



# ATTACHMENT 4

## ARROW LNG PLANT

Social Impact Management Plan Update



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SOCIAL IMPACT MANAGEMENT PLAN UPDATE

22 January 2013



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## Acronyms and Abbreviations

APLNG	Australia Pacific LNG
CAS	Community Advisory Service
CEO	Chief Executive Officer
CMS	Complaints Management System
CSG	Coal Seam Gas
DEEDI	Department of Employment, Economic Development and Innovation
DEEWR	Department of Education, Employment and Workplace Relations
DETE	Department of Education, Training and Employment
DOCSDS	Department of Communities, Child Safety and Disability Services
DSDIP	Department of State Development, Infrastructure and Planning
EIS	Environmental Impact Statement
EPC	Engineering, Procurement and Construction
EQIP	Education Queensland Industry Partnership
FaHCSIA	Federal Department of Families, Housing, Community Services and Indigenous Affairs
FIFO	Fly-in, fly-out
GAGAL	Gladstone Area Group Apprentices Ltd
GAPDL	Gladstone Area Promotion and Development Ltd
GEIDB	Gladstone Economic and Industry Development Board
GILG	Gladstone Industry Leadership Group
GPC	Gladstone Ports Corporation
GRC	Gladstone Regional Council
LGA	Local Government Area
LNG	Liquefied Natural Gas
MOF	Materials Offloading Facility
RCCC	Regional Community Consultative Committee
SAIN	Schools and Industry Network
SIA	Social Impact Assessment
SIEFA	Socio-Economic Indexes for Areas
SIMP	Social Impact Management Plan
SISP	Social Infrastructure Strategic Plan
SKM	Sinclair Knight Merz
SLA	Statistical Local Area
TWAF	Temporary Workers Accommodation Facility
QCLNG	Queensland Curtis LNG





## Executive Summary

Arrow CSG (Australia) Pty Ltd (Arrow Energy) proposes to develop a liquefied natural gas (LNG) facility on Curtis Island off the central Queensland coast near Gladstone. The project, known as the Arrow LNG Plant, is a component of the larger Arrow LNG Project.

This social impact management plan (SIMP) for the Arrow LNG Plant has been developed based on the findings of the social impact assessment undertaken for the project which identified a range of impacts and benefits of moderate to high significance.

In order to manage and mitigate the identified social impacts and enhance the benefits of the project, a series of action plans have been developed, including:

- housing and accommodation
- community investment & wellbeing
- indigenous engagement
- workforce and training
- local Content
- community health and safety
- community amenity
- cumulative Impacts.

### **Housing and accommodation action plan**

The housing and accommodation action plan seeks to manage the increased pressure placed by the project on the GRC housing market and on temporary accommodation such as hotels and motels.

Specifically it aims to adequately house the non-local project workforce, minimise inflationary pressure on the housing market (both on rentals and on the cost of purchasing), avoid the displacement of vulnerable groups and reduce the potential for the project workforce to displace other existing users of temporary accommodation. The strategies will need to consider the differences between construction accommodation requirements and housing requirements for the permanent operational housing.

### **Community investment and wellbeing plan**

The purpose of the community investment and wellbeing plan is to identify actions that seek to both manage impacts on existing social infrastructure, services and recreation and enhance the community. It does this through actions that target investment in projects, events and initiatives that improve the health and safety of the community, build sustainable learning and employment opportunities and increase awareness of the environment.



### **Indigenous engagement**

The purpose of the Indigenous engagement plan is to enhance the participation of Indigenous people within Arrow Energy and other organisations. This is across a range of areas including direct recruitment, employment and training and business development and engagement.

### **Workforce and training**

The workforce and training plan is designed to maximise local employment and provide local training opportunities. The plan aims to facilitate the achievement of up to 20% local employment and to provide increased employment opportunities for school leavers and other people wishing to join the LNG industry. It also seeks to provide opportunities for qualified females and people from other underrepresented groups while providing training opportunities that enhance the overall skills base of the region.

### **Local Content**

The local content strategy has been developed to provide capable local businesses with full, fair and reasonable opportunity to compete for the supply of goods and services to the project. It seeks to do this by putting in place a series of actions and requirements for Arrow Energy and Arrow Energy's contractors to implement that will support the provision of full, fair and reasonable. Arrow Energy will work proactively with government organisations and industry advocates to implement supplier development programs that will assist local businesses to improve their ability to competitively tender for major project work.

### **Community health and safety**

The purpose of the community health and safety plan is to identify actions that address community concerns about the influx of the project workforce as well as perceived and actual impacts on community health and safety. It aims to protect the welfare of the community and project workers as well as communicate measures to manage project impacts.

### **Community amenity**

The plan aims to address community concerns about the impact of the project on local and regional amenity including potential visual, noise, vibration and air pollution impacts.

### **Cumulative impacts**

While the focus of the preceding action plans is on managing the direct impact of the project, some impacts, particularly those relating to housing and accommodation have the potential to be amplified when considered cumulatively. While each action plan addresses cumulative impacts where appropriate, this plan identifies the organisations charged with coordinating and managing cumulative impacts with whom Arrow Energy can cooperate in their management.

In order to measure the effectiveness of the actions identified, a monitoring framework has also been developed for each plan. Each monitoring framework provides performance targets, evidence required to measure progress as well as timing for reviews.

Complementing this, a stakeholder engagement strategy has also been outlined which will facilitate the delivery of the SIMP and the establishment of relationships with key stakeholders as well as the

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wider community. The stakeholder engagement strategy is also supported by Arrow Energy's Complaints Management System, which will provide a transparent, systematic process through which complaints and issues can be addressed by the project.



## 1. Introduction

This document is the social impact management plan (SIMP) for the Arrow LNG Plant ('the project'). The SIMP guides the management of social impacts identified through the environmental impact statement (EIS) process.

A social impact assessment (SIA) has been completed as part of the EIS process for the project. It identifies social impacts for the construction, operation and decommissioning stages of the project. This SIMP provides an overview of the key findings and recommendations of the SIA, and further develops mitigation measures, which will become commitments by Arrow Energy into the future.

The scope of this document includes activities to be carried out during both the construction and operational stages of the project. The SIMP has been strategically aligned with Arrow Energy's existing community relations processes and procedures as well as the Company's approach towards social investment (i.e. the Brighter Futures Program).

### 1.1. The requirement for a Plan

The Queensland Government's *Sustainable Resource Communities Policy 2008* requires proponents of new or expanded major resource development projects to develop a SIMP.

This SIMP has been compiled in accordance with the guidelines issued by the Queensland Government, i.e. *Social Impact Assessment: Preparing a Social Impact Management Plan (September 2010)*.

The SIMP is a living document, which will be updated on an annual basis, and modified in line with future updates to the guidelines by the Queensland Government.

### 1.2. Objectives of the Plan

The purpose of this SIMP is to identify and define the roles of Arrow Energy, government and the community in the mitigation and management of social impacts throughout construction and operation of the project. The SIMP also aims to:

- present a clear summary of the potential positive and negative social impacts of the project, as well as proposed mitigation and management actions
- reflect the key findings and recommendations of the SIA, including the results of stakeholder engagement
- promote an active and ongoing role for communities, local authorities and government throughout the project
- recognise cumulative impacts and outline a collaborative approach to addressing them
- protect and promote the social values of the community
- help build a sustainable relationship between Arrow Energy and all stakeholders in the region.

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### **1.3. The Brighter Futures Program**

Arrow Energy has a pre-existing program called Brighter Futures that will assist in delivering some of the actions within this SIMP.

The Brighter Futures program allows Arrow Energy to work in conjunction with local organisations and service providers to supply funding for projects and initiatives that will develop stronger, more sustainable communities in Queensland (QLD) and New South Wales (NSW).

The program focuses on three key areas.

- 1) Health and Safety: Improving the safety, healthy lifestyles and liveability of the community.
- 2) Education: Building sustainable learning and employment opportunities.
- 3) Environment: Increasing awareness of the environment.

Applications for funding under this program are open to the community of Gladstone as well as the other regions in which Arrow Energy operates.

### **1.4. Update for the Supplementary Report to the Arrow LNG Plant EIS**

Attachment 4A of the Supplementary Report to the Arrow LNG Plant EIS contains an assessment of the social impacts of changes to the Arrow LNG Plant project description since the social impact assessment (SIA) was finalised in 2011.

The changes to the project description were found to result in limited changes to the social impacts identified in the SIA. The changes were assessed as minor and found to not materially alter the mitigation measures contained in the SIA or Social Impact Management Plan (SIMP) (SKM, 2012).

Section 2.3 of the SIMP Update (this report) has been revised to reflect the changes to the project description. Section 3 has been updated to reflect the development of Arrow Energy's commitment to social performance.



## **2. Section A: Summary**

### **2.1. Name and location of the project**

Arrow CSG (Australia) Pty Ltd (Arrow Energy) is a subsidiary of Arrow Energy Holdings Pty Ltd which is wholly owned by a joint venture between subsidiaries of Royal Dutch Shell plc and PetroChina Company Limited.

Arrow Energy proposes to construct the Arrow LNG Plant in the Curtis Island Industry Precinct at the south western end of Curtis Island, approximately 6 km north of Gladstone and 85 km southeast of Rockhampton, off Queensland's central coast.

In 2008, approximately 10% of the southern part of the island was added to the Gladstone State Development Area to be administered by the Queensland Department of Local Government and Planning. Of that area, approximately 1,500 ha (25%) has been designated as the Curtis Island Industry Precinct and is set aside for LNG development.

The balance of the Gladstone State Development Area on Curtis Island has been allocated to the Curtis Island Environmental Management Precinct, a flora and fauna conservation area.

### **2.2. Project outcomes and objectives**

Arrow Energy is constructing the Arrow LNG Plant to help meet growing world demand for cleaner burning fuels. The Arrow LNG Plant will take gas sourced from the Bowen and Surat Basins and cools it into a liquid ready for transport by LNG tankers to overseas customers.

### **2.3. Summary of the project**

This section provides a summary of the Arrow LNG Plant.

Arrow Energy proposes to construct the Arrow LNG Plant in the Curtis Island Industry Precinct at the south western end of Curtis Island, approximately 6 km north of Gladstone and 85 km southeast of Rockhampton, off Queensland's central coast.

In 2008, approximately 10% of the southern part of the island was added to the Gladstone State Development Area (GSDA) to be administered by the then Queensland Department of Infrastructure and Planning (DIP now the Department of Local Government and Planning (DLGP)).

Of that area, approximately 1,500 ha (25%) has been designated as the Curtis Island Industry Precinct and is set aside for LNG development. The balance of the GSDA on Curtis Island has been allocated to the Curtis Island Environmental Management Precinct as a flora and fauna conservation area.



The Arrow LNG Plant will be supplied with coal seam gas from gas fields in the Surat and Bowen basins via high-pressure gas pipelines to Gladstone, from which a feed gas pipeline will provide gas to the LNG plant on Curtis Island. A tunnel is proposed for the feed gas pipeline crossing of Port Curtis.

The project is described below in terms of key infrastructure components: LNG plant, feed gas pipeline and dredging.

Key elements of the project include:

- liquefaction facility
- feed gas pipeline
- workforce accommodation
- LNG Jetty
- material off loading facility
- personnel jetty
- mainland launch site
- dredging.

### **LNG plant**

The LNG plant will have a base-case capacity of 16 Mtpa, with a total plant capacity of up to 18 Mtpa. The plant will consist of four LNG trains, each with a nominal capacity of 4 Mtpa. The project will be undertaken in two phases of two trains (nominally 8 Mtpa in each phase), with separate final investment decisions (FIDs) undertaken for each phase.

Operations infrastructure associated with the LNG plant includes the LNG trains (where liquefaction occurs; see 'Liquefaction Process' below); LNG storage tanks; cryogenic pipelines; seawater inlet for desalination and stormwater outlet pipelines; water and wastewater treatment; a 115 m high flare stack; power generators (see 'LNG Plant Power' below); administrative buildings; and workshops.

Construction infrastructure associated with the LNG plant includes construction camps (see 'Workforce Accommodation' below), a concrete batching plant and lay down areas.

The plant will also require marine infrastructure for the transport of materials, personnel and product (LNG) during construction and operations (see 'Marine Infrastructure' below).

A propane import pipeline will be installed from the Boatshed Point MOF along the haul road to the propane storage tank located in the utilities area. The pipeline will be used for the first fill of the propane storage tank from a bulk carrier.



### **Construction schedule**

The plant will be constructed in two phases. Phase 1 will involve the construction of LNG trains 1 and 2, two LNG storage tanks (each with a capacity of between 120,000 m<sup>3</sup> and 180,000 m<sup>3</sup>), a Curtis Island construction camp and, if additional capacity is required, a mainland workforce accommodation camp. Associated marine infrastructure will also be required as part of Phase 1.

Phase 2 will involve the construction of LNG trains 3 and 4 and potentially a third LNG storage tank. Construction of Phase 1 is scheduled to commence in 2014 with train 1 producing the first LNG cargo in 2017.

Construction of Phase 2 is anticipated to commence approximately five years after the completion of Phase 1 but will be guided by market conditions and a financial investment decision at that time.

### **Construction method**

The LNG plant will generally be constructed using a modular construction method, with preassembled modules being transported to Curtis Island from an offshore fabrication facility. There will also be a stick-built component of construction for associated infrastructure such as LNG storage tanks, buildings, underground cabling, piping and foundations.

Where possible, aggregate for civil works will be sourced from suitable material excavated and crushed on site as part of the bulk earthworks. Aggregate will also be sourced from mainland quarries and transported from the mainland launch site to the plant site by roll-on, roll-off vessels.

A concrete batching plant will be established on the plant site. Bulk cement requirements will be sourced outside of the batching plant and will be delivered to the site by roll-on roll-off ferries or barges from the mainland launch site.

### **LNG plant power**

Power for the LNG plant and associated site utilities may be supplied from the electricity grid (mains power), gas turbine generators, or a combination of both, leading to four configuration options that will be assessed:

- Base case (mechanical drive, also known as power island mode): The mechanical drive configuration uses gas turbines to drive the LNG train refrigerant compressors, which are the traditional powering option for LNG facilities.

This configuration would use coal seam gas and end flash gas (produced in the liquefaction process) to fuel the turbines that drive the LNG refrigerant compressors and the turbine generators that supply electricity to power the site utilities. Construction power for this option would be provided by diesel generators.





- Option 1 (mechanical/electrical also known as partial auxiliary power import mode) – construction and site utilities only): This configuration uses gas turbines to drive the refrigerant compressors in the LNG trains. During construction, mains power would provide power to the site via a cable (45-MW capacity) from the mainland.

The proposed capacity of the cable is equivalent to the output of one gas turbine generator. The mains power cable would be retained to power the site utilities during operations, resulting in one less gas turbine generator being required than the proposed base case. The two high voltage cables from the mainland to Curtis Island will be laid in ducts installed by horizontal directional drilling (HDD) under Port Curtis from the mainland at RG Tanna Coal Terminal to Hamilton Point on Curtis Island.

### **Liquefaction process**

The coal seam gas enters the LNG plant where it is metered and split into two pipe headers which feed the two LNG trains. With the expansion to four trains the gas will be split into four LNG trains.

For each LNG train, the coal seam gas is first treated in the acid gas removal unit where the carbon dioxide and any other acid gasses are removed. The gas is then routed to the dehydration unit where any water is removed and then passed through a mercury guard bed to remove mercury. The coal seam gas is then ready for further cooling and liquefaction.

A propane, pre-cooled, mixed refrigerant process will be used by each LNG train to liquefy the predominantly methane coal seam gas. The liquefaction process begins with the propane cycle. The propane cycle involves three pressure stages of chilling to pre-cool the coal seam gas to -33°C and to compress and condense the mixed refrigerant, which is a mixture of nitrogen, methane, ethylene and propane.

The condensed mixed refrigerant and pre-cooled coal seam gas are then separately routed to the main cryogenic heat exchanger, where the coal seam gas is further cooled and liquefied by the mixed refrigerant.

Expansion of the mixed refrigerant gases within the heat exchanger removes heat from the coal seam gas. This process cools the coal seam gas from -33°C to approximately -157°C. At this temperature the coal seam gas is liquefied (LNG) and becomes 1/600th of its original volume. The expanded mixed refrigerant is continually cycled to the propane pre-cooler and reused.

LNG is then routed from the end flash gas system to a nitrogen stripper column which is used to separate nitrogen from the methane, reducing the nitrogen content of the LNG to less than 1 mole per cent (mol%). LNG separated in the nitrogen stripper column is pumped for storage on site in full containment storage tanks where it is maintained at a temperature of -163°C.

A small amount of off-gas is generated from the LNG during the process. This re-gasified coal seam gas is routed to an end flash gas compressor where it is prepared for use as fuel gas.



Finally, the LNG is transferred from the storage tanks onto LNG carriers via cryogenic pipelines and loading arms for transportation to export markets. The LNG will be re-gasified back into sales specification gas on shore at its destination location.

### **Workforce accommodation**

The LNG plant (Phase 1), tunnel, feed gas pipeline, and dredging components of the project each have their own workforces with peaks occurring at different stages during construction. The following peak workforces are estimated for the project:

- LNG plant Phase 1 peak workforce of 3,500, comprising 3,000 construction workers: 350 engineering, procurement and construction (EPC) management workers and 150 Arrow Energy employees
- tunnel peak workforce of up to 100 workers
- feed gas pipeline (from the mainland to Curtis Island) peak workforce of up to 75 people
- a dredging peak workforce of between 20 and 40 people.

Construction camps for up to 3,500 people may be constructed as a part of the project. The main accommodation facility will accommodate up to 2,500 workers and will be located on Curtis Island at Boatshed Point. Its establishment will potentially be preceded by a pioneer camp at the same locality which will evolve into the completed construction camp.

In addition, a temporary workers accommodation facility (TWAF), for up to 1,000 workers, may be constructed on the mainland, or a third party accommodation facility may be used to provide additional accommodation should the construction camp on Curtis Island have insufficient capacity during periods of peak construction.

Two TWAF locations are being considered on the mainland. These include a pastoral property near Targinnie (TWAF 8) and the Red Rover Road laydown and staging site. Both potential TWAF sites include sufficient space to accommodate camp infrastructure and construction lay down areas. The TWAF and its associated construction lay down areas will be decommissioned on completion of Phase 1 works.

Of the 3,000 construction workers for the LNG plant, it is estimated that between 5% and 20% will be from the local community (and thus will not require accommodation) and that the remaining fly-in, fly-out (FIFO) workers will be accommodated in construction camps. The 350 EPC management and 150 Arrow Energy employees are expected to relocate to Gladstone with the majority housed in company facilitated accommodation.

The tunnel workforce is anticipated to be accommodated on the mainland. Options that will be considered for the accommodation of these workers will include, residential properties, third party provided construction camp facilities, another form of accommodation facilitated by the project or TWAF, depending on accommodation availability. The dredge workforce will predominantly be housed on board the dredge vessel.



The feed gas pipeline workforce is expected to be accommodated in a separate construction camp associated with the construction of the gas pipeline assessed as part of the Arrow Energy Surat Pipeline project.

The permanent Arrow Energy operational workforce will be housed locally in Gladstone and commute to the island on a daily basis. There will be a mixture of existing local staff and people moving to Gladstone.

### **Marine infrastructure**

Marine facilities include the LNG jetty, materials offloading facility (MOF), personnel jetty and mainland launch site.

#### **LNG jetty**

LNG will be transferred from the storage tanks on the site to the LNG jetty via above ground cryogenic pipelines. Loading arms on the LNG jetty will deliver the product to an LNG carrier. The LNG jetty will be located in North China Bay, adjacent to the northwest corner of Hamilton Point.

#### **MOF**

Delivery of materials to the site on Curtis Island during the construction and operations phases will be facilitated by a MOF where a combination of roll-on, roll-off or lift-on, lift-off vessels and bulk transportation barges will dock to unload preassembled modules, equipment, supplies and construction aggregate. The MOF will be connected to the LNG plant site via a heavy-haul road.

Boatshed Point (MOF 1) is the base-case MOF option and would be located at the southern tip of Boatshed Point. The haul road would be routed along the western coastline of Boatshed Point and enters the LNG Plant site at the southern boundary. A quarantine area will be located south of the LNG plant and will be accessed via the northern end of the haul road.

One alternative option is being assessed, should the Boatshed Point option be determined to be unfeasible:

- North Hamilton Point (MOF 3): This option involves shared use of the MOF being constructed for the Santos Gladstone LNG Project (GLNG Project) on the northwest side of Hamilton Point (south of Arrow Energy's proposed LNG jetty). The GLNG Project is also constructing a passenger terminal at this site, but it will not be available to Arrow Energy contractors and staff. The quarantine area for this option would be located to the north of the MOF. The impacts of construction and operation of this MOF option and its associated haul road were assessed as part of the GLNG Project and will not be assessed in this EIS.

#### **Personnel jetty**

An integrated personnel jetty will be constructed with the MOF at Boatshed Point to transfer workers from the mainland launch site to Curtis Island by fast passenger and roll on / passenger ferries. A haul road to transport over-dimensional loads (including modules) and heavy and light vehicles will connect the MOF and personnel jetty with the LNG plant and construction camp.



### **Mainland launch site**

Materials and workers will be transported to Curtis Island via the mainland launch site. The mainland launch site will contain both a passenger terminal and a roll-on, roll-off facility. The passenger terminal will include a jetty and transit infrastructure, such as amenities, waiting areas and car park. The barge or roll-on, roll-off facility will have a jetty, associated lay down areas, workshops and storage sheds.

The two location options for the mainland launch site are:

- Launch site 1: This is the preferred site and is located north of Gladstone city near the mouth of the Calliope River, adjacent to the existing RG Tanna coal export terminal.
- Launch site 4N: This site is located at the northern end of the proposed reclamation area for the Fishermans Landing Northern Expansion Project, which is part of the Port of Gladstone Western Basin Master Plan. The availability of this site will depend on how far progressed the Western Basin Dredging and Disposal Project is at the time of construction.

### **Pioneer Facilities**

Early works comprises the establishment of pioneer facilities on the mainland and Curtis Island, to enable construction of the LNG plant and ancillary infrastructure. Pioneer facilities include:

- Pioneer mainland launch sites for transfer of materials, earthmoving and civil construction equipment, and personnel to and from Curtis Island. Separate pioneer mainland launch sites are being considered for personnel, materials and equipment, and bulk materials transport to and from Curtis Island. Personnel and materials will be transported to Curtis Island from one or more of the following pioneer sites:
  - Gladstone Marina (existing personnel and materials transfer facilities off Bryan Jordan Drive and Alf O'Rourke Drive)
  - Auckland Point / Barney Point
  - Fishermans Landing adjacent to Australia Pacific's mainland launch site.
- Pioneer landing sites on Curtis Island to ship personnel, material and equipment to the island. Three options are being investigated including the GLNG pioneer MOF on Hamilton Point, the GAWB ramp on the southern end of Hamilton Point and a ramp to be constructed by Arrow Energy at the southwest corner of Boatshed Point. Access to the existing facilities and the associated haul and access roads is dependent on negotiations with the operators of those facilities.
- Pioneer camp on Curtis Island. As described in the EIS.



### **Feed gas pipeline**

An approximately 9.5 km long feed gas pipeline will supply gas to the LNG plant from its connection to the Arrow Energy Surat Pipeline (formerly the Surat Gladstone Pipeline), to the mainland near Rio Tinto's Yarwun alumina refinery. The feed gas pipeline will be constructed in three sections:

- A first length of feed gas pipeline will run from the proposed Arrow Energy Surat Pipeline to the tunnel launch shaft, which will be located on a mudflat south of Fishermans Landing, just south of Boat Creek. This section of pipeline will be constructed using conventional trenching methods within an approximately 40 m wide construction right of way.
- The second section of the feed gas pipeline will traverse Port Curtis in the Arrow Gladstone Harbour Tunnel (also known as The Curtis Island Link) to be bored under the harbour from the mainland tunnel launch shaft to a reception shaft on Hamilton Point. The tunnel under Port Curtis will have an excavated diameter of up to approximately 6 m and will be constructed by a tunnel boring machine that will begin work at the mainland launch shaft. Tunnel spoil material will be processed through a de-sanding plant to remove the bentonite and water. It will comprise mainly a finely graded fill material to be deposited in a spoil placement area established within bund walls constructed adjacent to the launch shaft.
- From the tunnel reception shaft on Hamilton Point, the third section of the feed gas pipeline will cross the LNG loading lines to run up the western side of the proposed LNG plant to the gas inlet station, which is located west of trains 1 and 2. This section will be constructed using conventional trenching methods within an approximately 40 m wide construction right of way.

Other infrastructure, such as communication cables, water and wastewater pipelines, might also be contained within the tunnel.

### **Dredging**

Dredging required for LNG shipping access and swing basins has been assessed under the Gladstone Ports Corporation's Port of Gladstone Western Basin Dredging and Disposal Project. Additional dredging of five potential sites was identified for the EIS by Arrow Energy to accommodate the construction and operation of the marine facilities. The Hamilton Point South MOF option has been discontinued. The four sites requiring dredging to facilitate the project are:

- Dredging for construction of the LNG jetty in China Bay which has an increased dredging volume from 120,000 m<sup>3</sup> to 131,000 m<sup>3</sup>.
- Dredging for the construction and operation of the MOF and integrated personnel jetty at the southern tip of Boatshed Point. The anticipated maximum dredge volume at the MOF is 148,000 m<sup>3</sup>.
- Dredging for access to the MOF from the main Passage Island Channel and for a swing basin adjacent to the MOF. The anticipated maximum dredge volume for the access channel and swing basin is 165,000 m<sup>3</sup>.
- Dredging for access to Launch sites 1 or 4N. The anticipated maximum dredge volume for Launch site 1 is 900,000 m<sup>3</sup> and for Launch site 4N 2,500 m<sup>3</sup>.



### 2.3.1. Workforce profile

This section provides separate profiles for project's construction, operation and maintenance workforces, how they will be accommodated and how they will travel to site.

#### **Construction workforce – profile**

The Arrow LNG Plant is proposed to be developed in two phases. In the first phase LNG trains 1 and 2 will be constructed. The second phase will involve the construction of trains 3 and 4.

The project's construction is expected to directly require a peak workforce of 3,500 people in 2016 for construction of trains 1 and 2. The peak construction period for trains 3 and 4 is expected to occur in 2024; however this is dependent on market conditions at that time and separate financial investment decision, with an estimated 2,300 workers required. Between the years 2018 and 2022, the first two LNG trains will be in operation and no construction workforce will be required (See Appendix D for information on estimated workforce numbers across the project).

Local workers are defined as those residing in the study area prior to the commencement of the construction stage of the project. Arrow Energy has conducted an analysis of the local Gladstone workforce, and determined it has the potential capacity to provide between 5% and 20% of the construction workforce required for the project, depending on the final timing of other proposed projects in the Gladstone region.

The estimated peak construction workforces for the project are as follows:

- LNG plant workforce – 3,000 people
- Arrow Energy staff – 150 people
- Engineering, procurement and construction (EPC) workers – 350 people.
- Tunnel workforce – up to 100 people.
- Feed gas pipeline workforce – up to 75 people.
- A dredging workforce – between 20 and 40 people.

The project is expected to provide employment to up to 600 local construction workers during the peak of the construction phase. In addition, Arrow Energy expects that 5% of the EPC staff will be local and 10% of Arrow Energy management staff will be from Gladstone, this will provide positions for a further 33 local workers.

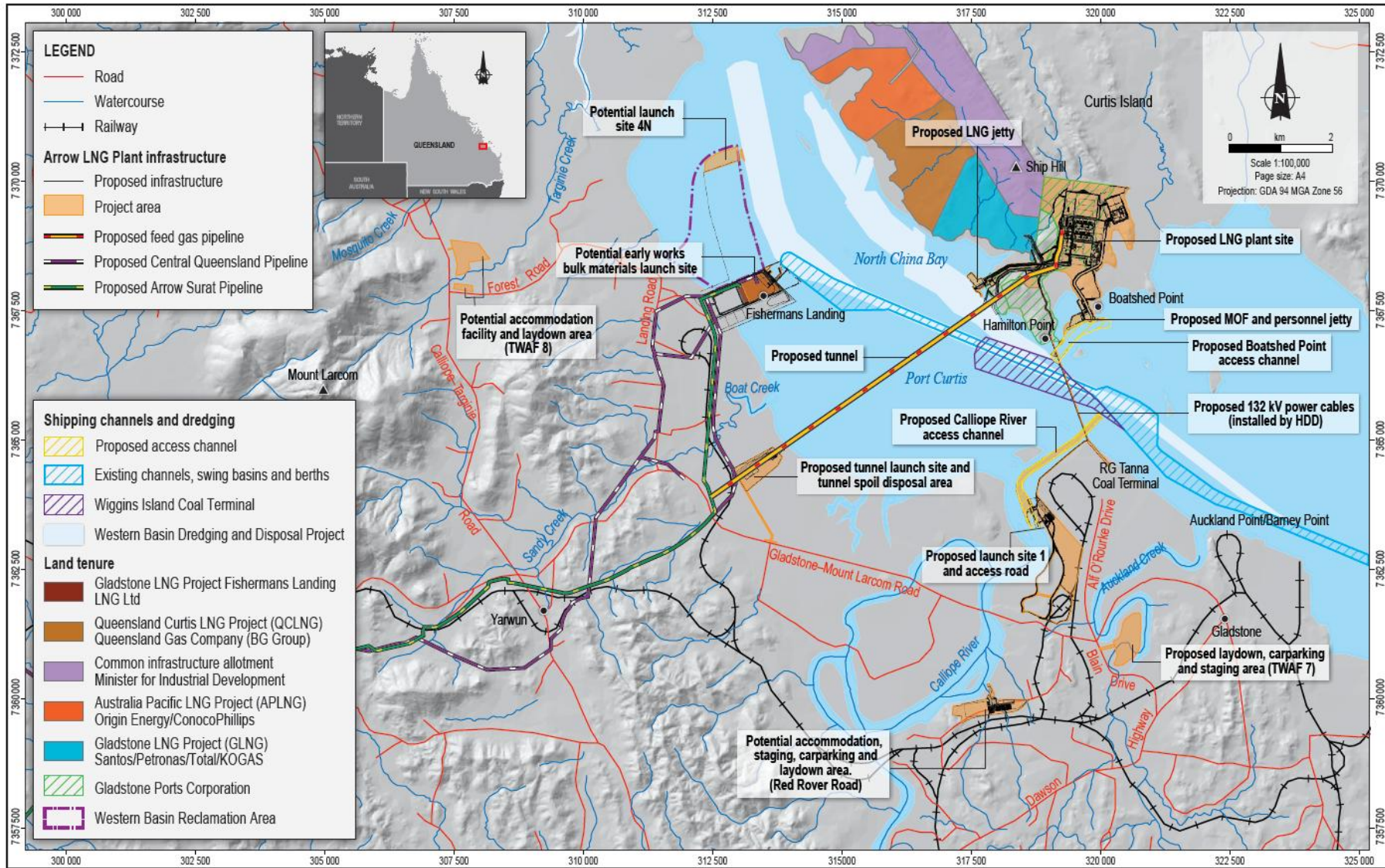


### **Construction Workforce – Accommodation**

Construction camps for up to 3,500 people may be constructed as a part of the project. The main accommodation facility will accommodate up to 2,500 workers and will be located on Curtis Island at Boatshed Point. In addition, a temporary workers accommodation facility (TWAF), for up to 1,000 workers, may be constructed on the mainland, or a third party accommodation facility may be used to provide additional accommodation should the construction camp on Curtis Island have insufficient capacity during periods of peak construction. Two TWAF locations are being considered on the mainland. These include a pastoral property near Targinnie (TWAF 8) and the Red Rover Road laydown and staging site (Figure 2-2). The LNG plant construction workforce, including EPC contractor staff and Arrow Energy employees, will be housed in these camps.

Prior to the construction camp becoming operational, between 200 and 300 workers will need to be accommodated on the mainland. Options that will be considered for the accommodation of these workers will include, residential properties, third party provided construction camp facilities or another form of accommodation facilitated by the project, depending on accommodation availability.

The tunnel and feed gas pipeline workforce is anticipated to be accommodated on the mainland. Options that will be considered for the accommodation of these workers will include, residential properties, third party provided construction camp facilities, another form of accommodation facilitated by the project or TWAF, depending on accommodation availability. The dredge workforce will be housed onboard the dredge vessel, or will be addressed within the development of the early works and construction accommodation strategies.



■ Figure 2-1: Arrow LNG plant site locality





### **Construction workforce – transportation**

Workers located in the TWAF or within company facilitated communal living options (such as third party camps, medium to high density developments, or the existing rental market where market conditions allow) will commute to the launch site by bus, while local residents will use private vehicles or company facilitated bus services.

FIFO workers will transfer from the Gladstone Airport via buses to either the launch site for ferry transfer to the construction camp on Curtis Island, or to the mainland TWAF.

### **Operational workforce – profile**

The operational workforce will gradually increase as each of the trains comprising the LNG plant is completed. Subject to market conditions and financial investment decision, train 1 is expected to commence operations in 2017 followed by train 2 in 2018. To support the operation of the facility, an ongoing workforce of approximately 450 personnel will be required, comprising 250 staff and 200 contractors.

In 2024, subject to market conditions train 3 is expected to begin operating followed by train 4 in 2025. The operational workforce will peak at 600 workers, 400 of whom will be staff and 200 will be contractors.

Arrow Energy estimates that, of the staff, up to 30% may be available locally, while up to 40% of contractors may also be sourced locally. This would provide employment for approximately 155 local workers during operation of trains 1 and 2, increasing to 200 workers for the operation of trains 3 and 4.

### **Operational workforce – accommodation**

During the operation of Stage 1, it is estimated that 295 non local operational positions will be generated consisting of 175 Arrow Energy staff and 120 contractor positions. Arrow Energy estimates that up to 70% (approximately 122.5) of non local Arrow Energy staff will relocate to the study area with their families, generating a total demand of up to 130 houses.

This is the maximum anticipated housing demand generated by the project during Stage 1 and the project housing strategy will consider the housing market at the time when this impact will occur and implement appropriate interventions which minimise negative effects on local housing availability and affordability. When Stage 2 is complete, a further assessment of housing demand and requirements will be made.

During Stage 1 the 120 non local operational contractor positions along with the remaining 55 non local Arrow Energy permanent staff members are expected to be single status positions. In addition, another 50 beds for single status will be required for the regular (six monthly) maintenance workforce.

Accommodation of this component of the operations workforce will not impact upon the local housing market as the project will facilitate housing either through the direct development of purpose built accommodation or provision through a third party provider.



#### **Operational Workforce – transportation**

The operational workforce will be transported either by private vehicle or bus to the mainland launch site and travel by ferry to Curtis Island

#### **Turnaround workforce – profile**

In addition to permanent operational employees, planned maintenance of the plant will occur every six months. In most cases this will require approximately 50 additional personnel, however periodically this will require up to 350 personnel. These maintenance activities will require a period of approximately three weeks to complete. It is assumed that the maintenance workforce will be predominately FIFO.

#### **Turnaround workforce – accommodation**

In addition to the permanent workforce, short term accommodation will be periodically required for the larger maintenance workforce. Hotels, motels or caravan parks will be utilised or, if they materialise, third party provided temporary workers villages/camps which are currently proposed in the Gladstone region

#### **Turnaround workforce – transportation**

The maintenance workforce will be transported either by private vehicle or bus to the mainland launch site and then travel by ferry to Curtis Island.

#### **Decommissioning workforce**

The LNG plant design life is 25 years, however with appropriate maintenance programs, the plant may be able to operate for in excess of 25 years, dependent on availability of gas and the market at that time.

Detailed planning for decommissioning will be refined during the life of the Project. It is anticipated that that all plant and equipment on the LNG plant site, including LNG trains, tanks, jetty and supporting infrastructure will need to be removed. Experience on similar projects suggests that the decommissioning workforce would involve approximately 500 employees for a period of approximately one year.

### **2.4. Social and cultural area of influence**

This section provides a brief description of the social and cultural area of influence for the project. The information contained is a summary of that provided as part of the SIA developed for the Arrow LNG Plant (SKM, 2011).

The majority of potential direct positive and negative impacts of the project are likely to be experienced within the Gladstone Regional Council (GRC) area. As such, the SIA and SIMP have adopted this area as the social and cultural area of influence.

The GRC area is composed of the statistical local areas (SLA's) of Gladstone City, Calliope Part A, Calliope Part B and Miriam Vale (Figure 2-2).

It also includes the urban centres and localities:

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- South End, the only township on Curtis Island, located approximately 9 km north-east of the project site.
- Gladstone City, the regional centre for the study area, is located on the mainland, approximately 7 km south of the project site.
- Calliope, located on the mainland, approximately 25 km south of the project site.
- Mount Larcom, a small rural township located on the mainland approximately 25 km west of the project site.
- Boyne Island and Tannum Sands, twin towns located approximately 21 km south east of the proposed project site.

#### **2.4.1. Population**

In 2009, the GRC recorded an estimated resident population of 59,644 people with over half located in the Gladstone SLA. It has experienced relatively high population growth (3.2% to the year 2009) and is one of the fastest growing Local Government Area's (LGA) in the state. This high growth is projected to continue into the future with the population projected to grow by an additional 44,030 people between 2006 and 2031 (DIP, 2008).

#### **2.4.2. Employment and income**

As of the September Quarter 2010, the unemployment rate was estimated to be 5.4% (1,700 people) comparable to Queensland as a whole. Unemployment varies geographically across the area with the highest estimated (7.4%) in Miriam Vale (DEEWR, 2011).

Median weekly household incomes in 2006 also varied geographically; with Miriam Vale (\$638) and Calliope B (\$993) the lowest, while Calliope A recorded the highest median household income (\$1378) followed by Gladstone City (\$1189) (ABS, 2007).

Reflecting the dominance of the manufacturing and construction sectors in providing employment, approximately 49% of the workforce was employed as technicians, trade workers, machinery operators, drivers and labourers (ABS, 2007).

#### **2.4.3. Education**

Reflecting the industrial nature of the region, a smaller proportion of people had completed year 11 or 12 in 2006 than the rate for all of Queensland. Post school qualifications were skewed towards certificates with 21.8% of persons aged 15 years or older not currently in school having completed a certificate compared to 17.9% for Queensland. The proportion of persons aged 15 years or older that had completed a tertiary qualification was lower in the region (47.6%) than the Queensland rate (50.0%) (ABS, 2007).

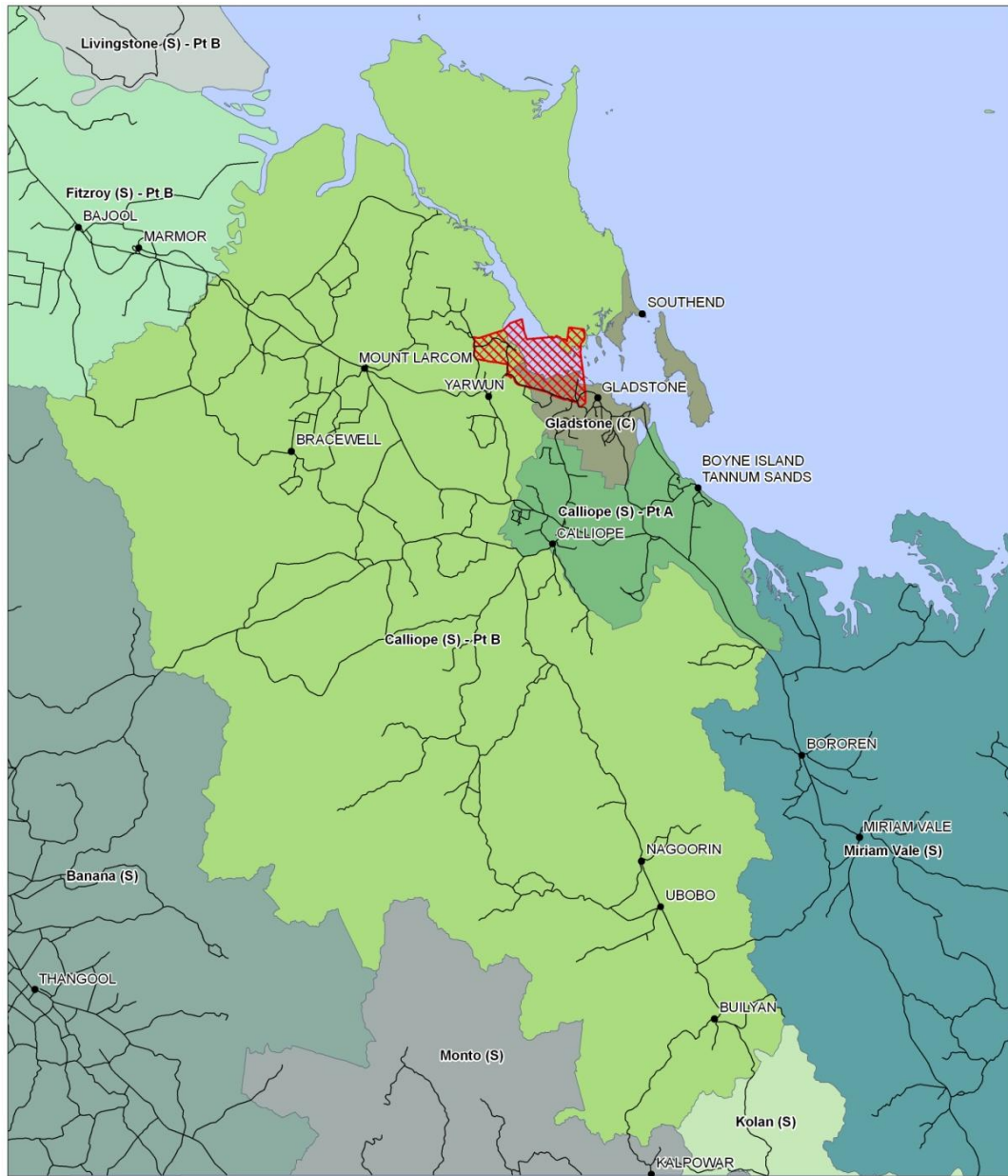
Educational infrastructure is concentrated in Gladstone City, with a TAFE and University both preparing to meet the needs of the LNG industry. There are also a number of primary and secondary schools with spare capacity for an additional 300 to 450 students (APLNG, 2010).



#### **2.4.4. Housing and accommodation**

In 2006 there were more than 19,000 occupied dwellings in Gladstone, of which more than 15,805 were separate dwellings. The rental market vacancy rate in the study area was very low (1.4%) as of March 2011 and is expected to worsen into the future. As a result of the tight housing market, in the 12 months to March 2011, the median price for houses increased by 8.2% while units increased by 7.8% (REIQ, 2011b).

This house price growth has been matched by growth in rent over the same period with rent across different housing stock increasing by between 9.1% for two bedroom units and 43.3% for three bedroom town houses.



- Legend**
- Towns
  - Roads
  - ▨ EIS Study area
- |                                |  |  |
|--------------------------------|--|--|
| <b>Statistical Local Areas</b> | <ul style="list-style-type: none"> <li>Banana (S)</li> <li>Calliope (S) - Pt A</li> <li>Calliope (S) - Pt B</li> <li>Fitzroy (S) - Pt B</li> </ul> | <ul style="list-style-type: none"> <li>Gladstone (C)</li> <li>Kolan (S)</li> <li>Livingstone (S) - Pt B</li> <li>Miriam Vale (S)</li> <li>Monto (S)</li> </ul> |
|--------------------------------|--|--|

**DATA SOURCES**  
 Roads, Towns, LGAs from Geoscience Australia, 2006  
 LNG Facility Site Study Area from Coffey Environments

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	<b>ARROW LNG PLANT</b>	March 25, 2011
	Map of Study Area and Statistical Local Areas	W:\GIS_Library\Admin\GIS_Templates\ArcMap\MXD_Backup\Template_A3_Landscape.mxd Melbourne Spatial Group. Created by: LS Checked by: NK

■ **Figure 2-2 Map of study area and Statistical Local Areas (SLAs)**



Issues were raised during consultation for the SIA about the displacement of some households due to reduced availability of rental housing and reduced rent affordability. Groups reported to have been displaced included: the unemployed, recipients of government pensions and allowances, the disabled and anyone else of limited financial means unable to secure affordable housing.

A search of realestate.com.au has confirmed that the rental market continues to experience limited supply with some 143 properties currently available for rent (realestate.com.au, March 2011). Of the 143 rental listings identified within the postcode of 4680 the cheapest dwelling available was \$220 per week. A further 48 properties were available for under \$400 per week, a level still high even for those with full time employment.

Aside from permanent housing there are also a number of temporary accommodation options available including hotels, motels and serviced apartments. It was reported in consultation for the SIA that there has been a surge in occupancy due to major projects in the region.

There were also 943 social housing dwellings in the GRC in February 2009 with 75 applicants recorded on the social housing register.

#### **2.4.5. Indigenous profile**

In 2006, 1,575 people within the study area identified themselves as Indigenous (approximately 3.1% of the population) with a median age of 20 years (ABS, 2007).

While median income for Indigenous households was lower than non-Indigenous households they were higher in Gladstone City and Calliope A than for Indigenous households in Queensland as a whole (ABS, 2007).

The study area had an Indigenous workforce of 548 people and unemployment of 20.4%. It is expected that major projects in the study area will provide employment opportunities to Indigenous residents.

Educational qualifications of the Indigenous population were generally lower than the non-Indigenous population in all the SLAs with 26.8% of Indigenous people having completed year 11 or 12 in the Gladstone SLA while in Calliope B 7.3% had done so (ABS, 2007).

The most common highest post-school qualification completed by Indigenous people was a Certificate level III or IV. The percentage of Indigenous people aged 15 years or over that had completed a diploma or higher level of education was lower than for non-Indigenous people.

More than one third of Indigenous people were renting privately in 2006 (ABS, 2007). This coupled with low incomes potentially makes the Indigenous population more vulnerable to changes in accommodation costs.



## **2.5. Social infrastructure**

Social infrastructure and services are essential in ensuring that people have access to education, keep healthy, recreate and participate in a range of social activities. Of the facilities provided within the GRC area, most of the larger scale social infrastructure facilities are located in Gladstone City. These include hospitals, schools, tertiary education, courts, police, recreational facilities, fire service, a library and a community centre.

The study area has an established medical and health services sector with two hospitals located in Gladstone City. A small private hospital is also located in Gladstone (Gladstone Mater Private hospital) with Rockhampton Hospital being the main referral hospital.

There are also two police stations located in Gladstone and one in Calliope. The study area is currently well serviced by Queensland Police.

### **2.5.1. Recreational facilities and open space**

There are a wide range of sporting and recreational facilities providing both formal and informal sporting and recreational opportunities across the study area. Boating and fishing are popular recreational pursuits. Infrastructure provided to support these activities include Gladstone marina boat ramp located at the end of Goondoon Street and others located on the Calliope River, Toolooa Bends and Boyne Island.

## **2.6. Community values and issues**

The employment opportunities in various industries in Gladstone have been acted as an attractor for people to the study area. As a result, there is an understanding and acceptance of the industrial nature of the region. However there are a number of community issues that need to be considered for all major industrial projects, including:

- community concerns about housing costs
- maintaining water based recreational opportunities
- maintaining natural and recreational assets
- challenges of growth and growing inequality
- the community's desire to influence decisions on large projects
- contribution of industry and all governments to the study area
- amenity, particularly in regards to air quality
- the safety of the LNG Industry, particularly in regards to increased shipping movements in the harbour
- maintaining community health and well-being.

## **2.7. Community health and well-being**

In 2006, the SIEFA Index of Disadvantage scores for the study area identified a high level of relative disadvantage in Miriam Vale, which scored in the lowest 19% of all SLA's in

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Queensland. Calliope B was only marginally less disadvantaged ranking in the lowest 27% of all SLA's in the state. Gladstone in contrast scored just below the state average and Calliope A, with a percentile of 65% was amongst the least disadvantaged communities in the state.

## **2.8. Potential contribution to regional development**

The project is expected to make a positive contribution to regional development and provide a range of social and economic benefits to the Gladstone Region and Queensland as a whole. These include:

- directly creating up to 3,500 positions during the construction phase, of which up to 633 positions may be filled by local residents
- directly creating up to 600 positions during the operation of the plant, of which up to 200 positions may be filled by local residents
- a substantial and sustained investment in the Gladstone and Queensland economies over the next 25 years or more
- diversification of Gladstone's industry base with the introduction of the LNG industry
- opportunities to up skill members of the community through apprenticeships, school programs, work experience, on the job training and other programs.

Arrow Energy is committed to working with key government agencies and local communities to facilitate access to the above opportunities. In particular, the project will work with the Industry Capability Network, Gladstone Engineering Alliance, GRC, and state government to communicate the nature and level of goods and services required for construction and operation. Initial consultation has commenced and the project will continue to focus on facilitating government programs that increase the capacity of local businesses, and improve the ability of local businesses to successfully meet tender requirements.

The project will also contribute to regional development by aligning with a range of government community plans and regional planning strategies; including:

- Blueprint for Queensland's LNG Industry.
- Queensland Skills Plan 2008.
- Gladstone Regional Council Corporate Plan 2009 – 2013.
- Gladstone Regional Vision 2028.
- Gladstone Regional Social Infrastructure Strategic Plan (SISP).
- Toward Q2: Tomorrow's Queensland.
- Queensland Health Strategic Plan 2007 – 2012 (including the four recently added strategic priorities).
- Sustainable Resource Communities Policy: Social Impact Assessment in the Mining and Petroleum Industries (DEEDI).





- Department of Emergency Services Strategic Plan 2008 to 2012 (Department of Emergency Services).
- Gladstone Regional Plan.
- Gladstone Community Plan.
- Gladstone Region Wellbeing Study.
- Prosperity 2030: Gladstone Region Economic Development Strategy.

## 2.9. Stakeholder engagement strategy used to inform the SIMP

This section describes the stakeholder engagement strategy used to inform the SIMP. Details of the stakeholder engagement strategy for the project going forward are provided in Section 5.

A broad consultation program was conducted as part of the EIS process (for further details refer to the Consultation Report prepared for the EIS (JTA Australia, 2011). Key issues raised during the community information sessions by stakeholders during this process are presented in Table 2-1 below.

### ■ Table 2-1: Summary of issues raised by location

Location	Issues raised	
Boyne Island Tannum Sands	Pipeline approvals Construction camp (Curtis Island) EIS timeframe Consolidation of projects	Supply contracts/workforce Employment/skills training Impacts of shipping on boating and fishing Technology to be used
Calliope	Pipeline corridor and logistics of pipeline construction Weed spread Cooling system for plant Impacts of shipping on boating and fishing Impacts on health and education system CSG, treatment of water and its history	Impact on World Heritage Area Air emissions and flares Construction timeframe Impacts on Curtis Island and size of LNG plant Construction camp (Curtis Island) Employment/apprenticeships Gas destination (domestic or overseas)
Miriam Vale	Construction camp Consolidation of LNG projects Treatment of water from CSG and desalination Water use, treatment and discharge at LNG plant Air emissions/contaminants Energy source and consumption of project Gas destination (domestic or overseas) Lifespan of project	Environmental impacts Pipeline corridor across the harbour/ bridge option Impacts of shipping on boating, fishing, the harbour environment Impact on road infrastructure Emergency response and impact on health system Impact on social infrastructure and facilities Local workers vs. importing workers
Gladstone	Air quality/controlling emissions	Impacts on Gladstone infrastructure including



Location	Issues raised
	<ul style="list-style-type: none"> <li>Contribution to greenhouse gases and air emissions</li> <li>CSG and salt</li> <li>CSG drilling and impact on water table and aquifers</li> <li>Cumulative impacts of LNG plants</li> <li>Desalination and use of harbour water</li> <li>Dredging of Calliope River</li> <li>Emergency response and impact on health system</li> <li>Environmental management precinct and management of environmental impacts</li> <li>FIFO workforce, apprenticeships</li> <li>Impact of shipping and exclusion zones</li> <li>Impact on harbour/dredging</li> <li>Impact on marine life</li> <li>Impact on road infrastructure</li> <li>Impacts on boating and fishing</li> </ul>
Mount Larcom	<ul style="list-style-type: none"> <li>EIS, land zoning and community input</li> <li>The market for LNG</li> <li>Impacts of dredging on The Narrows, location of LNG plants channel Curtis Island</li> </ul>
Curtis Island	<ul style="list-style-type: none"> <li>Impact of shipping on the harbour including exclusion zones</li> <li>Location of construction camp on Curtis Island vs. housed in Gladstone</li> </ul>

A separate, second round of consultation was undertaken to specifically inform the SIA and SIMP in April and May 2011. Stakeholders consulted are detailed in Table 2-2.

**Table 2-2: Stakeholders consulted for the social impact assessment**

Stakeholder	Details	Purpose of consultation
Community and Cultural Organisations	<ul style="list-style-type: none"> <li>President, Liaison Officer, Outing Co-ordinator, Secretary and members of the Gladstone Sportfishing Club inc</li> <li>Captain, Salvation Army</li> <li>President, St Vincent De Paul Society</li> <li>Support Worker, OZChild</li> </ul>	<ul style="list-style-type: none"> <li>Community values</li> <li>Impact on vulnerable groups</li> <li>Impact on water based recreation</li> </ul>
Department of Employment, Economic Development and	<ul style="list-style-type: none"> <li>Employment and training Manager, Indigenous Employment and Initiatives</li> <li>Manager, Gladstone Centre, Rural and Regional Development</li> </ul>	<ul style="list-style-type: none"> <li>Indigenous employment and training opportunities</li> <li>Implications the project will have on development</li> <li>Ability of the region to provide</li> </ul>

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Stakeholder	Details	Purpose of consultation
Innovation		workers
Department of Education and Training	<ul style="list-style-type: none"> <li>Principal, Toowoosa State High School</li> </ul>	<ul style="list-style-type: none"> <li>Information on existing capacity of schools services</li> </ul>
Department of Communities, Child Safety and Disability Services	<ul style="list-style-type: none"> <li>Area Manager, Housing and Homelessness Services</li> </ul>	<ul style="list-style-type: none"> <li>Existing levels of community housing</li> <li>Impact on vulnerable groups</li> </ul>
Department of Local Government and Planning (SIA Unit)	<ul style="list-style-type: none"> <li>Manager, Social Impact Unit</li> <li>Project Manager, Social Impact Unit</li> </ul>	<ul style="list-style-type: none"> <li>Key stakeholders to consult</li> <li>Approach to the assessment</li> <li>SIMP structure and approach</li> </ul>
Education Queensland Industry Partnership (EQIP)	<ul style="list-style-type: none"> <li>Chief Executive Officer (CEO)</li> </ul>	<ul style="list-style-type: none"> <li>To understand training and education opportunities for students</li> </ul>
Energy Skills QLD LNG Unit	<ul style="list-style-type: none"> <li>Skills Formation Manager</li> </ul>	<ul style="list-style-type: none"> <li>Whether the local industry possess the skills to support the project</li> <li>Level of up skilling will be required to meet the skills needs of the project</li> </ul>
Gladstone Chamber of Commerce and industry	<ul style="list-style-type: none"> <li>Acting President</li> <li>Treasurer</li> </ul>	<ul style="list-style-type: none"> <li>To understand existing business conditions</li> <li>Implications of the project for small business</li> </ul>
Gladstone Community Advisory Service	<ul style="list-style-type: none"> <li>Community Development Officer, GRC</li> <li>Youth Development Officer, GRC</li> <li>Multicultural Community Relations Officer, GRC</li> <li>Manager, Roseberry Community Service</li> <li>Manager, Supported Accommodation Assistance Program</li> <li>Manager, Relationships Australia</li> <li>Councillors, Relationships Australia</li> </ul>	<ul style="list-style-type: none"> <li>Information on social infrastructure and services</li> <li>Valued places</li> <li>Current community issues</li> <li>Recreational resources</li> <li>Community challenges</li> <li>Impacts of the project</li> </ul>
Gladstone Economic and Industry Development Board	<ul style="list-style-type: none"> <li>CEO</li> </ul>	<ul style="list-style-type: none"> <li>Anticipated impacts of the project</li> <li>Potential initiatives the project could coordinate with during operation and construction</li> <li>Other activities in the region</li> </ul>
Gladstone Industry Leadership Group	<ul style="list-style-type: none"> <li>CEO</li> </ul>	<ul style="list-style-type: none"> <li>Community issues</li> <li>Existing initiatives to deal with community concerns about industrial development</li> </ul>
GRC	<ul style="list-style-type: none"> <li>Manager, Human and Social Services</li> <li>Sports and Recreation Officers</li> <li>Manager, Gladstone Aquatic Centre</li> <li>Senior Planning Officer</li> <li>Planning Officer</li> <li>Manager project Coordination</li> </ul>	<ul style="list-style-type: none"> <li>Information on social infrastructure and services</li> <li>Valued places</li> <li>Current community issues</li> <li>Recreational resources</li> <li>Community challenges</li> <li>Impacts of the project</li> </ul>
Police and Emergency	<ul style="list-style-type: none"> <li>Officer in Charge, Gladstone</li> </ul>	<ul style="list-style-type: none"> <li>Existing levels of crime, root</li> </ul>



Stakeholder	Details	Purpose of consultation
Services	<ul style="list-style-type: none"> <li>■ District Water Police</li> <li>■ District officer, Gladstone Police Station</li> <li>■ Business Support Services Manager, Gladstone Hospital</li> <li>■ Executive Director Primary and Community Health, Gladstone Hospital</li> </ul>	<ul style="list-style-type: none"> <li>■ causes and possible mitigation measures</li> <li>■ Existing levels of health service provision</li> <li>■ Impacts on services</li> </ul>
Schools and Industry Network (SAIN)	<ul style="list-style-type: none"> <li>■ Chairman</li> </ul>	<ul style="list-style-type: none"> <li>■ Training and education opportunities for students in the study area</li> </ul>

A summary of the issues raised by the above mentioned stakeholder groups is provided in Table 2-3.

■ **Table 2-3: Stakeholder issues, aspirations, values and views**

Stakeholder group	Issue, value or view	
State Government	<ul style="list-style-type: none"> <li>■ Cumulative impacts</li> <li>■ Traffic management</li> <li>■ Increased demand on social infrastructure and services</li> <li>■ Affordable housing</li> <li>■ Linking training with jobs/positions</li> <li>■ Training and employment opportunities, including for the long term unemployed and other vulnerable groups</li> <li>■ Coordinating workforce planning with relevant state bodies</li> <li>■ Impacts on water based recreation</li> <li>■ Investment in social infrastructure</li> <li>■ Mental and physical health of the workforce</li> </ul>	<ul style="list-style-type: none"> <li>■ Providing adequate lead times to government to allow for planning for social infrastructure and service provision</li> <li>■ Sustainability of jobs created in the construction stage</li> <li>■ Water based safety</li> <li>■ Accommodation options for single men in the region</li> <li>■ Skills shortages</li> <li>■ Support for small to medium enterprises</li> <li>■ The impact of dredging on existing activities within the harbour</li> <li>■ Opportunity to up skill migrants and other vulnerable groups</li> <li>■ Employee behaviour</li> </ul>
Local Government	<ul style="list-style-type: none"> <li>■ Employment opportunities</li> <li>■ Training opportunities for young people</li> <li>■ Increased diversity</li> <li>■ Sustainable population growth</li> <li>■ Impact of rising housing costs</li> <li>■ Limited available employment for women</li> <li>■ Limited access to childcare</li> <li>■ Pressures of shift work</li> <li>■ Limited public transport</li> <li>■ Physical and mental health of the workforce</li> </ul>	<ul style="list-style-type: none"> <li>■ Affordable housing</li> <li>■ Loss of existing residents</li> <li>■ Skills shortages</li> <li>■ Volunteering</li> <li>■ Integration of new residents</li> <li>■ Employee behaviour</li> <li>■ Impact on informal recreation</li> <li>■ Coordinating with the Gladstone Foundation</li> <li>■ Social infrastructure investment</li> <li>■ Impact of skills shortages on other businesses</li> </ul>
Business and community groups	<ul style="list-style-type: none"> <li>■ Impact on water based recreation</li> <li>■ Safety impacts associated with increased congestion and infrastructure in the harbour</li> <li>■ Local presence for the project</li> </ul>	<ul style="list-style-type: none"> <li>■ Employee retention complicated by skills shortages</li> <li>■ Improvements in the range of goods and services available in Gladstone</li> </ul>



Stakeholder group	Issue, value or view	
	<ul style="list-style-type: none"> <li>■ Increased utilisation of recreational infrastructure</li> <li>■ Educating harbour users</li> <li>■ Housing costs</li> <li>■ Affordable housing</li> <li>■ Temporary accommodation</li> <li>■ Discrepancy between available skills and job opportunities</li> </ul>	<ul style="list-style-type: none"> <li>■ Amenity / air quality</li> <li>■ Liveability</li> <li>■ Skills shortages</li> <li>■ Training and apprenticeship opportunities</li> <li>■ Loss of training opportunities at other employers</li> <li>■ Potential for a glut of unemployed apprentices in the future</li> </ul>

Arrow Energy has continued to engage with key stakeholders about the project since the EIS was finalised and exhibited. Within these discussions input to plans, strategies or actions that could be included in the SIMP has been considered where appropriate. The following provides a summary of the stakeholders engaged following finalisation and exhibition of the EIS (Table 2-4).

■ **Table 2-4 Stakeholders consulted following the finalisation and exhibition of the EIS**

Agnes Waters School	Gladstone Industry Leadership Group
Capricorn Conservation Council	Gladstone Local Marine Advisory Committee
Central Queensland Institute of TAFE	Gladstone Regional Council
Central Queensland Medicare Local	Gladstone Sports Fishing Club
Central Queensland University	Gladstone Workforce Skilling
Community Advisory Service	Golding Contractors
Department of Communities	Industry Capability Network
Department of Community Services	Maritime Safety Queensland
Department of Education and Training	McCosker Contracting
Department of Employment, Economic Development and Innovation	Member for Flynn (LNP)
Department of Housing, Qld	Member for Gladstone
Department of Justice and Attorney-General	Public Trustee
Department of State Development, Infrastructure and Planning	Queensland Ambulance
Education Queensland & Industry Partnership (EQIP)	Queensland Health
Gladstone Airport	Queensland Minerals and Energy Academy
Gladstone and District Wildlife Carers Association	Queensland Police
Gladstone Area Promotion and Development Ltd	Queensland Rail
Gladstone Conservation Council	Stockland Gladstone
Gladstone Economic and Industry Development Board	Toolooa State High School
Gladstone Engineering Alliance	Walz Construction



## 2.10. Summary of impacts

This section summarises the potential social benefits and impacts of the project that have been assessed as of moderate or high significance in the SIA (SKM, 2011).

Within the SIA, each identified potential positive and negative social impacts was assessed on the dimensions shown in Table 2-5. For more details on the assessment tool refer to Appendix A. For more details on the impacts refer to Appendix C.

■ **Table 2-5: Dimensions of social impacts assessed within the SIA**

Impact dimension	Description
Nature	Whether each social impact is positive, negative or neutral.
Duration	How long each social impact will be experienced for
Extent	The geographic extent of each impact
Severity	The level to which human, social, financial or built capital will be affected
Likelihood	How likely each impact will occur
Significance	A significance rating derived by summing the scores for duration, extent and severity and multiplying this by the likelihood. Significance ratings fall into three categories; low, moderate and high.

Driving many of these benefits and impacts is the expected population change that will be brought about by the project. As described in section 2.3.1, the majority of the workforce will be resident in construction camps and will have minimal opportunities to interact with the remainder of the community outside of their project role.

At the peak of construction, 467 workers will be living outside of the construction camps. It is expected a small number of these will bring their families (5% of the EPC staff and 10% of Arrow Energy staff). Based on an assumed family size of four (two children and one spouse), this will lead to a peak population increase in the study area community of approximately 729 people during construction (equivalent to 1.2% of the 2009 population).

During operation, Arrow Energy has indicated that approximately 30% of the Arrow Energy workforce and 40% of contractors will be local to the study area. This will result in 295 non locals relocating to the study area during operation of trains 1 and 2, increasing to 400 upon operation of trains 3 and 4. Arrow Energy expects 70% of non local Arrow Energy staff will relocate to the study area with their families, while the balance of contractors will be FIFO single status. Based on the same assumed family size as above, in total approximately



543 people will relocate to the study area during operation of trains 1 and 2, increasing to 868 people during operation of trains 3 and 4.

Based on this population change and project activities, Table 2-6 provides a summary of the potential social benefits and impacts that have been rated to be of moderate to high significance. The table also identifies where impacts will have cumulative implications with other projects that are likely to occur.

■ **Table 2-6: Key social impacts / benefits and mitigation actions**

<b>Impact / benefit</b>	<b>Project phase</b>	<b>Nature</b>	<b>Description</b>	<b>Relevant SIMP action plan</b>
Increased housing costs.	Construction and operation	Negative	The project will result in a small increase in demand for housing stock (90 houses during construction and 130 houses during operation) which will reduce the availability of existing accommodation. This may be sufficient to sustain housing costs growth that had already occurred under previous projects With lower incomes than the non Indigenous community, Indigenous people are more vulnerable to increased private rents	Housing and Accommodation plan.
Increased demand on existing social infrastructure and services	Construction and operation	Negative	The small proportion of worker's living in the study area outside of construction camps and their families will place increased demand on social infrastructure and services (e.g. medical, educational).	Community Investment and Wellbeing Plan.
Reduced availability of staff at existing social infrastructure.	Construction	Negative	By placing limited pressure on housing stock, the project will place some pressure on affordable housing limiting the ability of entry level police, council officers, teachers and other workers to reside in the area.	Housing and Accommodation plan.
Reduction in recreational opportunities	Construction and operation	Negative	The project will have a limited impact on recreational boating and related activities in the harbour. In addition, workers and their families based on the mainland will place limited demand on formal and informal recreational facilities.	Community Investment and Wellbeing Plan.
Employment opportunities	Construction and operation	Positive	The project is likely to result in employment opportunities for the Indigenous community to work directly or indirectly for the project or in filling other positions in the community.	Indigenous Community Plan.
Business opportunities for Indigenous persons	Construction and operation	Positive	The project may be of benefit to Indigenous contractors or other businesses. These operators may take on more employees in response to business growth providing further benefit to the community.	Indigenous Community Plan.
Construction workforce not respecting Indigenous values	Construction and operation	Negative	The construction workforce may not understand Indigenous values.	Indigenous Community Plan.
Increased local employment.	Construction and operation.	Positive	During construction up to 633 workers will be local – equivalent to 2.0% of the 2006 workforce. During operation up to 200 workers will be local.	Workforce and Training plan.
Increased local employment opportunities with non LNG employers	Construction and operation	Positive	The project will create additional positions in other businesses that service the project, expand to cater to the increased population or back fill positions. Continued increased patronage of existing hotels/ motels is likely to contribute to local employment and benefit the financial wellbeing of business operators in the hospitality industry	Local Content and Investment Plan



Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
Increased local training opportunities	Construction and operation.	Positive	The project will provide training opportunities for students through Arrow Energy’s scholarship, vacation employment and school based training and Graduate programs. Employees working directly for Arrow Energy will also potentially be able to benefit from internal training, vocational/trade training and specialist training. Arrow Energy staff and contractors may take on apprentices and trainees providing opportunities for younger people.	Workforce and training plan.
Ability for local business to benefit from the additional trade	Construction and operation	Positive	Existing businesses have the potential to provide goods and services directly to the project. While they will have already increased their staffing to do this for other projects, the LNG Plant presents an opportunity to maintain or increase their workload. Some businesses ability to benefit from the project will be constrained due to an inability to compete on wages or higher living costs	Local Content Strategy.
Community concerns about the management of social issues	Construction and operation	Negative	The project may create or amplify existing community concerns about the pressures on housing in the study area and the provision of social infrastructure and maintenance of exiting lifestyles. The community is concerned that the values of the project workforce will be incompatible with theirs. Particular issues of concern include the potential for increased risk of alcohol related offences, crime, antisocial behaviour or domestic violence.	Community Health and Safety Plan.
Strain on workers and their families	Construction and operation	Negative	Shift work is perceived by some stakeholders to be a risk factor that may contribute to incidents of domestic violence. However, it is anticipated that the proposed Monday to Friday shift will mitigate the potential incidence of this risk. However, the FIFO, component of the workforce will be subject to two weeks on site, potentially placing a strain on their relationship with their families. It is commonly reported that another risk factor for domestic violence is financial stress, which can be exacerbated by cost of living increases.	Community Health and Safety Plan.
Increased income inequality in the community	Construction and operation		The project will contribute to an increased income disparity between people working in or for the LNG industry and those not. Significant increases in income disparity can be a contributing factor to a loss of community cohesion.	Community Health and Safety Plan.
Increases in the public risk as a result of increased traffic, people and the project.	Construction and operation	Negative	There will potentially be an increase in the level of risk resulting from increased traffic movements. This increased risk will also extend to the harbour, with changed harbour conditions and congestion increasing the likelihood of accidents.	Community Health and Safety Plan.
Changes in air quality	Construction	Negative	The project will impact on air quality very infrequently. Infrequent change in air quality could be expected to be of concern to the community.	Community Amenity Plan.

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
Visual Impact	Construction and operation	Negative	The project will impact on existing visual amenity but this will be diminished by the presence of a number of other industrial facilities	Community Amenity Plan.
Noise and vibration impacts	Construction and operation	Negative	There will be increased noise levels, however it will not be sufficient to create sleep disturbance.	Community Amenity Plan.
Cumulative increased housing demand putting pressure on housing costs	Construction and operation	Negative	Projects that achieved FID prior to the commencement of this EIS will have increased demand for available housing stock, in turn putting increased pressure on housing costs. It is likely that this project will contribute to this by also putting demand on housing stock and sustaining pressure on housing costs.	Housing and Accommodation Plan.
Increased employment and training opportunities	Construction and operation	Positive	Cumulatively, there will be a large increase in peak local employment. During the peak construction of the Arrow LNG Plant, the combined workforce of all LNG projects which have made a Financial Investment Decision (FID) to proceed is expected to be 5,834 workers.	Workforce and Training Plan.
Increased demand on social infrastructure (excluding recreation)	Construction and operation	Negative	Cumulatively there will be an increase in the number of families in the study area as a percentage of workers relocate to the study area with their spouses and children. This will increase demand for a range of community services and facilities, including child care, education, health and medical services, family support services and cultural and entertainment facilities.	Community Investment and Wellbeing Plan.
Impact on recreation		Negative	The Arrow LNG Plant, cumulatively with other projects in the study area that have achieved FID prior to the commencement of the Arrow LNG Plant EIS is expected to impact on water based activities such as boating and fishing. During construction, works at Curtis Island will result in increases in the number of exclusions zones, boating traffic and area used for project infrastructure.  Increased population growth is also expected to increase demand for other formal and informal recreational facilities, such as pools, tennis courts, squash courts, gyms, indoor sports, parks and bikeways.	Community Investment and Wellbeing Plan.
Balancing environmental concerns and industrial development	Construction and operation	Negative	Clearing of part of Curtis Island and works within the harbour are likely to be of community concern. Activities that balance industrial development with environmental protection are likely to be well received.	Community Health and Safety Plan.



### **2.11. Project monitoring process**

Details on the process to monitor project commitments are provided in Section 4. Progress against each of the commitments will be recorded in a commitments register, which will be updated as new commitments are made. The commitments register will be available for viewing on the Arrow Energy website and will be updated every six months.

The project will also undertake regular environmental monitoring, including water, dust and noise monitoring, as part of its Environmental Management Plan (EMP).



### **3. Section B: Impact mitigation and management**

Based on the results of consultation and the key positive and negative social impacts identified for the project, Arrow Energy has developed action plans and mitigation strategies according to eight key themes shown in Figure 3-1.

Recognising the value of collaboration and the cumulative nature of many of the impacts, Arrow Energy seeks to promote an active and ongoing role for the community, the GRC and all levels of government throughout construction, operation and decommissioning phases of the project.

As such each of these action plans identifies activities that will seek involvement from key stakeholders and other proponents in the region to ensure that resources can be pooled and efforts coordinated to address impacts and maximise the benefits of the project for the community.

■ **Figure 3-1: Action plan themes**



Each action plan below contains three sections:

- Introduction
- Impacts
- Mitigation actions

**Introduction** – The introduction explains the purpose of each plan, the underlying objectives and key stakeholders involved.

**Impacts** – This section describes the impacts that the action plan is addressing. It contains information on the nature, phase, extent, duration, severity, likelihood and significance of each identified impact.

**Mitigation actions** – This section details the mitigation actions that will be undertaken as part of the project, responsible stakeholders for each and indicative timeframes.



These plans represent measures to be taken to establish appropriate systems and protocols for initiating and commissioning the project. Once a contractor has been selected to undertake construction and operational activities, more detailed actions will be established in consultation with these parties. The method by which to measure progress against each target may also be altered.

These action plans will be revised for the operation phase of the project prior to the completion of the construction of trains 1 and 2.

Arrow Energy recognises that the effective implementation of these actions will require a joint effort by stakeholders across the government, public and industry sectors. Section 3.9 provides a summary of the key partnerships that arise from the action plans below.

### 3.1. SIMP ACTION PLAN: HOUSING AND ACCOMMODATION

Introduction																									
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> <li>■ Manage the increased pressure placed by the project on the GRC housing market for renters and those seeking to purchase dwellings.</li> <li>■ Manage the impact of increased utilisation by project workers of temporary accommodation such as hotels, motels and serviced apartments.</li> </ul>																								
Objectives	<ul style="list-style-type: none"> <li>■ To adequately house the non-local project workforce.</li> <li>■ To minimise inflationary pressure on the local housing market.</li> <li>■ To minimise displacement of vulnerable groups including low and middle income households and Indigenous persons in the GRC.</li> <li>■ To reduce the potential for the project workforce to displace other users of temporary accommodation.</li> </ul>																								
Stakeholders	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Arrow Energy</td> <td style="width: 50%;">Local communities</td> </tr> <tr> <td>Chamber of commerce</td> <td>Non government social housing providers</td> </tr> <tr> <td>DETE</td> <td>Office of the Coordinator General</td> </tr> <tr> <td>Department of Communities, Child Safety and Disability Services</td> <td>Other proponents</td> </tr> <tr> <td>EPC contractor</td> <td>Other tourism and business bodies</td> </tr> <tr> <td>GAPDL</td> <td>RCCC</td> </tr> <tr> <td>GRC</td> <td>Traditional Owners</td> </tr> <tr> <td>Housing industry</td> <td>Urban Land Development Authority</td> </tr> <tr> <td>Indigenous community representatives</td> <td></td> </tr> </table>							Arrow Energy	Local communities	Chamber of commerce	Non government social housing providers	DETE	Office of the Coordinator General	Department of Communities, Child Safety and Disability Services	Other proponents	EPC contractor	Other tourism and business bodies	GAPDL	RCCC	GRC	Traditional Owners	Housing industry	Urban Land Development Authority	Indigenous community representatives	
Arrow Energy	Local communities																								
Chamber of commerce	Non government social housing providers																								
DETE	Office of the Coordinator General																								
Department of Communities, Child Safety and Disability Services	Other proponents																								
EPC contractor	Other tourism and business bodies																								
GAPDL	RCCC																								
GRC	Traditional Owners																								
Housing industry	Urban Land Development Authority																								
Indigenous community representatives																									
Scope	All actions in the housing and accommodation plan cover Arrow Energy employees, the EPC contractor and sub-contractors during the construction and operations stages.																								
Impacts																									
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance																		
Increased housing costs	Negative	Construction Operation	Local	Long term	Medium	Probable	High																		
Reduced housing affordability for Indigenous people	Negative	Construction Operation	Local	Long term	Medium	Definite	High																		
Reduced availability of staff at existing social infrastructure.	Negative	Construction	Local	Medium term	Low	Possible	Moderate																		

<b>Mitigation</b>		
<b>Mitigation Actions</b>	<b>Responsibility</b>	<b>Timeframe</b>
<b>Construction Workforce Accommodation</b>		
<p>Develop a construction workforce accommodation strategy within twelve months of awarding the EPC contract.</p> <p>This strategy will include a commitment to company facilitated accommodation to meet the anticipated demand for up to 380 beds during construction of trains 1 and 2. It is anticipated that all of these beds will be provided in company facilitated communal accommodation which may be met directly by the project, either through the development of purpose built accommodation or through agreements with third party providers. Examples of the company facilitated communal accommodation include:</p> <ul style="list-style-type: none"> <li>■ Medium to high density developments.</li> <li>■ Third party construction camps already operational in the Gladstone Region.</li> <li>■ Pioneer workers camp on the mainland.</li> <li>■ Rental properties where market conditions allow.</li> </ul> <p>The strategy will identify the preferred approach for facilitating up to 90 houses during the construction phase. This will be based on the state of the market to meet this project generated demand and required market interventions to minimise adverse impacts upon the community. It will also identify opportunities to bring forward facilitation of housing intended for the operations workforce that can be used for the construction workforce.</p>	<p>Arrow Energy EPC contractor Housing industry GRC</p>	<p>Twelve months of awarding the EPC contract</p>
<p>Identify options to meet the demand for dwellings, which minimises the use of rental properties unless vacancy rates increase to 3% or higher. Possible options could include:</p> <ul style="list-style-type: none"> <li>■ Providing rental guarantees or other incentives to private investors to encourage the construction of new housing stock which can be used by project staff.</li> <li>■ Encouraging all non local employees to live in company facilitated housing unless they have families or other circumstances that make this impractical.</li> <li>■ Providing direct and indirect investment in the housing market.</li> <li>■ Providing accommodation advice services for workers and their families.</li> </ul>	<p>Arrow Energy EPC contractor</p>	<p>Twelve months of awarding the EPC contract</p>
<b>Operations Workforce Accommodation</b>		
<p>Develop an operations accommodation strategy 24 months prior to the completion of construction. This strategy will include a commitment to company facilitated accommodation to meet the anticipated demand for up to 225 beds during operation of trains 1 and 2. It is anticipated that all of these beds will be provided in company facilitated communal accommodation which may be met directly by the project, either through the development of purpose built accommodation or through agreements with third party providers. Examples of the company facilitated communal accommodation include:</p> <ul style="list-style-type: none"> <li>■ Medium to high density developments.</li> <li>■ Third party construction camps already operational in the Gladstone Region.</li> <li>■ Pioneer workers camp on the mainland.</li> <li>■ Rental properties where market conditions allow.</li> </ul> <p>The strategy will identify the preferred approach for facilitating 130 houses during operation of trains 1 and 2. This will be based on the state of the market to meet this project generated demand and required market interventions to minimise adverse impacts upon the community.</p>	<p>Arrow Energy EPC contractor Housing industry GRC</p>	<p>24 months prior to the completion of construction</p>



<p>Identify options to meet the demand for dwellings, which minimises the use of rental properties unless vacancy rates increase to 3% or higher. Possible options could include:</p> <ul style="list-style-type: none"> <li>■ Providing rental guarantees or other incentives to private investors to encourage the construction of new housing stock which can be used by project staff.</li> <li>■ Encouraging all non local employees to live in company facilitated housing unless they have families or other circumstances that make this impractical.</li> <li>■ Providing direct and indirect investment in the housing market.</li> <li>■ Providing accommodation advice services for workers and their families.</li> </ul>	<p>Arrow Energy EPC contractor</p>	<p>Twelve months prior to operations</p>
<p><b>Reporting and liaison</b></p>		
<p>Continue to engage with the Office of the Coordinator-General and other LNG proponents to identify co-operative strategies that address cumulative housing impacts.</p>	<p>Arrow Energy Other proponents Office of the Coordinator General</p>	<p>Ongoing</p>
<p>Continue to liaise with other LNG proponents to determine cumulative workforce housing requirements and to determine whether the private market is able to provide sufficient dwellings in the local area for the construction and operation workforces. This will be informed by house price and rental data from the REIQ's Queensland Market Monitor and Department of Communities, Child Safety and Disability Services Housing Market Report.</p>	<p>Arrow Energy Other proponents</p>	<p>Ongoing</p>
<p>Collect data on where workers are residing and whether they have a family with them. Determine the level of local employment and the likely number of non local workers and their families seeking accommodation in the study area.</p>	<p>Arrow Energy EPC contractor GRC</p>	<p>Every three months during construction</p>
<p>Participate in OESR surveys to monitor housing and worker accommodation in Gladstone undertaken for the Gladstone Housing Report.</p>	<p>Arrow Energy EPC contractor OESR</p>	<p>Ongoing</p>
<p>Continue to provide data to state and local government to facilitate the creation of a common data set across all major projects. The data collected will be in the format already agreed between existing proponents and the Office of the Coordinator General.</p>	<p>Arrow Energy EPC contractor Office of the Coordinator General GRC</p>	<p>Every three months during construction</p>
<p>Provide information on the Arrow Energy website on actions taken to meet project housing needs.</p>	<p>Arrow Energy</p>	<p>Every six months during construction</p>

<b>Temporary Accommodation</b>		
<p>Develop an early works workforce accommodation strategy covering the period from construction commencement until final commissioning of the Curtis Island construction camp. This strategy will identify options for accommodating all project workers who will need to be accommodated on the mainland prior to the establishment of the Curtis Island Camp. Options that will be considered for the accommodation of these workers will include:</p> <ul style="list-style-type: none"> <li>■ Residential properties.</li> <li>■ Third party provided construction camp facilities.</li> <li>■ Other forms of accommodation facilitated by the project, depending on accommodation availability.</li> </ul>	Arrow Energy EPC contractor	Four months prior to construction
<p>Design the Curtis Island Camp to provide sufficient accommodation for up to 2,500 workers and ensure it has a design life of approximately five years to cover the entire construction phase of the project. Following the completion of Stage 1 of the project, consider decommissioning the camp or maintaining the camp for the Stage 2 construction phase, depending on expected timing. Decommission the construction camp following all project construction phases and stabilise, reinstate and rehabilitate the site to a self-sustaining landform.</p>	Arrow Energy EPC contractor	Pre construction to completion of construction
<p>Consider options for the accommodation of the tunnel workforce, including residential properties, third party provided construction camp facilities, another form of accommodation facilitated by the project or TWAF, depending on accommodation availability.</p>	Arrow Energy EPC contractor	Pre construction
<p>Ensure that workers associated with dredging are housed onboard the dredge vessel, or are considered as part of the early works and construction accommodation strategies.</p>	Arrow Energy EPC contractor	Ongoing during construction
<p>Design the TWAF to accommodate a sufficient capacity (up to 1,000 people) to act as an overflow camp for FIFO workers if the construction camp reaches capacity. The camp will also provide accommodation for workers associated with mainland based activities, e.g., pipeline and tunnel construction. This facility will have a shorter lifespan to the main construction camp on the island, during the peak construction period.</p>	Arrow Energy EPC contractor	During detailed design
<p>Collaborate with other proponents in the region and identify opportunities to share temporary accommodation where possible for the construction and maintenance workforces.</p>	Arrow Energy EPC contractor	Ongoing
<p>Inform the tourist industry and other peak business bodies of anticipated time frames for peak temporary accommodation demand.</p>	Arrow Energy EPC contractor Chamber of commerce GAPDL Other tourism and business bodies	Construction and every 12 months regarding key maintenance activities

<b>Affordable housing</b>		
Work with the Queensland Government, Gladstone Regional Council and affordable housing providers to identify opportunities in the study area to bring additional affordable housing to market for existing residents	GRC DSDIP Arrow Energy	EPC award and during construction
Provide \$6.5 million towards the development of affordable housing options in Gladstone. Arrow Energy has met with and negotiated with Gladstone Affordable Housing (GAH) to provide this funding. The GAH is committed to providing housing to key target groups including Aboriginal and Torres Strait Islander people. Arrow Energy will take a position on the GAH reference group upon the commitment of funding at FID.	GAH DOC Arrow Energy	EPC award
Provide information on the Arrow Energy website on actions taken to support affordable housing initiatives to offset housing impacts.	Arrow Energy	Every six months during construction
Provide \$1 million for Emergency Rental Assistance (ERA) to Gladstone Regional Council (GRC) for distribution. Arrow Energy has commenced discussions with GRC and will continue to work with them to develop the criteria and distribution processes for access to ERA funding. This is intended to ensure that it reflects local community needs and compliments the current agreements within the ERA program with the other proponents.	Arrow Energy GRC	EPC award

### 3.2. SIMP ACTION PLAN: COMMUNITY INVESTMENT AND WELLBEING

Introduction																					
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> <li>■ Enhance the community.</li> <li>■ Manage impacts on existing social infrastructure, services and recreation.</li> </ul>																				
Objectives	Enhance the community through targeted investment in projects, events and initiatives that; improve the safety, healthy lifestyles and liveability of the community, build sustainable learning and employment opportunities and increase awareness of the environment around us. <ul style="list-style-type: none"> <li>■ Minimise impacts on social infrastructure and services.</li> <li>■ Fund projects that directly offset impacts of the project.</li> <li>■ Arrow Energy's relationship with the community is maintained or improved.</li> </ul>																				
Stakeholders	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Arrow Energy</td> <td style="width: 50%;">Education providers</td> </tr> <tr> <td>Arrow LNG Plant workforce and contractors.</td> <td>Education Queensland</td> </tr> <tr> <td>Boating and fishing groups</td> <td>EPC contractor</td> </tr> <tr> <td>Community and not-for-profit organisations.</td> <td>GRC</td> </tr> <tr> <td>Community service providers</td> <td>Local communities</td> </tr> <tr> <td>DETE.</td> <td></td> </tr> <tr> <td>DOC.</td> <td></td> </tr> </table>							Arrow Energy	Education providers	Arrow LNG Plant workforce and contractors.	Education Queensland	Boating and fishing groups	EPC contractor	Community and not-for-profit organisations.	GRC	Community service providers	Local communities	DETE.		DOC.	
Arrow Energy	Education providers																				
Arrow LNG Plant workforce and contractors.	Education Queensland																				
Boating and fishing groups	EPC contractor																				
Community and not-for-profit organisations.	GRC																				
Community service providers	Local communities																				
DETE.																					
DOC.																					
Impacts																					
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance														
Reduction in recreational opportunities.	Negative	Construction Operation	Local	Long term	Low	Probable	High														
Increased demand on existing social infrastructure and services.	Negative	Construction Operation	Local	Long term	Low	Probable	Moderate														
Increased demand on formal and informal recreational facilities.	Negative	Construction operation	Local	Medium term	Low	Possible	Moderate														

<b>Mitigation</b>		
<b>Mitigation Actions</b>	<b>Responsibility</b>	<b>Timeframe</b>
<b>Social Investment program</b>		
<p>Arrow Energy acknowledges it has a shared responsibility with government, and society more broadly, to help facilitate the development of strong and sustainable communities. It is committed to managing the residual social impacts of its activities that cannot be avoided or sufficiently minimised and to contributing to the social and economic wealth of the communities in which it operates through its social investment program.</p> <p>Arrow Energy has committed to each of the following social investment activities:</p> <ul style="list-style-type: none"> <li>■ Brighter Futures Program, providing funding for community, sponsorships and partnership opportunities (see section 1.3).</li> <li>■ \$3.5 million to offset or mitigate impacts of the project (comparable to other LNG Proponents).</li> <li>■ \$1 million for Emergency Rental Assistance to Gladstone Regional Council (GRC) for distribution (section 3.1).</li> <li>■ \$6.5 million to Gladstone Affordable Housing to develop affordable housing options (section 3.1).</li> </ul> <p>These commitments are comparative with those made by other LNG proponents.</p> <p>Details of the Brighter Future program for Gladstone will be released on the Arrow Energy website. This will include information on criteria for funding, funds expended, processes for applying for funding and how often funding will be available for applications. Information will also be provided on projects that receive funding or in kind support to offset or mitigate direct project impacts.</p>	Arrow Energy	Ongoing
<b>The workforce and planning</b>		
Design the workers camp to have sufficient social and recreational facilities to cater for recreational, fitness and entertainment requirements.	Arrow Energy EPC contractor	Prior to pioneer works
Develop and provide workers with an induction and welcome kit which includes a statement of community expectations for new arrivals. Where FIFO workers come from overseas, ensure they are provided with an adequate Australian cultural awareness briefing and information on how to undertake day to day activities, for example banking or shopping.	Arrow Energy EPC contractor GRC	EPC award
Consult with the GRC and RCCC to identify which social, community or recreational infrastructure is being directly impacted by the project and to what extent. Work with the Office of the Coordinator General and Gladstone Regional Council to identify the most suitable mechanism to coordinate efforts across all proponents and identify projects that may provide an equivalent offset or mitigation of impacts.	Arrow Energy GRC Other relevant bodies	During construction and 12 months after commencement of operations
Ensure that there are no ongoing restrictions on the Calliope River boat ramp or Gladstone Marina during the operation of the project.	Arrow Energy	Ongoing
Prohibit non local construction workers and operators from engaging in fishing, crabbing or boating in any exclusion zone.	Arrow Energy EPC contractor	Ongoing
Prohibit all FIFO workers (with the exception of traditional owners) from fishing, crabbing and boating in the Gladstone Regional	Arrow Energy	During construction

Council area, whilst on shift/ living in the construction camps.	EPC contractor	
Continue to provide state and local government departments responsible for educational, health and other social infrastructure with forecasts of workforce numbers and projected families to assist in their future service planning. This information will be provided in an agreed format that will allow these departments to plan for cumulative population change.	Arrow Energy DOC DETE GRC Education Queensland	construction and 12 months after commencement of operations

### 3.3. SIMP ACTION PLAN: INDIGENOUS ENGAGEMENT STRATEGY

Introduction							
Purpose	The purpose of this plan is to identify actions that: Provide employment opportunities for Indigenous people and businesses. Facilitate the creation of a workplace in which Indigenous people are respected.						
Objectives	Indigenous people are provided with opportunities and support in gaining employment on the project. Indigenous values are respected and Indigenous people feel supported. Indigenous businesses participate in the tendering process for elements of the project.						
Stakeholders	Arrow Energy Arrow Energy employees and its contractors DETE Department of Communities, Child Safety and Disability Services EPC contractor	Federal Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) GRC Indigenous businesses and joint ventures. Indigenous community representatives Traditional Owners					
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance
Employment opportunities.	Positive	Construction operation	Regional	Medium term	Low	Possible	Moderate
Business opportunities for Indigenous people.	Positive	Construction operation	Regional	Medium term	Low	Possible	Moderate
Construction workforce not respecting Indigenous values.	Negative	Construction operation	Local	Medium term	Low	Possible	Moderate

<b>Mitigation</b>		
<b>Mitigation Actions</b>	<b>Responsibility</b>	<b>Timeframe</b>
<p>Implement Arrow Energy’s Aboriginal and Torres Strait Islander Action Plan which outlines Arrow Energy’s commitment to Indigenous Australians, working with Traditional Owners and negotiating Indigenous Land Use Agreements (ILUA’s), around the four goals of:</p> <ul style="list-style-type: none"> <li>■ Ensuring Arrow Energy is culturally safe and culturally competent.</li> <li>■ Recruiting and retaining Aboriginal and Torres Strait Islander staff.</li> <li>■ Connecting Aboriginal and Torres Strait Islander people with business and employment opportunities.</li> <li>■ Supporting Aboriginal and Torres Strait Islander education.</li> </ul> <p>This action plan can be found on the Arrow Energy website, <a href="http://www.arrowenergy.com.au">www.arrowenergy.com.au</a></p>	Arrow Energy	Ongoing
<p>Ensure major contractors develop a plan that clearly identifies Indigenous opportunities (employment and business) on the project.</p>	Arrow Energy EPC contractor Maintenance contractor	Ongoing
<p>Implement actions within Arrow Energy’s Aboriginal and Torres Strait Islander Action Plan relating to the provision of educational opportunities for Indigenous students.</p> <p>Existing initiatives within the Action Plan include the following:</p> <ul style="list-style-type: none"> <li>■ The Queensland Aboriginal and Torres Strait Islander Foundation (QATSIF) providing support to 69 Indigenous students entering year 11 or 12 in 2013 by providing bursaries that cover school-related expenses such as uniforms, IT levies, and VET expenses.</li> <li>■ The Yalari Foundation, providing support to three Indigenous students commencing high school in 2013 to obtain a high quality education at a boarding school suited to their education and cultural needs.</li> <li>■ Partnering with six of Queensland’s leading universities (University of Southern Queensland, Central Queensland University, James Cook University, University of Queensland, Queensland University of Technology and Griffith University) to provide a total of 25 scholarships to Indigenous students across a range of fields. These scholarships include a package of financial support, mentoring and peer support.</li> <li>■ Encouraging Indigenous Australians to apply for its graduate program, vacation employment, traineeships and apprenticeships.</li> </ul>	Arrow Energy	Ongoing
<p>Register the Indigenous Land Use Agreement (ILUA) that was negotiated for the project site, harbour and port area in March 2012.</p>	Arrow Energy Traditional owners	Prior to construction
<p>Implement Arrow Energy’s Aboriginal and Torres Strait Islander Action Plan, including those actions that focus on employment for Indigenous Australians, including:</p> <ul style="list-style-type: none"> <li>■ Recruiting and retaining Aboriginal and Torres Strait Islander staff.</li> <li>■ Connecting Aboriginal and Torres Strait Islander people with business and employment opportunities.</li> <li>■ Arrow Energy has engaged in preliminary discussions with DSDIP, the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA) and DEEWR in relation to Indigenous employment, training and business development opportunities associated with the project. The focus of these discussions has been on developing Indigenous employment within Arrow Energy’s supply chain.</li> </ul>	Arrow Energy EPC contractor DETE Traditional Owners DOCSDS (OATSIP) Other Indigenous community	Prior to construction



<p>Actions being considered include:</p> <ul style="list-style-type: none"> <li>■ Identifying apprenticeships or traineeships that could be made available to Indigenous people. For underemployed or unemployed Indigenous people skills set summaries for these positions will be provided to work ready programs to allow them to tailor their training. These roles will be quarantined for successful Indigenous participants in the work ready programs.</li> <li>■ Identifying the most appropriate opportunities for Indigenous businesses to competitively tender to provide goods or services to the project during the operations stage.</li> <li>■ Sending information about the opportunities identified above to relevant businesses, or business groups.</li> </ul>	<p>representatives</p>	
<p>Continue the Arrow Energy Whanu Binal project and provide assistance, such as business mentoring, to Traditional Owners and other interested members of the Indigenous community with developing business opportunities and capacity.</p> <p>Arrow Energy's Whanu Binal project targets Indigenous businesses and helps them develop the capacity and capability to successfully tender for major projects, including Arrow Energy projects. It also aims to help build the skills and knowledge of existing and potential workforces. Examples of the type of activities that occur as part of this project include:</p> <ul style="list-style-type: none"> <li>■ Identification of opportunities to allow joint partnering.</li> <li>■ Briefings on what business systems and insurances are required to work on the project.</li> <li>■ Information on government programs that exist to help Indigenous businesses.</li> <li>■ Information on how to pool resources across businesses to tender on larger parcels of work.</li> </ul>	<p>Arrow Energy DETE Traditional Owners DOCSDS (OATSIP) Other Indigenous community representatives</p>	<p>Ongoing during construction, briefings every six months</p>
<p>Ensure that appropriate cultural awareness training to all workers on the project.</p> <p>Arrow Energy is committed to providing a workplace where all personnel are treated fairly and with dignity and respect. To facilitate this, it has been mandatory since 2011 for all Arrow Energy personnel (including contractors) to participate in Cultural Awareness Training within the first three months of employment or engagement by the company.</p> <p>Training is delivered by Indigenous presenters from Corporate Culcha, an Indigenous-owned and operated company specialising in building capacity to engage with, recruit and retain Indigenous Australians.</p> <p>The intended outcomes are that staff and contractors can engage and work effectively with Indigenous people, suppliers and communities. This in turn is intended to ensure that Indigenous staff are understood, respected and retained in the organisation, and that Arrow Energy maintains positive relationships with Indigenous communities.</p> <p>Arrow Energy will ensure that appropriate cultural heritage training will be developed and delivered to all workers on the project.</p>	<p>Arrow Energy DETE Traditional Owners</p>	<p>Ongoing</p>
<p>In addition to the actions contained in this plan, Indigenous persons and businesses will also be able to take advantage of initiatives outlined in both the Australian Industry Participation Plan (in the local content and investment plan, section 3.5) and the workforce and training plan (section 3.4).</p>	<p>Arrow Energy</p>	<p>Ongoing</p>

### 3.4. SIMP ACTION PLAN: WORKFORCE AND TRAINING

Purpose	<p>The purpose of this plan is to identify actions that:</p> <ul style="list-style-type: none"> <li>■ Allow for the maximum amount of local employment.</li> <li>■ Provide local training opportunities.</li> </ul>								
Objectives	<p>To create opportunities for up to 20% local employment          To provide increased employment opportunities for school leavers and other people wishing to join the LNG industry.          Opportunities are provided for qualified females and people from other underrepresented groups.          Training opportunities are provided by the project.          The overall skills base of the region is enhanced.</p>								
Stakeholders	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;">                 Arrow Energy                  Chamber of Commerce                  CSG/LNG Skills Taskforce                  CSG/LNG Steering Committee                  DETE                  DEEWR                  DET                  Education Queensland                  Employment agencies and training providers                  Energy Skills Queensland – CSG/LNG taskforce             </td> <td style="vertical-align: top;">                 EPC contractor                  EQIP                  GRC                  Industry Leadership Group                  LNG Industry Training Program Construction Skills Queensland – CSG/LNG                  Local businesses.                  SAIN                  TAFE and University                  Training Providers             </td> </tr> </table>							Arrow Energy Chamber of Commerce CSG/LNG Skills Taskforce CSG/LNG Steering Committee DETE DEEWR DET Education Queensland Employment agencies and training providers Energy Skills Queensland – CSG/LNG taskforce	EPC contractor EQIP GRC Industry Leadership Group LNG Industry Training Program Construction Skills Queensland – CSG/LNG Local businesses. SAIN TAFE and University Training Providers
Arrow Energy Chamber of Commerce CSG/LNG Skills Taskforce CSG/LNG Steering Committee DETE DEEWR DET Education Queensland Employment agencies and training providers Energy Skills Queensland – CSG/LNG taskforce	EPC contractor EQIP GRC Industry Leadership Group LNG Industry Training Program Construction Skills Queensland – CSG/LNG Local businesses. SAIN TAFE and University Training Providers								
<b>Impacts</b>									
<b>Impact</b>	<b>Nature</b>	<b>Phase</b>	<b>Extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Likelihood</b>	<b>Significance</b>		
Increased local employment.	Positive	Construction operation	Regional	Long term	High	Definite	High		
Increased local employment opportunities with non LNG employers	Positive	Construction and operation	Regional	Medium term	Medium	Probable	High		
Increased local training opportunities.	Positive	Construction operation	Regional	Long term	Medium	Probable	High		

<b>Mitigation</b>		
<b>Mitigation Actions</b>	<b>Responsibility</b>	<b>Timeframe</b>
<b>Workforce planning</b>		
Identify the range of skill sets required for the labour force and provide this information to relevant agencies in a format consistent with the templates provided by Skills Queensland. Undertake a gap analysis against existing skills availability and identify, in consultation with relevant agencies, appropriate strategies to fill these gaps, e.g. FIFO/drive-in, drive out (DIDO) or training.	DET DETE CSG/LNG Skills Taskforce CSG/LNG Steering Committee	EPC award
Determine how to maximise local employment opportunities and develop a recruitment plan to identify what positions will be targeted without negatively impacting on the availability of local services.	Arrow Energy DETE CSG/LNG Skills Taskforce CSG/LNG Steering Committee	EPC award
Engage an Education & Training Coordinator to undertake regular reviews of non project related labour requirements and current skills sets to ensure that training strategies meet these needs. The Coordinator will work within the Social Investment Team and various state agencies and other skills bodies to conduct assessments of existing community skills to minimise impacts on local businesses.	Arrow Energy Energy Skills Queensland – CSG/LNG taskforce LNG Industry Training Program Construction Skills Queensland – CSG/LNG DET	Ongoing
Develop a policy that facilitates equal opportunity for all suitably qualified persons.	Arrow Energy EPC contractor	Prior to construction

<b>Training</b>		
<p>Where appropriate, identify opportunities where training provided by the project or other training providers will be able to meet skills gaps in the community for the project to assist in maximising local employment opportunities.</p>	<p>Arrow Energy DETE CSG/LNG Skills Taskforce CSG/LNG Steering Committee DET</p>	<p>EPC award</p>
<p>Develop a policy identifying training pathways for students and school leavers to assist students in gaining employment upon graduation. This will be done in consultation with SAIN, EQIP, Education Queensland and QMEA. Where relevant training programs have been initiated by other proponents, Arrow Energy will consider coordinating support with these where appropriate.</p> <p>Existing Arrow Energy training programs and initiatives that will fall within this policy include:</p> <ul style="list-style-type: none"> <li>■ Go Women in Engineering and Science and Technology (Go WEST) which conducts networking and/or mentoring activities for female staff and students and enhances collaborative partnerships between regional industry, Queensland Office for Women, local government and USQ Student Services.</li> <li>■ The Arrow Energy Aiming for a Brighter Future Program which aims to inspire, motivate and support women in rural and remote communities to return to education as mature age students to pursue distance learning pathways in science, technology, engineering and mathematics disciplines.</li> <li>■ Education Queensland Industry Partnership (EQIP) – Gladstone which delivers courses designed to enable high school students to successfully transition into the local workforce and provide employers in the resource sector with new graduates who possess relevant skill sets. EQIP acts as a centralising body for government and industry to deliver a range of work-ready and pre-trade training courses to high school students. Arrow Energy entered into a three year partnership with EQIP in October 2012.</li> <li>■ Queensland Minerals and Energy Academy (QMEA) which, in partnership with the Queensland Government, the Queensland Resource Council and major coal seam gas (CSG) proponents, designs and facilitates a range of programs to encourage students to pursue careers in Queensland’s CSG industry. Arrow Energy entered into a three year partnership with QMEA in the Surat Basin in 2011 and the partnership was expanded in 2012 to include the Gladstone region.</li> <li>■ Working with group training organisations and encouraging contractors to recruit and retain apprentices or trainees during operations.</li> </ul>	<p>Arrow Energy EPC contractor EQIP QMEA SAIN, Education Queensland</p>	<p>Prior to operation</p>
<p>Continue to work with industry groups that are focused on increasing the engagement of women in the industry and developing pathways for women to work in non-traditional roles. Arrow Energy is already committed to:</p> <ul style="list-style-type: none"> <li>■ Attending the Women in Mining Industry network.</li> <li>■ Attending the quarterly meeting hosted by the University of Central Queensland.</li> </ul>	<p>Arrow Energy</p>	<p>Ongoing</p>
<p>Continue existing Arrow Energy programs to provide entry level positions within the business and opportunities for women, young people and people with a disability. The programs currently operational are:</p> <ul style="list-style-type: none"> <li>■ Graduate Program.</li> <li>■ Vacation Employment.</li> <li>■ Indigenous Scholarships.</li> <li>■ Traineeships.</li> <li>■ Apprenticeships.</li> </ul>	<p>Arrow Energy</p>	<p>Ongoing</p>

<p>The following Arrow Energy programs will be expanded to suitably qualified local employees:</p> <ul style="list-style-type: none"> <li>■ Executive and Management Development Programs.</li> <li>■ External Education Program.</li> <li>■ Vocational/Trade Training.</li> <li>■ Specialist Training.</li> </ul>	<p>Arrow Energy</p>	<p>Ongoing</p>
<p>Arrow Energy will work with Skills Queensland to deliver work readiness and skills development training programs for vulnerable local people such as the long term unemployed or under skilled, in order to assist them to gain employment.</p>	<p>Arrow Energy DETE Training Providers</p>	<p>Ongoing</p>
<p>Continue to support the careers in gas website or other similar initiatives.</p>	<p>Arrow Energy Other proponents Energy Skills QLD</p>	<p>Ongoing</p>

### 3.5. SIMP ACTION PLAN: LOCAL CONTENT

Introduction							
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> <li>Help local businesses to understand the requirements of supplying to the project.</li> <li>Provide processes to support local businesses in competing for opportunities.</li> </ul>						
Objectives	Actively support the opportunities for local businesses to provide goods and services to the project. Provide guidance to local businesses to better enable them to tender to provide good and services to the project. Reduce the impact that competition for staff for the project will have on other businesses.						
Stakeholders	Arrow Energy Chamber of Commerce DETE EPC contractor GAPDL GILG Gladstone Chamber of Commerce and Industry		GRC Industry Capability Network Local businesses Local communities Other proponents QMI TAFE				
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance
Ability for local business to benefit from the additional trade.	Positive	Construction Operation	Regional	Long term	Low	Probable	Moderate
Mitigation							
Mitigation Actions					Responsibility	Timeframe	
Finalise and implement the Australian Industry Participation Plan (AIPP), which provides detailed information about the strategies and approaches to be undertaken by Arrow Energy to: <ul style="list-style-type: none"> <li>Encourage contractors to source local goods and services where possible.</li> <li>Encourage business to consider Indigenous procurement to maximise Indigenous employment opportunities.</li> <li>Engage with key business bodies regarding appropriate opportunities for local businesses to supply goods and services to the project.</li> </ul> The AIPP is being developed in consultation with the Federal government and the Coordinator General.					Arrow Energy DETE EPC contractor	Within 3 months of FID	
Provide ICN Queensland and DSDIP with the information they require to assist local businesses improve their skills base and tailor their operations to meet the project's needs.					Arrow Energy EPC contractor ICN DSDIP	Within 3 months of FID Annually during construction	
Develop processes to ensure local business opportunities are considered in project procurement practises. These processes					Arrow Energy	Ongoing	

will allow capable local business to be given fair and reasonable opportunities to compete for the supply of goods or services to the project.	EPC contractor DETE	
Encourage contractors to source local goods and services where possible.	Arrow Energy EPC contractor	Ongoing
Encourage businesses who provide goods and services to the project to consider Indigenous procurement in order to maximise Indigenous employment opportunities.	Arrow Energy	Ongoing
Arrow Energy will continue to engage with key business bodies regarding appropriate opportunities for local businesses to supply goods and services to the project.	Arrow Energy Gladstone Chamber of Commerce and Industry Gladstone Engineering Alliance GAPDL	Ongoing
Facilitate the communication of the Local Content Policy to local service providers. This will involve ongoing communication of project procurement requirements, regular project updates during construction, overview of goods and services packages and supply chain. This will be communicated through initial procurement information sessions in Gladstone for potential suppliers and ongoing on the Arrow Energy website.	Arrow Energy DSDIP Gladstone Engineering Alliance EPC contractor	Within 3 months of FID for the information sessions Ongoing for information on the website
Participate in existing programs that provide technical assistance and briefings to potential local and regional businesses about opportunities and requirements (e.g. Gladstone Region Leaders in Business – Speakers Series and the Gladstone Tender Readiness Program). Briefings will contain information on management systems and other requirements.	Arrow Energy DETE GRC EPC contractor Industry Capability Network	Ongoing
Collaborate with the existing job service that has been set up by other proponents for local businesses and use this to advertise for local positions. This will allow applicants to choose between industry and non industry jobs.	Arrow Energy EPC contractor Other proponents	Ongoing
Provide information to the TAFE system to inform the specialised small business solutions programs on what is required to provide goods and services to the LNG industry.	Arrow Energy DETE TAFE EPC contractor	Annually during construction and 12 months prior to the commencement of operation of trains 1 and 2 and trains 3 and 4

### 3.6. SIMP ACTION PLAN: COMMUNITY HEALTH AND SAFETY

Introduction									
Purpose	The purpose of this plan is to identify actions that address: <ul style="list-style-type: none"> <li>■ Community concerns about the influx of the project workforce.</li> <li>■ Perceived and actual impacts on public safety.</li> <li>■ Perceived and actual impacts on workers health and safety.</li> </ul>								
Objectives	The welfare of the community and project workers is protected. Community concerns about project impacts are addressed.								
Stakeholders	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">                             Arrow Energy                              Department of Health                              Emergency services                              EPC contractor                              GPC                              GRC                              Local community                         </td> <td style="width: 50%; vertical-align: top;">                             Local landholders                              Marine Safety Queensland                              Not for profit groups / community groups                              Other proponents                              Queensland Police                              RCCC                         </td> </tr> </table>							Arrow Energy Department of Health Emergency services EPC contractor GPC GRC Local community	Local landholders Marine Safety Queensland Not for profit groups / community groups Other proponents Queensland Police RCCC
Arrow Energy Department of Health Emergency services EPC contractor GPC GRC Local community	Local landholders Marine Safety Queensland Not for profit groups / community groups Other proponents Queensland Police RCCC								
Impacts									
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance		
Community concerns about the management of social issues.	Negative	Construction operation	Local	Short to medium term	Medium	Probable	Moderate		
Increased income inequality in the community	Negative	Construction operation	Local	Short to medium term	Medium	Probable	Moderate		
Perceived and actual impacts on public health and safety.	Neutral	Construction operation	Regional	Short to medium term	Medium	Possible	Moderate		
Balancing environmental concerns and industrial development	Neutral	Construction and operation	Regional	Short to medium term	Low	Possible	Moderate		
Increases in the public risk as a result of increased traffic, people and the project.	Negative	Construction and ongoing	Local	Long term	Very high	Unlikely	Moderate		
Strain on workers and their families	Negative	Construction and ongoing	National	Medium term	Low	Possible	Moderate		



<b>Mitigation</b>		
<b>Mitigation Actions</b>	<b>Responsibility</b>	<b>Timeframe</b>
<b>Actions pertaining to the community</b>		
In accordance with project requirements an emergency management plan will be developed that will cover joint emergency response planning in collaboration with emergency service providers and local neighbours (e.g. in response to boating or traffic accidents).	Arrow Energy Emergency service providers Local landholders	Prior to construction
Ensure monitoring results of workplace health and safety are communicated to the public and to the RCCC as part of Arrow Energy's annual reporting.	Arrow Energy EPC contractor RCCC	Annually
Details of the approved traffic management plans will be made available on the Arrow Energy website.	Arrow Energy EPC contractor	Ongoing during construction
Continue to liaise with Marine Safety QLD regarding their safety education campaign for boat users and anglers.	Arrow Energy Marine Safety Queensland	Ongoing
The project will collaborate with other proponents to coordinate communications and responses to safety concerns such as increased activity in Gladstone Harbour or other activities associated with the LNG industry.	Arrow Energy Other proponents	Ongoing
Arrow Energy will engage with neighbouring landholders to construction works in advance of works.	Arrow Energy EPC contractor Local landholders	As required during construction
Arrow Energy will publically release information on how environmental impacts are being offset by the project.	Arrow Energy	Annually during construction
<p>Emergency management planning for the project will be undertaken in accordance with the requirements of the relevant codes and standards such as the National Standard for the Control of Major Hazard Facilities, the National Code of Practice and the Dangerous Goods Safety Management Act.</p> <ul style="list-style-type: none"> <li>■ All emergency management planning will be undertaken in consultation with relevant Queensland government authorities and emergency services organisations (including the Department of Community Safety and Emergency Management Queensland, Queensland Ambulance Service, Queensland Fire and Rescue Service and Emergency Management Queensland).</li> <li>■ A wider program of consultation will be undertaken to inform the development of emergency response plans. Representatives from the Curtis Island LNG projects, the LNG Incident Response Group Captains, Maritime Safety Queensland, Regional Harbour Master (Gladstone), Gladstone Ports Corporation, Queensland Police Service, Queensland Fire and Rescue Service and Queensland Ambulance Service will be consulted on the development of these plans.</li> </ul>	Arrow Energy GRC Other proponents Emergency services	Prior to construction and ongoing

<p>Continue to participate in a number of safety initiatives in Gladstone including:</p> <ul style="list-style-type: none"> <li>■ Meet (as required) with Council, Industry, local businesses, police and hospital to help address alcohol fuelled anti-social behaviour.</li> <li>■ Contribute to LNG funded extra police in the CBD during peak times.</li> <li>■ Work with Volunteer Marine Rescue and Maritime Safety Queensland on boating safety awareness. This involves working with recreational boat users (at boat ramps) to ensure they are up to date with maritime rules.</li> </ul> <p>Arrow Energy is aware that other groups are operating in the region on programs relating to road safety awareness, multicultural issues and domestic violence and are exploring opportunities to participate in these initiatives.</p>	<p>Arrow Energy GRC Maritime Safety Queensland Other proponents</p>	<p>Prior to construction and ongoing</p>
<p>Continue support for a Gladstone Gas Industry aero-medical retrieval service CareFlight. Arrow Energy, in collaboration with Origin Energy, Queensland Gas Company and Santos, has agreed to fund Gladstone Gas Industry aero-medical retrieval service in the region, commencing in mid 2013. The service is provided by CareFlight who are one of only two fully integrated aero-medical retrieval operations in the world. CareFlight employs its own full time emergency doctors, paramedics and flight crews to perform approximately 3000 retrievals a year in Queensland alone. The Aero-Medical Retrieval Service will assist in providing 100 free hours to Queensland Health for community based aeromedical recovery services.</p>	<p>Arrow Energy Other LNG proponents</p>	<p>Ongoing</p>
<p>Through the Gladstone Region Community Development Committee or other mechanisms, continue to engage with local service providers and community organisations across the Gladstone region. Arrow Energy will consult with the Office for Women and the Centre for Domestic and Family Violence Research to monitor impacts of alcohol, violence and impacts on families.</p>	<p>Gladstone Region Community Development Committee</p>	<p>Ongoing</p>
<p><b>Actions relating to the project workforce</b></p>		
<p>Communicate project activities, milestones, workforce numbers and other relevant information to appropriate state departments and agencies as well as local government to help plan for demand on services.</p>	<p>Emergency services DET Queensland Health DOC</p>	<p>Quarterly during construction and biannually during operation</p>
<p>Complementing the induction and welcome kit provided at induction (in the community investment and wellbeing action plan), non local employees will also be provided with relevant information on sexual health and fatigue management at induction.</p>	<p>Arrow Energy EPC contractor Queensland Health Emergency services GRC</p>	<p>Prior to construction</p>
<p>Implement policies and programs to maintain the wellbeing of personnel, including:</p> <ul style="list-style-type: none"> <li>■ Provision of welfare and recreation facilities.</li> <li>■ Provision of a counselling service (including drug and alcohol services*).</li> <li>■ Implementation of a range of Arrow Energy policies including the OHS Policy, Drug, Alcohol and Contraband Policy, Duty to Stop Work Policy and Fit for Duty Policy.</li> <li>■ Enforcement of smoking regulations on site.</li> <li>■ Restrictions on working hours to reduce worker fatigue.</li> <li>■ Provision of nutritionally balanced food to all personnel living within construction camps in line with guidance issued by</li> </ul>	<p>Arrow Energy EPC contractor</p>	<p>Prior to construction and ongoing</p>

<p>Queensland Health.</p> <p>*At all times Arrow Energy’s Drug, Alcohol and Contraband and Fit For Duty Policies will apply to the workforce whilst on Arrow Energy sites and whilst engaged in Arrow Energy work.</p>		
<p>A project code of conduct, based on Arrow Energy’s existing Code of Conduct and ‘drug and alcohol’ policy will cover workforce behaviour while on shift or on site. This code will be made available to the community on the website.</p>	<p>Arrow Energy EPC contractor</p>	<p>EPC award</p>
<p>Arrow Energy will explore the opportunity to stagger rostering with other proponents to avoid staff from all LNG projects passing through Gladstone simultaneously.</p>	<p>Arrow Energy Other Proponents EPC Contractor</p>	<p>Ongoing during construction</p>
<p>Arrow Energy will provide an on-site health service for the workforce on Curtis Island and will liaise with emergency services and Queensland health in the planning of this facility.</p>	<p>Arrow Energy EPC contractor</p>	<p>Ongoing during construction</p>
<p>Arrow Energy will support programs that contribute to the health and well-being of Indigenous employees.</p>	<p>Arrow Energy</p>	<p>Ongoing</p>
<p>Develop a detailed medical emergency response plan which outlines key areas of responsibility for personnel on site and the medical emergency facilities and resources available. A range of medical emergency facilities and resources will be made available in accordance with the minimum standards set out in the Shell Exploration and Production Medical Emergency Response Guidelines (2005). These will be detailed in the medical emergency response plan and include:</p> <ul style="list-style-type: none"> <li>■ An appropriately designed on-site medical facility.</li> <li>■ Trained medical personnel.</li> <li>■ First aid equipment.</li> <li>■ An appropriate method of transport from facility to shore.</li> <li>■ Remote medical support.</li> </ul> <p>A detailed medical emergency response study will be undertaken to assess transport times between the LNG plant and the mainland and determine whether required response times can be met.</p> <p>Arrow Energy will also contribute to a common Curtis Island local emergency response strategy being developed by the various stakeholders involved in the Curtis Island LNG projects.</p>	<p>Arrow Energy Emergency services EPC Contractor</p>	<p>Prior to construction</p>

### 3.7. SIMP ACTION PLAN: COMMUNITY AMENITY

Introduction							
Purpose	The purpose of this plan is to identify actions that: <ul style="list-style-type: none"> <li>Address community concerns about the impact of the project on amenity.</li> </ul>						
Objectives	Community concerns about amenity impacts are addressed.						
Stakeholders	GRC Local community Department of Health Not for profit groups / community groups						
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance
Visual impact	Construction and operation	Negative	Local	Long term	Negligible	Possible	Moderate
Noise and vibration impacts	Construction and operation	Negative	Local	Long term	Negligible	Possible	Moderate
Changes in air quality	Operation	Negative	Local	Long term	Negligible	Possible	Moderate
Mitigation							
Mitigation Actions						Responsibility	Timeframe
Arrow Energy will communicate information about measures to reduce the impact on air quality through the Arrow Energy website.						Arrow Energy	Within three months of the end of detailed engineering
Details of measures to address impacts on visual amenity will be communicated on the Arrow Energy website.						Arrow Energy	Within three months of FID
Details of measures to address noise impacts will be available on the Arrow Energy website.						Arrow Energy	Within three months of FID
Arrow Energy will publically release information on how environmental impacts are being offset by the project.						Arrow Energy	Annually during construction
Issues of concern in respect to air quality, visual amenity and noise will be addressed in accordance with the complaints management system. The RCCC for Gladstone will also serve as a vehicle through which these issues can be raised, actioned and addressed.						Arrow Energy	Ongoing

### 3.8. SIMP ACTION PLAN: CUMULATIVE IMPACTS

Introduction							
Purpose	Cumulative impacts are addressed in the previous action plans where the potential for specific cumulative impacts have been identified. The purpose of this plan is to identify organisations charged with coordinating and managing cumulative impacts that Arrow Energy can coordinate with.						
Objectives	To collaboratively address cumulative impacts.						
Stakeholders	Arrow Energy Education Queensland EPC contractor EQIP Industry Leadership Group	Office of the Coordinator General Origin Other Proponents QGC RCCC SAIN					
Impacts							
Impact	Nature	Phase	Extent	Duration	Severity	Likelihood	Significance
Increased housing demand putting pressure on housing costs.	Negative	Construction and operation	Regional	Long term	High	Probable	High
Increased employment and training opportunities.	Positive	Construction and operation	Regional	Long term	High	Probable	High
Increased demand on social infrastructure (excluding recreation).	Negative	Construction and operation	Regional	Long term	Moderate	Probable	High
Increased demands on recreation facilities/ increased restrictions placed on recreational activities.	Negative	Construction and operation	Regional	Long term	Moderate	Probable	High
Mitigation							
Mitigation Actions				Responsibility		Timeframe	
As per the housing and accommodation action plan, take a position on the GAH reference group upon the commitment of funding at FID.				Arrow Energy GAH		FID	
Continue to participate in the Industry Leadership Group for CSG Resource Projects.				Arrow Energy Other Proponents Industry Leadership Group		On-going	
Participate in the existing RCCC for Gladstone.				Arrow Energy Other Proponents RCCC		EPC award	
Participate in CSG Industry Monitoring Group established by APLNG and QCLNG.				Arrow Energy Other Proponents		EPC award	

	Origin QGC	
As per the community investment and wellbeing plan work with key stakeholders to identify the most suitable mechanism to coordinate investment efforts.	Arrow Energy Other Proponents	Ongoing during construction 12 months after the commencement of operation of trains 1 and 2 and trains 3 and 4
As per the housing and accommodation plan, continue to engage the Office of the Coordinator General, other proponents and state agencies to manage housing and accommodation across the industry.	Arrow Energy Other Proponents Office of the Coordinator General	EPC award Every six months during construction Prior to the commencement of operation of trains 1 and 2 and trains 3 and 4
As per the workforce and training plan, continue to work with existing training providers to coordinate assistance for relevant training programs.	Arrow Energy EQIP SAIN Education Queensland	Within six months of FID
As per the local content strategy, collaborate with the job service established by other proponents for local businesses.	Arrow Energy EPC contractor Other proponents	Ongoing



### 3.9. Key partnerships

Arrow Energy recognises effective management of impacts across the Gladstone region will require a joint effort by stakeholders across the government, public and industry sectors. Table 3-1 provides a summary of the initial list of key partnerships Arrow Energy plans to form during the construction phase of the Arrow LNG Plant. For stakeholders, their sector and the nature of the relationship have been identified. Relationships have been characterised as one of the following: **Collaboration**, where Arrow Energy will share information and develop joint solutions with stakeholders and **Financial** where Arrow Energy will provide financial or in-kind support to stakeholders.

The coordination and management of these relationships will be managed by the relevant officers responsible for implementing each of the actions within the action plans.

■ **Table 3-1: Arrow LNG Plant Partnerships**

<b>Organisation</b>	<b>Core sector</b>	<b>Description of relationship</b>
Chamber of Commerce	Local business	Collaboration
Community housing and service providers	Housing	Financial
CSG/LNG Skills Taskforce	Skills and training	Collaboration
DETE	Employment and economic development	Collaboration
DEEWR	Education and employment	Collaboration
Department of Health	Health	Collaboration
DET	Education and training	Collaboration
DOC	Community development	Collaboration
Education Queensland	Education	Collaboration
Emergency services	Police and medical	Collaboration
EQIP	Education	Collaboration
FaHCSIA	Indigenous affairs	Collaboration
GAPDL	Tourism, business and industry	Collaboration
GILG	Industry	Collaboration
Gladstone Chamber of Commerce and Industry	Small and medium sized business	Collaboration
GRC	Local government	Collaboration
Indigenous community representatives	Indigenous engagement	Collaboration
Industry Leadership Group	Major industry	Collaboration
Marine Safety Queensland	Marine safety	Collaboration
Non government social housing providers	Housing	Financial
Office of the Coordinator General	Impact management	Collaboration
Other proponents	Impact management	Collaboration
Tourism bodies	Tourism industry	Collaboration



Organisation	Core sector	Description of relationship
QMI (Industry Capability Network)	Assists small business	Collaboration
Queensland Health	Health	Collaboration
Queensland Police	Emergency services	Collaboration
RCCC		Financial and collaboration
SAIN	Training	Collaboration
TAFE and university	Education and training	Collaboration
Training providers	Education and training	Collaboration
DSDIP	Affordable housing provision	Collaboration

These partnerships will evolve as the project progresses through construction, and based on the emerging needs and issues of affected communities.

### 3.10. Alignment with regional planning

The project aligns with a number of existing policies and strategies including:

- Blueprint for Queensland's LNG Industry
- Gladstone Community Plan
- Gladstone Regional Council Corporate Plan 2009 – 2013
- Gladstone Regional Social Infrastructure Strategic Plan
- Gladstone Regional Vision 2028
- Queensland Health Strategic Plan 2007 – 2012
- Queensland Skills Plan 2008
- Sustainable Resource Communities Policy: Social Impact Assessment in the Mining and Petroleum Industries
- Toward Q2: Tomorrow's Queensland.

### 3.11. Closure planning

Closure planning for the project will commence approximately five years before the date of expected closure. Currently, it is estimated that the plant will be operational for approximately 25 years or more from the year 2017, and so it is expected that closure will occur in the year 2042 at the earliest.

Closure planning that is undertaken for the project will serve to:

- plan and provide effectively for retrenchment, redeployment or re-skilling of employees
- engage key stakeholders to optimise potential social benefits of closure
- facilitate safe and sustainable closure processes
- manage contractor transition to other projects





- promote compliance with environmental and rehabilitation requirements for the site post-closure
- plan for remediation of the land to a level that satisfies regulatory requirements and optimises future beneficial land use
- provide detailed closure information to local and State government agencies to assist in planning
- reduce long-term social risks and liabilities.



## 4. Section C: Monitoring, reporting and review

This section summarises the monitoring, reporting and review processes for each of the action plans described in Section 3. It also contains information on data being considered by state and local government in tandem with proponents to monitor cumulative impacts.

### Cumulative impact monitoring

The objectives of the cumulative monitoring framework being managed by state government are:

- supply of rental accommodation is adequate to meet demand for LNG projects.
- supply of private rental accommodation is adequate to meet the demand from non LNG industry households
- affordability of private rental accommodation is not compromised for non LNG industry households
- low to moderate income households are not displaced or excluded from private rental market by rising costs or lack of appropriate affordable dwelling supply
- supply of accommodation to purchase is adequate to meet demand for LNG projects
- supply of accommodation to purchase is adequate to meet demand from non LNG industry purchasers
- affordability of accommodation for purchase by non LNG industry households is not compromised.

A summary of the key monitoring mechanisms being considered by state and local government to assess the cumulative of all the projects are summarised in Table 4-1.

These monitoring mechanisms are draft only and still being considered by the Coordinator-General and all proponents and will be subject to change on finalisation of the SIMP.

- **Table 4-1: Summary of key monitoring mechanisms being considered by State Government to monitor cumulative impacts**

Category of impact	Data collection being considered by the SIA unit
Demographic	Changes in resident population, size of non – resident population and projections
Workforce	Size of construction and operational workforces <ul style="list-style-type: none"> <li>■ Composition (resident / non-resident)</li> <li>■ Projections of cumulative workforces (resident / non resident)</li> <li>■ Shared workforce arrangements</li> </ul>
Temporary Accommodation	<ul style="list-style-type: none"> <li>■ Size of sector</li> <li>■ Utilisation / vacancy rates</li> <li>■ Leasing of dwellings from private rental market</li> <li>■ Capacity of worker accommodation villages</li> <li>■ Take-up of worker accommodation villages by non-resident workers</li> <li>■ Workforce accommodation arrangements and policies for major projects</li> </ul>
Long term housing	<ul style="list-style-type: none"> <li>■ Sales volumes and cost – new and existing dwellings</li> <li>■ Availability</li> </ul>
Rental housing	<ul style="list-style-type: none"> <li>■ New Bonds, Rents, Size of rental market, vacancies and length of leases</li> </ul>



Category of impact	Data collection being considered by the SIA unit
Land Supply and Development pipeline	<ul style="list-style-type: none"> <li>■ Land available for residential development</li> <li>■ Building approvals</li> <li>■ Properties under construction</li> <li>■ Cost of new residential land</li> </ul>
Social and crisis housing	<ul style="list-style-type: none"> <li>■ Total number of social housing properties (size &amp; location)</li> <li>■ Number of clients</li> </ul>

Source: Coordinator-General

The data list above concentrates on housing and the movement of population, where the most significant cumulative impacts are likely to be experienced. However, to compliment these, Arrow Energy will also introduce a series of additional monitoring mechanisms for each of the action plans.

### Monitoring the action plans

The purpose of the action plan monitoring processes is to determine whether the actions contained are meeting the identified objectives. Robust monitoring and evaluation of activities will allow the project to:

- identify and respond to issues or challenges at an early stage
- conduct more effective forward planning
- record program inputs, outputs, outcomes and impacts
- understand and justify whether a program is meeting initial objectives
- increase accountability within project staff and teams
- understand if community and stakeholder expectations are being met
- increase levels of project transparency.

Targets will be developed based on the objectives under each action plan. These will be refined to include metrics, standards and quantitative criteria as the project progresses and further details become available. Table 4-2 provides a summary of the action plan objectives and the possible data that could be used to measure progress against each.

■ **Table 4-2: Summary of key monitoring mechanisms being considered by Arrow Energy**

Objective	Possible data requirements
Adequately house the non-local project workforce	<ul style="list-style-type: none"> <li>■ Number / percentage accommodated in the community</li> <li>■ Number / percentage accommodated in the TWAF's</li> <li>■ Number of dwellings occupied by project workforce</li> <li>■ Number of non local families residing in the community</li> </ul>
Minimise inflationary pressure on the local housing market	<ul style="list-style-type: none"> <li>■ Dwelling procurements by Arrow Energy</li> <li>■ Levels of assistance provided to affordable housing providers (e.g. DSDIP)</li> </ul>
Minimise displacement of vulnerable groups including low and middle income households and Indigenous persons in the GRC	<ul style="list-style-type: none"> <li>■ Financial or in kind support to affordable housing providers</li> </ul>
Reduce the potential for the project workforce to displace other users of temporary	<ul style="list-style-type: none"> <li>■ Complaints received</li> <li>■ Business satisfaction</li> </ul>



Objective	Possible data requirements
accommodation	
Enhance the community through targeted investment in Health and Safety, Education and the Environment	<ul style="list-style-type: none"> <li>■ Number of applications submitted by relevant community groups to the Brighter Future program</li> <li>■ Records of funding provided through the Social Investment Plan and the Brighter Futures program</li> </ul>
Minimise impacts on social infrastructure and services	<ul style="list-style-type: none"> <li>■ Facilities are in situ at the completion of the construction camp</li> </ul>
Fund projects that directly offset impacts of the project	<ul style="list-style-type: none"> <li>■ Number of projects that are actioned within three months of the problem being identified</li> </ul>
Arrow Energy's relationship with the community is maintained or improved	<ul style="list-style-type: none"> <li>■ Level of community satisfaction with the project measured through surveys, complaints, media monitoring</li> </ul>
Indigenous people are provided with opportunities and support in gaining employment on the project	<ul style="list-style-type: none"> <li>■ Employment records</li> </ul>
Indigenous values are respected and Indigenous people feel supported	<ul style="list-style-type: none"> <li>■ Complaints management system</li> </ul>
Indigenous businesses participate in the tendering process for elements of the project	<ul style="list-style-type: none"> <li>■ Contractor records</li> </ul>
To achieve between 5 and 20% local employment for the construction and operations stages	<ul style="list-style-type: none"> <li>■ Employment data</li> </ul>
To provide increased employment opportunities for school leavers	<ul style="list-style-type: none"> <li>■ Employment data</li> </ul>
Opportunities are provided for qualified females and people from culturally and linguistically diverse groups	<ul style="list-style-type: none"> <li>■ Employment policies</li> <li>■ Details from the complaints management system (CMS)</li> <li>■ Internal employment and application data</li> </ul>
Training opportunities are provided by the project	<ul style="list-style-type: none"> <li>■ External training numbers</li> <li>■ Internal training records</li> </ul>
The overall skills base of the region is enhanced	<ul style="list-style-type: none"> <li>■ Number of local staff that receive training</li> <li>■ Range and types of training local employees receive</li> </ul>
Maximise the opportunities for local businesses to provide goods and services to the project	<ul style="list-style-type: none"> <li>■ Expenditure with registered local suppliers</li> </ul>
Provide guidance to local businesses so that they can align their practices with Arrow Energy	<ul style="list-style-type: none"> <li>■ Internal records</li> <li>■ Local business survey</li> <li>■ Complaints received</li> </ul>
Reduce the impact that competition for staff for the project will have on other business	<ul style="list-style-type: none"> <li>■ Records from the job service providing details of rates of successful placements, numbers of positions vacant and length of time vacant</li> </ul>
The welfare of the community and project workers is protected	<ul style="list-style-type: none"> <li>■ HSSE records</li> </ul>
Community concerns about project impacts are addressed	<ul style="list-style-type: none"> <li>■ Data from the community survey</li> <li>■ Data from the Complaints management system</li> </ul>
Community concerns about amenity impacts are addressed	<ul style="list-style-type: none"> <li>■ Logs on website updates</li> <li>■ Monitoring data</li> </ul>
To collaboratively address cumulative impacts	<ul style="list-style-type: none"> <li>■ Membership records of the respective groups</li> <li>■ Satisfaction expressed by key stakeholders</li> </ul>



#### **4.1. Reporting**

Communicating the findings of the monitoring process is important in providing key stakeholders with information on how social management activities are progressing. Internally, for Arrow Energy, it shows how project funds are being used to achieve key objectives. Additionally, the findings generate knowledge of what works, what does not work and why; helping the project team to appropriately manage impacts throughout the project life.

External reporting during construction and operation will take place through publishing an annual sustainability report. Arrow Energy will also report on some indicators more regularly through the Gladstone RCCC and on the Arrow Energy website. Arrow Energy will also distribute a newsletter to provide the community and other stakeholders with updated information about Arrow Energy's operations.

#### **4.2. Review**

The dynamic and evolving nature of the SIMP process requires that mechanisms be established for regular review and update of the plan. As such, internal review of the project's SIMP will take place annually – through the reporting mechanisms described in the previous section. This internal review will be conducted in consultation with the RCCC, Queensland Government's SIA Unit and selected key community stakeholders.

External review will also occur two years after commencement of the construction stage, with further reviews 12 months in advance of the commencement of operations for trains 1 and 2 and trains 3 and 4. A final review will occur 12 months in advance of the commencement of the decommissioning of the project.

External review will involve the commissioning of a third-party independent company, who will audit the SIMP process undertaken to date, and will also report on progress against key performance indicators and targets. The audit process will culminate in a report to the SIA Unit that will include:

- an overview of the effectiveness of implementation to date
- an assessment of progress against nominated indicators
- an explanation as to why specific actions were not carried out, where applicable
- recommendations as to how Arrow Energy can improve future performance.



#### **4.3. Amendment and termination**

Amendments and updates to this SIMP will be made if the strategies and actions described in the original SIMP no longer meet the desired outcomes, or if improvements to existing measures can be made. Amendments and updates will occur during the regular review process as described above.

Any proposal to amend this SIMP will be subject to negotiation between Arrow Energy and the Queensland Government's SIA Unit.

Amendments and updates will also be communicated to key stakeholders for the project through existing community consultation mechanisms.



## 5. Section D: Stakeholder engagement strategy

Arrow Energy has an ongoing commitment to engage with the community. As part of this commitment, Arrow Energy recognises that effective and transparent consultation will be essential in building and maintaining the community's trust and in developing a positive ongoing relationship for the life of the project.

Underpinning the stakeholder engagement strategy for the project are the following objectives:

- Enhance Arrow Energy's position as a contributor to the community in Gladstone.
- Improve awareness and understanding of Arrow Energy's activities in the Gladstone region.
- Enhance and protect Arrow Energy's reputation and social license to operate.
- Support and improve the operations and activities of the broader Gladstone team through increased understanding of the role and services that are provided by the Community and Corporate Affairs (C&CA) team.
- Minimise undue impact on stakeholders.
- Maintain and build relationships with key stakeholders and address stakeholders concerns in order to achieve mutually beneficial outcomes.
- Provide a consistent and systematic approach for managing the interaction with stakeholders across all stages of the Arrow LNG Project.

For the construction and operation of the LNG Plant a stakeholder engagement plan will be developed. This plan is likely to contain a number of actions, including those from the action plans in section 3. The plan will also provide mechanisms through which Arrow Energy will participate in the existing RCCC and engage the community.

### 5.1. Participation in the RCCC

A key tool in facilitating community and key stakeholder input into the progress of this SIMP will be Arrow Energy's participation in the existing RCCC for Gladstone. The RCCC will provide an effective mechanism for community feedback across the Gladstone region.

### 5.2. Engagement mechanisms

To achieve the objectives stated above, the stakeholder engagement strategy for the project will involve the following key actions:

- maintenance of a community information centre in Gladstone City
- an 1800 number for landholders that will be staffed 24 hours a day for emergencies
- a maximum of a 48 hour acknowledgement of community complaints with stakeholders regularly advised of progress in addressing their complaint



- establishment of a project page on the Arrow Energy website with key information about the project
- the establishment of a CMS and complaints register which will allow for easy and regular reporting
- periodic presentations to the GRC’s Community Consultation Group
- a community newsletter to provide the community and other stakeholders with updated information about Arrow Energy’s operations
- 360° degree feedback review – A process to evaluate the effectiveness of stakeholder engagement activities undertaken annually to measure performance and outcomes
- qualitative and quantitative market research to measure community satisfaction with engagement activities undertaken
- meetings with key stakeholders and members of the community
- freepost service for community correspondence relating the construction or operation of the LNG Plant.

The effectiveness of these methods will be monitored and revised if found unsatisfactory, with successful methods preferred over less successful methods as the project proceeds.

### 5.3. Stakeholders

Appendix B contains a list of stakeholders currently understood to be impacted by the project. These include:

- Proponents
- Local government authorities
- State government agencies
- Directly affected landholders
- Industry representatives
- Community groups.

This list will continue to grow as the project proceeds. Table 5-1 provides a summary of key stakeholder interests in the project and the engagement mechanisms that will be used to engage with them. These mechanisms will be modified to respond to changing needs over time.

■ **Table 5-1: Key stakeholder engagement mechanisms**

<b>Stakeholder group</b>	<b>Primary interest in project</b>	<b>Engagement mechanisms</b>
Federal Government	<ul style="list-style-type: none"> <li>■ Sustainable resource development</li> <li>■ Economic development</li> </ul>	<ul style="list-style-type: none"> <li>■ Newsletters and fact sheets</li> <li>■ Arrow Energy website</li> <li>■ One on one meetings</li> <li>■ Briefing sessions</li> </ul>
State Government	<ul style="list-style-type: none"> <li>■ Sustainable resource development</li> <li>■ EIS compliance</li> <li>■ Economic development</li> </ul>	<ul style="list-style-type: none"> <li>■ One on one meetings</li> <li>■ Briefing sessions</li> <li>■ Newsletters and fact sheets</li> </ul>





Stakeholder group	Primary interest in project	Engagement mechanisms
	<ul style="list-style-type: none"> <li>■ Employment and training opportunities for the community</li> <li>■ Indigenous opportunities</li> <li>■ Impact on social infrastructure</li> <li>■ Housing affordability</li> <li>■ Impact on road networks</li> <li>■ Community safety</li> </ul>	<ul style="list-style-type: none"> <li>■ Arrow Energy website</li> </ul>
Local Government	<ul style="list-style-type: none"> <li>■ Opportunities for local business</li> <li>■ Employment opportunities for locals</li> <li>■ Impact on local road networks</li> <li>■ Impact on social infrastructure</li> <li>■ Impact on affordable housing</li> <li>■ Local lifestyles and livelihoods</li> <li>■ Impact on other businesses</li> </ul>	<ul style="list-style-type: none"> <li>■ Briefing sessions</li> <li>■ One on one meetings</li> <li>■ Newsletters and fact sheets</li> <li>■ Community information sessions</li> <li>■ Arrow Energy website</li> <li>■ 1800 number</li> <li>■ Community Information Centre</li> <li>■ Community information sessions</li> </ul>
Traditional owners	<ul style="list-style-type: none"> <li>■ Employment opportunities</li> <li>■ Training opportunities</li> <li>■ Business opportunities</li> <li>■ Cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>■ Cultural Heritage Management Plan</li> <li>■ Community survey</li> <li>■ Business survey</li> <li>■ Briefing sessions</li> <li>■ One on one meetings</li> <li>■ Newsletters and fact sheets</li> <li>■ Community information sessions</li> <li>■ Arrow Energy website</li> <li>■ 1800 number</li> <li>■ Project email</li> <li>■ Community Information Centre</li> <li>■ Freepost service</li> </ul>
Landholders	<ul style="list-style-type: none"> <li>■ Property acquisition arrangements</li> <li>■ Environmental impacts on amenity</li> <li>■ Access and connectivity</li> </ul>	<ul style="list-style-type: none"> <li>■ One-on-one meetings</li> <li>■ Telephone calls</li> <li>■ Letters, faxes and emails</li> <li>■ Annual community survey</li> <li>■ Arrow Energy website</li> <li>■ Community information sessions</li> <li>■ 1800 number</li> <li>■ Project email</li> <li>■ Community Information Centre</li> <li>■ CMS</li> <li>■ Freepost service</li> </ul>



Stakeholder group	Primary interest in project	Engagement mechanisms
Resident community	<ul style="list-style-type: none"> <li>■ Employment opportunities</li> <li>■ Business opportunities</li> <li>■ Training opportunities</li> <li>■ Workforce behaviour</li> <li>■ Workforce integration with local activities</li> <li>■ Impact on affordable housing</li> <li>■ Cost of living</li> <li>■ Access to community services</li> <li>■ Community cohesion</li> <li>■ Maintenance of existing lifestyles</li> </ul>	<ul style="list-style-type: none"> <li>■ Community newsletters</li> <li>■ Community information sessions</li> <li>■ Community survey</li> <li>■ Business survey</li> <li>■ CMS</li> <li>■ Arrow Energy website</li> <li>■ Community information sessions</li> <li>■ 1800 number</li> <li>■ Project email</li> <li>■ Community Information Centre</li> <li>■ Freepost service</li> </ul>
Community and environmental groups	<ul style="list-style-type: none"> <li>■ Preservation of environmental values</li> <li>■ Maintenance of existing lifestyles</li> <li>■ Community cohesion</li> <li>■ Local amenity</li> </ul>	<ul style="list-style-type: none"> <li>■ Community newsletters</li> <li>■ Community information sessions</li> <li>■ Community survey</li> <li>■ CMS</li> <li>■ 1800 number</li> <li>■ Project email</li> <li>■ Community information sessions</li> <li>■ Community Information Centre</li> <li>■ Arrow Energy website</li> <li>■ Freepost service</li> </ul>
Project workforce	<ul style="list-style-type: none"> <li>■ Shifts and rosters</li> <li>■ Family health and wellbeing</li> <li>■ Equality in opportunities</li> <li>■ Road safety</li> <li>■ Living conditions in workers camp</li> <li>■ Ability to secure housing in the community</li> <li>■ Recreational opportunities</li> <li>■ Support services and social infrastructure for their families</li> </ul>	<ul style="list-style-type: none"> <li>■ Regular meetings</li> <li>■ Induction</li> <li>■ Education and training</li> <li>■ Workforce survey</li> <li>■ Newsletters and notices</li> <li>■ Internal grievance mechanism</li> <li>■ Project intranet</li> </ul>



## 6. Section E: Social impact management plan dispute resolution

Arrow Energy is committed to providing both external and internal stakeholders with a transparent system through which they can resolve disputes and lodge complaints. An overview of the complaints management system (CMS) is provided on the Arrow Energy website, with a more detailed overview contained in Appendix E.

The CMS is consistent with the Australian Standard ISO 10002-2006 'Customer satisfaction – Guidelines for complaints handling in organisations'.

Details of the CMS such as the process for handling grievances will be made public. However, while detailed records will be kept of the grievances or complaints as well as the process undertaken in order to resolve them, personally identifiable complainant information will be actively protected from disclosure.

Responsibility for managing issues identified through the CMS lies with Arrow Energy's Community and Corporate Affairs department.

Current avenues open to stakeholders to raise issues include:

- Phone: 1800 038 856 (free call)
- Arrow Energy's website: <http://www.arrowenergy.com.au/>
- Email: [info@arrowenergy.com.au](mailto:info@arrowenergy.com.au)
- Mail: Community Relations, Arrow Energy GPO Box 5262, Q 4001

As per the stakeholder engagement strategy detailed in Section 5, upon FID a Community Information Centre will also be established which exist as another point of contact for stakeholders to raise issues during construction.

A summary of the complaints management process is contained on the Arrow Energy's website, a more detailed summary is also included in Appendix B. It contains information on the guiding principles, documentation, applicability, objectives, system elements, monitoring and the complaint process.



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## Appendix A Impact rating tool

In consultation with local and State Government agencies, Arrow Energy has identified key issues and impacts associated with the Arrow LNG Plant. Identified issues and impacts were rated and ranked according to the methodology outlined below.

Particular consideration was accorded to the nature, duration, extent, severity and likelihood of each. This allowed Arrow Energy to calculate an overall significance rating of: low, medium, high or very high according to the formulas below.

Consequence = Extent + Duration + Severity
Significance = Consequence x Likelihood

Nature	Description
Positive	Impacts have a positive or uplifting effect on the project-affected community and stakeholders. The quality of life of affected individuals, households or the community is improved.
Negative	Impacts have a negative or oppressive effect on the project-affected community and stakeholders. The quality of life of affected individuals, households or the community is diminished.
Neutral	Impacts are neither positive nor negative in nature and have no meaningful effect on project-affected communities and stakeholders.

Extent	Description
5	International scale
4	National scale
3	Regional scale (substantially beyond site boundaries)
2	Areas adjacent to the project site (local)
1	Site-specific

Duration	Description
5	Permanent / irreversible (more than 50 years)
4	Long-term (25 – 50 years)
3	Medium-term (5 – 25 years)
2	Short-medium term (1 – 5 years)
1	Short-term (less than 1 year)



<b>Severity</b>	<b>Description</b>
5 Very High	<ul style="list-style-type: none"> <li>■ Significant loss of human, social, financial or built capital</li> <li>■ Significant enhancement of human, social, financial or built capital</li> </ul>
4 High	<ul style="list-style-type: none"> <li>■ Large loss of human, social, financial or built capital</li> <li>■ Large enhancement of human, social, financial or built capital</li> </ul>
3 Medium	<ul style="list-style-type: none"> <li>■ Moderate loss of human, social, financial or built capital</li> <li>■ Moderate enhancement of human, social, financial or built capital</li> </ul>
2 Low	<ul style="list-style-type: none"> <li>■ Limited loss of human, social, financial or built capital</li> <li>■ Limited enhancement of human, social, financial or built capital</li> </ul>
1 Negligible	<ul style="list-style-type: none"> <li>■ Negligible loss of human, social, financial or built capital</li> <li>■ Negligible enhancement of human, social, financial or built capital</li> </ul>

<b>Likelihood</b>	<b>Description</b>
5	Definite (>90% chance)
4	Probable (50 – 90% chance)
3	Possible (10 – 50% chance)
2	Unlikely (<10% chance)
1	Impossible



## Appendix B Stakeholders

Table 7-1 contains a list of stakeholders currently understood to be impacted by the project. These include:

- Proponents
- Local government authorities
- State government agencies
- Directly affected landholders
- Industry representatives
- Community groups

This list will continue to grow as the project proceeds.

### ■ Table 7-1: Project stakeholders

Organisation	Position
<b>Proponent</b>	
Santos	Manager Community Engagement Public Affairs and Sustainability
APLNG	Community Relations Manager
QCLNG	Integrated Housing Strategic Advisor
<b>Local Government Authority</b>	
GRC	Mayor
GRC	Councillors
GRC	Director of Communities
GRC	Director of Infrastructure
GRC	Community Advisory Service
GRC	Manager, Human Social Services
GRC	LNG Project Manager
<b>State and Federal Government</b>	
DEEDI	Project Manager
DET	Executive Officer
EQIP	CEO
Energy Skills Queensland	Industry Engagement Consultant
Federal Member for Flynn	Member
Fitzroy Basin Association (Boyne/Calliope)	Coordinator
GAGAL	CEO
GAPDL	CEO
State Member for Gladstone	Member
Gladstone Area Water Board	Manager
Gladstone Economic and Industrial Development	CEO

SINCLAIR KNIGHT MERZ



<b>Organisation</b>	<b>Position</b>
Board (GEIDB)	
Gladstone Environmental Protection Group	Coordinator
Gladstone Foundation	Chair
Gladstone Industry Leadership Group	CEO
Gladstone Interagency Group (Community Advisory Service)	Community Development Officer
Gladstone Ports Corporation	CEO
Department of Communities	Area Manager
<b>Industry or Community Parties</b>	
Gooreng Gooreng Indigenous Group	Elder
Lifeline	Client Services Manager
Nhulundu Wooribah Indigenous Corporation	CEO
St Vincent De Paul	President
Salvation Army	Corps Officer
Save Curtis Island Group	
South End Progress Association	President
Agforce	Chairperson
Bailai Indigenous Group	
Capricorn Conservation Council	
Conversation Volunteers Australia	Regional Manager



## Appendix C Summary of impacts

The following table provides a summary of the impacts that have been identified as part of this assessment. Population growth and demographic change have not been included in this table as these are triggers for the positive and social impacts identified below. For an explanation of the rating scales used, refer to Appendix A.

Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
Increased local employment	During construction up to 633 workers will be local equivalent to 2.0% of the 2006 workforce. During operation up to 200 workers will be local.	Construction and operation	Positive	3	4	4	5	High (55)
Increased local training opportunities	The project will provide training opportunities for students through Arrow Energy’s scholarship; vacation employment and school based training and Graduate programs. Employees working directly for Arrow Energy will also potentially be able to benefit from internal training, vocational/trade training and specialist training. Arrow Energy staff and contractors may take on apprentices and trainees providing opportunities for younger people.	Construction and operation	Positive	3	4	3	4	High (36)
Increased local employment opportunities with non LNG employers	The project will create additional positions in other businesses that service the project, expand to cater to the increased population or back fill positions. Continued increased patronage of existing hotels/ motels is likely to contribute to local employment and benefit the financial wellbeing of business operators in the hospitality industry.	Construction and operational	Positive	3	3	3	4	High (36)
Increased housing costs	The project will result in a small increase in demand for housing stock (90 during construction and 130 during operation) which will reduce the availability of exiting accommodation. This may be sufficient to sustain housing costs growth that had already occurred under previous projects	Construction and operation	Negative	2	4	3	5	High (45)

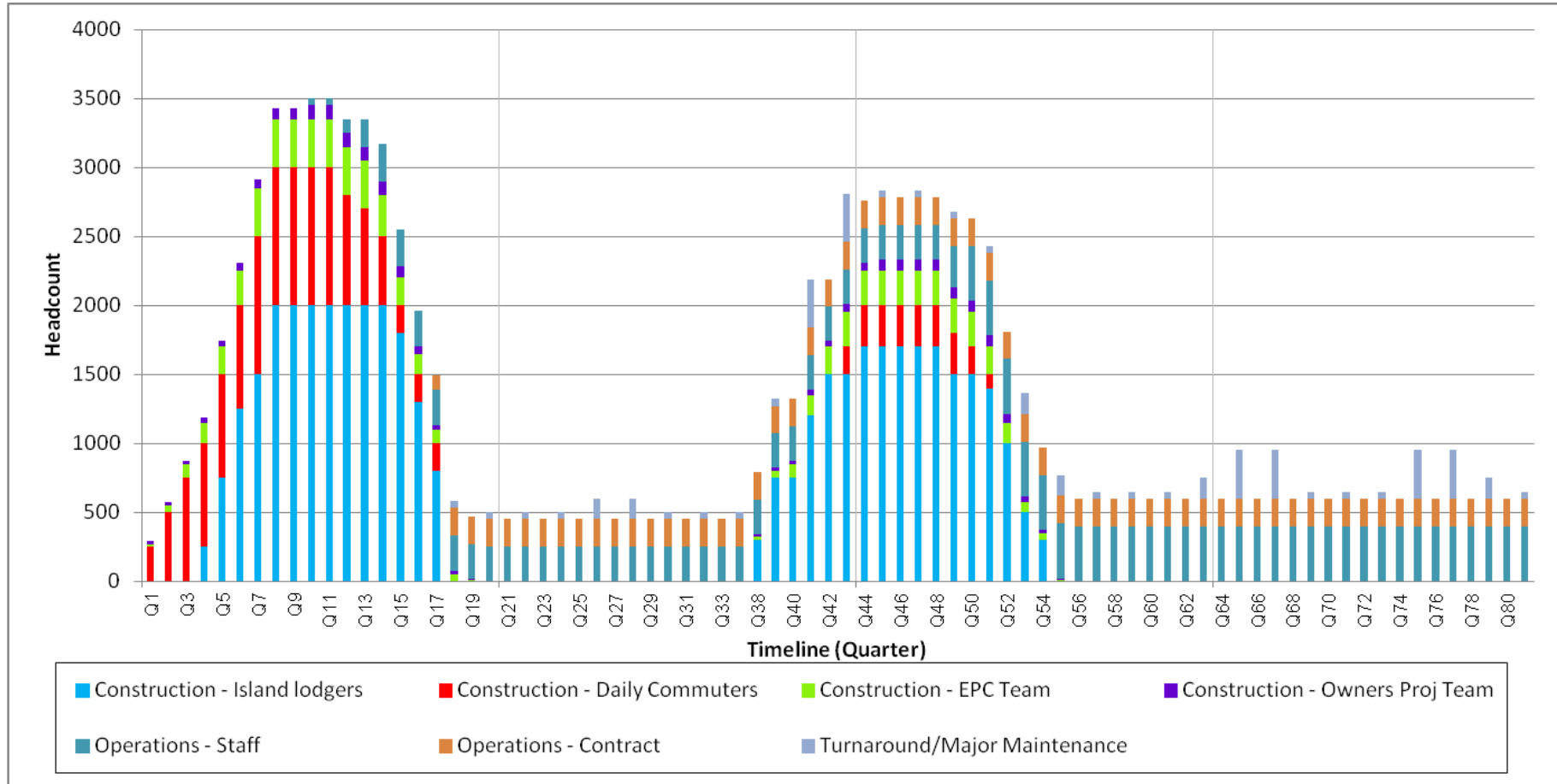
Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
Reduced housing affordability for Indigenous people	With lower incomes than the non Indigenous community, Indigenous people are more vulnerable to increased private rents	Construction and operation	Negative	2	4	3	5	High (45)
Ability for local business to benefit from the additional trade	Existing businesses have the potential to provide goods and services directly to the project. While they will have already increased their staffing to do this for other projects, the LNG Plant presents an opportunity to maintain or increase their workload.  Some businesses ability to benefit from the project will be constrained due to an inability to compete on wages or higher living costs	Construction and Operation	Positive	3	4	2	4	High (36)
Reduction in recreational opportunities	The project will have a limited impact on recreational boating and related activities in the harbour.  In addition, workers and their families based on the mainland will place limited demand on formal and informal recreational facilities.	Construction and operation	Negative	2	4	2	4	Moderate (32)
Changes to land uses	Existing land uses at the TWAf and project site on Curtis Island will cease.	Construction and ongoing	Negative	1	4	1	5	Moderate (30)
Increased demand on existing social infrastructure and services	The small proportion of worker's living in the study area outside of construction camps and their families will place increased demand on social infrastructure and services (e.g. medical, educational).	Construction and operation	Negative	2	2	2	4	Moderate (24)
Community concerns about the management of social issues	The project may create or amplify existing community concerns about the pressures on housing in the study area and the provision of social infrastructure and maintenance of exiting lifestyles.	Construction and operation	Negative	2	3	2	4	Moderate (28)
Increased income inequality in the community	The project will contribute to an increased income disparity between people working in or for the LNG industry and those not. Significant increases in income disparity can be a contributing factor to a loss of community cohesion.	Construction and operation	Negative	2	3	2	4	Moderate (28)
Strain on workers	Shift work is perceived by some stakeholders to	Construction and	Negative	4	3	2	3	Moderate

Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
and their families	be a risk factor that may contribute to incidents of domestic violence. However, it is anticipated that the proposed Monday to Friday shift will mitigate the potential incidence of this risk. However, the FIFO, component of the workforce will be subject to two weeks on site, potentially placing a strain on their relationship with their families. It is commonly reported that another risk factor for domestic violence is financial stress, which can be exacerbated by cost of living increases.	ongoing						(27)
Employment opportunities	The project is likely to result in employment opportunities for the Indigenous community to work directly or indirectly for the project or in filling other positions in the community.	Construction and operation	Positive	3	3	2	3	Moderate (24)
Business opportunities for Indigenous people	The project may be of benefit to Indigenous contractors or other businesses. These operators may take on more employees in response to business growth providing further benefit to the community.	Construction and operation	Positive	3	3	2	3	Moderate (24)
Reduced availability of staff at existing social infrastructure	By placing limited pressure on housing stock, the project will place some pressure on affordable housing limiting the ability of entry level police, council officers, teachers and other workers to reside in the area.	Construction and operation	Negative	2	3	2	3	Moderate (21)
Increased demand on formal and informal recreational facilities.	Workers and their families based on the mainland will place limited demand on formal and informal recreational facilities.	Construction and operation	Negative	2	3	2	3	Moderate (21)
Visual Impact	The project will impact on existing visual amenity but this will be diminished by the presence of a number of other industrial facilities	Construction and operation	Negative	2	4	1	3	Moderate (21)
Noise and vibration impacts	There will be increased noise levels, however it will not be sufficient to create sleep disturbance.	Construction and operation	Negative	2	4	1	3	Moderate (21)
Balancing environmental	Clearing of part of Curtis Island and works within the harbour are likely to be of community	Construction and operation	Neutral	3	2	2	3	Moderate

Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
concerns and industrial development	concern. Sensitivity to this will be diminished by activities that will take place prior to this such as the port's dredging program and other LNG projects. Activities that balance industrial development with environmental protection are likely to be well received.							(21)
Increased services	Population increase associated with the project and cumulatively with all the projects is likely to lead to an increase in the overall range of services and retail opportunities that the study area's population can support.	Operation	Positive	2	4	1	3	Moderate (21)
Increases in the public risk as a result of increased traffic, people and the project.	There will potentially be an increase in the level of risk resulting from increased traffic movements. This increased risk will also extend to the harbour, with changed harbour conditions and congestion increasing the likelihood of accidents.	Construction and ongoing	Negative	2	4	5	2	Moderate (22)
Construction workforce not respecting Indigenous values	The construction workforce may not understand Indigenous values.	Construction and operation	Negative	2	3	2	3	Moderate (21)
Changes in air quality	The project will impact on air quality very infrequently. Infrequent change in air quality could be expected to be of concern to the community.	Construction	Negative	2	4	1	3	Moderate (21)
Reduced availability of hotel/motel accommodation	High utilisation of temporary accommodation may impact on businesses or other users who will find it more difficult to access temporary accommodation	Construction	Negative	2	1	2	3	Low (18)
Reduced level of volunteering and participation in community groups	Increases in the proportion of locals employed as shift workers will negatively impact on their ability to volunteer or participate in sporting or interest groups, or engage in normal social activities.	Construction and operation	Negative	2	2	2	3	Low (18)
Impact on property values	Increased demand for housing as a result of the LNG industry will increase property values; however, the Arrow LNG Plant following the early projects is likely to only sustain existing price increases. This will make it harder for first home	Construction and operation	Neutral	2	3	1	3	Low (18)

Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
	buyers to purchase property but benefit those who are seeking to sell their dwellings.							
Reduced access to private property	There may be some temporary loss of access as a result of construction traffic or activities	Construction	Negative	2	2	1	3	Low (15)
Increased risk of anti social behaviour	The influx of a construction workforce will likely result in increased risk of alcohol related offences.	Construction and ongoing	Negative	2	3	2	2	Low (14)
Perceived increased risk of alcohol / anti social related offences	The influx of a construction workforce will likely be perceived to result in an increased risk of alcohol related offences or crime/anti-social behaviour in the study area.	Construction and ongoing	Negative	2	2	2	2	Low (12)

## Appendix D Arrow LNG plant workforce estimation (EIS)



■ **Figure D-1: Arrow LNG Plant workforce estimation**



## **Appendix E Complaints management system**

Arrow Energy

Complaints  
Management System



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## 1. System Statement

Arrow Energy is committed to managing all complaints in an accountable, transparent, timely and meaningful way.

The company's Complaints Management System is consistent with the Australian Standard ISO 10002-2006 'Customer satisfaction – Guidelines for complaints handling in organisations' and aligns with Arrow Energy's values to:

### **Lead**

We lead by continually seeking ways to improve safety, delivery, cost, quality, and teamwork

### **Own**

We think and act like owners taking personal responsibility for Arrow's business performance and conduct.

### **Solve**

We view challenges not as barriers but as opportunities to improve through innovation and change.

### **Share**

We share experiences, knowledge and ideas to achieve superior outcomes.

### **Respect**

We treat all people, inside and outside Arrow, with dignity and respect.

## 2. Guiding Principles

Arrow Energy is committed to the following complaints management guiding principles:

- **Visibility:** Arrow Energy will provide information about the how and where to complain to all stakeholders including shareholders, landholders, community members, industry partners, employees and contractors.
- **Accessibility:** Complainants can easily access the complaints management process and information on the process.
- **Responsiveness:** All complainants should receive immediate acknowledgment that their complaint has been received. Complainants should be treated courteously, and kept informed of the progress of their complaint through the process.
- **Objectivity:** Each complaint should be addressed in an equitable, objective and unbiased manner through the complaints management process.
- **Charges:** Complainants will incur no cost or charges as a result of accessing the complaint management process.

- **Confidentiality:**
  - **Complainant:**  
Personally identifiable complainant information should be available where needed, but only for the purposes of addressing the complaint within Arrow Energy. The complainant’s information will be actively protected from disclosure, unless the complainant expressly consents to its disclosure.
  - **Arrow Employee:**  
In order to afford natural justice to an employee and/or representative of Arrow Energy whose conduct may be the subject of a complaint, access to the relevant information in the electronic Complaints Management System (CMS) will be restricted to agreed senior staff.
  
- **Stakeholder - focussed approach:** Arrow Energy has a stakeholder–focussed approach which is open to feedback, including complaints, and should show commitment to resolving complaints by its actions.
  
- **Accountability:** Arrow Energy will ensure that accountability for and reporting on the actions and decisions of the organisation with respect to complaints management is clearly established.
  
- **Continual Improvement:** The opportunity for continual improvement of the complaints management process will be delivered through a six monthly review which will monitor performance and trend the nature, timeframes and resolution of complaints

### 3. Scope

The majority of feedback and complaints received by Arrow Energy relate, or are anticipated to relate, to community stakeholder experiences especially land holders; however all Arrow Energy business related complaints are within scope of this system.

Importantly, this complaint procedure supports Arrow Energy’s statutory obligations to investigate and report on safety, environment and other incidents, and to respond to any Compliance Direction Notices to key external stakeholders, including Government. This can include the requirement for public disclosure of some incidences and rectification measures undertaken by the company. Failure to do so can lead to prosecution.

This system does not replace, modify or revoke any legislative, contractual or other legal requirements for the management of particular types of complaints. The management of complaints related to contractual or human resource related matters are listed under ‘specific complaints’ and are addressed within Section 8 of this document.

The following are out of scope of this policy:

- Contractual and HR related complaints – *see Section 8 - specific complaints*
- general feedback obtained during consultation processes; and
- queries and requests for information.

General feedback obtained during consultation sessions, particularly those required under Queensland legislation for the Environmental Impact Statement (EIS) process, is formally recorded through a discrete system. This information will be monitored to inform, where applicable, the management and resolution of issues and complaints, and to assist in the overall improvement and response to stakeholders.

Exemptions to the application of the system can be granted by the Chief Executive Officer.

### 3.1 *Issues Register*

Comments, questions or information received from stakeholders, and deemed by the relevant Vice President or General Manager as an issue will be tracked through the relevant project Issues Register. In addition, the issue and required actions will be recorded within the CMS database. The Arrow Energy Issues Register is managed by the Community and Corporate Affairs department and consulted, shared and updated through the standing fortnightly Project Coordination Meetings (Bowen, Surat, Gladstone).

### 4. Applicability

This system applies to all Arrow Energy staff including, temporary, casual and contracted staff.

### 5. Objectives

The objectives of this system are to:

- a) Provide a transparent, consistent and effective mechanism for the management and prompt resolution of complaints;
- b) Demonstrate greater accountability to stakeholders;
- c) Improve relationships with stakeholders through greater trust and credibility;
- d) Identify complaint trends and monitor the company's performance in complaint management;
- e) Provide information for business improvement opportunities as part of our commitment to LEAN;
- f) Enhance Arrow Energy's reputation as a responsive and stakeholder-focussed organisation.

### 6. Rationale

Complaints management is a vital component of every decision-making framework and is especially relevant to Arrow Energy in its delivery of a coal seam gas industry in Queensland and Australia.

Feedback is one measure of stakeholder satisfaction and as such plays an important part in determining if Arrow Energy is meeting its stakeholders' needs, issues and concerns. To ensure we respond to our stakeholders' feedback and complaints it is critical for the organisation to make available and demonstrate its complaints management process.

### 7. Policy/System Elements

Arrow Energy's Complaints Management System reflects the following elements – see Appendix A:

#### 7.1. *Visibility and Access*

1. Complaints about Arrow Energy's policies, operations, activities, and projects can be lodged by any member of the public, landholder, shareholder, or other stakeholder.

2. Information on where and how to lodge a complaint and anticipated response times is readily available through established Arrow Energy communication channels, such as:
  - **Error! Hyperlink reference not valid.**
  - publications such as annual and sustainability reports
  - community engagement activities
3. Unless there are legislative, contractual or other legal requirements, complaints are accepted both verbally by contacting Arrow staff, and in writing through the Arrow Energy Internet site, and by writing to: Arrow Energy; GPO Box 5262, Brisbane Q 4001.
4. Arrow Energy ensures the complaint process is flexible and no one is excluded from making a complaint. Where necessary, Arrow Energy staff will assist those stakeholders requiring assistance to lodge a complaint.

### *7.2. Responsiveness*

1. Complaints received by Arrow Energy can be sensitive and complex and may require detailed investigation and analysis. Timeframes for the management of complaints are to be reasonable and not be excessively drawn out. All phone and email complaints will receive formal written acknowledgement with 48 business hours. Written complaints will receive formal acknowledgement through a written response sent within 48 hours of receipt.
2. Arrow Energy staff required to handle complaints are provided with information, education and training to ensure a consistent approach is followed in the management and resolution of Arrow Energy complaints.

### *7.3. Assessment and Action*

1. All complaints are managed in accordance with the guiding principles for complaints management detailed in Section 2 of this system.
2. Upon receiving a complaint, Arrow Energy staff must take reasonable steps to ensure that the complaint is properly understood and seek clarification or additional information from the complainant when required.
3. A preliminary assessment of the complaint is conducted to determine if it is a contractual or human resource related complaint, which will be allocated to the appropriate area for recording and action within the appropriate system. see Section 8.
4. Arrow Energy staff assess, record and report the complaint and forward it to the relevant area for appropriate action or information.
5. A complaint received in relation to a particular Arrow Energy employee is initially assessed and investigated by their supervisor/manager.
6. If Arrow Energy is not able to address the complaint, where possible, the complaint will be referred to the appropriate agency, or party (for example a local council or government agency).

#### 7.4. Corrective Action and Resolution

1. The progress of the complaint is monitored until the outcome has been communicated to the complainant and all reasonable avenues have been exhausted.
2. If the complainant is dissatisfied with the outcome, they are advised of independent review bodies available.
3. Arrow Energy will ensure continued improvement in its operations and activities through meaningful feedback provided about potential improvements identified as a result of complaints.

#### 7.5. Monitoring Effectiveness and Continual Improvement

1. Complaint trends will be reported to the Arrow Energy Executive on a regular basis (minimum six monthly basis)
2. The Arrow Energy Leadership Team is responsible for implementing the Complaints Management System and standard operating procedure within their business area.
3. Arrow Energy Community and Corporate Affairs department will regularly monitor the quality and effectiveness of its Complaints Management System and revise relevant components where appropriate.

### 8. Specific Complaints

Some complaints are classified as 'specific complaints' due to particular contractual or human resource related requirements. On receipt of a complaint, preliminary assessment should be undertaken to determine if it falls within a 'specific complaints' category.

Due to the sensitive nature of many specific complaints, they should not be recorded in the standard Complaints Management System. The business area the complaint is referred to will record full details of the complaint in the appropriate system and action as required.

#### 8.1 Contractual Related Complaints

- Complaints relating to third parties, who as agents or service providers for Arrow Energy will be managed in accordance with contractual arrangements.
- Wherever possible, Government and Community should be made aware of contractual and legal related complaints.

#### 8.2 HR Related Complaints

- Discrimination complaints should be referred to the Human Resources Manager and will be managed in accordance with the relevant legislation and organisational requirements. (eg *Anti-Discrimination Act 1991.*)
- Performance management or HR Code of Conduct complaints are to be referred to the relevant Human Resource Manager or officer and be managed in accordance with Arrow Energy's organisation requirements and procedures.

- Workplace health and safety complaints are to be referred to the Workplace Health and Safety Coordinator and be managed in accordance with Arrow Energy’s organisational requirements and procedures and consistent with current legislative requirements ie *Workplace Health and Safety Act 1995* and the *Department of Employment and Industrial Relations “Safer and Healthier Workplaces” Framework 2007-2012*.

9. Complaint Process

It is anticipated that the complaint handling system will be dynamic and as the system matures, changes and improvements will occur on an ongoing basis. Initial complaint and compliance process mapping is at Appendix B.

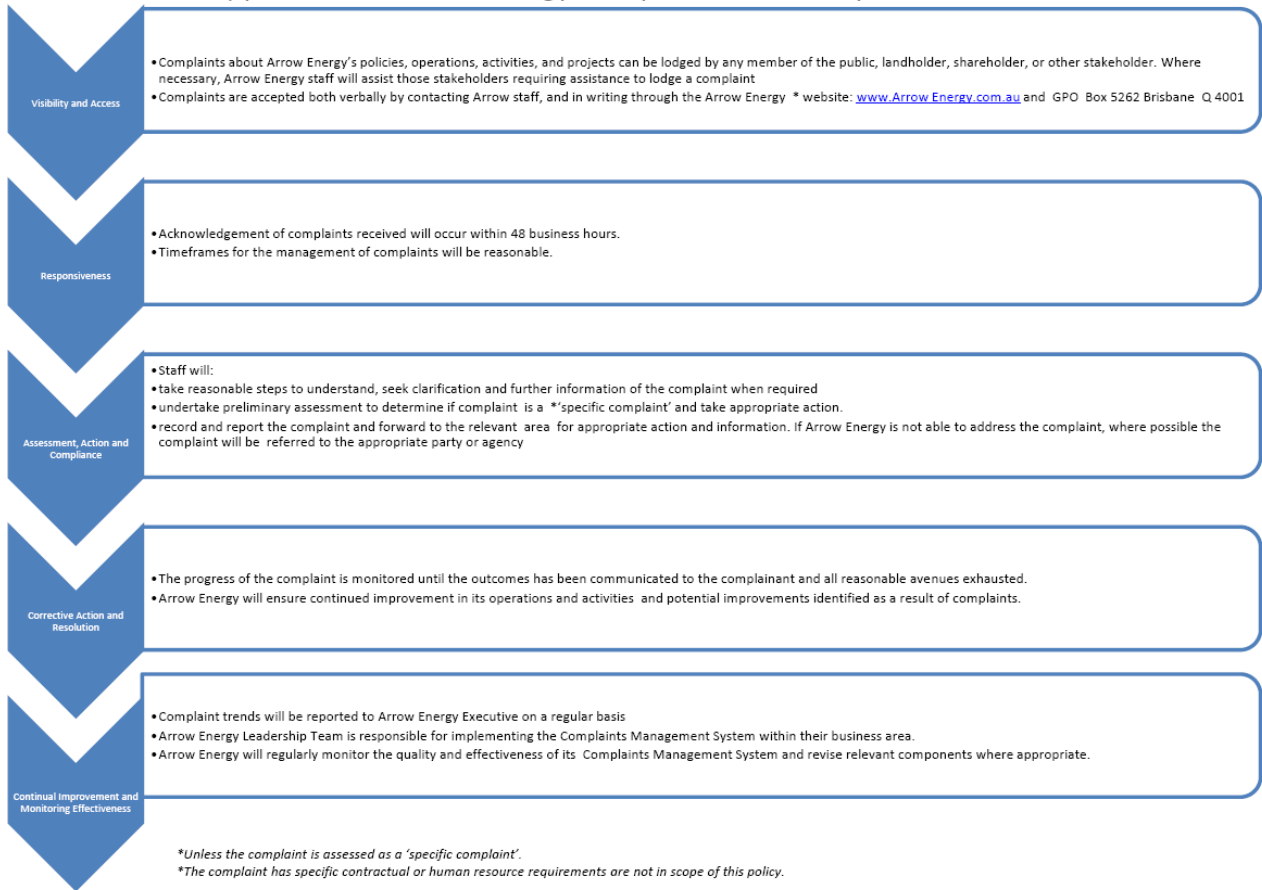
10. Definitions

Term	Definition
Complainant	The person who makes the complaint.
Complaint	The expression of dissatisfaction, orally or in writing, about the policies, operations, activities, and projects of Arrow Energy or its staff.
Confidentiality	Access to the information is controlled and the information does not have to be of a personal nature.
Privacy	The information is of a personal nature and reasonable steps are taken to protect the personal information from loss, unauthorised access, use or disclosure.
Specific complaint	The complaint has specific contractual or human resource related requirements that are out of scope of the Complaints Management System.
Systemic issue	A deficiency in an organisation’s administrative process, rather than an error in judgement by an officer, which causes or contributes to a complaint.

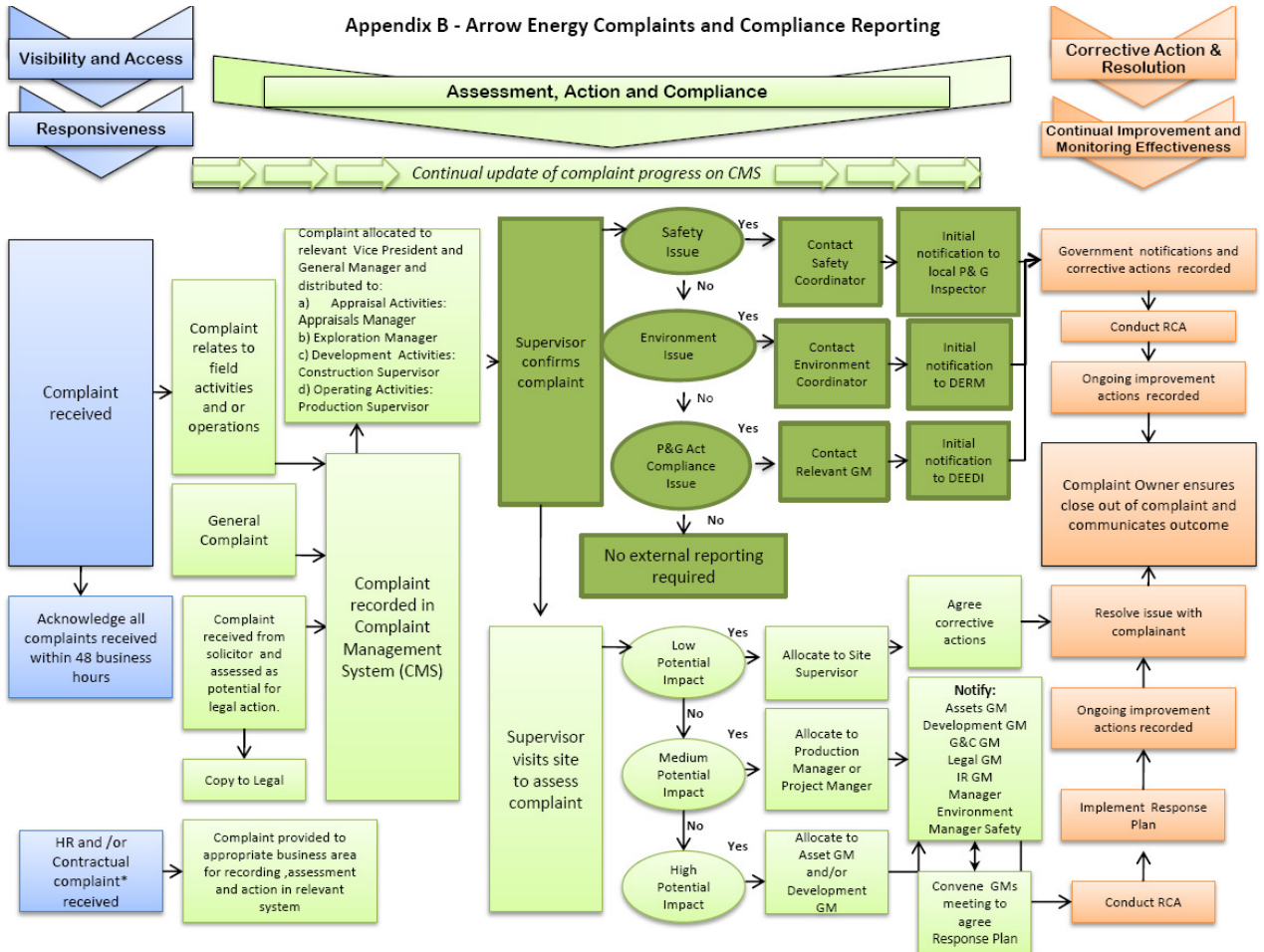
11. Reference Material

- Australian Standard ISO 10002:2006 *Customer satisfaction – Guidelines for complaints handling in organisations*
- Queensland Ombudsman, *Developing Effective Complaints Management Policy and Procedures December 2005*
- Queensland Ombudsman, *Complaints Management – Recognising Opportunities for Improvement, 2001*

## Appendix A – Arrow Energy Complaints and Compliance Elements







\*The complaint has specific contractual or human resource related requirements that are out of scope of this policy.