Arrow LNG Plant

SOCIAL IMPACT MANAGEMENT PLAN

FINAL

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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
DET	Department of Education and Training
DOC	Department of Communities
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
ULDA	Urban Land Development Authority
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 community
- Workforce and training
- Local content and investment
- 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.

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 community

The purpose of the Indigenous community plan is to provide employment and training opportunities for Indigenous people and businesses while facilitating the creation of a workplace in which Indigenous people are respected.

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 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 and investment

The local content and investment plan has been developed to help local businesses provide goods and services to the project. It seeks to do this by maximising opportunities for local businesses, providing assistance on how to meet procurement requirements and by reducing the impact that competition for staff will have on other businesses.

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 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.

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.

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 compress 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 project.

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 110 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).

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^3 and 180,000 m^3), 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 substantial 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): 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 – 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 (30-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.
- Option 2 (mechanical/electrical): This configuration uses gas turbines to drive the refrigerant compressors in the LNG trains and mains power to power site utilities. Under this option, construction power would be supplied by mains power or diesel generators.
- Option 3 (all electrical): Under this configuration mains power would be used to supply electricity for operation of the LNG train refrigerant compressors and the site utilities. A switchyard would be required. High-speed electric motors would be used to drive the LNG train refrigerant compressors. Construction power would be supplied by mains power or diesel generators.

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.
- Feed gas pipeline (from the mainland to Curtis Island) peak workforce of up to 75.
- A dredging peak workforce of between 20 and 40.

Two workforce construction camp locations are proposed: the main construction camp at Boatshed Point on Curtis Island, and a possible mainland overflow construction camp, referred to as a temporary workers accommodation facility (TWAF).

Two potential locations are currently being considered for the mainland TWAF; in the vicinity of Gladstone city on the former Gladstone Power Station ash pond No.7 (TWAF7) or in the vicinity of Targinnie, on a cleared pastoral grazing lot (TWAF8). 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 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 be housed onboard 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 Surat Pipeline project.
Up to 2,500 people will be housed at Boatshed Point construction camp. Its establishment will be preceded by a pioneer camp at the same locality which will evolve into the completed construction camp.

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 roll-on, roll-off or lift-on, lift-off vessels 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 (abutting the construction camp to the east) 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.

Two alternative options are being assessed, should the Boatshed Point option be determined to be unfeasible:

- South Hamilton Point (MOF 2): This MOF option would be located at the southern tip of Hamilton Point. The haul road from this site would traverse the saddle between the hills of Hamilton Point to the southwest boundary of the LNG plant site. The quarantine area for this option will be located southwest of the LNG plant near the LNG storage tanks.
- 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

During the peak of construction, base-case of up to 1,100 people may require transport to Curtis Island from the mainland on a daily basis. A personnel jetty will be constructed at the southern tip of Boatshed Point to enable the transfer of workers from the mainland launch site to Curtis Island by high-speed vehicle catamarans (Fastcats) and vehicle or passenger ferries (ROPAX). This facility will be adjacent to the MOF constructed at Boatshed Point. The haul road will be used to transport workers to and from the personnel jetty to the construction camp and LNG plant site. A secondary access for pedestrians will be provided between the personnel jetty and the 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 site 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.

Feed gas pipeline

An approximately 8-km long feed gas pipeline will supply gas to the LNG plant from its connection to the Arrow Surat Pipeline (formerly the Surat Gladstone Pipeline), to Rio Tinto's Yarwun alumina refinery. The feed gas pipeline will be constructed in three sections:

- A short length of feed gas pipeline will run from the proposed Arrow 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 open-cut trenching methods within a 40-m wide construction right of way.
- The next section of the feed gas pipeline will traverse Port Curtis harbour in a tunnel to be bored under the harbour from the mainland tunnel launch shaft to a receival 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. Based on the excavated diameter, approximately 223,000 m3 of spoil will be treated as required for acid sulfate soil and disposed of at this location.

- From the tunnel receival shaft on Hamilton Point, the remaining section of the feed gas pipeline will run underground to the LNG plant, parallel to the above ground cryogenic pipelines. This section will be constructed using conventional open-cut trenching methods within a 30-m wide construction right of way.

Should one of the electrical plant power options be chosen, it is intended a power connection will be provided by a third party to the tunnel launch shaft. Arrow Energy would construct a power cable within the tunnel to the LNG plant.

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 within the marine environment of Port Curtis may be required to accommodate the construction and operation of the marine facilities.

Dredge site 1: The dredging of this site would facilitate the construction and operation of launch site 1. This dredge site is located in the Calliope River and extends from the intertidal area abutting launch site 1, past Mud Island to the main shipping channel. The worst-case dredge volume estimated at this site is approximately 900,000 m3.

Dredge site 2: The dredging of this site would facilitate the construction and operation of launch site 4N. This dredge site would abut launch site 4N and extend east from the launch site to the shipping channel. The worst-case dredge volume identified at this site is approximately 2,500 m3.

Dredge site 3: The dredging of this site would facilitate the construction and operation of the personnel jetty and MOF at Boatshed Point. This dredge site would encompass the area around the marine facilities, providing adequate depth for docking and navigation. The worst-case dredge volume identified at this site is approximately 50,000 m^3.

Dredge site 4: The dredging of this site would facilitate the construction and operation of the MOF at Hamilton Point South. This dredge site would encompass the area around the marine facilities, providing adequate depth for docking and navigation. The worst-case dredge volume identified at this site is approximately 50,000 m^3.

Dredge site 5: The dredging of this site will facilitate the construction of the LNG jetty at Hamilton Point. This dredge site extends from the berth pocket to be dredged as part of the Western Basin Strategic Dredging and Disposal Project to the shoreline and is

required to enable a work barge to assist with construction of the jetty. The worst-case dredge volume identified is approximately 120,000 m^3.

The spoil generated by dredging activities will be placed and treated for acid sulfate soils (as required) in the Port of Gladstone Western Basin Dredging and Disposal Project reclamation area.

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 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 expects that 5% of the EPC staff will be local and 10% of Arrow management staff will be from Gladstone, this will provide positions for a further 33 local workers.

Construction Workforce - Accommodation

Two workforce construction camp options are being assessed; a construction camp at Boatshed Point on Curtis Island for the bulk of the construction workforce and a smaller possible mainland construction camp, referred to as a temporary workers accommodation facility (TWAF) (Figure 1-1).

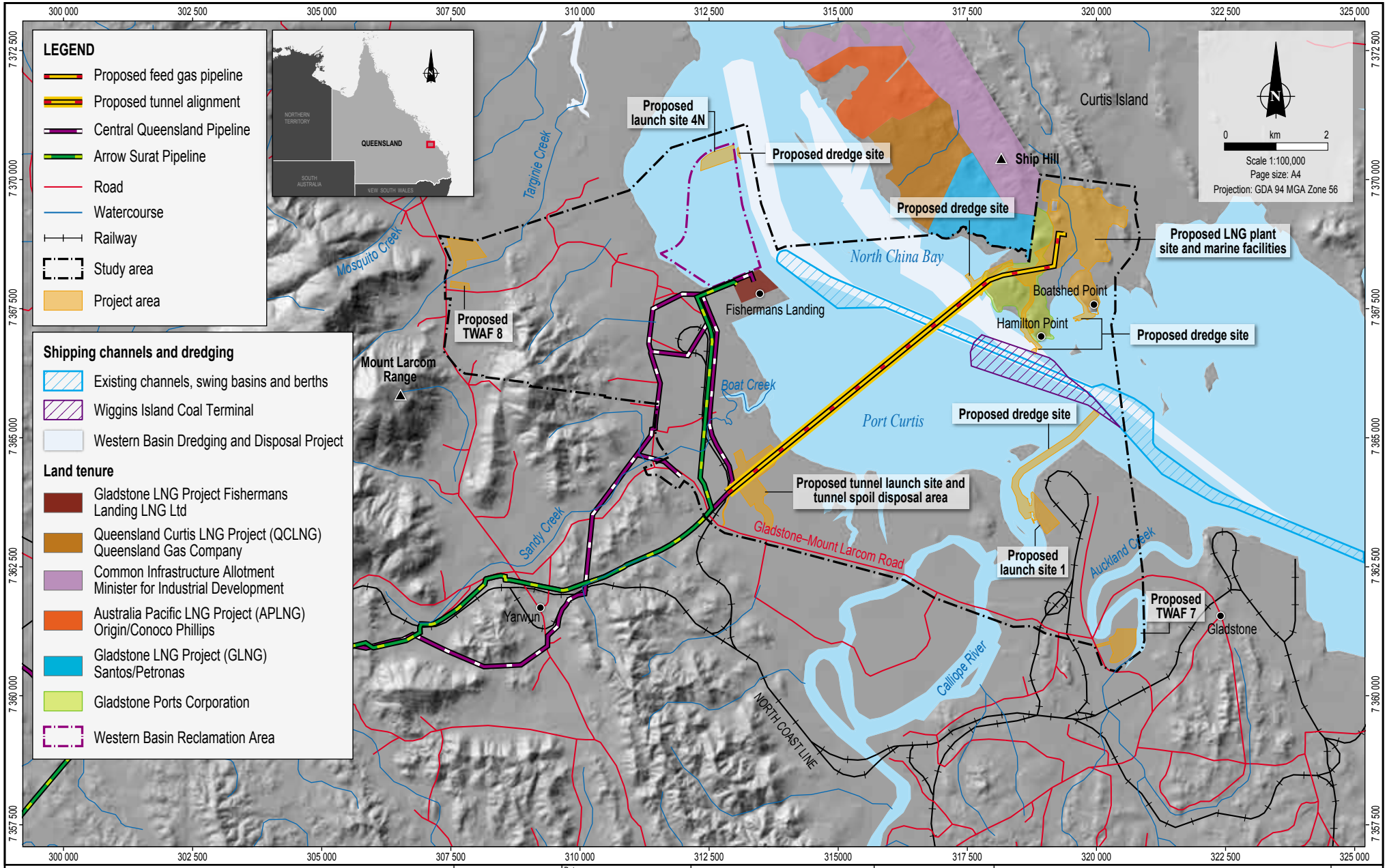
With the exception of local workers, EPC and Arrow Energy staff, the construction workforce will be housed in these camps. This will be facilitated by the engagement of the majority of FIFO workers on single status.

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.

While EPC and Arrow Energy staff will be housed on the mainland, the majority of these (380) will be housed 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.

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 be housed onboard 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 Surat Pipeline project.



Source:
Place names, roads and watercourses from DME.
Study area, pipelines, proposed auxiliary facilities and marine infrastructure from Arrow Energy.
Proposed feed gas pipeline, proponents and DEM from Coffey Environments.
Western Basin Dredging Master Plan from Gladstone Ports Corporation.

coffey environments

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Arrow Energy

Arrow LNG Plant

arrow energy go further

Site locality

Figure No: 1.1

Construction workforce – transportation

Workers located in the TWAF will commute to the launch site by bus, while local residents will use private vehicles or company facilitated bus services.

Fly-in fly-out (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.

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

Operational workforce – accommodation

During the operation of Stage 1, 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 1-2).

It also includes the urban centres and localities:

- 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

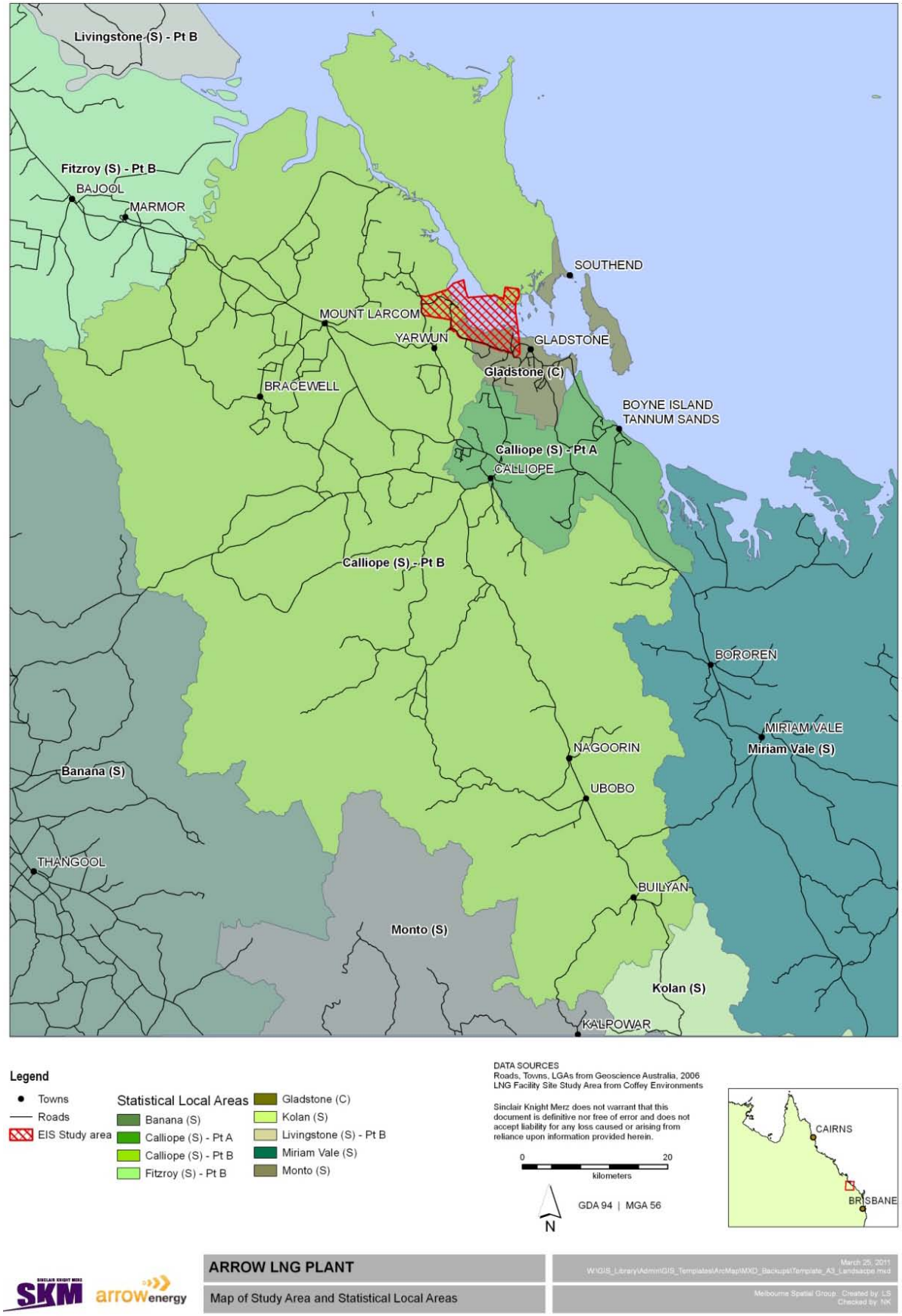
Reflecting the industrial nature of the region, a smaller proportion of people had completed year 11 or 12 in 2006 than the rate for all of Queensland. Post school qualifications were skewed towards certificates with 21.8% of persons aged 15 years or older not currently in school having completed a certificate 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.



- **Figure 1-2 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 in 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 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, 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	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

Location	Issues raised	
	Air emissions/contaminants Energy source and consumption of project Gas destination (domestic or overseas) Lifespan of project	health system Impact on social infrastructure and facilities Local workers vs. importing workers
Gladstone	Air quality/controlling emissions Contribution to greenhouse gases and air emissions CSG and salt CSG drilling and impact on water table and aquifers Cumulative impacts of LNG plants Desalination and use of harbour water Dredging of Calliope River Emergency response and impact on health system Environmental management precinct and management of environmental impacts FIFO workforce, apprenticeships Impact of shipping and exclusion zones Impact on harbour/dredging Impact on marine life Impact on road infrastructure Impacts on boating and fishing	Impacts on Gladstone infrastructure including cumulative impacts Lifespan of project LNG plant safety Local employment policy and procurement policy Location of LNG plant and its life expectancy Managing construction workers in camp Market for LNG and use of LNG (not LPG) Number of trains and changes to shipping Pipeline corridor and construction Pipeline corridor/bridge option Pipeline leaks and safety Potential for gas supply to Curtis Island residents Power source for the plant and gas turbines Purchasing policy Shipping turnaround and frequency Visual impact of stacks Weed spread Workforce accommodation
Mount Larcom	EIS, land zoning and community input The market for LNG Impacts of dredging on The Narrows, location of LNG plants channel Curtis Island	World Heritage Area and the Great Barrier Reef Marine Park Impacts of shipping including exclusion zones Impact of shipping accident/emergency response plan
Curtis Island	Impact of shipping on the harbour including exclusion zones Location of construction camp on Curtis Island vs. housed in Gladstone	Logistics and safety of numerous camps on Curtis Island Refrigeration requirements for LNG Dredging requirements for the project Impacts to local fishing and boating.

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	▪ President, Liaison Officer, Outing Co-ordinator, Secretary and members of the Gladstone Sportfishing Club inc ▪ Captain, Salvation Army ▪ President, St Vincent De Paul Society ▪ Support Worker, OZChild	▪ Community values ▪ Impact on vulnerable groups ▪ Impact on water based recreation
Department of Employment, Economic Development and Innovation	▪ Employment and training Manager, Indigenous Employment and Initiatives ▪ Manager, Gladstone Centre, Rural and Regional Development	▪ Indigenous employment and training opportunities ▪ Implications the project will have on development ▪ Ability of the region to provide workers
Department of Education and Training	▪ Principal, Tooloosa State High School	▪ Information on existing capacity of schools services
Department of Communities	▪ Area Manager, Housing and Homelessness Services	▪ Existing levels of community housing ▪ Impact on vulnerable groups
Department of Local Government and Planning (SIA Unit)	▪ Manager, Social Impact Unit ▪ Project Manager, Social Impact Unit	▪ Key stakeholders to consult ▪ Approach to the assessment ▪ SIMP structure and approach
Education Queensland Industry Partnership (EQIP)	▪ Chief Executive Officer (CEO)	▪ To understand training and education opportunities for students
Energy Skills QLD LNG Unit	▪ Skills Formation Manager	▪ Whether the local industry possess the skills to support the project ▪ Level of up skilling will be required to meet the skills needs of the project
Gladstone Chamber of Commerce and industry	▪ Acting President ▪ Treasurer	▪ To understand existing business conditions ▪ Implications of the project for small business
Gladstone Community Advisory Service	▪ Community Development Officer, GRC ▪ Youth Development Officer, GRC ▪ Multicultural Community Relations Officer, GRC ▪ Manager, Roseberry Community Service ▪ Manager, Supported Accommodation Assistance Program	▪ Information on social infrastructure and services ▪ Valued places ▪ Current community issues ▪ Recreational resources ▪ Community challenges ▪ Impacts of the project

Stakeholder	Details	Purpose of consultation
	▪ Manager, Relationships Australia ▪ Councillors, Relationships Australia	
Gladstone Economic and Industry Development Board	▪ CEO	▪ Anticipated impacts of the project ▪ Potential initiatives the project could coordinate with during operation and construction ▪ Other activities in the region
Gladstone Industry Leadership Group	▪ CEO	▪ Community issues ▪ Existing initiatives to deal with community concerns about industrial development
GRC	▪ Manager, Human and Social Services ▪ Sports and Recreation Officers ▪ Manager, Gladstone Aquatic Centre ▪ Senior Planning Officer ▪ Planning Officer ▪ Manager project Coordination	▪ Information on social infrastructure and services ▪ Valued places ▪ Current community issues ▪ Recreational resources ▪ Community challenges ▪ Impacts of the project
Police and Emergency Services	▪ Officer in Charge, Gladstone District Water Police ▪ District officer, Gladstone Police Station ▪ Business Support Services Manager, Gladstone Hospital ▪ Executive Director Primary and Community Health, Gladstone Hospital	▪ Existing levels of crime, root causes and possible mitigation measures ▪ Existing levels of health service provision ▪ Impacts on services
Schools and Industry Network (SAIN)	▪ Chairman	▪ Training and education opportunities for students in the study area

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

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

Stakeholder group	Issue, value or view	
State Government	▪ Cumulative impacts ▪ Traffic management ▪ Increased demand on social infrastructure and services ▪ Affordable housing	▪ Providing adequate lead times to government to allow for planning for social infrastructure and service provision ▪ Sustainability of jobs created in

Stakeholder group	Issue, value or view	
	▪ Linking training with jobs/positions ▪ Training and employment opportunities, including for the long term unemployed and other vulnerable groups ▪ Coordinating workforce planning with relevant state bodies ▪ Impacts on water based recreation ▪ Investment in social infrastructure ▪ Mental and physical health of the workforce	the construction stage ▪ Water based safety ▪ Accommodation options for single men in the region ▪ Skills shortages ▪ Support for small to medium enterprises ▪ The impact of dredging on existing activities within the harbour ▪ Opportunity to up skill migrants and other vulnerable groups ▪ Employee behaviour
Local Government	▪ Employment opportunities ▪ Training opportunities for young people ▪ Increased diversity ▪ Sustainable population growth ▪ Impact of rising housing costs ▪ Limited available employment for women ▪ Limited access to childcare ▪ Pressures of shift work ▪ Limited public transport ▪ Physical and mental health of the workforce	▪ Affordable housing ▪ Loss of existing residents ▪ Skills shortages ▪ Volunteering ▪ Integration of new residents ▪ Employee behaviour ▪ Impact on informal recreation ▪ Coordinating with the Gladstone Foundation ▪ Social infrastructure investment ▪ Impact of skills shortages on other businesses
Business and community groups	▪ Impact on water based recreation ▪ Safety impacts associated with increased congestion and infrastructure in the harbour ▪ Local presence for the project ▪ Increased utilisation of recreational infrastructure ▪ Educating harbour users ▪ Housing costs ▪ Affordable housing ▪ Temporary accommodation ▪ Discrepancy between available skills and job opportunities	▪ Employee retention complicated by skills shortages ▪ Improvements in the range of goods and services available in Gladstone ▪ Amenity / air quality ▪ Liveability ▪ Skills shortages ▪ Training and apprenticeship opportunities ▪ Loss of training opportunities at other employers ▪ Potential for a glut of unemployed apprentices in the future

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 2-4. For more details on the assessment tool refer to Appendix A. For more details on the impacts refer to Appendix C.

- **Table 2-4: 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 during operation of trains 3 and 4.

Based on this population change and project activities, Table 2-5 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 2-5: Key social impacts / benefits and mitigation actions**

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
Increased housing costs.	Construction and operation	Negative	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 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.

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action 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
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	Workforce and training plan.

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
			providing opportunities for younger people.	
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 and Investment Plan.
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	Construction and		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	Community Health and Safety Plan.

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
community	operation		disparity can be a contributing factor to a loss of community cohesion.	
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.
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	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	Workforce and Training Plan.

Impact / benefit	Project phase	Nature	Description	Relevant SIMP action plan
opportunities			proceed is expected to be 5,834 workers.	
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: ▪ Manage the increased pressure placed by the project on the GRC housing market for renters and those seeking to purchase dwellings. ▪ Manage the impact of increased utilisation by project workers of temporary accommodation such as hotels, motels and serviced apartments.
Objectives	To adequately house the non-local project workforce. To minimise inflationary pressure on the local housing market. To minimise displacement of vulnerable groups including low and middle income households and Indigenous persons in the GRC. To reduce the potential for the project workforce to displace other users of temporary accommodation.
Stakeholders	Arrow Energy Chamber of commerce DEEDI Department of Communities EPC contractor GAPDL GRC Housing industry Indigenous community representatives Local communities Non government social housing providers Office of the Coordinator General Other proponents Other tourism and business bodies RCCC Traditional Owners Urban Land Development Authority

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

Mitigation

Mitigation Actions	Responsibility	Timeframe
Long Term Housing for the project workforce		
Continue to liaise with other proponents to determine cumulative workforce housing requirement. Use house price and rental data from the REIQ's Queensland Market Monitor and Department of Communities Housing Market Report to determine whether the private market is able to provide sufficient dwellings in the local area for the construction and operation workforces.	▪ Arrow Energy ▪ Other proponents	Prior to FID Every six months during construction Prior to operation
Identify viable housing options for housing the non local construction workforce likely to reside outside of the construction camps, minimising sourcing housing in the private rental market for non permanent staff unless vacancy rates increase to 3% or higher. Possible options could include: ▪ Provide rental guarantees or other incentives to private investors to encourage the construction of new housing stock which can be used by project staff and remain available for the wider community following the end of the construction phase. ▪ Encourage all non local employees to live in company facilitated housing TWAF unless they have families or other circumstances that make this impractical. ▪ Provide direct and indirect investment in the housing market. ▪ Provide accommodation advice services for workers and their families	▪ Arrow Energy ▪ EPC contractor ▪ Housing industry ▪ GRC	Prior to FID
Continue to engage with the Office of the Coordinator-General and other proponents to identify co-operative strategies that address cumulative housing impacts.	▪ Arrow Energy ▪ Other proponents ▪ Office of the Coordinator General	Prior to FID Ongoing during construction
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.	▪ Arrow Energy ▪ EPC contractor ▪ GRC	Every three months during construction Prior to operations
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.	▪ Arrow Energy ▪ EPC contractor ▪ Office of the Coordinator General ▪ GRC	Every three months during construction Prior to operations
Identify preferred approach for facilitation of up to 90 houses during the construction phase and increasing up to 130 houses for long term housing for the non local operational workforce (at	▪ Arrow Energy	Prior to construction

Stage1) through the project accommodation strategy. The strategy should assess the state of the market to meet this project generated demand and make the required market interventions to minimise adverse impacts upon the community.	▪ EPC contractor ▪ GRC	Prior to operations
Indentify preferred approach for facilitation of 380 beds in company facilitated accommodation for construction management (Arrow Energy and contractor) single status workers and 225 beds for operational workers (at Stage 1) through the project accommodation strategy.	▪ Arrow Energy	Prior to construction Prior to operations
Identify opportunities to bring forward facilitation of housing intended for the operations workforce that can be used for the construction workforce.	▪ Arrow Energy ▪ EPC contractor	During Construction
Provide information on the Arrow Energy website on actions taken to meet project housing needs and key data on workforce numbers and approximate numbers housed within the community.	▪ Arrow Energy ▪ RCCC ▪ DEEDI ▪ GRC	Every six months during construction
Temporary Accommodation		
Collaborate with other proponents in the region and identify opportunities to share temporary accommodation where possible for the construction and maintenance workforces.	▪ Arrow Energy ▪ EPC contractor ▪ Office of the Coordinator General	Prior to construction Prior to operations
Inform the tourist industry and other peak business bodies of anticipated time frames for peak temporary accommodation demand.	▪ Arrow Energy ▪ EPC contractor ▪ Chamber of commerce ▪ GAPDL ▪ Other tourism and business bodies	Construction and every 12 months regarding key maintenance activities
Affordable housing		
Work with the ULDA to identify opportunities in the study area to bring additional affordable housing to market for existing residents.	▪ GRC ▪ ULDA ▪ Arrow Energy	Prior to FID and during construction
Work with the state government, the GRC and the Indigenous community to identify opportunities to provide assistance to not for profit housing providers to support the Indigenous community.	▪ GRC ▪ DOC	Within six months of FID

	▪ Arrow Energy ▪ Traditional Owners	
Provide $6.5 million or in kind support of the same value to other non government providers of social housing.	▪ GRC ▪ DOC ▪ Arrow Energy ▪ Non government social housing providers	Post FID
Provide information on the Arrow Energy website on actions taken to support affordable housing initiatives to offset housing impacts.	▪ Arrow Energy	Every six months following FID during construction
Provide $1 million in financial assistance to the GRC for emergency rental assistance.	▪ Arrow Energy ▪ GRC	Upon FID

3.2. SIMP ACTION PLAN: COMMUNITY INVESTMENT AND WELLBEING

Introduction	
Purpose	The purpose of this plan is to identify actions that: ▪ Enhance the community. ▪ Manage impacts on existing social infrastructure, services and recreation.
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. Minimise impacts on social infrastructure and services. Fund projects that directly offset impacts of the project. Arrow Energy's relationship with the community is maintained or improved.
Stakeholders	Arrow Energy Arrow LNG Plant workforce and contractors. Boating and fishing groups Community and not-for-profit organisations. Community service providers DEEDI. DOC. Education providers Education Queensland EPC contractor Gladstone Foundation GRC Local communities

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

Mitigation		
Mitigation Actions	**Responsibility**	**Timeframe**
Expand the opportunities available for the region under the Brighter Future's program and the Social Investment Plan.	▪ Arrow Energy	Ongoing

Design and construct the workers camp to have sufficient social and recreational facilities to cater for recreational, fitness and entertainment requirements.	▪ Arrow Energy ▪ EPC contractor	Prior to construction
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	Upon FID
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. Liaise with the relevant body, for example the Gladstone Foundation, to coordinate efforts across all proponents and identify projects that may provide an equivalent offset or mitigation of impacts.	▪ Arrow Energy ▪ Gladstone Foundation ▪ GRC ▪ Other relevant bodies	During construction and 12 months after commencement of operations of trains 1 and 2 and trains 3 and 4
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 Council area, whilst on shift/ living in the construction camps.	▪ Arrow Energy ▪ EPC contractor	During construction
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 ▪ DEEDI ▪ GRC ▪ Education Queensland	During construction and at commencement of operations of trains 1 and 2 and trains 3 and 4
Post details on the Arrow Energy website of projects which receive funding or in kind support to offset or mitigate direct project impacts.	▪ Arrow Energy	Ongoing
Publically release details of the Brighter Future program for Gladstone on the Arrow Energy website. This will include information on criteria for funding, funds expended, processes for applying and how often funding will be available for applications.	▪ Arrow Energy	Ongoing

3.3. SIMP ACTION PLAN: INDIGENOUS COMMUNITY

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 DEEDI Department of Communities 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

Mitigation		
Mitigation Actions	**Responsibility**	**Timeframe**
Identify the most appropriate methods to recruit and retain Indigenous Australians. This will be done in consultation with DEEDI, Traditional owners and other relevant Indigenous community representatives.	▪ Arrow Energy ▪ DEEDI ▪ Traditional Owners ▪ DoC (OATSIP) ▪ Other Indigenous community representatives	Prior to FID

For underemployed or unemployed Indigenous people, identify apprenticeships or traineeships that could be made available. 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.	▪ Arrow Energy ▪ EPC contractor ▪ DEEDI	Ongoing
Identify the most appropriate opportunities for Indigenous businesses to competitively tender to provide goods or services to the project during the operations stage. Send information about these opportunities to the relevant businesses, or business groups. Arrow Energy website.	▪ Arrow Energy ▪ DEEDI ▪ Traditional Owners ▪ DoC (OATSIP) ▪ Other Indigenous community representatives	Annually or more often if required by the project during the construction stage
Provide assistance, such as business mentoring, to Traditional Owners and other interested members of the Indigenous community with developing business opportunities and capacity alignment with Arrow Energy's Indigenous Engagement team. Examples of the type of activities that occur as part of this assistance include: ▪ Identification of opportunities to allow joint partnering. ▪ Briefings on what business systems and insurances are required to work on the project. ▪ Information on government programs that exist to help Indigenous businesses. ▪ Information on how to pool resources across businesses to tender on larger parcels of work. The Arrow Energy procurement team and the officer responsible for Indigenous Engagement will provide this assistance.	▪ Arrow Energy ▪ DEEDI ▪ Traditional Owners ▪ DoC (OATSIP) ▪ Other Indigenous community representatives	Ongoing during construction, with briefings to be undertaken every six months
Require major contractors to develop a plan that will clearly identify Indigenous opportunities (employment and business) for the project.	▪ Arrow Energy ▪ EPC contractor	Upon FID
An Arrow Energy officer will be made responsible for Indigenous engagement to encourage participation and integration of Indigenous employees and track their welfare.	▪ Arrow Energy	Upon FID
Arrow Energy will implement an Indigenous cultural awareness program for construction and operation staff and contractors. The workforce will be exposed to the program during induction.	▪ Arrow Energy ▪ DEEDI ▪ Traditional Owners	Ongoing

3.4. SIMP ACTION PLAN: WORKFORCE AND TRAINING

Introduction	
Purpose	The purpose of this plan is to identify actions that: ▪ Allow for the maximum amount of local employment. ▪ Provide local training opportunities.
Objectives	To achieve between 5 and 20% local employment for the construction and operations stages. 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.
Stakeholders	Arrow Energy Chamber of Commerce CSG/LNG Skills Taskforce CSG/LNG Steering Committee DEEDI 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

Impacts							
Impact	**Nature**	**Phase**	**Extent**	**Duration**	**Severity**	**Likelihood**	**Significance**
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

Mitigation

Mitigation Actions	Responsibility	Timeframe
Identify the range of skills required for the labour force and undertake a gap analysis against existing skills availability. Where gaps exist in consultation with the Department of Education and Training identify the method or strategy through which these skills will be filled, e.g. FIFO/DIDO or training.	▪ DET ▪ DEEDI ▪ CSG/LNG Skills Taskforce ▪ CSG/LNG Steering Committee	Prior to FID
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 ▪ DEEDI ▪ CSG/LNG Skills Taskforce ▪ CSG/LNG Steering Committee	Prior to FID
Develop a policy that facilitates equal opportunity for all suitably qualified persons.	▪ Arrow Energy ▪ EPC contractor	Prior to construction
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.	▪ Arrow Energy ▪ DEEDI ▪ CSG/LNG Skills Taskforce ▪ CSG/LNG Steering Committee ▪ DET	Prior to FID
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.	▪ Arrow Energy ▪ EPC contractor	Prior to construction
Undertake regular reviews of labour requirements and current skills sets to ensure that training strategies meet these needs.	▪ Arrow Energy ▪ Energy Skills Queensland – CSG/LNG taskforce ▪ LNG Industry Training	Prior to FID

	Program Construction Skills Queensland – CSG/LNG ▪ DET	
Arrow Energy will work with group training organisations and encourage contractors to recruit and retain apprentices or trainees during operations. Arrow Energy will sponsor group training positions during the operations stage of the project.	▪ Arrow Energy ▪ EPC contractor	Ongoing
The following existing programs will have positions reserved for suitably qualified students and school leavers from the Gladstone region: ▪ Graduate Program (engineering, planning, social and environmental) ▪ Scholarships ▪ Vacation Employment ▪ School Based Training	▪ Arrow Energy	Ongoing
The following Arrow Energy programs will be expanded to suitably qualified local employees: ▪ Executive and Management Development Programs ▪ External Education Program. ▪ Vocational/Trade Training ▪ Specialist Training	▪ Arrow Energy	Ongoing
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.	▪ Arrow Energy ▪ DEEDI ▪ Training Providers	Ongoing

3.5. SIMP ACTION PLAN: LOCAL CONTENT AND INVESTMENT

Introduction	
Purpose	The purpose of this plan is to identify actions that: ▪ Help local businesses to provide goods and services to the project. ▪ Make it easier for existing businesses to retain and recruit employees in the face of increased competition.
Objectives	Maximise 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 DEEDI 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**
Develop a Local Industry Participation Plan (LIPP) in consultation with DEEDI and consistent with the Australian Government Australian Industry Participation Plan.	▪ Arrow Energy ▪ DEEDI ▪ EPC contractor	Within 3 months of FID
Provide QMI Solutions 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 ▪ QMI	Within 3 months of FID Annually during construction
Develop processes to ensure local business opportunities are considered in project procurement practises. These processes will allow competitive local business be given fair and reasonable opportunities to provide	▪ Arrow Energy ▪ EPC contractor	Ongoing

	goods or services to the project.	▪ DEEDI	
	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 ▪ GILG ▪ GAPDL	Ongoing
	Facilitate the communication of the Local Procurement 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 ▪ DEEDI ▪ GRC ▪ 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 ▪ DEEDI ▪ 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 ▪ DEEDI ▪ TAFE	Annually during construction and 12 months prior to

	▪ EPC contractor	the commencement of operations 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: ▪ Community concerns about the influx of the project workforce. ▪ Perceived and actual impacts on public safety. ▪ Perceived and actual impacts on workers health and safety.
Objectives	The welfare of the community and project workers is protected. Community concerns about project impacts are addressed.
Stakeholders	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

Mitigation

Mitigation Actions	Responsibility	Timeframe
Actions pertaining to the community		
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 consult with landholders in close proximity 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
Implement a community safety awareness program covering project activities in conjunction with industry and government partners.	▪ Arrow Energy ▪ GRC ▪ Other proponents ▪ Emergency services	Prior to construction and ongoing
Actions relating to the project workforce		
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.	▪ Arrow Energy ▪ EPC contractor ▪ Queensland Health ▪ Emergency services ▪ GRC	Prior to construction
Develop an employee well-being program that monitors the mental and physical health of employees and contractors. Information on support services to be provided on induction with updates provided at regular intervals. This program should allow for monitoring employee wellbeing with the potential to undertake surveys to measure progress.	▪ Arrow Energy ▪ EPC contractor	Prior to construction and ongoing
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. FIFO workers will be bound by these while in transit to and from the project as well as on shift.	▪ Arrow Energy ▪ EPC contractor	Prior to FID
Arrow Energy will explore the opportunity to stagger rostering with other proponents to avoid	▪ Arrow Energy ▪ Other Proponents	Ongoing during construction

	staff from all LNG projects passing through Gladstone simultaneously.		
	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.	▪ Arrow Energy ▪ EPC contractor	Ongoing during construction
	Arrow Energy will support programs that contribute to the health and well-being of Indigenous employees.	▪ Arrow Energy	Ongoing

3.7. SIMP ACTION PLAN: COMMUNITY AMENITY

Introduction	
Purpose	The purpose of this plan is to identify actions that: ▪ Address community concerns about the impact of the project on amenity.
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 FID
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

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 Gladstone Foundation 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**
Continue to participate in the Industry Leadership Group for CSG Resource Projects.	▪ Arrow Energy ▪ Other Proponents	Prior to FID

	▪ Industry Leadership Group	
Participate in the existing RCCC for Gladstone.	▪ Arrow Energy ▪ Other Proponents ▪ RCCC	Prior to FID
Participate in CSG Industry Monitoring Group established by APLNG and QCLNG.	▪ Arrow Energy ▪ Other Proponents ▪ Origin ▪ QGC	Prior to FID
As per the community investment and wellbeing plan liaise with the relevant body that can coordinate investment efforts across all proponents.	▪ Arrow Energy ▪ Other Proponents ▪ Gladstone Foundation	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 to manage housing and accommodation across the industry.	▪ Arrow Energy ▪ Other Proponents ▪ Office of the Coordinator General	Prior to FID. 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 and investment plan, 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

Organisation	Core sector	Description of relationship
Chamber of Commerce	Local business	Collaboration
Community housing and service providers	Housing	Financial
CSG/LNG Skills Taskforce	Skills and training	Collaboration
DEEDI	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
Gladstone Foundation	Social Infrastructure	Collaboration
GRC	Local government	Collaboration
Indigenous community representatives	Indigenous engagement	Collaboration

Organisation	Core sector	Description of relationship
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
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
ULDA	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 draft 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" ▪ Composition (resident / non-resident) ▪ Projections of cumulative workforces (resident / non resident)

Category of impact	Data collection being considered by the SIA unit
	▪ Shared workforce arrangements
Temporary Accommodation	Size of sector Utilisation / vacancy rates Leasing of dwellings from private rental market Capacity of worker accommodation villages Take-up of worker accommodation villages by non-resident workers Workforce accommodation arrangements and policies for major projects
Long term housing	Sales volumes and cost – new and existing dwellings Availability
Rental housing	New Bonds, Rents, Size of rental market, vacancies and length of leases
Land Supply and Development pipeline	Land available for residential development Building approvals Properties under construction Cost of new residential land
Social and crisis housing	Total number of social housing properties (size &location) Number of clients

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	▪ Number / percentage accommodated in the community ▪ Number / percentage accommodated in the TWAF's ▪ Number of dwellings occupied by project workforce ▪ Number of non local families residing in the community
Minimise inflationary pressure on the local housing market	▪ Dwelling procurements by Arrow Energy ▪ Levels of assistance provided to affordable housing providers (e.g. ULDA)
Minimise displacement of vulnerable groups including low and middle income households and Indigenous persons in the GRC	▪ Financial or in kind support to affordable housing providers
Reduce the potential for the project workforce to displace other users of temporary accommodation	▪ Complaints received ▪ Business satisfaction
Enhance the community through targeted investment in Health and Safety, Education and the Environment	▪ Number of applications submitted by relevant community groups to the Brighter Future program ▪ Records of funding provided through the Social Investment Plan and the Brighter Futures program
Minimise impacts on social infrastructure and services	▪ Facilities are in situ at the completion of the construction camp
Fund projects that directly offset impacts of the project	▪ Number of projects that are actioned within three months of the problem being identified
Arrow Energy's relationship with the community is maintained or improved	▪ Level of community satisfaction with the project measured through surveys, complaints, media monitoring
Indigenous people are provided with opportunities and support in gaining employment on the project	▪ Employment records
Indigenous values are respected and Indigenous people feel supported	▪ Complaints management system
Indigenous businesses participate in the tendering process for elements of the project	▪ Contractor records
To achieve between 5 and 20% local employment for the	▪ Employment data

construction and operations stages	
To provide increased employment opportunities for school leavers	▪ Employment data
Opportunities are provided for qualified females and people from culturally and linguistically diverse groups	▪ Employment policies ▪ Details from the complaints management system (CMS) ▪ Internal employment and application data
Training opportunities are provided by the project	▪ External training numbers ▪ Internal training records
The overall skills base of the region is enhanced	▪ Number of local staff that receive training ▪ Range and types of training local employees receive
Maximise the opportunities for local businesses to provide goods and services to the project	▪ Expenditure with registered local suppliers
Provide guidance to local businesses so that they can align their practices with Arrow Energy	▪ Internal records ▪ Local business survey ▪ Complaints received
Reduce the impact that competition for staff for the project will have on other business	▪ Records from the job service providing details of rates of successful placements, numbers of positions vacant and length of time vacant
The welfare of the community and project workers is protected	▪ HSSE records
Community concerns about project impacts are addressed	▪ Data from the community survey ▪ Data from the Complaints management system
Community concerns about amenity impacts are addressed	▪ Logs on website updates ▪ Monitoring data
To collaboratively address cumulative impacts	▪ Membership records of the respective groups ▪ Satisfaction expressed by key stakeholders

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'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**

Stakeholder group	Primary interest in project	Engagement mechanisms
Federal Government	▪ Sustainable resource development ▪ Economic development	▪ Newsletters and fact sheets ▪ Arrow Energy website ▪ One on one meetings ▪ Briefing sessions
State Government	▪ Sustainable resource development ▪ EIS compliance ▪ Economic development ▪ Employment and training opportunities for the community ▪ Indigenous opportunities ▪ Impact on social infrastructure ▪ Housing affordability ▪ Impact on road networks ▪ Community safety	▪ One on one meetings ▪ Briefing sessions ▪ Newsletters and fact sheets ▪ Arrow Energy website
Local Government	▪ Opportunities for local business ▪ Employment opportunities for locals ▪ Impact on local road networks ▪ Impact on social infrastructure ▪ Impact on affordable housing ▪ Local lifestyles and livelihoods ▪ Impact on other businesses	▪ Briefing sessions ▪ One on one meetings ▪ Newsletters and fact sheets ▪ Community information sessions ▪ Arrow Energy website ▪ 1800 number ▪ Community Information Centre ▪ Community information sessions
Traditional owners	▪ Employment opportunities ▪ Training opportunities ▪ Business opportunities ▪ Cultural heritage	▪ Cultural Heritage Management Plan ▪ Community survey ▪ Business survey ▪ Briefing sessions ▪ One on one meetings ▪ Newsletters and fact sheets ▪ Community information sessions ▪ Arrow Energy website ▪ 1800 number ▪ Project email ▪ Community Information Centre ▪ Freepost service
Landholders	▪ Property acquisition arrangements ▪ Environmental impacts on amenity ▪ Access and connectivity	▪ One-on-one meetings ▪ Telephone calls ▪ Letters, faxes and emails ▪ Annual community survey ▪ Arrow Energy website

		▪ Community information sessions ▪ 1800 number ▪ Project email ▪ Community Information Centre ▪ CMS ▪ Freepost service
Resident community	▪ Employment opportunities ▪ Business opportunities ▪ Training opportunities ▪ Workforce behaviour ▪ Workforce integration with local activities ▪ Impact on affordable housing ▪ Cost of living ▪ Access to community services ▪ Community cohesion ▪ Maintenance of existing lifestyles	▪ Community newsletters ▪ Community information sessions ▪ Community survey ▪ Business survey ▪ CMS ▪ Arrow Energy website ▪ Community information sessions ▪ 1800 number ▪ Project email ▪ Community Information Centre ▪ Freepost service
Community and environmental groups	▪ Preservation of environmental values ▪ Maintenance of existing lifestyles ▪ Community cohesion ▪ Local amenity	▪ Community newsletters ▪ Community information sessions ▪ Community survey ▪ CMS ▪ 1800 number ▪ Project email ▪ Community information sessions ▪ Community Information Centre ▪ Arrow Energy website ▪ Freepost service
Project workforce	▪ Shifts and rosters ▪ Family health and wellbeing ▪ Equality in opportunities ▪ Road safety ▪ Living conditions in workers camp ▪ Ability to secure housing in the community ▪ Recreational opportunities ▪ Support services and social infrastructure for their families	▪ Regular meetings ▪ Induction ▪ Education and training ▪ Workforce survey ▪ Newsletters and notices ▪ Internal grievance mechanism ▪ Project intranet

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 proved on the Arrow Energy website, with a more detailed overview contained in Appendix A.

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
- 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.

7. References

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SKM 2011, Arrow LNG Plant Social Impact Assessment, Victoria.

Sonus 2011. Arrow LNG Plant Environmental Impact Assessment (Noise and Vibration).

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 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)

Severity	Description
5 Very High	▪ Significant loss of human, social, financial or built capital ▪ Significant enhancement of human, social, financial or built capital
4 High	▪ Large loss of human, social, financial or built capital ▪ Large enhancement of human, social, financial or built capital
3 Medium	▪ Moderate loss of human, social, financial or built capital ▪ Moderate enhancement of human, social, financial or built capital
2 Low	▪ Limited loss of human, social, financial or built capital ▪ Limited enhancement of human, social, financial or built capital
1 Negligible	▪ Negligible loss of human, social, financial or built capital ▪ Negligible enhancement of human, social, financial or built capital

Likelihood	Description
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
Proponent	
Santos	Manager Community Engagement Public Affairs and Sustainability
APLNG	Community Relations Manager
QCLNG	Integrated Housing Strategic Advisor
Local Government Authority	
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
State and Federal Government	
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

Organisation	Position
Gladstone Area Water Board	Manager
Gladstone Economic and Industrial Development Board (GEIDB)	CEO
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
Industry or Community Parties	
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	Construction and operation	Positive	3	4	3	4	High (36)

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)
	providing opportunities for younger people.							
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	Construction and operation	Negative	2	4	2	4	Moderate (32)

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)
	limited demand on formal and informal recreational facilities.							
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).y	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	Construction and operation	Negative	2	3	2	4	Moderate (28)

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)
	contributing factor to a loss of community cohesion.							
Strain on workers and their families	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.	Construction and ongoing	Negative	4	3	2	3	Moderate (27)
Employment opportunities	The project is likely to result in employment opportunities for the Indigenous community to	Construction and operation	Positive	3	3	2	3	Moderate (24)

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)
	work directly or indirectly for the project or in filling other positions in the community.							
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)

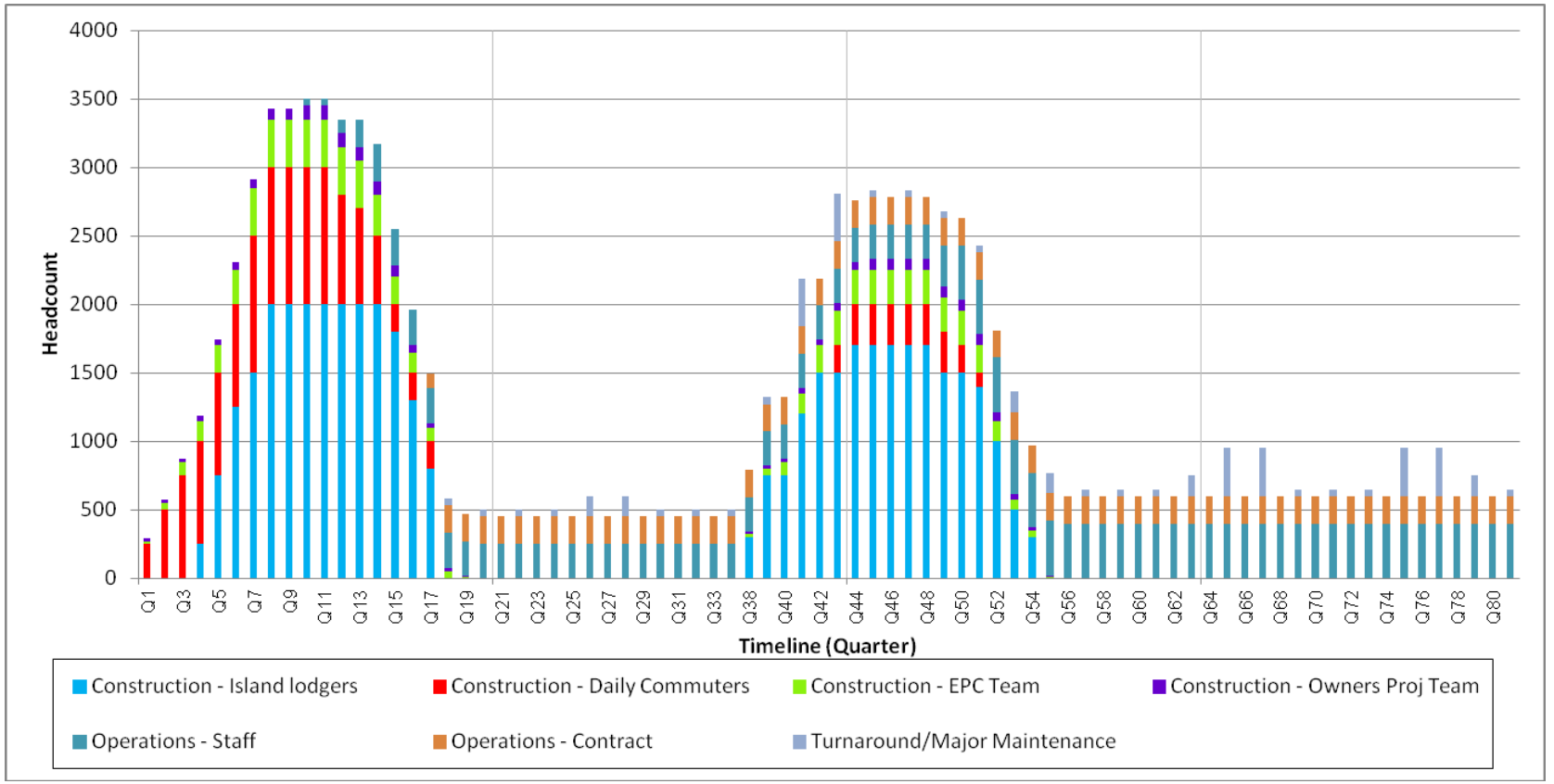
Social Impact	Description	Project Phase	Nature	Extent (1 – 5)	Duration (1-5)	Severity (1-5)	Probability (1-5)	Significance (0-20 low 20 -35 moderate 35+ = high)
Visual Impact	The project will impact on existing visual amenity but this will be diminished by the presence of a number of other industrial 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 concerns and industrial development	Clearing of part of Curtis Island and works within the harbour are likely to be of community 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.	Construction and operation	Neutral	3	2	2	3	Moderate (21)
Increased services	Population increase associated with the project and cumulatively with all the projects is likely to lead to an	Operation	Positive	2	4	1	3	Moderate (21)

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)
	increase in the overall range of services and retail opportunities that the study area's population can support.							
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	High utilisation of temporary accommodation may	Construction	Negative	2	1	2	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)
accommodation	impact on businesses or other users who will find it more difficult to access temporary accommodation							
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 project following the early projects is likely to only sustain existing price increases. This will make it harder for first home buyers to purchase property but benefit those who are seeking to sell their dwellings.	Construction and operation	Neutral	2	3	1	3	Low (18)
Reduced access to private property	There may be some temporary loss of access as a result of construction	Construction	Negative	2	2	1	3	Low (15)

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)
	traffic or activities							
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



- **Figure 7-1: Arrow LNG Plant workforce estimation**

Appendix E Complaints management system

Appendix E Complaints Management System

Arrow Energy

Complaints Management System

Contents

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.

- **Responsivenes:** 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 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.

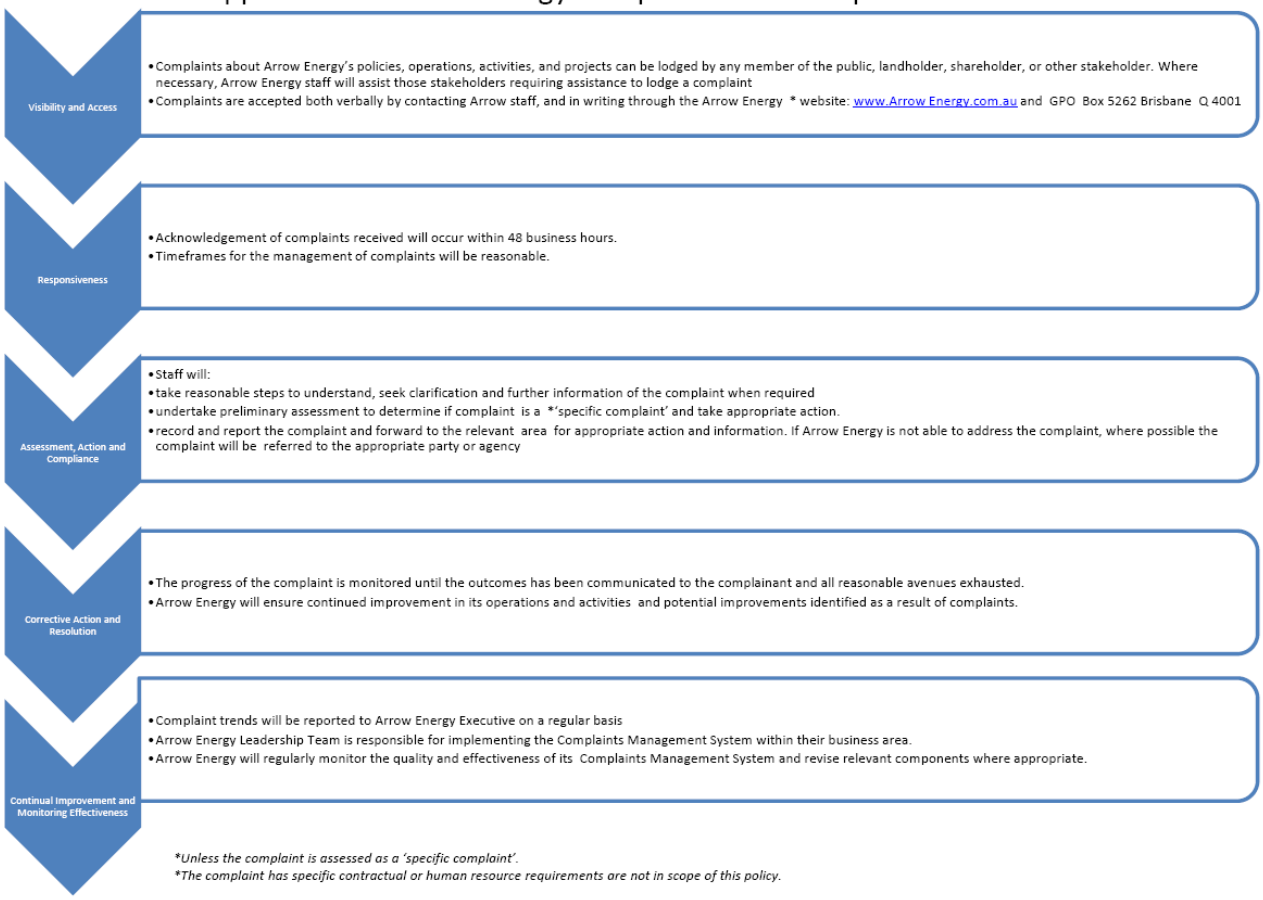
10. *Definitions*

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

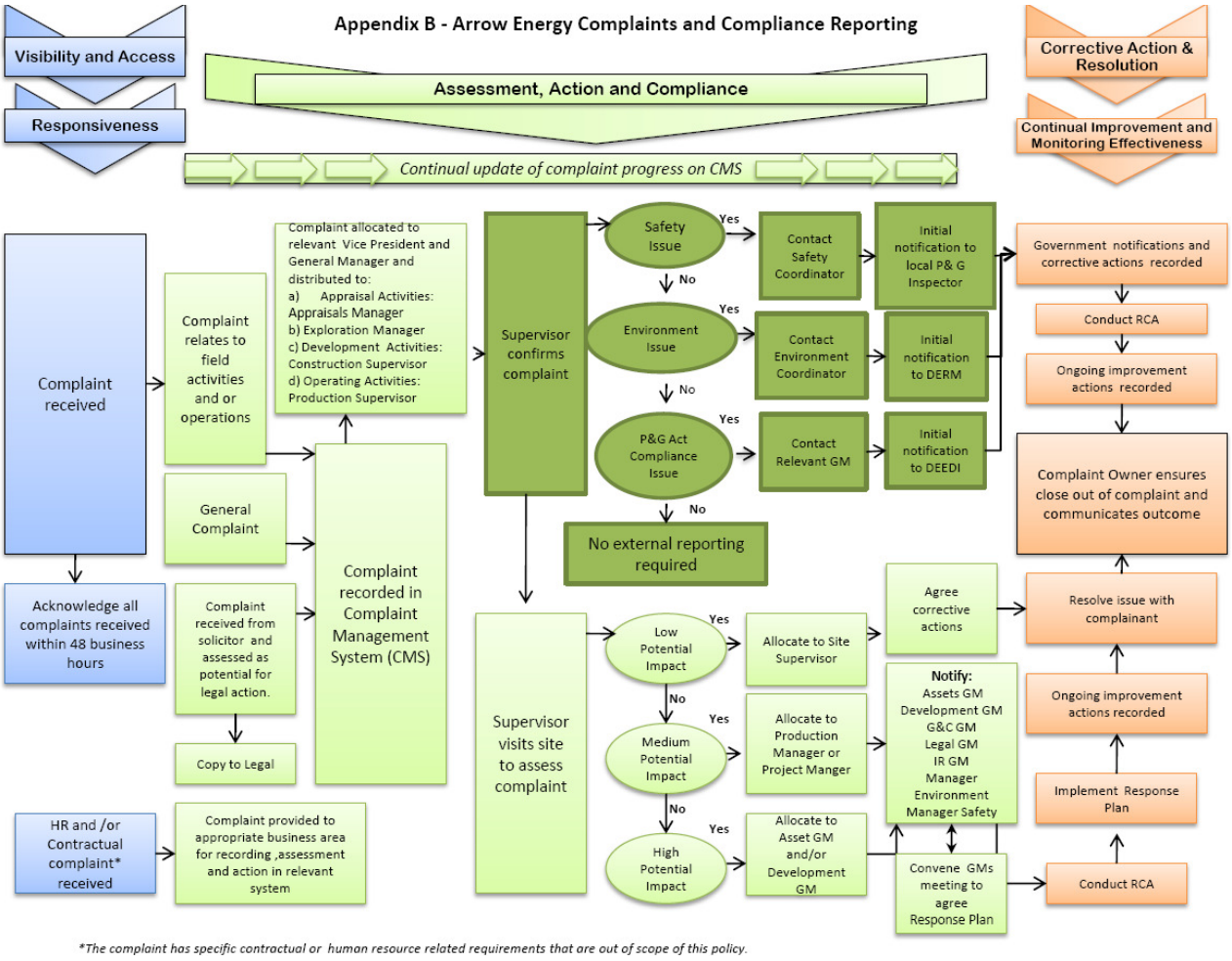
- Australian Standard ISO 10002:2006 *Customer satisfaction – Guidelines for complaints handling in organisations*
- Queensland Ombudsman, *Developing Effective Complaints Management Policy and Procedures December 2005*
- Queensland Ombudsman, *Complaints Management – Recognising Opportunities for Improvement,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

Appendix A – Arrow Energy Complaints and Compliance Elements



**Unless the complaint is assessed as a 'specific complaint'.*
**The complaint has specific contractual or human resource requirements are not in scope of this policy.*

Appendix B - Arrow Energy Complaints and Compliance Reporting



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