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Social Impact Assessment

Aldoga Solar Farm

Gladstone Regional LGA, QLD

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Acronyms and abbreviations

ABS	Australian Bureau of Statistics
ACHA	Aboriginal Cultural Heritage Assessment Report
AES	Accommodation and Employment Strategy
BESS	Battery Energy Storage System
CSEP	Community and Stakeholder Engagement Plan
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DPIE	Department of Planning, Industry and Environment (NSW)
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment (Act)
FTE	Full-time equivalent
GRP	Gross Regional Product
IAIA	International Association for Impact Assessment
IPP	Industry Participation Plan
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
km	kilometres
LGA	Local Government Area
LPP	Local Procurement Policy
LVIA	Landscape and Visual Impact Assessment
m	metres
NSW	New South Wales
REZ	Renewable Energy Zone
SEIFA	Socio-Economic Indexes for Areas
SIA	Social Impact Assessment
TIA	Traffic Impact Assessment

Executive summary

Acciona Energia is the largest 100% renewable energy company in the world, without a fossil fuel legacy. In Australia, the company develops, constructs, owns and operates renewable energy assets and has delivered five wind farms and a 20MW solar farm with a total installed capacity of over 600MW. In addition, Acciona Energia's 1,026MW MacIntyre Wind Farm Precinct which is currently under construction, is one of the largest wind projects in the southern hemisphere.

Setting it apart from many other companies, Acciona Energia remains committed to enhancing the economic and social development of communities in which its projects are located. Acciona Energia is involved in projects throughout the project cycle – from design, development, construction, long-term ownership and operation. The Aldoga Solar Farm (SF) project (the project) is to be located on lands owned by the Minister for Economic Development Queensland (EDQ) within the Gladstone State Development Area (GSDA). The project site is approximately 20km northwest of Gladstone and just over 2km southeast of Mount Larcom in the Aldoga locality, within the Gladstone Region in Central Queensland (CQ).

Intended to be EDQ's flagship renewable energy project, the project aims to renew and repurpose underutilised state land to generate jobs and drive economic growth. Due to its substantial scale, the project will also contribute significantly to Queensland Government's target of achieving 50 per cent renewable energy by 2030. The project compliments the Gladstone Regional Councils (2023) Roadmap which identified that "stakeholders from the Gladstone Region and industry groups shared a common vision that by 2032, the Gladstone Region will have transitioned its source of energy generation to renewable energy while intensifying its position as an energy superpower" (TNE, 2022, p. 2). Access to renewable energy supply is also critical to the further development of the green hydrogen industry and associated renewable manufacturing opportunities which are prominent interests for the Gladstone Region.

The project site is approximately 1,137ha and includes areas for the solar PV modules, module mounting/tracking systems, inverters, step-up transformer, on-site substation, access tracks, construction compound (temporary), underground cabling and permanent monitoring equipment (e.g., met stations), and the BESS. At present, most of the project site is predominantly used for cattle grazing, with some areas used for the siting of electricity transmission infrastructure. The site is an optimal location for solar power development as it is proximal to existing electrical transmission infrastructure, including high voltage transmission lines and a substation. The project will be connected to the grid via the adjacent Powerlink Larcom Creek Station. Additionally, Acciona Energia has signed a Memorandum of Understanding with Queensland's Stanwell Corporation to supply renewable energy from the project directly to Stanwell's proposed hydrogen plant near Aldoga.

The Gladstone LGA has a population of 64,304 residents with 332 residents living in the Mount Larcom Suburb and Locality (SAL), 45,185 living in Gladstone SAL and 5,263 living in Calliope SAL. Approximately 6.2% of the population identify as Aboriginal or Torres Strait Islander with the largest population proportion residing in Calliope (6.8%) and lowest in Mount Larcom (5.1%). The median age within the LGA varies from 42 in Mount Larcom to 32 in Calliope with a larger population aged 65+ residing in the Mount Larcom SAL (20.1%) compared to Calliope SAL (10.7%).

The region has experienced housing boom and busts where the construction phase of three LNG facilities in 2010 and 2011 resulting in inflated house prices in Gladstone (TNE, 2022). Residential vacancy rates dropped to 0.4% and eventually relaxed in 2012 (SQM, 2023) as workers relocated to construction camps on Curtis Island, sought jobs elsewhere, and additional housing was constructed.

Currently, most of the population reside in separate housing (8.5%) and a higher proportion of homes are owned outright in Mount Larcom (38.7%) compared to 22.8% in Calliope and 27.3% within the LGA more broadly (ABS, 2021).

During the 2021-22 financial year, the housing market experienced a 17.4% increase in sale prices and a 7.1% increase in rental prices (TNE, 2022). These price increases compounded with a potential influx of new workers for upcoming projects could contribute to affordable housing shortages and exacerbate challenges to the region's housing market in the coming years. Avoiding potential negative impacts on housing affordability and availability due to these developments are key community concerns. Responding to this, local residents have suggested a need for additional government housing, converting underutilised accommodation into housing or emergency accommodation, ensuring high energy efficiency for low-income households, and new accommodation built in the region (TNE, 2022).

In 2021, the Gladstone LGA supported an estimated 25.9% of jobs in Central Queensland (CQ), and 1.2% of jobs in Queensland (REMPPLAN, 2023). While the medium weekly income was recorded to be \$1,639, which was slightly lower than the Queensland average of \$1,675, high employment activity continues to be experienced in the region due to a continuing pipeline of mining, construction and renewable energy projects. The Gladstone region also forms part of the CQ Renewable Energy Zone (REZ). Within this REZ, 67 projects had registered an interest in August 2021 (Infrastructure Partnerships Australia, 2023).

Despite this strong economic activity, the region has faced limitations in relation to accessing community infrastructure and services. In addition to having geographical challenges to access services, an increasing proportion of families from low socio-economic backgrounds have put pressure on local health and social services (CCQ, 2019). This was reflected with the Gladstone Region receiving a SEIFA score based on factors such as employment, housing, social services and support and socioeconomic factors such as health (AIHW, 2020), that was lower than the Queensland average.

Acciona Energia's Planning Report (Acciona Energia, 2020) identified that this project has the potential to invest more than \$500 million into the regional economy and result in increased employment and services which will bolster local supply chains, particularly during construction. The positive and negative impacts, which have been explored through a community survey (n=26) and stakeholder interviews (n=26) are identified and assessed in this SIA report.

The detailed analysis of positive and negative social impacts is provided in Sections 5 and 6 of this report. The main benefits (see below) were mainly related to an increase in income, employment and skills to the region. Negative impacts varied and related to social, economic, environmental, cultural and political factors which will need to be considered.

Positive	Negative
<ul style="list-style-type: none"> • Increase in economic activity • Local employment opportunities • Local education and training opportunities • Local procurement opportunities • Community investment opportunities • Renewable energy generation 	<ul style="list-style-type: none"> • Increase accommodation demand (for housing) • Increase accommodation demand (for short-term accommodation) • Local labour market competition • Increase demand for social infrastructure • Perceived lack of procedural fairness • Road access and conditions impacts • Safety and hazard risks (bush/grass fires, BESS fire) • Social amenity impacts (traffic, noise, air quality) • Impacts on Aboriginal cultural heritage • Visual impacts, including glint and glare • Environmental impacts • Changes to land use

The social impact management framework outlined in Section 6 proposes a schedule of actions to mitigate potential negative impacts and enhance benefits resulting from the project. They are derived from the engagement component of this project and are also benchmarked against other projects and best practices. The key suggested measures include:

- Update Community and Stakeholder Engagement Plan throughout the project lifecycle with more rigorous engagement in the early stages of the project.
- Develop Industry Participation Plan, including a Local Procurement Policy and an Accommodation and Employment Strategy. This will focus on increasing local benefits, particularly during the construction period, inclusively increasing local capacity and capability, and reducing risks to accommodations shortages, inflation and cumulative effects.
- Further develop, ground-truth and finalise Community Benefits Sharing Plan based on the research in this document, including stakeholder suggestions identified in Section 6.

1. Introduction

On behalf of Acciona Energia Global Pty Ltd (Acciona Energia) (the proponent), NGH has completed a Social Impact Assessment (SIA) for the Aldoga Solar Farm (the project). The project will be located within the Gladstone State Development Area (GSDA) where the proposed development is to be located on lands which are owned by the Minister for Economic Development Queensland (EDQ). The project site is approximately 15 kilometres northwest of Gladstone and approximately 2.6 kilometres southeast of Mount Larcom in the Aldoga locality, within the Gladstone Regional Council (GRC) Local Government Area (LGA).

Planning approvals for this project have been staged. Approval for an original project footprint was granted by the Queensland Government in 2019. After that time, the project footprint was expanded, and additional approvals sought. The entire project area (including the original project area, the overhead transmission line (OHTL) into Larcom Creek Terminal Substation, and the expanded project area) was granted final Queensland Government approval in July 2021. This approval was comprised of a State Development Area Development Permit for a Material Change of Use for a Renewable Energy Facility (Solar Farm) and Substation under the GSDA Development Scheme.

This SIA was not tied to, or mandated by, these approvals processes. Acciona Energia's principal intent for this SIA remains to inform the development of the project's Social Impact Management Plan and Community Benefit Sharing initiatives. The SIA also contributes to nurturing long-term local stakeholder relationships for Acciona Energia in the Gladstone area.

1.1. Project description

The project will involve the construction, operation, and decommissioning of a 355MW (AC) capacity solar farm, including a battery energy storage system (BESS) with a likely 200MW/2H storage capacity. The project has the potential to provide up to 480MWh of solar power and over 1,000,000MWh of energy to the National Electricity Market (NEM).

The project will be EDQ's flagship renewable energy project, as it aims to renew and repurpose underutilised state land to generate jobs and drive economic growth. The substantial scale of the project will also contribute significantly to Queensland Government's target of achieving 50 per cent renewable energy by 2030.

The project site (or development footprint) is defined as all areas of land that may be directly impacted by the project through all project phases. This project site is approximately 1,137ha (see Figure 1-1) and would include areas for the solar PV modules, module mounting/tracking systems, inverters, step-up transformer, on-site substation, access tracks, construction compound (temporary), underground cabling and permanent monitoring equipment (e.g., met stations), and the BESS.

The project site provides an optimal location for solar power development as it is proximal to existing electrical transmission infrastructure, including high voltage transmission lines and a substation. The project will be connected to the grid via the adjacent Powerlink Larcom Creek Station. Additionally, Acciona Energia has signed a Memorandum of Understanding with

Queensland's Stanwell Corporation to supply renewable energy from the project directly to Stanwell's proposed hydrogen plant near Aldoga.

Most of the project site and surrounding land is very gently undulating undeveloped country that has historically been used for cattle grazing. The current land use of the project site is predominantly cattle grazing, with some areas used for the siting of electricity transmission infrastructure.

There is a small number of residents and farm workers living in proximity to the site, including along The Narrows and Cullen Roads.

Access to the site would be via the Gladstone-Mount Larcom Road, at the south of the site.

The project site is shown in Figure 1-1.

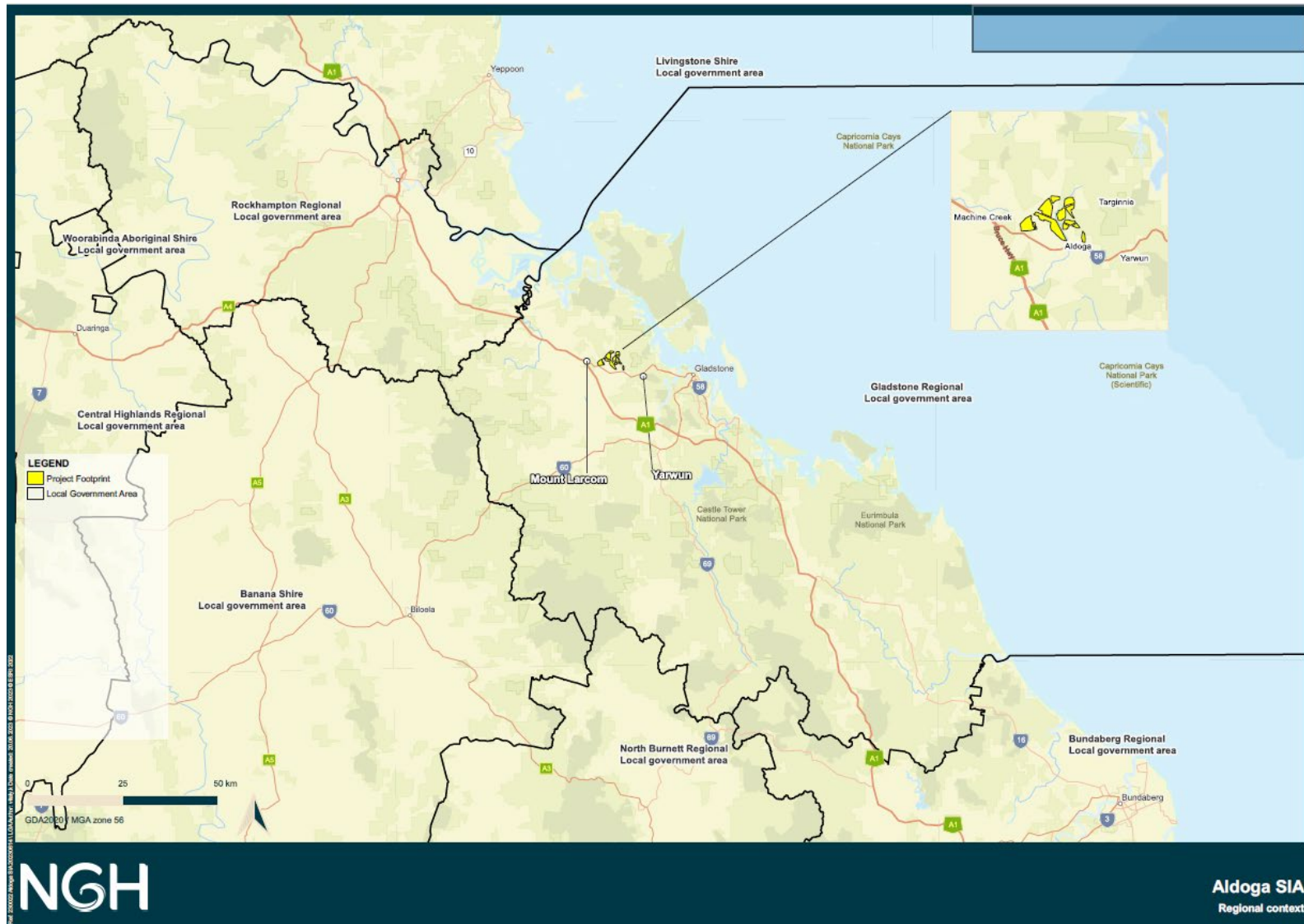


Figure 1-1 Project site and surrounding locality

It is anticipated the project's construction phase will extend over a period of 18 months, commencing in 2023/24 with a peak construction workforce of 480 FTE workers expected. The solar farm would be operational for approximately 30 years with up to 20 FTE operations and maintenance staff and service contractors required to operate the facility.

At the end of the project's life, when the solar farm is no longer considered viable, the project is expected to be decommissioned with most infrastructure (above and below ground) removed and measures taken to rehabilitate the site, with the aim of returning the site to its pre-existing condition.

Acciona Energia is the largest 100% renewable energy company in the world without a fossil fuel legacy. In Australia, the company develops, constructs, owns and operates renewable energy assets. Acciona Energia has delivered five wind farms and a 20MW solar farm with a total installed capacity of over 600MW. Construction of Acciona Energia's largest wind farm, the 1,026MW MacIntyre Wind Farm Precinct is currently under construction. This project will be one of the largest wind projects in the southern hemisphere.

Acciona Energia is involved in renewable energy projects throughout the project cycle – from design, development, construction, long-term ownership and operation. This characteristic sets Acciona Energia apart from many other companies and reinforces its commitment to contribute to the economic and social development of the communities in which its projects are located.

Key components of the project are summarised in Table 1-1 below.

Table 1-1 Key components of the Project

Key components	Details
Location	The project sits within: <ul style="list-style-type: none"> • Lots 7 SP260750, 29 RP894241, 2 SP301578 and 1 SP157677, in addition to Powerlink easement ARP610585 (approved as part of original project layout). • Lot 2 SP301578, Lot 1 SP307522, Lot 1 SP157677 (OHTL in Larcom Creek) and Lot 1 SP260750 (approved as part of the expanded project layout).
Nominal capacity	355MW (AC)
Development footprint	1,137ha
Solar array	Approximately >1,000,000 solar PV modules (approx. up to 2.3m x 1.1m) installed in regular north-south, parallel arrays. Panel arrays will be mounted on metal structures which are expected to be piled or screwed into the ground to a depth of 2.5m to 4m, some potentially requiring concrete footings.
Modular inverters	Power conversion units (PCUs), comprising central inverters, step-up transformers, protection and switchgear located within 40ft steel containers (or similar structures) or on container skid pads and on a concrete foundation.

Key components	Details
Transmission line connections	The project requires connection to the national electricity grid.
Onsite substation and switchyard	The pad area for the substation is expected to be approx. 2–3ha and an overhead high-voltage line measuring approximately up to 2km in length will connect the plant substation to the Larcom Creek Terminal Substation. The plant substation will be in the south-eastern area of the site, adjacent to the Larcom Creek Terminal Substation. The substation is expected to include an indoor switch room for medium-voltage circuit breakers, and an outdoor switch yard for transformer(s), gantries and other electrical infrastructure.
BESS	Likely 200MW/2H storage capacity and footprint of less than 3ha is expected.
Site access	Two main construction access points from both Flynn Road, and Mount Larcom Road from the south of the site to the construction compound areas will be installed on site with a maximum width of approximately 10m.
Operations and maintenance buildings	An operations and maintenance building on the solar farm site with office space, restrooms, warehouse and workshop space is planned and expected to be contained within an area approximately 30m x 100m. Parking would be provided at operations and maintenance building
Security fencing	Perimeter fencing will be installed around the groupings of solar panels. This will comprise a chain link fence or suitable alternative approximately 1.8m high, with an associated security system.
Construction timing and workforce	The construction phase is anticipated to be 18 months commencing in 2023/24. Workforce during construction is expected to peak to approximately around 480 FTE workers. Construction hours (e.g., Mon–Fri, 7am–5pm).
Operational timing and workforce	The expected workforce during operation is estimated to require approximately 20 full-time equivalent staff and service contractors.
Capital investment value	The capital investment value is estimated to be in excess of \$500Million.

2. Methodology

A summary of the SIA methodology is presented in this Chapter and detailed methodology provided in Appendix A.

This SIA has been prepared in accordance with the International Association for Impact Assessment (IAIA) Guidance Note, *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay, Esteves, Aucamp, & Franks, 2015), and the *International Principles for Social Impact Assessment* (the SIA Principles) (Vanclay, 2003). The SIA has also been informed by Acciona Energia's specific intent for the SIA (Acciona Energia, 2023).

The assessment aims to identify, predict and evaluate the likely social impacts and benefits arising from the project, and propose appropriate responses to mitigate and manage negative impacts and enhance positive benefits. As per the SIA Principles (Vanclay, 2003), social impacts were assessed across the following social impact categories: way of life, community, culture, political systems, environment, health and wellbeing, personal and property rights, and fears and aspirations.

The key steps that were undertaken included:

- Project scoping
- SIA engagement
- Impact assessment and management.

An overview of the key tasks for each step are summarised in Figure 2-1.

Figure 2-1 Overview of SIA methodology

With a population of 64,304 (ABS, 2021), the social locality (or study area) for this project is the Gladstone Regional LGA. The study primarily focussed on the city of Gladstone and the rural town and locality of Mount Larcom. A secondary focus on the satellite town (from Gladstone) of Calliope and the rural township and locality of Yarwun is also provided. The population of each locality is provided in Table 2-1 and only limited data was available for Yarwun given its small population.

Table 2-1 Gladstone Regional LGA locality populations

	Areas of primary focus		Areas of secondary focus	
Town/locality	Gladstone	Mount Larcom	Calliope	Yarwun
Population	45,185	332	5,263	89

Source: (ABS, 2021)

A social baseline focused on these areas was developed (see Appendix D-1), which has established a baseline for potential impacts from the proposed development to be assessed against. The social locality is shown in Figure 2-2.

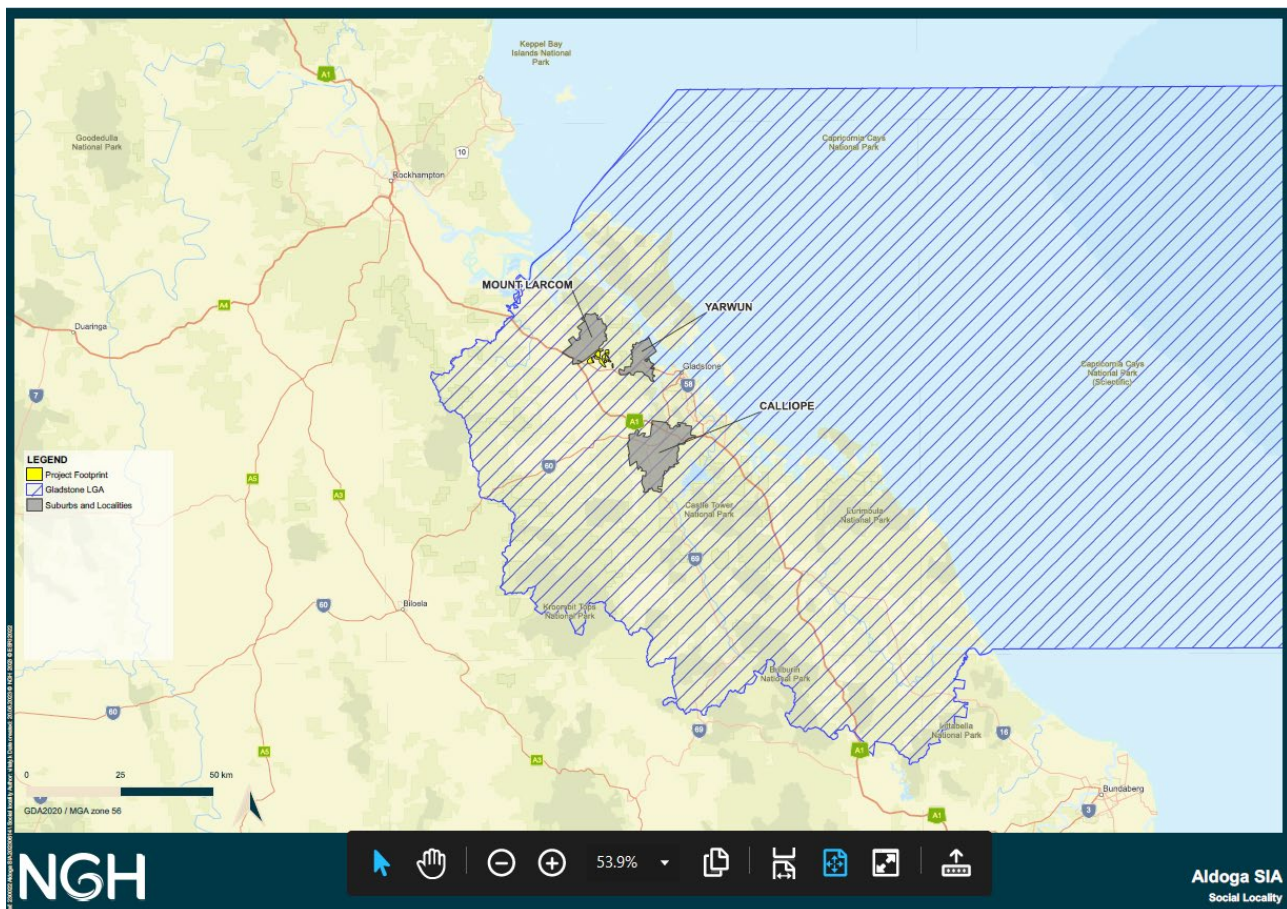


Figure 2-2 Social locality and regional setting

Social impact scoping was then undertaken to frame the scale and depth of the SIA, and to gain an initial understanding of the likely social impacts of the project for each project activity. The IAIA (2003) SIA principles of social impacts were assessed across the following categories: way of life, community, culture, political systems, environment, health and wellbeing, personal and property rights, and fears and aspirations.

SIA stakeholder engagement was also undertaken between early May to mid-June 2023 to inform and validate the social baseline and assessment of social impacts. This involved:

- Twenty-six stakeholder interviews (face-to face and online/phone)
- Online survey (twenty-six responses) from residents from Gladstone, Yarwun and Mount Larcom communities.
- Attendance at the Gladstone Careers Expo and the Industry Association Queensland CQ Industry Forum in Gladstone.

The social impact evaluation built on the social impact scoping, and involved further review of relevant inputs, e.g., relevant EIS technical reports, engagement findings, and comparative studies. An assessment was then carried out to determine the likely significance of each potential impact, based on its predicted likelihood and magnitude as defined in the IAIA's (2003) SIA guidelines.

Finally, measures to avoid, minimise or mitigate potential negative impacts and enhance positive benefits were developed to address impacts. This involved a brief assessment of residual impacts post-application of mitigation measures using the social impact significance matrix in Table 2-2.

Table 2-2 Social impact significance matrix

		Consequence level				
		1	2	3	4	5
Likelihood level		Insignificant	Minor	Moderate	Major	Catastrophic
A	Almost certain	High	High	Extreme	Extreme	Extreme
B	Likely	Moderate	High	High	Extreme	Extreme
C	Possible	Low	Moderate	High	Extreme	Extreme
D	Unlikely	Low	Low	Moderate	High	High
E	Rare	Low	Low	Moderate	High	High

3. Stakeholder engagement findings

This section draws together the key themes that emerged from SIA engagement, which included the online survey and SIA interviews.

Question 1 of the survey requested participants to identify their living status, which identified (see Figure 3-1) that the majority (65%) of participants lived in Gladstone (17 respondents), 2 respondents each lived in Mount Larcom, 2.1–5km from the site and more than 5km from the site. One respondent lived less than 1km from the site, another stated that they don't live there but visit the area, and another was unstated.

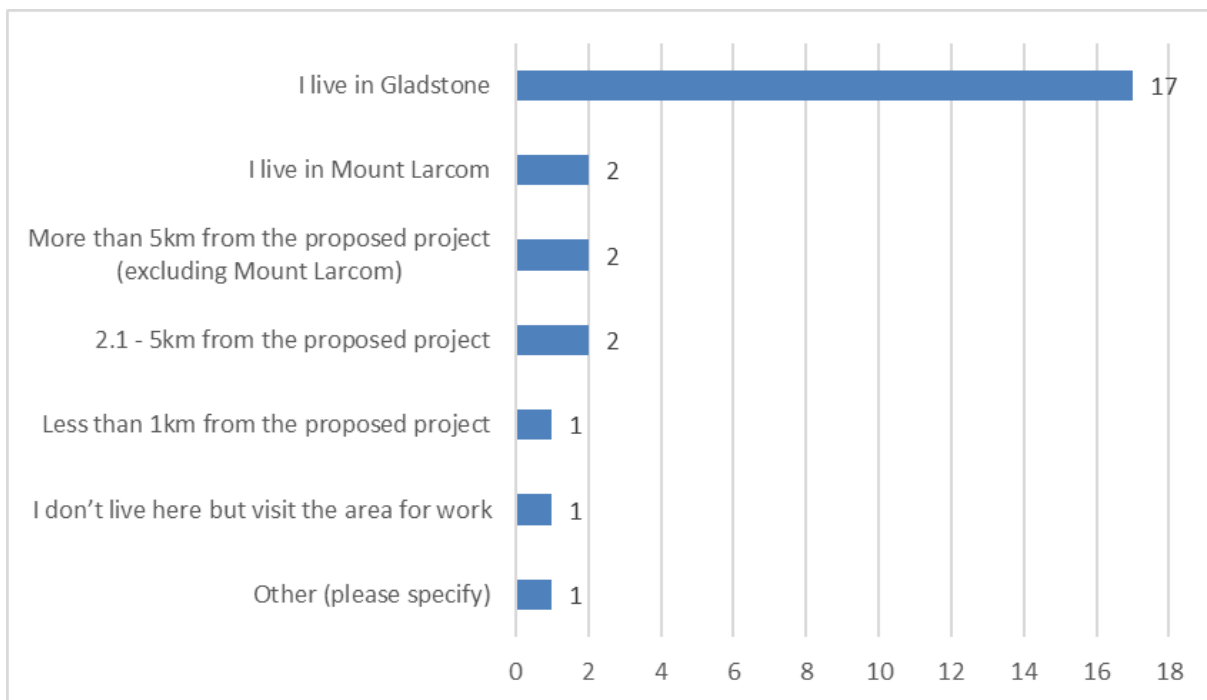


Figure 3-1 Living status of online survey respondents (n=26)

The online survey results also depicted a robust community with strong family and environmental values and strong interest in the region's recreational and work opportunities. When asked in the survey 'what you value most about the local area?', 69% (18 responses) stated 'community/family ties', 65% (17 responses) stated 'landscape and views', again 65% (17 responses) stated 'natural values', and 62% (16 responses) stated 'work opportunities' and 'recreation opportunities'.

The survey results also implied there was currently a mix of perspectives about renewable energy projects in the region, with 35% of respondents (9 responses) either strongly disagreeing or disagreeing with the statement 'I feel pleased to have renewable energy development in our region', and 45% (12 responses) either strongly agreeing or agreeing.

When asked 'what are the main reasons you're interested in this project?', 60% (15 responses) stated 'potential positive impacts on the local area', 32% (8 responses) stated 'potential negative impacts on the local area', another 32% (8 responses) 'I want to build my understanding of the

project’, and another 32% (8 responses) expressed interest in gaining work or business opportunities with the project.

The most prominent amenity and social, economic, and environmental factors relating to this project identified by participants were ‘community benefit opportunities from the project’ (73% of respondents), ‘waste management procedures’ (50%), ‘native vegetation impacts’ (50%), and ‘transportation planning and the use of local roads’ (50%). This is shown in Figure 3-2.

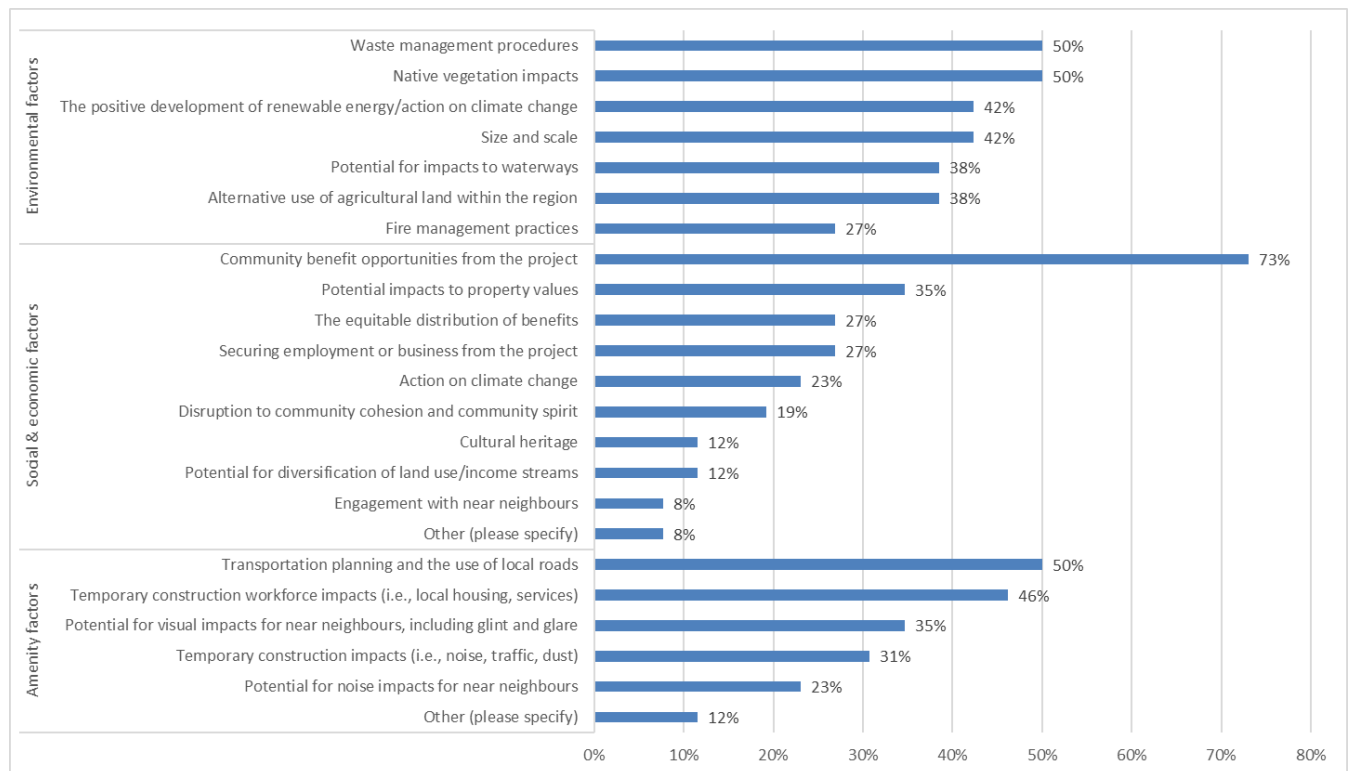


Figure 3-2 Most important factors for this project

When asked about ‘key challenges that the community is facing’, common response themes included health services and community infrastructure, social and economic issues, and industry growth and employment. This indicated that the requirement for coordinated and robust engagement with local community members during the project lifecycle would be important to increase benefits and reduce negative impacts from the project.

The SIA interviews concurred with these results. Together, the interviews portrayed a proud community with much experience with large scale development projects and proponents in and around their town. The acute negative experiences of the construction phases of the LNG projects (particularly effects on the housing market and community cohesion) loom large for interviewees and for the town. Given this, they do not want to be “taken advantage of” by proponents. They want to see real benefits from these projects, and this specifically relates to high local content outcomes, benefit funds that add value over the longer term, and open communication from proponents.

The interviews conveyed a sense that participants and the community more broadly support the project. They want to see construction start and the project delivered. The consensus from the interviews was that the GSDA is an appropriate location for the project, and that compared to other industries within Gladstone, the potential negative impacts of a solar farm on the community are

negligible. Despite this, the issues around energy transition are very tangible for this community. The potential for large local job losses from the transition is “frightening”, and this is a constant backdrop for this community.

The most common themes of interest for interviewees relating to impacts and benefits from this project were: ‘local content’ (21 comments), ‘community benefit fund’ (20 comments), ‘engagement’ (12 comments), ‘issues surrounding transition’ (11 comments), ‘housing market concerns’ (10 comments), and ‘concern about cumulative impacts’ (9 comments). A summary of the impacts and benefits of interest that were identified by interviewees is at Table 3-1.

Table 3-1 Summary of SIA interviewee concerns by theme (n=26)

Impact theme	Issue/concern	Stakeholder group	No. of interviewees concerned
Local employment and procurement opportunities	<ul style="list-style-type: none"> Need for local content, yet concern about skills shortages and skills drain from other businesses 	Environmental groups; Industry; Education; Community groups	21
Community benefit fund	<ul style="list-style-type: none"> Need for a local focus (i.e., Mount Larcom and Yarwun) Link in with existing initiatives to strategically target core issues 	Environmental groups	20
Engagement	<ul style="list-style-type: none"> More information about the project and the solar industry, including about local content 	Education; Local government; Environmental groups	12
Issues surrounding transition	<ul style="list-style-type: none"> Local people are interested in renewable energy and transition Access to green energy is important for keeping the large employers in Gladstone 	Industry; Community groups; Education; Local government; Environmental groups	11
Accommodation	<ul style="list-style-type: none"> Concern about potential housing and rental market impacts 	Environmental groups; Council; Industry; Accommodation; Local government	10
Cumulative	<ul style="list-style-type: none"> Cautious about a repeat of the effects of the influx of non-resident workers with the LNG projects Need for greater coordination of impacts and benefits 	Environmental groups; Emergency services; Education; State government; Industry	9

Impact theme	Issue/concern	Stakeholder group	No. of interviewees concerned
Roads	<ul style="list-style-type: none"> Limited traffic impacts as relatively small workforce Concern regarding potential road damage along access route 	Community group; Industry; Local community	5
Access to facilities/services	<ul style="list-style-type: none"> Health care already under strain 	Education providers; Industry; Local government	5
Loss of agricultural land /land use change	<ul style="list-style-type: none"> People accept projects in the SDA 	Local community; Environmental groups	2
Amenity	<ul style="list-style-type: none"> Potential dust impacts 	Industry	1
Distributive equity	<ul style="list-style-type: none"> Little economic flow-on effects when workers stay in workforce camps 	Accommodation	1

4. Social baseline

This section provides an overview of the existing socio-economic conditions within the social locality. All population and demographic data presented here are from the 2021 Census, unless otherwise stated.

A summary community profile is provided in this chapter. Detailed demographic and industry characteristics and data relating to the social locality is also provided in Appendix C.

4.1. Local and regional setting

The project is located in the Gladstone Region which is a LGA that comprises 6 cities, towns, villages and localities including Gladstone, Callemondah, Gatcombe, Northcliffe, Southend and South Gladstone. The GRC area covers the Gladstone North, Gladstone South, Calliope, Boyne Islands, Tannum Sands, Agnes Waters and Seventeen Seventy regions.

The project is located in the GSDA which is a major industrial hub for mining, shipping and manufacturing and is home to highly active and diverse industries and more than 2,000 employees. These employees are engaged in 8 sectors including manufacturing (15.5%), construction (11.2%), retail trade (9.7%), transport, postal and warehousing (8.6%), education and training (7.7%), health care and social assistance (7.4%), professional, scientific and technical services (7.2) and accommodation and food services (6.9) (GRC, 2022). The project site is also located in the CQ REZ (detailed in Section 4.2.1 below) and has been referred to as a flagship project for economic growth and development within the LGA.

A history of high economic activity and recent experiences with boom bust cycles have compounded local access to community infrastructure and services such as health facilities, and education and community services, which remain insufficient. For example, an SIA survey participant identified that residents were regularly required to travel to Townsville (824 kilometres away) to access medical services. Rising inflation, accommodation shortages and access to primary facilities remain primary concerns within the region. While a highly skilled and active trades sector exists, the socioeconomic status of the region according to the SEIFA index remains below the Queensland average. This is due to limited educational achievements, poor access to services and the community being relatively isolated, which has limited career paths beyond the trades sector. Disparities in incomes between indigenous and non-indigenous populations remain prominent although there is a comprehensive regional structure to support the economic development and growth of traditional owner groups.

4.2. Development context

4.2.1. Socio-economic planning setting

Land use planning at the regional level is guided by the CQ Regional Plan (the Regional Plan) (DSDIP, 2013). The purpose of the Regional Plan is to identify the state's interest in land use planning for the region and to identify regional priorities; this includes developing regional policies to address land use conflicts. It strongly focuses on protecting Priority Agricultural Land Uses

(PALU), while supporting co-existence opportunities for the resources sector and providing for growth for identified priority towns. These priority towns include Gladstone, Calliope and Tannum Sands.

The Regional Plan was developed during a period of rapid resource sector growth, notably in liquified natural gas (LNG), coal, and coal seam gas (CSG). As such, the Plan highlights the acute challenges experienced at that time with the growth and fluctuations of the non-resident workforces across the region (notably in Gladstone with the Curtis Island LNG Project). The Plan also focused on the need to address pressure on community infrastructure and impacts on the region's liveability (DSDIP, 2013).

Three State Development Areas (SDAs) have been established in CQ by the Queensland Government, which are defined as areas of land established by the Queensland Government Coordinator-General to promote economic development.

In 1993, the GSDA was declared as an industrial hub for large-scale, heavy industry located northwest of Gladstone. The GSDA comprises 26,934ha of land adjacent to the Port of Gladstone and has connections to major rail networks and the national highway. The state government owns a significant portion of the land with the Coordinator-General owning 8,217ha and the Minister for Economic Development Queensland (EDQ) owning 14,816ha.

Planning in the GSDA is controlled by the GSDA Scheme, with the current version approved in May 2022, following an extensive strategic review. The strategic vision for the GSDA is to:

- a) be CQ's economic powerhouse, with an efficient concentration of large-scale industry of national, state and regional significance that benefits from the SDA's strategic location near the Port of Gladstone and major road and rail networks
- b) support development that aligns with the Queensland Government's strategic priorities for the region, particularly related to the hydrogen industry
- c) maintain environmental, cultural heritage and community values where possible to support wider ecological processes and provide community benefits (DSDILGP, 2022).

The Gladstone Region Economic Development Strategy 2021–2025 details a five-year plan which guides the Gladstone Regional Council's operations "to support the vibrancy, diversity, resilience and sustainability of the communities of the Gladstone Region" (GRC, 2021). The strategy was informed by the Growing the Gladstone Region Report (SC Lennon & Associates, 2021) and aligns with the region's key strategic planning documents. The Economic Development Strategy identifies five key priorities:

1. Encourage investment through support for the delivery of enabling infrastructure and catalyst project opportunities.
2. Support the capacity of business and industry in the region to prosper in a post-carbon economy.
3. Support the resilience and prosperity of the Gladstone region's entrepreneurial and innovative businesses.
4. Support the Gladstone region's appeal as a place in which to work, live, play and stay.
5. Support the development of the Gladstone region's visitor economy.

A key initiative to support Priority 2 is the Gladstone Region Economic Transition Roadmap (the Roadmap) (TNE, 2022). Informed by engagement with over 200 community and industry stakeholders, the document addresses opportunities and impacts associated with the evolving mix of global energy production and establishes council's policy position on local renewable energy production.

The Roadmap states that "stakeholders from the Gladstone Region and industry groups shared a common vision that by 2032, the Gladstone Region will have transitioned its source of energy generation to renewable energy while intensifying its position as an energy superpower" (TNE, 2022). GRC recognises that its role in influencing decision makers is crucial to future-proofing the region and has developed 2022/23 Strategic Priorities (GRC, 2022) to advocate for the region. Priorities include 'renewable energy and the transitioning economy', which highlights the Gladstone region's potential to become a green chemicals and hydrogen hub. The publication identifies the urgent need for regional research and strategic planning to identify energy transition impacts, supporting investments, consistent policy frameworks and additional infrastructure to enable a just transition for the region.

4.2.2. Renewable energy policy and setting

In 2022, the Queensland Government released the Queensland Energy and Jobs Plan (QEJP), which commits Queensland to achieving renewable energy targets of 50% by 2030, 70% by 2033 and 80% by 2035 (DEPW, 2022). Alongside this, the Queensland Government is in the process of developing a Queensland REZ framework. A REZ is an area with high quality renewable resources such as strong wind and solar, suitable terrain, and proximity to transmission infrastructure that can be developed in a coordinated and cost-effective way and benefit existing and emerging industries and local communities (DEPW, 2021b). The state government has committed to establish three Queensland REZ regions in northern, central, and southern Queensland to help manage the energy transformation, deliver jobs, diversify the economy and lower emissions (DEPW, 2021a).

The CQ REZ region includes the Fitzroy REZ, encompassing Rockhampton and Gladstone, and the Wide Bay REZ, which extends south from Bundaberg. The CQ REZ region, currently the "energy powerhouse of Queensland" (DEPW, 2022), is centrally located in a strong part of the network, with significant coal-fired power generation and renewable energy resources, and proximity to existing energy-intensive industries. The construction of the CQ REZ will support industrial decarbonisation and the emerging hydrogen economy (DEPW, 2021b).

The Gladstone region was identified as a potential regional hydrogen hub in both the Queensland Hydrogen Industry Strategy 2019-2034 (DSDMIP, 2019) and the 2019 National Hydrogen Strategy (Commonwealth of Australia, 2019). Factors supporting development of a Gladstone hydrogen hub include existing industries and infrastructure, access to the port, and a skilled workforce, while the GSDA gives the state government the ability to facilitate large-scale industrial development. The region has since attracted a cluster of global companies to invest in green hydrogen-related projects in the Gladstone region, including the Fortescue Future Industries hydrogen electrolyser facility and the CQ Hydrogen Project, both at Aldoga.

Access to renewable energy supply is critical to the further development of the green hydrogen industry and associated renewable manufacturing opportunities in the region. Other approved renewable energy projects in the Gladstone region include the Gladstone Abattoir Solar Farm, and

the Raglan Solar Farm (currently under construction). There are also multiple proposed solar and wind farms proposed in the neighbouring Banana Shire and Rockhampton LGAs.

4.3. Community profile

A brief overview of the study area's key social characteristics is summarised in this section. A more detailed community profile is available at Appendix C-I.

In 2021, the Gladstone LGA had a population of 64,304 residents with 332 residents living in the Mount Larcom SAL, 45,185 living in Gladstone SAL and 5,263 living in Calliope SAL. Close to half of the residents in each area identify as female and the remaining 50% male. An estimated 6.2% of the population identified as Aboriginal or Torres Strait Islander with the largest proportions residing in Calliope (6.8%) and lowest in Mount Larcom (5.1%). The median age of residents varied from 42 in Mount Larcom and 32 in Calliope, compared to the Queensland average of 38. This disparity was reflected with a greater proportion of the population aged 65+ living in Mount Larcom SAL (20.1%), compared to Calliope SAL (10.7%).

During 2021, most of the population resided in separate housing (8.5%), and a high proportion of homes in Mount Larcom were recorded as being owned outright (38.7%), compared to 22.8% in Calliope and 27.3% within the Gladstone LGA (ABS, 2021).

The development of the LNG projects severely impacted on the local housing market. It led to a huge rise in housing demand and pricing in Gladstone, followed by a housing market slump as demand dropped off as most construction workers were accommodated on Curtis Island and supply increased with the construction of additional housing.

More recently, housing affordability in the region experienced a 17.4% increase in sale prices and a 7.1% increase in rental prices during the 2021–22 financial year (TNE, 2022). The medium weekly income (\$1,639) remains slightly lower than the Queensland average (\$1,675) though high employment activity continues to be experienced in the region, due to a continuing pipeline of mining, construction and renewable energy projects.

Key challenges relating to health within the Gladstone LGA region include:

- The increasing proportion of families from low socio-economic backgrounds has placed pressure on local health and social services (which continue to remain limited). Challenges identified by the Department of Health (2019) have included: High disease prevalence: cardiovascular disease, respiratory conditions, mental illness, diabetes, stroke and cancer.
- Lack of healthcare access: access to GPs, specialists, mental health services and bulk-billed providers, long wait lists, high costs for private consults, imposed travel costs, and poor continuity of care.
- Workforce gaps: local workforce gaps, shortages of GPs, specialists and allied health professionals.
- Underlying factors: poor integration services, limited student opportunities and flexible employment models, lack of professional networking, support, mentorship and development opportunities, lack of infrastructure, professional burnout/fatigue, poor Medicare rebates and financial incentives, gladstone portrayed as unattractive location to live and work (CQ Rural Health, 2022).

Approximately 11.1% of people accessed unpaid assistance for a disability, health condition or due to old age, which closely aligns with the state average (11.5%). Approximately 9.6% of people in the region identified that they suffered from a mental health condition, and 7.6% with a long-term health condition, which sits slightly below the QLD average. Earlier data also notes domestic and family violence, mental health, drug use and children in care as significant issues for the community and were said to be correlated to migration patterns (Platformc, 2022).

The Gladstone community is accustomed to industrial developments, and associated peaks and troughs, in and around their town. Nonetheless, none have compared to the LNG boom and bust. The influx of an estimated 10,000-15,000 non-resident workers between 2010-2014 resulted in major impacts on the Gladstone community. The approval of three LNG projects on Curtis Island resulted in a spike in demand for housing, services, and skills (Smith & Kelly, 2017).

Consultation revealed how the influx of workers impacted on both the composition and the character of the community. The housing crisis that developed resulted in rapid rent increases and shorter rental contracts, and many long-term tenants left the area as rents became unaffordable. This included vulnerable groups, such as pensioners, as well as lower socio-economic status (SES) families with children. Local businesses also had to deal with competition for workers and effects on wages.

During consultation, many stakeholders described the social issues that accompanied the construction boom and the impacts that had on residents' way of life. People were not going out due to the behaviour of construction workers in town. The number of assaults increased, fuelled by alcohol. It was clear from SIA interviews that Gladstone stakeholders and the community are keen to avoid a repeat of the LNG boom and bust.

5. Impact assessment

5.1. Overview and summary

The social impacts presented in this section have been informed by the initial social impact scoping, relevant technical reports, engagement findings, information provided by Acciona Energia, and comparative studies. The likely significance of each potential impact has been assessed by assigning likelihood and consequence levels using the IAIA SIA Guidance Note Risk Assessment Framework (Vanclay, Esteves, Aucamp, & Franks, 2015) (refer Table 2-2). Given the location of this project and the scale of both renewable and other industry development forecast for the Gladstone region, cumulative impacts have been considered in the assessment.

An increase in economic activity, and local procurement, employment and training opportunities are key potential benefits of the project. It is anticipated that the project will generate a construction peak workforce of up to 480 jobs and provide up to 20 ongoing full-time positions on site once operational. It is also anticipated that the project will provide opportunities for local businesses to provide goods and services and result in increased business activities in Gladstone and nearby towns including Mount Larcom, Yarwun, and Calliope. Other positive impacts include local education and training opportunities, and community investment initiatives. The renewable energy generated by the solar farm will positively contribute to the Gladstone region's industry objectives for decarbonisation and green manufacturing.

Potential negative impacts identified during SIA scoping and engagement include impacts on infrastructure, services, facilities, and the community. Key concerns centred on temporary construction workforce impacts on local housing and services, as well as transportation planning and the use of local roads. Against the background of another construction boom and a skills shortage, participants noted that the community was keen to avoid a repeat of the LNG boom and bust and associated impacts on housing and services, particularly health services.

These impacts are explored in more detail below and proposed responses to avoid, minimise, or mitigate potential negative impacts and enhance positive benefits are summarised.

5.2. Social impacts (positive)

5.2.1. Increase in economic activity

An increase in economic activity within the local and regional areas is expected. The project will directly and indirectly, through its supply chains, create demand for goods and services such as construction workforce accommodation, food, construction materials, and freight. It is likely that local businesses in Gladstone and the broader CQ region will supply some of these services. In addition, increased income and spending by construction workers and others across supply chains will likely stimulate local economies more broadly. For example, a recent report identified that a single Fly In Fly Out (FIFO) worker spent a minimum of \$100 per day on living expenses (Cadence Economics, 2018), which suggests that a significant increase in spending is likely during the project's peak construction period.

The project's Planning Report (Acciona Energia, 2020) estimated that the project will provide more than \$0.5 billion into the Queensland economy. Given the importance that Acciona Energia, key stakeholders and the community place on the potential positive impact for the local and regional area's businesses and economies, this impact is assessed to be of high social significance (almost certain, and of minor consequence).

5.2.2. Local employment, education, and training opportunities

Capturing employment and training opportunities at the local level is a key potential benefit of the project. Construction of the project is anticipated to begin in late 2023 or early 2024 and expected to take up to 18 months. It is anticipated to generate a construction peak workforce of up to 480 jobs and provide up to 20 ongoing full-time operations and maintenance positions once operational.

Consultation feedback highlighted the importance of ensuring the realisation of employment opportunities for local people and businesses. Most survey participants indicated that it was very important (73%) or important (19%) that the project prioritises training, employment, and procurement opportunities for the local community.

*Direct the EPC to look for workers with a postcode from Miriam Vale to Rockhampton.
Provide bus transport from Gladstone.*

Avoid FIFO as much as possible both in construction and operations.

Furthermore, one stakeholder noted that projects of this nature may provide opportunities for locals who currently travel for work.

Working in the mines is ugly – you're away from home, it's hard work – so this project (and others) may provide opportunity for people to come back home. Some of them are always looking to come back and stop working away.

Acciona Energia's workforce strategy (outlined in the project's Community Stakeholder Engagement Plan (2023)) details their intention to maximise employment and training opportunities for the local community through the project, giving priority to any suitable local applicants for project construction and operational roles.

Many of the skills that the project will require already exist across the Gladstone region. Consultation confirmed that Gladstone has strong capability for construction works, with a high proportion of the workforce employed in the manufacturing and construction industries, and strong engineering expertise. However, as noted in the social baseline, Gladstone is experiencing skills shortages across all sectors, and there is high demand for construction skills. Many stakeholders noted that this project may face challenges to secure a workforce (local or non-resident) amid a competitive local and regional labour market.

*I don't know where Acciona [Energia] will get the workforce from, they'll have problems.
Costs, including labour costs are increasing.*

Acciona [Energia] will need to explore local employment, but it will be a struggle, particularly with the number of shutdowns.

The capabilities are here but the capacity is not.

This situation is not unique to the Gladstone region. The renewable energy sector currently faces high demand and skills shortages, particularly in technical and specialised roles (e.g., engineers and electricians) (CEC, 2022). A recent study of five REZ in NSW found that labour and skills shortages would become significant limiting factors for the construction of renewable energy and transmission infrastructure, especially in regions with tight labour markets and high competition across infrastructure sectors (Briggs, et al., 2021). In addition, the characteristics of renewable energy development (including industry volatility and boom-bust cycles) and training capacity limitations, create challenges for local workforce development, exacerbated by very high competition for labour between renewable energy, mining and infrastructure sectors (Briggs, et al., 2022).

The study's findings are broadly applicable to regions in other jurisdictions undergoing rapid renewable energy development such as CQ. The authors suggest that a multi-dimensional strategy to increase labour supply from a range of pathways will be needed to build a renewable energy workforce. This includes industry engagement with school leavers, offering internships and traineeships, as well as labour market programs and pre-employment training to increase the employability of disadvantaged and under-represented groups (Briggs, et al., 2022).

Similar strategies were identified during consultation. The Gladstone region has a range of employment, training and education services that could be utilised, many of which are highly experienced in working with industry to develop education, skills, and training pathways. Several industry and education providers noted that the project provides an opportunity for apprenticeships and traineeships.

They will need labourers, there are lots of teenagers who have just left school, they could do apprenticeships.

They should be able to put on 30-40-50 apprentices – there would not be trouble getting this many. They could come straight out of school.

They should stipulate that a percentage of jobs offered should be apprenticeships.

This opportunity was seen as important in light of a reduced number of apprenticeships currently offered by the big industries in Gladstone, and the resultant pressure on SMEs in the area as well as flow-on effects for the region.

Big industries cut the numbers of apprentices in their businesses about 5 years ago – and Gladstone is now seeing the effects of not having a pipeline of workers coming through.

SMEs in Gladstone are carrying the load with apprentices while the big companies (such as Rio Tinto) have few. The local SMEs are at full capacity.

Apprenticeships used to mean something to companies as part of their social responsibility.

Some stakeholders noted that most trade qualifications take longer to complete than a typical solar farm construction. To overcome potential difficulties attracting apprentices on a project of this length, one industry stakeholder suggested that Acciona Energia could engage organisations such as Apprentices and Trainees Queensland (ATQLD), which places apprentices in relevant businesses, removing the risk for the contractor of not having long term work for apprentices.

Another stakeholder suggested exploring pipeline opportunities with other developers in the GSDA.

As this is an EDQ project – and any SDA projects – are there any opportunities for pipeline planning so that developers have shared cost and responsibility for developing traineeships where trainees can flow from one project to the next [as individual projects are not long enough to complete a traineeship]? Including Indigenous traineeships?

Several interviewees also mentioned the idea of a training legacy.

Leave a legacy – a partly trained workforce.

They need to leave a training legacy. Could consider training in solar farm maintenance.

Education stakeholders highlighted the importance of engaging with local high schools to encourage students to think about careers in renewable energy, offer work experience or explore potential for school-based traineeships. This would help school leavers to understand the training pathways and employment opportunities in the renewable energy sector. They noted that the local high schools have strong industry links in Gladstone, and that most of the industry players offer work experience. Others noted that the solar farm could provide an educational resource for both students and the broader community, e.g., tours of the solar farm or an open-air demonstration site.

A lot of kids have parents in traditional industries and base their judgement of career options on their families. They don't have enough understanding and opportunities to make different choices.

Work closely with the government to identify support programs and incentives to develop a sustainable, long-term demand and supply.

A stated goal of Acciona Energia's workforce management strategy (Acciona Energia, 2023a) is to create employment opportunities for diverse population groups, such as Indigenous people, women, school leavers and people that were previously unemployed, whilst employing a mix of unskilled, semi-skilled and skilled workers. To achieve this goal, Acciona Energia will:

- Align with the principles of the Queensland Government Building and Construction Training Policy to meet the target of 15% of the total labour hours to be undertaken by trainees and apprentices.
- Implement partnerships with educational institutions, training providers and government agencies such as CQ University (CQU), the Port Curtis Coral Coast (PCCC) Trust, Gidarjil Development Corporation, and Gladstone Engineering Alliance (GEA).
- Deliver structured training programs for apprentices, trainees and engineering cadets/interns.
- Implement local recruitment strategies, such as local advertising and using the Information Hub (once established) to advertise positions and receive applications.
- Adopt equal employment opportunities for recruitment and support a diverse workforce that includes vulnerable and under-represented population groups.
- Adopt flexible and fair work arrangements which are designed to assist employees with maintaining a work/life balance and help disadvantaged groups transition to the workforce.

- Establish and maintain relationships with government agencies, training groups and community groups to assess potential skills gaps and potential training requirements.

These specific strategies to enable positive employment and training outcomes have been considered in the context of skills shortages and the scale of anticipated development in the region. As such, these benefits have been assessed to be of high significance (likely, and of moderate consequence).

5.2.3. Local procurement opportunities

Local procurement is a vehicle through which Acciona Energia has an opportunity to realise local benefits across all stages of the project. The project team will register the project on Acciona Energia's PROCUR-e system to provide a connection between local suppliers and contractors to tendering opportunities for the supply of goods and services.

With respect to local procurement, Acciona Energia will align with the principles of the Queensland Procurement Policy 2023 (QPP) and will incorporate several processes to prioritise the use of local suppliers. Acciona Energia has also committed to working in collaboration with GEA and the Gladstone Chamber of Commerce and Industry to align with the objectives of the Gladstone 'Buy Local' program.

However, several key stakeholders raised concerns about state and federal local content policies, such as the QPP, noting that they often don't meet the requirements of local communities. They suggested that Acciona Energia consider engaging with the Queensland Local Content Leaders Network (QLCLN), a collaboration which includes GRC and surrounding councils, and consider an alternative approach to local procurement that adopts the QPP with some modification, such as the 'natural economic region' approach that takes into account local context and is region specific (SC Lennon & Associates, 2019; QLCLN, 2020).

Some stakeholders had suggestions for engaging with local businesses, such as going through GEA.

Gladstone Connects have run programs in the past where they introduced local companies to industry through initiatives such as 'Boots on the ground' workshops.

Clearly articulate and communicate opportunities to businesses. Early engagement helps businesses to plan.

Speed dating with contractors is a good way to meet the local businesses.

Industry briefings are a good method. They could coordinate with other upcoming projects.

Some industries talk about local content, but they don't do it. There needs to be some transparency around this. For example, one company got a large contractor in to look after all the smaller companies, but then pushed down the prices for all the smaller companies. Local companies would prefer to deal with the company directly.

The extent to which local people, and local and regional businesses will be able to capture the opportunities that will arise depends upon several factors; the first of which is how 'job ready' or 'project ready' they are. Local people and small businesses need to have the necessary capabilities

and compliance measures in place to be able to work or sub-contract within larger construction contexts. This was raised in several interviews with experienced industry stakeholders.

We would suggest that [Acciona Energia] split up the work packages, because most aspects of the work are too big for local companies, then the Gladstone businesses could get the work.

Several stakeholders in both Gladstone and Yarwun expressed the desire to see local businesses (such as the Yarwun Store) and community benefit from local procurement. They noted that the Yarwun Store relies on workers to "buy their smoko" and that the store misses out on business from workers staying at Homeground, such as those currently working on the FFI hydrogen project, because they are all transported to site by bus.

Considering the strategies Acciona Energia has committed to maximise local procurement, this opportunity has been assessed as being of high significance (likely, and of moderate consequence).

5.2.4. Community investment

The project represents an opportunity for increased community investment in localised initiatives through the proposed Community Benefits Sharing Program (CBSP), which is described in more detail in Section 6.3. As stated in Acciona Energia's CSEP, annual expenditure on the CBSP will comprise a combination of three initiatives:

- A Scholarship and Education Program
- A Research and Development Program
- A Sponsorship and Small Grants program.

Acciona Energia ran a short survey on the project's Community Hub from early February to late March 2023 to gather community perspectives on the types of programs to be included as part of the CBSP. This question was also included in the SIA survey. The top three options selected by participants were 'a sponsorship and smalls grants program to fund community or not-for-profit groups up to \$10,000', 'funding towards a major event, project, or infrastructure', and 'an energy efficiency program to assist residents with electricity bills or to purchase solar panels for their home' (42% for each option).

Community benefit opportunities from the project was an important social and economic factor for almost three-quarters of SIA survey participants (73%) and this was reiterated during SIA interviews. Several stakeholders noted that existing industry community benefit sharing schemes have provided many opportunities for local community groups. However, they noted that some local groups have experienced difficulties meeting application requirements for some grants programs or knowing when application processes open and close, and that certain areas, such as Mount Larcom and Yarwun, seem to miss out.

Others noted that there is already a lot of money flowing into the community. While some community benefit initiatives such as the Gladstone Foreshore and Marina are well regarded in the community, many stakeholders expressed scepticism about benefit sharing schemes in light of past and current industry approaches, particularly during the LNG boom.

There's already a lot of money around – QGC and APLNG have handed out millions through their CBS.

LNG companies came in and threw trinkets around. This doesn't serve the broader community.

Several stakeholders spoke to the lack of structure and coordination, and poor outcomes.

Lack of sharing resources and lack of development collaboration. A lot of industry gives the community sector cascading equipment, so lots of organisations have ride on mowers or marquees that just sit there, and they don't share them... Does mowing lawns for a sports ground leave a legacy?

So disappointed we came off the LNG boom without better structure. So much money and little to show for it...we have a housing and health services crisis.

Industry walks in and says, "what do you want?". This has increased an individualistic approach and there are lots of NFP startups, but it has not built the NFP sector and there is a lack of resiliency. This has unintentionally eroded the social fabric.

The community is adamant that this time they don't want "monuments, baubles and trinkets", such as ride on mowers, sheds etc. They want to see money going to health, housing and social services.

The need for industries to take a strategic approach and create a legacy was raised multiple times during interviews, and several stakeholders provided past examples and suggestions.

Coordinated community investment does come up as an issue.

It will be important to work through now all these new industries come to town can best contribute but not duplicate...Pool money to build infrastructure to suit everyone.

They need to look for opportunities to be more impactful. To leave more of a legacy for Gladstone. What is the legacy from LNG?

It's important to leave more of a legacy, by actually targeting and supporting core issues within the community that are subject to longer term and more strategic development processes. They need to invest in the disadvantaged community in a strategic way.

Don't do a community benefit scheme! Invest in the community. Work to find out where the need is instead of directing money to the people who can write the best grant application or pay someone to do it. Make it all milestone-based funding.

Santos canned their community benefit scheme because community organisations would get the money and then wouldn't or couldn't deliver. Instead, they partnered with organisations to get real community outcomes, for example, the PCYC, after school care and school buses, sponsored training for the SES, supported community health organisations.

Several stakeholders were supportive of the proposed scholarship component of the CBSP.

There are plenty of opportunities to partner with schools and sponsor programs and events. Events can be tailored to be industry specific and Acciona [Energia] could sponsor some type of challenge, for example, something like the H2 Grand Prix.

Scholarships may encourage students to stay in the region, especially if mentored and supported by industry partners.

Scholarships also go a long way – my kid received a scholarship, and it was important for them, they always remember that.

This opportunity has been assessed to be of high significance (almost certain, and of minor consequence).

5.2.5. Renewable energy generation

In terms of this project, the positive development of renewable energy and action on climate change were important environmental, social and economic factors for almost half of SIA survey participants (46%). Close to two-thirds of survey participants (62%) agreed that they feel pleased to have renewable energy development in the region.

The development of renewable energy projects strongly aligns with federal, state, and local government energy policies and land use plans. The project would support these plans, contribute significantly to the Queensland Government's renewable energy targets, and assist with the broader transition to renewable energy production. The project also supports the objectives of the Gladstone region for both green hydrogen industry development and decarbonising existing industries. This was identified as a key benefit of the project by several stakeholders, who noted that the agricultural sector and councils in the region are moving towards decarbonisation and transition policies.

Existing industries are transitioning and need access to green energy. They are all decarbonising. Acciona [Energia] will provide a piece within this puzzle and will provide the green energy (with other projects) that allows the bigger companies, such as Rio Tinto, LNG plants) to meet their targets and stay in Gladstone. We need the bigger companies to stay in Gladstone, as they provide all the jobs. Rio Tinto and others need access to renewable energy for them to remain viable in an international scale.

Industry is decarbonising and looking to develop circular economy. This includes electrifying LNG plants.

Cheap renewable energy – nothing's going to work without secure and reliable electricity.

The concept of energy transition was a big no-no at first with resources community, but now more accepting and people talk openly about renewable energy transition.

As noted in the Roadmap, if managed well, decarbonising existing industries could also lead to expanding a range of enterprises across the region, providing a diverse range of local employment and service opportunities (TNE, 2022).

The provision of renewable energy has been assessed as a positive benefit of high significance (almost certain, and of minor consequence).

5.3. Social impacts (negative)

5.3.1. Housing and accommodation

Acciona Energia has committed to hiring locally, where possible, to minimise the number of construction workers moving into the area and the resulting demand on accommodation and services. However, it is expected that non-resident workers are likely to be required due to skills and labour shortages in the region. Acciona Energia has indicated their intent to utilise the existing dedicated workforce accommodation facilities to accommodate most of their non-resident workforce. In addition, some of these workers may utilise both short-term accommodation and rental housing.

While this has the potential to increase economic benefits for accommodation and rental housing providers, an influx of workers may further constrain the availability of accommodation options for residents and tourists. This becomes a particular concern when considering cumulative impacts.

As described in the social baseline, the Gladstone region is experiencing severe rental housing pressures, with very low rental vacancy rates and increasing rents. Stakeholders reported that this is already impacting on key workers, and that there are people unable to secure a rental property living in short-term accommodation. In this context, any additional impacts from a construction workforce, even of modest size, would add to housing pressures. Almost half of survey participants (46%) reported that temporary construction workforce impacts (i.e., on local housing and services) was an important amenity factor for this project.

Several stakeholders noted that construction workforces tend to out-compete other people seeking accommodation and increase rents, with increased housing pressures felt most by vulnerable population groups. This had been the case during the LNG boom.

Rents went up during the LNG boom – people were kicked out of their rentals.

Pensioners had to leave town.

Several stakeholders noted that there is currently a lot of capacity in the workforce accommodation facilities located at Calliope and Barney Beach, and that they were largely unconcerned about the potential negative impacts of this project's non-resident workforce on the local housing market. However, they also noted that this situation may rapidly change, given the number of renewable energy and other infrastructure projects forecast for Gladstone to commence over the next several years.

While the scale of this forecast cumulative development in the Gladstone region is anticipated to result in a much smaller worker influx than the LNG boom, some stakeholders voiced concerns about the potential for a repeat of the LNG boom and bust. They advocated that a staged, coordinated and collaborative planning approach to manage cumulative impacts is needed. Such an approach would need to consider alternative models to respond to housing market impacts, such as the development of a mix of housing types (rather than a repeat of the one-bedroom or studio apartments constructed during the LNG boom), developing temporary housing that can then be re-purposed to benefit the community in the longer term, and also the consideration of re-introducing the local rental support scheme that was used during the LNG boom.

It is not currently known how much of the project workforce will require temporary accommodation in the area. To minimise potential impacts on the community, Acciona Energia has committed to several measures and will:

- Liaise with Gladstone Regional Council to discuss recent workforce accommodation learnings and identify opportunities for this project to avoid issues encountered in previous times of peak construction workforce.
- Liaise with local real estate agents to provide appropriate housing for the workforce.
- Undertake early consultation with local accommodation providers to discuss peak employment periods and capacity to absorb the workforce and provide the opportunity to meet requirements locally.
- Undertake early consultation with other project developers / businesses in the area to discuss overlapping periods of peak employment and how Acciona Energia can minimise potential constraints on accommodation requirements from cumulative impacts.
- Continue engagement with Homeground Accommodation at Calliope, and Barney Beach Accommodation in Gladstone in regard to accommodation options for the construction workforce.

This project has a moderately sized construction workforce that will be active over a relatively short duration. However, given the potential for cumulative impacts, the acute nature of the housing affordability and availability issues within the region, and the vulnerability of the potentially affected population groups, this potential negative impact has been assessed as being of high significance (likely, and of moderate consequence).

5.3.2. Local labour market competition

Large construction projects can draw in workers from existing businesses and industries in local areas, as workers are attracted to the potentially higher wages and opportunities that larger construction projects can offer. This was a key issue of concern and was raised by several stakeholders in SIA interviews, who noted the ongoing impacts.

Labour impacts on local businesses and wages – competition for workers. During the LNG boom, there was difficulty getting workers to stock shelves at supermarkets, teachers too. Once people leave these professions, they don't come back to them.

Local content policies do create problems. Businesses already can't fill roles. Local content can create drain on other businesses. [There isn't a] single sector in the region that isn't experiencing skills shortages.

Small businesses lose employees to bigger businesses.

Given the potential for the project to contribute to an increase in competition for labour in the Gladstone region, this impact has been assessed as being of high significance (almost certain, and of minor consequence).

5.3.3. Social infrastructure

Major development projects can result in demographic changes due to non-resident workers coming into areas during construction. This can place pressure on local social infrastructure and

community services, as was the case in Gladstone during the LNG boom, particularly on health services and on local schools and childcare.

As noted in the social baseline, there is existing pressure on local health services, with residents experiencing longer waiting times for GP appointments, and difficulties attracting and retaining health professionals. Difficulties accessing childcare is also a key issue across the region. For this project, the construction phase is of a relatively moderate scale and duration. The project will access emergency and health services as required, however, the potential for additional pressure on the area's social infrastructure generally, and health services more specifically, was not generally raised as a concern during consultation.

Adverse impacts on services are anticipated to be minimal during operation and decommissioning. During operation, maintenance staff and associated activities would be consistent but limited, and use of services and facilities is not likely to be noticeable. Where possible, maintenance staff would be sourced from the local area.

Given these factors, this potential impact has been assessed as being of moderate significance (possible, and of minor magnitude). Despite this, it is recommended that Acciona Energia continue regular engagement with council, particularly during the construction phase, to discuss and adaptively respond to any emerging community and business concerns.

5.3.4. Procedural fairness

Procedural fairness relates to people's ability to participate and have a say in decisions that affect their lives. This includes the effectiveness of engagement mechanisms to enable opportunities for people to have a say in the project's community investment decisions, and their ability to access complaint, remedy, and grievance mechanisms. Meaningful and inclusive community engagement is integral to this process.

During SIA consultation, many participants provided positive feedback regarding Acciona Energia's community engagement to date and indicated they were satisfied with the level of consultation and information provision. However, some stakeholders suggested that most people, including in Mount Larcom, Yarwun and Aldoga, were unlikely to know about the project, and that there was a need for more communication from Acciona Energia.

Acciona [Energia] had an information session here in Mount Larcom pre-Covid. Then nothing. The silence was deafening – that's not uncommon for projects around here.

Survey participants reported that it was very important to them that the project team 'listens to and respects the community's opinion' (81%), and that the project team 'engages in genuine two-way dialogue, is open, honest, and transparent, and keeps the community informed' (73%). This was reiterated in comments made by interviewees, who also made broader observations about what was needed to ensure meaningful and inclusive engagement in this context.

It's crucial that engagement is open, honest, and transparent. The level of trust in government and industry is so low. The renewable energy industry is not even doing the basics in Queensland and here in Gladstone they're dealing with a savvy community that's been burnt before.

People like to have a say. They want to know what's happening with projects. Consultation has been quite poor with some of the projects that are going on.

Community information sessions only work if they allow enough time and space for these discussions about benefits and impacts.

Multiple and varied suggestions were offered for the best ways to engage with locals, highlighting the importance of considering their preferences for accessing and receiving information, as well as their work patterns and lifestyles.

Community information sessions need to go through into the evening. Acciona [Energia] could have a drop-in session at the Mount Larcom Hall. Would need to be extended hours, e.g., 9am–9pm as so many people work 12-hour shifts.

People won't come to town halls, drop-in sessions, or shop fronts. They work 12-hour shifts. You have to go to where the community is going to be.

Tap into existing events. The Mount Larcom annual show is in June, and up to 10,000 people attend. A lot of people come for the day. It's a good place to catch people – people take the time to stop and talk there.

Eco-fest is also a good place to catch up with local people.

The Yarwun Valley Rally – Rio Tinto annual event. It finishes at the Yarwun State School and there are stalls – Acciona [Energia] could have a stall there to engage and provide information.

Could have a market stall at the Calliope Historic Village markets, though mainly attended by Calliope and Gladstone residents.

Would be good to have an open day/site visit so that people can see what's going on.

Have a stall outside the Mount Larcom post office from 8.45–10.30am and/or 3–5pm, when most people check their boxes.

Other suggestions included the CWA Country Kitchens Program, the Mount Larcom school newsletter, and mailouts and letter drops, with Mount Larcom stakeholders advising that people don't always read newsletters or Facebook.

Acciona Energia is committed to engaging widely with stakeholders and community on all its projects. Developing and maintaining positive relationships, built on trust and transparency, with the community in and around the Aldoga Solar Farm is critical to the success of the project. The objectives of the project's community engagement strategy include ensuring stakeholders are informed, consulted, and involved, and providing a mechanism for feedback to Acciona Energia to inform adjustments and refinements to the project where appropriate.

However, a perceived lack of procedural fairness resulting from a change in the level of community engagement, negative publicity or an unplanned event, or the failure to correctly handle a complaint resulting in escalation and reputational damage could result in failure to obtain the support of the community.

This potential impact has been assessed as being of high significance (possible, and of moderate consequence).

5.3.5. Road access

The potential adverse impacts of construction traffic on local road users and conditions were frequently mentioned during consultation with the local community and industry stakeholders. Fifty percent of survey participants indicated that transportation planning and the use of local roads was an important amenity factor in relation to this project.

Several stakeholders in Mount Larcom and Yarwun identified existing problems with traffic and road conditions that could be exacerbated by increased traffic volumes.

Traffic is a problem. The intersection at Mount Larcom needs an upgrade.

The Narrows Road gets really chopped up. It was supposed to be maintained by Arrow, but they only do it up to a point. It can now only take one vehicle.

Dangerous intersection at Calliope River Rd and Gladstone Mount Larcom Rd. Poor visibility when turning right towards Gladstone, drivers don't stick to the speed limit, and more traffic could increase the danger.

Other concerns were primarily related to potential impacts on road capacity and conditions resulting from transportation of project construction materials from the Port, rather than the construction workforce, particularly in the context of cumulative impacts from multiple renewable energy projects.

There will be bigger loads, and the management of traffic needs to be communicated.

There is a greater need for bigger truck access, but if they're ahead of the game [other projects] then it won't be an issue.

Wind farms are doing damage to the road networks, and this is currently a big issue. A lot of the roads don't have the capacity for the length of the turbines/blades.

Roundabouts are being torn up; overhead passes are too low. If the damage is to Council roads, it's their expense and the money for repairs has to come from somewhere; could result in rates increases.

While less of a concern, suggestions to reduce the potential impact of the construction workforce travel on other road users included the use of buses to transport workers, and scheduling construction traffic to avoid school bus times.

A Traffic Impact Assessment (TIA) has been undertaken for the project, which identified potential impacts such as reduced traffic safety and damage to council and state roads and provides mitigation measures. A Traffic Management Plan will be developed to assist with the project.

Potential impacts on road access and conditions have been assessed as being of high significance (likely, and of moderate consequence).

5.3.6. Safety and hazard risks

Public safety and hazard risk concerns were raised by some stakeholders during consultation. These concerns were primarily related to bushfire risk and interaction with vegetation on the site.

The local Rural Fire Brigade (RFB) indicated that access to the site in the event of fire would be their main concern, given their professional opinion that fire through the Aldoga site at some point

is inevitable. They noted that the site will be security fenced, and that an Emergency Response Plan will need to provide clear direction on how the Mount Larcom RFB will get access to the site. They were also interested to know whether they will need special training on how to deal with fire risk from particular elements in the solar farm (i.e., panels/electrical/battery) in order to be prepared.

A project-specific Bushfire Management Plan has been developed to include management control measures to be implemented during the construction and operation phase of the project to manage and mitigate impacts. Measures include providing site access and ingress to safely accommodate RFB vehicles.

This impact has been assessed as being of high significance (possible, and of moderate consequence).

5.3.7. Social amenity and way of life

During construction, there may be adverse social amenity impacts associated with traffic, noise, and air quality for neighbours near the project site and/or along the proposed haulage route. These may include impacts on nearby residents' way of life, including commuting or travelling time, their experience of travel, and their ability to move around freely. There may also be impacts on nearby residents' privacy, peace, and quiet enjoyment. These impacts may also have secondary health impacts; however, this was not raised as a concern during consultation.

In terms of this project, survey participants reported that the potential for noise impacts for near neighbours (23%) and temporary construction impacts (i.e., noise, traffic, dust) (31%) were important amenity factors. Consultation with some Aldoga and Mount Larcom residents also identified concerns related to an increase in the volume of traffic, and associated noise and road dust.

As outlined in the Planning Report (Acciona Energia, 2020), construction activities are expected to generate noise. The Construction Environmental Management Plan (CEMP) will include measures to manage these impacts. Construction activities are to be undertaken during standard hours for construction. Any construction or commissioning activities outside of these standard working hours will require an approval from relevant authorities. Noise associated with the operation of the solar farm is limited to the inverters (housed in containers and therefore acoustically sheltered), transformers, and energy storage components. Solar developments typically do not generate a large amount of noise and it is not anticipated that the operation of the project will affect the closest sensitive receptors to the site. The closest sensitive receptor is located over 430m from the solar farm footprint. It is anticipated that any operational noise associated with the solar farm will be largely reduced before it reaches the sensitive receptor.

Construction activities, such as vehicle movements and disturbance to ground cover, are expected to generate dust. The CEMP will implement strategies to minimise impacts, where possible, on surrounding sensitive receptors. Construction activities will be undertaken with the objective of preventing visible emissions of dust from the site. Upon completion of construction, disturbed ground cover is anticipated to be re-established, where practicable, with the aim of reducing dust within and adjoining the solar farm footprint.

The potential for both noise and dust impacts during construction have been assessed as being of high significance (likely, and of moderate consequence), and as being of moderate significance once the solar farm is operational (possible, and of minor consequence).

5.3.8. Aboriginal cultural heritage

Aboriginal people feel strong cultural and spiritual ties to Country. As such, harm to Aboriginal cultural heritage is a key social consideration.

A cultural heritage management plan under Part 7 of the Aboriginal Cultural Heritage Act 2003 is being developed with the Aboriginal Party for the project area to determine, by free, prior and informed consent, a process to identify and manage cultural heritage during the project planning, construction and operational phases.

While the true cultural and social value of Aboriginal sites can only be determined by the Aboriginal Party for an area, as a general concept, all sites hold cultural value to the Aboriginal Party. An opportunity to identify cultural heritage values will be guided by the principles embodied in the agreed Cultural Heritage Management Plan.

Initial engagement with the First Nations Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda People Aboriginal Corporation RNTBC has highlighted opportunities to work closely with Traditional Owners during the pre-construction, construction and operational phases. These potential opportunities include:

- Cultural heritage surveys of the site to inform the development application
- Cultural heritage management supervision and monitoring services during construction and other ground-disturbing activities on the site through the Cultural Heritage Management Plan and any subsequent findings from the cultural heritage surveys
- Cultural heritage awareness workshops for the project team.

Impacts on cultural heritage from construction activities and ground-disturbing development activities have not been assessed as the Cultural Heritage Management Plan has not yet been finalised.

5.3.9. Visual impacts

The project will involve a change of land use from rural (with some grazing), to land being used to site electricity infrastructure, during the operational phase. Consultation feedback revealed generally low levels of concern about potential visual impacts, while noting that there were likely to be some community concerns about glint and glare. Some local stakeholders in the Yarwun area had questions about whether the solar farm would be visible from the road, and whether the panels would result in glare from vehicle headlights at night. Just over a third of survey participants (35%) indicated that the potential for visual impacts for near neighbours, including glint and glare, was an important amenity factor in terms of this project. No concerns were raised in relation to visual impacts on the panoramic landscape views from Mount Larcom.

A detailed Landscape and Visual Impact Assessment (LVIA) of the project has been undertaken. The LVIA has considered the potential impact of the project on a range of visual receptors identified including residents and farm workers, motorists, recreational users, and gas and future solar farm industry workers.

No significant visual effects were identified. The LVIA noted that the solar farm development would not be visible from Mount Larcom township. It identified a moderate impact on views from the Mount Larcom Summit looking west over the site. It is also noted that this whole area falls within the GSDA, so this viewpoint is likely to become industrialised even if the solar farm does not proceed. In comparison, the effects of a solar farm, which has relatively low infrastructure components, may be less visually intrusive (and therefore, potentially more acceptable to recreational viewers) than some other types of industrial development.

The other viewpoints assessed are usually experienced by few viewers and/or transient views experienced at speed. Many of these views have intervening landform or vegetation that also restrict views to the development area.

Minimal lighting is proposed as part of the proposed solar farm, comprising motion-activated security lighting. Therefore, lighting is considered to have a negligible visual impact. As explained in the Planning Report, no formal glint and glare assessment has been undertaken.

Overall, the project is considered to be consistent with respect to landscape and visual values with the objectives of the GSDA that supports development of the site for high impact industry. However, to minimise impacts on landscape and visual receptors care should be taken during the construction phase of the project to minimise loss of mature vegetation and retain a vegetated buffer to the site to the greatest extent possible.

As such, this impact has been assessed as being of high social significance (likely, and of minor consequence).

5.3.10. Environmental impacts

Fifty percent of survey participants reported that native vegetation impacts and waste management procedures were important environmental factors in terms of this project, while potential impacts to waterways were an important factor for more than a third of participants (38%). Several community members in Mount Larcom expressed concern about potential environmental impacts, primarily related to clearing of remnant vegetation and weed management along The Narrows Road.

Concerns were also raised by several stakeholders about decommissioning in relation to solar panel waste and the recovery of materials, and the need for information about how this will be managed.

This potential impact has been assessed as being of moderate significance (possible, and of minor consequence).

5.3.11. Changes to land use

The project will be located on former agricultural land that is currently used for grazing. Stakeholder consultation indicated that tensions over competing land use between the agricultural and renewable energy sectors have been increasing, and that “people are upset that solar farms are taking up prime agricultural land”. However, concerns about the project’s impacts on current land use were considered to be unlikely, given its location within the GSDA. Additionally, this type of development was preferred to other possible industry uses.

GSDA projects are generally well accepted – people expect a large development there. One development will kick off others.

If it is in the SDA, it doesn't bother people.

Considerations re agricultural land is not a problem, as it is in the SDA.

As much as I hate the idea of industry coming closer I would sooner accept a solar farm than many other potential industries, such refineries etc.

However, some local community members lamented the loss of the local agricultural industry that existed prior to being bought out by the SDA, including viable fruit growing businesses, and reported the land was then not used and not maintained.

Other locals noted that the approved project has a much bigger footprint than what was originally proposed, and that the fragmented footprint would make it difficult to build anything else on the site. Some were curious about Acciona Energia's intention for the areas surrounding the solar panel infrastructure, and whether it would still be grazed. One key industry stakeholder noted the possibilities for agrisolar, with a pivot from the production of beef to meat sheep, that can achieve both a higher-grade meat as well as increasing social acceptance of renewable energy development.

Given the low levels of concern about changes to land use, this potential impact has been assessed as being of low significance (unlikely, and of minor consequence).

5.4. Social impact summary

Mitigation strategies have been developed for negative impacts of moderate (or greater) significance, and residual impact significance has then been assessed again for these impacts. The residual impact significance rating represents the likely significance of an impact once the proposed mitigation measure has been successfully implemented. Enhancement measures for all positive impacts have also been developed and are listed in the Social Impact Summary Table (see Table 5-1 Social Impact Summary TableTable 5-1).

Table 5-1 Social Impact Summary Table

Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
Social impacts (positive)							
Increase in economic activity	Personal & property rights	Construction Operation	Local/regional businesses, contractors, suppliers Local accommodation providers, retailers & food services Local government Broader community	High	High (Almost certain, minor)	Industry Participation Plan (including Accommodation and Employment Strategy, Local Procurement Policy) Community and Stakeholder Engagement Plan	NA
Local employment opportunities	Personal & property rights	Construction Operation	Job seekers Local/regional businesses, contractors, suppliers Local government Broader community	High	High (likely, moderate)	Industry Participation Plan (including Accommodation and Employment Strategy, Local Procurement Policy) Community and Stakeholder Engagement Plan	NA
Local education & training opportunities	Personal & property rights	Construction Operation	Students Job seekers	High	High (likely, moderate)	Industry Participation Plan (including Accommodation and Employment Strategy, Local Procurement Policy)	NA

Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
			Local/regional employment and training providers Local/regional businesses			Community and Stakeholder Engagement Plan	
Local procurement opportunities	Personal & property rights	Construction Operation	Local/regional businesses, contractors, suppliers Local government Broader community	High	High (likely, moderate)	Industry Participation Plan (including Local Procurement Policy) Community and Stakeholder Engagement Plan	NA
Community investment opportunities	Community Fears & aspirations	Operation	Mount Larcom/Yarwun community Community groups Schools/universities Local government Broader community	High	High (almost certain, minor)	Community Benefits Sharing Program Community and Stakeholder Engagement Plan	NA
Renewable energy generation	Personal & property rights Community Uncertainty & aspirations	Operation	Local/regional businesses, industries Local government State government Broader community	Very high	High (almost certain, minor)	NA	NA

Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
Social impacts (negative)							
Increased accommodation demand (for housing)	Way of life	Construction	Residents Local businesses, industries Local government	High	High (likely, moderate)	Community and Stakeholder Engagement Plan Industry Participation Plan (including Accommodation and Employment Strategy)	Moderate (possible, minor)
Increased accommodation demand (for short-term accom)	Way of life Community	Construction	Tourists, visitors Vulnerable populations in short-term accommodation	High	High (likely, moderate)	Community and Stakeholder Engagement Plan Industry Participation Plan (including Accommodation and Employment Strategy)	Moderate (possible, minor)
Local labour market competition	Livelihoods	Construction	Local businesses, industries Local government	High	High (almost certain, minor)	Industry Participation Plan Community and Stakeholder Engagement Plan	High (likely, minor)
Increased demand for social infrastructure	Way of life Community	Construction	Broader community Local government Service providers	Moderate	Moderate (possible, minor)	Community and Stakeholder Engagement Plan Industry Participation Plan (including Accommodation and Employment Strategy)	Low (unlikely, minimal)

Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
Perceived lack of procedural fairness	Political systems	All	Near neighbours Aldoga / Mount Larcom / Yarwun residents Broader community Local government	High	High (possible, moderate)	Community and Stakeholder Engagement Plan	Low (unlikely, minor)
Road access and conditions impacts	Way of life Community	Construction	Near neighbours Aldoga / Mount Larcom / Yarwun residents Residents along the haulage route Local businesses, industries Local, state government Road users Broader community Tourists, visitors	High	High (likely, moderate)	Traffic Management Plan Community and Stakeholder Engagement Plan	Moderate (likely, minor)
Safety and hazard risks (bush/grass fires, BESS fire)	Environment	Construction Operation	Near neighbours Aldoga / Mount Larcom / Yarwun community Emergency services Broader community	High	High (possible, moderate)	Bushfire Management Plan	Moderate (possible, minor)

Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
Social amenity impacts (traffic, noise, air quality)	Way of life Environment	Construction	Near neighbours Aldoga / Mount Larcom / Yarwun residents Residents along the haulage route Road users Broader community Tourists, visitors	Moderate	High (likely, moderate)	Construction Environment Management Plan Community and Stakeholder Engagement Plan	High (likely, minor)
		Operation	Near neighbours	Low	Moderate (possible, minor)		Low (unlikely, minor)
Impacts on Aboriginal cultural heritage	Culture	Construction Operation	Aboriginal community	Not assessed (not enough information)	Not assessed (not enough information)	Cultural Heritage Management Plan Partner with Traditional Owners Community and Stakeholder Engagement Plan	Not assessed (not enough information)
Visual impacts, including glint and glare	Environment	Operation	Near neighbours Broader community Recreational users	Low	High (likely, minor)	Potential for Landscape Management Plan Community and Stakeholder Engagement Strategy	Moderate (likely, insignificant)

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Potential impact	IAIA Social impact category	Project phase	Key affected stakeholders	Perceived stakeholder significance	Significance (unmitigated)	Mitigation / enhancement measures	Residual impact significance
Environmental impacts	Environment	Construction Operation Decommission	Near neighbours Aldoga / Mount Larcom / Yarwun community Broader community Environmental groups	Low	Moderate (possible, minor)	Environmental Management Plan	Low (unlikely, minor)
Changes to land use	Community	Construction Operation Decommission	Near neighbours Aldoga / Mount Larcom / Yarwun community Broader community	Low	Low (unlikely, minor)	Community and Stakeholder Engagement Plan	NA

6. Social impact management framework

This section provides a framework for managing the project's social impacts and optimising project benefits, including a schedule of action outlining timings for delivery of the framework's components. The intent of the framework is to provide a foundation for the development of the project's Social Impact Management Plan and for further refinement and finalisation of the Community Benefits Sharing Plan.

The measures outlined below directly respond to the potential social impacts (positive and negative) associated with the project. These measures have been identified through consideration of project impacts and benefits, existing knowledge, and stakeholder engagement.

Core tasks that are required to develop the framework include:

1. Updating the Community and Stakeholder Engagement Plan (CSEP)
2. Development of the Industry Participation Plan (IPP)
3. Further development of the Draft Community Benefits Sharing Plan (CBSP).

Some social impacts of the project will be managed primarily through the various environmental management strategies identified in the Planning Report and the project consent documentation. These include the Traffic Management Plan, Cultural Heritage Management Plan, Complaint Investigation and Response Plan, Landscape Management Plan, Bushfire Management Plan, Biosecurity Management Plan, Property Pest Management Plan, Waste Management Plan, Operational Management Plan, and the Construction Environmental Management Plan and Decommissioning Plan.

The CSEP will be the platform that ensures adequate linkage between the management and benefits plans, and community concerns and interest relating to these matters.

6.1. Community and Stakeholder Engagement Plan

Acciona Energia recently prepared a CSEP (Acciona Energia, 2023a) which is aligned to the principles of the International Association for Public Participation (IAP2) Spectrum Model as well as the Department of Natural Resources, Mines and Energy's 'Queensland Solar Farm Guidelines' (State of Queensland, 2018).

The stated objectives of the CSEP are to:

- Identify and engage with the local community and key stakeholders.
- Build a foundation of strong relationships and community support.
- Ensure stakeholders are informed, consulted and involved.
- Wherever possible, activities are conducted with emphasis on stakeholder collaboration and empowerment.
- Uphold the four CEC principles (accepted rules of conduct) of community engagement which include: openness, inclusiveness, responsiveness and accountability.
- Provide a mechanism for feedback to Acciona Energia from which to make adjustments and refinements to the project where appropriate (Acciona Energia, 2023a).

Alongside these intentions and the stated actions within the plan, the SIA revealed some specific engagement needs that would help Acciona Energia to further consolidate community awareness of and social licence for the project during the coming project phases. These further engagement needs are detailed in the following table.

Table 6-1 Key further engagement needs

Key engagement needs	Details	Project phase	Social impacts/benefits addressed
Broader engagement at the local level (i.e., Mount Larcom and Yarwun)	<ul style="list-style-type: none"> Increased engagement with the Mount Larcom and Yarwun communities. Build trust and relationships with key stakeholders within these towns. Increase the local (i.e., Mount Larcom and Yarwun) community's general awareness about the project. Provide clear updates on project progress, commitments and next steps to reduce uncertainty and increase local benefits in relation to the project. Increase the local community's awareness about the potential unskilled, semi-skilled and skilled work that may be available with the project through construction and operations. Ensure local representation on the project's Community Engagement Committee. Ensure Acciona Energia attendance at key regional events (such as the Mount Larcom Show, Yarwun Rally, and Gladstone's Ecofest). Hold information sessions in Mount Larcom and Yarwun (e.g., at the Yarwun markets or Mount Larcom CWA or town hall) or pop up stalls outside the post offices or stores; distribute and display project newsletters at central locations (e.g., at post offices or the Yarwun Store); use of the local Facebook pages (e.g., Yarwun Grow Group and Mount Larcom Progress Association) to disperse project information. 	All phases	Social amenity impacts Perceived lack of procedural fairness Safety and hazard risks Visual impacts Changes to land use Increase in economic activity Local employment opportunities Local education & training opportunities Local procurement opportunities Renewable energy generation Community investment opportunities Environmental impacts
Increase project awareness within	<ul style="list-style-type: none"> Increase community awareness about what's happening with the project. 	All phases	Increased accommodation demand Increased demand for social infrastructure

Key engagement needs	Details	Project phase	Social impacts/benefits addressed
the Gladstone community	<ul style="list-style-type: none"> • Ensure establishment of the Information Hub in Gladstone, and provision of accurate and factual project information, through project fact sheets. • Increase the community's awareness about the potential unskilled, semi-skilled and skilled work that may be available with the project through construction and operations. • Increase the community's understanding about the solar industry generally, including about solar panels (i.e., how they run, and particularly how they will be disposed of). • Establish the Community Engagement Committee. • Update and efficiently administer Acciona Energia's Complaint Investigation and Response Plan including a community complaints mechanism. 		Perceived lack of procedural fairness Safety and hazard risks Social amenity impacts Increase in economic activity Renewable energy generation Visual impacts, including glint and glare Changes to land use Local employment opportunities Local education & training opportunities Community investment opportunities Local procurement opportunities Environmental impacts
Community engagement about the construction phase	<ul style="list-style-type: none"> • Communicate measures outlined within the Construction Traffic Management Plan and the Environmental Management Plan to the near neighbours and the Yarwun and Mount Larcom communities. • Increase the local community's awareness about the potential unskilled, semi-skilled and skilled work that will be available with the project through construction and operations. • Establish the Community Engagement Committee. • Update and efficiently administer Acciona Energia's Complaint Investigation and Response Plan including a community complaints mechanism. 	Pre-construction Construction	Social amenity impacts Local education & training opportunities Local employment opportunities Local procurement opportunities

Key engagement needs	Details	Project phase	Social impacts/benefits addressed
Ground-truth the Community Benefits Sharing Plan	<ul style="list-style-type: none"> Garner feedback from key stakeholders before finalising the Community Benefits Sharing Plan. Provide ongoing opportunities for local people to be involved in Community Benefits Sharing Plan decision-making processes, over the life of the project. Establish the Community Engagement Committee. 	Pre-construction Construction Operations	Local employment opportunities Local procurement opportunities Local education & training opportunities Community investment opportunities
Community and stakeholder engagement to develop the IPP	<ul style="list-style-type: none"> Partner with key economic development stakeholders to develop the IPP. Provide open, transparent, timely and accessible communication of project information, including mechanisms for local industry and community to learn more about the project and register interest. Work with key economic development stakeholders (e.g., council and GEA, Gladstone Manufacturing Hub) to increase community and business awareness about work opportunities related to the project, e.g., undertake industry briefing sessions. When developing the Accommodation and Employment Strategy (as part of the IPP), engage with key economic development and other stakeholders (including workforce accommodation camp providers, tourism industry, accommodation providers, real estate) to avoid negative impacts on the housing market and on tourism and any 	Pre-construction	Local education & training opportunities Increased demand for accommodation Increased demand for social infrastructure Increase in economic activity Local employment opportunities Local education & training opportunities Local labour market competition

Key engagement needs	Details	Project phase	Social impacts/benefits addressed
	<p>vulnerable populations who are utilising short-term accommodation.</p> <ul style="list-style-type: none"> • Increase the local community's awareness about the potential unskilled, semi-skilled and skilled work that will be available with the project through construction and operations. • Explore potential for any procurement opportunities at the very local level (i.e., with Mount Larcom and Yarwun businesses). • Develop fact sheets so that the community understands the intentions for accommodating the non-resident construction workforce. • Continue to engage with council to discuss and adaptively respond to any emerging community and business concerns, including any concerns relating to pressure on the housing market and potential increased demand on local services and social infrastructure during construction. 		
Engage in broader socio-economic development planning	<ul style="list-style-type: none"> • Build relationships and/or participate within the key networks or groups (e.g., GILG, Gladstone Region engaging in action Together, Not for Profit House) within Gladstone that are focused on bringing together funds, proponents, researchers and/or community groups and other key stakeholders to better coordinate local community benefit sharing funds and bring about social development. • Participate in any coordinated planning efforts that may be undertaken in the region that bring proponents together to 	All phases	<p>Decreased community cohesion</p> <p>Increased demand for accommodation</p> <p>Increased demand for social infrastructure</p> <p>Increase in economic activity</p> <p>Local employment opportunities</p> <p>Local education & training opportunities</p> <p>Community investment opportunities</p> <p>Renewable energy generation</p>

Social Impact Assessment

Aldoga Solar Farm



Key engagement needs	Details	Project phase	Social impacts/benefits addressed
	<p>collectively manage cumulative impacts and optimise community benefits.</p> <ul style="list-style-type: none">• Continue to engage with council and other key stakeholders to discuss and adaptively respond to any emerging community and business concerns.		Local labour market competition

6.2. Industry Participation Plan

Acciona Energia is committed to maximising employment and training opportunities for the local community through the project. Acciona Energia's goal is to create inclusive employment opportunities including for diverse population groups, such as First Nations and multi-cultural communities, women, school leavers and people that were previously unemployed, whilst employing a mix of unskilled, semi-skilled and skilled workers.

Given skills shortages, an active approach will be needed to achieve positive local employment and business outcomes for this project. The IPP will articulate the measures that Acciona Energia will put in place to achieve these goals.

The IPP will encompass considerations regarding local employment and procurement, as well as the accommodation of the non-resident construction workforce. It will be primarily targeted towards the people and businesses within Gladstone LGA, as well as considering the wider CQ region. Specific opportunities for Aboriginal people and businesses, women, and young people will be outlined.

Specifically, the Plan will include the following two key components that interrelate:

- Local Procurement Policy (LPP)
- Accommodation and Employment Strategy (AES).

6.2.1. Local Procurement Policy

This policy will outline the proponent's commitment to upholding the principles of the Queensland Procurement Policy and the Gladstone Buy Local program, as outlined within the Draft Community Benefits Sharing Plan (Acciona Energia, 2023b). The policy will give preference to local contractors and suppliers where they are competitive during all project phases, and it will include specific focus on First Nations businesses.

Within this, it will be important to have a particular focus on the very local level, i.e., by considering what services and supplies can be sourced through the towns of Mount Larcom and Yarwun (e.g., catering opportunity through the Yarwun Store etc).

6.2.2. Accommodation and Employment Strategy

This will encompass two core components:

1. Accommodation of the non-resident workforce and management of associated social impacts and benefits. It is likely that a proportion of the construction workforce will be non-resident, so this strategy will outline measures that respond to potential social impacts and opportunities relating to this. This will include exploring the options for accommodating the non-resident workforce (this may be through a mix of options, e.g., most workers may stay in accommodation camps, yet executives may stay in town). It will include measures to minimise potential negative impacts on the local rental market, short-term accommodation (i.e., avoiding negative impacts on tourism opportunities and any vulnerable populations who are utilising short-term accommodation), and local services and social infrastructure. Taking into consideration lessons learned from previous experiences with non-resident workforce influxes into Gladstone, the strategy will also outline workforce management

details, including measures to manage positive social integration with the community. Consideration should be given to Acciona Energia's intent for the degree of integration of the non-resident workforce (particularly those staying in workforce accommodation camps) into the local community.

2. Measures to maximise local employment. Acciona Energia will actively look for the right skills amongst residents and businesses. The AES will detail how Acciona Energia will link in at the local level with government and other support agencies (e.g., employment and training organisations and industry support networks such as Gladstone Engineering Alliance) that assist people and businesses improve their capacity and capability. Stakeholder engagement also suggested the need to avoid peak shutdown times where possible, as these are times of an acutely stretched local labour market.

As per the CSEP (Acciona Energia, 2023a), Acciona Energia will aim to meet a target of 15% of the total labour hours to be undertaken by trainees and apprentices. Acciona Energia will align with the Queensland Government Building and Construction Training Policy to require their contractors to employ apprentices and trainees and undertake other workforce training, and they will deliver structured training programs for apprentices, trainees and engineering cadets/interns.

Other measures outlined within the CSEP (Acciona Energia, 2023a) include:

- Encouragement of an increased spend by workers and contractors in the local area to enhance local supply chains and benefits.
- Implement strategic and long term partnerships with educational institutions, training providers and government agencies such as CQ University (CQU), the Port Curtis Coral Coast (PCCC) Trust, Gidarjil Development Corporation, and Gladstone Engineering Alliance.
- Deliver structured training programs for apprentices, trainees and engineering cadets/interns to increase local skills and employment in the region.
- Implement local recruitment strategies, such as local advertising and using the Information Hub (once established) to advertise positions and receive applications.
- Adopt equal employment opportunities for recruitment and support a diverse workforce that includes vulnerable and under-represented population groups.
- Adopt flexible and fair work arrangements which are designed to assist employees with maintaining a work/life balance and help disadvantaged groups transition to the workforce. The arrangements will also focus on maximising the retention of workers.
- Establish and maintain relationships with government agencies, training groups and community groups to assess potential skills gaps and potential training requirements.

Acciona Energia is also intending to develop an Apprenticeship Program for its operational phase. The program would consider its alignment to the objectives of the new Energy Apprenticeships Program which was announced by the Australian Government in March 2023 (Australian Government, 2023).

6.2.3. Key stakeholders

The IPP will be developed in partnership with key local and regional stakeholders, including:

- First Nations stakeholders
- Gladstone Regional Council
- Gladstone Chamber of Commerce and Industry
- Economic development and industry support agencies (e.g., CQU, the Port Curtis Coral Coast (PCCC) Trust, Gidarjil Development Corporation, Gladstone Engineering Alliance, Regional Development Australia, Gladstone Manufacturing Hub, Industry Capability Network etc.)
- Qld Local Content Leaders Network (QLCLN)
- Training and employment support agencies
- Other proponents with intent for overlapping construction workforces in the region
- Other local social service or support agencies, real estate agents, and accommodation providers (including Homeground Gladstone, Barneys Beach Accommodation).

6.3. Community Benefits Sharing Program

This section has been informed by SIA stakeholder engagement, existing knowledge, as well as review of the Draft Community Benefits Sharing Plan (Acciona Energia, 2023b) and the Acciona Energia-CQUnite Green Futures Partnership Proposal (CQU, 2023). A Community Benefit Sharing Fund is required for this project as part of contractual obligations with EDQ. This section will inform the development of the project's Community Benefits Sharing Plan which will aim to increase benefits to local community members throughout the project's lifecycle.

6.3.1. Overview of community benefit funding programs in Gladstone

Lessons learned in Gladstone

There has been a high level of economic activity in the Gladstone region over the past decades, as various proponents have established and now operate some very large-scale energy projects. During this time, a lot of infrastructure has been built and many benefit programs (including grants) have been dispersed through community benefit schemes in the region which have been well regarded by the community.

However, many stakeholders interviewed for this SIA also noted that these investments have been ad hoc in their distribution, which has not served the community well over the longer term. One council employee noted that with the coming construction wave of renewable energy projects, the community does not want “monuments, baubles and trinkets”. Instead, the community would like to see community benefit funds that are targeted to addressing core community issues and are focussed on longer term and strategic development processes. This includes the targeting of support for health, housing and social services to improve liveability in the region and leave a legacy for Gladstone.

This sentiment echoes the recent findings of GRC's Economic Transition Roadmap (TNE, 2022), which stated that:

“Local people expect that as industries grow, profits are reinvested (whether through taxation, royalties or community funds) in a range of services (including health, education, childcare and aged care facilities) and community infrastructure such as roads, rail, bridges and waste facilities” (p.108).

Overview of existing community benefit funding schemes in Gladstone

As noted above, there is, and has been, much community benefit funding flowing into Gladstone. Stakeholders interviewed for this SIA noted the following as some of the key ‘headline’ initiatives that other proponents in Gladstone are supporting:

- Rio Tinto supports Here for Gladstone, an overarching program including local content objectives, local grant funding, sponsorships, support for social issues (such as mental health and domestic violence) and sponsoring of local events (such as the Yarwun Rally).
- Santos partners with local organisations to deliver positive social outcomes (e.g., PCYC, after-school care and school buses, training for the SES, supporting community health organisations). Santos also sponsors the annual GLNG Carols by Candlelight.
- Gladstone Ports Corporation built the foreshore and marina and runs a grants program and in-kind support through their Community Investment Program. They also organise a yearly fun run.
- Shell has the QGC Communities Fund, which is a grant funding program.
- Orica supports The Smith Family’s Learning for Life program.
- ConocoPhillips has a community investment program which includes contributions to organisations, sponsorships and small grants.

Since this project’s inception, Acciona Energia has also made contributions (totalling \$90,500) to the following local organisations:

- First Nations Chamber of Commerce and Industry (FNCCI) - \$15,000
- PCCC Dorrie Day - \$10,000
- Yarwun State School - \$500
- Gidarjil, NAIDOC Week - \$10,000 x 3 (2019, 2020, 2021)
- Gulya Indigenous Education Program - \$20,000
- Yarwun State School - \$200
- Cultural Connections - \$10,000
- Westowe Rural Fire Brigade - \$5,000.

It was noted by a senior member of the GRC that local people highly value knowing what each company is funding.

Local coordination of community investment and social development

While several documents such as the Roadmap and the Investment Prospective exist to outline the intent and priorities for the region, generally, community investment in the region has been short term and ad hoc. There are however several local mechanisms that bring together resources, proponents, researchers, community groups and other key stakeholders to better coordinate local community benefit sharing and social development. These include:

- Gladstone Foundation. This foundation manages voluntary contributions made by large projects in Gladstone towards social infrastructure projects. It was established in 2011 to provide a structured approach to allocate funding that addresses the region's social infrastructure needs. The Public Trustee is the trustee of the fund.
- Gladstone Industry Leadership Group (GILG) Community Relations Committee. This committee brings together representatives from eight companies with substantial operations in Gladstone. Matters of community investment and coordination are canvassed here.
- Gladstone Region engaging in action Together. This community-led place-based initiative is aimed at improving community wellbeing. They are engaged with ongoing community conversations to develop a Gladstone Region Wellbeing Action Plan and to develop local wellbeing indicators.
- Not-For-Profit House. This is a community organisation that is focused on capacity building for the community services sector in Gladstone. They are developing a Report Card aimed at measuring the health of the Not For Profit Sector, in order to have an evidence base from which to strategically direct investment in the sector.

6.3.2. Aldoga Solar Farm Draft Community Benefits Sharing Program

Acciona Energia has developed a Draft Community Benefits Sharing Plan for the project (Acciona Energia, 2023b) which outlines two key components: Community Benefits Sharing Program and local procurement and employment. Acciona Energia has indicated that the Community Benefits Sharing Program will have an annual value of \$120,000. A brief overview of the key elements of the Draft Community Benefit Sharing Program is outlined in Table 6-1.

Figure 6-1 Key Components of the Draft Community Benefit Sharing Program

Component	Overview	Key stakeholders	Value
Scholarship and Education Program	Support students who stay in the local area and pursue their university/TAFE education. Encourage young people to study locally and potentially pursue employment locally. Preference will be given to those who have been accepted into a course of study in the fields of engineering, science or trades courses.	CQU Schools	\$25,000 / annum
Research and Development Program	Partner with CQU for research and development initiatives for energy related research.	CQU	\$30,000 / annum
Sponsorship and Small Grants Program	Not-for-profit organisations and community groups will have the opportunity to apply for small grants and sponsorships through an application process.	Local community organisations	\$65,000 / annum

Component	Overview	Key stakeholders	Value
	<p>These applications will need to meet specific criteria to demonstrate direct benefits to the Gladstone Regional Council area.</p> <p>Sponsorship provides financial support to eligible organisations that provide tangible commercial benefits to the community.</p> <p>A grant is money provided to recipients through formally recognised programs for a specific purpose and outcome. Grants involve a competitive process in which applications are assessed against a set of criteria and funding is determined against the quality of the application, the merit of the event or project, and available funding.</p>		

The Draft Community Benefits Plan also outlines a draft framework for governance and monitoring and review.

During the SIA process, Acciona Energia also noted their intent to incorporate a proposal developed by CQU within their Community Benefits Sharing Program. The proposal comprised three components, as outlined in Table 6-2.

Table 6-2 Key elements of the CQU proposal

Component	Details	Proposed program budgets (over 2 years)
Renewable Futures Program	<p>Targeting youth in the Gladstone and Mount Larcom regions from low socio-economic backgrounds</p> <p>Re-engaging local disadvantaged youth in hands-on learning which is curriculum-aligned and co-designed by industry stakeholders to support skilling a vulnerable cohort into the future workforce.</p>	\$133,000
Lifelong Learning Support Scholarships	<p>Targeting students in secondary and tertiary education in the CQ region</p> <p>Close to 100 Gladstone Region students are expected to benefit over two years. Three learning and career enhancement support components are proposed:</p> <ol style="list-style-type: none"> 1. STEM Career Enhancement Bursaries (Secondary school students) 2. Work Ready Youth Support Scholarships (VET Students) 	\$160,000

Component	Details	Proposed program budgets (over 2 years)
	3. Sustainable Engineering Support Scholarships (Engineering Undergraduates)	
Renewable Energy Integration Support Fund	<p>Targeting small-to-medium enterprises, rural and remote farmers and farming communities, and rural and remote communities to integrate renewable energies and benefit from decreased energy bills over the long term.</p> <p>Renewable Energy Integration Support will be provided from the fund under:</p> <ul style="list-style-type: none"> • Renewable Energy Integration Short-Term Projects • Renewable Energy Integration Research (RHD) Projects. 	\$429,000

The SIA project team met with CQU representatives as part of the SIA, who indicated their flexibility with regards to the details of their proposal.

6.3.3. Other considerations

Principles and overarching frame

It is important to align the project's benefit fund with best practice principles relating to benefit sharing. From an industry best practice standpoint, the Clean Energy Council (Lane & Hicks, 2019) has identified key principles that provide a useful framework for developing or assessing a benefit sharing strategy, as shown in Table 6-3.

Table 6-3 Benefit sharing principles (Lane & Hicks, 2019)

Principle	Description
Appropriate	<ul style="list-style-type: none"> - Tailored to local context, circumstances, culture and need. - Helps to address patterns of conflict or inequality. - Benefits perceived as appropriate and proportionate to the scale of the project and the level of change or disturbance. - Developer works with the local community to develop specific benefit sharing strategies. - Local community provides guidance.
Flexible	<ul style="list-style-type: none"> - Open to community involvement, influence, and negotiation. - Flexibility to respond to local context.

Principle	Description
	<ul style="list-style-type: none"> - Flexibility to evolve over the lifecycle of the development in line with community needs.
Transparent	<ul style="list-style-type: none"> - Benefit sharing strategy is transparently available to the community. - Provides a clear and understandable rationale for the various programs and eligibility. - Managed in a transparent and accountable way that involves local stakeholders. - Must not come with conditions of silence or consent.
Integrated	<ul style="list-style-type: none"> - Seeks to integrate the project owner/operators as valuable community members by building links and relationships into the community. - Integrated with the company's broader approach to community engagement and project development.
Mutually Beneficial	<ul style="list-style-type: none"> - Designed to bring mutual benefit to local communities, the project and its owners and financiers.
Strategic	<ul style="list-style-type: none"> - Creates a positive legacy in the local community. - Seeks to bring ongoing and lasting value to the local area. - Seeks to integrate benefit sharing opportunities with broader strategies by building local partnerships. - Benefits provided from at least the start of construction and throughout the operational phase. - One-off initiatives do not provide ongoing sustainability or support.

Feedback from SIA stakeholders complemented these principles and suggested key overarching considerations (Table 6-4) for the project's community benefits program.

Table 6-4 Key overarching considerations for the community benefit fund

A strong local focus	<p>Having some component of the program that is focused on the localities that are proximate to the project (i.e., Mount Larcom and Yarwun).</p> <p>These are small rural communities that often "seem to miss out". Many stakeholders agreed that these communities would welcome and appreciate investment and attention from Acciona Energia.</p>
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Linking in or building on existing initiatives	<p>There is an existing complex landscape of community investment in the Gladstone region. The community has much experience with community investment programs and has seen both positive and negative effects of these.</p> <p>It is recommended to be strategic and to leverage existing efforts when considering the program. This may be through pooled funding for strategic programming or infrastructure, partnering with existing development or research projects, or engaging (to varying degrees) with other mechanisms of community investment coordination.</p>
Responding to social issues or priorities	Targeting funding to address core community issues or priorities that are subject to longer term and strategic development processes.
Consistency	Local people value the consistency of proponents funding headline events or programs. Proponents then become known, and differentiated, for this.
Leaving a legacy	The Gladstone community does not want to be taken advantage of. They want investments that improve liveability and that contribute to the building of their community over the longer term.
Transparency	The community likes to know about and be able to see what each proponent funds.

SIA stakeholders did not express considerations about the governance of the project's fund.

Stakeholder suggested investment activities

In addition to the overarching considerations outlined above, SIA stakeholders also expressed specific suggestions for community investment for this project. For the SIA interviews, these suggestions have been categorised into themes and are summarised in Table 6-5, along with an indication of the extent of community support for each theme.

Table 6-4 Overview of SIA interviewee's suggestions for the project's community benefit fund

Theme	Details	No. of interviewees who expressed interest
Mount Larcom and Yarwun	<p>Support for Mount Larcom and Yarwun organisations, infrastructure, or schools. SIA stakeholders identified the following as potential recipients of support:</p> <ul style="list-style-type: none"> • Mount Larcom Youth Club • Mount Larcom Bowls Club (upgrade green, install energy efficient lighting) • Mount Larcom walking trail (trail marking) • Mount Larcom Progress Association (e.g., support Christmas Fair) • Mount Larcom Tennis Club (contribute to power bill or fund solar system) • Potential development of a Men's Shed in Mount Larcom • Upgrade or re-vamp Mount Larcom Memorial Pool • CWA Hall (needs new roof and insulation) • Town Hall (upgrade) • Mount Larcom RSL • Mount Larcom Rural Fire Brigade (needs second shed) • Westowe Rural Fire Brigade • Supported playgroups • Yarwun skate park • Mount Larcom and Yarwun schools. 	6
Grants or sponsorships	Funding for programs, projects or infrastructure for organisations in Gladstone. This could include such opportunities as supporting programs identified as strategic priorities by Gladstone Region engaging in action Together or Not-For-Profit House.	5
Partnering with or funding schools	Support for schools in the region, including for: professional development for staff (in STEM or solar industry), development of renewable energy curriculum, creating solar farm/industry educational opportunities for schools, site visits to the project, sponsoring school teams to enter the H2 Grand Prix etc.	4
Infrastructure	General infrastructure for the region	2

Theme	Details	No. of interviewees who expressed interest
Scholarships	Scholarships for high school and university students.	2
Health system / medical	Health system does need support, but with a project of this size, unlikely to support health system.	2
Targeting social issues / priorities	Strategic investment targeting identified social issues	2
Research funding	Funding for renewable energy focused research projects	1
Information sharing	Create information sharing opportunities about the solar farm and the solar industry for the community (e.g., an open-air demonstration area, site tours)	2
Traineeships and apprenticeships	Support for developing the workforce through traineeships and apprenticeships	1

This stakeholder feedback suggested that SIA interviewees had strong support for both the Scholarship and Education Program, and Sponsorship and Small Grants Program, but less support was evident for the Research and Development Program.

Similar results can be seen from the SIA survey. However, Acciona Energia's survey yielded slightly different results. The Acciona Energia survey found very strong support for the Scholarship and Education Program, but it also demonstrated support for a Research and Development Program. Like the SIA survey, the Acciona Energia survey also indicated support for the Sponsorship and Small Grants Program. This difference in results from the SIA engagement and the Acciona Energia survey was likely due to differences in the interests and values of the respondents to the two surveys. Acciona Energia suggested that there may have been a higher proportion of respondents from CQU for their survey.

Survey results from both the SIA and Acciona Energia's survey are shown at Figure 6-2.

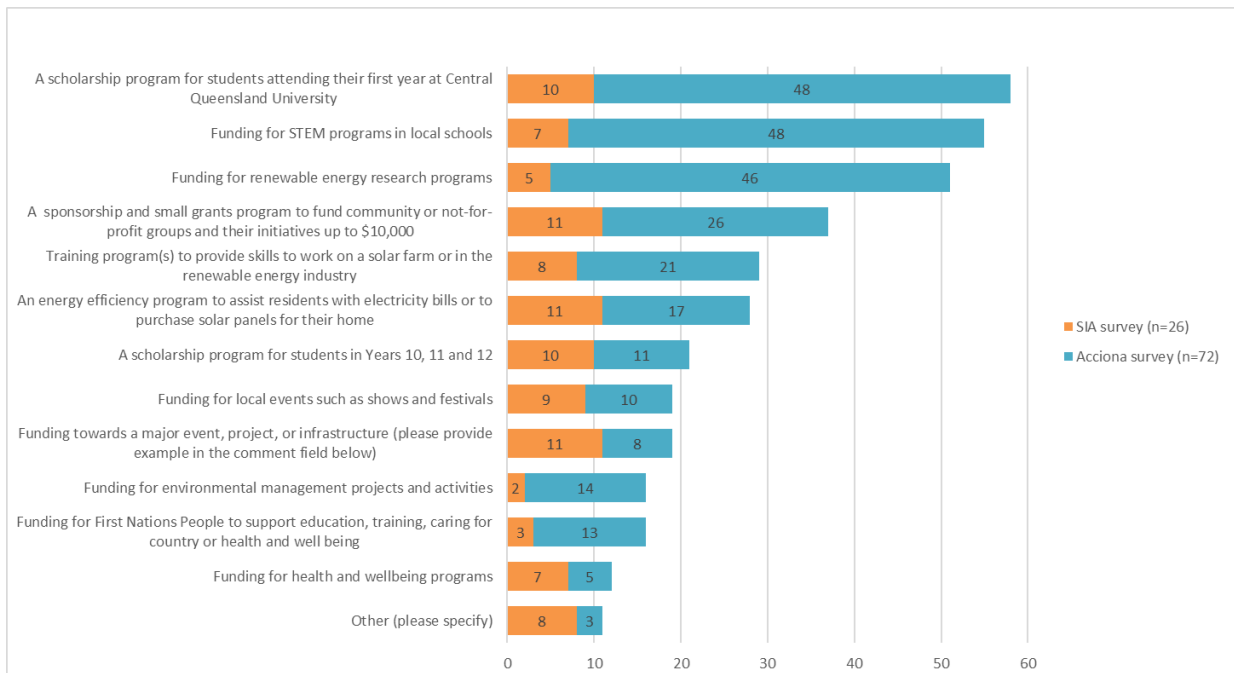


Figure 6-2 SIA and Acciona Energia's survey responses relating to the Community Benefit Fund

6.3.4. Schedule of actions

Table 6-5 Social impact management framework schedule of actions

Social impact management framework task	Timeframe		Responsibility
	Commence	Complete	
Update Community and Stakeholder Engagement Plan	Post finalisation of SIA	Prior to commencing IPP and CBSP	Acciona Energia
Develop Industry Participation Plan, including: <ul style="list-style-type: none"> Local Procurement Policy Accommodation and Employment Strategy 	Post finalisation of CSEP	Prior to construction commencing	Acciona Energia
Further develop, ground-truth and finalise Community Benefits Sharing Plan	Post finalisation of CSEP	Prior to construction commencing	Acciona Energia

6.4. Recommendations

There is a complex context of rapid development as well as industrial change in Gladstone. A lot of goodwill between stakeholders exists in the region towards industrial development and renewable energy projects in general, and towards this project.

Despite this, the community has experienced industry-related boom-bust cycles, and proponent benefits schemes that have not focused on increasing local capacity and liveability over the longer term. In addition, high socio-economic disparities remain within the local community as well as high unemployment, housing market pressures, and gaps in social infrastructure.

Given this, it will be important for the project's social impacts to be managed effectively to ensure benefits accrue to the local community, and a meaningful and lasting contribution is made to development within the region.

It is recommended that:

- The management plans that have been outlined within the CSEP and approvals documents, are developed in a timely manner.
- The CSEP is updated to reflect the findings from this SIA.
- An IPP is developed and is responsive to the findings of the SIA. It should outline an inclusive and systemic approach towards supporting the achievement of local content, minimising impacts and enhancing benefits from the non-resident workforce, and support broader workforce and skills development.
- An appropriate and effective Community Benefits Sharing Plan is further developed. Stakeholder considerations and priorities are integrated into the plans so that the plan is

closely aligned to community preferences towards community benefits resourcing. This may require shaping the Community Benefits Sharing Program to include:

- A strong local focus
- Linking and building upon existing initiatives
- Responding to social issues or priorities
- Consistency
- Legacy building, and
- A high level of engagement and transparency.

A focus directed towards elements of the plan that received a higher degree of SIA stakeholder support may also enhance the effectiveness and participation within the plan's implementation. Such as, SIA stakeholders demonstrated strong support for both the Scholarship and Education Program, and Sponsorship and Small Grants Program, but less support was evident for the Research and Development Program.

In conclusion, the Community Benefits Sharing Program could have two key components which have the following characteristics.

- Scholarship and Education Program, which is (wholly or partly) administered by CQU and includes a component that targets students at Mount Larcom State School. This element could also include a component that responds to need at Yarwun State School.
- Sponsorship and Small Grants Program, which may include a small grants element that is strongly tied to the local area (i.e., Yarwun and Mount Larcom) for local organisations to apply for grant funding to support their infrastructure or light programming needs. The sponsorship element could be tied to support for local events and/or be used to support an existing program that is strategically targeting core social issues. This could also be targeted to the very local areas of Yarwun and Mount Larcom.

Once the CBSP is further developed, feedback should then be sought from key stakeholders before the plan is finalised.

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Appendix A Detailed methodology

This section outlines the process that the SIA team undertook to develop this SIA.

Background and overview

This SIA was prepared in accordance with the International Association for Impact Assessment (IAIA) Guidance Note, *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay, Esteves, Aucamp, & Franks, 2015) and the *International Principles for Social Impact Assessment* (the SIA Principles) (Vanclay, 2003). The SIA was also informed by Acciona Energia's specific intent for the SIA, as outlined in the Request for Quotation (RFQ).

A SIA 'is a process of analysing, monitoring and managing social consequences, both positives and negatives, of planned interventions (policy, plan, program, project) and any social change processes invoked by those interventions' (Vanclay, 2003).

As such, this assessment aims to identify, predict and evaluate the likely social impacts and benefits arising from the project, and to identify appropriate responses to mitigate and manage negative impacts and enhance positive benefits throughout the lifecycle of the project.

'Social impacts' can be defined as the consequences that people experience when a new project brings change, and 'people' are classed as individuals, households, groups, communities, or organisations (DPIE, 2021). These impacts can be positive (such as increased employment and retail trade), as well as negative (such as exacerbating pressure to local housing markets and social infrastructure).

The SIA Principles group (Vanclay, 2003) likely social impacts into eight categories which have been adapted in this SIA to reflect an Australian context. In addition, the social impact and opportunity categories as Acciona Energia specified within the RFQ for this SIA, are synthesised into eight categories as shown in Appendix table A-1 below.

Appendix table A-1 Social impact categories for this SIA

Social impact categories	Details
Way of life	How people live, how they get around, how they work, how they play, and how they interact each day.
Community	Its cohesion, stability, character, infrastructure, services and facilities. Community values and/or the way the community functions.
Culture	Both Indigenous and non-Indigenous, including shared beliefs, customs, values, and language or dialect. Culture, history, and ability to access cultural resources.
Political systems	The extent to which people can participate in decisions that affect their lives (procedural fairness), can make informed decisions, and have access to complaint, remedy and grievance mechanisms.

Social impact categories	Details
Environment	Condition of the environment, including the quality of the air and water people use; the level of hazard or risk, dust or noise they are exposed to, their physical safety, access to and control over resources (including water).
Health and wellbeing	Health is a state of complete physical, mental, social, cultural and spiritual wellbeing and not merely the absence of disease or infirmity. Communities' quality of life including liveability.
Personal and property rights	Particularly whether people are economically affected or experience personal disadvantage. Whether peoples' jobs, properties or businesses are affected.
Fears and aspirations	People's perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

Alongside these categories, as per the RFQ, the SIA had a particular focus on the following key matters:

- Community and stakeholder engagement
- Workforce management
- Housing and accommodation
- Local business and industry procurement (including a focus on Aboriginal or Torres Strait Islander employment and businesses, as well as opportunities that align with the Queensland Procurement Policy (2021))
- Health and community well-being
- Opportunities to be included in the Community Benefits Sharing Program.

The eight social impact categories and the key matters identified above form the frame which allowed for a thorough identification of potential social impacts across the range of the social domain for each of the different project activities, in the SIA's impact scoping stage.

The SIA was supported by stakeholder and community engagement activities and has considered the findings of several other technical specialist (cultural, environmental, biodiversity, etc) studies from the approvals process.

An overview of the key SIA stages is presented in Appendix figure A-1 below.

Appendix figure A-1 Key SIA stages

Project scoping

Defining the social locality

The social locality describes the social extent of a project and consists of the people who are potentially impacted by the project. Affected peoples can include both 'communities of place' and 'communities of interest' (DPIE, 2021). The social locality is determined with consideration of the nature and scale of potential impacts arising from the development, and review of the characteristics of the affected communities. The social locality includes:

- Host and adjacent/near neighbour properties, including residents and local businesses
- Localities likely to be impacted and/or benefit from the project
- Localities likely to experience construction-related workforce, procurement, and traffic impacts.

Given this, the social locality for this project is the Gladstone Regional LGA, with a particular focus on the city of Gladstone and the rural town and locality of Mount Larcom. A secondary focus is also on the satellite town (from Gladstone) of Calliope, and on the rural township and locality of Yarwun. However, given Yarwun's small population, only limited data was available for this region.

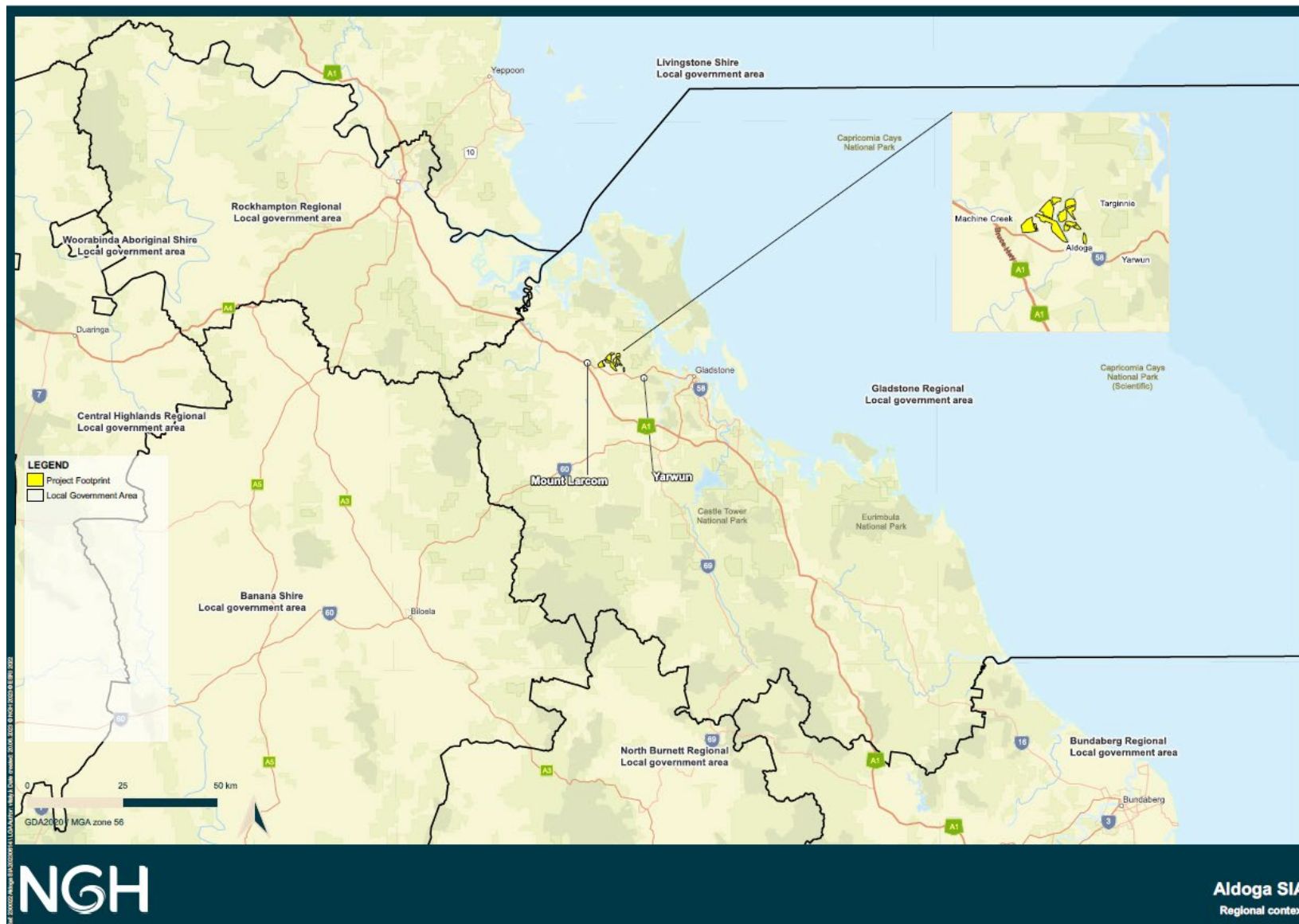
Statistical areas of analysis for the purpose of this assessment are shown in Appendix table A-2. Note, some Australian Bureau of Statistics (ABS) and Australian Statistical Geographic Standard

(ASGS) geographical classifications have changed between 2016–2021. The State Suburbs (SSC) classification in the ABS 2016 Census (ABS, 2016) has been replaced with Suburbs and Localities (SAL) in the 2021 Census (ABS, 2021).

Appendix table A-2 Focus areas within the social locality

Area of interest	Geographical boundary (ABS/ ASGS/ State classification)
Towns/localities proximate to the project	Mount Larcom, QLD (SAL/SSC) Yarwun, Qld (SAL)
Towns/localities proximate to the key workforce accommodation camp	Calliope (SAL)
Local Government Area (LGA)	Gladstone Regional Council
Region (QLD State Development)	Central QLD
State (for comparison of averages)	QLD

Appendix figure A-2 below provides an overview of the social locality and broader regional setting.



Appendix figure A-2 Overview of the regional setting and broader regional setting

Initial social impact scoping

An initial identification and preliminary assessment of the likely social impacts of the project was completed during this stage. These findings were informed by project and background information provided by Acciona Energia, existing engagement findings, the social risk matrix contained with the project's CSEP (Acciona Energia, 2023a), comparative studies, and other relevant work completed to date.

As such, social impacts and opportunities were identified across the eight categories as described in Appendix table A-1, and direct, indirect, and cumulative impacts were accounted for. The impact scoping is available at Appendix B.

During this analysis, impact scoping framed the scale and depth of the SIA. Considered judgements, based on the extent of cumulative impacts and the degree of material social impact, were then made regarding the type and level of assessment to be undertaken for each potential impact.

Establishing the social baseline

The baseline provides a snapshot of existing social conditions within the social locality, establishing a base case against which potential impacts can be assessed. The baseline was informed by both primary and secondary data sources, as shown in Appendix table A-3 below. Due to the small size of the Yarwun population, the social baseline focused on the city of Gladstone, the town and locality of Mount Larcom, the town of Calliope, and the Gladstone LGA.

Appendix table A-3 Scoping activities and data sources

ACTIVITY	TASK/SOURCE
Desktop research and data collection	<ul style="list-style-type: none">• Review of project documentation, including approvals• Review of relevant community service providers and local community organisations websites, including the regional council, local chamber of commerce• Social infrastructure and stakeholder mapping• Identification of relevant key projects/developments in the LGA and broader region
Data analysis	<ul style="list-style-type: none">• Australian Bureau of Statistics (2021/2016 Census and other relevant socio-economic data), including:<ul style="list-style-type: none">◦ <i>Population and demographic indicators</i>◦ <i>Business, industry, employment, and income indicators</i>◦ <i>Housing and accommodation characteristics</i>• QGSO population forecasts• Infrastructure, service, transport, and community features

ACTIVITY	TASK/SOURCE
Literature and strategic planning review	<ul style="list-style-type: none"> Review of publicly available research/SIAs on comparable infrastructure projects Review of relevant public policies, plans and strategies, including: <ul style="list-style-type: none"> <i>Central Queensland Regional Plan</i> (2013) <i>Gladstone Region Economic Development Strategy 2021-2025</i> (2021) <i>Gladstone Region Economic Transition Roadmap</i> (2022) <i>2022/23 Strategic Priorities</i> (2022) <i>Queensland solar farm guidelines: practical guidance for communities, landowners, and project proponents</i> (2018) <i>Queensland Government Energy and Jobs Plan</i> (2022)
Stakeholder and community engagement review	<ul style="list-style-type: none"> Review of previous engagement outcomes undertaken by Acciona Energia

Stakeholder engagement

The engagement program included targeted consultation to inform and validate the social baseline and assessment of social impacts. The methods used are described below and a summary of findings from all project engagement activities is presented at Section 3.

Stakeholder mapping

A stakeholder identification process was undertaken to identify stakeholders with an interest in the project, as well as those directly or indirectly affected.

Identified stakeholders included groups/individuals that live near, use or value a resource associated with the project site, and those that have an interest in the project. Any special interest groups (e.g., local community and environmental groups) and potentially vulnerable and marginalised groups were also included.

Additional stakeholders were identified through snowball sampling as the SIA engagement progressed. A list of the stakeholder groups identified as in scope for SIA consultation is shown at Appendix table A-4.

Appendix table A-4 Identification of SIA stakeholder groups

Stakeholder group	Potential interests/issues	
Landholders and/or near neighbours	<ul style="list-style-type: none"> Job creation Economic benefits Community benefits Decommissioning 	<ul style="list-style-type: none"> Rehabilitation Visual impacts Construction impacts (e.g., access changes/road safety)

Stakeholder group	Potential interests/issues	
Broader community	<ul style="list-style-type: none"> Visual impacts Construction impacts (e.g., access changes/road safety) Community benefits 	<ul style="list-style-type: none"> Loss of agricultural land Community/cultural impacts Cumulative impacts Rehabilitation Governance
Environmental groups	<ul style="list-style-type: none"> Construction impacts (e.g., access changes) Environmental impacts (land, soil, water, flora, fauna) Community benefits Regional economic impacts 	<ul style="list-style-type: none"> Visual impacts Governance and ownership Cumulative impacts Engagement Decommissioning Rehabilitation Accommodation impacts Job creation
Local and state government	<ul style="list-style-type: none"> Regional economic impacts Community benefits Job creation Accommodation impacts Visual impacts 	<ul style="list-style-type: none"> Access changes Commercial agreements Governance and ownership of the developing entity Decommissioning Rehabilitation
Business or industry	<ul style="list-style-type: none"> Regional economic impacts Community benefits Job creation Impacts on accommodation 	<ul style="list-style-type: none"> Commercial agreements Governance and ownership of the developing entity Decommissioning Rehabilitation Access changes
Agricultural sector	<ul style="list-style-type: none"> Loss of agricultural land 	<ul style="list-style-type: none"> Training opportunities
Training, employment, and industry	<ul style="list-style-type: none"> Job creation Community benefits 	<ul style="list-style-type: none"> Regional economic impacts
Traditional Owners, Indigenous community	<ul style="list-style-type: none"> Job creation for local Aboriginal businesses and workers 	<ul style="list-style-type: none"> Land management Procurement/service provision
Housing and accommodation	<ul style="list-style-type: none"> Impacts to short-term accommodation and rental housing market 	<ul style="list-style-type: none"> Property impacts Opportunities for local business
RFS/ emergency services	<ul style="list-style-type: none"> Fire safety and management 	

Stakeholder group	Potential interests/issues	
Community groups	<ul style="list-style-type: none"> Accommodation impacts Job creation 	<ul style="list-style-type: none"> Training opportunities Cumulative impacts

Semi-structured interviews

Twenty-six semi-structured face-to-face, phone or online interviews were conducted in May and June 2023 with representatives from special interest groups, industry and business, local government, education, and other support agencies. A breakdown of participants is shown in Appendix table A-5.

Purposive and snowball sampling techniques were used to identify possible participants. Not all stakeholders contacted agreed, or were available, to undertake an SIA interview. Draft findings informed ongoing SIA and EIS consultation.

Appendix table A-5 Stakeholders contacted for the SIA

Stakeholder group	Organisation contacted for the SIA	Interview attained
Neighbours	One near neighbour (who had completed online survey)	No
Environmental groups	Gladstone Conservation Council	No
	Australian Conservation Foundation Gladstone	Yes
	The Next Economy	Yes
Local and state government	Gladstone Regional Council	Yes
	CQ Regional Organisation of Councils	Yes
	Dept of State Development, Infrastructure, Local Government and Planning	Yes
	Dept of Regional Development, Manufacturing and Water	Yes
Business or industry	Gladstone Chamber of Commerce and Industry	No
	Gladstone Ports Corporation	Yes
	Yarwun Store	Yes
	Gladstone Industry Leadership Group	Yes
	Gladstone Engineering Alliance	Yes

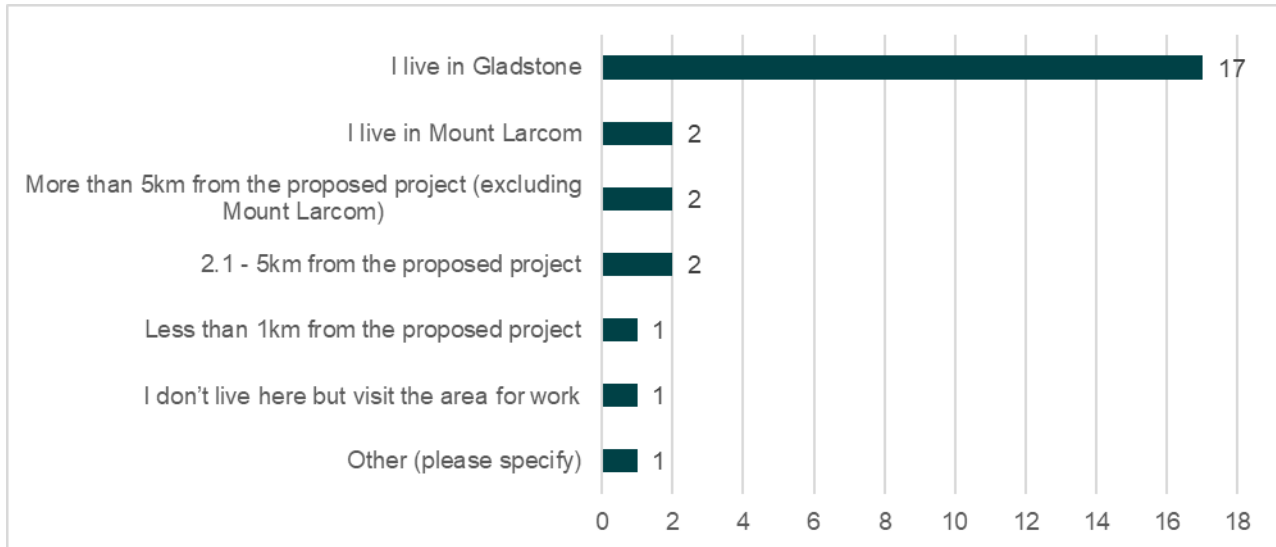
	Gladstone Area Promotion and Development Ltd	Yes
	Regional Development Australia Central and Western Queensland	Yes
	Industry Capability Network	Yes
Agricultural sector	Queensland Farmers' Federation	No
Training, employment, and industry	CQ University	Yes
	Toolooa State High School	Yes
	Gladstone State High School	Yes
	EQIP Gladstone	Yes
	Apprentices and Training Queensland	Yes
Traditional Owners, Indigenous community	Port Curtis Coral Coast Trust Ltd (PCCC)	No
	Yalga-Binbi Institute	Yes
	Gidarjil Development Corporation	Yes
Housing and accommodation	Homeground Gladstone	Yes
	Barney's Beach Accommodation	Yes
RFS/ emergency services	Mount Larcom RFS	Yes
Community groups	Mount Larcom and District Progress Association	Yes
	QCWA Mount Larcom	Yes
	Gladstone Rotary	Yes
	Not for Profit House	Yes

Online survey

A short online survey was developed and the link to this was distributed to stakeholders as part of the SIA engagement. This survey was live from 5 May 2023 until 5 June 2023. A notice about the online survey was hand delivered to the mailboxes of near neighbours along The Narrows Rd and Cullen Rd on 16 May 2023, and these notices were also displayed on the public notice boards at

the Gladstone Library, the Yarwun Store and the Mount Larcom Rural Transaction Centre. Notices for Flynn Rd residents were hand delivered to the Yarwun Post Office.

Twenty-six responses to the survey were received; one of these was from a resident who lived less than 1km from the project site, as seen in Appendix figure A-3.



Appendix figure A-3 Online survey: Where do you live? (n=26)

Site visit and attendance at community events

The SIA team visited the Gladstone Careers Expo on 16 May 2023, and attended the Industry Association Queensland CQ Industry Forum in Gladstone on 18 May 2023. A site visit was undertaken on 16 May 2023.

Social impact assessment and evaluation

The social impact evaluation was built on social impact scoping, and involved further review of relevant inputs, e.g., relevant EIS technical reports, engagement findings, and comparative studies. An assessment was then carried out to determine the likely significance of each potential impact, based on its predicted likelihood and consequence as defined in the SIA Principles (see

Appendix table A-6).

Appendix table A-6 Social impact assessment framework (Vancly, Esteves, Aucamp, & Franks, 2015)

		Consequence level				
		1	2	3	4	5
Likelihood level		Insignificant	Minor	Moderate	Major	Catastrophic
A	Almost certain	High	High	Extreme	Extreme	Extreme
B	Likely	Moderate	High	High	Extreme	Extreme
C	Possible	Low	Moderate	High	Extreme	Extreme
D	Unlikely	Low	Low	Moderate	High	High
E	Rare	Low	Low	Moderate	High	High

Identification of management, mitigation, and enhancement options

Measures to avoid, minimise or mitigate potential negative impacts and enhance positive benefits have been developed to address impacts. A brief assessment of residual impacts post-application of mitigation measures was then undertaken, again using the social impact assessment framework above.

Assumptions and limitations

This SIA has been developed based on several assumptions and limitations, including:

- This SIA has been undertaken with information that is known about the project and the social context at the time of writing, and social impacts have been predicted based on this information.
- Online survey participants self-selected to complete the survey. As with many surveys of this nature, participants most likely to engage with the survey will hold strong views either in support of or opposition to the project. While the views expressed in the survey responses align with the outcomes of the SIA interviews and broader community consultation, they should not be regarded as representative of community sentiment.
- Some stakeholders were engaged multiple times through multiple engagement mechanisms, so their views may have been expressed more than once.
- Every effort was made to access the most recent data available to inform the social baseline, using a range of sources.

Appendix B Initial social impact scoping

Project activities	IAIA social impact category	Potential impact	Magnitude (known at this time)	Likelihood (known at this time)	Assessment level in SIA	Potential mitigation
Pre-construction and construction	Community	Negative impact on community cohesion (divisions in community)	Minimal/minor	Possible	Standard	Community and Stakeholder Engagement Plan
Pre-construction and construction	Health and wellbeing	Project induced stress and anxiety	Unknown	Possible	Detailed (due to unknown)	Community and Stakeholder Engagement Plan
Construction and operation	Personal and property rights	Employment and labour impacts	Moderate	Almost certain	Detailed	Construction Management Plan Participation considerations during operations Community and Stakeholder Engagement Plan
Construction and operation	Personal and property rights	Training for the local community / future employees	Moderate	Possible	Detailed	Align with the requirements of the Queensland Government Building and Construction Training Policy to meet target of 15% of the total labour hours to undertaken by trainees and apprentices. Partner with PCCC Trust, Gidarjil Corp, Gladstone Regional Youth Council,

Project activities	IAIA social impact category	Potential impact	Magnitude (known at this time)	Likelihood (known at this time)	Assessment level in SIA	Potential mitigation
						Gladstone Engineering Alliance, CQ University and local jobs and training providers to implement training and apprenticeship programs
Construction and operation	Personal and property rights	Increase in economic activity	Moderate	Almost certain	Detailed	Design a Local Procurement Program to comply with requirements of the Queensland Procurement Policy which will focus on maximising the involvement of local people and businesses in the project.
Construction	Community	Further constraints to rental and short-term accommodation	Moderate	Almost certain	Detailed	Construction Management Plan Partner with worker accommodation provider/s Community and Stakeholder Engagement Plan
Construction	Community	Increased demand for social infrastructure	Moderate	Possible/likely	Standard	Construction Management Plan Community and Stakeholder Engagement Plan
Construction	Way of life	Increased traffic	Moderate	Likely	Detailed	Traffic Management Plan

Project activities	IAIA social impact category	Potential impact	Magnitude (known at this time)	Likelihood (known at this time)	Assessment level in SIA	Potential mitigation
						Community and Stakeholder Engagement Plan Complaint Investigation and Response Plan
Construction	Health and wellbeing	Noise and dust impacts	Unknown	Possible	Detailed (due to unknown)	Environmental Management Plan Community and Stakeholder Engagement Strategy grievance mechanism
Construction	Culture	Loss /damage to Aboriginal cultural heritage	Unknown	Possible	Detailed (due to unknown)	Environmental Management Plan Cultural Heritage Management Plan
Operation	Environment	Visual impact (incl. glint and glare)	Unknown	Possible	Detailed (due to unknown)	Landscaping Plan Environmental Management Plan
Operation	Environment	Loss of agricultural land & concern about how land will be managed	Unknown	Possible	Detailed (due to unknown)	Community and Stakeholder Engagement Strategy
Operation	Safety	Risks and hazards (e.g., fire risk)	Unknown	Possible	Detailed (due to unknown)	Fire suppression systems

Project activities	IAIA social impact category	Potential impact	Magnitude (known at this time)	Likelihood (known at this time)	Assessment level in SIA	Potential mitigation
						OH&S Plan
Operation	Personal and property rights	Potential property value impacts	Unknown	Possible	Detailed (due to unknown)	Community and Stakeholder Engagement Strategy
Construction and operation	Community	Community investment opportunity	Moderate	Almost certain	Detailed	Community Benefit Scheme
All stages	Political systems	Concerns about procedural fairness and distributive equity	Unknown	Possible	Detailed (due to unknown)	Community and Stakeholder Engagement Strategy Community Benefit Scheme
Decommissioning	Environment	Decommissioning concerns (visual amenity, land use)	Unknown	Possible	Detailed (due to unknown)	Decommissioning Plan

Appendix C Detailed community profile

All population and demographic data presented here is from the 2021 Census (ABS, 2021) unless otherwise stated. The dataset for this community profile is presented below at Section C1.9.

C.1 Key community characteristics

C1.1 Population and growth

With a population of 63,515 people, in 2021 the Gladstone LGA grew to approximately half the rate of the Queensland average over the last five years (0.8% and 1.6% respectively). Expected to reduce slightly to 0.7% per year between 2016 and 2041 (QGSO, 2023), the population growth has been attributed to shifts in workforce demand due to the completion in construction of major oil and gas projects in the region (Queensland Government, 2016).

Highly concentrated in Gladstone City, the population within the LGA is home to approximately 70% of all Gladstone LGA residents. The Mount Larcom and Calliope Suburb and Localities (SALs) comprise significantly smaller populations at 332 and 5,263 people respectively and Gladstone's neighbouring locality, Yarwun, recorded a total of 89 residents, while Aldoga recorded zero residents due to high levels of industrial operations.

C1.2 Age, households and cultural diversity

In 2021, the median age within Gladstone LGA is aligned with the state median (38 years) and is projected to increase to 39 years by 2041 (QGSO, 2023). Mount Larcom SAL recorded a slightly older population profile (median 42 years), whereas Calliope SAL comprised a younger profile (median 32 years). Seventy-one percent of the Gladstone LGA comprised family households, which is comparable with Mount Larcom (72.7%); whereas family households in Calliope were recorded higher at 81.1%. The average number of people per household in Gladstone LGA were 2.5 people per household.

Slightly higher than the Queensland average of (4.6%), Aboriginal and Torres Strait Islander persons comprised 6.2% of the LGA's population. The largest proportion of Aboriginal and Torres Strait Islander persons at 7.1% resided in Gladstone city which also recorded less residents born in Australia (79.0%) than Calliope SAL (86.6%), Mount Larcom SAL (80.7%), and the broader Gladstone LGA (79.6%). These circumstances were reflected with higher indicators of non-English speakers at home (9.8%) recorded in Gladstone city in contrast to Calliope SAL (4.7%), the Gladstone LGA (7.5%), and the Mount Larcom SAL (7.6%). However, less residents born in Australia within the Gladstone LGA remained significantly lower than the Queensland average of 15.6%.

C1.3 Housing and accommodation

Within the Gladstone LGA, most of the population resided in separate housing (85.5%). Reflecting its rural small-town character, nearly all houses in Mount Larcom were also recorded to be separate houses (99.2%), which was similar to Calliope at 94.5%. Subsequently, Mount Larcom

recorded a high proportion of homes that were owned outright (38.7%) compared to 22.8% in Calliope and 27.3% within the Gladstone LGA.

Mount Larcom was recorded to be a relatively less expensive place to live, where median weekly rent (\$190) and mortgage repayments (\$1,300) were significantly cheaper than the Gladstone LGA (\$275 and \$1,600 respectively). While the proportion of households experiencing rental housing stress were lower in the LGA (26.5%) than the state (32.3%), the lowest proportion of households experiencing rental stress was recorded in Mount Larcom (21.7%).

A residential vacancy rate of 2.6%-3.5% is considered to be a healthy balance between supply and demand in a balanced rental market (REIQ, 2023). Over the two years to May 2023, the residential vacancy rate for Gladstone (postcode 4680) has remained below 2.5%, and in May 2023 was 1.7% (SQM, 2023).

Historically the region has grappled with housing booms and busts associated with key regional developments (TNE, 2022). The construction phase for three LNG facilities in 2011–2013 contributed to a house price boom in Gladstone and an associated housing affordability and availability crisis. During this time residential vacancy rates dropped to 0.4% but increased rapidly in late 2012 once worker accommodation camps on Curtis Island were completed and peaked at 12.3% in April 2016 at the height of the post-construction bust (SQM, 2023).

Many of the non-resident workers that come to the area in recent years have been accommodated in worker accommodation camps, circumventing the local housing market, which initially created an oversupply of housing and short-term accommodation. However, this trend has reversed in the past two years. During SIA consultation, stakeholders reported that rents are currently rising and it's starting to impact on key workers, while some residents unable to secure rental properties are living in short-term accommodation. This has become a key concern for residents when considering effects of upcoming developments in the area.

Recent changes to housing affordability in the region has occurred with a 17.4% increase in sale prices and a 7.1% increase in rental prices experienced during the 2021–22 financial year (TNE, 2022). The resulting price increases have been exacerbated due to an influx of new workers for upcoming projects which is likely to heighten affordable housing shortages and challenges to the region's housing market in the coming years. Local residents have suggested supporting additional government housing, converting underutilised accommodation into housing or emergency accommodation, ensuring high energy efficiency for low-income households, and new accommodation to be built in the region as potential solutions (TNE, 2022).

C1.4 Income, employment and industry

The Gladstone LGA was estimated to support 25.9% of jobs in CQ, and 1.2% of jobs in Queensland (REMPLAN, 2023). The total amount of Gross Regional Product (GRP) generated was recorded to be \$18.6 billion during the 2021 Census with manufacturing identified as a key industry both in its GRP contribution and employment (estimated to be 47.1% and 15.0% respectively (REMPLAN, 2023). Construction, health care and social assistance, and retail trade were further identified as key industries within the LGA (REMPLAN, 2023).

Socio-economic indexes of advantage and disadvantage (SEIFA) is a scoring system of social and economic factors such as income, education, employment, community safety and social support from five yearly census. The SEIFA score awarded to the Gladstone LGA was 1,600 which

reflected a fractionally more disadvantaged society to the state score of 1,700. This score was reflected with a slightly lower median weekly income of \$1,639 recorded in the Gladstone LGA (\$1,639) compared to the state average of \$1,675. The highest average income was recorded in the Gladstone SAL (\$1,691) and the lowest in Mount Larcom SAL (\$1,268). The median weekly household income recorded for Aboriginal and Torres Strait Islander populations with an average of 3.2 people per household was \$1,448 in the Gladstone LGA which was approximately 12% below those of other households in the same locality.

Unemployment within the Gladstone LGA was also recorded to be 7.4%, which was higher than the state average (5.4%). All areas within the study area, except for Mount Larcom (4.7%), recorded higher unemployment rates than the state average with the highest being in the Gladstone urban area (8.2%). Lastly, a significantly lower proportion of people (12.0%) in the Gladstone LGA had attained a university level higher education than Queensland (21.9%). The most frequently occurring highest educational attainment in the LGA was a Certificate 3-4/Diploma (33.4%) in all regions within the study area.

SIA engagement highlighted that skills shortages are a key issue for the region. Skills shortages are exacerbated during the annual shutdowns of Gladstone's large power plants, as there is a high demand for workers at these times.

C1.5 Health and wellbeing

Levels of individual and community health and wellbeing are closely related to the social environment and circumstances. Factors such as conditions of employment, housing, social services and support, and socioeconomic factors are known as the social determinants of health, and are shaped by political, social, and economic forces (AIHW, 2020).

In the Gladstone region, the increasing proportion of families from low socio-economic backgrounds have put pressure on local health and social services (CCQ, 2019).

Key challenges identified in the Gladstone LGA region include:

- High disease prevalence: cardiovascular disease, respiratory conditions, mental illness, diabetes, stroke and cancer.
- Lack of healthcare access: access to General Practitioners (GPs), specialists, mental health services and bulk-billed providers, long wait lists, high costs for private consults, elevated travel costs, and poor continuity of care.
- Workforce gaps: local workforce gaps, shortages of GPs, specialists and allied health professionals.
- As recently identified by the CQ Rural Health (2022) further limitations include poor service integration, limited student opportunities and flexible employment models, infrequent professional networking opportunities, ad hoc support services, limited mentorship and professional development opportunities, infrastructure limitations, professional burnout/fatigue, poor Medicare rebates and financial incentives.

In the Gladstone LGA, 11.1% of people accessed unpaid assistance for a disability, health condition or due to old age, which is closely aligns with the state average (11.5%). There were 9.6% of people in the region with an identified mental health condition, and 7.6% with a long-term health condition, which sits slightly below the QLD average. Earlier data also notes domestic and family

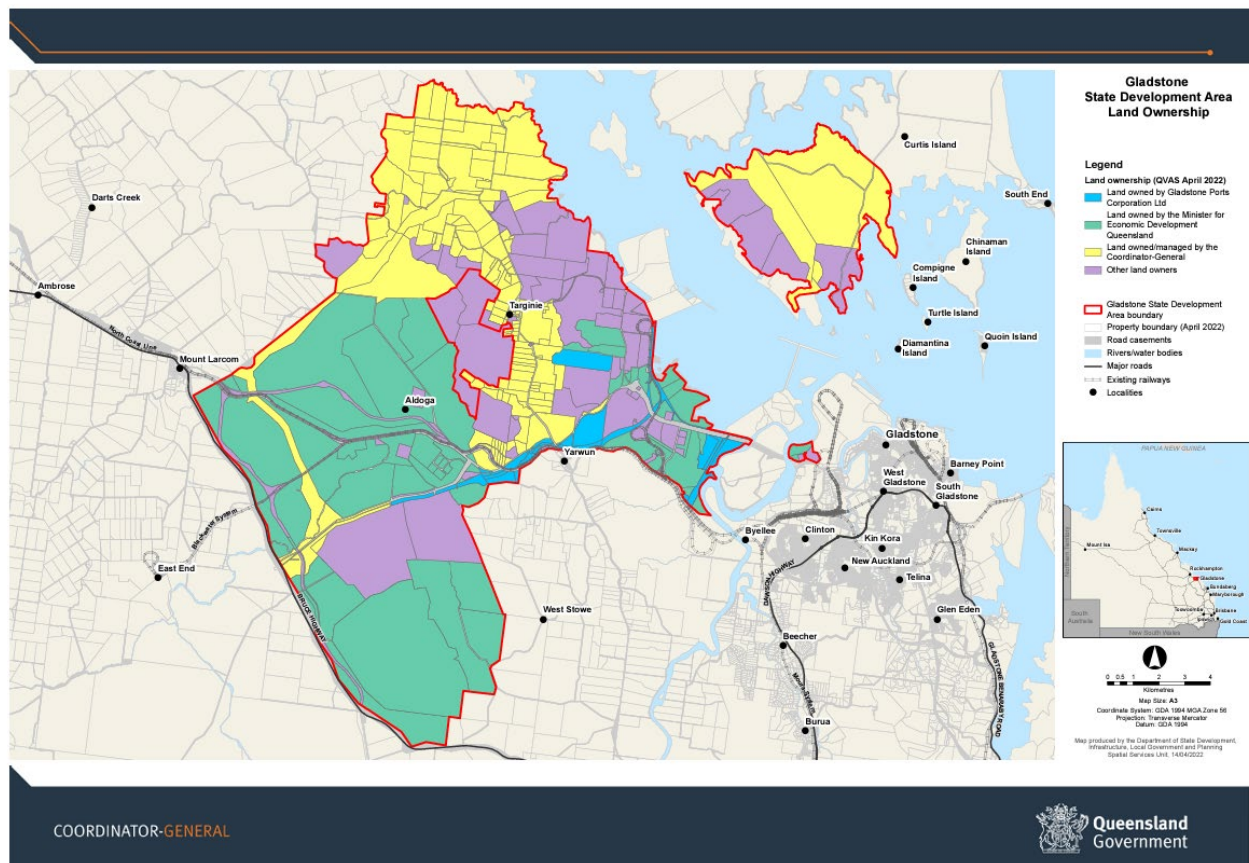
violence, mental health, drug use and children in care as significant issues for the community and were said to be correlated to migration patterns (Platformc, 2022).

SIA engagement indicated that access to health care was a key issue of concern for the local community.

C1.6 Land tenure, use and local agricultural values

The Gladstone LGA covers an area of 10,494 square kilometres where a significant portion of land was declared as a State Development Area in 1993 which is defined as an “area of land dedicated for industrial development and materials transportation” (DSDILGP, 2022). Lands within the Gladstone State Development Area (GSDA) are owned by the state government where the Coordinator-General owns 8217 hectares of land and the Minister for Economic Development Queensland (EDQ) owns 14,816 hectares where the proposed Aldolga solar farm is to be located (see Appendix figure C-1 Gladstone LGA land ownership

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Appendix figure C-1 Gladstone LGA land ownership

Source: Extracted from <https://www.statedevelopment.qld.gov.au/coordinator-general/state-development-areas/current/gladstone-state-development-area/gladstone-state-development-area-accordion-group-0/land-ownership2>

Agriculture, forestry and fisheries were recorded to equate 1.9% of employment or 566 workers in the Gladstone Region between 2018 to 2019 (GRC, 2022). During the same timeframe, agricultural production was valued at \$86 million with beef production accounting for 81% of the value and a

small number of other agricultural industries which included horticulture (mangoes, citrus, macadamias), irrigated fodder production, broad acre cropping and dairy also contributing. The commercial fishing industry was valued to generate 13 million in GVP which comprised harvest fisheries and line, net, trawler and crab fisheries (GRC, 2022).

C1.7 Social infrastructure and services

Social infrastructure encompasses the key services and resources that sustain the liveability of communities, and strongly influences perceived and real quality of life (Australian Urban Observatory, 2021). These extend from health, education and essential services to community support and development resources, and leisure and recreational opportunities.

Development within the region has exerted pressure on existing services, increasing the demand for services in most areas including, health/medical services, mental health, children's services, youth development, family support, affordable and crisis housing, counselling, disability support and migration/settlement support (Buckley Vann et al., 2010).

In 2016 the Gladstone LGA had the lowest number of aged care facilities in CQ per 1,000 people aged 65 and over. Mental health services include a Headspace centre located in Gladstone Central. While general health facilities such as the Gladstone Hospital, Gladstone Central Medical Centre, Gladstone GP Superclinic and other allied health professionals exist services remain limited, such as a community member recently noted, "If a worker has a broken arm, they have to fly up to Townsville or Rockhampton to get medical help" (TNE, 2022).

In terms of non-acute care, community service centres, namely the Gladstone Community and Neighbourhood Centre were available to residents of Gladstone and surrounding areas (Gladstone Regional Council, 2023). Magenta Community Services and UnitingCare Community also tailored support for people with disabilities. Other dignity hubs, such as the Roseberry Community Services, which provided food, personal items and support for those suffering from homelessness and marginalisation also existed.

Local schools in the region included Gladstone Central State School, Gladstone State High School, and the Star of Sea Catholic Primary School. Central Queensland University offered tertiary education for the region, and since 2014 operates a Central Queensland (CQ) TAFE (CQU, n.d).

Two industry support representatives interviewed for the SIA highlighted that Gladstone's growth is constrained by its lack of social infrastructure (e.g., health services and higher education options) as it affects the region's attractiveness and liveability.

C1.8 Community culture, values and governance

The Council's Reconciliation Action Plan shares that First Nations Community members "are still connected to the Country of their ancestors and most consider themselves the custodians or caretakers of their land" (Gladstone Regional Council, 2021, p. 29). The traditional custodians of the Gladstone Region are the Bailai, Gurang, Gooreng Gooreng and Taribelang Bunda people who remain connected and work extensively with community, governments and stakeholders to manage, improve and maintain country. These groups are represented through the Port Curtis Coral Coast Limited which is the Trustee for the Port Curtis Coral Coast Aboriginal Peoples Charitable Trust (PCCC, 2023) who share a vision for "our people will be strong, proud and

empowered through cultural knowledge, quality education and economic participation and growth” (PCCC, 2023).

The GRC’s 2021-2026 Community Development Strategy also highlights the region’s strong sense of community with a ‘can do’ attitude to advancing local goals and prospects. These sentiments were displayed through extensive community consultation as a part of the GRC Arts & Culture Plan 2018-2022 which found the following community values existed:

- Personal Values: Enrichment & wellbeing;
- Cultural Values: Community identity, creativity, cultural diversity and heritage;
- Social Values: Inclusivity, equitable opportunity, and respect;
- Civic values: Cultural leadership, collaboration, and regional image and reputation.
- Environmental Values: Natural heritage, balanced development, sense of place;
- Economic Values: Creative enterprise, and economic resilience.

While members of the community and industry stakeholders have expressed pride in Gladstone’s industrial heritage, a greater investment in other sectors, including construction, professional services, housing, health, education and tourism have also been identified (TNE, 2022). In addition, sSecuring long-term economic benefits across the community by 2032 including reduced cost of living, health and wellbeing improvements and increased access to affordable housing is highly important to the community (TNE, 2022). In addition, benefits need to reach marginalised groups within the community, particularly women, First Nations peoples, and fossil fuel workers (TNE, 2022).

The Gladstone region also features the entrance to the Great Barrier Reef Islands and lagoons, such as Heron Island, famous as a tourism destination.

Community attitudes towards renewable energy

The Gladstone region forms part of the CQ REZ where the Queensland Government announced \$145 million to support network upgrades and the development of three REZs, with CQ being one of the REZs. In August 2021, within CQ 67 projects had registered an interest (DEPW, n.d.).

The Gladstone region is already home to Fortescue Future Industries’ (FFI) Green Energy Manufacturing (GEM) Centre and has been referred to as “Australia’s clean energy capital” (State of Queensland, 2023). The Gladstone Region Economic Transition Roadmap outlines the clean energy ten-year transition plan for region, noting numerous economic and employment opportunities and community benefits. Overwhelmingly, participants were proud of Gladstone’s industrial history and wanted to see the region continue to be “a place where things are made and exported to the world” (TNE, 2022).

Patterns of concern pertaining to new developments also emerged among the community. The Gladstone region is familiar with industrial impacts of energy-related project within the region and the potential for ongoing effects within the community. The 2011 LNG boom generated wealth and employment for some, although also contributed to housing shortages and price increases for others (TNE, 2022). Consequently, housing concerns are prevalent in the transition to renewable energy. While some residents remain open to approving new developments, others advocate for additional measures to safeguard rising housing costs (TNE, 2022). Participants identified the following as critical areas for prospective developers to account for:

- Liveability through increased access to health services
- Housing
- Infrastructure and other amenities
- Local job creation and procurement opportunities
- Financial benefits shared across the community
- And a stronger sense of identity and social cohesion.

Community members also noted expectations of lower energy costs as a result of the region's transition. Generally, people understand the energy sector is transitioning towards renewables and expect to see it across the region within the next decade (TNE, 2022). While community members understand the large-scale requirements of renewable energy developments, "they expressed strong support for decentralised energy generation through increased household and community ownership of renewable energy generation" (TNE, 2022)(pg. 10). The report mentioned meaningfully incorporating First Nations peoples and their knowledge into governance structures and decision-making processes. Participants also voiced sustainability concerns about the amount of land and water projects will use, particularly pertaining to hydrogen developments (TNE, 2022).

C1.9 Previous experiences with energy industry development

While Gladstone is no stranger to industrial development and has experienced a series of construction peaks and troughs, none have compared to the LNG boom and bust. The influx of an estimated 10,000–15,000 non-resident workers between 2010-2014 resulted in major impacts on the Gladstone community. The approval of three LNG projects on Curtis Island resulted in a spike in demand for housing, services, and skills (Smith & Kelly, 2017).

The LNG boom was unprecedented in Australia. The ramp down was more horrendous than the ramp up.

Gladstone community is well practiced with projects, impacts and outcomes. They've been through it all, including the housing and short-term accommodation impacts. They know sometimes things go badly.

We [the Gladstone community] still have scars on us from LNG... lived through some crazy years.

Consultation revealed how the influx of workers impacted on both the composition and the character of the community. The housing crisis that developed resulted in rapid rent increases and shorter rental contracts, and many long-term tenants left the area as rents became unaffordable. This included vulnerable groups, such as pensioners, as well as lower socio-economic status (SES) families with children.

Education stakeholders described how local schools lost students from renter families forced out of the area by increasing rents, while at the same time, schools and childcare services struggled to absorb the influx of children of construction workers arriving in town. They reported that after the bust, the costs of housing dropped and there was an increase in lower SES families moving into Gladstone, including families from Southeast Queensland that had been given cash incentives to move to regional towns. This again changed both the dynamics of the town and the composition of the schools and stakeholders noted that these students often have high support needs.

Local businesses also had to deal with competition for workers and effects on wages.

During the LNG boom, there was difficulty getting workers to stock shelves at supermarkets, teachers too. Once people leave these professions, they don't come back to them.

During consultation, many stakeholders described the social issues that accompanied the construction boom and the impacts that had on residents' way of life. People were not going out due to the behaviour of construction workers in town. The number of assaults increased, fuelled by alcohol.

The way that the town was treated was very poor...Our community was on our knees.

It was bedlam – social, safety issues in town on Saturday nights “surprised that no-one got killed up the main street”. Operation Parasol was set up – a safety committee (funded by industry) to deal with alcohol fuelled violence.

Drug use becomes a problem when construction workers in town, and also mental health issues from being always away from home.

It was clear from interviews that Gladstone stakeholders and the community are keen to avoid a repeat of the LNG boom and bust.

C.2 Community profile dataset

Appendix table C-1 Social indicators for geographical boundaries and QLD (ABS, 2021)

Indicator ABS 2021 Census	Mount Larcom SAL	Gladstone SUA	Calliope SAL	Gladstone LGA	QLD
Demographics					
Population (n)	332	45,185	5,263	64,304*	5,156,138
Male (%)	50.0	50.1	50.3	50.7	49.3
Female (%)	50.0	49.9	49.7	49.3	50.7
Aboriginal & Torres Strait Islander population (%)	5.1	6.7	6.8	6.2	4.6
Age					
Median age (years)	42	36	32	38	38
0-14 years (%)	20.1	21.9	28.7	21.5	18.7
65+ years (%)	20.1	12.5	10.7	13.9	17

Indicator ABS 2021 Census	Mount Larcom SAL	Gladstone SUA	Calliope SAL	Gladstone LGA	QLD
Cultural diversity					
Country of birth (Australia) (%)	80.7	79.3	86.6	79.6	71.4
English only used at home (%)	83.7	87.0	92.1	87.4	80.5
Households - non-English language is used (%)	7.6	8.8	4.7	7.5	15.6
Health					
Mental health condition	9.9	10.0	8.7	9.6	9.6
No long-term health condition(s) (%)	50.6	59.1	61.9	58.6	58.2
Highest level of educational attainment					
Year 12 or equivalent (%)	7.9	14.4	15	13.8	15.5
Certificate 3-4/Diploma (%)	31.1	33.4	29.6	33.4	28.3
Bachelor degree and above (%)	5.6	13.2	8.2	12.0	21.9
Households & families					
Family households (%)	72.7	69.5	81.1	71.3	71.0
Couple family with children (%)	27.6	42.3	49.2	41.7	41.2
Sole parent family (%)	19.5	18.6	15.4	16.6	16.8
Median household income (\$/week)	1,268	1,691	1,884	1,639	1,675
Housing					
Separate house (%)	99.2	82.8	94.5	85.5	74.8
Owned outright (%)	38.7	23.3	22.8	27.3	29.1
Owned with a mortgage (%)	42.0	35.5	43.6	36.5	34.4
Rented (%)	19.3	39.2	29.2	33.4	33.1

Indicator ABS 2021 Census	Mount Larcom SAL	Gladstone SUA	Calliope SAL	Gladstone LGA	QLD
Median mortgage repayment (\$/month)	1,300	1,578	1,733	1,600	1,733
Mortgage households in housing stress (%)	9	8.8	8.5	9.6	11.9
Median rent (\$/week)	190	270	300	275	365
Rental households in housing stress (%)	21.7	26.3	24.6	26.5	32.3
SEIFA					
IRSAD decile	1	2**	2	3	N/A
Employment					
Employment status					
In the labour force (%)	55.4	64.2	65.2	61.8	61.6
Worked full-time (%)	55.4	58.5	61.2	58.1	55.8
Worked part-time (%)	29.7	27.7	25.8	28.0	30.5
Unemployed (%)	4.7	7.6	6.8	7.4	5.4
Did voluntary work in last 12 months (%)	22.4	15.7	15.7	16.2	14.1
Occupation					
Professionals	4.2	15.7	10.1	14.4	21.4
Managers	5.6	8.2	8.3	9.3	12.5
Clerical & administrative workers	8.4	10.3	9.9	10.2	12.7
Technicians & trades workers	13.3	20.4	23.0	20.6	13.7
Labourers	16.1	12.1	12.6	12.4	10.1

Indicator ABS 2021 Census	Mount Larcom SAL	Gladstone SUA	Calliope SAL	Gladstone LGA	QLD
Community & personal services workers	14.7	11.2	9.6	10.8	12.3
Sales workers	11.9	8.3	8.5	8.0	8.7
Machinery operators & drivers	16.8	11.7	15.7	12.2	6.8

Appendix table C-2 Social indicators for geographical boundaries and QLD (ABS, 2021)

Indicator ABS 2021 Census	1	2	3	4	5
Mount Larcom SAL	Aluminium smelting 4.9%	Beef cattle farming 3.5%	Cement & lime Manufacturing 3.5%	Petroleum product wholesaling 3.5%	Supermarket & grocery stores 2.8%
Gladstone SUA	Aluminium smelting 6.1%	Alumina production 4.1%	Other heavy and civil engineering construction 3.2%	Primary education 3.1%	Supermarket & grocery stores 3.0%
Gladstone LGA	Aluminium smelting 5.7%	Alumina production 3.6%	Other heavy and civil engineering construction 3.2%	Primary education 3.1%	Supermarket & grocery stores 2.8%
QLD	Hospitals 5.0%	Supermarket & grocery stores 2.5%	Primary education 2.5%	Other social assistance services 2.4%	Takeaway food services 2.3%



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