

BE WHAT **YOU** WANT TO BE.



Gladstone Industry - Community Perception Study

2010

Lindsay Greer, Delwar Akbar, John Rolfe and Julie Mann

Prepared for Gladstone Industry Leadership Group (GILG)



Centre for
Environmental
MANAGEMENT

CQUniversity, Building 7, Rockhampton, QLD 4702

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Images by Julie Mann

CQUniversity acknowledges and respects Elders both past and present of the Darumbal Nation and all Aboriginal peoples and nations on all the lands in which we operate in working together to create a better future for us all. CQUniversity commits to a just and meaningful partnership of reconciliation with Aboriginal and Torres Strait Islander people throughout the communities we serve. The CQUniversity Reconciliation Statement was issued in 2002 and is available at www.cqu.edu.au

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
BSL	Boyne Smelter Limited
CEM	Centre for Environmental Management
CA	Cement Australia
CATI	Computer Assisted Telephone Interview
CQUniversity	Central Queensland University
DEEDI	Department of Employment, Economic Development and Innovation
DET	Department of Education and Training
DERM	Department of Environment and Resource Management
DIDO	Drive in/Drive out
DME	Department of Mines and Energy
EPA	Environment Protection Authority
ERP	Estimated Residential Population
FIFO	Fly in/Fly out
GILG	Gladstone Industry Leadership Group
GPC	Gladstone Ports Corporation
GRC	Gladstone Regional Council
GRP	Gross Regional Products
IRC	Isaac Regional Council
Km	Kilometre
LGA	Local Government Authority
LNG	Liquefied Natural Gas
NRG	NRG Gladstone Operating Services
OESR	Office of Economic and Statistical Research
QAL	Queensland Alumina Limited
QLD	Queensland
RDD	Random Digit Dialling
RTA-Y	Rio Tinto Alcan - Yarwun
SD	Statistical Division
SLA	Statistical Local Area

EXECUTIVE SUMMARY

Study objectives:

The purpose of this study is to provide a measure of the perception of Gladstone industry performance by the residents of the Gladstone region. This is an independent study designed to be an on-going and accurate measure capable of providing a benchmark of the performance of existing Gladstone industries. This study was commissioned by the Gladstone Industry Leadership Group (GILG).

The study objectives were: (a) to provide an estimate of the perceptions of a representative sample of Gladstone area households of the performance of Gladstone industry across a range of corporate citizen factors, (b) to estimate the perception of health and environment related performance measures, and (c) to provide Gladstone industry with perceptive feedback on its performance in the Gladstone community and offer a mechanism for improvement into the future.

Research methods:

The study used survey research methods consisting of a household survey (n=520) and an in-depth interview with some selected residents (n=12). These surveys were undertaken to collect data to understand the community perceptions of Gladstone in relation to the performance of Gladstone industry across a series of benchmark indicators of corporate citizenship performance. The data collection was undertaken by National Field Service, a Sydney based data collection agency using sophisticated in-house CATI facilities. The study used a range of techniques to understand the individual and aggregated perception about the Gladstone Region's industrial health and environment, descriptive statistical analysis, composite index and thematic (qualitative) analysis.

Study area:

Gladstone is an industrial and port city located in the Central Queensland region. The Gladstone area has been represented by a single local government authority, the Gladstone Regional Council (GRC), since 2008, when three previous shires of Gladstone City, Calliope and Miriam Vale were amalgamated. The population of the GRC area was approximately 59,644 in June, 2009, about 1.3 percent of the state's population. The average annual growth rate in the GRC between 2004 and 2009 was 3.2 per cent, compared with 2.6 per cent for the State of Queensland. The majority of that population was in the Gladstone and Calliope communities in close proximity to the Gladstone Industrial area.

In this study, there were 267 male (51.3 percent) and 253 female (48.6 percent) survey respondents with a total of 520 valid responses. The median number of years that respondents had resided in the Gladstone region was twenty years or more, indicating that the survey respondents in the majority were long term residents. Most of those surveyed lived in their own separate house (94.6 percent i.e., higher than Queensland average), of which the majority were owned or being purchased (79.6 percent), with 12.8 percent being rented on the open market. The Gladstone population is generally younger (33 years) than the Queensland average of 36 years.

The largest education category was the respondents who indicated that their highest education level was Year 11 or lower (34.2 percent), followed by those who had attained a post secondary

qualification (22.8 percent) and who had completed Year 12 (19.6 percent). Just over 15 percent had an undergraduate degree and 7.8 percent had a postgraduate degree. Post-school educational attainment levels in Gladstone are generally below the Queensland state average except at the Certificate level where they are higher.

The locality of the respondents was recorded by dividing the Gladstone region into three areas: Gladstone (62.3%), Boyne Island/Tannum Sands (BITS) (23.1%), former Calliope Shire and Miriam Vale Shire (14.6%). These three regions were further divided into 11 neighbourhoods (i.e., Boyne Valley, Toolooa-Glen Eden, Gladstone City, West Gladstone, Boyne Island- Tannum Sands, Calliope, Clinton, Kin Kora -Telina and Sun Valley, Gladstone South, New Auckland, and Yarwun-Targinnie) for better understanding about views of Gladstone Industry performance at a neighbourhood level. Just over half of the respondents either worked for a major industry in Gladstone or had a family member who did so. A quarter of the respondents were employed in both small and medium sized business and 14.8 percent of the respondents were Federal, State or Local government employees.

Survey results:

The survey respondents were asked to rate their level of general knowledge of Gladstone industry on a scale of one to ten where one indicates limited knowledge and ten extensive knowledge. The mean score of all respondents was 6.42/10, which means most respondents have some level of knowledge about the Gladstone Industries, which might reflect their opinion on the rating of Gladstone industry performance.

An important aspect of the community's level of knowledge of industry is the rating (1-5) given to the level of consultation by industry in Gladstone. The mean score of all respondents is 3.17/5, which is slightly better than the median score. The results also show a range scores across the locations from 2.4/5 in the Boyne Valley to 3.5/5 in the Yarwun Targinnie area.

The respondents were asked to rate the overall liveability of the Gladstone region on a scale of 1 to 10 where one equals poor liveability and ten equals excellent liveability. Overall liveability of the region is 6.71/10, which is above the median score of liveability and this is better than some of the regional areas in Queensland such as Isaac Regional Council. By locality the rating of liveability in both Boyne Valley and in Yarwun/Targinnie is the lowest in the Gladstone area.

The Gladstone community is concerned about their regional liveability and industrial development. Six statements regarding industrial development were presented to the survey respondents to understand the positive and negative aspects of such development. The results show that most respondents felt that the overall benefits of industry development are greater than possible negative impacts, and most respondents did not agree that Gladstone has too many industries. However the picture is not straight forward as the second statement with which most people agreed is that 'more state government regulation is required to coordinate growth'. This could suggest an underlying level of anxiety regarding the level and character of future industrial development. This will need to be examined in further detail in future studies.

In order to ascertain the priority areas that Gladstone industry should consider for the Gladstone region the respondents were first asked to give a priority rating to key areas identified from previous

studies. These were rated on a scale of 1 to 5, with 5 being of the highest priority. The main two priority areas identified were infrastructure and environmental concerns (including health issues) followed by health infrastructure concerns.

Although health issues had a relatively low priority with the initial construction of QAL forty-five years ago this has changed considerably as Gladstone's economic development has progressed (Roper, 2010). Recently a study led by Queensland Health identified that there is little or no direct correlation between industry emission and health outcomes, however latent concerns within the community persist. The results of this survey also show further lessening of concern compared to the Queensland Health survey with 28.7 percent indicating that they were not at all concerned, 21.1 percent were slightly concerned and 27.5 percent were moderately concerned, while 13.8 percent were highly concerned, and 8.7 percent were extremely concerned.

This study found the highest level of concern by Gladstone residents was dust (Mean 3.62/5) followed by air quality (Mean 3.61/5). The majority of responses were associated with the QAL facility (odour, caustic vapour) and the prevalence of coal dust from the rail and port facilities within close proximity to the Gladstone CBD area.

Corporate citizenship:

The study looked at the performance of Gladstone industry across selected indicators of good corporate citizenship. The performance rating (scale 1-5) includes an evaluation of all Gladstone industry and gives the opportunity for respondents to list any other indicators of good corporate citizenship that should be included in future evaluations of Gladstone industry performance. Industry performance was also measured for the specific industries of: Boyne Smelter Limited (BSL), Cement Australia (CA), Gladstone Power Station (NRG), Queensland Alumina Limited (QAL), RTA-Y/Yarwun, and Orica.

The highest rating is given to Gladstone industry having '*a long term commitment to the Gladstone community*' (Mean 4.02/5), followed by industry being '*known locally as a good employer*' (Mean 3.99/5). The lowest two ratings are that Gladstone industry '*communicates clearly and openly with the community*' (Mean 3.18/5) and '*is trustworthy and believed by the local community*' (Mean 3.07/5). While these attributes score the lowest rating, average ratings for these categories are relatively high compared to the median score, which suggests that most people agree that Gladstone industry is performing better than average.

Corporate citizenship indicators	Mean
Has a long term commitment to the Gladstone community	4.02
Is known locally as a good employer	3.99
Supports the local community	3.86
Generally, has a good reputation within the region	3.67
Acts in line with the expectations that I have of Gladstone industry	3.50
Is concerned and sensitive to the needs of the local Indigenous communities	3.47
Demonstrates care for the local environment	3.30
Communicates clearly and openly with the Gladstone community	3.18
Is trustworthy and believed by the local community	3.07

In addition to the above performance evaluation, five main industries in the Gladstone region were rated on their overall level (scale 1-5) of performance based on six key measures of good corporate citizenship. The results of the evaluation of each industry differ from the previous rating of the performance.

Good corporate citizenship indicators	NRG	CA	RTA-Y	BSL	QAL
Has a good reputation	3.63	3.22	3.20	3.21	3.21
Demonstrates care for the environment	3.23	2.82	3.10	3.02	2.90
Communicates clearly and openly with the community	3.23	2.77	3.15	3.04	3.20
Is trustworthy and believed	3.37	2.99	2.97	2.88	3.07
Is known as a good employer	3.69	3.17	3.17	3.24	3.56
Is concerned with and sensitive to the needs of the Indigenous community	2.31	2.14	2.80	2.47	2.42
Average score	3.24	2.85	3.06	2.97	3.05

Of concern to the authors is the low score for the five industries for indigenous engagement where all but one resulted in a score that is less than a 2.5/5 mid-range score.

Conclusion:

The combination of the performance of Gladstone industry and the high level of acceptance within the Gladstone community indicates that Gladstone industry is performing satisfactorily in the task of maintaining a 'social licence to operate' in the region. The challenge is for industry to not only maintain its satisfactory performance but to maximise its efforts through positive action to increase the support throughout the community by continuous identification of potential flashpoints for community concern. As the industry presence grows in the Gladstone region so does the risk that community sentiments will shift in a negative way if care is not taken.

This is not a simple task as there is the suggestion that for some Gladstone residents the expectation of industry performance will be a shifting aspirational goal that may never be met. Prudent investment in the Gladstone community that clearly demonstrates a reflexive best practice model will assist to meet the expectations of the majority of the community. The investment in the maintenance of a satisfactory operating environment needs to be balanced against the difficult task of shifting an entrenched set of relatively negative views of industry.

This study has identified some important areas for consideration by Gladstone industry such as the priority areas of health infrastructure and urban based facilities as well as balancing environmental protection. In relation to good corporate citizenship it is recommended that the benchmark measurement of corporate citizenship be expanded to incorporate sustainability concepts measured across five key areas of cultural, economic, environmental, human and social performance. The indices presented in this report are an illustration of what can be achieved using the legacy benchmark indicators of previous Gladstone industry studies. The indicators can be improved and serve the Gladstone community by providing a clearer measurement of Gladstone industry performance. It is hoped that this will assist the Gladstone community to develop in a productive and sustainable way.

SECTION 1 INTRODUCTION

The purpose of this report is to provide a measure of the public perception of Gladstone industry performance by the residents of the Gladstone region. The report was commissioned by the Gladstone Industry Leadership Group (GILG). It presents an opportunity to conduct an independent study designed to be an on-going and accurate measure capable of providing a benchmark of the performance of existing industry groups in the Gladstone region.

The study objectives are to:

1. Review the existing design and methodology of current Gladstone industry community surveys.
2. Gain acceptance for a revised approach and survey instrument.
3. Measure the performance of Gladstone Industry from environment and corporate citizenship perspective.
4. Measure the acceptance of Gladstone industry to the Gladstone community
5. Seek constructive feedback from the community on how Gladstone industry performance can be improved

1.1. Study Outline

The Gladstone Industry - Community Perception 2010 Study was designed as a two stage study beginning with a computer assisted telephone interview (CATI) of 520 randomly selected households within the Gladstone area. In addition to the CATI survey, analysis of key issues was further explored through a small number of qualitative interviews (n=12) with selected respondents. The objective of the qualitative interviews was to provide further in-depth understanding and clarification of the key issues as identified by the CATI survey.

1.2. Study Location

The scope for the Gladstone Industry - Community Perception 2010 study is the Gladstone Regional Council (GRC) area in Queensland. Gladstone is a relatively small industrial city of approximately 33,300 people located in the Central Queensland region (OESR, 2010). The average annual growth rate in Gladstone Regional Council area between 2004 and 2009 was 3.2 per cent, compared with 2.6 per cent for the State of Queensland. Gladstone is the second major community in the Fitzroy Statistical Division, with Rockhampton to the north the hub of the region. The Gladstone area has been represented by a single local government authority, the Gladstone Regional Council, since 2008, when three previous shires of Gladstone City, Calliope and Miriam Vale were amalgamated. The population of the new Gladstone Regional Council area was approximately 59,644 people in June, 2009, about 1.3 percent of the state's population¹. The majority of that population was in the Gladstone and Calliope communities in close proximity to the Gladstone area.

¹ OESR Regional Profile generated 20th September 2010

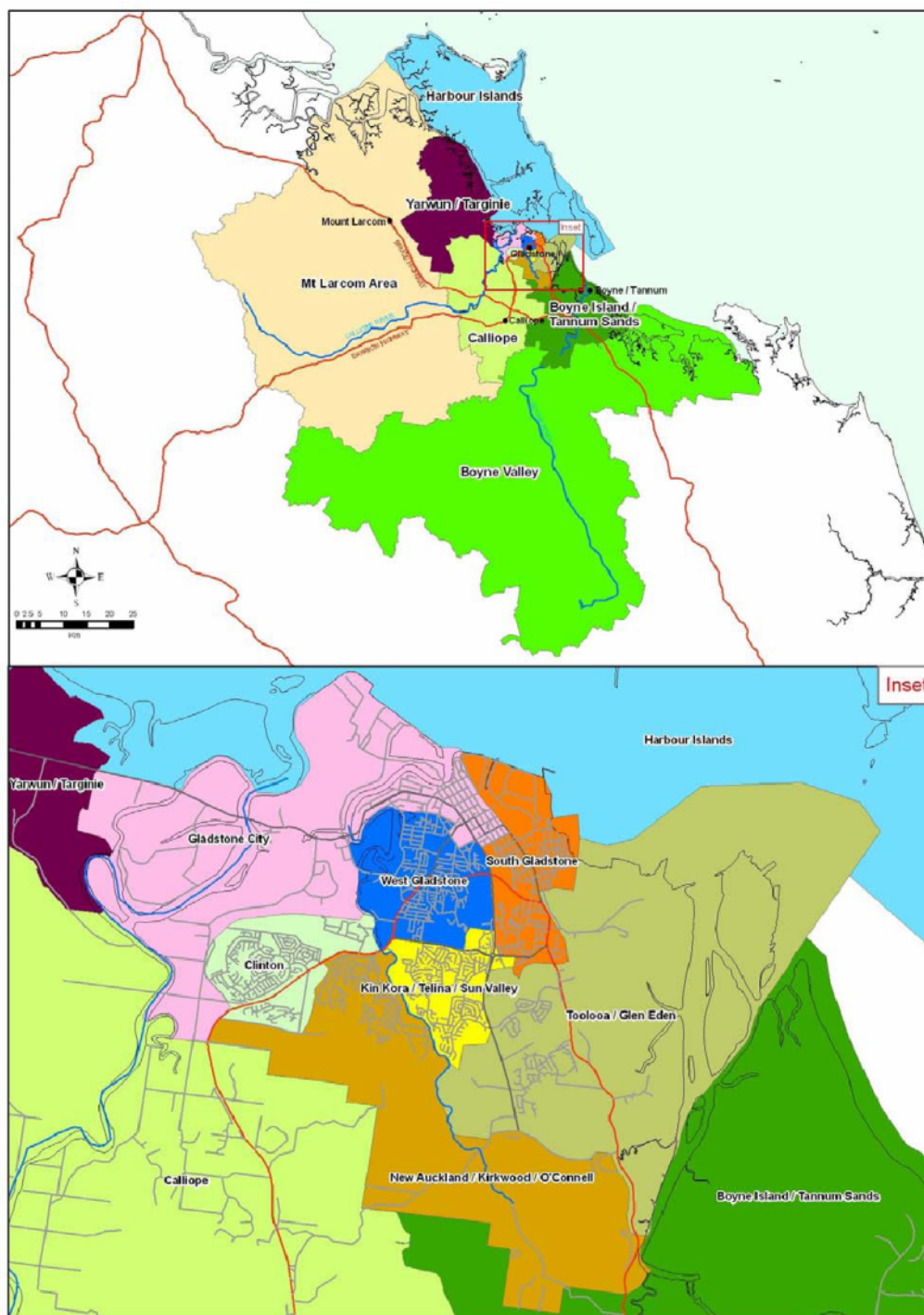


Figure 1.1 Map of study area

Source: Queensland Health, 2009

The key population and housing characteristics of the GRC area are:

- a strongly family oriented community, with a high proportion of working adults (54.8 per cent of population - 25-64 years, ERP 2009) and a high proportion of couple families with children (47.8 per cent of families, 2006);
- a lower proportion of people aged 65 years (8.7 percent, ERP 2009) or more than Queensland (12.3 per cent, ERP 2009);

- relatively low proportions of Indigenous people (3.1 per cent of total population, 2006) and people from non-English speaking backgrounds (3.4 per cent of total population, 2006) although many nationalities are represented;
- a transient population, with 49.8 per cent of the population being based at another address five years previously;
- relatively high incomes with 23.7 per cent earning more than \$1,000 per week (Queensland 16.8 per cent, 2006), although 39.6 per cent of the population (15 years and over) earns less than \$400 per week;
- a work oriented community, with a low unemployment rate (5.7 per cent, March 2010) and high labour force participation rate; with manufacturing (19.9 per cent), construction (12.6 per cent), and retail trade (10.4 per cent) the main employment sectors.
- a low proportion of households owning their own home (25.8 per cent, 2006), and a high proportion purchasing their home (41.52 per cent, 2006) i.e. a significant 'mortgage belt';
- a high proportion of separate houses (91.6 per cent, 2006) and a low proportion of flats/units (8.3 per cent, 2006), indicating limited housing choice;
- low vacancy rates, resulting in high rents for flats and decreasing housing affordability.

(Source: Social Infrastructure Strategic Plan; OESR Regional Profile 2010)

The economy of the broader Fitzroy (Statistical Division) region is dominated by mining (particularly coal), agriculture (beef cattle, cropping, cotton and horticulture), and minerals processing as primary export industries that drive regional activity. Gladstone is a major industrial centre for minerals processing, transport (port and rail) and power generation. While Rockhampton remains the major hub for service industries, the growth in Gladstone means that there is an increasing demand for services in the community, with corresponding growth in the business and public sector to provide these.

With the bulk of Queensland's export coal coming from Central Queensland's Bowen Basin, Gladstone and the Central Queensland region is well positioned to benefit from this growth. Gladstone also has strong prospects for growth in other sectors of minerals processing and energy exports, particularly with the development of the LNG industry.

The Gladstone State Development area² supports a number of key industries in refining, minerals processing, chemicals and mining. Major industries within the region include:

- Queensland Alumina Limited (QAL) – major alumina refinery, commenced in 1964
- NRG/Gladstone Power Station commissioned in 1969
- Cement Australia – major cement manufacturer, commenced in 1981
- Boyne Smelter Limited – major aluminium smelter, commenced in 1982

² The Gladstone State Development area covers approximately 28,000 hectares and is considered suitable for large scale industrial development. State Development areas were created under Section 77 of the State Development and Public Works Organisation Act 1971 and are designed to promote economic development of industrial land and multi-user infrastructure.

- Orica – major chemical manufacturer, commenced in 1990
- Rio Tinto Alcan Yarwun Refinery – major alumina refinery, commenced in 2002

The development of the Rio Tinto Alcan Yarwun Refinery from 2002 (Stage 1 followed by Stage 2) as well as other industrial developments over the same time period has generated substantial growth in the local and regional economy. This is best demonstrated by the change in population for the region, with the industrial developments since 2002 driving a sustained increase in population growth (Figure 1.2).

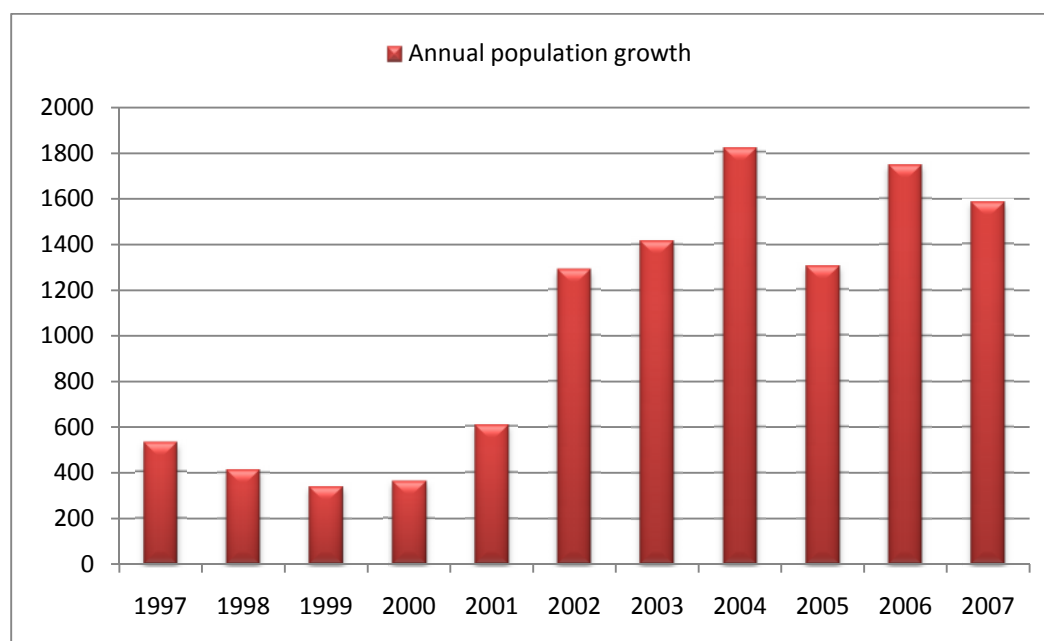


Figure 1.2 Estimated population growth in Gladstone Regional Area

Source: GAPDL (2009)

Industry development is supported by the operations of the Gladstone Port. This is the largest multi-commodity port in Queensland, and handled a record 76.48 million tonnes of cargo in 2007-08. Major commodities that were exported through the port in this year were coal (54.1 million tonnes), alumina (4.1 million tonnes), cement and clinker (1.3 million tonnes), and aluminium (0.3 million tonnes). Major commodities that were imported through the port were bauxite (13.0 million tonnes), caustic soda (1.4 million tonnes), petroleum products (0.8 million tonnes), ammonia (0.2 million tonnes) and petroleum coke (0.2 million tonnes). There has been a significant increase in total throughput at the Gladstone Port over the previous five years, with a 28.2 percent increase from 59.66 million tonnes in 2003-04 (Queensland Transport 2008). A total of 1,368 ships visited the port in 2007-08.

1.3. Study Context

Gladstone can be characterised as a developing industrial city that has significant natural endowments and competitive advantages. Its key assets are the deepwater port and associated port and transport infrastructure, helping to position Gladstone as a major industrial port in Australia.

The continued development of the mining and gas industries in central Queensland are likely to underpin the future development of the city.

Gladstone plays a key role in the Australian and Queensland economy as a state designated industrial centre. Its access to energy and water supplies, excellent industry focused heavy transport infrastructure (rail and port facilities), proximity to minerals deposits and the presence of a suitable workforce and business supply chain create significant advantages for minerals processing and other industrial activities. There has been progressive, but sometimes patchy growth in the minerals processing and chemicals industry in Gladstone since Queensland Alumina began construction of the plant in Gladstone in 1964. While Gladstone has major comparative advantages as a location for future minerals processing industries, there is still the potential for major new projects to have significant impacts on the regional economy. Possible future industrial developments in the Gladstone area include:

- Rio-Tinto Aluminium –expansion to 3.4 mt pa alumina refinery
- Gladstone Pacific Nickel – 126 kt pa nickel and 10.4 kt pa refinery
- Wiggin's Island Coal Terminal – 80mt pa coal terminal
- Gladstone LNG Fisherman's Landing - \$0.45B – 1 mt pa liquefied natural gas plant
- GLNG Santos - \$5-7B 4 mt pa LNG plant
- QCLNG - \$8B LNG plant
- APLNG – \$35B 16mt pa LNG development
- Western Basin Dredging and Fisherman's Landing development
- Shell – LNG development Curtis Is
- Boulder steel development

The Gladstone Industry Leadership Group (GILG) formed in December 2008 and comprised of five member companies: Boyne Smelters Limited (BSL), Cement Australia (CA), NRG Gladstone Operating Services, Queensland Alumina Limited (QAL), Rio Tinto Alcan – Yarwun (RTA). It is the peak industry group dedicated to increasing industry engagement, transparency and accountability. The GILG stated vision is 'a clean and healthy Gladstone where industry has a positive impact on society, economy and environment'.

Acknowledgement that the maintenance of a social licence to operate is paramount for Gladstone industry is supported by the GILG publicly committing to ensuring that the concerns of the Gladstone community over industry performance are suitably articulated and addressed. In previous years the GILG member companies have conducted individual audits of the Gladstone communities concerns and assessment of industry performance. This study represents a new collaborative approach between the industry companies, GILG and CQUniversity to independently assess and benchmark the community perceptions of industry performance and to seek input from the community on how Gladstone industry can improve its performance.

1.4. Previous Studies

The Gladstone community and environment has been subjected to considerable scrutiny by industry and government initiated assessments. Results from previous studies have highlighted and subsequently concentrated on two main areas of concern. The first is the persistent reporting of Gladstone community concerns over air quality and dust in the Gladstone area. The second is the concern that this may be linked to detrimental health outcomes in the community. For example in May 2007 a report was released by the Central Queensland Ports Authority that examined the public perceptions of industry performance in Gladstone. The qualitative study involving more than 80 participants identified as a major concern the ‘unknown impact of coal dust on their [Gladstone residents] health’.

In response to the ongoing concerns in Gladstone about industrial emissions, air quality and possible associated human health risks, as well as criticism of the EPA Air Monitoring program, the Clean and Healthy Air for Gladstone project was established in July 2007. The project is being jointly conducted by the Queensland Environmental Protection Agency and Queensland Health. The project arguably strengthens the role of the environmental regulator and the Environmental Protection Act by the inclusion of strategies designed to manage existing industries through the monitoring of environmental data, the application of best practise and the assessment of industry performance in relation to compliance with the EPA. Additional measures include assessment of community reporting and more broadly an assessment of the maintenance of the social licence to operate by Gladstone industry.

Consistent with these aims a summary report, the *Final Human Health Risk Assessment*, was released in August 2010 which examined air quality data to assess the likelihood of health risk concerns and to evaluate the air quality monitoring program. The results are publicly available at http://www.derm.qld.gov.au/environmental_management/air/clean_and_healthy_air_for_gladstone/pdf/final-health-risk-assessment-report.pdf

In brief the report concludes that;

“in response to specific concerns raised during the project, levels of particulates, metals, benzene and fluoride in the ambient air are well below health-based standards, apart from circumstances where regional dust storms or local bush fires raised particulate levels. In regard to concerns about cancers and reproductive effects, there is no obvious basis from the air quality data for concluding that the ambient air in Gladstone poses unacceptable health risks.

Where comparative data are available, the report includes the comparison of the results for Gladstone with recent results from air quality monitoring in South-east Queensland, particularly in the urban Brisbane region. This comparison does not show any notable discrepancies between the overall ambient air qualities of the two airsheds. From a health risk assessment perspective, any small differences are not considered to be significant”.

In November 2008 Queensland Health released the report, *Health assessment Phase 1: Summary of data analysis from existing health datasets*. This concluded that overall, the health of the population

of the Gladstone area as measured by key health outcomes did not show consistent variation from Queensland as a whole. Furthermore it stated that ‘deaths and cancers generally occurred at rates similar to the Queensland rates’. In general the report found that while there were some fluctuations in the rates of hospitalisation with average Queensland rates there were neither consistent patterns nor systemic conclusions that could be drawn from the data.

However, despite the number of studies that have investigated air quality and health concerns, the perception of air quality problems associated with Gladstone industry have had a particular currency in the Gladstone community and continue to be identified as areas of interest by the community. The persistency of community concerns reflects the ongoing challenge that Gladstone industry has to maintain its social licence to operate and to instil openness and trust with all members of the Gladstone community.

In an example of openness, Boyne Smelters Limited (BSL) released the *Boyne Smelters Limited Environmental Investigation Report – 30th Sept 2009*. The report details a list of public complaints (n=57) relating to industry emission from the industry complex during the period 1st January 2006 through 30th June 2009 (pp: 14-15). The complaints have been categorised with 45 attributed to known events or source (32 related to odour, 8 to emissions (including dust), and 5 relating to concerns over health impact).

Queensland Alumina Limited has collected systematic trend data on community complaints divided into five categories of dust, odour, noise, alkali, other. The summary of estimated total data from 1996 to 2010 is shown in Figure 1.3.

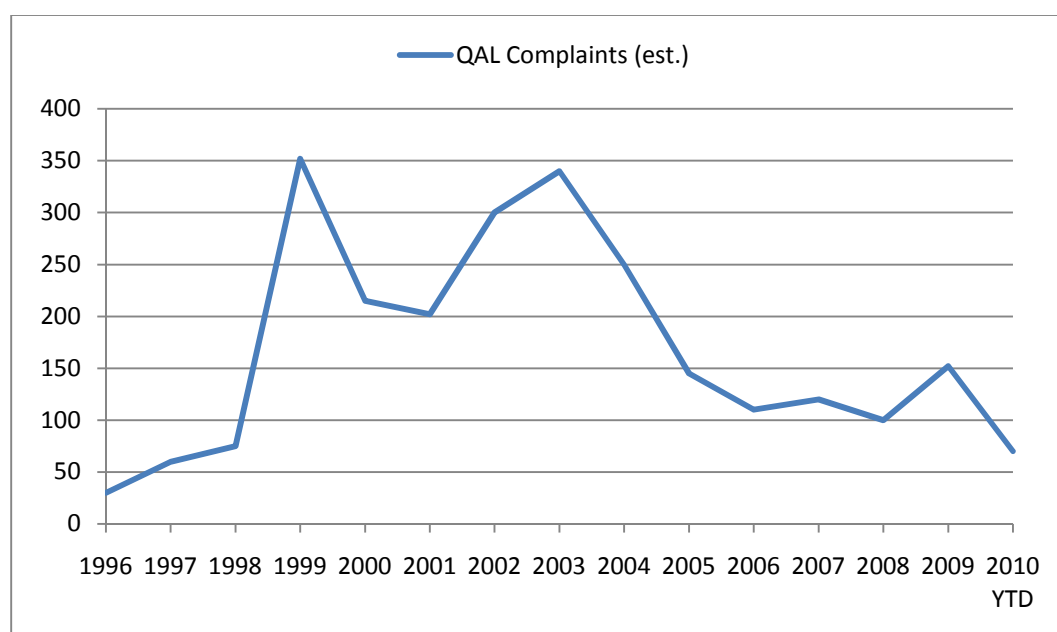


Figure 1.3 Estimated total community complaints, QAL 1996-2010

In Figure 1.4 the variability of the complaints is shown over a two year period. It should be noted that a spike in complaints can often be associated with a particular event that may not be associated with the industry site, although there are some that have been documented in QAL reports.

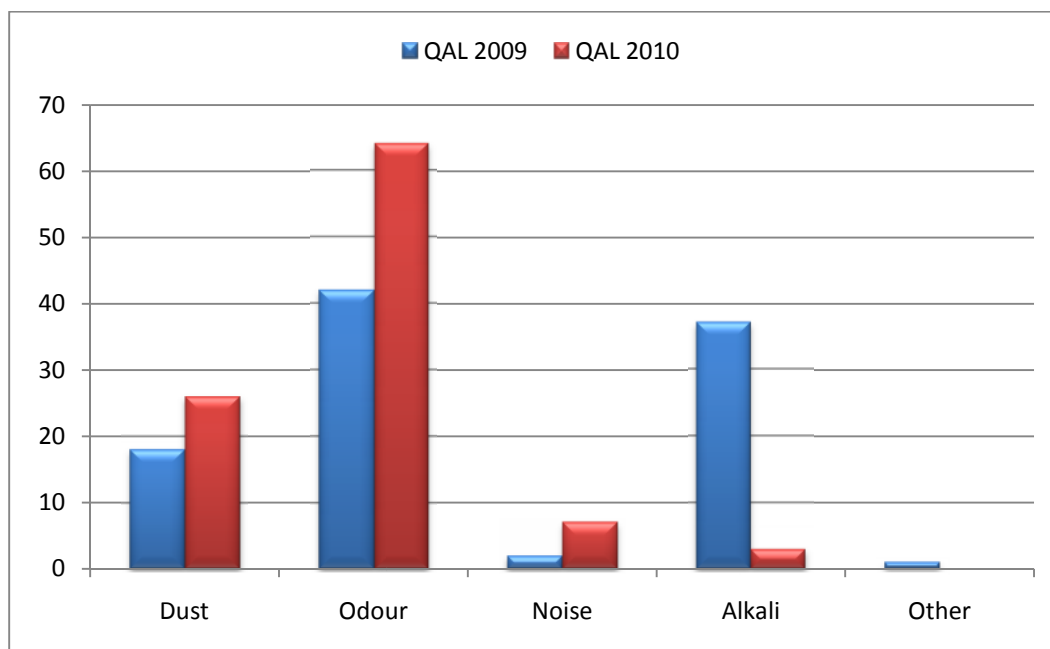


Figure 1.4 Percentage of community complaints by category 2009-10

Although there is some data publicly available on community complaints about Gladstone industry, a systematic analysis showing trend data remains challenging due to a number of key factors;

- There is difficulty in the aggregation of reported complaints data,
- Proximity of industry can skew complaints data,
- Distribution of complaints data is a problem i.e. data may relate to a single household (with serial complainant).

The feasibility of assessing quality trend data will hopefully be examined in the near future. This is relevant given the Queensland Health, 2009, *Gladstone Community Health Survey: February 2009*, in which the Gladstone community continues to express a high level of concern about 'potential impacts of industry generally, and air pollution specifically, on their health and the health of their households'.

The 2009 report states that 75 per cent of the survey respondents expressed at least some level of concern about potential impacts of industry on health and that the areas of concern were mainly related to air pollution and dust. This report provides Gladstone industry and community with the opportunity to examine these concerns in more detail and to seek ways to improve the performance of Gladstone industry in the eyes of the Gladstone community, thus revisiting the general concept of the social licence to operate and increasing the good corporate citizenship profile. This is timely considering the expected expansion of industrial activity in the Gladstone region and the increased monitoring and evaluation of industry as a licensing and compliance issue set by the Queensland Government.

1.5. Study Method

The study utilised both quantitative survey and qualitative interview research methods. The study was granted ethics approval by the CQUniversity Human Research Ethics Committee on 23rd July 2010 (H10/07-127).

1.5.1 Data collection methods

A Computer Assisted Telephone Interview (CATI) household survey (n=520) was undertaken to collect data to understand the community perceptions of Gladstone in relation to the performance of Gladstone industry across a series of benchmark indicators of corporate citizenship performance. The data collection was undertaken by National Field Service a Sydney based data collection agency using sophisticated in-house CATI facilities.

The data collection commenced with a pilot study (n=20) on the 1st September 2010. The purpose of this pilot was to test question formats and question sequences, and to address any survey issues. The original questionnaire was amended slightly from the results of the pilot. The survey length was deemed too long (average response time of 23 minutes) and specific questions were pre-coded to decrease the survey length. The final average interview length was 21.34 minutes. There were also some minor adjustments made to the question order following the pilot study with the live data collection restarting on Friday 3rd September evening session. The data collection was completed on Monday 13th September.

The telephone interviews were generally made between 5pm and 9pm Monday to Friday and 10am to 5pm on Saturday and Sunday except where a specific appointment has been made. Trained interviewers carried out the data collection and were supervised at all times. On contacting the household, the interviewer initially identified themselves and the purpose of the survey. All interviews were conducted in English. A maximum of six attempts were made to organise an appointment to interview the respondent. The call back timing were organised in such a way that chances of obtaining an interview are maximised in relation to the overall sample required and could be called outside scheduled interviewing hours if required. This assisted in minimising non-response bias. As per IQCA requirements, ten percent of the work completed by the interviewers was selected at random for validation by the supervisor.

At the completion of the CATI survey a stratified sample of respondents who indicated a willingness to participate in face to face interviews were contacted and 12 interviews arranged. CEM researchers conducted the interviews in the first two weeks of November 2010. Interviewees were selected on the basis of gender and age. An information sheet, consent form and interview schedule (Appendix 3) were used to guide the interviews in which the researcher was able to explore issues of concern in-depth.

1.5.2 Sampling techniques

The sample frame for the survey was households contactable by landline telephone within the designated in-scope areas. The sample frame is bound by the local government area of Gladstone

Regional Council (GRC). To ensure an adequate representation of the population to be surveyed, minimum quotas were set to reduce age and gender bias.

A simple random sampling technique was used via Random Digit Dialing (RDD). RDD is a continuously updated randomly generated phone number database that has been designed to draw a sample on postcode level based on existing telephone exchange prefixes. The sample was randomly selected in each household by requesting the youngest male over the age of 18 years then the youngest female in the household. This method of selection is significantly more efficient and cost effective due to greater availability and also allows targeting of younger people who are difficult to sample (See Survey questionnaire in Appendix 2).

1.5.3 Response rates

The final response rate was 21%, which is considered a satisfactory survey response rate. This response rate is based only on the number of contacts we made with an in-scope actual person (does not include answering machines, dead numbers etc). It is calculated as: Completed surveys/(Completed surveys + Refusals + Terminated surveys). The response rate is related to the random digit dialling methodology. Response rates for telephone surveys have in general been declining due in part to the increased use of mobile phones and in response to survey fatigue including an increase in telemarketing. Given this background, the actual response rate is very satisfactory.

1.5.4 Accuracy of estimates

The results of this survey provide estimates of the data that would be found if the whole population was interviewed. The sampling error is a measure of the validity of the descriptive statistics that are observed in a sample. The estimated sampling error, at the 95% confidence level, for the survey sample of 520 households and a 50/50 binomial percentage distribution is plus or minus 4.2 percentage points³. With a large sample size of n=520 there is a higher probability that the responses accurately reflect the population that it is intended to represent. The sample size of n=520 means we can be 95% confident that the true opinions lie within + or – 4.2% of the current data collected. The following formulae were used to calculate the sampling error at a 95% confidence level for the survey:

$$\text{Gladstone Region sample (n=520)} \quad 1.96 \times \frac{\sqrt{.5 \times .5}}{\sqrt{520}} = 1.96 \times \sqrt{.000480} = 1.96 \times .021908 = .0429414$$

1.5.5 Data input

Data was initially analysed in SPSS⁴ (Version 17) and transferred to Excel and STATISTICA⁵ for further analysis and for presentation. The study used nominal and ordinal scales for the data collected from

³ Babbie, Earl (1989) *The Practice of Social Research* (Fifth Edition). Belmont, California: Wadsworth Publishing Company, p.A32.

⁴ SPSS (Statistical Product and Service Solutions – formerly Statistical Package for the Social Sciences) is a product of SPSS Inc., Chicago, Illinois.

the household survey. This study also used Likert-type scales in the case of ordinal data in some questions. Open ended responses were recoded into logical categories. Data analysis was performed by categorising and tabulating evidence to address the objectives of the study.

1.5.6 Data analysis methods

The study used the following techniques to understand the individual and aggregated perception about the Gladstone Region's industrial health and environment as well as relationship between different variables:

1. Descriptive statistical analysis
2. Composite index
3. Qualitative analysis

Descriptive analysis: The descriptive analysis includes the calculation of frequencies, mean (average) ratings along with selected cross-tabulations shown as percentages and graphs. The survey data was exported into SPSS version 17.0 and data outputs were prepared using Microsoft Excel.

Composite index: This can be defined as an aggregation of the GRC area health and environmental values (community perception) which collectively convey information about the quality of Gladstone Region's health and environmental condition. This is a method that combines a series of indicators in an appropriate manner. The weighted average technique is the most widely used technique of composite index. This technique can be used where the variables have different weights in terms of importance in assessing performance.

The simplest formula of this technique is: $U = Y_1X_1 + Y_2X_2 + \dots + Y_nX_n$

Where X_n is the n th variable, and Y_n its corresponding weight. This is a linear aggregation method. Here, where applicable, the 0 and 1 values have been replaced with minimum and maximum membership values. Composite index development was performed using Microsoft Excel.

Qualitative analysis: The above quantitative analysis is supported by qualitative analysis such as discourse and thematic analysis and observation following the semi-structured selected interviews.

For further details of the survey methodology see Appendix 1.

⁵ STATISTICA (ver 8) is a product of StatSoft, Tulsa Oklahoma

SECTION 2 STUDY RESULTS

The study results are presented here following an initial descriptive analysis which includes the calculation of frequencies, mean (average) ratings along with selected cross-tabulations shown as percentages and graphs. In the majority of cases the scales used in the survey were five point likert scales organised from negative to positive with one equating to less concerned/quality and five to better concerned/quality. The exceptions were: q1 self assessment of the level of knowledge of Gladstone industry and q5 rating of the liveability of the Gladstone region which are organised from negative to positive on a scale of one to ten.

2.1.1 Interpreting the data

For the Gladstone population, the sample size (n=520) is a statistically significant representation of the Gladstone population at a 95% confidence level. As the sample includes respondents who do not have any industry nearby, these results assist in understanding the viewpoints of those living near industry and those who do not. Total responses were also included to highlight differences between a particular region and the total sample population.

2.2 Survey respondent demographics

There were 267 male (51.3 percent) and 253 female (48.6 percent) survey respondents with a total of 520 valid responses. Most of those surveyed lived in a separate house (94.6 percent), of which the majority were owned or being purchased (414 or 79.6 percent), with 12.8 percent being rented on the open market. Only 12 dwellings were occupied with employer assistance. This is higher than the Queensland average with 76.5 percent of people living in a single separated house and ownership at almost 62 percent (ABS Census 2006). The Gladstone population is generally younger (33 years) than the Queensland average of 36 years. Figure 2.1 shows the age distribution of the survey respondents compared to the Gladstone region and the State of Queensland.

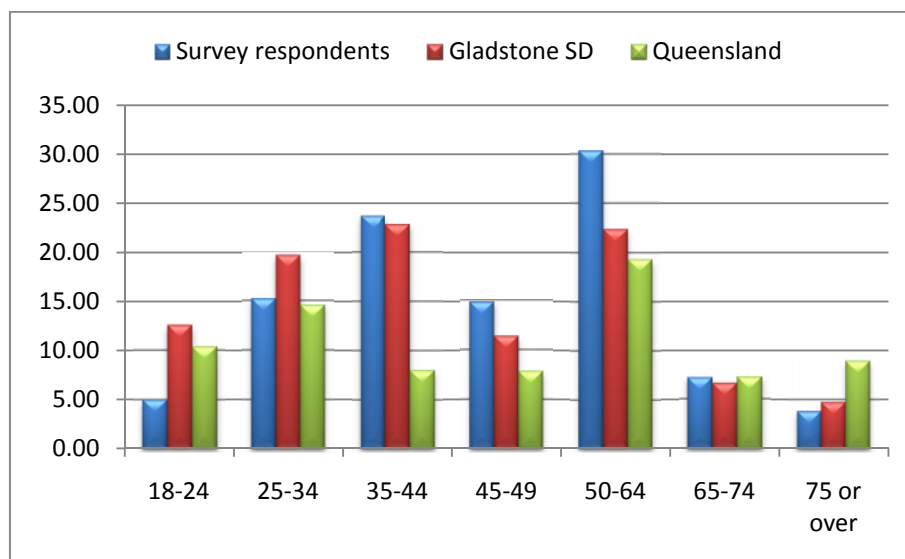


Figure 2.1 Age distribution of survey respondents, percentage

The survey respondents differed from the general population of Gladstone in some important age categories. For example, there was an under-representation of respondents under the age of 35 and an over representation in the 45 to 64 categories.

The largest education category was the respondents who indicated that their highest education level was Year 11 or lower with 178 respondents (34.2 percent), this was followed by 119 (22.8 percent) who had attained a post secondary qualification and 102 (19.6 percent) who had completed Year 12. Just over 15 percent (79 respondents) had an undergraduate degree and 7.8 percent (41) had a postgraduate degree. Within Queensland 59 percent of residents have obtained a post-secondary qualification (incl. university degrees) which is higher than the survey respondents which was slightly lower at 45.8 percent.

2.2.1 Location of survey respondents

The locality of the respondents were recorded by dividing the Gladstone region into three areas; Gladstone, Boyne Island/Tannum Sands (BITS), former Calliope Shire and Miriam Vale Shire. In Table 2.1 the number of respondents by area is compared with the regional profile data.

Table 2.1 (S3) Survey respondents by Gladstone area

Survey area	Survey respondents		Gladstone region ⁶
	Frequency	Percent	Percent
Gladstone	324	62.3	69.2
Boyne Island / Tannum Sands	120	23.1	18.9
Calliope and Miriam Vale (former Shire)	76	14.6	11.9
Total	520	100.0	

The survey also collected data on the suburb or locality of the respondents. This data was recoded and aligned with Table 2.2 This additional location data allows for benchmarking with a number of existing studies that have incorporated different geographical boundaries. Any comparisons however may be subject to a level of concordance error and will need to be assessed accordingly.



⁶ OESR Regional profile population estimates, June 2009

Table 2.2 (S4) Suburb or locality you live in (recode)

Survey area	QH Suburbs ⁷	Frequency	Percent
Gladstone	Gladstone City	5	9.8
	Gladstone South	53	10.2
	West Gladstone	58	11.2
	Clinton	52	10.0
	Kin Kora/Telina/Sun Valley	55	10.6
	Toolooa/Glen Eden	21	4.0
	New Auckland	34	6.5
Boyne Island / Tannum Sands	Boyne/Tannum	120	23.1
Calliope & Miriam Vale (former Shire)	Calliope	68	13.1
	Boyne Valley	5	1.0
	Yarwun/Targinnie	2	.4
	Miriam Vale	1	.2
Total		520	100.0

2.2.2 Length of residency and employment

The median number of years that respondents had resided in the Gladstone region was twenty years or more indicating that the survey respondents in the majority were long term residents of the Gladstone region (Figure 2.2).

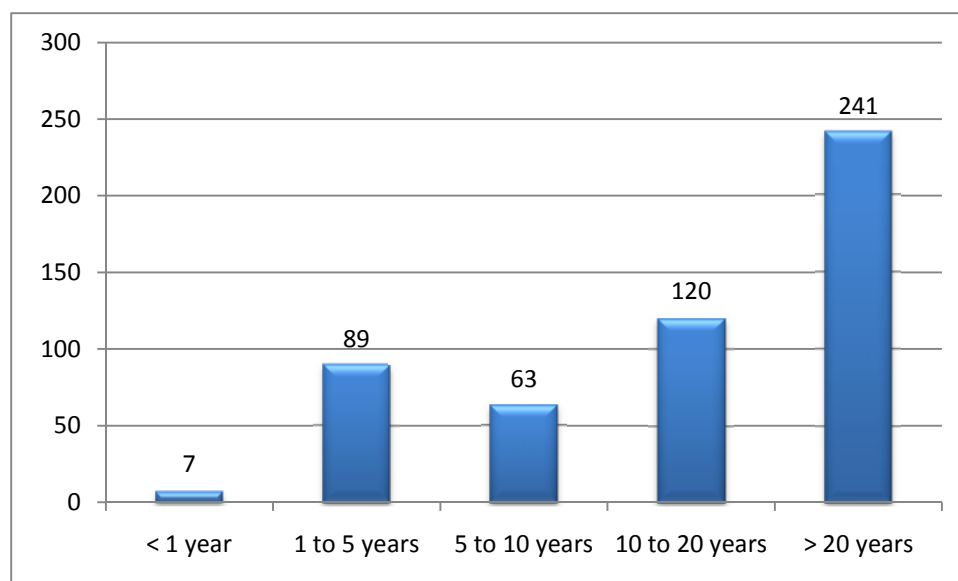


Figure 2.2 Years living in Gladstone region (n)

⁷ In order for comparisons to be made the survey respondent locations were grouped by the suburb categories used in the 2009 Queensland Health report, "Gladstone Community Health Survey".

Just over half of the respondents either worked for a major industry in Gladstone or had a family member who did so (57.12 percent). Reflective of the industrial presence in the Gladstone region 129 respondents (24.8 percent) worked directly for a major Gladstone industry, with a further 51 (9.8 percent) respondents employed as industry contractors. A quarter of the respondents (n=131) were employed in both small or medium sized business and 77 (14.8 percent) were Federal, State or Local government employees (Figure 2.3).

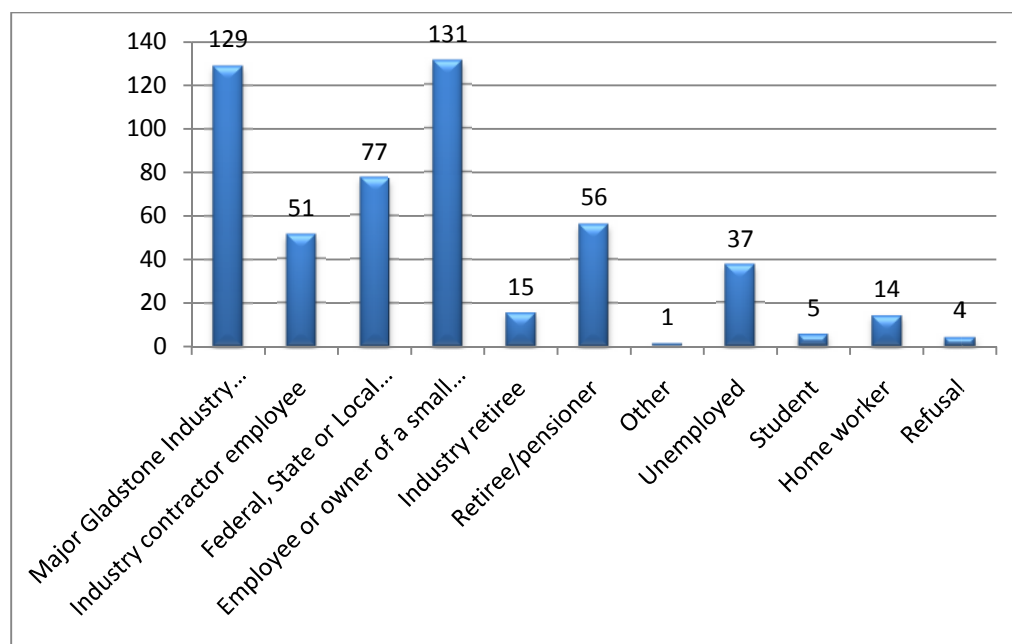


Figure 2.3 Employment status (n)

2.2.3 Knowledge of Gladstone Industry Leadership Group (GILG)

More than half of the respondents (n=265/520) had heard of the Gladstone Industry Leadership Group before the survey was conducted. As shown in Figure 2.3 those respondents aged 35 to 64 are more likely to have heard of the GILG with younger respondents in the 18-24 age group and those over 75 years of age most unlikely to have heard of the group. This fits with the GILG profile although it does suggest areas where the profile could be lifted in particular with younger Gladstone residents.

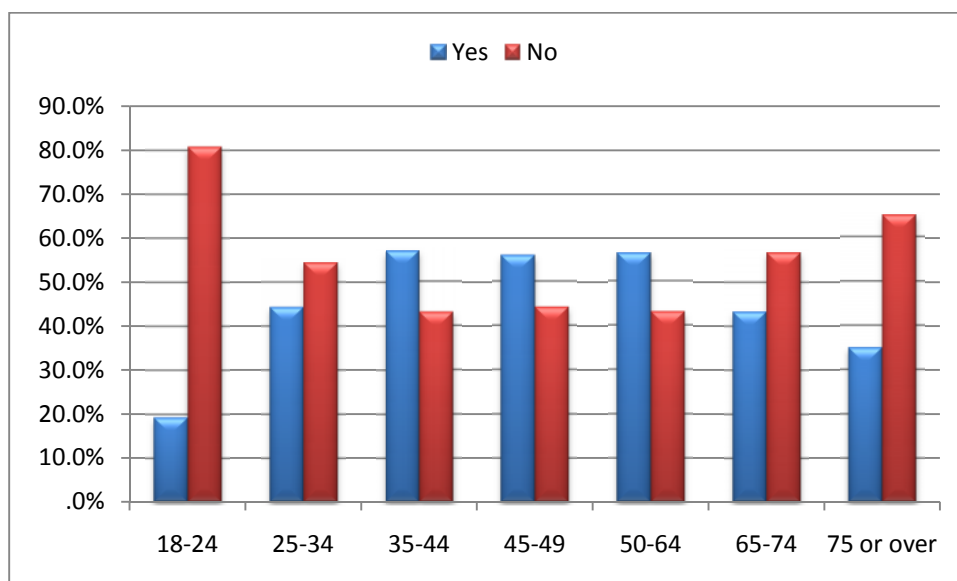


Figure 2.4 Percentage of respondent with knowledge of GILG by age

As expected those respondent who rated their knowledge of Gladstone industry more highly (greater than 6/10) were more likely to have heard of the GILG (Figure 2.5).

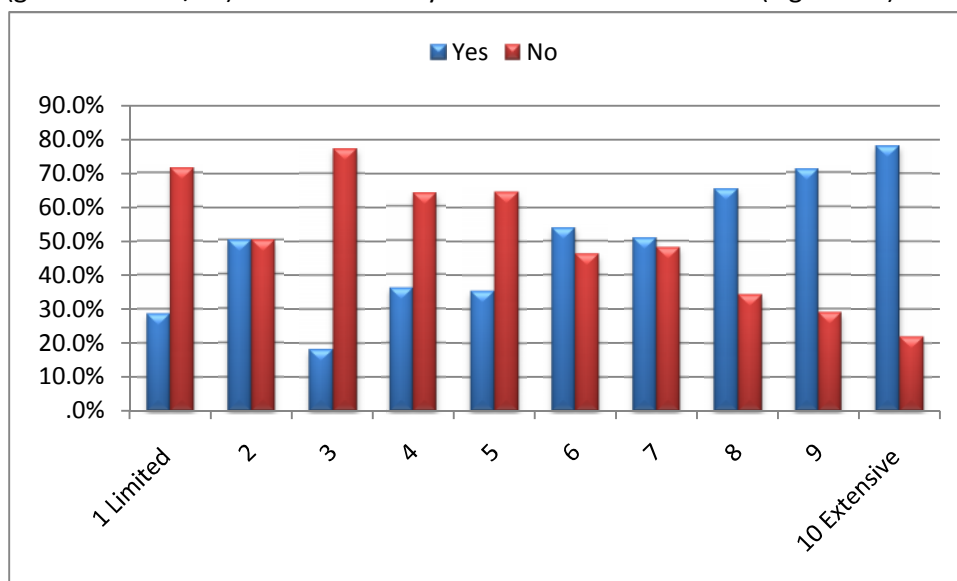


Figure 2.5 Awareness of GILG and knowledge of Gladstone industry, %

Those respondents who indicated that they had heard of the GILG were asked their understanding of the main purpose of the GILG. These responses were recoded into like categories to give a sense of how the group was perceived in the Gladstone community. The recoding process produced 216 individual responses with the highest number 68 (31 percent) of the responses describing the main purpose of the group to work with the community and industry, 45 (21 percent) of the responses related to an industry monitoring and support role, 44 (20 percent) of responses related to the provision of information to promote and support the region and business as well as providing information to the community. There were 39 (18 percent) of responses in which the respondents were unsure of the main purpose of the group or else replied with a negative or cynical response which range from a 'propaganda tool for industry' or 'self opinionated people who have self interest

at heart, not interested in the big picture, more interested in what they can do for each other and for themselves' to those who have heard the name but have no idea what the group does.

2.3 General knowledge of Gladstone Industry

The survey respondents were asked to rate their level of general knowledge of Gladstone industry on a scale of one to ten where one indicates limited knowledge and ten extensive knowledge. This question was primarily asked in order to examine if there is a connection between the level of general knowledge of Gladstone industry and the rating of Gladstone industry performance. The mean score of all respondents was 6.42/10. The ratings are shown in Table 2.3 for each level of the rating scale.

Table 2.3 (q1) Rating of level of general knowledge of Gladstone industry

	Frequency	Percent
1 Limited knowledge	7	1.3
2	8	1.5
3	22	4.2
4	36	6.9
5 Average knowledge	113	21.7
6	65	12.5
7	106	20.4
8	93	17.9
9	38	7.3
10 Extensive knowledge	32	6.2
Total	520	100.0

The level of knowledge of Gladstone industry was also examined on the basis of the location of the respondents using the mean score for each locality. This is based on the localities used in the 2009 Queensland Health study cited earlier. As can be seen in Figure 2.5 residents in the locality of Boyne Valley display a considerably lower mean score for knowledge of Gladstone industry.

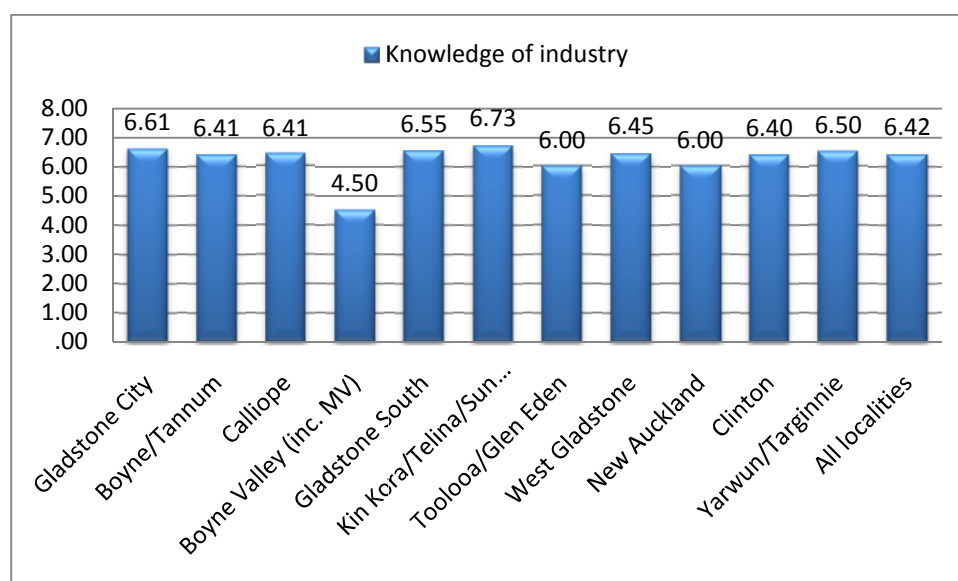


Figure 2.6 Level of general knowledge of Gladstone industry by location (Ave.)

Generally there is minimal range in the mean scores suggesting a consistent level of knowledge across the surveyed locations (Figure 2.6). Those respondents who rated Gladstone industry performance as excellent did not necessarily report a good knowledge of Gladstone industry, with the highest number reporting only 3/10 for industry knowledge (Figure 2.7). Respondents reporting a higher level of industry knowledge did however have more polarised opinions on industry performance (Figure 2.7 e.g. 8-10/10). The majority of respondents however with a knowledge rating of between 5-8/10 rated industry performance 3-4/5 (Figure 2.8).

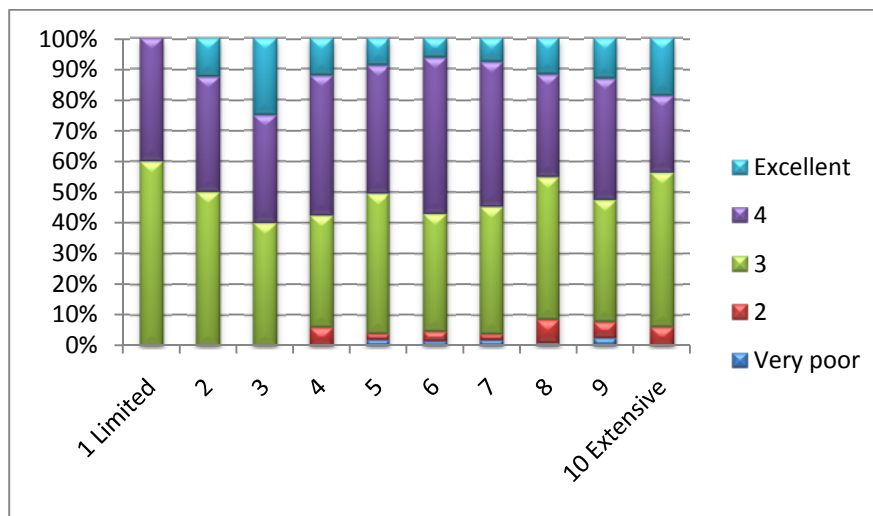


Figure 2.7 Rating of industry performance and general knowledge of industry %

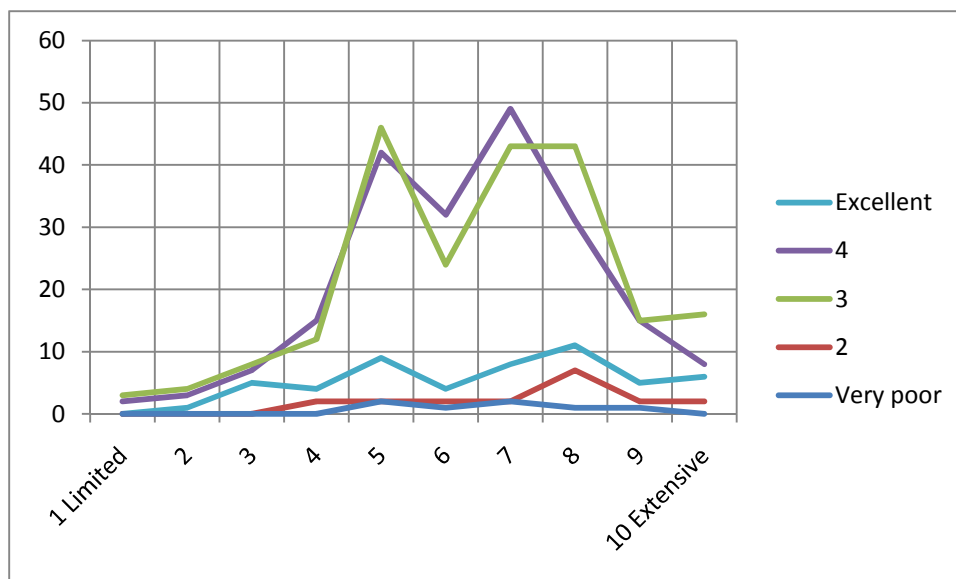


Figure 2.8 Rating of industry performance and general knowledge of industry (n)

2.3.1 Main source of information about Gladstone industry

Respondents were asked to select from a pre-defined list the main source of information about Gladstone. Respondents were given the opportunity to list another source of information if more relevant than the pre-defined list. The other sources were added to the list in preparing this report. Two additional categories were added to the list, local government and newsletter or post. The combined responses are presented in Table 2.4 which shows the local Gladstone Observer newspaper as the main source of information for the community about Gladstone industry.

Table 2.4 (q2) Main source of information about Gladstone industry

	Frequency*	Percent
Local newspaper (Gladstone Observer)	412	27.80
Family or Friends	255	17.21
Television	158	10.66
Your Employer	154	10.39
Industry employees	130	8.77
Industry Association	85	5.74
Radio	83	5.60
Internet	57	3.85
Community Groups	51	3.44
State newspapers (Courier Mail, The Sunday Mail)	36	2.43
Social networking (Twitter, Facebook etc)	31	2.09
National newspaper (i.e. The Australian)	21	1.42
Mail/newsletters etc	7	0.47
Local Government	2	0.13
Total	1482	

*Results show combined three main sources of information

2.3.2 Level of consultation by industry

An important aspect of the community's level of knowledge of industry is the rating given to the level of consultation by industry in Gladstone. The survey respondents were asked to rate the level of consultation by industry in Gladstone about Gladstone's future on a likert scale of one to five, with one indicating a very poor level of consultation and five an excellent level of consultation. The mean score of all respondents is 3.17/5.

Table 2.5 (q3) Rating of the level of consultation by industry in Gladstone

	Frequency	Percent
1 Very Poor	35	6.7
2 Poor	79	15.2
3 Average	226	43.5
4 Good	124	23.8
5 Excellent	56	10.8
Total	520	100.0

The mean scores for the rating of level of consultation by industry in Gladstone are presented in Figure 2.9 for each of the selected locations. The results show a range across the locations from 2.4/5 in the Boyne Valley to 3.5/5 in the Yarwun Targinnie area.

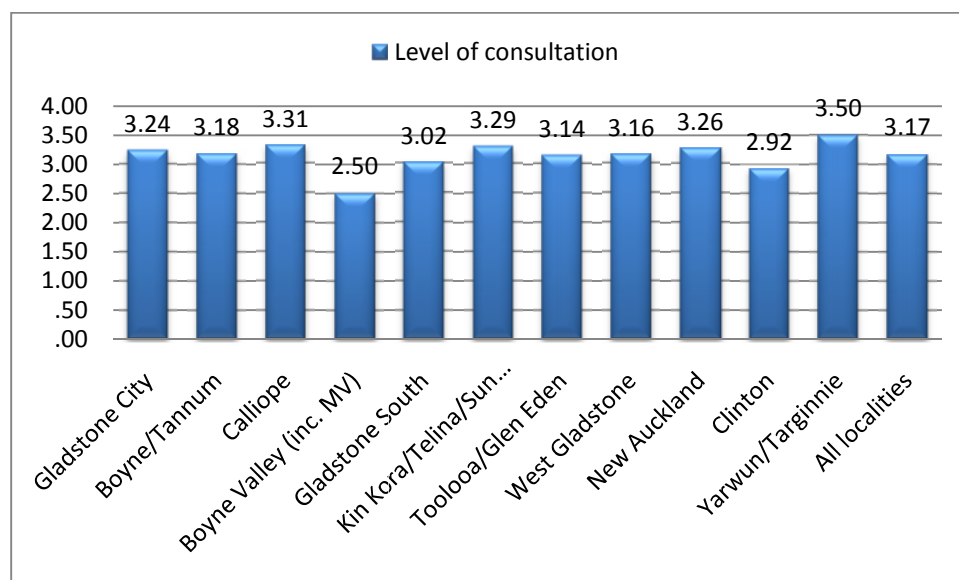


Figure 2.9 Average rating of industry consultation by locality

2.3.3 Industrial development, liveability and future priorities

An area of possible concern for the Gladstone region is the perception from the Gladstone community of the level and type of industrial development that has been occurring and the overall liveability of the Gladstone region. Six statements regarding industrial development were presented to the survey respondents who were asked to indicate on a scale of one to five how strongly they agreed or disagreed with the statements. A score of one indicates strong disagreement and five strong agreement. The objective was to obtain a considered measure of the perception of industrial development by presenting statements which ranged from positive support for the level of industrial development to negative perceptions of industrial development. The results show that most respondents felt that the overall benefits of industry development are greater than possible negative impacts and most respondents disagreed that Gladstone has too many industries (Table 2.6). However the picture is not straight forward as the second statement with which most people agreed is that 'more state government regulation is required to coordinate growth', this could suggest an underlying level of anxiety regarding the level and character of future industrial development. This will need to be examined in further detail.

Table 2.6 (q4) Agreement about industry development in the Gladstone region.

Industry development statement	Mean
Q4_1 The overall benefits of current industrial developments in the Gladstone region are greater than the possible negative impacts	3.39
Q4_3 More State Government regulation is required to coordinate growth with industry, local government and the community	3.24
Q4_6 The current level of industry development in the Gladstone region is just	3.22

right	
Q4_5 Industry in Gladstone should be more diversified	3.14
Q4_2 The Gladstone region needs to attract more industrial development	2.90
Q4_4 Gladstone currently has too many industries	2.17

The results in Figure 2.10 show the mean values for each of the statement for the selected suburbs. The chart shows a level of variability across the different suburbs of Gladstone and suggests a need to examine the data in more detail.

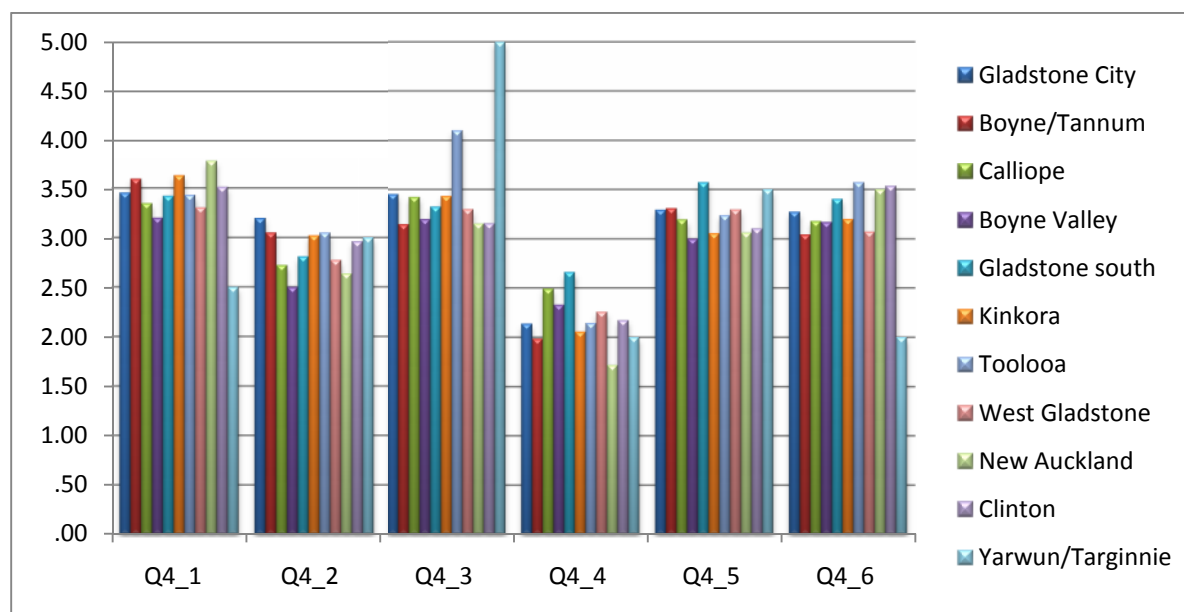


Figure 2.10 Support for industry development by suburb (mean values)

The respondents were asked to rate the overall liveability of the Gladstone region on a scale of 1 to 10 where one equals poor liveability and ten equals excellent liveability. This measure of the Gladstone region is able to be compared with previous surveys conducted in the Mackay, Whitsunday and Isaac region. The comparisons presented in Table 2.7 are meant as a guide only as the study was conducted more than 12 months apart. However the comparison is still a useful benchmark by which to rate the progress of the Gladstone region. Further examination of the liveability performance of the Gladstone region and the role industry plays is recommended in future studies.

Table 2.7 (q5) Comparison of overall liveability rating (0-10)

Rating of overall liveability	Mean
Whitsunday Regional Council	7.57
Mackay Regional Council	7.43
Gladstone Regional Council	6.71
Isaac Regional Council	6.67
Bowen Basin mining villages	6.59

The liveability rating is also presented by the mean scores of the surveyed suburbs indicating areas where performance is rated higher than others. By locality the rating of liveability in both Boyne Valley and in Yarwun/Targinnie is the lowest in the Gladstone area. Intuitively, this makes some sense as these residents have chosen presumably through preference, to reside in rural locations where there are fewer facilities than in the urban areas (Figure 2.11).

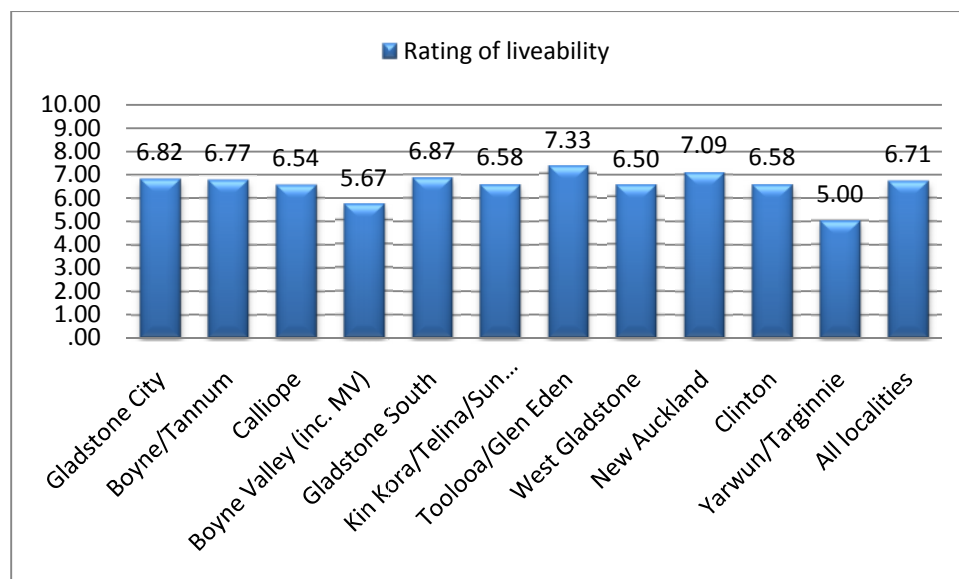


Figure 2.11 Comparison of liveability rating, mean scores

As well as obtaining a measure of the liveability of the Gladstone area, survey respondents were asked what could be done to improve the liveability of the Gladstone region. This resulted in 479 individual responses which were thematically recoded into fourteen categories. The theme which emerged most frequently from the responses was a perceived need for more funding for essential infrastructure for the Gladstone region. Transport infrastructure and the condition of key roads were identified as key priorities. Also identified was the need for planning and construction of key infrastructure to stay ahead of future industry developments in the region.

Table 2.8 (q6) What can be done to improve the liveability of the Gladstone region?

Liveability factors	No. of responses	Percent
Infrastructure	163	21.20
Recreation/Sport/Community services	126	16.38
Retail facilities	92	11.96
Medical services	84	10.92
Environmental comments	70	9.10
Industry related	58	7.54
Housing	45	5.85
Transport	41	5.33
Compliments	20	2.60
High cost of living	20	2.60
Miscellaneous	20	2.60
Education	13	1.69
Promotion of region	10	1.30

Employment	7	0.91
Total	769	100.00

Some particularly relevant quotations were extracted from the responses.

‘more money needs to be spent in the area, development, infrastructure, to be able to cope with the upcoming construction boom’

‘If the government gave more back to the community how many towns need to pay for their own airport/ they need to put more funding into the town its very under funded and we have no facilities considering we are the powerhouse of Queensland’.....‘More shopping centres/ Big business should be putting more money into the local infrastructure in Gladstone, not going towards building a new highway for Brisbane’

In order to ascertain the priority areas that Gladstone industry should consider for the Gladstone region the respondents were first asked to give a priority rating to key areas identified from previous studies. These were rated on a scale of 1 to 5, with 5 being of the highest priority.

Table 2.9 (q7) Priority areas for Gladstone industry

Priority areas	Mean
q7_10 Health services	4.46
q7_3 Infrastructure (roads, public transport etc)	4.33
q7_1 Environmental protection	4.31
q7_8 Investing in emission reduction technology	4.29
q7_6 Supporting local small to medium sized business	4.27
q7_2 Education services	4.19
q7_9 Increasing workplace safety	4.16
q7_11 Increasing employment security	4.15
q7_5 Family support services	4.11
q7_4 Recreational facilities (parks, sporting grounds)	4.00
q7_12 Employment and business opportunities for the Indigenous community	3.65
q7_7 Attracting new industries	3.47

Further to this respondents were given the opportunity to list other priority areas. There were 181 individual suggestions which were thematically recoded into 11 categories. The main two priority areas identified were infrastructure and environmental concerns (including health impacts) followed by health infrastructure concerns.

Table 2.10 (q8) Other priority areas that Gladstone industry should address

Priority areas	Responses
Infrastructure (roads, public transports etc)	39
Environmental Comments	37
Health infrastructure concerns	24
Sport/Rec/Community	18
Region/Local Support/Affordability	18
Housing cost	13

Communication and equity of benefits	13
Industry	13
Employment/Training	9
Public Transport	3
Miscellaneous	3

Some particularly relevant quotations were extracted from the responses.

‘Bus service - better hours of running so can get to work and for teenagers with jobs who don't have transport or parents to drive them around/bus service hours - 7am-6pm service instead of 9-3pm/there are no buses on a Saturday - bus on a Saturday would be great/help with a better service at the hospital - overall services’

‘Any new development should contribute to the infrastructure of the city/many projects have failed to achieve this/the revenue for government has mostly been taken and a fair percentage should be returned for the infrastructure and the continued development of this community/infrastructure’

‘One big one would be port access. By that I mean trucks. I know there is a road now but it's a busy road and it's not successful as of yet. It needs more work.’

Pollution – ‘They should be cleaner/ vehicles drop off coal and dust around town /there is a white film on the floor of my unit that comes from the powerhouse/emission coming out from chimney/ can smell QAL from here and has been going since the 60s’

‘They should be able do something about the pollution they are causing/I get coal dust in my house and have been getting it for years/No wonder there is so much sickness in the town/Gladstone is the cancer area - I had cancer of the throat and use to work in the coal industry - they say they are not polluting the town’

‘Air quality/in paper they discuss monitoring of air quality - it needs to be done properly/at my age I do not care if they poison me but when you think of young kids the air quality needs to be correct/if anyone is in breach of air quality need to make the fines sizeable so the industries will actually take notice of it/parks and gardens - industry should be contributing towards that as they are here for the long haul - you have to have a community where you can work and live/need more law and order - there is a lack of it in this area’

‘Making the air breathable/ Rio Tinto do their own testing on air pollution, so of course they are going to say everything is fine/ The air testing needs to be out sourced’

‘I would like to see them have a look at a regular environmental research studies done on all smelters and coal terminal and the results made public/ also studies on the affect of marine life in Gladstone by the large number of foreign vessels that make port’.

2.3.4 Gladstone industry, personal health and environment

As noted in the introduction to this report the concern by residents of Gladstone about the possible links between their personal health and industry activities has been a consistent issue for the past decade. While recent testing has failed to show direct correlation between industry emission and

health concerns, those concerns continue to be expressed in the general media. The results of this survey show a slight lessening of concern compared to the 2009 Queensland Health survey with 28.7% (149/520) indicating that they were not at all concerned, 21.1% (110/520) were slightly concerned, 27.5% (143/520) were moderately concerned, 13.8% (72/520) were highly concerned, and 8.7% (45/520) were extremely concerned (Figure 2.12).

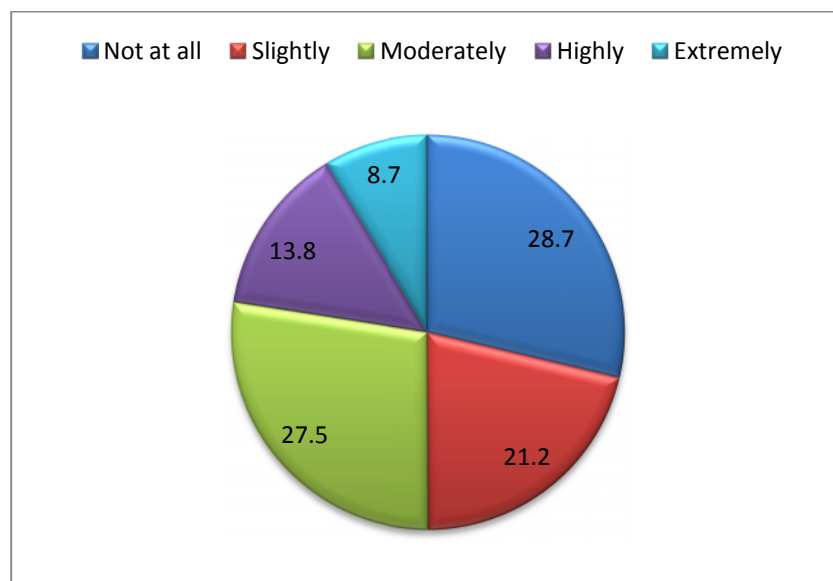


Figure 2.12 Concern that industry in Gladstone might affect your health, %

Figure 2.13 shows the comparison of results between the 2009 Queensland Health survey and the 2010 (GILG) survey. There is an increase in those who are 'not at all' concerned as well as those who are 'moderately' concerned. In 2010 there is a decrease in those who are highly or extremely concerned.

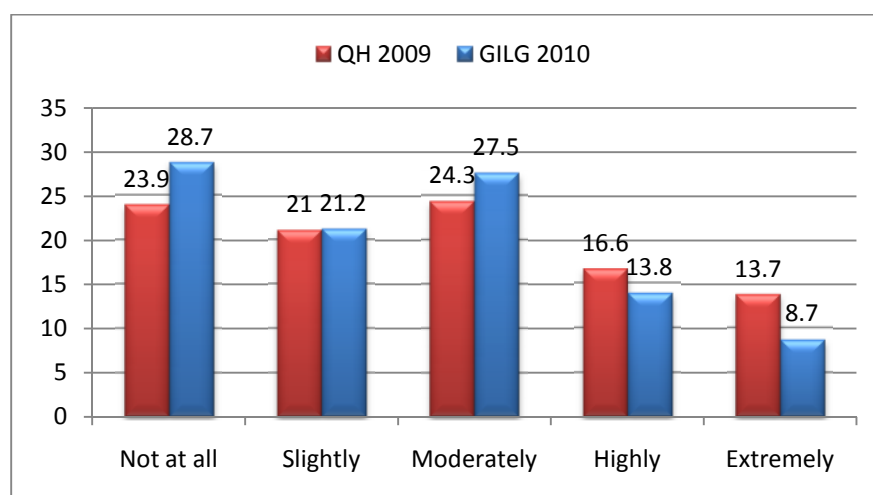


Figure 2.13 Qld Health Gladstone Community Survey 2009 and GILG 2010

Industry emissions have been cited in previous research as an area of concern for Gladstone residents. In Table 2.11 selected industry emissions are shown ranked by the highest mean score

whereby a higher score indicates greater concern. The highest level of concern by Gladstone residents was dust (Mean 3.62) followed by air quality (Mean 3.61).

Table 2.11 (q10) Level of concern for selected industry emission for the Gladstone region.

Industry emissions	Mean
Dust	3.62
Air quality	3.61
Chemicals	3.50
Water pollution	3.40
Fumes	3.28
Land pollution	3.24
Odour	3.04
Noise	2.65
Radiation	2.57
Lighting	2.36

The majority of responses indicating other industry emissions of concern were seen to be associated with the QAL facility (odour, caustic vapour) and the prevalence of coal dust from the rail and port facilities within close proximity to the Gladstone CBD area (Table 2.12).

Table 2.12 (q11) Any other industry emissions

Industry emission	No. of responses
Alumina refining (odour, caustic vapour)	17
Coal dust	12
Nitrous oxide, carbon and sulphur dioxide	6
General emissions/concerns	6
Concern for nature (land clearing & water pollution)	5
Fluoride	3
Traffic emissions	3
Carcinogens, heavy metals	3
Visual pollution	3
Shale	2
Red mud dam	2

The respondents were asked to identify industry emissions they were concerned about and if possible identify the industry that they associated with the emission. A total of 537 responses were coded from the data into the categories shown in Table 2.13. Some responses were grouped

together such as odour and fumes as well as a list of chemicals. A significant number of emissions were not able to be categorised (208/537) and there are also a number of emissions that were attributed to all or some of the Gladstone industries and these were coded as 'industry not defined'.

Table 2.13 (q12) Industry emissions concern and associated industry

Company	Not defined	Odour/fumes	Dust	Caustic emissions	Air quality	Other chemicals ¹	Noise	Company total
QAL	72	69	26	41	28	5	3	244
BSL	31	5	4	0	6	9	0	55
GPC	14	0	15	0	1	0	1	31
RTA	10	5	1	2	2	1	0	21
NRG	21	4	1	5	12	8	0	51
CA	4	0	1	0	0	0	0	5
Orica	3	1	1	1	2	4	0	12
Coal (industry)	13	0	39	0	0	0	1	53
LNG - new industry	4	0	0	0	0	0	0	4
Industry not identified	36	3	3	1	9	8	1	61
Total	208	87	91	50	60	35	6	537

The next survey question looked at the main reason respondents were not concerned about the current air quality in the Gladstone region. There were 109 responses from respondents who rated air quality (q10a) either 2 or less out of five, indicating they were not concerned. The approach to the issue of air quality in this survey differs from previous studies in that we were interested in the reasons why some Gladstone residents were not concerned about air quality in the Gladstone region instead of focusing on the negative concerns. Primarily this approach was adopted to better understand this issue that has been dominant in the local and state media for considerable time. Despite the media attention which focuses on air quality concerns, Gladstone has been growing with more people making apparent trade-offs and rationalising the locations they choose to reside in.

Responses to this question range from individuals who suggest a resignation with regards to reported air quality concerns. This resignation is reflected in comments that suggest that you just have to put up with it, for example,

'Gladstone is just like any other industrial based city/if you choose to live in close to industry you will have pollution', and

'I'm not concerned because I'm up here for the money and if you're not up here for the money then you shouldn't be'.

Other respondents suggested that it is worse in other locations they had lived in or read about,

'It doesn't affect me in any way/I don't think there's a problem. I think it'd be worse if you lived in Melbourne!'

'I lived in Sydney for 6 years/ compared to major cities I don't believe there's a major concern here/I don't have asthma or health concerns'.

Another group of respondents acknowledged that some residents may have concerns with air quality in the region but for them it was not a problem due to their current location; they could see possible air quality issues but were too far away to be impacted or they had read that it was a problem but had not actually experienced any problems personally.

Significantly though a large number of the respondents had no concern about air quality either through their personal experience, such as;

'my wife has asthma and she is fine, and it is under control by industry/My wife has asthma, and I think it was worse in Brisbane when we were living there/ The emissions are under control, and the regulations placed on industry, I think we are fine'.

Equally though respondents cited some form of evidence drawn from some authoritative source such as the local council, state government department (DERM, Queensland Health), or independent source to support their belief that there were no reasons for concern over air quality in the Gladstone region. For example the follow quotations are drawn from the survey data;

'Because I read a report by the regional council that said that it is the same quality as South East Queensland/ I know the writer of the report and I trust their integrity',

'The amount of studies done over the last 10 years have shown no problems',

'They have just conducted air quality tests from 5 or 6 stations - it is in the newspaper/I am not the one taking the samples or pushing the buttons/validated by second organisation or authority',

'Because they have conducted studies that state we are no more or less off than living any where else. Knowing this makes everyone on an even par',

'Cause the clean health Gladstone projects proved otherwise'.

A few respondents were a little more circumspect. While they were not really concerned with the issue of air quality and felt that Gladstone was better than other localities they still had concerns over other industry emissions which may be more damaging. For example,

'I think we've done testing and it's shown that it is of quality, and I think there are other things such as dust and stuff that is heavier and of more concern,and generally in other places they have worse pollution than we get here'.

In Figure 2.14 the level of concern is shown for two of the industry emissions; odour and fumes. The mean values are shown for each of the Gladstone suburbs.

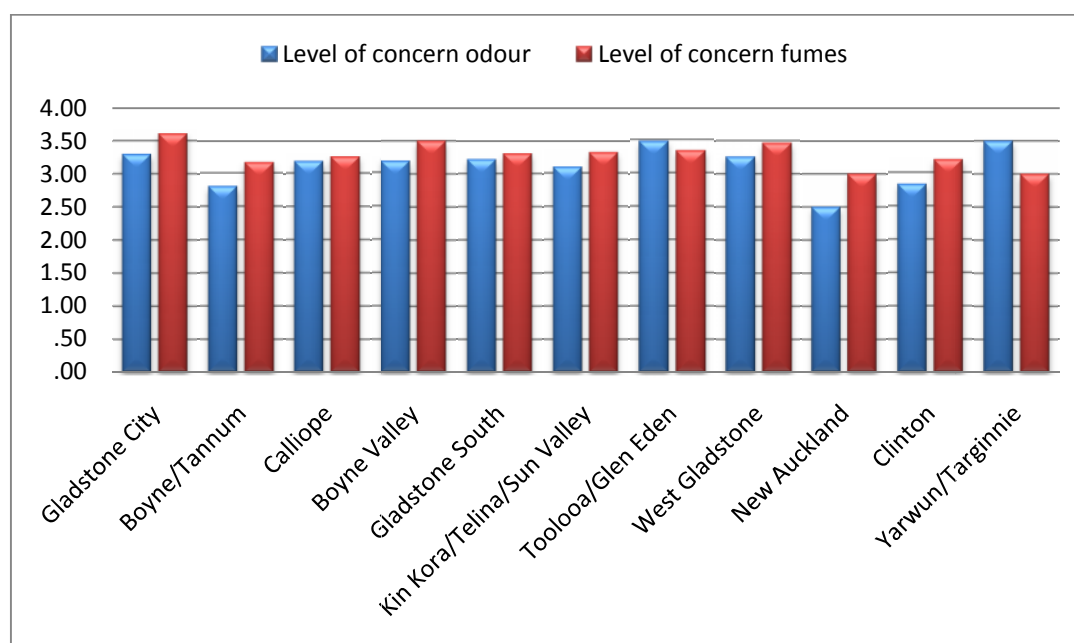


Figure 2.14 Level of concern (mean values) for odour and fumes by suburbs

Most of the respondents indicated some level of concern regarding odour and fumes⁸, with the latter being of more concern. The concern with fumes was supported by comments that the fumes were more visible so even those respondents who were not directly affected by the fumes could see the fumes and associate concern.

2.3.5 Gladstone industry and corporate citizenship

This section of the study looks at the performance of Gladstone industry across selected indicators⁹ of good corporate citizenship. The performance rating is drawn from the perception that Gladstone residents have of Gladstone industry performance. These rating look first at all Gladstone industry and gives the opportunity for respondents to list any other indicators of good corporate citizenship that should be included in future evaluations of Gladstone industry performance. Industry performance is also measured for the specific industries of;

- BSL/ Boyne Smelter Limited
- CA/Cement Australia
- NRG/Gladstone Power Station
- QAL/Queensland Alumina Limited
- RTA-Y/Yarwun
- Orica

The general perception of Gladstone industry performance was undertaken by asking respondents to rate the level of which they disagreed or agreed with statements that reflect attributes of good

⁸ Fumes were used as a general descriptor in the study by participants and was not based on any specific criteria

⁹ The selected indicators are based on legacy indicators from previous industry based performance evaluations. These were used for comparison purposes with previous surveys.

corporate citizenship. A five point rating scale is used with one (1) indicating the respondent disagreed with the statement about Gladstone industry performance and five (5) which indicated agreement with the statement. Table 2.14 shows the mean score for each of the attributes ranked from the highest (agree) to lowest (disagree). The highest rating is given to Gladstone industry having a long term commitment to the Gladstone industry (Mean 4.02), followed by the industry being known locally as a good employer (Mean 3.99). The lowest two ratings are that Gladstone industry communicates clearly and openly with the community (Mean 3.18) and is trustworthy and believed by the local community (Mean 3.07). While these attributes score the lowest rating, average ratings for these categories are relatively high, scoring over 3 out of 5. This indicates that more people agree that Gladstone industry is performing well than disagree.

Table 2.14 (q14) General perception of the performance of Gladstone industry¹⁰.

Corporate citizenship indicators	Mean
Has a long term commitment to the Gladstone community	4.02
Is known locally as a good employer	3.99
Supports the local community	3.86
Generally, has a good reputation within the region	3.67
Acts in line with the expectations that I have of Gladstone industry	3.50
Is concerned and sensitive to the needs of the local Indigenous communities	3.47
Demonstrates care for the local environment	3.30
Communicates clearly and openly with the Gladstone community	3.18
Is trustworthy and believed by the local community	3.07

Survey respondents were also given the opportunity to list any other requirements of being a good corporate citizen that should be considered when making an evaluation of Gladstone industry. After the responses were separated into 'like categories', there were 259 individual responses with the highest number (n=54) related to the quantity and quality of community support given by Gladstone industry (Table 2.15). While most of the comments simply referred to providing local community support others elaborated on the need to account for the quality of support beyond simple dollar terms. For example one respondent commented,

'they seem to get behind the local sort of events around the place/they have their little pet organisations - they will give some funding to one organisation and not to others/like to see them get behind sporting organisations and junior sport - a lot of those services are very second rate'.

Other comments related to the need to maintain high environmental protection standards. This extended to ensuring a high level of transparency in their actions and that this was communicated clearly and included a commentary on the state of local infrastructure and future planning. One of the comments gives a good insight into how residents are aware of the global implications that can impact on local industry and suggests a more collaborative approach is needed by industry.

¹⁰ A statistical test for linearity indicates that there is a relationship between these factors at the 0.05 level however the relationship is not statistically significant at the 0.05 level.

‘They could be more upfront about the ecological impacts they are having on the town as well the extraction sites for their raw materials/ they could be more upfront about how much of the wealth they generate is staying in the town rather than going overseas or to wealthy shareholders/they should also make the town more aware of how volatile their industries are in the global context and what their actions will be in the event of economic disruptions’.

The need for an open relationship between industry and citizens that included being upfront with the risks involved in operations, admitting if things go wrong and openly discussing the trade offs involved was expressed. There is a weariness of ‘corporate spin’ being used.

Table 2.15 Requirements of being a good corporate citizen

Corporate citizenship attributes	Responses
Quality community support	54
Better environmental practices	47
Transparency (accountability and openness)	35
Infrastructure	32
Information/communication	29
Employment	25
Satisfied with current situation	24
Miscellaneous	13
Total	259

However, despite a significant level of criticism of Gladstone industry and an equally high number of suggestions for improving the performance of Gladstone industry, there is a very high rate of acceptance of Gladstone industry. Respondents were asked to consider both the benefits and the impacts of Gladstone industry on the Gladstone region and then rate their acceptance of the industry. A score of one indicated that they did not accept Gladstone industry and a score of five indicated complete acceptance. The average score was 4.29/5. Only two respondents indicated that they did not accept Gladstone industry with 81.5 percent (421/512) rating their acceptance 4-5/5. As can be seen in Figure 2.15 the acceptance of industry is uniform across the Gladstone region with just a slightly lower rating for the Yarwun/Targinnie area.

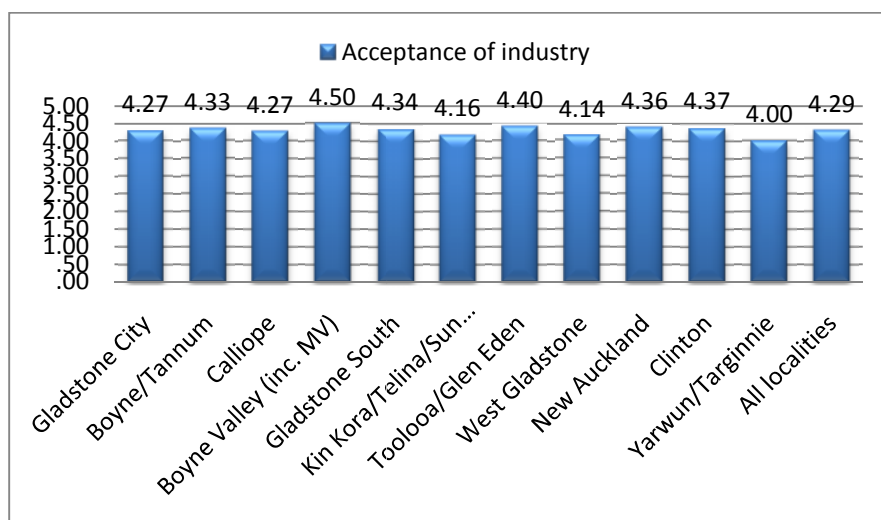


Figure 2.15 (q16) Rating of acceptance of industry by suburb.

The main industries in the Gladstone region were rated on their overall level of performance as good corporate citizens. In Figure 2.16 the range of scores are shown as a percentage of the total company score for each of the selected companies.

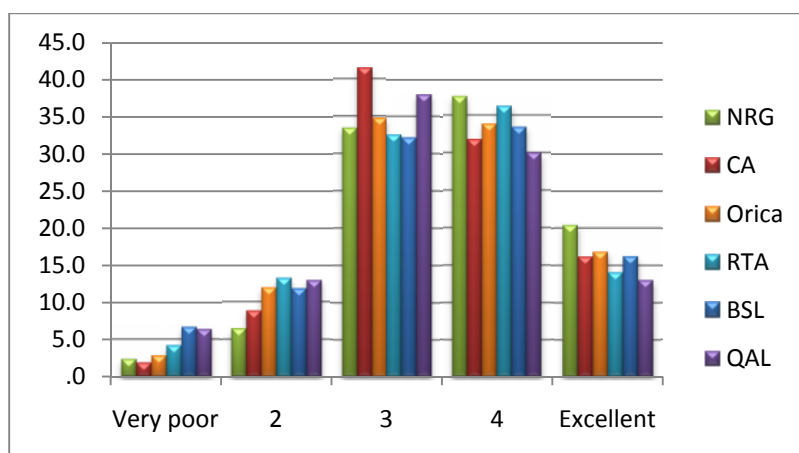


Figure 2.16 Performance as corporate citizen as a percentage of total company score

Five Gladstone industries¹¹, NRG/Gladstone Power Station, CA/Cement Australia, RTA-Y/Yarwun, BSL/Boyne Smelter Limited, and QAL/Queensland Alumina Limited were subject to evaluation across six key measures of good corporate citizenship. By averaging the scores for each measure NRG scores the highest with 3.24/5, followed by RTA-Y with 3.06/5, then QAL with 3.05/5, with BSL (2.97/5) and CA (2.85/5) scoring less (Table 2.16). The variability across the measures suggests that care should be taken when reporting the aggregation of the scores and that the process of examining the data in greater detail and contextualising the findings for each industry and local community is advised.

¹¹ Orica was not included in this part of the performance evaluation.

Table 2.16 (q18-22) Measure of good corporate citizenship, selected industries

Good corporate citizenship indicators	NRG	CA	RTA-Y	BSL	QAL
Has a good reputation	3.63	3.22	3.20	3.21	3.21
Demonstrates care for the environment	3.23	2.82	3.10	3.02	2.90
Communicates clearly and openly with the community	3.23	2.77	3.15	3.04	3.20
Is trustworthy and believed	3.37	2.99	2.97	2.88	3.07
Is known as a good employer	3.69	3.17	3.17	3.24	3.56
Is concerned with and sensitive to the needs of the Indigenous community	2.31	2.14	2.80	2.47	2.42
<i>Average score</i>	<i>3.24</i>	<i>2.85</i>	<i>3.06</i>	<i>2.97</i>	<i>3.05</i>

Figure 2.17 shows the differences in the mean scores for each selected industry for each measure of good corporate citizenship. Consistently across all of the selected industries the average rating for being '*concerned with and sensitive to the needs of the indigenous community*' scores the lowest while the highest scores for each organisation are either for being known as a good employer (NRG, QAL, BSL) or for having a good reputation (CA, RTA-Y) (Table 2.16).

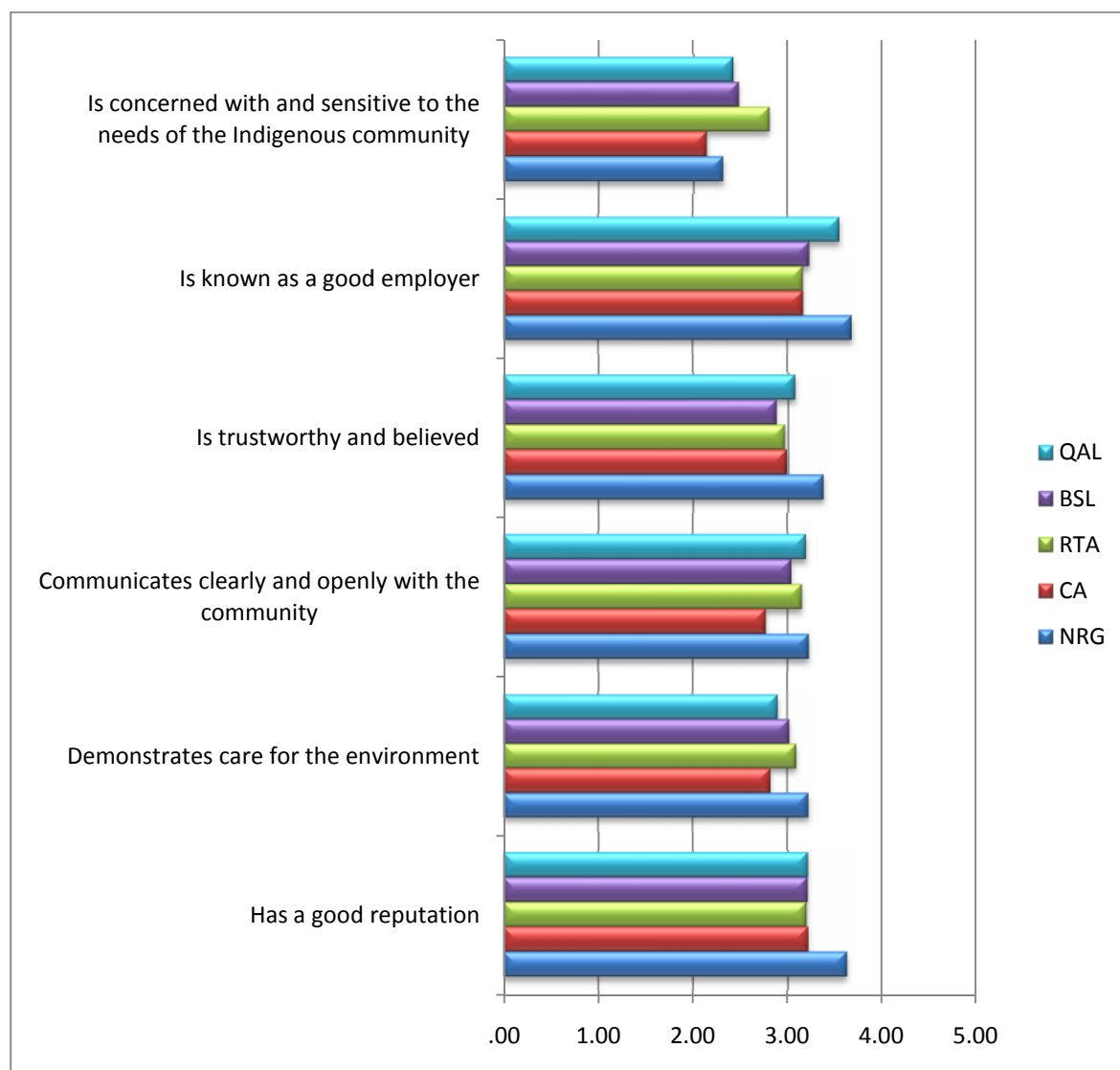


Figure 2.17 Measure of good corporate citizenship, selected industries (Ave. scores)

Survey respondents were given the opportunity to make comments regarding Gladstone industry (Survey question 31). This resulted in 208 responses which were grouped into nine areas of concern (Table 2.17).

Table 2.17 Areas of concern regarding Gladstone industry

Areas of concern	No of responses
Industry performance	59
Environmental	34
Infrastructure	32
Positive feedback	23
General	17
Social/Community	15
Employment	14
Health concerns	8
Communication	6
Total	208

While there is a diversity of views on the current state of Gladstone industry there is a strong acceptance of the important role that industry undertakes in underpinning the Gladstone region's economy and the clear links with employment opportunities for current residents and for future growth of the region. In straight forward language,

'Gladstone lives on industry /there is major industry that employs lots of people /its good for the community/its how people make there living and are able to buy there houses'....and

'Gladstone wouldn't be on the map if they didn't have industry/ I don't know why people complain, the small business rely on people in town, and they need employment, which is big industry'.

However this acceptance by the majority of those who commented is qualified by a number of important factors. For example there is acceptance of current industry but also concern about the new LNG sector;

'the point that I would like to make is that Gladstone industry up until now have been corporate sensitive. I don't believe the next generation of companies coming to Gladstone will keep this up'.

There were two issues that produced more negative feedback. This was in relation to the impact on the environment of Gladstone industry and the other the timely provision of infrastructure such as health facilities, employment training and education.

In regards to the environmental impacts of industry there were some concerns expressed of existing industry practice such as,

'I don't believe the air quality reports/they're benchmarks are not a true reflection of the air quality/you only need to go to certain areas to see the houses affected by the coal dust'.

The development of the LNG industry also drew comment,

'Bringing in the new LNG is a bit of a worry/ dredging the harbour and destroying seagrasses, their boats blocking the harbour/ environmental impacts on Port Curtis - there was no community consultation/ worried about explosions as it'll be close to town/ impacts on dugongs', and

'We're on verge of having a gas industry here and there needs to be more stringent rules on environmental issues and pick up their act before they come here'.

Two main points can be gleaned from the comments. First while there is anxiety over the ongoing industrial developments in the Gladstone region positive actions can be adopted to assist industry and give support to the community. As this comment suggests, cumulative impact planning is an important step in illustrating a professional best practice approach to future development and ongoing monitoring of industry performance.

'I suppose the region wouldn't be as developed as what it is if it wasn't for the industry/ but the impacts that they've had on the industry are detrimental/ but they've got to look as a collective on what the environmental impacts are/ right now they're only looking at legislation to see what they are allowed to emit/ they need to get together and reduce what they put out/ when you incorporate all of them together, 20% from each company adds up to a lot/ especially in a minority area where many small companies together contribute to more then what one company would produce in a concentrated area'

The second area relates to the perception that industry is only concerned with bottom line compliance with government set environmental standards that rely upon community pressure to ensure that they are adequately set and acceptable with community standards. The view was put forward that industry should move beyond simple compliance to become leaders in this area. For example,

'Getting to the level of government standards, get above government standards, what pollutants they are putting into the air by the industries which may bring down the cases of cancer in our town'.

The request for more infrastructure is similar to producing a 'wish list' for regional communities who often see extensive infrastructure developments in major urban centres (or have relocated from those centres) and feel aggrieved at the relatively slow progress in regional locations. Respondents to the survey expressed the view that industry,

'should put more back into the community to make it easier for ratepayers/industry should match infrastructure with the size of their plant/a plant of \$30 billion - they will put stress on roads, housing requirements etc - they should fund more and put in a fair share - the tax payer should not have to fund this when industry profits often go overseas'.

Soft and hard infrastructure for the health sector is seen as a high priority as with infrastructure to support a greater diversification of economic activity within the region. In addition the timeliness of infrastructure is mentioned, in particular, the timely supply of housing to help moderate housing costs.

Although not reflected in Table 2.17 the issue of communication was predominant in most of the commentary categories and focused on the need for good quality communication between industry, the community and governments. The comments ranged from straight forward suggestions such as,

'it would be beneficial if we had more information about what each industry does and how they support the community / i.e. a pamphlet indicating how each industry is supporting the community',

to the perceived need for evidence that community communication is effective and produces outcomes that improve the situation between industry and the community.

For example;

'Industry doesn't do a good job of working and engaging with local community. Any engagement needs to be genuinely listened to. Community concerns are ignored the risk is their level of acceptance of industry will start to wane. So consulting people has no value, no genuine nature. That is actually a real risk. New and current industries need to be genuine and listen to community concerns. Benefits could easily be turned around in the absence'.

This final comment presents a good summary of the feedback from the community and suggests a way forward for industry,

'we already have a committee of industry leaders to improve the community present/ future we are talking about 5000 workers - communicating between now and the future is very hard/present commitment - our industry leaders is admirable, respectful/for future development I would hope that

the state government and all parties hold consultation both with local industry and local government/please contribute to the local infrastructure’.



2.4 Qualitative interviews

The final question in the survey questionnaire invited respondents to indicate if they were willing to participate in further research regarding the performance of Gladstone industry. The further research involved participating in a face to face interview with a Centre for Environmental Management researcher in order to elaborate on key themes drawn from the survey results. An affirmative response was received from 140 of the 520 survey respondents and of those a total of 12 people were interviewed over a period of two weeks.

Those interviewed were from different age and gender cohorts. There were more males (7) interviewed than females (5). Interviewees resided in different localities in the Gladstone region, including Mt Larcom, Calliope and the city of Gladstone. All interviews excluding two occurred within the homes of the interviewees at a time that was appropriate to them; one interview took place at a school where the interviewee worked and the other interview took place at the local marina. Interviews ranged in time from 45mins to 100mins. Several interviews occurred during the evening to accommodate people in the workforce.

The interviewees have resided in the area for different lengths of time; two interviewees were born in Gladstone, and two had moved to Gladstone when they were children – parents of both interviewees moved to Gladstone for employment. Time frames of residence varied between 4 and 30 years. Seven interviewees moved to Gladstone specifically for work and one moved from an inland regional location to live near the ocean (e.g. Sea-change).

When asked how long they intended to stay living in Gladstone, seven interviewees had no intention of leaving the city; one was dependent upon the employment for her grandson; one would like to move to another Queensland coastal location but would stay in Gladstone for employment; one wanted to move as soon as possible due to ill health and not finding the community a friendly place; one would stay until the 'kids were finished school' in 12 – 15 years, and one was undecided.

Comments ranged from, *"Another fifty years – I just love it"* to

"We are getting out as soon as we can because our health has been crap since we have been here; it's not a very friendly town. We just don't like it. It is exceedingly clicky, we lived elsewhere and it was hugely transient but not clicky. It is strange here".

As indicated from this comment the participants had varying opinions of Gladstone and this hopefully assisted the authors to question their assumptions regarding the analysis of the survey data and develop a more nuanced view of Gladstone industry performance.

2.4.1 Key themes

One of key aims of the qualitative interviews was to obtain a better understanding of the ratings used in the survey questionnaire. The interviews sought clarification of the scores given and attempts were made to connect particular scores with either possible actions or impacts on the respondents in order to give more meaning to the rating system. This was approached by asking each of the interviewees to discuss the nine attributes of good corporate citizenship that were presented in the telephone survey (see q14a-i in Appendix 2).

Beyond seeking to benchmark the survey rating system an important question is whether the qualitative exercise has simply resulted in illustrating a set of entrenched values that exist in the community and whether or not there is an opportunity for these values to be transformed through the actions of industry.

1. Demonstrates care for the local environment

Interviewee's answers were varied in relation to how they thought industry demonstrated care for the environment. Half of the interviewees felt that industry either didn't care or felt that there were no clear examples of industry caring to cite. One comment in particular focused on the new LNG industry that is developing in the Gladstone area and reflects an undercurrent of unease about the potential rapid developments that could occur with the new industry. This is not dissimilar to concerns in the Gladstone community with the development of the existing industry although the emphasis here is to a larger extent on environmental impacts. As one respondent commented;

"I am aghast at where LNG has picked to build their plant. It is somewhere that is a breeding ground for the dugongs (sea cows), it is scary watching it being jeopardised – it is where my boys have camped, my son had his 18th birthday there, it is a safe and nice place for kids to go. I have not seen a lot of evidence that they do care for the environment".

Equally interviewees thought that industry did display an understanding of the need for standards of practice and were aware that their performance was being monitored. One comment illustrated the community's sophisticated understanding of the trade-off's involved in modern industrial practice by alluding to the acknowledgement that while industry is constrained by technological

processes there is the perception that industry is working towards better solutions and practices. This is clear in the quote by a respondent;

“Even though they have environmental limits they will strive for world best practice”.

This is an important distinction and highlights a perceived need for clear honest communication between industry and the community that is not based solely on positive feel good stories of achievement, but are mature exchanges able to discuss ongoing problems that can be shared equally with the community. For example, community engagement that is also ‘empowering’ for the Gladstone community and gives the community a role in the industries future planning.

2. Communicates clearly and openly with the Gladstone community

The second attribute of good corporate citizenship is a measure of industries community engagement. Overall more interviewees stated that they did not think industry communicated clearly and openly, with some respondents expressing this as a form of deceptive behaviour with the perception that industry was misleading by either ‘distorting the facts’ or by withholding information.

“They don’t communicate clearly; they don’t talk about issues that they don’t want us to know about. They distort the facts to suit their own agendas and therefore they are lying and lying cannot be clear communication”.

However when respondents gave some acknowledgement of good communication practices there was a tendency for there to remain the criticism that the focus of the information was predominately ‘good’ news. This approach was identified by one respondent who said;

“I do think they are as upfront as they can be, they couldn’t give the public all the information because I think a lot of people in the public couldn’t cope because some people don’t have that understanding of business processes”.

On the question of the delivery of clear information to the community there was comment that on some issues there was an overload of information and this had the effect of overwhelming the public and causing them to turn off. An example was given of volumes of material in the local library and the difficulty of knowing where to start to find the information required. Positive comment was given for the information available on various company websites.

3. Supports the local community

All twelve interviewees believed that industry does offer good support to the local community. The types of support, how to access the support, and the changing nature or decline of industry support was mentioned. One of the respondents reflected that;

‘They support sports teams, art projects - you just write to them and money comes out of their ears. My boys play a lot of sport, boxing, footie, when I do the washing the polo shirts would circle the washing line and every shirt has a different company name on the back’.

While all interviewees agreed that industry offered good support for the local community, a thread of cynicism and qualification is evident in several of the responses. This often related to the longer term impacts of industry operations on the local environment. For example,

“The things they are going to give us are temporary and the environment should be something which many, many generations to come can enjoy”.

There were also reflections on past practice and a feeling that in the past industry offered more to the community in the form of hard infrastructure than is the current practice. The substance of these claims have not been verified however it does reflect a community sentiment that reflects not only existing industry practice but also (we suggest) draws on concerns associated with the future development of the Gladstone community in light of new industry developments (LNG). As one respondent reflected,

“I think there was a lot more of that in the past, there was a lot more infrastructure that was provided by the industry - the likes of QEGB (electricity) they actually had houses, so did QAL – they don’t have houses now”.

4. Is trustworthy and believed by the local community

The question of trustworthiness and being believed by the community brought a variety of responses with positive comments generally linked to the employment provided by industry and the evidence of ‘real’ benefits experienced by those employed. There was however evidence of the ‘precautionary principle’ in action with respondents noting a level of scepticism with regards to the messages coming from industry. This was more pronounced with regard to environmental comments and underpinned by ‘insider’ knowledge of industry through the close relations of the community with workers within the industries. For example as one respondent commented,

‘...I think there would be a fairly high level of cynicism about what they hear or what the company say is going on I suppose because the community works here and lives here. Most people have a brother or father or sister who works in industry so the whole community knows what is really happening’.

5. Is known locally as a good employer

The majority of interviewees stated that in general, industry is known to be ‘good employers’ and that this is the main benefit of industry. These benefits are seen as long term and offer a level of security for families, as one respondent commented;

“To get an apprenticeship with QAL would mean you would be set for life because they are well recognised within the industry sector”.

The perception of industry as a good employer whilst good overall differed when particular industries were mentioned. Without singling out any of the industries there is the perception is that industry are good employers when it suits their needs but are limited with their support of workers outside of the workplace and there is the recollection of when industry downturns have occurred. The treatment of workers who had been laid off during production down turns was mentioned and those negative sentiments can linger within the community for considerable time. There were also comments regarding a perception of an increase in the number of contractors

working for industry and the changing nature of the 'employment contract' with workers experiencing more mobility with their employment. Opportunities for career advancement with employment in large (national and international) organisations were seen as beneficial.

Two comments presented here focus more on the concerns of workers than the general acknowledgement that overall the industries are seen as good employers.

"Oh yeah, they are good employers; the social aspect of their employment leaves a lot to be desired. They employ people but there is no other input here, like supporting housing and that sort of stuff"

"I have friends who worked with QAL and they thought QAL was the best employer until they both lost their jobs and were treated very unjustly".

6. *Has a long term commitment to the Gladstone community*

Most of the respondents believed that Gladstone industry had illustrated its commitment to the community by the length of time that they had remained operating successfully in the area. Typical of the responses was;

"If you look at QAL – they arrived in 1967 and have been employing maybe 1500 people since then, so that's 45 years or so. Long term commitment they have been providing jobs for all those years".

One interviewee however felt that the older more established companies had a long term commitment to the community but newer companies like LNG may not have that commitment.

"The older ones obviously, the new ones – there is a lot of concern about LNG"

Of note to the researchers was the element of realism and typical understatement of the respondents which pointed out the expected limits of industry commitment to the community which premised on continued profits is contingent on the utility of the workforce to the industry. This was expressed eloquently by one respondent who said,

"While they are making money they have a vested interest in the community here so they have obligations that they have to meet but if for any reason a plant had to shut down then that would be it, if they stopped making money that would be it. I don't think there would be any obligation to help the community out in any way".

7. *Is concerned and sensitive to the needs of the local Indigenous communities*

There were only two interviewees who believed that industry in generally does display concern and sensitivity to the needs of the local Indigenous communities through direct action. That said there was reference to industry policies and induction processes that included reference to indigenous values and sensitivities. There was an element of industry being tokenistic in its attempt to engage with the indigenous community and this was partly justified by barriers emanating from the indigenous community more than from industry.

Some praise was given for the efforts of industrial project proponents in relation to local indigenous engagement although this was viewed as part of a set of compliance issues. As one respondent put it,

“They are more sensitive to that now but I think it’s because of obligation more than anything that they do it”.

8. Generally, has a good reputation within the region

When asked if industry had a good reputation in the region the majority of interviewees answered to the affirmative and commented that since industrial development in Gladstone people have continually migrated to the area. Despite some set backs the population has continued to grow and most people have an awareness of what to expect from Gladstone. Again respondents were understated in praising industry and preferred to attribute a good reputation within the region to the size of the industries and their careful image management. Typical comments were,

“Yes because of the hype of providing employment”

“Yes, the perception is that you have to have it”

“I think so, they are big employers and they don’t want to be seen to do the wrong thing”.

9. Acts in line with the expectations that I have of Gladstone industry

In exploring this measure of good corporate performance the responses were much polarised and reflected the respondent’s relationship to industry and whether they derived any direct benefit from industry. That industry provided employment and through this the opportunities for some workers to undertake training and to advance careers was a dominant area in which expectations were being met. However beyond direct employment there were viewpoints that broad expectation of industry (where they exist) were not being completely met. Whether this is due to the expectations being overly ambitious is hard to ascertain although the areas of concern were centred on infrastructure, social justice issues and public transportation options. These areas tended to drift into responsibilities that were arguably the responsibility of government agencies and not direct company concerns. Having said that the expectations of the Gladstone community is in a state of flux and persistent media reporting of the new industrial developments associated with the LNG sector may have heightened expectations beyond a reasonable level.

During the interviews opinions were sought of three key themes associated with Gladstone industry; corporate citizenship, the general liveability of Gladstone, and the status of the Gladstone area in terms of environmental health and the health of individuals.

Theme 1: Corporate citizenship

A discussion was initiated around the concept of corporate citizenship with the objective of evaluating the attributes used in the phone survey to measure corporate citizenship performance. In addition participants were asked if other attributes of corporate citizenship should be included in any future measurement of industry performance. This line of questioning generated some interesting responses from the interviewees. The comments are summarised here; four interviewees stated that the level, quality and nature of industry contribution to local infrastructure should form a basis of the measurement of corporate citizenship. Two interviewees discussed applying a greater emphasis on social responsibility and the support of social services. Two

interviewees believe that there should be a focus on ethical business practices. Four interviewees were unsure of any other benchmark for corporate citizenship.

One comment that illustrated possible future measures of corporate citizenship spoke of existing activities such as industry tours and open days but suggested that measures of a more serious and tangible nature be included such as; ‘supplying accommodation options or assisting in the development of community co-ops to support workers’. Also any measures to alleviate against rising housing costs.

When asked about their expectations of industry the interviewee’s answers shared common themes. Care for the environment, particularly air quality, a commitment to support and care for the community, safety for all residents and employees, recycling and managing waste products in a sustainable manner and contributing to the infrastructure were constant themes filtered through most answers.

“I would like to see the pollution out of the air, I would like to see all of the waste products carefully retained and recycled and not leached into waterways”.

“My expectation is that they (industry) act in a safe manner so that the things they are producing don’t affect me”.

“That they provide a safe work place for employees, meet their environmental obligations, they act in a fair and ethical manner (they actually look after their employees and don’t take advantage of them)”.

“My greatest expectation would be that industry gives back to the community and creates well being for its employees, giving it as much life as it can”.

After discussing expectations of industry, interviewees were asked if they felt that industry met those expectations. In general interviewees stated that they felt industry did meet those expectations especially in relation to the opportunities given for employment and job related training, for example;

“I think they do, my boys got apprenticeships with them. They meet our expectations and I feel that if you could put a proposal together and have the right people to push it something could be done – this is a small community – I have never asked them to, but it is a tiny population here”.

On the other hand four interviewees stated they did not believe that industry met their expectations and this was primarily related to environmental concerns as one respondent stated;

“Not all of industry – there is a lot of doubt around an environmental report – there is delay in that report - they are not being transparent with that report. Potentially they could be polluting the BITS area. It’s poor business, because a small of community reputation is worth a thousand percent pays for itself. If you have a good relationship with your local community they will be much more forgiving when times are hard that if you are sneaky or not transparent and then when things do come out they are much more harsh”.

As this comment suggests there were sentiments among the research participants that suggested a lost opportunity for industry on some occasions. It was suggested that greater effort to openly communicate would result in better outcomes for industry. Again it was the environment that appeared to be a tipping point for shifting sentiments from the positive economic benefits to negative impacts of industry practice.

Theme 2: Liveability

During the phone survey interviews, questions were asked about key liveability factors. The face to face interviews sought to expand upon these and examine the issue of liveability in Gladstone in more detail.

Hard and soft infrastructure were seen as key measures of liveability with medical services, education, transport, housing, sporting facilities and retail services rating relatively highly for several interviewees.

As far as liveability all of the services are here, everything you need is here it might not be as much as you would like but the necessities are here. We even have a lovely little entertainment centre, I love the theatre. We do have stuff here that is good it's not just a little hick town with nothing".

However there were areas where improvements were needed as mentioned here;

"We have everything within ten minutes except maybe major furniture shops. We have everything here; mum and dad loved coming here because it was five minutes to the races, hospital, airport, doctor, and dentist".

The sense of community and belonging were also seen as key liveability factors for the Gladstone community although there was acknowledgement that social isolation was experienced. Other issues that interviewees felt were key liveability factors 'missing' in the Gladstone area include clean air; transport, accommodation and a variety of retail outlets.

Three interviewees rated the natural environment and weather as important – the reef, the bush, Gatchombe Heads and the harbour.

Where respondents were located in relation to the services that are available and how they were situated social and financially was important for their outlook on liveability. For example one respondent commented,

"Housing and services particularly mental health services; transport – especially out here, without a licence or a car and when you are unemployed you can't run a car".

This contrasted with another respondent who described a community, in which there is;

"... a fair sense of support and community and family in Gladstone. It might not have all the services and all the bells and whistles but there is family here. Even for someone like myself who doesn't have family here, it doesn't take long to get family here".

All interviewees expressed the view that more industry would impact on the Gladstone region and that the current infrastructure would not cope with the influx of people and use associated with more industry development. Two interviewees voiced concern about specific new industry development issues including problems associated with the possibility of a fly-in fly-out work force. Two interviewees expressed concern about environmental issues associated with more industry. However the importance of industry and the impact of new industry development on Gladstone's longevity were also highlighted.

For example in relation to the fly-in fly out work force issue;

"The proposed construction methods, you could almost describe them as anti social with the fly in fly out mentality. Those big influxes of short term residents put a big strain on local services while those people are not here to contribute to the maintenance of those services. Some of the aspects of environmental effects are not fully known".

Interestingly almost half of the interviewees responded that they will not directly benefit from more industry in relation to employment opportunities or increased business activity however housing value increases were seen as a benefit to existing home owners. Also the benefits to other family or community members were mentioned. For example,

"It will probably keep me employed, my husband employed, my grandson an apprenticeship and we are just one family so many more families will have those opportunities".

Theme 3: Health – Environment and people

Interviewees were asked about health concerns that they believed were specifically linked to industry. More than half of the interviewees responded that they had no health concerns related to industry yet four of those interviewees expressed concern at not knowing if their health was impacted upon and that they were just unaware. Of those four interviewees, one specifically resides in Calliope to situate his young family away from industry to avoid any potential health concerns. This reinforces the perception expressed in the survey (and in previous studies) that concern with a possible link between industry emissions and personal health is prevalent despite any clear evidence of an association.

Of the three interviewees who stated that they did have health related issues, two were unsure if their health issues were related to industry activity. One interviewee stated work stress as a health concern and that his son had asthma – the issue of working with chemicals and the responsibility involved for the safety of other workers had added to the stress condition. Only one of the interviewees suggested that they would leave the area because of health concerns and social reasons were also a factor in this case.

A perception of air quality issues appears more the case than experiential factors as indicated in the following quote from a respondent who resided considerable distance from industrial sites;

"The air quality, that is an ongoing issue – we don't see it too much in Calliope – but that's why we bought in Calliope because we are away from the prevailing winds and we don't get any fallout from industry".

Interviewees were asked if they changed the way they did things for 'industry' related issues – emissions, odours etc. Three interviewees stated that they did change the way they did things and nine interviewees said that they didn't make changes to how they did things. However, of those nine interviewees two also stated that there were certain areas in the Gladstone region, where they would not live. One of those interviewees said that while they didn't specifically change the way they did things they always wound the car window up when they were driving in certain areas, due to the odour, indicating a level of reaction. The other interviewee said that in certain prevailing winds the odour was offensive. These two quotes indicate the impact and show that local residents are concerned with the perception of their community by visitors and friends.

"No you learn to live with it. We are fortunate where we are but if the wind is blowing in the wrong direction you get the smell from QAL and it's just like a sewerage smell and you just wait for the wind to change direction. This is the premier real estate area of Gladstone".

"I avoid certain roads because of the traffic and the danger associated with that so you try to find another way home in those busy periods. Sometimes if the wind is the other way we will get the smell from QAL we will shut the windows, it's when you have friends and visitors from out of Gladstone that they really notice it".

In relation to specific industries in the Gladstone area three interviewees had no concern with any specific industry; nine interviewees expressed concern for specific industries which included: the mining of chemicals, coal and caustic emissions, the LNG industry developments, QAL, the use of NOX, and the main Gladstone industries all rated a general mention. Two interviewees expressed specific concern at NOX emissions; with one interviewee saying that they were concerned with the transportation (by road) of hazardous materials and the locating of industry near waterways.

"Yes, mining of chemicals. The type of chemicals they are producing there like cyanide and hydrochloride and others they produce, they produce sulphur too. The scenario is that they are too close to our water base, the ocean but particularly the narrows. In case of accidents, leakages into our waterways, I don't think there are sufficient precautions taken to prevent that".

Responses to the question of more industry development in the Gladstone region were mostly attached with conditions. Only one interviewee said that the region 'needed it'. Several interviewees suggested that infrastructure needed to be upgraded before more industry should be established. One interviewee believes that in time to come industry will stretch from the Gladstone port through to the township of Raglan.

There were also concerns expressed that industry should stop claiming prime agricultural land while several other interviewees stated that as long as industrial practices were socially and environmentally responsible then it was acceptable. One interviewee suggested that 'clean industry' appropriately located would be welcome. The following quotes summarised the general position of the interviewees with regards to industrial development in the Gladstone area.

The comments range from anti industrial development sentiments in which concern is raised over the protection of agricultural land,

“Stop bringing it in to prime agricultural land, we’ve got to eat so stop wiping out mountains and farming areas”.

Other comments gave support to more industrial development with conditions associated with good corporate citizenship applied,

“Providing they pay for their own infrastructure and sufficient safety factors are built into their development there shouldn’t be any objections”.

“I am not opposed to it as long as it’s done in a responsible manner and fits in with community aspirations”.

A final comment related to the type of industry attracted to the region and reflects possible future industrial development aspirations,

“I would like to see some clean industry come; we’ve got a lot of dirty industry so it would be great to see some clean industry”.

3.1. CONCLUSION

The combination of the performance of Gladstone industry and the high level of acceptance within the Gladstone community indicates that Gladstone industry is performing satisfactorily in the task of maintaining a 'social licence to operate' in the region. The challenge is for industry to not only maintain its satisfactory performance but to maximise its efforts through positive action to increase support throughout the community by continuous identification of potential flashpoints for community concern. As the industry presence grows in the Gladstone region so does the risk that community sentiments will shift in a negative way if appropriate strategies are not adopted and actioned upon.

This is not a simple task as there is the suggestion that for some Gladstone residents the expectation of industry performance will be a shifting aspirational goal that will never be met. Prudent investment in the Gladstone community that clearly demonstrates a reflexive best practice model will assist to maintain the positive community attitudes. The investment in the maintenance of a satisfactory operating environment needs to be balanced against the difficult task of shifting an entrenched set of relatively negative views of industry.

This report has identified some important areas for consideration by Gladstone industry such as the priority areas of health infrastructure and urban based facilities as well as balancing environmental protection. In relation to good corporate citizenship it is recommended that the benchmark measurement of corporate citizenship be expanded to incorporate sustainability concepts measured across five key areas of cultural, economic, environmental, human and social performance. The indices presented in this report are an illustration of what can be achieved using the legacy benchmark indicators of previous Gladstone industry studies. The indicators can be improved and serve the Gladstone community by providing a clearer measurement of Gladstone industry performance. It is hoped that this will assist the Gladstone community to develop in a productive and sustainable way.

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APPENDICES

APPENDIX 1 SURVEY SAMPLE METHODS

A1.1 Sampling methods

Based on the following information and the nature of the study, the research team suggested a two-stage sampling design. OESR (2010) estimated resident population in the Gladstone Region is 59,644 with an average household size of 2.6 people.

Table A1.1 Estimated resident population by urban centre/locality, June 2009

Urban centre/locality	Estimated resident population (n)	Area – km2	Population density - persons/km2
Gladstone	33,339	67.1	496.9
Tannum Sands	4,761	4.8	991.9
Boyne Island	4,362	6.8	641.5
Calliope	2,133	4.1	520.2
Agnes Water	2,107	45.6	46.2
Benaraby (L)	725	3.5	207.1
Miriam Vale (L)	409	3.7	110.5
Mount Larcom (L)	286	1.6	178.8
Seventeen Seventy (L)	64	6.6	9.7
Gladstone (R)	59,644	10,489.20	5.7
Queensland	4,425,103	1,734,173.90	2.6
Region as % of Qld	1.3	0.6	2.2

The formula for calculating sample size for simple random sampling for infinite population size is:

$$n_0 = \frac{t^2 P Q}{d^2}$$

For finite population, the final sample size

$$n = \frac{n_0}{1 + \frac{n_0}{N}}, \text{ Where } N = \text{population size};$$

Determining sample size for two-stage design is:

$$n_0 = \frac{t^2 P Q}{d^2} de, \text{ where } de = \text{design effect};$$

$$\text{and, } n = \frac{n_0}{1 + \frac{n_0}{N}}$$

In this study,

N (Total number of households in Gladstone Regional Council) = 22,940 (OESR, 2010)

P= Proportion of households know about the environmental impacts of industrial development in Gladstone

Q= Proportion of households do not know about the environmental impacts of industrial development in Gladstone

$$\text{So, } n_0 = \frac{t^2 PQ}{d^2} de$$

t= the value of standardized normal variable to ensure 95% confidence level.

P= 0.5, to ensure maximum precision, as we do not have prior information about P.

$$Q= 1-P= 1-0.5= 0.5$$

de = design effect = 2.0, generally used for two stage sampling design.

d= 0.06, margin of errors

Putting these values we get,

$$n_0 = \frac{1.9208^2}{0.06^2} = 534$$

$$\text{So, } n = \frac{n_0}{1 + \frac{n_0}{N}} = \frac{534}{1 + \frac{534}{22,940}} = \frac{534}{1 + .023278} = 521 \cong 520$$

Gender and age quota sets were set to enable an efficient and representative data collection (Table A1.2).

Table A1.2 Gender and age quotas

Gender	Min Quota	Set to
Males	min 200	250
Females	max 300	250
Total		500
Gender x Age	Min Quota	Set to
Males 18-34	min 50	75
Females 18-34	min 50	75
Males 35-49	min 55	90
Females 35-49	min 55	90
Males 50+	min 55	85
Females 50+	min 55	85
Total		500

The CATI data collection used random digit dialling which generally requires the generation of relatively large sample numbers in search of in-scope usable contact numbers. The final sample dispositions produced from the RDD process are presented in Table A1.3.

Table A1.3 Gladstone Final Sample Disposition Report

Disposition	N	Percent
Complete	520	8.98%
Hard Appt	64	1.11%
Soft Appt	231	3.99%
Engaged	24	0.41%
No Answer	1879	32.45%
Answering Machine	234	4.04%
Live Sample	2432	42.00%

General Ineligible	309	5.34%
Screened Out	5	0.09%
Refused	1887	32.59%
Terminated survey	19	0.33%
Disconnected number	553	9.55%
Modem/Fax/Beeper	35	0.60%
Business	29	0.50%
Privacy block	1	0.02%
Dead Sample	2838	49.02%
Total Sample Used	5790	100.00%

A1.2 Sample representativeness

A survey sample is considered representative of the larger population from which it is selected if the aggregate characteristics of the sample closely approximate those same characteristics in the population. The study uses the index of dissimilarity for age distributions to provide a measure of sample representativeness and to guide the interpretation of the survey results.

The Index of Dissimilarity for the overall (unweighted) sample of the survey is 37.1, which demonstrates that overall there is a variation from the Gladstone region population from which the sample were drawn on this dimension. As shown in Table A1.4 there was over sampling in the 50–64 age categories and under sampling in the 18-24 age categories¹².

Calculation of the Index of Dissimilarity:

$$ID = 0.5 \sum (Abs)X-Y$$

Whereby

ID = Index of Dissimilarity

X = 2010 Survey sample Age category %

Y = Gladstone region population by age (ABS 2006) % of 18+

Table A1.4 Age distribution for the 2010 survey sample

(S2) Age	Frequency	Survey sample (X) %	Gladstone Region (Y) %	A-B	Abs
18-24	26	5.0	12.54	-7.5	7.54
25-34	79	15.2	19.57	-4.4	4.38
35-44	123	23.7	22.82	0.8	0.83
45-49	77	14.8	11.36	3.4	3.45
50-64	158	30.4	22.37	8.0	8.01
65+	57	10.9	11.31	-0.4	-0.41

¹² The index represents the proportion of households that would have to move to a different category to make the distributions identical. The index can vary from 0 to 100. Any index that is less than 10 indicates that their distributions are similar. Source: Duncan, O.D., and Duncan, B. *Residential Distribution and Occupational Stratification*, *American Journal of Sociology*, 60(5):493-503, March 1955.

Total	520	100		ID=23.80
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Gaining adequate participation of younger respondents when conducting CATI surveys using only randomly generated landline telephone samples has become more difficult as increasing numbers of young people use only mobile (cell) telephones. Recent studies have shown that the exclusion of mobile phone only households does not (yet) significantly influence survey results¹³, however the smaller cell size for respondents aged 18-24 in the survey should be considered when conducting data analysis using age categories.

A1.3 Weighting

In many surveys it is the case that some groups are over- or underrepresented in the survey. One way of managing these misrepresentations is to weight the data, for example, by age, gender and locality. For the purposes of this report, the Index of Dissimilarity has demonstrated that the sample varies from the Gladstone population on the dimension of age. The following weighting factors (Table A1.5) can be used when performing analysis of the data in order to account for sampling variations related to age. It was considered that, for the purposes of this community perception survey, there was reasonable geographical and gender distribution of respondents.

Table A1.5 Calculation of weighting variable (wtvar1¹⁴)

(S2) Age	Gladstone Region	Survey sample	Sample size	Weighting Factor	Weighted sample
18-24	12.54	5.0%	26	2.508	65
25-34	19.57	15.2%	79	1.2881519	102
35-44	22.82	23.7%	123	0.964748	119
45-49	11.36	14.8%	77	0.7671688	59
50-64	22.37	30.4%	158	0.7362278	116
65+	11.31	10.9%	57	1.0376147	59
Total	99.97	99.9	520		520

¹³ Pennay, D.W, and Bishop N., 2009, *Profiling the 'Mobile Phone Only' Population: A study of Australians with a mobile phone and no landline telephone*, Social Research Centre Pty Ltd.

¹⁴ In the SPSS system file the weight variable is: wtvar1. When analysing the whole sample (n=520) wtvar1 should be used. To turn weighting on, insert: WEIGHT BY wtvar1.

APPENDIX 2 GILG INDUSTRY – COMMUNITY PERCEPTION SURVEY

Introduction:

Good morning/afternoon/evening. My name is ... from *National Field Services* an independent research company. We are conducting a survey on behalf of Central Queensland University and the Gladstone Industry Leadership Group to better understand the community perceptions of Gladstone industry.

Could I please speak to the youngest male who is at home and who is aged 18 years and over?

[IF NO MALES ASK:] Then may I please speak to the youngest female who is at home and aged 18 years or over?

[IF YOUNGEST MALE OR FEMALE NOT AVAILABLE, SPEAK TO ANYONE IN HOUSEHOLD AGED 18 YEARS OR OVER, ENSURING THEY ARE WITHIN QUOTAS]

[REPEAT INTRODUCTION IF NEW PERSON COMES TO THE PHONE]

SAY IF NECESSARY: Your replies will, of course, be treated in complete confidence.

SAY IF NECESSARY: This is solely for research purposes and we will not try to sell you anything afterwards.

SAY IF NECESSARY: Depending on your answers the survey will take approximately 15 minutes to complete.

Would you be willing to help? IF NO, ASK IF THERE IS ANYONE ELSE IN HOUSEHOLD WHO WOULD BE WILLING TO HELP.

During the course of this interview, my supervisor may listen to check the quality of my work.

In accordance with CQUniversity research policy you are free to withdraw from this study at anytime, and if we come to a question that you do not wish to answer then we can simply skip to the next question.

Thank you for your time.

SECTION 1: SCREENING & QUOTA QUESTIONS

S1 RECORD GENDER [CHECK QUOTAS]

MALE	1
FEMALE	2

S2 To ensure that we have a good cross-section of people, could you please tell me which of the following age groups you belong in?

[READ OUT] [CHECK QUOTAS]

18-24	1
25-34	2
35-44	3
45-49	4
50-64	5
65-74	6
75 or over	7

Don't Know/ Refused 8

TERMINATE IF DK/REFUSED AT S2

S3 Which part of the Gladstone Region do you live in? [READ OUT]

- | | |
|---------------------------------|---|
| a) Gladstone, | 1 |
| b) Boyne Island / Tannum Sands, | 2 |
| c) former Calliope Shire, | 3 |
| d) former Miriam Vale Shire, | 4 |
| e) Other please specify _____ | |

S4 Can I just ask the name of the suburb or locality you live in?

TYPE CLEARLY and CHECK SPELLING

ALL RESPONDENTS

Q1. Firstly, on a scale of 1 to 10 where 1 means *Limited Knowledge* and 10 means *Extensive Knowledge*, how would you rate your level of general knowledge of Gladstone industry?

Limited knowledge

Extensive knowledge

1	2	3	4	5	6	7	8	9	10	11 Don't know
---	---	---	---	---	---	---	---	---	----	---------------

2a. From the following list which I will read to you, which of the following is the main source of information about Gladstone industry for you? [Read list] [Rotate list]

Q2b. From the following list which I will read to you, which is the second main source of information about Gladstone industry for you? [Read list] [Rotate list]

Q2c. And from the following list which I will read to you, which is the third main source of information about Gladstone industry for you? [Read list] [Rotate list]

- | | | | |
|----|--|---|---|
| a. | Local newspaper (Gladstone Observer) | 1 | |
| b. | State newspapers (Courier Mail, The Sunday Mail) | 2 | |
| c. | National newspaper (i.e. The Australian) | 3 | |
| d. | Radio | 4 | |
| e. | Television | 5 | 1st preference <input type="checkbox"/> |
| f. | Internet | 6 | 2nd preference <input type="checkbox"/> |

g.	Social networking (Twitter, Facebook etc)	7	3rd preference	<input type="text"/>
h.	Family or Friends,	8		
i.	Industry employees,	9		
j.	Your Employer,	10		
k.	Industry Association,	11		
l.	Community Groups.	12		
m.	Any other source (please specify)_____	14		
n.	None/No other [DO NOT READ OUT]	13		

Q3. Using a scale from 1 to 5, where 1 means *Very Poor* and 5 means *Excellent*, how would you rate the level of consultation by industry in Gladstone about Gladstone's future?

[Enter score] 1 2 3 4 5 Don't Know [6]

Q4. I am now going to read a list of statements about industry developments in the Gladstone region and for each I would like you to indicate how strongly you disagree or agree with the statements. Please use a scale of 1 to 5 where 1 means *Disagree* and 5 means to *Agree*. [Rotate list of statements]

How strongly do you agree or disagree with the following statements?	Disagree					Agree					Don't know (DO NOT READ OUT)
	1	2	3	4	5	1	2	3	4	5	
a. The overall benefits of current industrial developments in the Gladstone region are greater than the possible negative impacts	1	2	3	4	5	1	2	3	4	5	6
b. The Gladstone region needs to attract more industrial development	1	2	3	4	5	1	2	3	4	5	6
c. More State Government regulation is required to coordinate growth with industry, local government and the community	1	2	3	4	5	1	2	3	4	5	6
d. Gladstone currently has too many industries	1	2	3	4	5	1	2	3	4	5	6
e. Industry in Gladstone should be more diversified	1	2	3	4	5	1	2	3	4	5	6
f. The current level of industry development in the Gladstone region is just right	1	2	3	4	5	1	2	3	4	5	6

Q5. This time, using a scale of 1 to 10 where 1 equals Poor and 10 equals Excellent, how would you rate the overall liveability of the Gladstone region?

Poor									Excellent	Don't Know (DO NOT READ OUT)
1	2	3	4	5	6	7	8	9	10	11

Q6. What can be done to improve the liveability of the Gladstone region? [Open-ended] PROBE FULLY

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q7. The next question is about giving priorities to issues which face the Gladstone community. I'll read through a list of issues and using a scale of 1 to 5, where 1 is a *Low priority* and 5 is a *High priority*, what priority do you think Gladstone industry should give to the following areas. [Rotate list]

What priority should Gladstone industry give to the follow areas?	Low priority					Don't know (DO NOT READ OUT)
	1	2	3	4	5	
a. Environmental protection	1	2	3	4	5	6
b. Education services	1	2	3	4	5	6
c. Community infrastructure e.g. roads and local transport	1	2	3	4	5	6
d. Recreational facilities (parks, sporting grounds)	1	2	3	4	5	6
e. Family support services	1	2	3	4	5	6
f. Supporting local small to medium sized business	1	2	3	4	5	6
g. Attracting new industries	1	2	3	4	5	6
h. Investing in emission reduction technology	1	2	3	4	5	6
i. Increasing workplace safety	1	2	3	4	5	6
j. Health services	1	2	3	4	5	6
k. Increasing employment security	1	2	3	4	5	6
l. Employment and business opportunities for the Indigenous community	1	2	3	4	5	6

Q8. Are there any other priority areas that Gladstone industry should address? [Open-ended]

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF NONE/NO OTHERS, TYPE IN 'NULL'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q9. How concerned are you that industry in Gladstone might be affecting your health?

[Read out options]

- | | |
|----------------------------|---|
| a) Not at all | 1 |
| b) Slightly | 2 |
| c) Moderately | 3 |
| d) Highly | 4 |
| e) Extremely | 5 |
| f) DO NOT READ: Don't know | 6 |

Q10. From the following list of industry emissions, how would you rate your level of concern for the Gladstone region? This time using a scale from 1 to 5, where 1 means *Not concerned at all* and 5 means *High concern*. [Read list]

[Rotate list]

List of industry emissions	Not concerned at all					Don't know (DO NOT READ OUT)
	1	2	3	4	5	
a. Air quality	1	2	3	4	5	6
b. Dust	1	2	3	4	5	6
c. Noise	1	2	3	4	5	6
d. Water pollution	1	2	3	4	5	6
e. Land pollution	1	2	3	4	5	6
f. Fumes	1	2	3	4	5	6
g. Radiation	1	2	3	4	5	6
h. Chemicals	1	2	3	4	5	6
i. Lighting	1	2	3	4	5	6
j. Odour	1	2	3	4	5	6

Q11. Are there any other industry emissions that you are concerned about? (please specify)

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF NONE/NO OTHERS, TYPE IN 'NULL'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q12 For those industry emissions that you are concerned about, is there a particular industry associated with the emission? Please identify emission and industry if possible

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

IF Q10a≤2 ASK:

Q13. You indicated that you are not concerned about air quality in the Gladstone region. What is the main reason?
Open ended PROBE FULLY

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q14. I would now like to read through a list of statements and would like to know whether you disagree or agree?
Use a scale from 1 to 5, where 1 means *Disagree* and 5 means *Agree*.

Gladstone industry.... [INSERT EACH STATEMENT IN TURN] [Rotate list of statements]

Gladstone industry.....						Don't know (DO NOT READ OUT)
	Disagree		Agree			
a. Demonstrates care for the local environment	1	2	3	4	5	6
b. Communicates clearly and openly with the Gladstone community	1	2	3	4	5	6
c. Supports the local community	1	2	3	4	5	6
d. Is trustworthy and believed by the local community	1	2	3	4	5	6
e. Is known locally as a good employer	1	2	3	4	5	6
f. Has a long term commitment to the Gladstone community	1	2	3	4	5	6
g. Is concerned and sensitive to the needs of the local Indigenous communities	1	2	3	4	5	6
h. Generally, has a good reputation within the region	1	2	3	4	5	6
i. Acts in line with the expectations that I have of Gladstone industry	1	2	3	4	5	6

Q15. Are there any requirements of being a good corporate citizen that should be applied to Gladstone industry?
 PROMPT: **Any others?** [Open-ended]

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q16. Considering the benefits and impacts that industry brings to Gladstone, can you please rate your acceptance of industry in the Gladstone region, where 1 means you do not accept industry and 5 means you completely accept industry?

Do not accept				Completely accept	Don't know
1	2	3	4	5	6

Q17. Thinking of their performance as corporate citizens over the last 12 months, how would you rate each of the following companies in the Gladstone region? Using a scale from 1 to 5, where 1 means very poor performance and 5 means excellent performance. [Rotate list of statements]

Gladstone industry:	Very Excellent					poor	Don't know DO NOT READ OUT)
a. BSL / Boyne Smelter Limited	1	2	3	4	5	6	
b. CA / Cement Australia	1	2	3	4	5	6	
c. NRG / Gladstone Power Station	1	2	3	4	5	6	
d. QAL / Queensland Alumina Limited	1	2	3	4	5	6	
e. RTA-Y / Yarwun	1	2	3	4	5	6	
f. Orica	1	2	3	4	5	6	
g. GPC / Gladstone Port Corporation	1	2	3	4	5	6	

Please add: If Q17a =6 skip Q18

Q18. I would now like to ask you to rate the performance of specific Gladstone industries on six key measures of corporate citizenship. Thinking about BSL / Boyne Smelter Limited, on a scale where 1 is very poor and 5 is excellent, how do you rate their performance for the following? [Rotate list – Read company name before each measure.]

BSL / Boyne Smelter Limited	Very Poor Excellent					Don't know DO NOT READ OUT)
	1	2	3	4	5	
a. has a good reputation	1	2	3	4	5	6
b. demonstrates care for the environment	1	2	3	4	5	6
c. communicates clearly and openly with the community	1	2	3	4	5	6
d. is trustworthy and believed	1	2	3	4	5	6
e. is known as a good employer	1	2	3	4	5	6
f. is concerned with and sensitive to the needs of the Indigenous communities of the Gladstone region	1	2	3	4	5	6

If Q17b =6 skip Q19

Q19. Thinking about CA / Cement Australia, on a scale where 1 is very poor and 5 is excellent, how do you rate their performance for the following? [Rotate list – Read company name before each measure.]

CA / Cement Australia	Very Poor Excellent					Don't know DO NOT READ OUT)
	1	2	3	4	5	
a. has a good reputation	1	2	3	4	5	6
b. demonstrates care for the environment	1	2	3	4	5	6
c. communicates clearly and openly with the community	1	2	3	4	5	6
d. is trustworthy and believed	1	2	3	4	5	6
e. is known as a good employer	1	2	3	4	5	6
f. is concerned with and sensitive to the needs of the Indigenous communities of the Gladstone region	1	2	3	4	5	6

If Q17c =6 skip Q20

Q20. Thinking about **NRG / Gladstone Power Station**, on a scale where 1 is very poor and 5 is excellent, how do you rate their performance for the following? [Rotate list – Read company name before each measure.]

NRG / Gladstone Power Station	Very Poor Excellent					Don't know DO NOT READ OUT)
a. has a good reputation	1	2	3	4	5	6
b. demonstrates care for the environment	1	2	3	4	5	6
c. communicates clearly and openly with the community	1	2	3	4	5	6
d. is trustworthy and believed	1	2	3	4	5	6
e. is known as a good employer	1	2	3	4	5	6
f. is concerned with and sensitive to the needs of the Indigenous communities of the Gladstone region	1	2	3	4	5	6

If Q17d =6 skip Q21

Q21. Thinking about **QAL / Queensland Alumina Limited**, on a scale where 1 is very poor and 5 is excellent, how do you rate their performance for the following? [Rotate list – Read company name before each measure.]

QAL / Queensland Alumina Limited	Very Poor Excellent					Don't know DO NOT READ OUT)
a. has a good reputation	1	2	3	4	5	6
b. demonstrates care for the environment	1	2	3	4	5	6
c. communicates clearly and openly with the community	1	2	3	4	5	6
d. is trustworthy and believed	1	2	3	4	5	6
e. is known as a good employer	1	2	3	4	5	6
f. is concerned with and sensitive to the needs of the Indigenous communities of the Gladstone region	1	2	3	4	5	6

If Q17e =6 skip Q22

Q22. Thinking about **RTA-Y / Yarwun**, on a scale where 1 is very poor and 5 is excellent, how do you rate their performance for the following? [Rotate list – Read company name before each measure.]

RTA-Y / Yarwun	Very Poor Excellent					Don't know DO NOT READ OUT)
a. has a good reputation	1	2	3	4	5	6
b. demonstrates care for the environment	1	2	3	4	5	6
c. communicates clearly and openly with the community	1	2	3	4	5	6
d. is trustworthy and believed	1	2	3	4	5	6
e. is known as a good employer	1	2	3	4	5	6
f. is concerned with and sensitive to the needs of the Indigenous communities of the Gladstone region	1	2	3	4	5	6

Demographics

To finish off I have a couple of general questions to ask about you so we can see if we have a good representation of the population of the Gladstone area.

Q23. How long have you lived in the Gladstone Region?

- | | |
|-------------------------------|---|
| a) Less than a year | 1 |
| b) One to five years | 2 |
| c) Between five and ten years | 3 |
| d) Between ten and 20 years | 4 |
| e) More than 20 years | 5 |

Q24. Do you currently live in a ... READ OUT, S/R

- | | |
|----------------------------------|---|
| House | 1 |
| Semi-detached house | 2 |
| Unit/flat | 3 |
| Motel/hotel | 4 |
| Caravan Park | 5 |
| Single person quarters/work camp | 6 |
| Another type of dwelling | 7 |
| (Do not read out) Refused | 8 |

- Q25. Is your current home...
[READ OUT]...
[SINGLE RESPONSE ALLOWED]

Supplied by employer	1
Rented on open market	2
Rented with employer assistance	3
Owned with employer assistance	4
Owned by you/your partner	5
Other	6
(Do not read out) Refused	7

Q26. What is your highest level of education? READ OUT

Year 11 or lower	1
Completed Year 12	2
Post-secondary qualification	3
Undergraduate degree	4
Postgraduate degree	5
(Do not read out) Refused	6

Q28. Do you or any member of your family work for a major industry in Gladstone?

Yes	1
No	2
Don't Know/ Not sure	3

Q27. In regards to your employment, which of the following best describes your situation? READ OUT. SINGLE RESPONSE

a.	Major Gladstone Industry employee	1
b.	Industry contractor employee	2
c.	Federal, State or Local Government employee	3
d.	Employee or owner of a small business	4
e.	Industry retiree	5
f.	Retiree	6
g.	Unemployed	8
h.	Other (please specify)	7

Q29. Have you heard of Gladstone Industry Leadership Group (GILG) before?

Yes	ASK Q30	1
No	GO TO Q31	2
Don't Know/ Not sure		3

IF YES ASK

Q30. What do you understand to be the main purpose of GILG? Please specify

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

ASK EVERYONE:

Q31. Before we complete this survey, are there any comments that you would like to make regarding Gladstone industry? Please specify

IF REFUSED TO ANSWER THE QUESTION, TYPE IN 'REF'

IF NONE/NO OTHERS, TYPE IN 'NULL'

IF RESPONDENT DOES NOT KNOW HOW TO ANSWER, REPEAT THE QUESTION. IF STILL UNSURE, TYPE IN 'DK'.

Q32. Would you like the Gladstone Industry Leadership Group (GILG) keep you updated on any issues of concern? [If yes, enter contact details.].

Please note – if we collect your details here, you are providing permission for these to be passed on to the Gladstone Industry Leadership Group specifically for the purposes of keeping you updated on any issues of concern. Your details will not be passed on to any other party or organisation.

Name: _____

Email: _____

Q33. Finally, would you be willing to participate in further research regarding the performance of Gladstone industry? This would involve participating in a face to face interview with a researcher from the Centre for Environmental Management at Central Queensland University.

Yes 1

No 2

[If yes, enter contact details.]

IM NOTE: DISPLAY NAME AND EMAIL ON THEIR RESPECTIVE SCREENS IF PROVIDED AT Q32

Name: _____

Email: _____

Telephone number: _____

Thank-you for your time today.

IF ASKED: If you have any queries about Gladstone Industry Leadership Group, please contact:

Kurt Heidecker

CEO, Gladstone Industry Leadership Group

Phone: 0438 184 476

Email: kurt.heidecker@gilg.com.au

CLOSE

ALL RESPONDENTS

Just to remind you my name is.... from National Field Services. Could I please have your name so that we can re-contact you if necessary as part of our quality control to validate that this interview actually took place?

	Yes	1
	No	2

IF YES TO RECONTACT

May I please have your NAME? RECORD NAME. IF ALREADY PROVIDED AT Q32 OR Q33, DISPLAY ON SCREEN FOR PURPOSES OF CONFIRMING

NAME:

Once the validation period has finished, please be assured that your name and contact details will be removed from your responses to this survey. After that time we will no longer be able to identify the responses provided by you. However, for the period that your name and contact details remain with your survey responses, which will be approximately 3 months, you will be able to contact us and to request you have access to your information

IF YES TO RECONTACT

Can I just confirm that I have dialed the correct phone number: [PHONE NUMBER]

	Number is CORRECT	1
	Number is WRONG	2

IF WRONG TO DIALED NUMBER

Please can I have the correct telephone number to re-contact you on?

INTERVIEWER: RECORD NUMBER WITH AREA CODE, NO SPACES OR DASHES & LEADING ZERO

PHONE NUMBER: _____

ALL RESPONDENTS

As this is market research, it is carried out in compliance with the Privacy Act. The information you provided will be used only for research purposes. As mentioned earlier this research was conducted on behalf of Central Queensland University.

THAT'S THE END OF THE INTERVIEW, THANK YOU VERY MUCH FOR YOUR HELP.

PLEASE BE ASSURED THIS IS GENUINE MARKET RESEARCH.

**IF YOU HAVE ANY QUERIES, YOU CAN CALL MY SUPERVISOR ON (02) 9304-4324 OR CALL THE MARKET
RESEARCH SOCIETY'S SURVEY LINE ON 1300 364 830**

INTERVIEWER I certify this is a true, accurate and complete interview, conducted in accordance with IQCA standards and the ICC/ESOMAR code of conduct. I also agree to hold in confidence and not disclose to any other person the content of this questionnaire or any other information relating to this project.

APPENDIX 3 PERSONAL INTERVIEW SCHEDULE

Interview Schedule for Gladstone project

Introduction

Thank you for participating in the interview. (Go through information sheet and ensure that consent form is signed and that the project and anonymity is fully understood by the participant).

Background

How long have you been in the Gladstone area? Why did you move here?

How long will you stay in Gladstone? Why?

Corporate Citizenship

In the phone survey we asked a number of questions that we relate to good corporate citizenship, for each one could you give an example of what it means to you and how that relates to the 1-5 rating.

	Example of rating -
Demonstrates care for the local environment	(e.g. helps planting trees)
Communicates clearly and openly with the Gladstone community	
Supports the local community	
Is trustworthy and believed by the local community	
Is known locally as a good employer	
Has a long term commitment to the Gladstone community	
Is concerned and sensitive to the needs of the local Indigenous communities	
Generally, has a good reputation within the region	
Acts in line with the expectations that I have of Gladstone industry	

What are some other measures of 'corporate citizenship' that could be included?

What are some of your expectations of industry in the Gladstone area?

Do you think industry meets those expectations? (If yes, how and in what ways)

Liveability

We ask survey participants to rate the liveability of the Gladstone region. What are the key liveability factors for you?

Do you think that more industry (like the new gas project) will impact on the liveability of Gladstone?

If so, how do you see that it would impact? (Are there any specific issues that you are worried about)

Will you benefit personally from more industrial development?

Health – Environment and People

Do you have any specific health related concerns that are linked to the performance of Gladstone industry?

Does Gladstone industry change the way you do things? For example do you avoid certain activities because of industrial emissions like dust, noise, odour.

Are you concerned about any particular industries in the Gladstone area? What are these concerns?

What are your thoughts on more industrial development in the Gladstone region?

GLADSTONE INDUSTRY COMMUNITY PERCEPTION STUDY

INFORMATION for PARTICIPANTS

What is this research all about?

The core focus of this research study is to improve the performance of Gladstone industry. The study has involved the collection of data through a telephone survey which looked at the priority issues for the Gladstone community, the corporate citizenship performance of Gladstone industry and ways that it can be improved.

Who can participate and what you will be asked to do?

To gain information to assist in a better understanding of community perceptions of Gladstone industry performance we are conducting face to face interviews with a selection of the survey participants. Your assistance with this study is greatly appreciated.

During the interview (approx. 1 hour) you will be asked to provide your opinion regarding how you perceive the performance of industry in Gladstone in relation to corporate citizenship, the liveability of the region and health related issues.

How will the information I provide be used?

The information gathered from interviews will provide Gladstone industry with perceptive feedback on its performance in the Gladstone community and offer a mechanism for improvement.

What are my rights?

You are free to withdraw from participating at any time. This means you can withdraw permission for the information you have given to be used, even after completing the interview. Your input is anonymous and all answers will be kept strictly confidential. The data gained from this research project will be stored for 5 years in accordance with the Code of Conduct for CQUniversity, Australia.

Who do I contact for more information?

For more information about this research project please contact: Mr Lindsay Greer, Ph: 49232373 or email l.greer@cqu.edu.au

Alternately you can contact CQUniversity Human Research Ethics Committee on 07 49232607.

PARTICIPANT CONSENT FORM**GLADSTONE INDUSTRY COMMUNITY PERCEPTION STUDY**

I _____

Have read and understood the information sheet provided and have had any queries answered to my satisfaction.

I understand I may freely withdraw from participating in this study at any time.

I give consent for the information that I will give in the survey/interview to be recorded and published as part of this study, on the understanding that:

- Access to information recorded will be limited; and
- The anonymity of participants will be maintained at all times

Signed _____

Date _____

GLADSTONE INDUSTRY COMMUNITY PERCEPTION STUDY

I would like to receive a copy of the summary of research results when available.

Name: _____

Address: _____

Email: _____

