inn ■ The Imperial Hotel ■ Dalby Parkview Motel ■ Leslie House Bed and Breakfast ■ Dalby Hotel Motel ■ Windsor Hotel and Motel ■ Commercial Hotel ■ Drovers Motor Inn ■ Pioneer Caravan Village
Power supply	<ul style="list-style-type: none"> ■ Ergon Energy – Dalby Central Substation
Transport and roads	<ul style="list-style-type: none"> ■ Warrego Highway ■ Bunya Highway ■ Moonie Highway ■ Dalby Jandowae Road ■ Dalby Kogan Road ■ Dalby Cooyar Road ■ Dalby Airstrip
Banking facilities	<ul style="list-style-type: none"> ■ Westpac ■ Commonwealth Bank ■ NAB ■ Heritage Building Society ■ Rabobank ■ Warwick Credit Union
Communication facilities	<ul style="list-style-type: none"> ■ WDRC Customer Service Centre



LEGEND

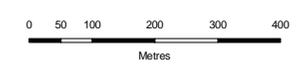
- Towns of Interest
- Proposed Pipeline
- Full Supply Level (183.5m AHD)
- Cadastre
- Parks/Reserve

Social Infrastructure

- ▲ Caravan Park/Campground
- 🚒 Emergency Services
- 🏠 Education Facility
- 🏌️ Golf Course
- 🏥 Hospital
- ⛪ Place of Worship
- ✉️ Post Office
- 🏎️ Racecourse

Projection: GDA94 Zone 56

Figure 24-3A



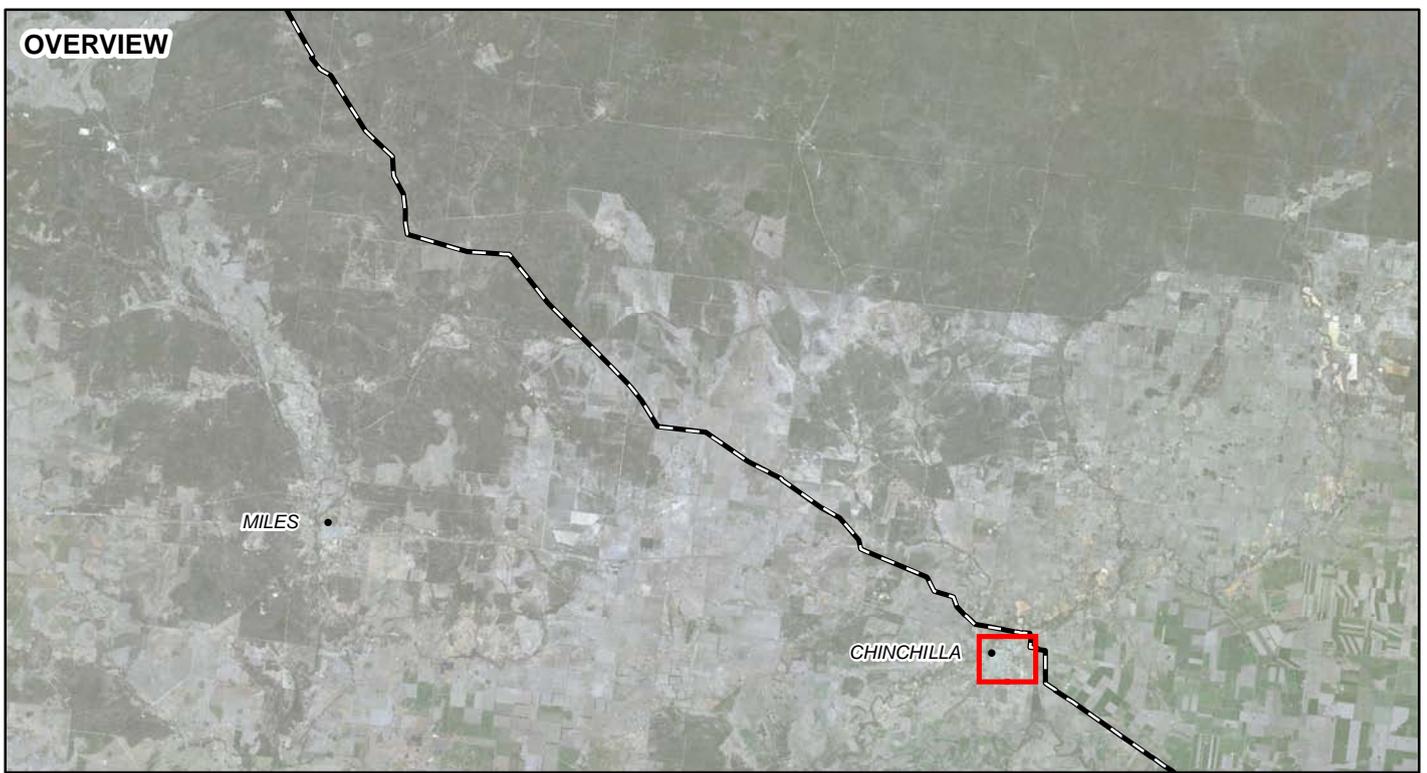
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SKM SunWater
Making Water Work

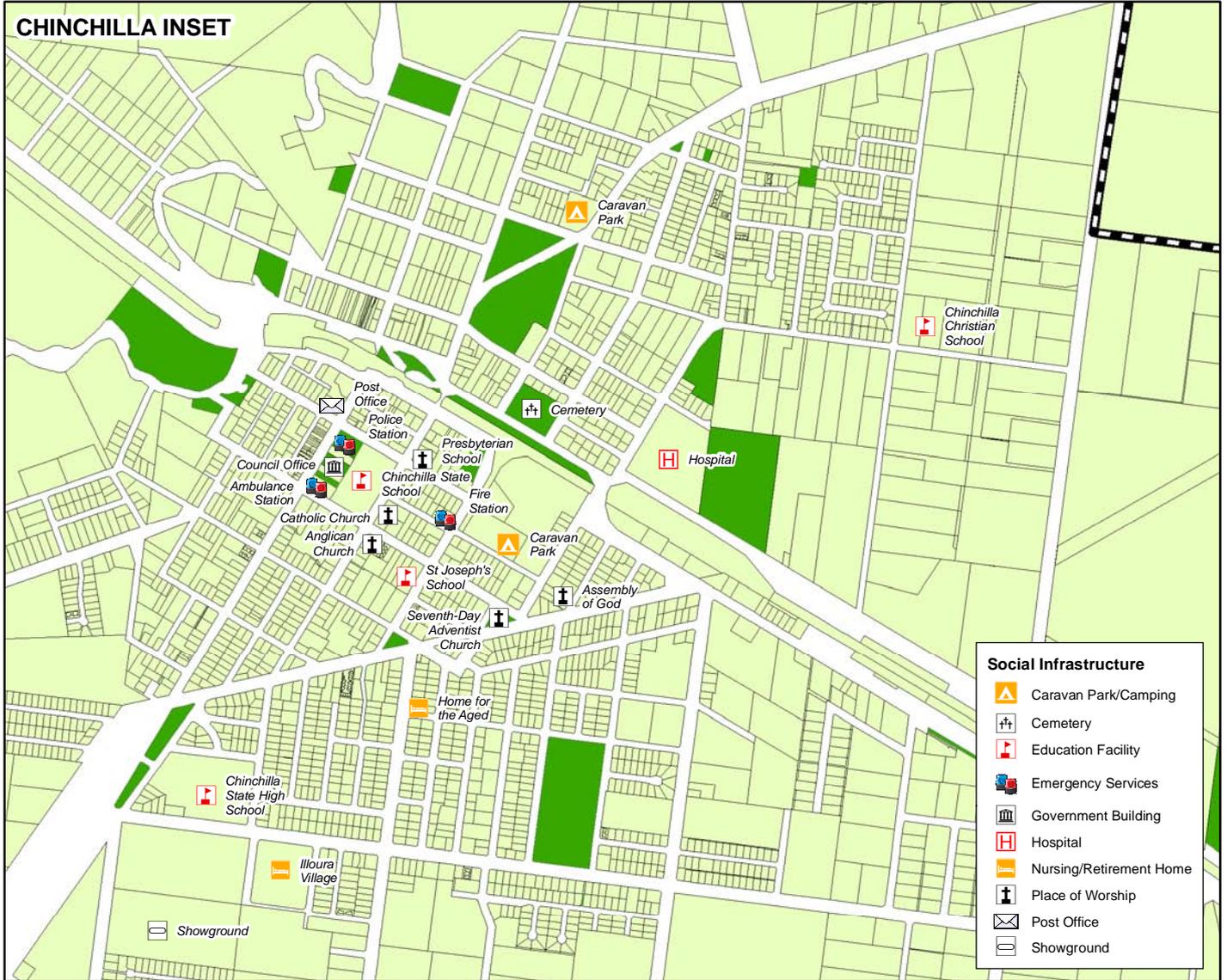
NATHAN DAM AND PIPELINES EIS

Social infrastructure along the pipeline

OVERVIEW



CHINCHILLA INSET



- Social Infrastructure**
- Caravan Park/Camping
 - Cemetery
 - Education Facility
 - Emergency Services
 - Government Building
 - Hospital
 - Nursing/Retirement Home
 - Place of Worship
 - Post Office
 - Showground

LEGEND

- Towns of Interest
- Proposed Pipeline
- Full Supply Level (183.5m AHD)
- Cadastre
- Parks/Reserve

Projection: GDA94 Zone 56

Figure 24-3B

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Metres

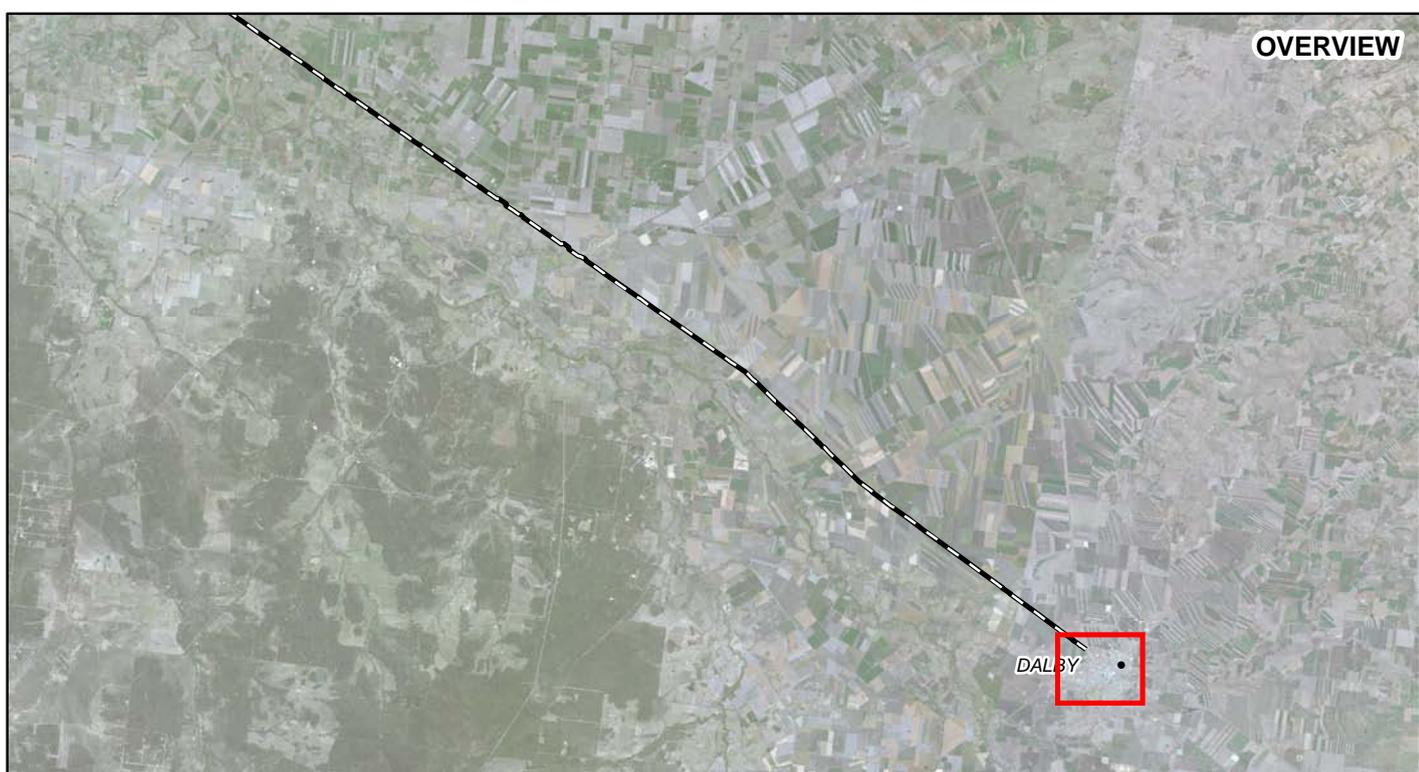


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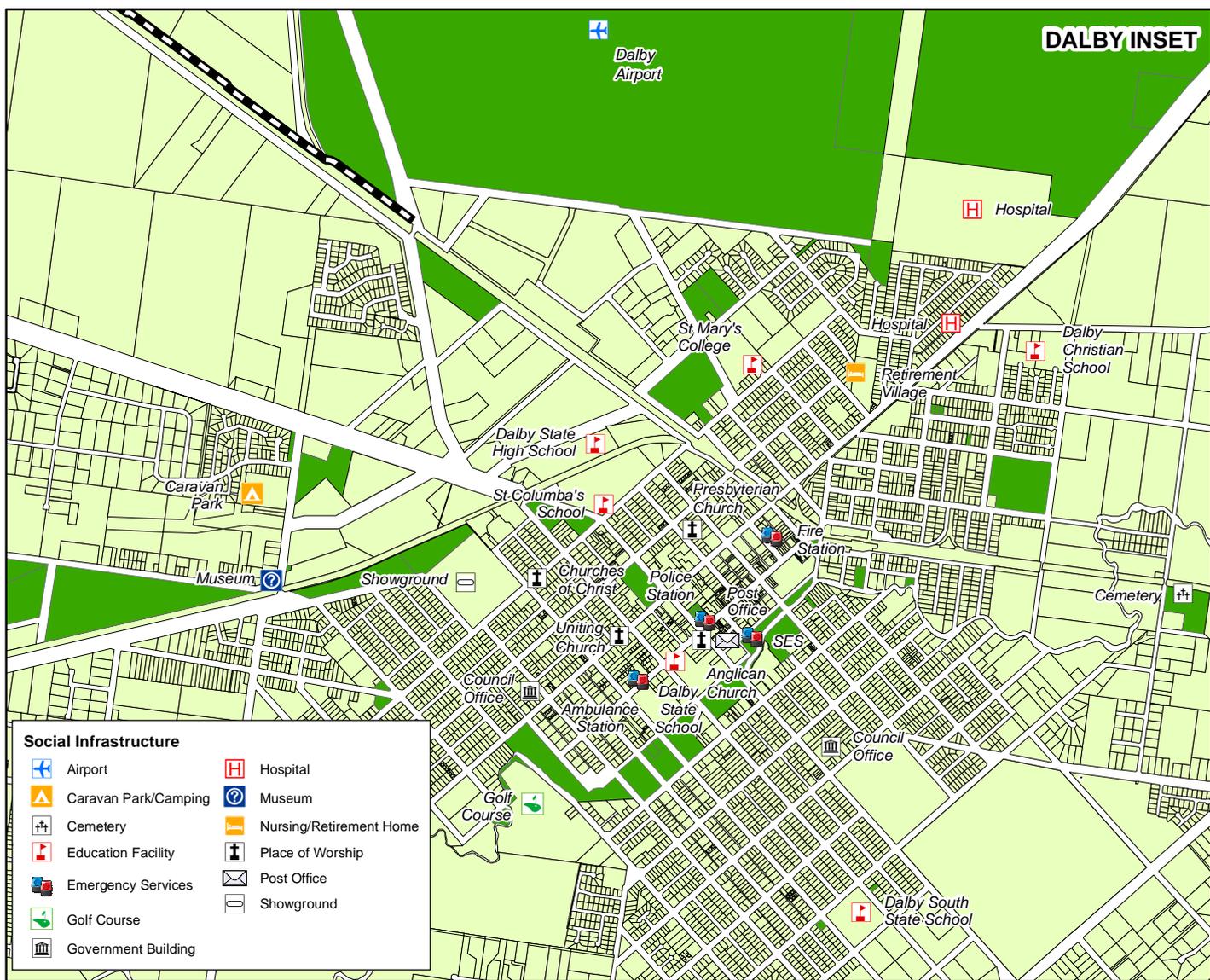


NATHAN DAM AND PIPELINES EIS
Social infrastructure along the pipeline

OVERVIEW



DALBY INSET



Social Infrastructure

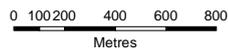
- | | |
|----------------------|-------------------------|
| Airport | Hospital |
| Caravan Park/Camping | Museum |
| Cemetery | Nursing/Retirement Home |
| Education Facility | Place of Worship |
| Emergency Services | Post Office |
| Golf Course | Showground |
| Government Building | |

LEGEND

- Towns of Interest
- Proposed Pipeline
- Full Supply Level (183.5m AHD)
- Park/Reserve
- Cadastre

Projection: GDA94 Zone 56

Figure 24-3C



Scale 1:30,000 (at A4)



NATHAN DAM AND PIPELINES EIS
Social infrastructure along the pipeline

24.3. Profile of the local community

This section describes the existing social environment of the study area and those communities near the Project that may experience changes during construction and operation. Specifically, data has been collected for:

- the dam and surrounds, including the Taroom township and wider Taroom district (covered by the Taroom SLA); and
- the pipeline, including the area covered by the WDRC (amalgamated and, where relevant, the townships of Wandoan, Chinchilla and Dalby).

Population and demographic data was also gathered for Queensland to provide a comparative analysis.

This profile of the existing community has drawn on:

- demographic data from the 2006 ABS Census, supplemented by information from State and local Government agencies;
- the review and analysis of relevant literature and data relating to local community values; and
- consultation with local communities and key stakeholders, including local and State Government agencies and local service providers.

The boundaries of the WDRC (formed on the 15 March 2008 following local government amalgamations) do not follow ABS geographic boundaries. As such, data on the WDRC is limited to information available from the Queensland Government Office of Economic Statistical Research (OESR).

24.3.1. Population size and growth

The Taroom SLA had an ERP of 2,463 people at June 2009, of which 75.4% lived outside of the Taroom township in the rural areas of the SLA.

With the exception of Wandoan, the proportion of non-resident workers (people who work in the area but are usual residents of a different area) was relatively low compared to other townships located in the Surat Basin, indicating a lower level of resource development and employment in the study area. The Taroom township did not have any non-resident workers at June 2008. Apart from Wandoan, the proportion of non-resident workers within communities along the pipeline was generally low. The level of non-resident workers in Wandoan generally reflected the level of minerals exploration and development occurring nearby (Table 24-11). Resident and non-resident population estimates for the study area are also provided in Section 25.2.2.

Table 24-11 Population estimates – dam and pipeline area

Locality	Estimated Residential Population June 2009	Estimated Non-Resident Population June 2008		Total FTE Population Estimate June 2008
	No.	No.	%	No.
Taroom	607	0	0	686
Wandoan	791	52	11.3	460
Chinchilla	4,242	383	5.6	6,836

Locality	Estimated Residential Population June 2009	Estimated Non-Resident Population June 2008		Total FTE Population Estimate June 2008
	No.	No.	%	No.
Dalby	10,846	491	4.4	11,037
WDRC	31,366	1,208	3.8	31,772
Queensland	4,425,103	-	-	-

Source: ABS 2009, Surat Basin Population Report 2008

Between 2006 and 2009, the Taroom SLA experienced a decline of 75 people (or 0.7%) in the residential population (Table 24-12). Consultation in the study area suggests that this may be attributed to recent drought conditions, as well as other impacts on rural lifestyles and enterprise such as the increased cost of running farms and steadily increasing fuel prices. These impacts may have contributed to the migration of families out of the area, as they move away to seek better opportunities, and are not being replaced by newcomers (Wandoan EIS, 2008).

Over the same period, population growth in the WDRC was relatively slow at 1.0% per annum, compared to growth of approximately 2.0% per annum for Queensland.

Table 24-12 Change in estimated resident population, 2006-2009

Locality	2006	2007	2008	2009	Average Annual Change (%)	
					2006 – 2009	2008 - 2009
Taroom SLA	2,538	2,461	2,451	2,463	-0.7	0.5
WDRC	30,118	30,218	30,867	31,366	1.0	1.6
Queensland	4,090,908	4,182,062	4,308,570	4,425,103	2.0	2.7

Source: ABS, 2010

Over the 25 years from 2006, the Taroom SLA and the WDRC areas are projected to grow at a relatively slow rate of 0.8% per annum, reflecting the rural nature of the area (Table 24-13). This is less than half the rate of growth expected for Queensland, at 1.7% per annum. However, these projections do not consider increases in the non-resident population or the impact of planned resource and development projects in the area, which are likely to have an impact, particularly for townships along the pipeline.

Table 24-13 Projected estimated resident population, 2006-2031

Locality	2006	2011	2021	2031	Annual Ave Change (No.) (2006-31)	Annual Ave % Change (2006-31)
Taroom SLA	2,388	2,539	2,740	3,153	31	0.8
WDRC	30,118	31,620	34,477	35,677	222	0.8
Queensland	4,090,908	4,567,714	5,478,715	6,273,885	87,319	1.7

Source: Queensland Government Department of Infrastructure and Planning, 2008, Medium Series Population Projections

24.3.2. Age profile

The age profiles of the Taroom township and SLA as a whole are typical of many rural areas, with lower proportions of people in younger age groups (15-24 years) and higher proportions of people in older age groups (over 45 years) (Table 24-14). This reflects an ageing population and young people leaving the area to seek education opportunities or to find work.

In the Taroom SLA and the WDRC, people aged 18 years and over represented approximately 75% of the population, at 1,795 people and 22,000 people respectively.

Table 24-14 Age profile, 2006

Locality	0 - 14 yrs		15 - 24 yrs		25 - 44 yrs		45 - 64 yrs		65 yrs + older		Median Age (years)
	No.	%	No.	%	No.	%	No.	%	No.	%	
Taroom Township	123	19.5	67	10.6	153	24.3	172	27.3	115	18.3	42
Taroom SLA	516	21.6	224	9.4	648	27.1	668	28.0	333	13.9	40
WDRC	7,000	22.8	3,768	12.2	7,951	25.8	7,936	25.8	4,110	13.4	N/A
Queensland	806,536	20.7	539,201	13.8	1,099,165	28.2	976,737	25.0	482,892	12.4	36

Source: ABS 2006 Census

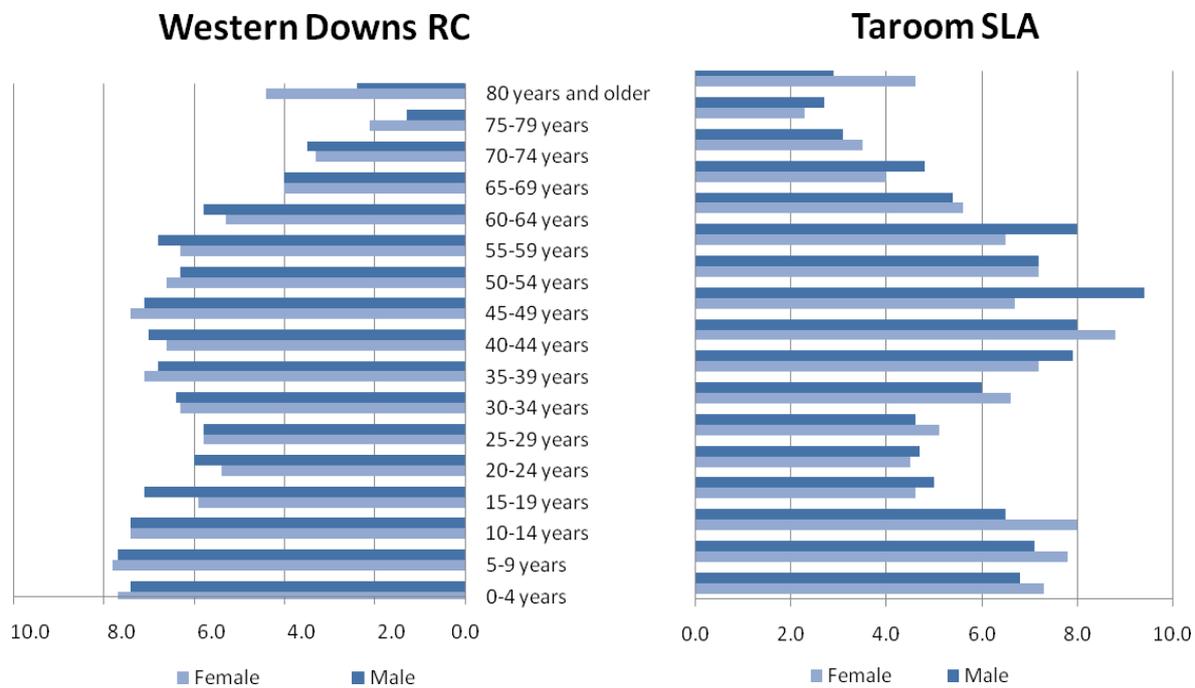


Figure 24-4 Age profile by gender, 2006

24.3.3. Population mobility

At the 2006 Census, the Taroom township and Taroom SLA displayed lower levels of mobility and more stable residential populations than Queensland, which reflects the study area's rural nature and older population profile (Table 24-15).

Along the pipeline, there was a relatively high rate of population mobility compared with the dam area, with only 57.2% of people having lived at the same address five years previously. However, this was still a more stable population than noted for Queensland as a whole.

Table 24-15 Population mobility, 2006 (%)

Locality	Same Address 1 Year Previously	Same Address 5 Years Previously
Taroom Township	85.6	65.5
Taroom SLA	85.0	67.1
WDRC	82.3	57.2
Queensland	74.1	45.1

Source: ABS 2006 Census

24.3.4. Households and families

At the 2006 Census, the Taroom township had lower proportions of family households and higher proportions of lone person households compared with the remainder of the study area and Queensland (Table 24-16). This may reflect the town's older population, particularly those who are 65 years and older.

Table 24-16 Household type, 2006 (%)

Locality	Family Household	Lone Person Household	Group Household
Taroom Township	57.8	38.4	3.8
Taroom SLA	71.4	26.3	2.3
WDRC	73.0	24.0	3.0
Queensland	72.7	22.8	4.5

Source: ABS 2006 Census

The Taroom township and Taroom SLA had a higher proportion of couple only families and lower proportions of couples with children and one parent families (Table 24-17). This is reflective of many rural areas in which young people leaving the area to seek education opportunities or to find work. It also reflects the older age profile of these localities. In the WDRC, along the pipeline, the family composition of households more closely reflected that of Queensland.

The study area as a whole had a lower proportion of one-parent families than Queensland, reflecting that rural populations generally demonstrate more traditional family and relationship structures.

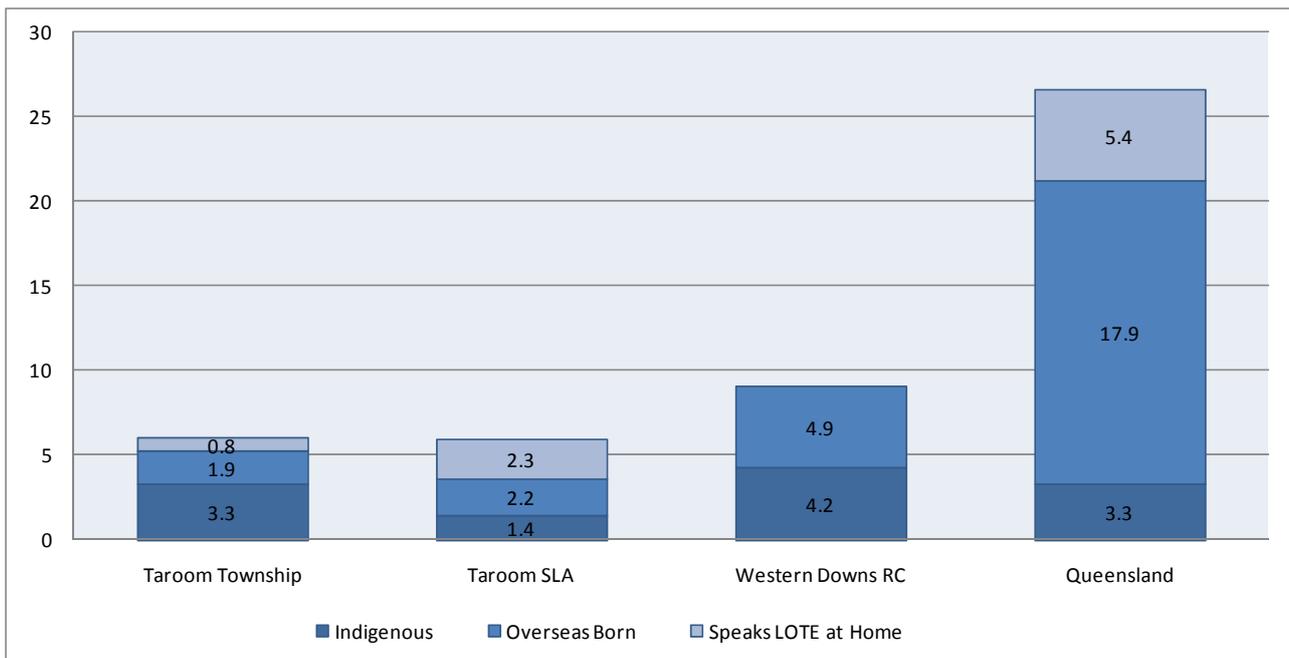
Table 24-17 Family households, 2006 (%)

Locality	Couple Family with Children	Couple Family without Children	One Parent Family	Other Family
Taroom Township	37.6	51.0	11.4	0.0
Taroom SLA	45.9	46.2	6.8	1.1
WDRC	42.3	43.1	13.1	0.0
Queensland	43.3	39.1	15.9	1.7

Source: ABS 2006 Census

24.3.5. Cultural diversity

Overall, the study area had a lower level of cultural diversity than Queensland, with lower proportions of overseas born people and people who speak a Language Other than English (LOTE) at home. However, the Taroom township and WDRC areas had proportions of people who identified as Indigenous either equal to or greater than Queensland (Figure 24-5).



Source: ABS 2006 Census

Figure 24-5 Cultural diversity, 2006 (%)

At the 2006 Census, the number of Indigenous persons in the Taroom SLA and WDRC was 33 person and 596 persons respectively (Table 24-18). The Indigenous population of the study area was young, with a median age of between 16 years and 17 years, compared to 20 years for Indigenous people in Queensland as a whole.

Indigenous households in the Project area recorded high rates of unemployment, at 38.9% in the Taroom SLA and 23.1% in the WDRC. These unemployment rates were also significantly higher than Indigenous communities in Queensland, where unemployment was recorded at 13.1% in 2006.

The median income for Indigenous households in the study area ranged between \$810 per week in the Taroom SLA and \$814 per week in the WDRC, lower than for Indigenous households in Queensland (\$899).

At the 2006 Census, the Grade 12 completion rate for Indigenous people in the Taroom SLA was 36.8%, significantly higher than for Indigenous people in the WDRC and Queensland as whole, at 22.2% and 25.5%, respectively. However, given the small number of Indigenous people in the SLA, this equates to only seven people having obtained this level of education.

Table 24-18 Key demographic statistics for Indigenous people in the local community area, 2006

Characteristic	Taroom SLA	WDRC	Queensland
Population	33	596	127,580
Median age	16	17	20
Male (%)	54.5	46.8	49.1
Female (%)	45.5	53.2	50.9
Labour force participation (%)	55.6	54.5	56.2
Unemployment (%)	38.9	23.1	13.1
Median household income (\$ per week)	810	814	899
Grade 12 completion (%)	36.8	22.2	25.5

Source: ABS 2006 Census

24.3.6. Education

24.3.6.1. Education attendance

The study area generally had higher levels of students attending pre-school, primary school and secondary school and lower levels of tertiary students compared to Queensland (Table 24-19).

Table 24-19 Education institution attending, 2006 (%)

Locality	Pre-school	Primary School	Secondary School	TAFE	University	Other
Taroom Township	5.8	34.3	27.0	3.6	4.4	0.0
Taroom SLA	6.7	40.9	18.8	3.4	3.7	1.1
WDRC	No data*	28.8	18.1	No data	No data	No data
Queensland	4.9	29.1	19.8	5.7	11.5	1.9

Source: ABS 2006 Census

* Data has not been amalgamated for the WDRC for the 2006 Census statistics on education institutions

24.3.6.2. Education levels

The Taroom township and Taroom SLA generally had lower levels of education compared to Queensland, with lower proportions of people who had completed Year 12 and lower levels of people who had post-school qualifications (Table 24-20). This is consistent with the older population and rural nature of the study area, as well as a lack of access to local tertiary training opportunities.

Table 24-20 Education levels, 2006 (%)

Locality	Year 8	Year 10	Year 12	Post-grad Degree	Diploma/ Cert	Bachelor Degree	Advance Diploma	Certificate
Taroom Township	22.1	36.0	20.9	0.0	0.0	5.7	2.7	12.5
Taroom SLA	15.1	37.2	26.7	0.0	0.3	5.5	4.1	11.0
WDRC	No data*	No data	No data	No data	No data	No data	No data	No data
Queensland	6.6	23.8	36.5	1.7	1.0	8.8	5.8	15.8

Source: ABS 2006 Census

* Data has not been amalgamated for the WDRC for the 2006 Census statistics on education levels

24.3.7. Housing and accommodation

24.3.7.1. Housing characteristics

At the 2006 Census, there were 904 occupied private dwellings, of which only 29% were located in the Taroom township. Four dwellings in the SLA were identified as being unoccupied in 2006.

Separate houses were the predominant dwelling type in the study area (Table 24-21).

Nearly 50% of houses in the Taroom SLA were fully owned at the 2006 Census, significantly higher than for Queensland, reflecting the less mobile population of the study area. Data from the 2006 Census suggests a low level of owner occupiers in the Taroom township with approximately 30% of households either fully owned or being purchased. However, approximately 40% of households in the township did not indicate a housing tenure.

Nearly 30% of houses, or 253 properties, in the SLA were rented. The majority of rental properties in the study area were being rented from a person not in the same household, such as a parent/ other relative or other person, while a further 22% were rented from an "other landlord type" such as a caravan park or employer (Table 24-22). No dwellings were rented from private real estate agents in 2006.

Table 24-21 Housing characteristics, 2006 (%)

Locality	Separate house	Medium Density House	Other Dwelling House	Fully Owned	Being Purchased	Rented	Other Tenure Type	Total Dwellings
Taroom Township	95.0	3.5	1.5	7.8	22.5	29.8	1.2	258
Taroom SLA	88.1	11.0	0.9	49.6	18.7	28.0	2.0	908
WDRC	No data*	No data	No data	No data	No data	No data	No data	No data
Queensland	79.5	18.8	1.5	31.6	33.8	31.1	0.8	1,391,632

Source: ABS 2006 Census

* Data has not been amalgamated for the WDRC for the 2006 Census statistics on housing characteristics

Table 24-22 Landlord type, 2006 (%)

Locality	Real Estate Agent	State or Housing Authority	Person not in same household	Housing co-operative	Other landlord type	Landlord type not stated	Total Dwellings
Taroom Township	0.0	6.5	54.5	3.9	22.1	13.0	77
Taroom SLA	0.0	5.1	39.5	4.0	27.7	23.7	253
WDRC	No data*	No data	No data	No data	No data	No data	No data
Queensland	50.9	11.1	26.2	2.3	6.6	2.9	432,296

Source: ABS 2006 Census

* Data has not been amalgamated for the WDRC for the 2006 Census statistics on landlord type

24.3.7.2. Housing costs and affordability

Statistically, the housing market in communities surrounding the dam and pipeline can generally be regarded as being affordable. Anecdotally, however, there are some indications that the housing market is unaffordable for key service workers and other socio-economic groups (as per Section 24.2.4.5).

At the 2006 Census, the ABS recorded that median rental rates were lower in the study area than for the remainder of the State, at \$80 per week in Taroom and \$25 per week in the Taroom SLA, compared to \$200 per week in Queensland. Rental rates in communities along the pipeline were generally high, particularly in Chinchilla.

Given that the ABS statistics of 2006 seemed to indicate unreasonably low rental rates, a search of the realestate.com website (December 2011) was undertaken, and identified no available rental properties in Taroom and about nine properties available for rent in Wandoan. Chinchilla and Dalby had a higher number of rental properties available, reflecting the larger size of these towns (Table 24-23). The median rental rates across the study area had increased

significantly in all townships since data was collected for the Project in September 2010, particularly in Wandoan. This probably reflects an increased demand for housing associated with new resource development projects in the area.

Table 24-23 Houses available for rent within the study area, December 2011

Locality	2 Bedrooms		3 Bedrooms		4 Bedrooms	
	No. Properties	Median Rental	No. Properties	Median Rental	No. Properties	Median Rental
Taroom	0	-	0	-	0	-
Wandoan	3	\$500	6	\$600	4	\$850
Chinchilla	6	\$320	13	\$500	12	\$550
Dalby	28	\$250	25	\$300	20	\$400

Source: www.realestate.com.au, viewed December 2011

At the time of the Census, the median monthly housing loan repayment in the Taroom township and Taroom SLA was also low at \$520 and \$542, respectively, compared to \$1,300 for Queensland.

Information on median house prices available from RPData, indicates that between November 2010 and October 2011, the median house price ranged from \$96,000 to \$285,000 in Taroom (**Table 24-24**). These house prices were generally lower than for townships along the pipeline, including Chinchilla, which ranged from approximately \$273,000 to \$337,000 and Dalby, which ranged from \$235,000 to \$358,000. Higher prices along the pipeline may reflect increased demand for housing in these communities from workers associated with the recent resources development near these towns. This was reiterated during consultation for the SIA, which suggested that there have been a number of speculators purchasing properties in the area, particularly in Chinchilla (DoC, pers. comm., 19/08/2010). Additional details regarding residential land valuations are contained in **Section 25.2.7.3**.

Table 24-24 Median house prices, November 2010 – October 2011*

Month	Taroom	Chinchilla	Dalby
October 2011	\$285,000	\$342,700	\$320,000
September 2011	\$285,000	\$340,000	\$235,000
August 2011	\$120,000	\$297,500	\$270,000
July 2011	\$120,000	\$337,500	\$253,750
June 2011	\$120,000	\$273,000	\$336,000
May 2011	\$96,000	\$294,500	\$358,500
April 2011	\$96,000	\$320,000	\$250,000
March 2011	\$215,000	\$335,000	\$244,000
February 2011	\$215,000	\$283,000	\$278,000
January 2011	\$215,000	\$340,000	\$277,500
December 2010	\$215,000	\$322,000	\$263,000
November 2010	\$215,000	\$327,000	\$289,000

Source: RPData Pty Ltd, www.myrpd.com.au (viewed December 2011)

*Note: Data was not available for the Wandoan Township.

Housing affordability is generally defined as housing that consumes no more than 30% or 35% of gross household income for rent or purchase, respectively. Members of the community which are over the 30% or 35% thresholds are considered to be under housing stress.

The *BankWest Housing Affordability Report for Local Government Areas (2011)* provides statistics on housing affordability for key workers in different housing markets between 2005 and 2010. In this report, housing affordability is measured by the Median Multiple, which is the median housing price compared against the median household income. The Median Multiples are rated as either:

- unaffordable, at a Median Multiple of 5.1 and over; and
- affordable, at a Median Multiple of 5.0 or less.

The Median Multiple for key workers and affordability ratings for Taroom, Chinchilla and Dalby in 2005 and 2010 are shown in **Table 24-25**. The housing markets in Taroom, Chinchilla and Dalby were rated as being affordable between 2005 and 2010, although it can be seen that the house price to earnings ratio increased quite significantly over this period, indicating that affordability is generally declining.

Table 24-25 Housing affordability ratings, 2005 – 2010

Market	House Price to Earnings Ratio					
	2005		2009		2010	
Taroom	Affordable	1.3	Affordable	2.0	Affordable	2.3
Chinchilla	Affordable	2.9	Affordable	3.4	Affordable	3.6
Dalby	Affordable	2.8	Affordable	3.4	Affordable	3.5

Source: BankWest (2011)

24.3.8. Community capacity

24.3.8.1. *Socio-Economic Indices for Areas*

The ABS produces four Socio Economic Indices for Areas (SEIFA) based on data from the 2006 Census.

The Index of Relative Socio-Economic Advantage/Disadvantage is a continuum of advantage to disadvantage. It considers indicators relating to income, education, occupation, wealth and living conditions.

The Relative Socio-Economic Advantage/Disadvantage score for the Taroom SLA was 919, lower than the score for the former Shires of Murilla, Chinchilla and Dalby along the pipeline (**Table 24-26**). This suggests that the Taroom community had higher levels of relative disadvantage, with lower proportions of people on high incomes, qualified people, and professionals.

The Index of Economic Resources reflects indicators such as income and expenditure including wages and rental costs for families, and variables that reflect wealth (e.g. dwelling size). Income variables are also specified by family structure, as this affects disposable income.

The Index of Economic Resources for the Taroom SLA is 1,014, higher than the score for former shires along the pipeline, indicating that the Taroom community had a higher proportion of high-income families, a lower proportion of low-income families and more households living in large houses.

The disparities in these indices (i.e. higher levels of disadvantage, although higher levels of economic resources) may be due to the relatively high asset base of people in rural communities, e.g. people owning houses and properties but not necessarily having high level of education or income.

Table 24-26 SEIFA indices for dam and pipeline communities, 2006

Locality	Advantage/Disadvantage		Economic Resources	
	Score	Percentile ranking in QLD	Score	Percentile ranking in QLD
Taroom SLA	919	47th percentile	1,014	81st percentile
Former Murilla Shire	920	47th percentile	976	57th percentile
Former Chinchilla Shire	936	60th percentile	1,006	76th percentile
Former Dalby Shire	943	66th percentile	973	54th percentile

Source: ABS Census, 2006

24.3.8.2. *Need for assistance*

The ABS 2006 survey data is based on people who need assistance due to a severe or profound disability. As at the 2006 Census, the Taroom township community had a relatively high proportion of people in need of assistance (Table 24-27). This is again indicative of the proportion of elderly people in the dam area. Within the WDRC, 4.6% of people were in need of assistance, closer to the average for Queensland.

Table 24-27 Need for assistance, 2006

Locality	Need for Assistance	
	No.	%
Taroom Township	38	6.0
Taroom SLA	85	3.6
WDRC	1,313	4.6
Queensland	154,707	4.0

Source: ABS Census, 2006

Consultation with the DoC identified that the study area has a strong need for crisis accommodation and NGO support services for homeless people. This is indicative of a need for education and housing assistance where issues such as

domestic violence have forced people out of their homes for temporary periods. In particular, there is little capacity for these services in Indigenous communities, where the need is much greater.

24.3.9. Community health and safety

24.3.9.1. Admissions to hospital

Information on community health is available for the Toowoomba and Darling Downs District, which includes the Taroom Health Service, Chinchilla Health Service and Dalby Health Service. Data could not be obtained for Wandoan Health Services.

In 2005/2006, there were a total of 238,992 admissions to health services in the Toowoomba and Darling Downs Health District (Table 24-28). Of these, 266 admissions were to the Taroom Health Service. The predominant reasons for hospital admissions within the District included digestive disorders, births, renal dialysis and chemotherapy.

Table 24-28 Admissions to hospitals in Toowoomba and Darling Downs District, 2005/2006

Health Service	Number of Admissions
Taroom Health Service	266
Chinchilla Health Service	1,051
Dalby Health Service*	2,389
Total Toowoomba and Darling Downs Health District	238,992

*Most current data available was for 2004/05; Source: Queensland Health, 2008

24.3.9.2. Crime

Data on crime is only available at a police district and region level. The study area is located within the Dalby and Roma Districts of the Queensland Police Southern Region, which incorporates Charleville, Roma, Dalby, Warwick, Toowoomba and Ipswich. In 2008/2009, 42,672 offences occurred within the Southern Region, of which 2,743 offences (6.4%) occurred within the Dalby Police District and 2,295 offences (5.4%) occurred within the Roma Police District (Table 24-29).

Within the Southern Region, offences against property accounted for 52% of total offences, while 39.1% involved “other” offences (including drug and alcohol abuse). Compared to the region as a whole, the Dalby District had a higher proportion of offences against the person and a lower proportion of property offences, while the Roma District had significantly higher proportions of offences against the person and “other” offences.

The Southern Region had a higher rate of offences against the person and lower rates of property offences and “other” offences compared to Queensland.

Table 24-29 Crime statistics, reported offences 2008 - 2009

Locality	Offences Against the Person		Offences Against Property		Other Offences		Total Offences
	No	Per 100,000	No	Per 100,000	No	Per 100,000	
Southern Region	3,778	769	22,196	4,518	16,698	3,399	42,672
Dalby District	262	785	1,222	3,662	1,259	3,773	2,743
Roma District	210	902	730	3,135	1,355	5,819	2,295
Queensland	30,974	705	202,803	4,618	167,448	3,813	401,225

Source: Queensland Police, 2008/2009

Information on the relationship of the victim to the offender is only available at the Southern Region level, but can be demonstrative of the level of domestic violence in an area. In 2008/2009, 410 victims were related to the offender (suggestive of domestic violence), while a further 833 victims were a friend, colleague or professional or other acquaintance. This accounted for approximately 20% and 41% of crimes respectively, higher than for Queensland as a whole (Table 24-30).

Table 24-30 Victim/offender relationship, 2008/2009

Victim	Southern Region		Queensland	
	Number	%	Number	%
Partner	85	4.2	1,056	6.1
Ex-partner	34	1.7	194	1.1
Child	28	1.3	260	1.5
Other family member	263	12.8	2,287	13.2
Known to victim – other*	833	40.8	5,920	34.3
Unknown to victim	744	36.5	7,046	40.8
Not stated	52	2.6	501	2.9
Total	2,039	100.0	17,264	100.0

Source: Queensland Police, 2008/2009

*Note: Includes friends, colleagues and professional and other acquaintances

Information on the incidence of domestic violence is available for the jurisdiction of each courthouse in Queensland (Table 24-31). In 2005-2006, one protection order was taken out in Taroom. At the same time, a total of 31 temporary protection orders and 107 protection orders were taken out in Chinchilla and Dalby, respectively.

Table 24-31 Domestic and family violence orders by court, 2005-2006

Court	Temporary Protection Order	Protection Order
Taroom	-	1
Chinchilla	4	26
Dalby	27	81
Queensland	7,605	13,567

Source: Department of Communities, 2006

24.3.10. Local community values, vitality and lifestyles

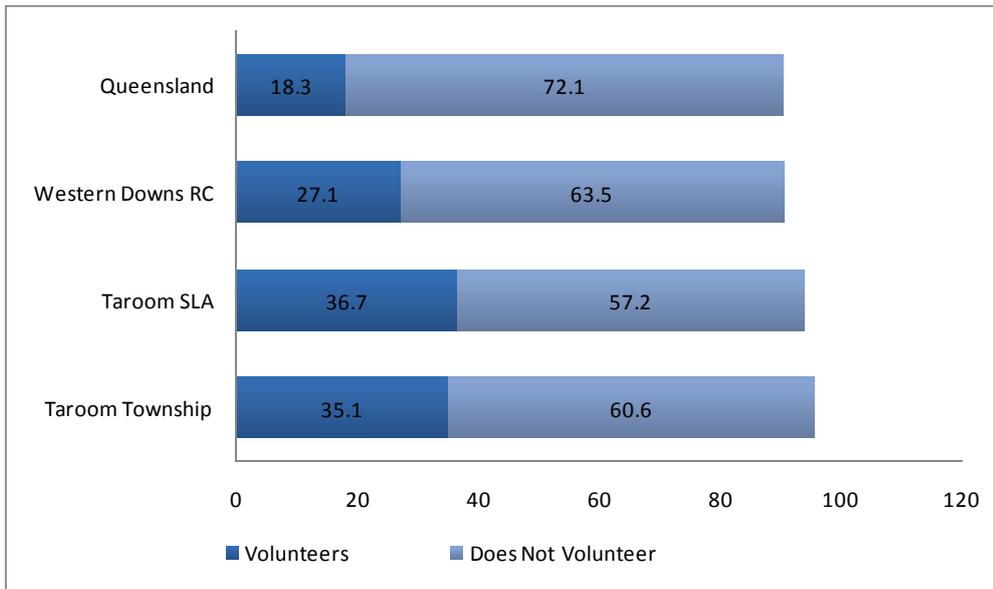
Community values in the 'local community area' are representative of the rural lifestyle of the area.

Consultation with directly affected landholders in the dam area indicated that many have owned their properties for over 20 years. This indicates a strong community history, and a heavy reliance on agricultural lifestyles and livelihoods, with many landholders stating that family farming was the primary or only source of income for the household (SunWater, 2010). Some people in the dam area expressed strong environmental values around the preservation of boggomoss ecosystems in the local area.

Consultation with directly affected landholders along the pipeline route was also undertaken, and indicated that residents place significant value on the security and provision of water. A high percentage of respondents expressed a strong interest in accessing water from the Project, and also stated that the Project could represent opportunities for employment. However, concern was expressed that water would be provided to industry stakeholders, but not to agriculture. Concern was also expressed that rural lifestyles and agricultural livelihoods have already been affected in recent years due to increased pressure from nearby resource and development projects.

24.3.10.1. Community cohesion

Community cohesiveness and community interaction are considered core values of the area and are represented through the broad range of community clubs and organisations in both the dam and pipeline communities. Additionally, high levels of volunteering also provide the sense that community is an important aspect for the area (Figure 24-6). This is particularly true in the broader Taroom community in the vicinity of the dam, which had levels of volunteering at about 35%, compared to 18% in Queensland. This was reiterated in the results of consultation with affected landholders, where 66% of residents indicated that they participate in volunteer activities, including for the Lions Club, Scouts, Rural Fire Brigade, Show Society, Garden Club and Cancer Care Group. Consultation undertaken for other projects in the study area also indicated that many organisations in the region rely heavily on the support of volunteers, for example Meals on Wheels and local show societies, sporting clubs and community groups (Wandoan EIS, 2008).



Source: ABS Census 2006

Figure 24-6 Participation in volunteer activities, 2006 (%)

24.3.10.2. *Amenity and sense of place*

In the vicinity of the dam, land use is predominantly beef cattle grazing and the low lying area that is traversed by the Dawson River has been heavily modified, thinned and cleared of vegetation. The visual amenity of the area consists of a mix of agricultural uses and open bushland. Nathan Gorge and the surrounding elevated landscape have not been cleared and as a result, have retained a predominately natural vegetated outlook. The water storage consists of 74 land parcels of varying sizes, some of which contain houses and homesteads, sheds and cattle yards. The water storage area is therefore characterised by farming homesteads, and residents who have a strong association with the agricultural history of the area.

Communities along the pipeline are primarily rural agricultural communities. The surrounding area consists of predominately grazing properties, for both breeding and fattening enterprises, that have been partially cleared, with remaining vegetation being most prevalent between Wandoan and Chinchilla. However, land to the north of Miles is well vegetated and the topography is characterised mostly of rolling hillsides and escarpments, limiting the extent of potential grazing. Recent increases in industrial and resource activities in the region have impacted the rural amenity and lifestyle. In particular, some stakeholders directly affected by the Project indicated that they are impacted by up to seven development projects, and raised concerns during consultation that the time required for consultation on these projects detracts them from agricultural activities and business enterprises that are being carried out on their property.

24.3.10.3. *Transport and access*

Taroom is located on the Leichhardt Highway, which is the main north-south travel route through Central Queensland. Access is by road as there is no rail service to Taroom and the local airstrips are restricted to private usage by light planes.

In the pipeline communities, the Leichhardt Highway extends from Taroom, through Wandoan and on to Miles. The Warrego Highway extends from Miles, through Chinchilla and on to Dalby where the pipeline ends. At Dalby, the Warrego Highway forms a crossroads with the Moonie Highway, which extends through to southern capitals, and the Bunya Highway to coastal centres. Consultation for the SIA suggested that increased traffic on the Warrego and Leichhardt Highways has been experienced due to recent resource developments, and subsequent safety is a concern for many community members. Greyhound bus services pass through townships between Brisbane and Charleville, and Toowoomba and Rockhampton. The Toowoomba to Rockhampton service runs on a Monday, Wednesday and Friday, and the Brisbane to Charleville Greyhound service operates daily. Kynoch Coaches run a long distance service which passes through Dalby, Chinchilla, Wandoan, Taroom and Theodore. A school bus also services the Wandoan and Taroom area and McCafferty's private bus service operates out of Taroom.

The proposed Surat Basin Rail Project will develop an additional 210 km of railway across the study area, and will connect the Western Rail System near Wandoan with the Moura Railway System, near Banana. This project would be an open-access, multi-use rail link that aims to facilitate the export of coal and freight through to the Port of Gladstone.

No passenger rail services are available in the dam and surrounds, while in Chinchilla, passenger rail services are provided twice a week by The Westlander to Roma and Brisbane.

Dalby is located on the main western line from Brisbane, with branch lines linking Dalby to country areas. The station is also a centre for QLink's freight service. The Westlander is the main passenger rail service connecting Dalby to the west. The rail network is used for the delivery of bulk grain shipments from silos and depots in the area. Containerised cargo is also shipped from Dalby's loading terminal to the Port of Brisbane. Coal shipments regularly run from nearby Kogan Creek mine through Dalby on route to the Swanbank Power Station and Brisbane Port.

Dalby also has an aerodrome, which features an all-weather full sealed strip and aircraft maintenance workshops, and provides overnight courier services, as well as crop-spraying and charter services.

24.4. Profile of the local business community

24.4.1. Directly affected properties and families

There are 74 land parcels that would be directly affected by the dam, water storage and associated infrastructure, of which approximately 76% are freehold, and 19% are leasehold properties. A small percentage of properties are State land and reserve properties. There are approximately 35 landholders and tenants that would be directly affected by property acquisitions, with the majority of affected households comprising small families of between one and four residents. All of these properties are currently used for grazing purposes, while a proportion are also used for cultivation and cropping.

In addition, approximately 238 land parcels on 127 properties would be directly affected by the location of the pipeline, of which approximately 47% are freehold and 9% are leasehold properties. Approximately 4% of affected properties are reserve properties. According to the results of consultation along the pipeline, existing land uses are predominantly grazing (67% of respondents) and cultivated cropping (51% of respondents). Landholders indicated that these land uses would likely remain unchanged into the future, and 71% of survey respondents stated that there were no future developments planned for their properties (SunWater, 2010).

Further information on existing land uses in the dam area and along the pipeline is provided in **Chapter 7**.

24.4.2. Employment and income

The following provides a broad overview of local businesses in the study area. Detailed information regarding the industry profile and key economic contributors in the region is contained in **Chapter 25**.

24.4.2.1. Local businesses

As at 2006/2007, there were a total of 732 businesses in the Taroom SLA (**Table 24-32**). Approximately 98% of these were small businesses. Along the pipeline, there were 4,446 businesses in the WDRC, of which 97% were small businesses. When read in conjunction with statistics on employment by industry (**Table 24-35**), it is likely that the majority of these are family-owned farming or agricultural businesses.

Table 24-32 Business counts by employment size, 2006-2007

Locality	Employment Size			Total
	Small	Med	Large	
Taroom SLA	720	12	0	732
WDRC	4,446	137	15	4,599

Source: OESR, 2010

Within the water storage area for the dam, consultation was undertaken with landholders who would be directly affected by inundation. The survey included 15 landholders, of which 13 (86.7%) indicated that they currently operate a business on the property (SunWater, 2010). These businesses are primarily family owned grazing and cropping businesses, with the majority of businesses having operated for over 20 years. This indicates a long history of agricultural enterprise in the directly affected study area. Over 87% of the total businesses in the dam area employ between 0 and 4 employees, and 80% of landholders indicated that family farming operations are their only source of income. Any impacts of the Project on the viability and profitability of these businesses would therefore be a point of concern for affected landholders.

24.4.2.2. Labour force participation

The Taroom township and Taroom SLA had higher levels of workforce participation and significantly lower levels of unemployment than Queensland (**Table 24-33**). The Taroom SLA also had a comparatively high proportion of workers working full-time. Additional details regarding labour force participation are contained in **Section 25.2.7.1**.

More recent data on unemployment for the Project area is available for the December 2010 quarter (**Table 24-34**). The availability of labour in the Taroom SLA is extremely low (0.9%). Between 2009 and 2010, unemployment levels remained very low compared to Queensland as a whole. This may be indicative of the area's reliance on agricultural livelihoods, and suggests that the labour force for the project would likely need to be sourced from elsewhere in the State and Australia.

Table 24-33 Labour force participation, 2006 (%)

Locality	Labour Force	Labour Force Participation	Total Employed	Total Unemployed	Employed full time	Employed part time
Taroom Township	321	65.9	98.1	1.9	65.4	28.3
Taroom SLA	1,355	72.7	98.5	1.5	73.6	20.2
WDRC	13,596	No data *	No data	No data	No data	No data
Queensland	1,915,948	61.8	95.3	4.7	61.6	27.7

Source: ABS 2006 Census

* Data has not been amalgamated for the WDRC for the 2006 Census statistics on labour force participation

Table 24-34 Unemployment, December 2009-December 2010*

Locality	Labour force Dec 2010	Unemployment Rate (%)				
		Dec 2009	Mar 2010	June 2010	Sept 2010	Dec 2010
Taroom SLA	1,703	0.7	0.8	0.9	1.0	0.9
Queensland	2,443,800	5.4	5.7	5.7	5.6	5.5

Source: DEEWR 2010, Small Area Labour Markets – December Quarter 2010, Smoothed Series* Data has not been amalgamated for the WDRC

24.4.2.3. Employment by industry

The importance of agriculture in both the dam and pipeline areas is evidenced by the high proportion of people employed in the primary industry sector (Table 24-35). However, it should be noted that the ABS Census statistics relate only to the resident population, and do not reflect the presence of non-resident workers or the subsequent importance of the resources sector in the area.

In the vicinity of the dam, public administration and safety was also an important employer, as was the health care and social services sector. Taroom also had a slightly higher proportion of people employed in transport, postal and warehousing compared to Queensland. In communities along the pipeline, significant industries of employment included retail trade, health care and social assistance and manufacturing, representing a more economically diverse community than in the area surrounding the dam. Labour force statistics are also provided in Section 25.2.3.

Table 24-35 Employment by industry

Industry	Taroom Township		Taroom SLA		WDRC		Queensland
	No.	%	No.	%	No.	%	%
Agriculture, forestry & fishing	35	10.9	728	54.4	3,175	24.4	3.4
Mining	0	0.0	17	1.3	225	1.7	1.7
Manufacturing	3	0.9	32	2.4	967	7.4	9.9
Electricity, gas, water & waste services	0	0.0	8	0.6	165	1.3	1.0
Construction	25	7.8	42	3.1	1,097	8.4	9.0
Wholesale trade	15	4.7	30	2.2	490	3.8	3.9

Industry	Taroom Township		Taroom SLA		WDRC		Queensland
	No.	%	No.	%	No.	%	%
Retail trade	31	9.7	65	4.9	1,406	10.8	11.6
Accommodation & food services	18	5.6	45	3.4	682	5.2	7.0
Transport, postal & warehousing	13	4.1	43	3.2	533	4.1	5.1
Information media & telecommunications	0	0.0	0	0.0	61	0.5	1.4
Financial & insurance services	3	0.9	8	0.6	200	1.5	2.9
Rental, hiring & real estate services	0	0.0	0	0.0	101	0.8	2.1
Professional, scientific & technical services	3	0.9	16	1.2	352	2.7	5.6
Administrative & support services	6	1.9	8	0.6	148	1.1	3.1
Public administration & safety	57	17.8	95	7.1	664	5.1	6.7
Education & training	29	9.1	74	5.5	952	7.3	7.6
Health care & social assistance	51	15.9	74	5.5	981	7.5	10.2
Arts & recreation services	6	1.9	6	0.4	71	0.5	1.3
Other services	16	5.0	20	1.5	419	3.2	3.7
Inadequately described/Not stated	9	2.8	27	2.0			2.7
Total	320	100	1,338	100	13,014	100	100

Source: ABS 2006 Census

24.4.2.4. Employment by occupation

Table 24-36 provides a breakdown of employment by occupation in the dam and pipeline communities.

At the 2006 Census, the Taroom SLA had a significantly higher proportion of workers employed as managers compared to the WDRC and Queensland. This is likely representative of the high proportion of farmers who own and manage businesses on their properties. Other important occupation categories in the dam area were labourers and machinery operators and drivers. Along the pipeline, there was also a relatively high proportion of people employed as managers, and also as technicians and trades workers.

Table 24-36 Employment by occupation

Industry	Taroom Township		Taroom SLA		WDRC		Queensland
	No.	%	No.	%	No.	%	%
Managers	43	13.7	728	45.7	3,313	25.5	12.4
Professionals	26	8.3	17	5.6	1,271	9.8	17.1
Technicians & trade workers	37	11.7	32	6.8	1,762	13.5	15.4
Community & personal service workers	29	9.2	8	4.9	891	6.8	9.1
Clerical & administrative workers	39	12.4	42	6.4	1,391	10.7	14.8
Sales workers	21	6.7	30	2.5	1,021	7.8	10.4

Industry	Taroom Township		Taroom SLA		WDRC		Queensland
	No.	%	No.	%	No.	%	%
Machinery operators & drivers	53	16.8	65	9.3	1,160	8.9	7.2
Labourers	67	21.3	45	17.3	2,018	15.5	11.9
Inadequately described	0	0.0	43	1.3	-	-	1.8
Total	315	100	0	100	13,016	100	100

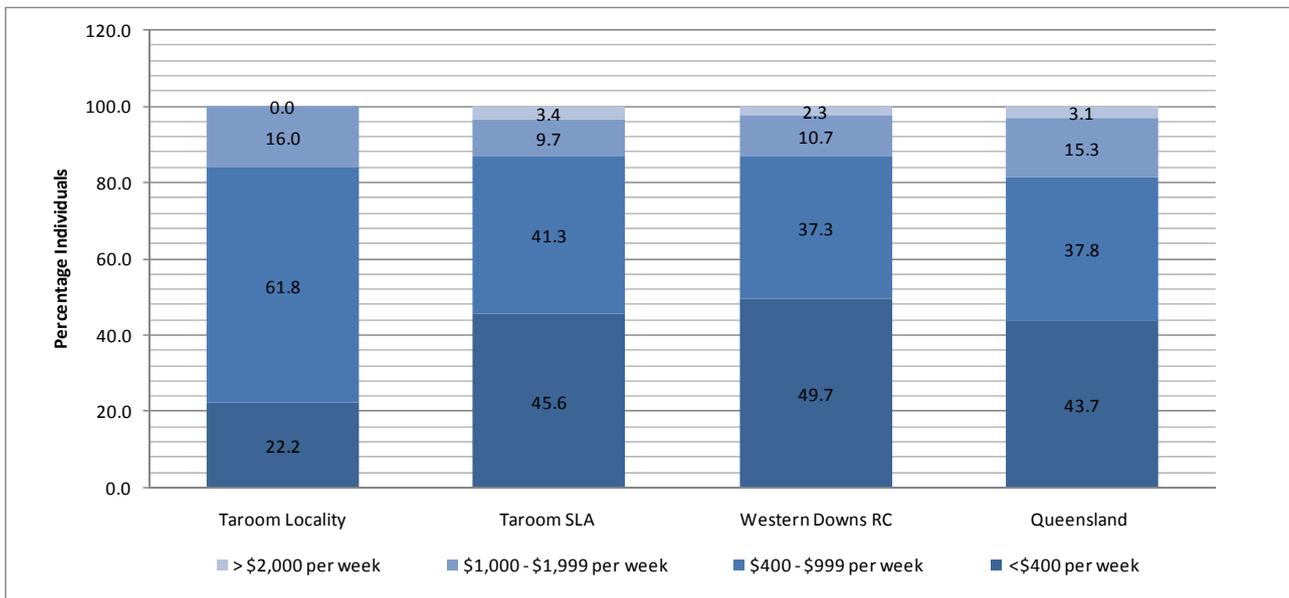
Source: ABS 2006 Census

24.4.2.5. Incomes

In general, communities in the Project area had lower median incomes than for Queensland as a whole.

At the 2006 Census, households in the Taroom SLA had a median weekly income of \$810, while households in the Taroom township had a median weekly income of \$795.

Individual weekly incomes in the Project area are contained in **Figure 24-7**, which shows that the study area had a slightly higher proportion of people earning low incomes (<\$400 per week) and a lower proportion of people earning high incomes (>\$2,000 per week). This is particularly true in the WDRC in communities along the pipeline, where almost half (49.7%) of individuals were earning less than \$400 per week.



Source: ABS 2006 Census

Figure 24-7 Median individual weekly incomes, 2006

24.4.3. Agriculture, forestry and fishing

Rural production, including agriculture and grazing dominate the economic and social environments of the Taroom SLA, with the area being renowned for high quality beef cattle, prime hard wheat, other grain crops and forestry products. The total value of agricultural production in the Taroom SLA in 2005-2006 was \$147.4 million, 1.7% of the total value of agricultural production in Queensland (Table 24-37). Within the Taroom SLA there were 446 rural properties covering a total area of more than 1.8 million ha. These rural properties often have more than one enterprise, showing diversification of economic opportunities for agricultural industries in the Taroom SLA.

Along the pipeline in the WDRC, total agricultural production equated to \$617.1 million, approximately 7.1% of total production in Queensland. The majority of this was generated through livestock slaughtering and a large proportion was also generated through cropping activities.

Additional details regarding the contribution of primary industries to the local economy are provided in Section 25.2.5.2.

Table 24-37 Agricultural enterprise in the Taroom SLA and WDRC, 2005-06

	Taroom SLA		WDRC	
	%	\$Mil	%	\$Mil
Crops	4.3	\$6.4	33.1	\$204.3
Livestock Slaughtering	95.6	\$141.0	65.8	\$405.8
Livestock Products	0.0	\$0.0	1.1	\$7.0
Total	100.0	\$147.4	100.0	\$617.1

Source: OESR, Local Government Area Profile, 2010

24.4.4. Mining and industry

While mining is not currently a significant industry in the BSC and WDRC, the area is traversed by one of Queensland's major mineral areas (i.e. the Surat Basin) which has significant potential for future development. In particular, the basin contains extensive deposits of coal and coal seam gas, many of which are planned for extraction and development in the near future (Table 24-7).

Along the pipeline, the Kogan Creek and Wilkie Creek coal mines are currently operational in proximity to Chinchilla. However, mining was not noted to be a significant industry of employment in the Project area, with only 1.3% of the labour force in Taroom SLA and 1.7% in the WDRC being employed in this sector at the 2006 census. However, census statistics do not adequately represent non-resident workers. It is expected that participation in this industry will increase significantly.

24.4.5. Tourism

The Leichhardt Highway and the Warrego Highway transect the study area, and are recognised tourist routes.

Tourism is not significant in the Western Downs Region, and comprises only 2% of total domestic tourism in Queensland, and only 1% of international tourism. Over the 12 months to March 2010, domestic tourism in the region decreased by 11%. This may have been due to the effects of the economic downturn.

A large proportion of tourism through the region comprises 'grey nomads' on driving holidays, usually en route to other areas. Glebe Weir is identified as a convenient stop-over point in the local area. Attractions for other visitors may include the country rural lifestyle of the area, bird-watching and fishing opportunities, or the convenience of the Western Downs as a stop-over point. Camping spots as well as national parks are also important tourist attractions in the broader region.

The proposed dam is located along the Dawson River, which is considered to be a tourist attraction and recreational area. The Dawson River offers activities such as picnicking, fishing, bird watching, bush walking and swimming, with fishing being a particularly important tourist activity for the area. The Precipice National Park is located approximately 8 km downstream from dam site and provides camping, hiking, fishing and sightseeing opportunities for tourists.

Further information on tourism is provided in **Chapter 25**.

24.4.6. Recreation

The region offers a wide range of recreational pursuits for residents, which are generally focused in the townships and regional centres. These include both formal sporting facilities and clubs and informal recreational opportunities such as parks and gardens. At Glebe Weir, there is currently a camping and recreation facility, which would be impacted by the Project. Further details on the range of sporting facilities located within the region are provided in **Section 24.2.4**.

24.5. Potential impacts and mitigation measures

This section provides an assessment of the potential social benefits and impacts of the Project for local and regional communities, including from the construction and operation phases. Mitigation measures are also identified to manage impacts.

The majority of impacts associated with the Project would be experienced during the construction phase. Once construction of the Project is complete, it is likely that few ongoing impacts would be experienced, apart from benefits associated with the provision of a more reliable water supply.

24.5.1. Property impacts

In this section, the term 'property' means a land holding. A land holding may comprise a number of allotments, as may be the case with farms or other rural enterprises.

Potential impacts on property from the Project may include:

- full or partial acquisition of properties for the dam, water storage and associated infrastructure;
- property acquisition leading to relocation of directly affected families;
- partial acquisition, leasing or other tenure arrangements for construction and operation of the pipeline;
- restrictions on the use of land within the water storage flood margin and pipeline easement;

- changes to property values or marketability in areas near the Project; and
- changes to community land uses due to property impacts.

24.5.1.1. Dam and surrounds

The water storage at FSL would directly impact approximately 74 land parcels, ranging from small holdings on the outskirts of Taroom to large pastoral properties. Land acquisition is the responsibility of DERM, with the preferred approach being to acquire land by reaching a negotiated agreement with landholders. As such, the Department is currently negotiating voluntary acquisition of properties affected by the water storage.

Within the impoundment area land will be acquired over those areas subject to inundation by the FSL, with tenure over the flood margin being secured through an easement. Consequently the vast majority of remaining land acquisitions within the water storage area will be on a partial acquisition basis. However, an assessment will be undertaken of the impact to each property of the loss of this area, and if a property is significantly impacted then consideration will be given to offering a full acquisition. A property will generally be deemed as significantly impacted where the balance of land not required by the Project would not constitute a viable property.

There is one homestead (Glebe Homestead) located within the water storage which would need to be relocated for the Project. Residents of the homestead would need to relocate prior to closure of the dam, which may result in a change in lifestyle for these residents. Other families affected by partial acquisition may also choose to relocate out of the area. Impacts on community health and well-being that may arise for landholders from these changes are discussed further in **Section 24.5.9**.

The survey of affected landholders identified that the majority of affected residents had lived in the area for more than 20 years, with some properties owned by one family for a number of generations. Many landholders also indicated that family-operated farming businesses in the water storage were a primary or sole source of income for the household. These residents may have strong emotional attachments to their properties, potentially making them more vulnerable to stress and anxiety about property acquisition and relocation.

SunWater is continuing to consult with landholders affected by the Project and negotiate voluntary acquisition of properties. SunWater's policy in relation to property acquisition is to ensure that landholders are paid fair market value for their land as well as reasonable costs relating to the sale of the property and relocation of residents or other infrastructure.

Impacts on property values and marketability of some properties in the study area may be a concern for some landholders. However, properties that are directly impacted by the Project would receive appropriate compensation and so this impact is not expected to be significant. Compensation would also relate to any permanent or temporary loss of productivity that may be experienced.

Community uses directly impacted by property acquisition include the Glebe Weir Camping Reserve. Other potential impacts on land use are discussed in **Chapter 7**.

Specific mitigation and management actions for potential property impacts are outlined in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49)**.

24.5.1.2. Pipeline

Easements would be required for the trunk pipeline and all permanent access tracks to service the pipeline. Interests in land may also be required for temporary access tracks and laydown areas during construction. The location and compensation would be by negotiation with the landowners. Ownership is required for more significant items of above ground infrastructure such as the balancing storages. The preferred easement would directly impact 238 land parcels, generally comprising rural and grazing uses held in leasehold or freehold tenure. Between Wandoan and Chinchilla, the pipeline also passes adjacent to reserve and national park land, but does not impact these areas.

During construction, access to and use of land within the construction easement would be restricted, including movement of animals and farm machinery across the pipeline easement. This may temporarily impact on the use and operation of land along the pipeline. Where possible, the pipeline has been located within or adjacent to road reserves of Nathan Road and the Warrego Highway, or alongside already established infrastructure easements. This has been achieved for approximately two-thirds of the pipeline and would help to reduce land use impacts. Maintaining appropriate access in the vicinity of construction works as well as the progressive reinstatement of land affected by pipeline construction would also assist in minimising impacts.

Cumulatively, Project consultation undertaken along the pipeline revealed that some landholders are affected by several development Projects. Stakeholders therefore expressed that land access negotiations and field investigations should be undertaken in a timely manner and with due consideration to compensation. Impacts around the progressive loss of farming land were also mentioned as a concern for landholders. SunWater would conduct and conclude access and compensation arrangements in a streamlined fashion, and in as short a time as possible, to minimise disruption to livelihood activities and lifestyles for residents. Compensation would be paid to directly affected landholders in accordance with relevant legislation, and ongoing communication with landholders would help to reduce uncertainty for property owners about the easement acquisition and the ongoing use of land within the pipeline easement.

In the longer term, land within the pipeline easement can continue to be used for agricultural purposes such as grazing or light cultivation. However, some activities such as excavating or deep ripping over the pipeline or construction of structures over the easement would be restricted to secure the integrity of the pipeline. From time to time, the pipeline easement would be accessed for maintenance, restricting the use of land within the easement for agriculture.

Specific mitigation and management actions for these potential impacts are outlined in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49 Figure 24-4)**.

24.5.1.3. Associated infrastructure

A range of associated infrastructure is required for the Project, including road upgrades and new access roads, establishment of clay extraction areas and provision of temporary accommodation camps in Taroom, Chinchilla and Wandoan.

Some of this infrastructure would be located on land to be acquired for the water storage and dam construction or within existing easements, while some access to additional acquisition by purchase or easement would be required. However, it is expected that impacts on these additional properties would be fairly limited and often temporary in nature. The location and size of the temporary accommodation facilities will determine the level of impact on affected properties. The siting of the camps will be determined in full consultation with affected stakeholders, including landholders, contractors,

council and other stakeholder representative groups. Details around the accommodation model for workers will be determined according to the principles of the MRPHP, and will be outlined in the Social Impact Management Plan for the Project.

24.5.2. Employment and education

Historically, the economic prosperity of Taroom and the region has been primarily dependent on agriculture. This has resulted in a small local economy and relatively narrow employment profile. New employment opportunities generated by the Project, as well as the mines and industries that its water would serve, may broaden the economic and employment base for the area.

Specifically, communities may benefit from the Project through:

- the creation of direct and indirect employment opportunities during construction; and
- provision of education and training opportunities in advance of and during the Project.

A detailed assessment of Project impacts on local and State labour markets is provided in **Chapter 25**.

24.5.2.1. Employment and skills requirements

During construction, the Project would generate direct employment opportunities for professional staff (e.g. engineers and environmental staff) as well as labourers, trade workers, machine operators and transport workers. Dam construction is expected to extend over approximately three and a half years from 2013, while the pipeline would be constructed over approximately 21 months from mid-2013. The majority of employment benefits would be experienced during construction of the Project, with minimal opportunities being available during operations.

In total, peak construction for the Project would employ about 390 workers, with the workforce for each component of the Project including (**Figure 24-8**):

- an average of 90 people for the construction of the dam, peaking at 170 people, including 20-30 professional staff;
- up to 220 people for the pipeline construction, working across four work fronts; and
- approximately 35 workers for road construction, excluding engineering and design, employed for some six months during the pre construction activities stage..

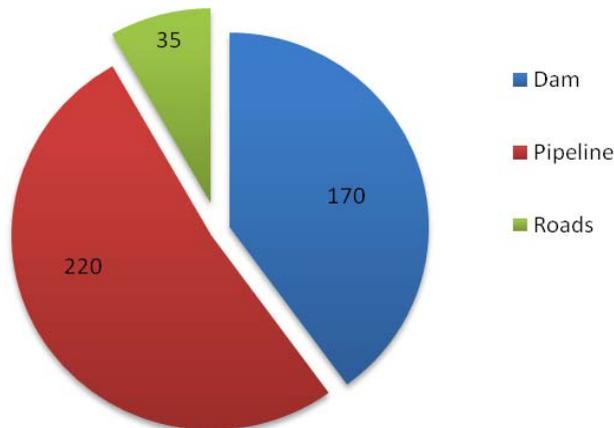


Figure 24-8 Project construction workforce

During construction, the Project would require a labour force with skills across a range of areas, including construction, driving, labouring, administration and environmental (refer to **Section 2.4.6.3** for a detailed list). In addition, construction of the Project would generate a significant number of indirect employment opportunities including for transport and suppliers, as further discussed in **Chapter 25**.

During operation of the dam, at least two duty dam operators would be available at any one time, and a duty flood engineer would be on call. Operation of the pipeline would require at least two duty pipeline operators to be available at any one time, and standby operators based at SunWater's Theodore office would also be on call. As operation is largely electronic, staff do not need to reside on or near site.

Where possible, preference should be given to sourcing construction workers locally to maximise local benefit. However, it is expected that this may be constrained by low local unemployment levels. Specifically, in the dam area, the unemployment rate in the Taroom SLA was 0.9% (or 15 people) in December 2010. Along the pipeline, unemployment at this time was 3.1% (112 people) in Chinchilla, and 4.4% (257 people) in Dalby. Local employment may also be constrained by significant competition for skills and labour from other developers, particularly in the coal seam gas and mining sectors (**Figure 24-9**).

For the Project, it has been assumed that approximately 90% of employees would need to be sourced from outside of the local area (i.e. DIDO/FIFO from Gladstone, Rockhampton, Hervey Bay, Toowoomba or other centres in South East Queensland). However, SunWater will engage Skills Queensland in the development of its SIMP to communicate core skills requirements for the Project, and determine how these opportunities may be realised locally or regionally.

During consultation for the SIA, it was identified that the Wide Bay Burnett area may offer a potential labour pool for the Project (DEEDI, pers. comm., 19/08/2010). At December 2010, unemployment in localities in the Wide Bay Burnett area included:

- Bundaberg – 7.1% unemployment, or 1,712 people looking for work;
- Maryborough – 7.0% unemployment, or 912 people looking for work; and
- Hervey Bay – 8.5% unemployment, or 1,990 people looking for work.

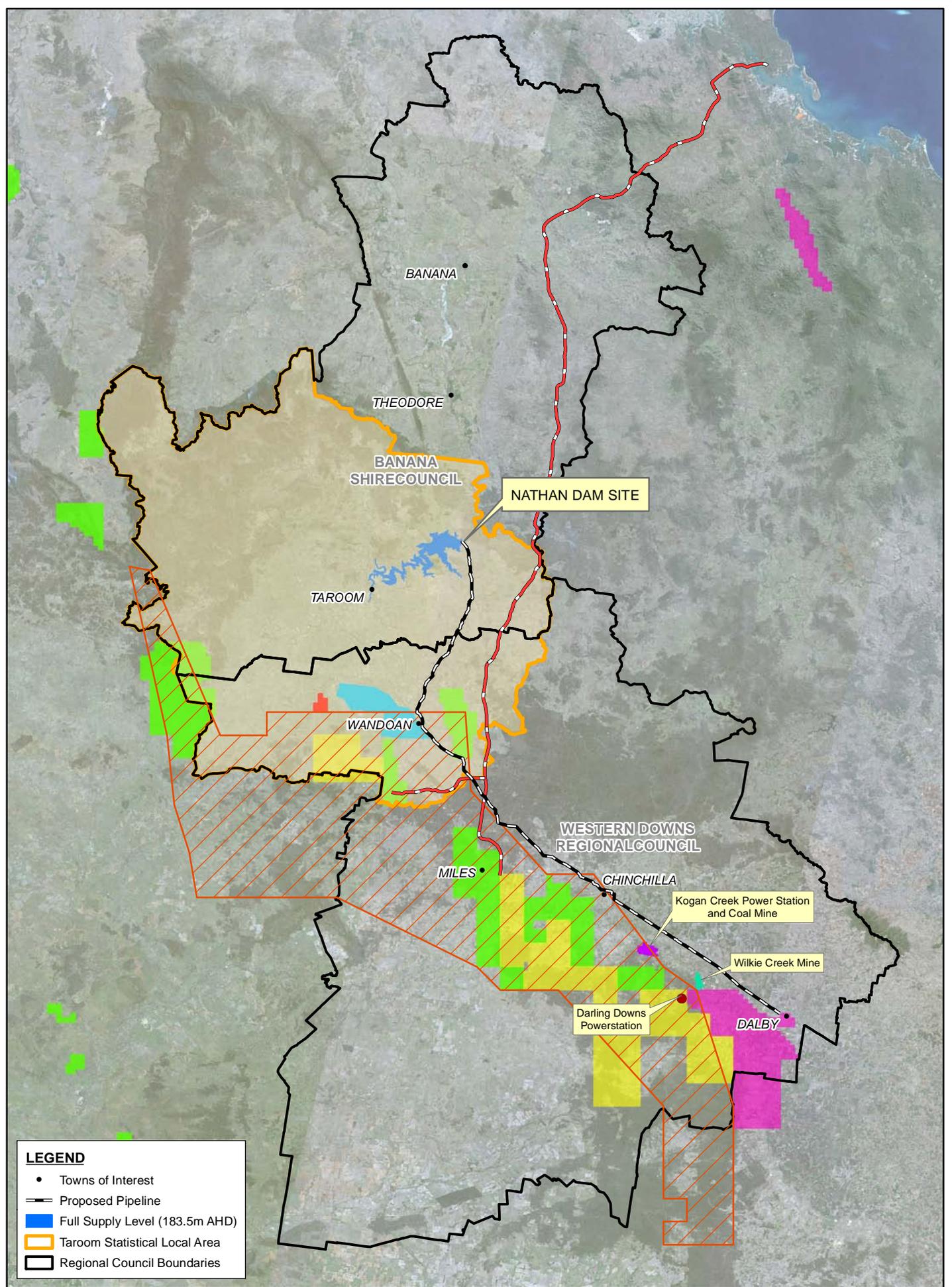
The work opportunities that the Project offers may provide an opportunity to increase workforce participation for communities in this region.

In addition, some opportunities for Indigenous employment may exist during construction, including for the Woorabinda and Cherbourg Aboriginal Communities, where high proportions of people aged 15-64 years were not in the labour force at the 2006 Census. However, these communities comprise relatively small populations, with Woorabinda recording 4.6% unemployment (11 people) and Cherbourg recording 6.8% unemployment (19 people) at the time of the Census.

SunWater is currently in the process of developing an Indigenous Land Use Agreement (ILUA) in consultation with Traditional Owners. The ILUA would contain strategies to develop capacity and enhance employment of Indigenous people. Skills Queensland will also be engaged to develop strategies to maximise Indigenous employment in the Project's workforce.

To maximise local employment, SunWater would also engage with nearby residents to investigate opportunities to provide affected families with off-farm incomes. SunWater would also engage with DEEDI to investigate and reduce other potential barriers for local individuals entering the workforce.

Enhancement measures for employment benefits are discussed in the **Social Impact Management Framework – Section 24.9.2** (Table 24-45).



LEGEND

- Towns of Interest
- Proposed Pipeline
- Full Supply Level (183.5m AHD)
- Taroom Statistical Local Area
- Regional Council Boundaries

Future Development Projects

- Australia Pacific LNG Project Pipeline
- Australia Pacific LNG Gas Fields
- Other Projects
- Elimatta Project
- Wandoan Coal Mine
- Wilkie Creek Mine
- QGC Petroleum Lease/Application
- Arrow Petroleum Lease/Application
- Origin Petroleum Lease/Application

Projection: GDA94 Zone 56

Figure 24-9

0 10 20 40
Kilometres

Scale 1:2,000,000 (at A4)

N

SKM SunWater
Making Water Work

NATHAN DAM AND PIPELINES EIS

Other project developments in the study area

24.5.2.2. *Education and training*

The level of benefit for local communities from employment would be dependent on access to appropriate education and training programs. There are currently a number of State-wide skills shortages, which may affect recruitment and training priorities for the Project. At June 2011, the Department of Education, Employment and Workplace Relations (DEEWR) recorded the following applicable skills shortages in Queensland:

- engineering managers;
- surveyors;
- engineers (civil, mechanical, transport, electrical, mechanical);
- civil engineering draftspersons and technicians;
- electrician; and
- building associates.

More detail around these skills shortages would be determined in consultation with Skills Queensland as part of the SIMP process for the Project.

Prior to construction, expressions of interest would be called for supply of skills and services to the Project. In addition, training opportunities would be made available to the existing workforce in the region to enhance their capacity to access potential employment opportunities provided by the Project. These opportunities may be made available through local education and training organisations or the companies contracted to construct the Project. This may also be coordinated through Skills Queensland.

In Taroom, there is limited capacity to provide education and training as there are no TAFE or Registered Training Authority (RTA) facilities. However, a range of training providers are located in Chinchilla, Dalby and Toowoomba (**Section 24.3.6.1**), and SunWater would encourage development of partnerships with local training providers to deliver relevant programs and strategies.

The companies contracted to construct the Project would also be required to arrange timely training and qualification arrangements to meet the needs of skills development to support all phases of the Project. The construction contractor should ensure all relevant Queensland Government employment policies are followed, including maximising the use of local workers, traineeships and apprenticeships and providing training where appropriate. In sourcing these workers locally, the contractor should also consider contacting local employment services and school-based programs.

In this regard, a Workforce Management Plan would be developed in consultation with the Project's contractors to ensure that all employment and training obligations are disclosed to the contractor and that full buy-in is received.

Contractors and subcontractors must also comply with the *Building and Construction Contracts Structured Training Policy (10% Training Policy)*. This policy requires a minimum of 10% of total labour hours to be undertaken by apprentices, trainees or cadets, or used to up-skill existing employees. The plan articulates methods to achieve this,

such as identifying skills required, arranging timely training, and ensuring all training and qualifications meet national requirements.

SunWater should also provide DEEDI with workforce management plans outlining required skills and qualifications levels, as well as schedules for skills requirements in advance of the Project, allowing the Department to develop targeted training initiatives.

Enhancement measures for education and training benefits are discussed in the **Social Impact Management Framework – Section 24.9.2** (Table 24-45).

24.5.3. Local business and industry

Local business and industry may be impacted by the Project, either beneficially or adversely through:

- increased local and regional demand for goods and services;
- changes to household income levels, and a subsequent boost to the local economy;
- the loss of business opportunities associated with the inundation of or constrained access to local farming properties;
- increased opportunity for tourism and recreation-based business ventures; and
- increased competition for skilled and unskilled employees.

Impacts on local business and industry are described in **Chapter 25**.

24.5.3.1. *Direct business opportunities*

Opportunities would be provided for local and regional businesses during construction and operation through demand for goods and services.

In particular the Project would require construction materials, accommodation services, transport and sub-contract construction skills (e.g. electrical, plumbing, fencing). In this regard, the Project would adhere to the requirements of the *State Procurement Policy (2010)*. This policy aims to ensure that competitive local suppliers that comply with relevant legislation are given a full, fair and reasonable opportunity to supply the projects of Government-Owned corporations (i.e. SunWater). It also aims to promote procurement from suppliers that treat their employees fairly.

While it is expected that the majority of temporary contractors and consultants would be accommodated in the camps, there may be limited opportunities for short-term accommodation providers during construction. However, consultation for the SIA indicated that many existing accommodation facilities are booked for weeks in advance and may have limited capacity to support increased demand. Arrangements for the accommodation of construction workers would be developed in consultation with all local stakeholders including local councils and community organisations. Collaboration with other resource development proponents may also be undertaken to minimise the cumulative impacts of the project on the local accommodation and housing market.

Consultation for the SIA also highlighted that local businesses and supply chains may not be 'project ready' and therefore unable to access supply opportunities and take advantage of the flow-on effects of the Project. In this regard,

early communication of Project opportunities would allow local businesses to prepare. Engagement with DEEDI (including its Office for Advanced Manufacturing) and the Industry Capability Network (ICN) should also be ongoing to implement programs and strategies that equip local and regional businesses to access Project opportunities. DEEDI also identified that supply chains in the Wide Bay Burnett area may have capacity to service the Project. Opportunities would therefore also be communicated through local networks in Bundaberg, Hervey Bay and Maryborough to maximise Project benefits.

Following construction, a legacy of new skills and capabilities may develop in the broader region. The Project may also have a number of indirect benefits for local business and employment through increased expenditure in the regional community. This may assist in strengthening the retail sector and benefit businesses such as shops, service stations and hotels.

Over the longer term, the Project could provide a number of opportunities for recreation-based tourism and business development, including fishing, boating, hiking and camping. This in turn has the potential to generate associated job opportunities and increased economic output. SunWater would promote and encourage this through the construction of two recreation areas at the dam site, which would be managed and maintained by Council over the long term. This may stimulate benefits for local tourism operators and entrepreneurs, as well as accommodation providers.

To increase access to opportunities around these 'new economies', an integrated approach to tourism development and marketing needs to be adopted in partnership with local and State government. Specifically, promotion around nature-based tourism, such as fishing, boating and camping would need to take place at a regional level.

Mitigation and enhancement measures for these potential impacts are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-46)**.

24.5.3.2. *Agriculture and alternative industries*

Dam and surrounds

Some agricultural business enterprises would be directly affected by the Project.

Property acquisition would result in the direct loss of one farming business in the water storage area, while partial acquisition would affect a further 14 businesses, all of which are family owned and operated and generally employ two people or less. Loss of employment in the agriculture industry is therefore not expected to be significant in the wider context of the region.

However, consultation with affected landholders identified concern that partial acquisition may affect the viability or profitability of businesses, with many landholders stating that onsite farming was a primary or sole source of income for the family (SunWater, 2010). Landholders also expressed that the day-to-day management of farms may be affected through changes to access and connectivity, which could also impact on the viability of operations.

SunWater would take measures to ensure that fair market value is paid for the permanent or temporary loss of productivity to ongoing farming operations, to minimise property impacts where possible. SunWater would also undertake full property acquisition, rather than partial acquisition, where required to minimise impacts of the water storage on the viability of existing businesses.

Some economic benefits for local farming businesses may potentially be experienced if a proportion of water from the dam is made available locally. This was raised strongly during consultation with affected landholders as a potential benefit for local agricultural businesses.

Pipeline

Some concerns were identified by property owners during Project consultation about potential disruption to existing farming operations from construction and operation of the pipeline. Ongoing engagement with affected landholders and providing notice in advance of property access would assist in minimising impacts. In addition, where possible, the pipeline alignment has been located within or adjacent to already established infrastructure easements to minimise loss of productivity on agricultural properties.

Disruption to farming businesses could also occur through the spread of weeds between properties and land access issues such as public access to the pipeline corridor and potential for gates to be left open or fences to be damaged. The implementation of appropriate environmental management measures (e.g. vehicle wash down procedures) and land access protocols (e.g. relating to the reinstatement of fences, closing of gates) would be important in minimising potential impacts on farming operations. Pre-construction discussions with landowners will aim to clarify such issues as the farmers' preference for gates or grids in particular locations and preferred access track locations.

SunWater has standard operating procedures for weed control and land access as part of its Environmental Management System. Weed control includes a range of physical and chemical controls as appropriate to the species of weed and its location. The correct type and application of chemicals is also addressed. Liaison with farmers on such issues would be undertaken prior to implementation of the weed management strategy. Public access would not be permitted to the pipeline easement, though farmers would be able to use the access track for movement within the property.

Downstream of dam

Landholder consultation also identified issues relating to impacts on water quality and water availability for downstream users (**Chapter 14**). A number of downstream water harvesters and unsupplemented irrigators may be affected by changed downstream water access through reducing available pumping days, with unsupplemented irrigators in the downstream Dawson catchment expected to experience an average reduction of 10% of their mean annual diversion. Compensation would be provided to existing users who are negatively impacted by the Project. Compensation could be delivered through a range of measures, such as financial compensation or provision of an alternative water product. SunWater would also undertake early discussions with DERM and the individual entitlement holders about the implications and options for compensatory arrangements. The implementation of water quality monitoring during construction and operation would also help to manage water quality for downstream users.

While some irrigators and water harvesters may be adversely affected by changed downstream flows, the Project may also provide benefits for some local businesses and industry through the provision of a reliable water supply, primarily to coal mines and power stations in the Surat Basin, as well as to existing and new customers in the Dawson Valley Water Supply Scheme.

However, during consultation for the EIS, stakeholders raised the need to ensure that the region maintains alternative industries and that the Project is not built solely on meeting mining industry water demands. In this regard, the provision

of a secure water supply may assist in stimulating the development of alternative industries in the region, providing additional local employment and business opportunities. The sale of water from the Project is also not formally restricted to mining customers; any new approved industry can potentially purchase water from the project.

The provision of a secure, long term water supply may also benefit agricultural users who elect to purchase water from the dam, providing opportunities to expand or diversify farming operations. However, based on SunWater's agricultural demand surveys in the area, it seems unlikely that irrigators in the region would purchase much water given the projected costs. Any agricultural production stimulated in this way is not expected to fully compensate for the loss of access to unsupplemented supplies for some other users.

24.5.3.3. Competition for labour

Increased demand for workers during construction may impact on existing skills shortages in some industries. This may be exacerbated by other development projects taking place in the study area, and their significant employment requirements (Table 24-7).

In the Surat Basin, several studies have been conducted to explore potential cumulative impacts from rapid resource and project development, including the *Surat Basin Scoping Study (2008)* and the *Surat Basin Future Directions Statement (2010)*. These studies and others identify that projects in the Surat Basin would likely experience difficulty in attracting and retaining workers due to:

- the low availability of appropriately skilled workers;
- low local unemployment levels;
- difficulty in attracting people to regional areas, given the basic levels of community services and infrastructure; and
- the limited availability of vocational training and education opportunities in regional towns.

The higher wages associated with construction occupations may attract staff out of traditional industries and service sectors. This may have a knock-on effect on the ability of these industries to viably compete in the labour market. Over the longer term, this may also leave a legacy of inflated service prices, with increased cost of living potentially affecting liveability of the region. Service delivery in some communities may also be affected if workers are attracted out of these sectors, either by increasing the cost of access to services or impacting the ability to provide these services.

As stated previously, given these likely labour shortages, it is expected that only a small proportion of workers for the Project (approximately 10%) would be sourced from the local area.

Mitigation and enhancement measures for these potential impacts are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-46)**.

24.5.4. Population and demography

Potential impacts on the population and demography of the study area include:

- a slight reduction in the local population as a result of property acquisitions for the water storage area; and
- a temporary influx of non-resident workers during the construction phase.

24.5.4.1. Dam and surrounds

Property acquisitions undertaken in the water storage area would result in a slight decline in the local population as some people move out of the area. The extent of this impact is likely to be very limited given that only one household (Glebe Homestead) would be required to relocate as part of the Project. Other families that are partially affected by the Project may also choose to relocate, which may result in a number of other families moving out of the area. However, SunWater would likely lease or sell these properties to other people, who may continue to live in the area, thus mitigating impacts on population numbers. Ongoing consultation with landholders in the dam area would be undertaken to determine the extent of this impact.

Consultation with the DoC suggests that, in general, construction projects result in approximately 7-8% of the non-local workforce relocating with their families into the local area for the duration of construction (DoC, pers. comm., 19/08/2010). While it is expected that this figure may be lower for the Project given the short duration of construction and the lack of long-term employment during operations, it has been applied as a basis for this assessment.

Based on these assumptions, it is expected that up to 142 non-local workers would likely reside temporarily in the purpose-built workers' camp during the roster (**Table 24-38**). This would represent a significant increase in the non-resident population of Taroom, which had no non-resident workers at June 2008.

Of non-resident workers, it is assumed that approximately 7% (or 11 workers) would move with their families to Taroom and surrounds. Based on an average household size of 2.6 people in Queensland, this would represent approximately 29 new people moving into the area for the duration of construction.

Over the longer term, a more reliable water supply for urban and industrial development would potentially support additional economic activity, business development and population growth.

Table 24-38 Construction workforce, dam and surrounds

Total workforce		Non-local workforce		Accommodation camp workers		Resident family influx		Estimated population influx
No.	%	No.	%	No.	%	No.	%	
170 peak	100%	153	90%	142	93%	11(29)	7%	171

Changes to the demography of the local area may also be experienced during construction of the Project. In particular, the delivery of local training initiatives may present younger people with a range of diverse career paths and may attract and encourage young people to stay in the study area. This may be particularly beneficial for areas such as Taroom, which have experienced an ageing population in recent years.

Gender diversity in the community may also be temporarily affected by the Project. Based on SunWater's previous experience, it is expected that approximately 95% of the workforce would be male, which would proportionally increase the number of males in Taroom for the duration of construction.

The cultural diversity of the population may also be increased if skills cannot be sourced nationally, and a proportion of workers are recruited from overseas. This may be notable in the local community considering that Taroom recorded a low proportion of people born overseas at the 2006 Census.

Potential impacts of demographic change and increased cultural diversity on community values and lifestyles are discussed in **Section 24.5.9**.

Mitigation measures for potential impacts on population and demography are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49)**.

24.5.4.2. Pipeline

Construction of the pipeline would not require the relocation of any homesteads or families. As such, no direct impacts on population and demography are expected as a result of property acquisitions.

Peak construction of the pipeline would require up to 220 workers, being split between two accommodation camps in Wandoan and Chinchilla. While the short duration of construction for the pipeline may mean that a very small proportion of workers would relocate permanently into the local area, this assessment has been based on the same assumptions identified for dam construction workers. As such, it is projected that an influx of approximately 198 non-local workers (or 90% of workers) would be experienced along the pipeline (**Table 24-39**). The majority of these would live in the purpose-built workers' camps during the roster, while a small proportion (approximately 7%) would relocate with their families into townships such as Miles, Chinchilla, Wandoan and Dalby.

As such, the non-resident population of Wandoan would increase by 92 people, representing an increase of 177% in the non-resident population of the township as recorded in June 2008. While this increase looks significant in and of itself, it is likely that the proportion of non-resident workers in Wandoan has already increased since June 2008, and is likely to increase significantly further with the construction and operation of the Wandoan Coal Mine Project. The ERP of Wandoan at June 2009 would increase by approximately 11.6%.

In Chinchilla, the non-resident population would also increase by 92 people, representing an increase of 24% in the non-resident population of the township at June 2008, and an increase of 2.1% in the June 2009 resident population.

Approximately 14 workers are expected to relocate with their families, meaning that approximately 36 people would relocate to Wandoan, Miles, Chinchilla or Dalby. This would represent only a minor change in the resident populations of these townships.

Table 24-39 Construction workforce, pipeline

Total workforce		Non-local workforce		Non-resident workers influx		Resident family influx		Total influx
No.	%	No.	%	No.	%	No.	%	
220	100%	198	90%	92 Wandoan	93%	14 (36)	7%	220
				92 Chinchilla				

It is likely that the demography of townships along the pipeline would experience similar changes to those described for the dam and surrounds.

Mitigation measures for potential impacts on population and demography are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49)**.

24.5.5. Housing and accommodation

The construction and operation of the Project may impact on housing and accommodation in local and regional communities through:

- a slight increase in the resident population during construction, increasing demand for rental and purchase properties, and potentially affecting the cost of renting and purchasing accommodation; and
- an increase in contractors and consultants visiting the area, increasing the demand for short-term accommodation.

24.5.5.1. Dam and surrounds

For construction of the dam, a construction camp is proposed to be established near the town of Taroom. This would accommodate the full peak workforce requirement, to reduce the demand on short-term and longer-term accommodation options in Taroom and surrounds.

The accommodation camp would include a range of services and facilities to cater for the day-to-day needs of workers, consultants and contractors, including sleeping areas, showers and toilets, laundry, rest area, kitchen/ dining areas and some recreation facilities. SunWater would also investigate the possibility of 'leaving behind' accommodation and recreation infrastructure that might be useful to communities over the longer term so that a level of community benefit can be facilitated. This would be discussed in consultation with the BSC, and the accommodation model for the Project would be developed in line with the requirements and principles of the MRPHP.

It is expected that approximately 11 workers may move with their families into Taroom and surrounds for the duration of construction. In these instances, rental accommodation or purchase of existing property in Taroom may be used. Consultation with the DoC (Central Queensland Region) suggested that the private housing market in Taroom is tight, and there would be limited capacity to support additional families moving into the area (DoC, pers. comm., 30/08/2010). This finding is supported by a real estate search, which indicated that there were no rental properties available at December 2011 (**Table 24-23**). In addition, it is difficult to attract private housing development into regional areas, and government is unlikely to undertake capital investment in the area, given the short-term duration of the Project's construction phase.

Consultation for the SIA identified that housing affordability is an issue of concern in the broader region, with a number of households experiencing housing stress (DoC, pers. comm., 19/08/2010). Affordability is also a key issue that is often raised during community consultation for the CSG industry. However, in Taroom and the area surrounding the dam this is not a significant issue, and there is currently no waitlist for social housing.

The Western Downs Regional Council is currently developing a Regional Housing Strategy to secure an adequate supply of affordable accommodation and social housing in the region, based on current and future demand expectations. SunWater would work with the council to provide information for the development and implementation of this strategy.

SunWater would provide the DoC and local community groups with updated Project information to allow monitoring of housing affordability over time. In this regard, SunWater would also participate in collaborative forums, such as the Surat Basin Local Leadership Group and SIA Cross-Agency Reference Group to facilitate a coordinated response to identified affordability issues.

There is also limited availability of short-term accommodation in motels, hotels or caravan parks in Taroona given that there are only four tourist accommodation facilities in town. This may result in an opportunity for such accommodation providers to expand their businesses.

Mitigation measures for impacts on housing and accommodation are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-47)**.

24.5.5.2. Pipeline

Two construction camp facilities would be established for the pipeline in Wandoan and Chinchilla, which would have capacity to accommodate 150 people each (given that the entire pipeline construction workforce may occupy each camp at some point during construction). This would minimise the requirement for local short-term and long-term accommodation along the pipeline. It is expected that the majority of short-term visiting staff (e.g. contractors and subcontractors) would be accommodated at one of the construction camps. As such, construction of the pipeline is not expected to impact on short-term tourist accommodation in the study area. However, existing shortages in the provision of short-term accommodation were raised during consultation for the SIA, with many facilities being booked weeks in advance by private enterprises. The number of 'grey nomad' tourists through the area also impacts on the availability of facilities. SunWater would therefore continue to engage with local accommodation providers to monitor impacts over time.

It is expected that approximately 14 workers may move with their families into townships along the pipeline, including Wandoan, Miles, Chinchilla and Dalby. The demand for rental and purchase accommodation in these townships is therefore likely to increase slightly, although the effects are not likely to be significant, given the small number of families involved and the large geographic area over which the impact would be experienced. As per **Table 24-23**, housing stock availability is not likely to be an issue in Chinchilla and Dalby, where there were a large number of properties available for rent as at September 2010.

Consultation with the DoC reiterated that impacts on local housing demand, as well as social housing are likely to be minimal considering the small workforce involved. However, housing affordability may be slightly affected by the Project when considered in combination with other development projects, particularly for the CSG and mining industries. Some housing affordability challenges are already being experienced in Chinchilla and Dalby, with house prices having increased by 135% and 120% respectively over five years, which is significant for rural Australian areas. This may be indicative of the significant level of development currently taking place in these areas.

Cumulative, the Project may also result in the exacerbation of a 'two stream' economy in the local area, with construction workers earning higher salaries and able to compete in the housing market more effectively than workers in other sectors. This may result in decreased affordability for lower income groups, especially those that are not able to access social housing. Affordability challenges are of particular concern for younger people, people on low or fixed incomes,

and the unemployed and other disadvantaged people, who may be required to relocate in search of more affordable housing options elsewhere, away from established support networks.

Acknowledging these possible cumulative impacts, SunWater would continue to engage with DoC and the WDRC to provide updated Project information and allow for government to monitor and respond to housing affordability challenges.

Mitigation measures for impacts on housing and accommodation are discussed in the **Social Impact Management Framework – Section 24.9.2** (Table 24-47).

24.5.6. Community services and social infrastructure

Social infrastructure includes services, facilities and networks which support community well-being. Effects on community facilities may occur during construction and operation as a result of:

- permanent or temporary changes to access to local facilities;
- increased demand for local services by construction workers and their families;
- opportunities for improved tourism and recreation infrastructure at the dam site; and
- opportunities for improved participation in some community services.

24.5.6.1. Access to social infrastructure and recreation opportunities

Glebe Weir and its associated recreation infrastructure will be inundated by the Nathan Dam water storage. The number of users of this camping facility is not formally recorded as there is no booking or monitoring system, but observations by SunWater staff and sub-consultants suggest that it varies between zero and a few campsites being occupied on any given night, although this may be higher on long weekends and public holidays (**Figure 24-10**).

During the community consultation process for the Project, stakeholders also expressed concern that recreation activities, particularly fishing, on the Dawson River may be disturbed by the Project. Fishing is currently an important tourist activity in the region and may be compromised if downstream flows are decreased by the dam. While the overall flow volume downstream would be reduced by the Project, fishways would be established to facilitate continued movement and migration of fish species.

Over the longer term, SunWater would contribute to tourism and recreation through the development of two recreation areas and a viewing platform as part of the Project. Each recreation area would include a picnic ground, boat ramp, toilet facilities with solar power, and non-potable water supply, and would be designed in accordance with the Australian Standards Design for Access and Mobility. One of the recreation areas would be located on the southern side of the 'Bend', while the other would be on the left bank at the termination of Glebe Weir Road at Boggomoss Creek. The viewing platform would be situated at the dam wall. It is intended that the BSC would take responsibility for the operation and maintenance of recreational facilities, as is presently the case with the Glebe Weir Camping Reserve.



Figure 24-10 Glebe Weir Camping Reserve

The construction of the pipeline may result in temporary and slight changes to access for the following community facilities in the corridor:

- Wandoan Racecourse on Windeyer Road;
- Wandoan Golf Club on Tip Road; and
- Dalby Airport on Knight Street.

These impacts would be managed through consultation and communication with facility owners and where necessary, the provision of alternate temporary access. It is normal practice to complete works on both sides of the access road first so that disturbance to the actual access is for the shortest time possible, i.e. generally no more than a few days.

24.5.6.2. Demand for social services

Across the Surat Basin, the development of multiple resource and infrastructure projects may reduce the ability of social infrastructure and services to support the local community. In particular, the varying needs of resident and non-resident populations may change the nature and level of demand for social infrastructure and services.

While the proposed DIDO/FIFO workforce arrangement of the Project would limit many potential impacts on local community services provision, based on the assumption that approximately 11 families relocate to the Taroom area, this would result in a population increase of about 29 people, of which around 10 people are expected to be dependent children. Along the pipeline, it is assumed that approximately 14 families would relocate to local towns, resulting in a population increase of about 36 people, including around 12 children. This may increase demand for some community services and social infrastructure in these towns, such as health, education and emergency services.

An increase in the non-resident populations of local towns may also place increased pressure on some services, particularly when considered cumulatively with other projects.

Enhancement and mitigation measures for potential impacts on community services are outlined in the **Social Impact Management Framework – Section 24-88 (Table 24-47)**.

Health services

The provision of health services was raised as a concern for communities during consultation for the SIA. In addition to recruitment and retention issues previously identified in **Section 24.2.4.4**, key stakeholders noted that:

- hospitals in Taroom, Dalby, Chinchilla and Wandoan are operating at full capacity and do not have the human resources to support spikes in demand;
- GP and health services at Wandoan would be impacted by any increase in demand;
- many GPs in the study area are nearing retirement age, which may exacerbate current constraints; and
- the poor road surface between Dalby and Toowoomba results in difficulties transferring patients between the two hospitals.

The Darling Downs West Moreton Health District advised that the number of development projects in the local area has led to an increased number of patients presenting at local hospitals and GPs. This has compounded the effects of an ageing population on health services in the study area. Currently, the majority of health incidents associated with development projects and workers' camps relate to road accidents, as well as some alcohol and drug related issues. These issues may be exacerbated by the Project.

Given the small number of employees expected to move into local towns, it is not expected that the impact on health services would be significant. However, some impacts, particularly on emergency and outpatient services, may be experienced due to the increased resident and non-resident population in the local area. To minimise potential impacts of the non-resident workforce, SunWater would provide emergency aid and medical facilities onsite in accordance with the Workplace Health and Safety Guidelines. First aid officers and a Safety Manager would also be available to respond to primary health and medical needs. The Project would also provide updated employment forecasts and schedules to Skills Queensland (to coordinate with Queensland Health) as these become available to assist government in monitoring impacts over time. A Health and Safety Plan and Fatigue Management Plan would also be developed. This would include communication with all site based workers, to assist in reducing the number of Project-related emergencies, as well as driver awareness and education programs for the Project workforce.

To assist in dealing with potential emergency situations, SunWater would also engage Queensland Health in the Project's emergency response planning process, and would align strategies and procedures with the disaster management plans of local hospitals within the dam area and along the pipeline.

Childcare services

It is unlikely that the Project would result in significant increased demand for childcare services in Taroom, Wandoan, Chinchilla and Dalby, as it is expected that most workers' families would reside in regional centres, and that only a small number of children would move into local townships.

However, from a cumulative perspective, an increase in the number of families and children in the study area may increase the demand for childcare services. This should be considered in light of the difficulty in recruiting childcare workers to rural areas, and the general lack of interest in entering the childcare sector (DET, pers. comm., 24/08/2010). Constraints may also arise in that there is limited interest from private developers in establishing new centres in the study area.

In particular, constraints may be experienced in Taroomb, Wandoan and Dalby, where advice from DET indicates there is limited capacity to support increases in demand. Chinchilla, Miles and Toowoomba would be expected to accommodate growth if required.

SunWater would continue to engage with the DET's Office for Early Childhood Education and Childcare to provide updated employment forecasts and schedules, as well as the expected demographics of the workforce and their families. This would allow DET to appropriately plan for service provision into the future, and for SunWater to consider mitigation of any Project impacts.

Education services

It is unlikely that the Project would have a significant effect on demand for education services in the study area, as it is expected that most workers' families would reside in regional centres, and that only a small number of children would move into local townships.

Consultation with the DET suggested that local school infrastructure is expected to cope with any Project-related increase in demand. However, from a cumulative perspective some impacts may be experienced, particularly in Wandoan, which may be heavily affected by other upcoming development projects, including the Wandoan Coal Project.

Some difficulties may also be experienced in attracting and retaining teachers in the maths, science and manual arts areas if the requirement for these is increased.

Prior to construction, SunWater would liaise with DET to facilitate a forum with local school principals. Through this forum, SunWater can communicate workforce forecasts and likely demographics, to allow the Department to adequately respond to potential changes in demand. The forum may also focus on exploring partnership opportunities to increase interaction between industry and local schools, and facilitate opportunities for training and skills development.

Family support services

Consultation with the DoC indicated a requirement for crisis accommodation and homelessness services in the study area. Crisis accommodation is often required for short-term or temporary refuge for victims of domestic violence for example. This impact is likely to be negligible, given that employees and their families that move into the local area would be supported by a Project income.

It is also possible that the requirement for counselling and family support services may be increased locally as a result of the Project, and other developments in the area. In this regard, SunWater and its contractor would provide an Employee Assistance Program (EAP) to its workers and their immediate families to reduce pressure on local service provision. The EAP would offer support to employees for a wide range of personal issues including stress, anxiety, relationship issues, work issues, alcohol and drug issues, and financial difficulties.

Emergency services

The construction of the Project, as well as the introduction of non-resident workers into camps may impact on demand for local emergency services. Increased resident and non-resident populations in these townships may impact on the capacity and staffing of these services, if advanced planning is not undertaken.

In particular, consultation with Queensland Police indicated that existing police stations may have little capacity to cope with population increases and construction activities, especially given the large number of other development projects planned for the region (Queensland Police, pers. comm. 24/08/2010). It was also suggested that the recruitment of police officers into the study area can be a challenge, particularly in areas where the housing market has become unaffordable (e.g. Chinchilla), and as such, advanced notice of any potential changes in demand is required.

Particular capacity concerns include the increased potential for traffic and road incidents as a result of movement of construction vehicles and workforce vehicles through the study area. This would also impact on fire and ambulance services. In addition, the movement of wide loads for the Project may increase the requirement for police escort vehicles and congestion management services, which are currently stretched in the region. While workers' camps in the region are generally well managed, the potential also exists that an increased incidence of drug and alcohol use and other offences may occur as a result of the Project.

As the workers' camps for the Project would generally be self-contained and offer a level of services and infrastructure that would minimise the interaction of the workforce with local communities, potential impacts on security requirements are likely to be minimal. A security service would be on site at the camps and at the main work sites. The implementation of protocols around worker behaviour within the camp and local area would also assist in minimising impacts.

In order to minimise impacts on local emergency services, and conduct appropriate workforce management, SunWater's contractors would also:

- establish ongoing relationships with the Police 'Officers in Charge' at each affected township, and undertake coordinated safety and security planning;
- establish ongoing relationships with local fire and ambulance stations at each affected township, and undertake coordinated emergency response planning;
- adopt a 'zero tolerance' drug and alcohol policy within the workforce;
- implement a workforce code of conduct to minimise negative employee behaviour within the community and on site, including policies and testing procedures around drug and alcohol use;
- alert Queensland Police of any known or potential community protest action against the Project;
- provide advanced notice of the requirement for any police escort vehicles for oversized loads;
- adopt strict regulations around storage and security of site equipment, to minimise theft and vandalism;
- involve Queensland Emergency Services and Queensland Police in emergency response planning for the Project;
- provide bus transport from workers' camps to work fronts and to key localities to minimise occurrence of fatigued driving, and reduce the risk of road safety incidents; and
- implement a Fatigue Management Plan to reduce road safety risks.

24.5.6.3. Participation in community services

An increase in the area's resident and non-resident population could have benefits for local sporting and recreation clubs through increased membership and participation levels. Consultation for the Project suggested that previous developments in Taroom had increased participation in local clubs and societies (BSC, pers. comm., 20/08/2010). Communities also indicated that the town of Taroom could benefit significantly from increased activities for young people if these are associated with the Project.

Traditionally, construction workers on shifts have struggled to be regularly involved in such activities and do not usually participate in community activities. Where possible, SunWater would encourage its workforce to participate in local events and recreation ventures. This would be done through providing community information materials at the workers' camps and on site.

24.5.7. Access and connectivity

Potential impacts to local access and connectivity may result from:

- increased construction traffic on local and regional roads, including the haulage of materials and equipment by heavy vehicles and transport of construction workers to accommodation camps;
- changes to local roads, including road upgrades, closures and temporary diversions; and
- changes to property access, including both temporary changes during construction and permanent changes due to water storage and Project infrastructure.

Additional impacts on traffic and transport are discussed in detail in **Chapter 21**.

24.5.7.1. Dam and surrounds

Road infrastructure upgrades are likely to involve full and partial road closures or diversions, potentially impacting on access and connectivity in the local area over the short term. Given the pastoral nature of the surrounding properties this may also impact on livestock transport and subsequently farm productivity.

This issue was raised strongly during consultation with directly affected landholders, who expressed concern that some properties may become fragmented or isolated over the longer term (SunWater, 2010). Isolation of properties will not result from the Project, although travelling times may be increased for some properties (**Chapter 21**). In particular, the road closure at Bundalla Road would represent a maximum increase in travel distance to and from Taroom of approximately 19 km from the northern side of the FSL. While Bundalla Road currently experiences low traffic demands and is not used as a school bus route to/from Taroom, there may be a number of students affected, who currently use the Road to access a bus stop at Taroom-Cracow Road. In addition, some residents indicated that Bundalla Road is the main point of access to their property and that appropriate alternative access points have yet to be identified. Owners were particularly concerned that alternative access routes in the surrounding area involve use of unsealed roads, which could increase travel time, while also increasing potential road safety hazards and risks. Mitigation measures for local property access and school travel will be developed in consultation with the affected stakeholders at detailed Project design.

During construction, an increased volume of traffic would likely be experienced on local and regional roads, including on the Leichhardt Highway. These increases in traffic may result in:

- increased travelling time for local landholders;
- increased travelling time for school buses, and students travelling to school; and
- impacts on the quality of road surfaces, potentially impacting on road safety for some motorists and other road users (e.g. cyclists and school buses).

Management of construction traffic would be required to maintain safety for motorists during construction. This would include communication (i.e. signage, advertisements in local papers, consultation materials) with local residents and road users about changes to local access, potential road hazards and expected traffic volumes during construction.

Over the longer term, following the filling of the water storage, a number of roads would be inundated. Bundalla Road will be closed due to inundation; however no property access will be affected, with minor increase in retrace routeing estimated for a minor number of anticipated trips (**Chapter 2**). Bundalla Road would become two terminal roadways as a result of the road closure, which would cut off access to the north from a school bus stop in Taroom-Cracow Road. Community consultation is required to inform mitigation measures, such as additional bus or alternative arrangements to/from Taroom.

Traffic related to operations is expected to be minimal. While the storage would provide a significant attraction, it is still in an isolated location with low local populations. Other than weekend and holiday periods, a regular low level of visitation is expected from tourists, particularly the 'grey nomad' travellers.

SunWater would continue to engage with relevant Queensland Government agencies, local councils and affected landholders to:

- develop and implement a Traffic Management Plan;
- maintain the connectivity and functionality of road networks;
- maintain access for emergency vehicles;
- maintain safe and convenient access for landholders to their properties;
- construct any new roads to current design and safety standards for roads of that category;
- maintain utility infrastructure and services for landholders;
- co-locate, within any new road corridors, any other infrastructure where applicable;
- minimise environmental impacts;
- develop and implement an Emergency Response Plan; and
- comply with cultural heritage duty of care.

Mitigation measures of for access and connectivity impacts are outlined in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49)**.

24.5.7.2. Pipeline

Potential impacts on local access and connectivity associated with the construction of the pipeline may include the same range of issues as the dam and surrounds. During construction, increased heavy vehicle traffic for the delivery of materials and equipment would likely be experienced along Nathan Road, the Leichhardt Highway and the Warrego Highway. As described earlier, road safety is a key concern for local communities and increased traffic on the Warrego Highway is likely to be an issue, especially when considered in combination with the number of other development projects in the area.

Construction of the pipeline within or adjacent to the road reserve may also result in temporary changes to local property access, where works are being undertaken in front of properties. During consultation for the EIS, stakeholders expressed concern that these access changes may disrupt lifestyles and livelihoods. Some landholders are affected by several development projects and expressed that cumulative access changes could have an effect on farming operations. However, the Project is not expected to have a significant impact on property owners given the relatively short duration of construction at each location. If for any reason access is severed for more than a minor period, alternative temporary access would be provided. SunWater would also continue to consult with affected landholders to facilitate access requirements and preferences to the degree possible.

The movement of workers to the pipeline work fronts from construction camps may also increase traffic on local and regional roads however much of this would occur within the pipeline construction easement. Bus transport for workers on roster changes would also be provided from Brisbane to Toowoomba, Dalby, Chinchilla, Miles and Wandoan.

Mitigation measures would be applied as identified for the dam and surrounds, and as contained in **Chapter 21**. Consultation would also be undertaken with school bus operators, the DET, and local schools to identify potential changes to school bus access and safety for students. Consultation with emergency services providers would also be required to communicate changes to local access along the pipeline during construction.

Mitigation measures of for access and connectivity impacts are outlined in the **Social Impact Management Framework – Section 24.9.2 (Table 24-49)**.

24.5.8. Community health and safety

Impacts of the Project on community health and safety may result from:

- stress or anxiety relating to property acquisition or lifestyle changes;
- road safety issues associated with vehicle movements and employee commuting arrangements; and
- potential safety or security issues associated with the presence of a non-resident workforce.

24.5.8.1. Dam and surrounds

Acquisition of properties in the water storage area may cause stress and anxiety for local residents, particularly where there is uncertainty around affected properties or where prolonged investigations and negotiations have taken place. This was identified as a concern during consultation with affected landholders with landholders indicating frustration with 'living in limbo' while Project decisions are made, and stated that ongoing delays and uncertainties about the project were a source of stress and anxiety (SunWater, 2010). Initial property acquisition for a previous version of the project

began in 1996. Delays to the EIS process have created a level of uncertainty for property owners and tenants in the dam area, who would like the future of the Project to be finalised so that decisions related to property renovations or relocations can be made.

Residents may also experience lifestyle changes where existing social and support networks are severed by property purchases, or where families move away from the local area. As indicated through consultation with local landholders, the majority of residents had lived in the area for over 20 years and may have strong emotional attachments to their properties and land, potentially making them more vulnerable to stress and anxiety about property acquisition and relocation.

This impact will occur on a small scale given that only one household (Glebe Homestead) is required to be relocated. However, other landholders may choose to relocate, depending on the nature of property inundation that is experienced. SunWater would continue to engage affected residents to negotiate suitable relocation arrangements, and provide certainty around property acquisitions in a timely manner. Where affected stakeholders would prefer immediate acquisition, SunWater would facilitate this where possible to minimise uncertainty, noting though that DERM is conducting the actual acquisition.

As identified previously, Project-related increases in traffic volumes on local and regional roads would likely be a concern. Consultation undertaken for the SIA identified stakeholder concern that areas with a presence of DIDO workers may experience higher levels of drink-driving and fatigue related vehicle accidents. This was a particular concern given the number of other development projects planned for the Surat Basin. However, the provision of Company-provided bus transport to and from worksites would aim to minimise the use of private vehicles, and hence the risk of such impacts.

In addition to implementation of a construction traffic management plan, SunWater would also design and enforce a Fatigue Management Plan to minimise fatigued driving, and adopt a 'zero tolerance' policy with regard to alcohol and drug use when driving. This would include alcohol and drug testing procedures.

During consultation for the SIA, it was also expressed that an increased incidence of drug and alcohol use, and subsequent crime, may be associated with the non-resident workforce, particularly from a cumulative perspective (Queensland Police, pers. comm., 19/08/2010). This may impact on community safety or community perceptions of safety.

However, as the construction camp for the Project would generally be self-contained and offer a level of services and infrastructure that would minimise the interaction of the workforce with local communities, potential impacts are likely to be minimal. SunWater would also adopt a strict code of conduct within the workforce to minimise negative interactions with the resident community. Security services would be provided at the workers' camp and on site where necessary to minimise security risks, while consultation with Queensland Police would be ongoing.

Mitigation measures for community health and safety impacts are outlined in the **Social Impact Management Framework – Section 24.9.2** (Table 24-49).

24.5.8.2. Pipeline

Community health and safety issues along the pipeline would likely be similar to those identified for the dam and surrounds. However, existing and planned CSG and resource projects may exacerbate community health and safety impacts in the pipeline area. Similar mitigation strategies would be implemented to manage potential impacts on health and well-being.

24.5.9. Community values and amenity

This section outlines potential impacts on community values, local amenity and community cohesion. Amenity plays a large part in determining community liveability and well-being, and is a term given to the attributes and appeal of a place. This can be negatively affected by loss of privacy or views, or by nuisance arising from noise, dust, and odours.

Activities related to the construction and operation of the Project may result in:

- changes to community cohesion due to the displacement of some residents and influx of construction workers to the local area;
- changes in the use of and access to culturally important areas and landscapes;
- reduced local amenity for those properties closest to construction activities or haulage routes due to dust, noise and visual impacts; and
- effects on social and environmental values and aspirations held by local and regional residents.

Mitigation measures for these potential impacts are discussed in the **Social Impact Management Framework – Section 24.9.2** (Table 24-49). Impacts on Indigenous and non-Indigenous cultural heritage are addressed fully in **Chapter 22** and **Chapter 23**.

24.5.9.1. Dam and surrounds

Displaced residents may move away from family or friends or lose existing social and support networks. As such, the acquisition of some properties could result in a loss of family history and heritage and links to the area. However, this is not likely to be significant given that only one homestead is required to be relocated. In addition, SunWater would continue to consult with directly affected landholders about the Project, to increase certainty to landholders about the property acquisition process and potential relocation arrangements.

During consultation for the EIS, some landholders in the dam area expressed concern around progressive loss of farming land, and the effects of this on the community values and livelihoods of farmers and their families. The Project may therefore be perceived by some as a diminishment of the area's agricultural history and agricultural values and rural lifestyle.

An increase in the number of construction workers in the local area may also be a concern for some residents. In particular, the perception may exist that an increase in workers' camps and the number of non-resident workers may result in increased incidence of drug and alcohol abuse and related crimes and nuisances. In addition, it may be felt that workers do not integrate or participate in the residential community, thus reducing any potential benefits of an increased local population (e.g. local spending, participation in community events). The workers' camps for the Project would also

likely result in a gender or demographic imbalance, through the introduction of a large proportion of male, mostly younger, workers. This may be perceived to alter the social structure and fabric of the local community. The Project may also introduce a proportion of overseas workers, who may come from different cultural backgrounds and operate according to different social norms. The impact on cultural change and integration would therefore need to be considered in mitigation programs and workforce induction and education programs.

However, the construction camp would cater for the day-to-day needs of workers and would generally be self-contained. The camp would operate a bar for a defined period around the evening meal to minimise alcohol use by workers in Taroom town. In addition, the camp would be located outside of the residential area of Taroom to minimise impacts on local residents. The implementation of protocols around worker behaviour in the camp and local area would also assist in minimising impacts on community values and cohesion. Maximising the involvement of local businesses in servicing the needs of the camp would assist in maximising the benefits of the camp's presence.

Potential impacts on residential amenity due to noise and dust generated by construction activities for the dam are expected to be minimal, due to the relative remoteness of the construction worksites from surrounding homesteads and towns.

Social amenity also relates to the ability to live in accordance with one's values, both social and environment. Activities such as vegetation clearing and fauna relocation may impact on the environmental values of some community members. However, the vast majority of the water storage is agricultural pasture, which would be left undisturbed. Consultation for the EIS identified stakeholder concern that environmental values associated with the boggomoss ecosystem in the dam area may be compromised by the Project. Stakeholders emphasised that existing ecosystems are unique and should be preserved to the extent possible. Outcomes of the Project's CLG meetings also suggested that environmental values associated with the preservation of species such as the platypus, as well as preservation of fish migration passages are also important to local communities.

Environmental management measures to mitigate impacts such as the spread of weeds and protection of species would be implemented during construction. In addition, vegetation cleared in the water storage area would be compensated for in accordance with the Vegetation Management Act. Ongoing consultation with local residents and environmental groups about likely impacts on environmental values and management measures would help to address some community concerns.

Chapter 22 and **Chapter 23** also identify sites of indigenous and non-indigenous cultural and historical significance that may be impacted during construction and operation of the Project. SunWater is developing tailored Cultural Heritage Management Plans (CHMPs) in consultation with endorsed Aboriginal parties within the water storage area. The Glebe Homestead, which will be inundated by the dam, is listed on the Queensland Heritage Register and will require a project-specific Conservation Management Plan. The Taroom Aboriginal Reserve has also been recently listed on the Queensland Heritage Register and will also require a site-specific Conservation Management Plan as well as consultation with the relevant Aboriginal communities with links to the reserve. The aim of these plans will be to ensure that the community values associated with these sites are protected or preserved. Consultation with DERM regarding these plans has commenced.

Over the longer term, population changes associated with a more reliable water supply for industry and urban uses may provide opportunities to diversify and strengthen the local economy. This may provide opportunities to revitalise some

local communities. The establishment of two recreation areas at the dam may also increase the recreation and tourism potential of the region and provide improved visual and social amenity in the study area.

24.5.9.2. Pipeline

Impacts on community values and cohesion along the pipeline are expected to be similar to those identified for the dam area. In particular, workers' camps in Wandoan and Chinchilla may be a concern for resident communities, given the existing proportion of non-resident workers in both of these townships. Existing impacts associated with Single Persons Quarters and gender imbalances may therefore be exacerbated by the Project. Mitigation measures would be applied as identified for the dam.

Impacts on social amenity and community values may occur at sensitive receptors near the pipeline easement due to dust and noise generated by the movement of construction materials, equipment and workers, and stockpiling of materials. During consultation for the EIS, stakeholders expressed that existing residential lifestyles and enjoyment of properties may be compromised by frequent land access required for the Project. This is particularly relevant from a cumulative perspective given that many landholders along the pipeline are affected by several development projects.

However, it is expected that the duration of disturbance by the Project for each affected landholder would be relatively short-lived, given that pipeline construction should progress quickly through each property, constructing up to 300 m of pipe in a day at each work front.

The implementation of environmental management measures would also assist in reducing impacts on amenity for local residents. Ongoing consultation with local residents would be undertaken in the vicinity of work areas, including about the timing, duration and likely impacts of construction activities. Given that all stockpile sites would be temporary, there would also be some scope for SunWater to negotiate with landholders or authorities to use or share pre-existing stockpile sites to minimise visual and amenity impacts of these sites.

Prior to commencing excavation work on site, the contractor for the Project would prepare a plan for rehabilitation. The plan would detail proposed timings for grassing, weed control, planting and establishment; as well as the temporary erosion and sediment controls to be put in place prior to grassing.

With regard to culturally or historically important sites, **Chapter 22** and **Chapter 23** identify that there are 14 registered sites of non-indigenous significance in the vicinity of the pipeline corridor. It is not expected that there will be any direct impacts on these sites, and access for communities will be maintained. Community values associated with the sites are therefore unlikely to be affected.

Regarding sites of potential indigenous cultural heritage significance, SunWater is developing tailored Cultural Heritage Management Plans (CHMPs) in consultation with endorsed Aboriginal parties along the pipeline.

In the longer term, impacts on local amenity and community values from operation and maintenance activities for the pipeline are expected to be minimal, although some local noise issues may be associated with the operation of the pumping stations. (**Section 19.2.4**)

24.5.10. Project workforce

While recognising social impacts of the Project on local and regional communities, it is also important to consider impacts of work arrangements on the Project workforce and their families. Mitigation measures for these potential impacts are discussed in the **Social Impact Management Framework – Section 24.9.2 (Table 24-48)**.

It is proposed that pipeline and dam construction be run on a day shift schedule. Typically, this would be 12 hours per day (notionally 6am to 6pm) 7 days per week. The roster may vary depending on the labour source and negotiated agreement with the selected construction contractor. Due to the high proportion of the labour planned to be sourced on a DIDO/FIFO basis, a long roster of 24 days on, 7 days off has been used in planning.

During construction, it is likely that the majority of employees would commute from their permanent homes and reside temporarily in the workers' camps during the roster. Employees may commute from nearby regional townships, or from centres such as Gladstone, Rockhampton, Hervey Bay, Toowoomba, or cities in South East Queensland.

While the proposed DIDO/FIFO arrangement would assist in mitigating social impacts relating to local accommodation demand and demand for community services and facilities, it may result in some impacts on workers, including:

- isolation from family, friends and existing social and support networks;
- increased stress for workers and their families due to changes in family functioning where employees are away from their permanent homes for extended periods during the roster;
- stress related to shift work and commuting may impact on the general health and well-being of affected workers;
- limited choice of housing type and location, given existing pressures on the regional housing and rental market; and
- safety risks associated with travelling to and from regional centres (discussed earlier).

In addition, some families who choose to relocate to the local area may experience difficulties with the transition to new lifestyles, including adjusting to new schools and families adapting to their new geographic location. Limited access to community facilities and support services in smaller communities such as Taroom and Wandoan may also be an issue for some families.

These impacts would be managed by the contractors through ongoing communication and consultation with employees, and the implementation of transition programmes, including access to specialist services (e.g. SunWater's Employee Assistance Program) and provision of information about local communities, social services and facilities nearby. Community groups, social and sporting clubs could also be publicised so that increased integration into the community is achieved.

The provision of good communication services at the construction camps, including phone and internet access, would also assist workers in maintaining contact with their families during their shift roster and reduce feelings of isolation for some workers.

24.6. Cumulative impacts

While no other projects are located in close proximity to the dam area, a range of CSG, resource and infrastructure development projects are currently planned for the wider region and along the pipeline. As noted in **Table 24-7**, the

workforce requirements of many of these projects are substantial, with up to approximately 10,000 new workers required for the construction of projects between 2010 and 2012. If realised, this would have a direct impact on the resident and non-resident populations of townships such as Wandoan, Chinchilla and Dalby in the study area.

24.6.1. Potential cumulative social impacts

The OESR has produced projected workforce and population statistics for the WDRC area based on planned gas, rail, power, and major infrastructure projects (including road and water).

Figure 24-11 shows that the non-resident workforce numbers in the Western Downs Region are expected to increase significantly towards the end of 2011 and through most of 2012, peaking at almost 7,000 non-resident workers in the Region. As the projects move into their operational phase, workforce requirements will decline, and the proportion of non-resident workers will decrease accordingly.

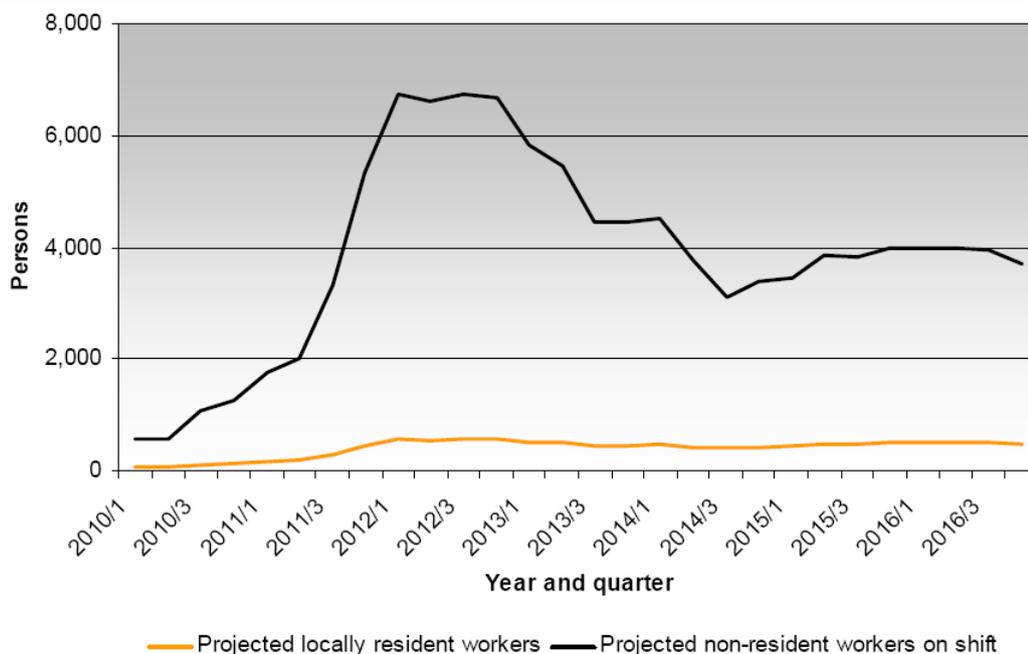


Figure 24-11 Projected workforce for the Western Downs Region

Source: OESR, 2010.

Note: projections are based on the assumption that 5% of construction workers will be local, 10% of operations workers will be local, and the construction of all projects will be delayed by 6 months.

In addition to these workforce-related population increases, there will be further growth associated with the partners and families of some workers choosing to move to local communities as well as indirect population increases associated with the growth of businesses, infrastructure and services in response to increased demand from development in the region.

Figure 24-12 outlines projected resident population increases between 2008 and 2016, and shows that while the non-resident population of the area will increase significantly, there are only moderate increases expected in the resident population. These projections, however, acknowledge that the timing of projects creates difficulties in predicting population changes, as projects are often delayed or timeframes are changed.

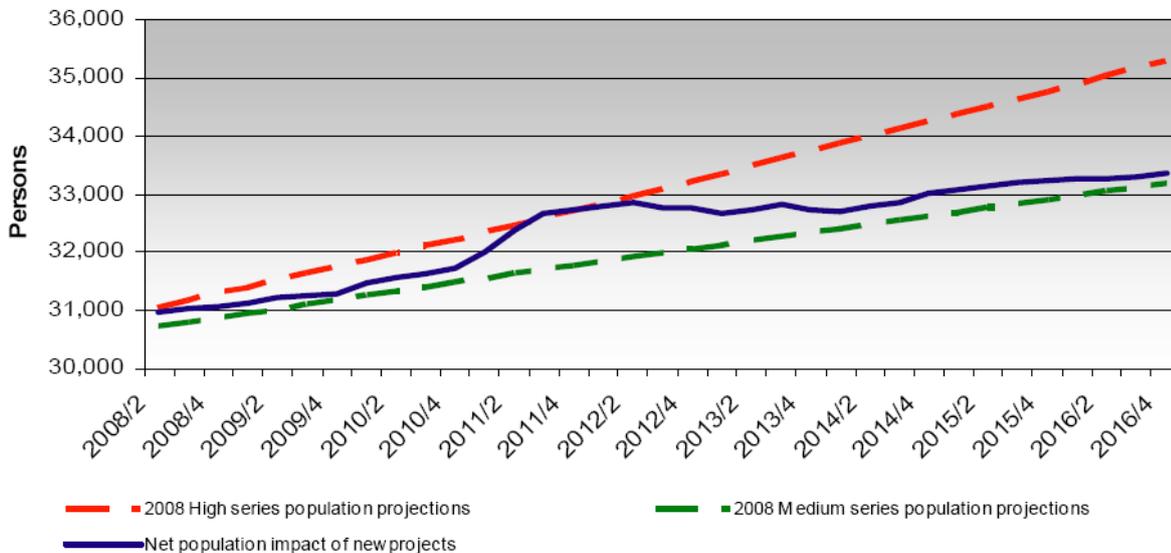


Figure 24-12 Projected resident population impact for the Western Downs

Source: OESR, 2010.

Note: projections are based on the assumption that 5% of construction workers will be local, 10% of operations workers will be local, and the construction of all projects will occur in the planned timeframes.

In coming years, it is likely that cumulative impacts in the Western Downs Region would be mostly attributed to the increasing proportion of non-resident workers in the region, rather than increases in local residents. Resident population impacts are more likely to occur across South East Queensland and Toowoomba than locally within the dam and pipeline study areas.

Increases in resident and non-resident populations in the pipeline area and Western Downs Region may result in some social impacts described in this section being experienced at a greater magnitude and scale. In particular, these may include:

- impacts on community values associated with the loss of rural land and agricultural lifestyles;
- impacts on employment and skills availability, due to competition for labour and scarce local skills;
- impacts on local access and connectivity including road safety and disruptions;
- impacts associated with increased demand for social services, especially health and police services;
- environmental effects such as dust and noise generation; and
- visual impacts of surface infrastructure and construction equipment and machinery.

An increase in the population due to cumulative construction workforce requirements, particularly an influx of young, male-dominated workers may also have an impact on community concerns regarding safety and health.

24.6.2. Existing initiatives and potential alignment

Mitigation measures identified in this section would assist in reducing the social impacts of the Project on local communities. In particular, the establishment of construction camps to accommodate workers and the provision of buses to transport workers between regional centres would help to reduce impacts on health service provision, accommodation and road safety and access, which are key concerns for local communities. In addition, the majority of cumulative impacts would be experienced during the construction phase of the Project, as there are very few operational workers that would be required over the longer term.

However, the mitigation and management of cumulative impacts across Queensland and the Surat Basin is an issue that requires detailed consideration by all project proponents in the area. Therefore wherever possible, SunWater will align with and contribute to existing government and industry initiatives that are being implemented to deal more holistically with cumulative impacts. A summary of potential initiatives is presented in **Table 24-40**.

Alignment and integration with these initiatives would facilitate a regional approach to dealing with cumulative issues, and would assist in assigning joint responsibilities involving government, industry and community stakeholders.

Table 24-40 Potential alignment with existing cumulate impact initiatives

Existing Initiative	Description	Potential SunWater Actions
Sustainable Resource Communities Policy	Policy designed to provide guidance on the identification and mitigation of social impacts associated with rapid growth of the resource industry. Suggests a number of mechanisms to facilitate assessment of cumulative impacts, including the preparation of SIMPs. Under this policy, a number of groups and committees have been formed to deal with specific issues.	<ul style="list-style-type: none"> ■ Ongoing liaison with Surat Basin Local Leadership Group ■ Ongoing liaison with SRC Policy Partnership Group ■ Preparation of a stand-alone Social Impact Management Plan for the Nathan Dam and Pipelines Project
Surat Basin Local Leadership Group	Established under the Sustainable Resource Communities Policy, with the aim of providing a clear mechanism for issues arising in the Surat Basin to be raised with government.	<ul style="list-style-type: none"> ■ Ongoing participation in the Local Leadership group to contribute to regional planning issues and key projects to address cumulative impacts
Surat Basin Cumulative Impacts Working Group	Established under the <i>Blueprint for Queensland's LNG Industry</i> . Aims to explore how Queensland Government can further work with industry and local communities to progress the LNG industry in a mutually beneficial way.	<ul style="list-style-type: none"> ■ Regular liaison with members of the Working Group to ensure that identified issues and strategies are considered in the SIMP for the Nathan Dam and Pipelines Project
Surat Basin Future Directions Statement	High level document to bring key stakeholders together to develop a coordinated region-wide approach to managing cumulative impacts. Commits Queensland Government to work with local government, industry and the community. Proposes a regional economic strategy, workforce development planning, preferred settlement	<ul style="list-style-type: none"> ■ Regular liaison with Steering Committee to identify and address cumulative impacts ■ Participation in relevant working groups and task forces ■ Work through DEEDI's designated Community Liaison Officer with regard to land access to minimise disruption for landholders. This officer is also

Existing Initiative	Description	Potential SunWater Actions
	planning, and regional transport investigation and planning.	responsible for coordinating key messages and information distribution to avoid fatigue for landholders affected by multiple projects
Surat Basin Workforce Development Plan	Forms part of a series of initiatives developed under the Surat Basin Future Directions Statement. Provides the framework for a coordinated, region-wide approach maximise economic benefits of growth resulting from the CSG/LNG industry.	<ul style="list-style-type: none"> ■ Identify workforce and skills requirements in advance ■ Work with the appointed Skills and Workforce Development Officer ■ Participate in workforce development activities where appropriate
Cumulative Growth Management Framework	Product of the Surat Basin Future Directions Statement. Will focus on processes to assess cumulative impacts and mechanisms to implement the outcomes of the EIS process. Will also consider the issue of industry contributions to cumulative impacts of growth, and negotiations with relevant stakeholders will be undertaken in this regard.	<ul style="list-style-type: none"> ■ Ongoing liaison with Future Directions Steering Committee to review draft framework and contribute to its finalisation
Major Resource Projects Housing Policy	Aims to make clear government's expectations of the accommodation and housing issues that project proponents submitting an EIS will need to consider.	<ul style="list-style-type: none"> ■ Provide current and forecasted workforce numbers to facilitate appropriate planning for infrastructure development ■ Integrate MRPH principles and objectives in the Project's SIMP and accommodation model
Surat Basin Resource Town Housing Affordability Strategy	Aims to minimise adverse impacts on the local housing market due to peaks in demand.	<ul style="list-style-type: none"> ■ Liaise regularly with government and other resource sector groups to participate in joint housing discussions ■ Compile a SIMP which details actions to monitor housing and social impacts over the life of the Project
Western Downs Regional Housing Strategy	Aims to secure affordable and social housing, based on the demands of the resource sector and other development projects	<ul style="list-style-type: none"> ■ Supply the council with projected workforce numbers ■ Supply council with the Project's accommodation strategy once this is developed
OESR Cumulative Population Projections	Regular population projection updates, which account for the development of projects across the study area.	<ul style="list-style-type: none"> ■ Regularly update the SIMP to reflect changes in population projections across the study area

In addition to the above, ongoing consultation and communication with the BSC and WDRC, as well as relevant Queensland Government agencies (e.g. DoC, Queensland Police, Queensland Health, Department of Transport and Main Roads, DEEDI and DET) and other project proponents in the study area will also help to ensure the early identification of potential issues relating to the construction and operation of the Project. Specific initiatives will be developed in consultation with key stakeholders and detailed in the SIMP action plans.

24.7. Social responsibility initiatives

Community participation in ongoing planning and environmental monitoring for the Project would assist in avoiding or minimising many social impacts and facilitating maximum benefit. This includes undertaking and maintaining a community engagement program to inform local and regional communities of Project activities, including timing and duration, opportunities to become involved and potential impacts.

This would include:

- maintenance of a free-call Project information line;
- a range of communication and consultation strategies, such as public advertisements, signage, electronic media, newsletters, direct mail notifications, and one-on-one meetings and briefings with key stakeholders; and
- implementation of a Traffic Management Plan.

Early and ongoing consultation would also be undertaken with directly affected landholders in relation to:

- locations of their private pipelines and other infrastructure;
- the timing, duration and likely impacts relating to construction and maintenance activities on their land;
- provision of temporary access, if required;
- potential conflicts with their farming operations (e.g. stock handling activities) or use of land;
- land access protocols, including those relating to fence openings, reinstatements, and any new gates or grids required for access to the pipeline; and
- measures for weed and erosion control.

SunWater is also committed to making a positive and lasting contribution to communities in which it operates. As such, it has implemented a sponsorship program which includes the provision of financial and/or in kind support for community or business organisations, generally operated on a voluntary or not-for-profit basis, to support grass-roots community activities and events and contribute to local economic development. Examples of events could include:

- community festivals, concerts and music events;
- industry awards and recognition functions; and
- community sporting or charity events.

Sponsorship of these events may assist Project employees to integrate into local communities by becoming actively involved in community activities and events. Support for local environmental groups and environmental activities may also assist in mitigating some community concerns about the Project's impact on environmental values.

SunWater also implements education programs with local communities, to raise awareness around the potential hazards in dams and waterways, and ensure the public takes a safe approach to using public water facilities. This program includes media campaigns, electronic materials and signage.

SunWater would also ensure that its contractors comply with the State Government's Building and Construction Contracts – Structured Training Policy which requires a minimum of 10% of the total on-site labour hours to be

undertaken by apprentices, trainees or cadets. This would assist in developing the skills and capacity of the local and regional community.

24.8. Impact assessment and residual risk

The methodology used for risk assessment and management is discussed in **Section 1.8**.

This section assesses the risks relevant to social impact assessment and summarises the mitigation measures proposed to minimise those risks.

Unmitigated and mitigated consequence and likelihood ratings for the identified hazards are shown with explanatory notes in **Table 24-41** and **Table 24-42**. The risk assessment is of the Project as described in Section 2, in which SunWater has already incorporated a range of risk reduction and mitigation measures. Based on this assessment, the following conclusions can be made:

- social benefits of the Project include the creation of employment opportunities for local and regional communities, particularly during construction. Local business opportunities would also be generated, and the region would benefit from the provision of a long-term water supply. These benefits and opportunities are aligned with the region's aim to increase economic prosperity and develop social services and infrastructure which contributes towards the attraction and retention of people in local towns;
- social impacts can be managed through the implementation of mitigation measures, environmental management and ongoing consultation and communication with key stakeholders, including landholders, local communities, businesses and health and emergency service providers;
- the establishment of construction camps outside of local towns would assist to reduce Project impacts, including on accommodation, demand for services and facilities and community cohesion, and potential impacts relating to an influx of construction workers is considered a low risk in relation to social impacts for local and regional communities;
- early and ongoing consultation with directly affected landholders for the Project may address some potential impacts on the loss of social and support networks of families, although some residents may experience these impacts. While this may be significant for residents affected, it is unlikely to be significant in the context of the wider Project given the small number of property owners affected; and
- based on this risk assessment, the impacts relevant to the social environment are acceptable and the residual risks can be effectively managed.

Table 24-41 Social risk assessment results – construction

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C*	L	Current Risk			C	L	Mitigated Risk
Lack of skilled and unskilled workers locally, requiring increase in workers having to be sourced from outside of the local area (dam and pipeline areas).	Availability of local appropriately skilled workers.	Reduce potential benefits for local area.	Use of local labour to the extent possible, involving local service providers	Mod	Likely	High	Identify Indigenous employment and training opportunities in consultation with local Aboriginal and Torres Strait Islander agencies.	Slight	Moderate	Possible	Medium
							Implement employment and training programs in partnership with local education and training organisations (i.e. TAFE).	Moderate			
Increased demand for local workers may attract workers out of existing businesses and service provision sectors (dam and pipeline areas).	Recruitment for construction of the dam and pipeline.	Increasing cost to access services and ability to provide these services.	Liaise with BSC and WDRC to provide timely and updated project information over time.	Mod	Likely	High	Undertake training and education programs to equip unemployed community members to access jobs.	Moderate	Moderate	Possible	Medium
		Reduced availability of local service workers, or employees in traditional industries.									

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C*	L	Current Risk			C	L	Mitigated Risk
Changes to community cohesion and values due to the introduction of a large non-resident workforce with different demographic and cultural composition (dam and pipeline area).	Recruitment of workers from outside of the local area, many of whom would be male, mostly younger employees. There may also be a proportion of overseas workers on 457 visas.	Change in demographic and cultural composition of local communities.		Mod	Unlikely	Medium	Development and implementation of protocols around worker behaviour within the camp and in local communities.	Moderate	Minor	Unlikely	Low
Increased demand for community services and accommodation (dam and pipeline area).	Increased resident and non-resident population.	Impact on service provision, and availability and affordability of accommodation	Provide an Employee Assistance Program to minimise requirement for government services.	Mod	Possible	Medium	Conduct ongoing consultation with community service providers to ensure potential increased demand is identified early.	Slight	Minor	Possible	Medium
Changed access to community services and facilities within the vicinity of the pipeline.	Pipeline construction	Impact on community access to services and facilities.	Where necessary, provide alternative access to community facilities.	Minor	Possible	Medium	Ongoing consultation and communication with facility owners.	Moderate	Minor	Unlikely	Low
Stress or anxiety related to property acquisition and relocation (dam area).	Property acquisition	Impact on health and well-being of landholders.	Consult with directly affected landholders in an early and ongoing manner to reduce uncertainty about acquisition process	Minor	Possible	Medium			Minor	Possible	Medium

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C*	L	Current Risk			C	L	Mitigated Risk
Restrictions on the use of and access to land within the pipeline easement during construction.	Construction of pipeline.	Potential impacts on farming operations and movement of stock.	Maintain appropriate access in the vicinity of construction works. Progressively reinstate land affected by the pipeline construction.	Mod	Possible	Medium	Pre-construction liaison with individual landowners	Moderate	Minor	Possible	Medium
Disruption to farming operations due to gates being left open, fences damaged, etc (dam and pipeline areas).	Construction and maintenance of pipeline	Impact on farming operations.	The EMP would include a mandatory daily inspection task.	Minor	Possible	Medium	Ongoing training and communication to construction workers about land access protocols.	Moderate	Minor	Unlikely	Low
Increased road safety risks through increase in traffic volumes during construction (dam and pipeline	Construction traffic	Impacts on road safety and delays and disruptions for road users, including emergency services.	Implementation of road safety education and awareness programs for workers.	Mod	Absolute	High	Avoid transporting workforce between regional towns during peak traffic periods.	Slight	Minor	Absolute	Medium

Hazards areas).	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C*	L	Current Risk			C	L	Mitigated Risk
			Regular monitoring of haulage routes.			High	Early and ongoing consultation and communication with local communities, OPS and emergency service providers about changes to local access and potential disruptions.	Moderate			
							Encourage workers to use Company-provided bus transport.	Moderate			
Potential impacts for workers and their families due to shift work arrangements or relocation for the Project (dam and pipeline areas).	Proposed work rosters may involve significant time spent away from families.	Impacts may occur on social and support networks for workers and their families, stress related to shift work, and safety risks due to travel.	Consult and communicate regularly with employees.	Mod	Likely	High	Provide onsite communication facilities at construction camps to improve connectivity to families during the roster.	Moderate	Moderate	Possible	Medium

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C*	L	Current Risk			C	L	Mitigated Risk
	Construction workforce and shift work arrangements.					High	Implement transition programs, including providing information for workers and their families on local services and facilities.	Moderate			Low
						High	Provide support (including counselling services where required) for employees and families to assist them with their transition.	Moderate			Low

* Note: 'mod' refers to 'moderate'

Table 24-42 Social risk assessment results – operation

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C	L	Current Risk			C	L	Mitigated Risk
Potential for reduced downstream flow (dam area).	Diversion of water	Reduced water availability for downstream irrigators and water harvesters	Range of compensation alternatives	Major	Likely	High	Early negotiation with landholders about range of compensation options.	Slight	Moderate	Likely	High
		Potential reduction in agricultural livelihoods and lifestyles for downstream users					Regular downstream water quality monitoring				
Improved recreational amenity at the water storage. NOTE THIS IS A POSITIVE OUTCOME	Construction of recreation areas and a viewing platform at the water storage	The dam would provide a recreational resource for fishing, camping, boating and hiking, providing opportunities for tourism development.		Minor	Absolute	Medium			Minor	Likely	Medium
Acquisition of property and relocation of affected families (dam area).	Inundation of properties for water storage.	Property acquisitions and relocation would represent a major change to the livelihood and lifestyles of families that are relocated.	Acquisition policy	Moderate	Absolute	High	Facilitate household preferences and relocation requirements where possible	Moderate	Minor	Absolute	Medium
			Conduct fair and transparent land negotiation process								
			Facilitate a timely negotiation process to provide certainty to landholders								

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C	L	Current Risk			C	L	Mitigated Risk
Impact on farming operations and the viability of farming businesses due to the acquisition of fertile land for the water storage area (dam area).	Reduced size of farming operations, and limited use of buffer areas. Property acquisition and inundation of the water storage area.	Reduced business viability or productivity as a result of inundation, or through changes in stock access routes and thoroughfares.	Consult with directly affected landholders to determine impacts on individual properties, and accommodate preferences where possible.	Moderate	Possible	Medium			Minor	Possible	Medium
Loss of employment from the acquisition of farming businesses (dam area).	Property acquisition.	Loss of local employment opportunities.		Minor	Absolute	Medium	Identify opportunities for retraining and re-skilling of workers, including for the Project.	Significant	Minor	Possible	Medium
Restrictions on the use of land within the pipeline easement during operation of the pipeline.	Operation and maintenance of the pipeline	Restricting use of land within the pipeline easement potentially impacting on farming operations.	Conduct ongoing consultation and communication with landholders about restrictions to land use and development within the pipeline easement.	Minor	Likely	Medium			Minor	Likely	Medium

Hazards	Factors	Impacts	Project Description Controls & Standard Industry Practice	Risk with Controls			Additional Mitigation Measures	Mitigation Effectiveness	Residual Risk		
				C	L	Current Risk			C	L	Mitigated Risk
Loss of agricultural land, further diminishing community values associated with traditional agricultural uses and rural lifestyle (dam area).	Project footprint.	Incremental loss in recent years of agricultural land to mining and infrastructure developments.	Minimise Project footprint where possible, including through use of shared easements.	Minor	Absolute	Medium			Minor	Absolute	Medium
		Impact on community and environmental values associated with farming activities.									
Impact on local access and connectivity in the study area due to local road closures (dam area).	Inundation of roads and infrastructure.	Increased travelling time for residents.	Communicate changes in connectivity ahead of time and in consultation with local landholders	Moderate	Likely	High	Negotiate alternative access routes; Consult with Queensland Police on traffic management matters	Moderate	Moderate	Possible	Medium
		Loss of thoroughfares between properties, and changes to stock routes and resident transport routes.	Provide appropriate signage								

24.9. Social impact management plan

This section provides a framework for the SIMP to be developed for the Project. The framework focuses on providing a methodology and timeline for development of the SIMP, while also providing a summary of the significance of social impacts that may be experienced during construction and operation. Draft action plans, including responsibilities and timeframes, are also provided for consideration by stakeholders before the commencement of detailed consultation on the SIMP.

24.9.1. Background

In 2008, the Queensland Government released the *Sustainable Resource Communities Policy: Social Impact Assessment in the Mining and Petroleum Industries*. The policy seeks to strengthen social impact assessment to deliver better community outcomes focussing on government coordination, links between SIA and regional planning, partnerships and an enhanced regulatory environment for SIA. SunWater is committed to working in partnership with the Queensland Government, local government, industry and community so that potential impacts for local communities are minimised and benefits of the Project are maximised or enhanced.

The development of a SIMP is not required under the ToR for the Project. However, SunWater has developed a preliminary framework to guide the development of a SIMP, which would be further developed and completed prior to the commencement of construction.

24.9.2. Methodology and schedule for SIMP development

SunWater proposes to develop a SIMP for the Nathan Dam and Pipelines Project according to three distinct phases, as shown in Figure 24-13.

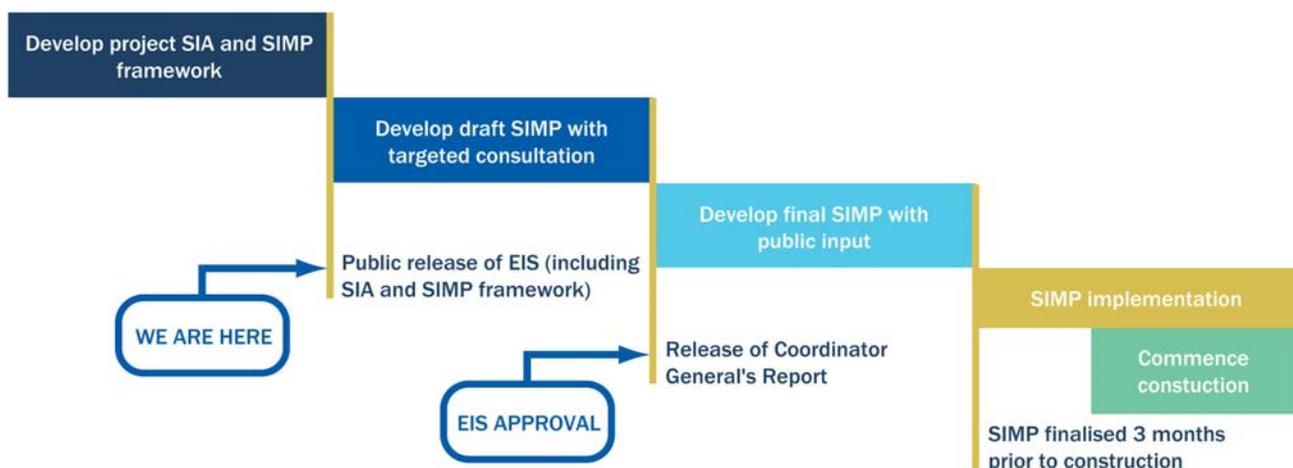


Figure 24-13 SIMP development timeline

Draft SIMP

A draft SIMP (in line with the Queensland Government's guideline document – September 2010) will be developed following the EIS public display period. In particular, the methodology outlined in **Table 24-43** is relevant.

Table 24-43 Methodology for draft SIMP development

Activity	
1.	Consolidate findings of the EIS and SIA process, including stakeholder input to date
2.	Conduct an internal (SunWater) workshop to revise draft action plans based on the outcomes of the EIS and SIA process to date
3.	Undertake targeted consultation with key stakeholders (including Skills Queensland, DEEDI (employment and indigenous initiatives, OAM), other government agencies, the Surat Basin Local Leadership Group and social service providers) to provide more detail and improve on proposed action plan strategies. This consultation will aim to increase support and partnership opportunities with government stakeholders; while also aligning strategies more closely with existing regional and community plans.
4.	Develop draft SIMP, including stakeholder input, in line with Queensland Government's guidelines.
5.	Submit draft SIMP to SIA Unit for public release.

Throughout this process, SunWater will liaise regularly with the Queensland Government's SIA Unit so that specific input can be gathered at key intervals, and so that the latest government and industry requirements can be understood and incorporated. The draft SIMP that is developed will be aligned with the nature and the scale of the Project, acknowledging that the majority of impacts will be experienced during the construction phase.

Final SIMP

Should the Project proceed after the business case stage, the draft SIMP will be finalised for implementation prior to the commencement of construction. As part of this process, consultation with the broader community will be undertaken to develop and improve on draft action plans and mitigation measures. The timing of finalising the SIMP has acknowledged the evolving nature of the Project, as well as stakeholder fatigue that is being experienced by communities in the local area. Completion and consultation on the SIMP in advance of construction will allow the document to be tailored to address current Project information, as well as evolving stakeholder expectations and government requirements. It is expected that this will deliver a better outcome for the Project and affected communities.

24.9.3. SIMP framework

Management framework

The SIMP Guidelines (September 2010) require that action plans, timeframes and responsibilities be developed for Project impacts that are ranked as being of medium or high significance, before the application of mitigation measures. Based on the findings of the social impacts risk assessment, the table below summarises the key impacts, both positive and negative, before the application of mitigation measures and implementation of action plans. These impacts were identified in consultation with government agencies and stakeholders as described in **Section 24.1.2**.

Table 24-44 Summary of key social impacts and benefits

Positive Impacts	Negative Impacts
High Impact	
Creation of direct and indirect job opportunities Provision of education and training programs Increased business activity for those sectors able to support the Project Improved water security for local resource industries and urban supply Improved recreational amenity at the water storage	Acquisition of property and relocation of affected families Lack of skilled and unskilled workers locally, requiring increase in workers having to be sourced from outside of the local area Increased demand for local workers may disadvantage existing businesses and service provision Increase in traffic volumes during construction Reduced downstream water flow, potentially impacting on livelihoods and lifestyles for irrigators and water harvesters Potential impacts for workers and their families due to shift work arrangements or relocation for the Project Impact on local access and connectivity in the study area due to local road closures
Medium Impact	
Opportunity for increased participation in community events and recreation activities Access to water from the dam	Stress or anxiety related to property acquisition and relocation Increased demand for community services and accommodation during construction Impact on farming operations and the viability of farming businesses due to the acquisition of fertile land for the water storage area Restrictions on the use of and access to land within the pipeline easement during construction Loss of employment from the acquisition of farming businesses Changed access to community services and facilities within the vicinity of the pipeline Spread of weeds between properties during construction of the pipeline and reinstatement of the pipeline corridor Disruption to farming operations due to gates being left open, fences damaged, etc Restrictions on the use of land within the pipeline easement during operation of the pipeline Loss of agricultural land, further diminishing community values associated with traditional agricultural uses and rural lifestyle

To facilitate simple management and monitoring, identified impacts have been grouped into five categories against which action plans and strategies can be described. These are:

- 1) employment and training;
- 2) community services and infrastructure;
- 3) local business development;
- 4) workforce housing and well-being; and

5) stakeholder engagement and community well-being.

Draft action plans have been prepared for each of these subjects, and are outlined in **Table 24-45** to **Table 24-49**. The actions, key performance indicators, responsibilities and schedules outlined in these tables would be used to establish monitoring mechanisms as part of the SIMP. As part of the SIMP process, SunWater would engage with Skills Queensland, DEEDI and other relevant stakeholders to develop full action plans which outline joint responsibilities and partnerships, as well as more detailed performance indicators and targets.

Table 24-45 Employment and training action plan

EMPLOYMENT AND TRAINING	Objective: To maximise the benefits of employment and training opportunities associated with the Project			
	Action	Broad Key Performance Indicator	Responsibility	Timeframe
	Develop an Indigenous Land Use Agreement (ILUA) including employment and training opportunities.	Completed ILUA, signed by Traditional Owners	SunWater Traditional Owners	Prior to construction
	Adhere to requirements of Queensland Government's Reconciliation Action Plan.	Compliance with actions and targets outlined in RAP.	SunWater QLD Government	During construction
	Engage with local residents to investigate providing landholders or their families with off-farm incomes.	Consultation with local landholders.	SunWater Local landholders	Prior to construction
	Develop a recruitment policy to facilitate equal inclusion in the Project and avoid discrimination.	Completed recruitment policy.	SunWater	Prior to construction
	Publish request for expressions of interest in the Project.	Public notices and media materials.	SunWater	Prior to construction
	Engage with TAFE and regional Universities (CQU) to form local partnerships to deliver relevant programs and strategies	Consultation with local training providers, and development of agreements.	SunWater	Prior to construction
	Adhere to the requirements of the Building and Construction Contracts Structured Training Policy (10% Training Policy).	Compliance with policy requirements.	SunWater QLD Government	During construction
	Engage local schools and education providers to develop partnerships and programs.	Results of consultation with local schools, and development of agreements.	SunWater DET	Prior to construction
Provide State Government departments with employment forecasts and schedules, and expected demographic profile of the workforce. This would allow departments to adequately monitor and respond to service requirements (see Table 24-47).	Accurate employment forecasts and schedules. Communication with key government agencies.	SunWater State Government	Prior to construction	
Develop a Workforce Management Plan in consultation	Completed workforce maps.	SunWater	Prior to construction	



with Skills Queensland that considers the Project's skills needs and shortages, and strategies to address these needs and shortages including support for increased local or regional workforce participation. Through analyses of regional labour markets and the assessment of the Project's skill requirements, strategies and plans will be developed that will meet project needs, address skills gaps and shortages and support the regional community.

Results of consultation with Skills Queensland and DEEDI.

DEEDI
Skills Queensland

Table 24-46 Local business development action plan

LOCAL BUSINESS DEVELOPMENT	Objective: To facilitate access to business, tourism and supply chain opportunities associated with the Project			
				
	Action	Broad Key Performance Indicator	Responsibility	Timeframe
	Communicate supply chain opportunities through the Project's website and communications materials.	Relevant page on SunWater and contractor websites. Distribution of published materials.	SunWater	Prior to construction
	Communicate supply chain opportunities through member networks of organisations such as the Taroom Development Association and Dawson Valley Development Association, as well as organisations in the Wide Bay Burnett area.	Results of consultation with local development associations. Published materials through member networks.	SunWater	Prior to construction
	Engage with DEEDI and the Industry Capability Network (ICN) to implement programs and strategies to equip businesses to access Project opportunities.	Results of consultation with DEEDI and ICN. Relevant partnership agreements.	SunWater DEEDI	Prior to construction
	Comply with the requirements of the State Procurement Policy.	Compliance with policy requirements.	SunWater QLD Government	Ongoing
Engage with relevant state and local government agencies to contribute to an integrated approach to tourism development and marketing.	Results of consultation with state and local government agencies. Coordinated tourism development planning.	SunWater QLD Government Local government	Prior to completion of construction	
Engage DEEDI's Office of Advanced Manufacturing to develop a Local Industry Participation Plan for the Project.	Records of consultation with OAM Approved Local Industry Participation Plan	SunWater DEEDI – OAM	Prior to construction	

Table 24-47 Community services and infrastructure action plan

Objectives: To minimise pressure on social services and infrastructure To minimise impacts on housing and accommodation To maximise recreation opportunities and services associated with the dam			
Action	Broad Key Performance Indicator	Responsibility	Timeframe
Establish three construction camps which provide a range of services and minimise impact on local townships.	Construction of three fully-equipped accommodation camps.	SunWater	Prior to construction
Consult with local government to investigate the possibility of 'leaving behind' camp infrastructure that might be useful to communities over the longer term.	Results of consultation with local government. Remnant infrastructure remains for community use.	SunWater Local government	Operations
Consult with community facility owners to discuss access requirements and preferences.	Register of access requirements as noted by community facility owners.	SunWater	During construction
Develop a Health and Safety Plan to minimise Project-related emergencies.	Completed Health and Safety Plan.	SunWater	Prior to construction
Develop a Fatigue Management Plan to limit road safety risks.	Completed Fatigue Management Plan	SunWater	Prior to construction
Develop a Traffic Management Plan, in consultation with Queensland Police Services and other key stakeholders	Completed Traffic Management Plan	SunWater Queensland Police	Prior to construction
Engage Queensland Health and Queensland Police in the Project's emergency response planning process.	Jointly developed emergency response plan for the Project.	SunWater Queensland Health & Queensland Police	Prior to construction
Engage with DET to facilitate a forum with local school principals.	Established local schools forum.	SunWater DET	Prior to construction
Provide an Employee Assistance Program (EAP) to the Project workforce and their immediate families.	Completed EAP, communicated to the workforce	SunWater	Prior to construction
Establish ongoing relationships with the Queensland Police Officers in Charge at each affected township, and undertake coordinated safety and security planning.	Results of regular communication with Queensland Police. Coordinated safety and security plan.	SunWater Queensland Police	Ongoing
Develop safety consciousness and awareness programs within the workforce.	Inclusion of safety materials into induction training and regular training updates.	SunWater	Prior to construction
Develop a workforce code of conduct to minimise negative employee behaviour within the community and on site. This would include procedures around drug and alcohol management and testing.	Completed workforce code of conduct.	SunWater	Prior to construction
Alert Queensland Police of any known or potential community protest action against the Project.	Results of regular communication with Queensland Police.	SunWater Queensland Police	Ongoing
Develop an Emergency Response Plan in consultation with Queensland Police	Completed Emergency Response Plan	SunWater Queensland Police	Prior to construction
Provide advanced notice of the requirement for any police escort vehicles for oversized loads	Completed traffic management plan detailing the requirement for oversized load escorts.	SunWater Queensland Police	Prior to construction
Adopt strict regulations around storage and security of site equipment, to minimise theft and vandalism.	Completed policy detailing storage and security requirements.	SunWater	Prior to construction
Provide bus transport from workers' camps to work fronts and to key localities to minimise occurrence of fatigued driving, and reduce the risk of road safety incidents.	Agreements with bus operators and detailed workers transport plan.	SunWater	Prior to construction

COMMUNITY SERVICES & INFRASTRUCTURE

Table 24-48 Workforce housing and well-being action plan

WORKFORCE HEALTH AND WELL-BEING	Objectives:			
		To minimise impacts on local housing options and disturbance to the local residential community To maximise opportunities for the workforce to contribute positively to community cohesion and development To minimise impacts on family functioning for the Project workforce		
	Action	Broad Key Performance Indicator	Responsibility	Timeframe
	Develop a detailed workforce accommodation and housing strategy for the Project, in line with the principles and requirements of the MRPHP, and in consultation with relevant stakeholders	Approved workforce accommodation strategy	SunWater	Prior to construction
	Situate construction camps outside of local townships to minimise impacts on residents.	Camps located outside of residential areas.	SunWater Local government	Prior to construction
	Work with the Western Downs Regional Council to develop and implement the Regional Housing Strategy and minimise impacts on affordable housing	Supply updated information to council as required for development of the strategy Provide council with the approved workforce accommodation strategy for the Project	SunWater Western Downs Regional Council	Prior to construction
	Encourage workers to participate in local events and recreation ventures.	Management communication with staff.	SunWater	Ongoing
	Engage with local community groups and recreation clubs to explore opportunities for worker involvement.	Results of consultation with local facilities.	SunWater	Ongoing
	Provide information materials around community events and facilities (e.g. sports clubs, etc) and volunteering opportunities at the workers' camps and on site.	Display of community information materials.	SunWater Local community groups	Ongoing
	Develop a workforce code of conduct to minimise negative employee behaviour within the community and on site.	Completed workforce code of conduct.	SunWater	Prior to construction
Operate a bar for a defined period around the evening	Policy around bar operating hours on site.	SunWater	Prior to construction	

	meal to minimise alcohol use by workers in local townships.			
	Implement Employee Assistance Program and transition programs to support workers in their shift and roster arrangements.	Completed Employee Assistance Program. Management communication with staff. Transition program materials.	SunWater	Ongoing
	Provide good communication services at the construction camps, including phone and internet access to assist workers in maintaining contact with their families.	Establishment of telephone lines and fast internet services at construction camps.	SunWater	Prior to construction

Table 24-49 Stakeholder engagement and community well-being action plan

STAKEHOLDER ENGAGEMENT & COMMUNITY WELL-BEING	Objectives:			
		To minimise disruption to local landholders		
		To facilitate open and transparent engagement with stakeholders		
	Action	Broad Key Performance Indicator	Responsibility	Timeframe
	Engage affected landholders to facilitate suitable relocation arrangements in line with the preferences of the landholder.	Mutually acceptable relocation and purchase agreements.	SunWater	Prior to construction
	Conduct and conclude access and compensation arrangements in a streamlined fashion, and in as short a time as possible.	Timely purchase and relocation agreements.	SunWater	Prior to construction
	Institute fair and transparent negotiations on property prices, including through the use of independent property valuers.	Commissioning of an independent valuator.	SunWater	Prior to construction
	Relocated re-usable infrastructure on inundated land to a suitable location, conforming to local and State planning requirements and following discussions with landholders.	Successful relocation of infrastructure.	SunWater	Prior to construction
	In line with safety and insurance requirements, maintain appropriate access outside of construction work areas to minimise impacts on farming operations.	Access agreements with affected landholders	SunWater	During construction and operations
	Consider provision of education and training programmes to equip farmers with the skills to gain alternative employment and adopt alternative farming practices.	Development of training materials and programs.	SunWater	During construction and operations
Provide sufficient advanced notice of required property access.	Advanced notice of access provided to affected landholders.	SunWater	Ongoing	
Implement stringent weed control protocols including a range of physical and chemical controls as appropriate to the species of weed and its location.	Completed weed control protocol, developed in consultation with affected landholders.	SunWater	Prior to construction	
Provide advanced communication (i.e. signage, advertisements in local papers, consultation materials) about changes to local access, potential road hazards and expected traffic volumes during construction.	Appropriate signage and communications materials.	SunWater	Ongoing	
Consult with school bus operators, the DET, and local schools to identify potential changes to school bus access and safety for students.	Results of consultation with schools and bus operators. Mutually acceptable access arrangements.	SunWater DET	Prior to construction	
Prepare a plan for rehabilitation (refer to Sediment and Erosion Control Plan).	Completed rehabilitation plan.	SunWater	Prior to construction	
Consult with local residents in the vicinity of work areas, including about the timing, duration and likely impacts of construction activities.	Communications materials. Results of consultation, including telephone calls, meetings and written correspondence.	SunWater	Prior to and during construction	
Design and implement a community sponsorship program, to enhance community well-being and lifestyles.	Completed sponsorship program	SunWater	Prior to construction	

24.9.3.1. Reporting and review

The *Sustainable Resource Communities Policy* and SIMP Guidelines require that project proponents report on social performance to management, government and other stakeholders. SunWater would conduct annual progress reporting against the SIMP during construction. The Company would also review the SIMP annually to incorporate any project changes and new issues and impacts as identified by stakeholders.

During operation, reporting and review would be less frequent, and the SIMP would be revised to incorporate only longer term risks and issues, of which there are likely to be few. Reporting timeframes during operations would be agreed in consultation with the Queensland Government's SIA Unit.

Reports that are issued to SIA Unit would include:

- an overview of the effectiveness of implementing the SIMP;
- an assessment of progress against nominated indicators;
- explanatory notes around actions that were not able to be carried out, where applicable; and
- recommendations to improve future performance.

24.10. Summary

Construction and operation of the Project would have a number of impacts for local and regional communities. In the short term; the primary benefits of the Project would be the creation of employment, training and procurement opportunities for local communities and businesses. However, the potential for communities to realise these benefits would be dependent on the nature of training and education that is provided pre-construction, and on the implementation of local procurement policies by SunWater and the construction contractors.

The majority of social impacts associated with the Project would be experienced during the construction phase and would generally relate to:

- increased construction traffic on local and regional roads, resulting in potential changes and disruption to local access and connectivity, and community concerns relating to road safety;
- potential for increased demand for housing and accommodation from construction workers;
- temporary disruption to farming operations along the pipeline during construction of the pipeline;
- increased demand for some social services, especially health and emergency services; and
- potential impacts on local environmental values relating to the clearing of vegetation along the pipeline, the spread of weeds between properties and the crossing of creeks and rivers by the pipeline, including construction works in the vicinity of creeks and rivers.

Potential impacts of construction on local and regional communities would be effectively managed through the design of the Project and implementation of mitigation and environmental management measures. In particular, the establishment of construction camps to accommodate construction workers would address impacts associated with increased demand for housing and accommodation. These would be relatively self-contained and would include facilities to cater for the

day-to-day needs of construction workers. The camps would also help to reduce demand for services and facilities in local towns as well as mitigate impacts on community cohesion, and population and demography of local towns.

The provision of buses to transport workers between construction camps and work sites, and from regional centres to construction camps would also assist in reducing construction traffic on local and regional roads and road safety impacts, particularly associated with fatigue related accidents.

Early and ongoing consultation and communication with directly affected property owners would also help to manage impacts of the pipeline's construction on the use of land and farming operations of properties along the pipeline. This would include information on matters relation to environmental management and mitigation and land access protocols.

In the longer term, social impacts of the Project generally relate to:

- beneficial social and economic development opportunities supported by a more reliable water supply to the region;
- changed downstream flow for irrigators and water harvesters, potentially affecting lifestyles and livelihoods;
- the acquisition of pastoral properties and loss of farming land within the water storage area;
- changes for local residents who are required to relocate from properties acquired for the Project;
- impacts on community values associated with the loss of rural land and agricultural lifestyles;
- changes to local access and connectivity in the vicinity of the water storage area, due to closure and diversion of local roads;
- potential restrictions on the use of land and farming operations within the pipeline easement; and
- improved access for local communities to recreational facilities provided at the dam.

Compensation would be paid to directly affected property owners in accordance with relevant legislation. SunWater have also identified measures to off-set environmental impacts associated with vegetation clearing within the water storage area.