

AQUIS RESORT AT THE GREAT BARRIER REEF PTY LTD
**ENVIRONMENTAL IMPACT
STATEMENT**

VOLUME 2

**CHAPTER 13
ECONOMIC**

13. ECONOMIC IMPACTS

13.1 ECONOMIC PROFILE OF FAR NORTH QUEENSLAND

13.1.1 Population and Demographics

The total population of the 19 Local Government Areas (LGAs) that make up Far North Queensland during 2011 was estimated at 254 000 (Australian Bureau of Statistics (ABS) 2011). This population is mainly based within the Cairns, Cassowary Coast and Tableland LGAs. Population ageing in the Far North Queensland region is higher than the rest of Queensland and Australia. Population ageing in Cairns is less acute than Queensland as a whole while Cassowary Coast and Tablelands have a higher proportion of older residents.

A common metric used to assess the extent of population ageing in a region is the dependency ratio. This is the number of individuals under the age of 15 and over 65 as a percentage of the number of working age individuals. The dependency ratios across Cairns, Cassowary Coast and Tablelands are 46.6%, 56.6% and 61.3% respectively. This compares to dependency ratios of 50.6%, 50% and 49.9% for Far North Queensland, Queensland and Australia respectively.

Greater population ageing in Far North Queensland region can largely be attributed to a few key factors:

- low inward migration rates for key working-age groups, such as students and young professionals in LGAs other than Cairns
- the persistent loss of younger residents, who choose to pursue education and employment opportunities elsewhere
- the dominance of labour intensive industries, which typically have an overrepresented share of older workers (i.e. the health care, public administration and education sectors).

The challenge of attracting and retaining young people is not exclusive to Far North Queensland and is an issue faced by many other regional economies. **Table 13-1** provides a current demographic profile of the Far North Queensland and Queensland.

TABLE 13-1 DEMOGRAPHIC PROFILE 2011

Population Indicators	Far North Queensland	Queensland
Population	254 000	4 333 000
Working Age Population	169 000	2 888 000
Dependency Ration(5)	50.6	50.0
Extreme Age Ratio*	3.9	5.1

Source: ABS (2011) and Deloitte Access Economics (2014).

Note:*Extreme age ratio is the number of residents aged over 80 years as a percentage of working-age residents.

13.1.2 Employment and Workforce

a) Regional Profile

The best available employment and industrial structure data from the ABS is reported at a broader industry level (e.g. retail, accommodation and food services). Industries are defined on the basis of the primary goods and services that they produce. Tourism is not included within these industry groups as it is defined by the status of the consumer, not the producer. This is because expenditure on recreational services by a visitor contributes to tourism's share of the economy, while expenditure by a local resident would not. Instead, when examining the contribution of tourism to an economy, a

combination of the accommodation and food services, transport and retail sectors are used as barometers for visitor activity.

The retail industry in Far North Queensland employs approximately 9,650 full-time equivalent (FTE) workers and accounts for 10.5% of total employment in the region. The accommodation and food services also employs a significant share of the regions labour force at 9.1%, translating to approximately 8350 FTE workers.

Outside recreational goods and service industries, human service sectors dominate employment. Health care and social assistance is the largest employer, accounting for 12.1% in Far North Queensland, representing the needs of a large and ageing regional population.

The top six industries by employment across Far North Queensland are shown in **Table 13-2**.

TABLE 13-2 TOP SIX INDUSTRIES BY EMPLOYMENT

Industry	Far North Queensland	Queensland
Health Care and Social Assistance	12.1%	10.9%
Retail Trade	10.5%	9.2%
Public Administration and Safety	9.5%	7.0%
Accommodation and Food Services	9.1%	5.7%
Education and Training	8.3%	7.3%
Construction	7.7%	10.7%
All other industries	42.8%	49.1%
Total Employment (FTEs)	92 000	1 884 000

Source: Deloitte Access Economics (2014).

Place of residence data indicates that between 2006 and 2011, employment increased by 7300 FTEs. However only 3000 of these people reported that they worked in Cairns. This suggests that on balance, more Cairns residents are living in Cairns and commuting outside the area for work. This has largely been seen in the construction and manufacturing sectors involved in large resource project development.

The recent decline in mining and resource activity across Queensland has also been felt in Far North Queensland where unemployment rates have climbed up to 7.0%, compared to the rest of the State at 6.1% (see **Table 13-3**). Workforce participation for this region is also somewhat lower, at 59.6% as opposed to 62.2% for the Queensland level.

TABLE 13-3 WORKFORCE SUMMARY 2011

Workforce Indicator	Far North Queensland	Queensland
Employment (FTE)	92,000	1,884,000
Unemployment (%)	7.0	6.1
Participation Rate (%)	59.6	62.2
Mean Household weekly income (\$)	1,052	1,227

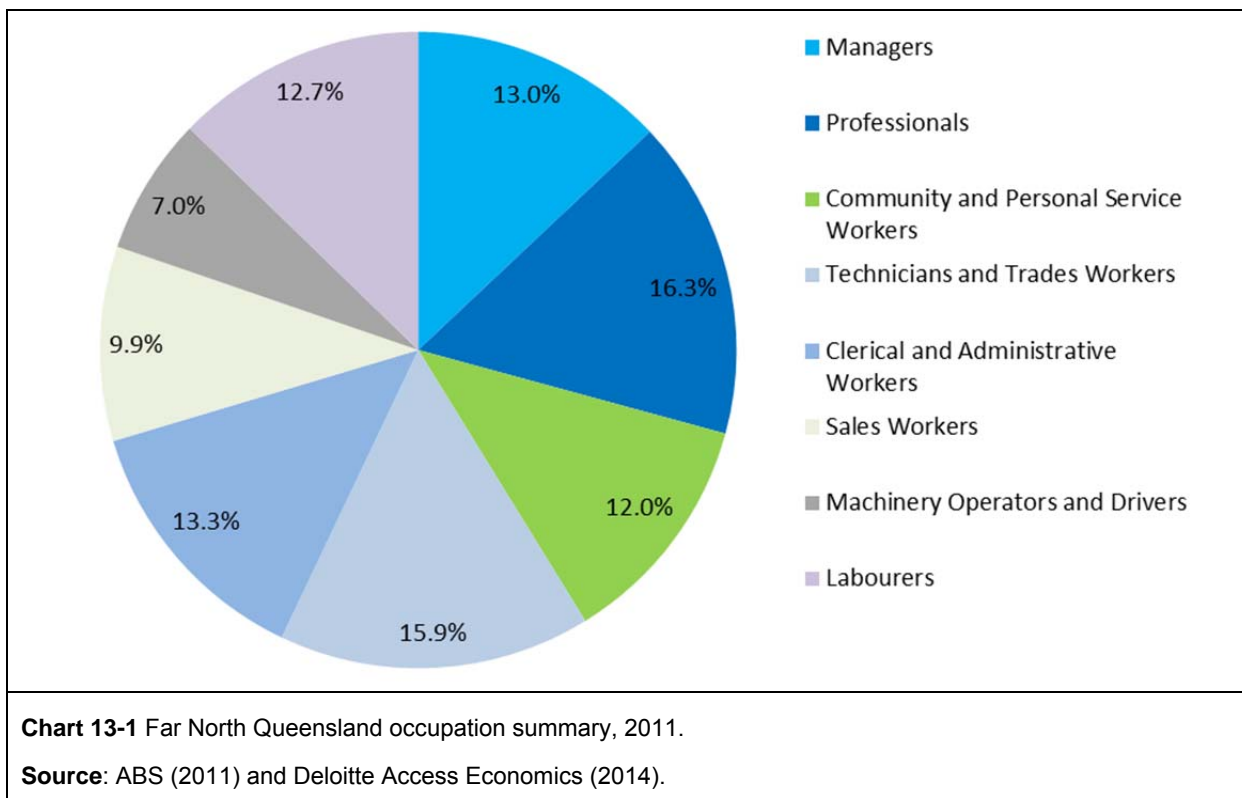
Source: Deloitte Access Economics (2014).

The combination of higher unemployment rates and lower participation rates in the Far North Queensland implies that there may be scope for Aquis to offer more employment locally, or assist in the transition back to the labour force.

b) Qualification and Skills

The Far North Queensland region has a less highly skilled population compared to larger regional and metropolitan areas in Australia. Cairns, however, does have a share of higher education educated residents that is on par with the State average. The most common qualifications are bachelors, advanced diplomas and certificates. The proportion of the population in Far North Queensland with a bachelor degree is 7.1%, and with a postgraduate degree is 1.3%.

The Far North Queensland's economic leanings are also evident in its occupational breakdown, with 38.2% of the workforce employed as professionals, community service, and sales workers (see **Chart 13-1**). This demonstrates the strength and important role the service sector plays in the Far North Queensland economy.



13.1.3 Industrial Structure and Size

The Far North Queensland economy has a gross regional product (GRP) of \$13.5 billion, or around 4.6% of the Queensland economy. The economic structures of Far North Queensland and Cairns are based primarily on construction, human services, and tourism. As noted, tourism is not explicitly recognised as an industry group but an indication of its importance can be gauged mainly through the accommodation and food services industry, but also the retail and transport industry. Due to the labour intensive nature of these tourism driven sectors, their employment footprint is higher than their contribution to gross value added.

Agriculture also makes a significant contribution to the Far North Queensland regional economy. Historically agricultural activities have focused on the sugarcane subsector; though there has been a recent diversification to include other crops and tropical fruits. The proposed Aquis Resort is located near existing farmland that produces sugar cane. However these soils are relatively poor, require substantial fertilisers and are subject to drought in prolonged dry spells.

Table 13-4 shows the top six industries by value-add as well as the value-add of retail and accommodation and food services. Construction is the highest contributor to value added making up

10.6% of the total. The combined transport, retail and accommodation sectors make up 20.3% of Far North Queensland's value added.

TABLE 13-4 TOP SIX INDUSTRIES BY VALUE ADDED, 2011

Industry	Far North Queensland	Queensland
Construction	10.6%	10.9%
Health Care and Social Assistance	10.5%	8.4%
Public Administration and Safety	9.2%	6.7%
Transport, Postal and Warehousing	7.7%	6.8%
Agriculture, Forestry and Fishing	7.0%	3.2%
Retail Trade	6.8%	5.5%
Accommodation and Food Services	5.8%	2.8%
Other Industries	42.3%	55.7%
Total Added Value (\$m)	11,231	241,776
GDP (\$m)	13,482	290,158

Source: Deloitte Access Economics (2014).

13.2 ECONOMIC IMPACTS

13.2.1 Analytical Methodology

The assessment of the economic impact of the proposed Aquis Resort to the regional Far North Queensland and State economies has been based on computable general equilibrium (CGE) modelling to estimate how capital investments for project development, operational revenues and tourism gains are distributed across broader sectors of the economy over time.

Computable General Equilibrium models take account of a wide range of economic drivers, including competition in labour and capital markets, and as such provide insight both into the potential upside and downside impacts of sectoral changes. There are typically a number of adverse economic impacts that are associated with projects of this scale. Some of the foremost pressures that are likely to manifest from the direct and indirect impacts of the Aquis Resort are also discussed here.

The analysis adopts a bottom up framework to determine the likely size, timing and location of the stream of activity that is likely to be generated from the development of the Aquis Resort based on comprehensive financial data provided by Aquis. This commercial in confidence information includes forward capital expenditures, operational capacity and workforce requirements over the construction and operation phases of the Aquis project. Where required, publicly available information from Tourism Research Australia (TRA) and the Australian Bureau of Statistics (ABS) has been leveraged to estimate and apportion the broader economic benefits from greater tourist visitation.

The economy-wide impacts of the Aquis Resort has been modelled using the Deloitte Access Economics Regional General Equilibrium Model (DAE-RGEM). The model projects macroeconomic variables such as Gross Domestic Product (GDP) and employment. For the purposes of this assessment, the model has been disaggregated and customised to match the attributes of the Far North Queensland area in which the Aquis Resort would be located. Modelling has been undertaken for the period of 2014 to 2030 for two specific geographic levels:

- Far North Queensland region: Contains the Aurukun, Cairns, Cassowary Coast, Cook, Croydon, Etheridge, Hopevale, Kowanyama, Lockhart River, Mapoon, Napranum, Northern Peninsula Area, Pormpuraaw, Tablelands, Torres, Torres Straight Island, Weipa, Wujal Wujal and Yarrabah Local Council Areas (LGAs).
- Queensland: Includes the 19 LGAs in the Far North Queensland region and impacts across the rest of the State.

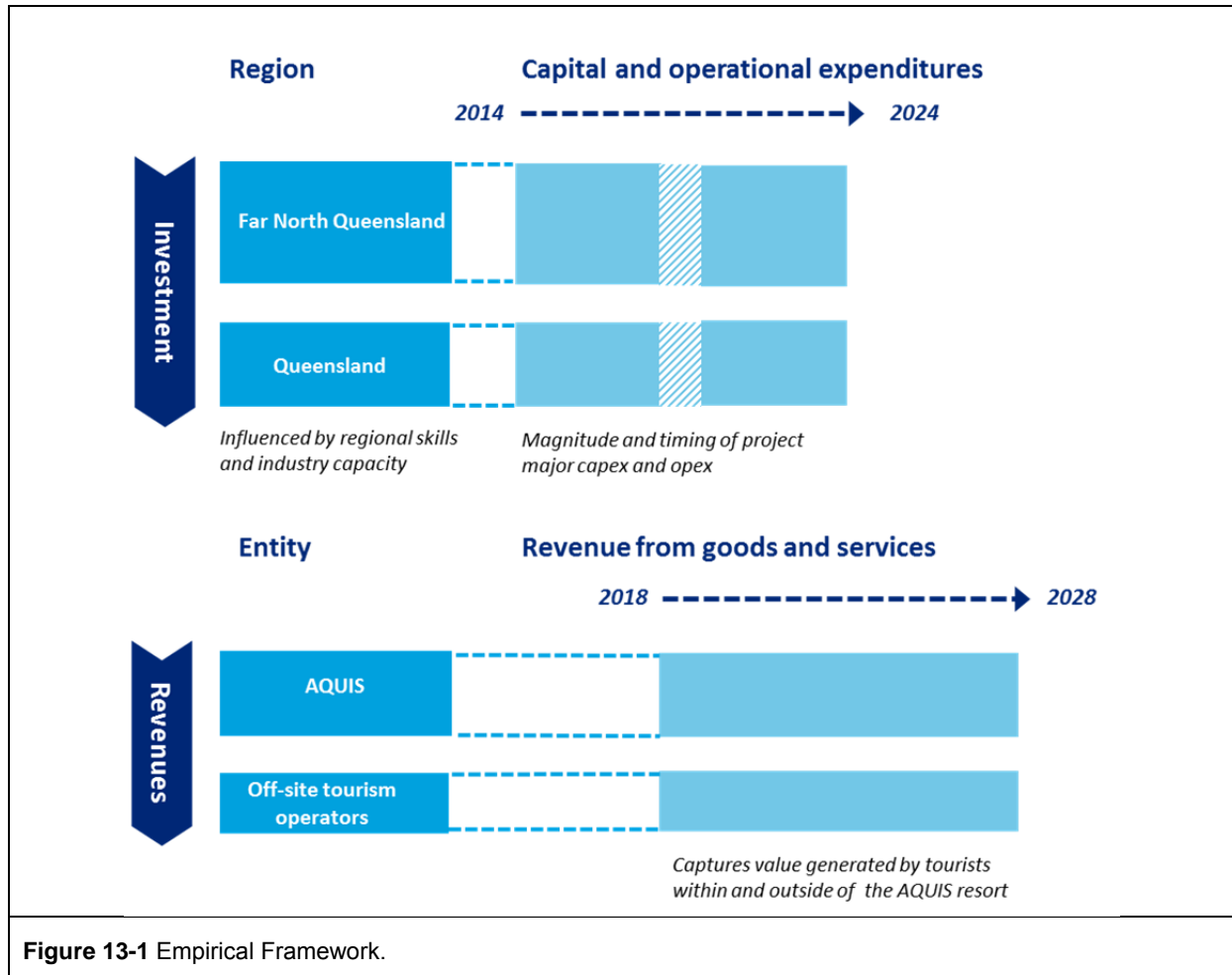
These regional classifications match the latest LGA boundaries released by the ABS and the Regional Development Australia definition for the Far North Queensland.

One of the realities of an extended analytical horizon is that projections contain an element of uncertainty. In particular, it is very difficult to forecast international economic growth, exchange rates, labour supply and other dynamic factors that will impact the level of visitation and tourism activity in Cairns into the future.

In general, low-skilled occupations such as the construction, manufacturing, transport and recreation sectors most called upon for the Aquis project, exhibit higher 'labour supply elasticity' because of the lower barriers to entry and qualifications required for these workers. An aggregate 'labour supply elasticity' of 1.2 has been adopted. 'Labour supply elasticity' is defined as the responsiveness of labour supply to changes in wages to illustrate the potential economic gains when project vacancies are filled relatively easily (either locally or otherwise). This aligns with Aquis' workforce assumptions.

To gauge the economic impacts of the proposed development, the 'Aquis scenario' is compared against a baseline, or counterfactual. The baseline case sets out the story of how the economy would have evolved over time in the absence of the Aquis Resort. As the other planned tourism or infrastructure projects for the Cairns vicinity (and indeed across Queensland) are not contingent on the development of the Aquis Resort, they have been considered to form part of the baseline. In this respect, the Aquis scenario represents the potential incremental gains to the economy, above and beyond what would have occurred without the capital expenditures and tourism revenues created from the Aquis Resort.

The results from the economic impact assessment are presented as absolute and percentage deviations in output and employment against this baseline case. The broad approach to the economic impact analysis is shown in **Figure 3-3**.



13.2.2 Distribution of Project Expenditure and Revenue

The economic impacts from the Aquis Resort are driven by two phases of development: the construction and operations periods. These phases underpin the pattern of economic activity and the types of demands (i.e. for materials inputs, capital, labour etc.) placed on the Far North Queensland region and wider State over time.

a) Capital Phase

This involves the period where major construction works are undertaken in the local Cairns project area. This includes the construction of the eight hotel towers, a casino, aquarium and other food, retail and entertainment facilities. Additional costs for site establishment, road and infrastructure upgrades have also been factored in.

b) Operations Phase

This involves the operational costs and revenues incurred over the life of the resort. In this phase, Aquis facilities open to the public, with the business operating at full scale following the second expansion.

Unlike most major projects, the capital expenditure expected for the Aquis Resort is not 'front-loaded'. This is due to the two stages of project development which sees 60% of the total \$8.15 billion construction expenditure incurred in the first four years of the project, with the remaining 40% expended in Stage 2 between 2020 and 2024. Capital expenditure patterns for the Aquis Resort are outlined in **Chart 13-2**.

Capital expenditure (\$M)

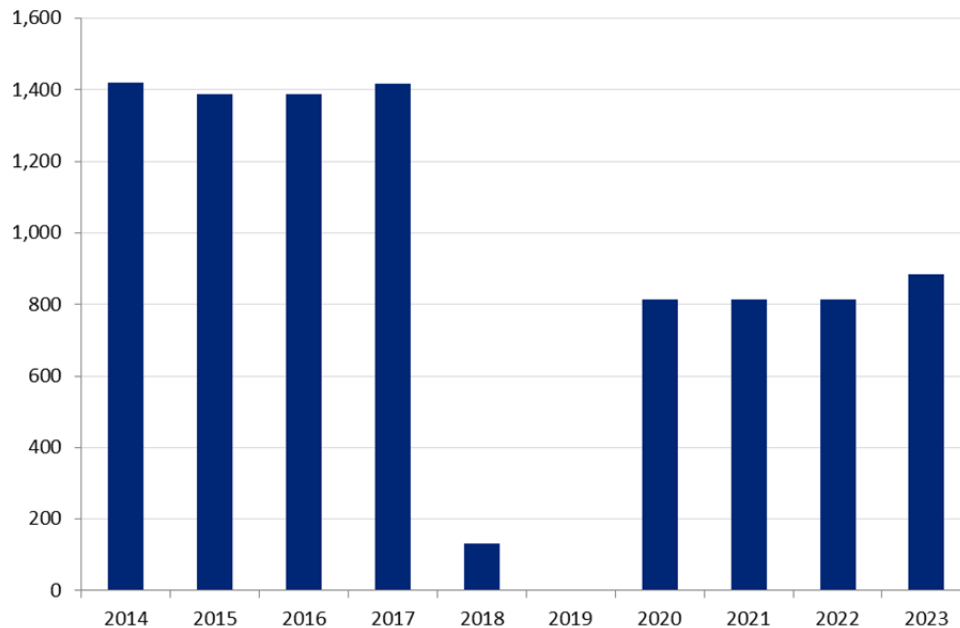


Chart 13-2 Capital expenditure.

Source: Aquis financial model.

Project revenues would start to be realised from 2018 onwards, once Stage 1 facilities become operational. Initially, Aquis revenue grows to around \$5.9 billion by 2020. After the additional capacity enhancements from State 2 come online, revenue increases to just above \$13.0 billion in the longer run (see **Chart 13-3**).

Revenue (\$M)

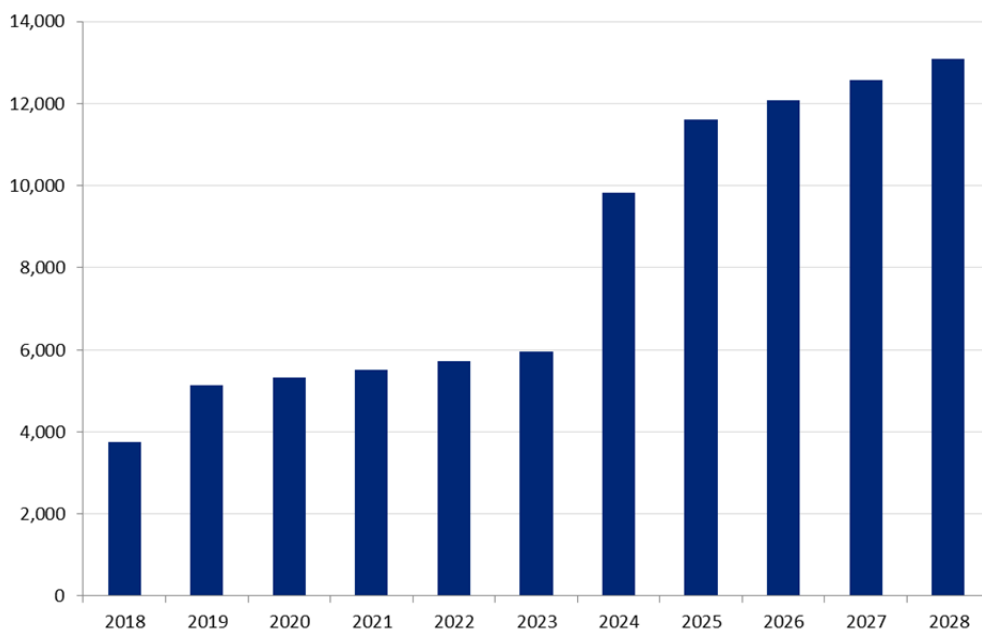


Chart 13-3 Revenue projection.

Source: Aquis financial model

The Aquis Resort, should it be approved, will increase the level of tourism activity in both Far North Queensland and for the State as a whole. Beyond these economic direct impacts, considerable indirect impacts are also generated from the distribution of project expenditures and tourist revenue over the life of the resort. This is because the tourism sector is supported by a deeply linked chain of related recreation industries that also benefit from increase visitation.

The types of businesses that benefit depend on the phase of project development: capital and operational. During the capital phase of a project, proponents tend to rely more heavily on input from engineering and construction suppliers and contractors due to the requirements of installing large-scale capital works. Once the resort is up and running, the supply side industries supporting a resource project shift according to the new operational necessities of accommodating hotel guests. Sectors such as maintenance, cleaning, food and hospitality typically experience higher demand for their services.

In addition to this, further indirect economic benefits are created through tourists who primarily visit Cairns to stay at, or use Aquis facilities and spend money on goods and services outside of the complex. For instances, greater tourism activity is likely to increase the demand for food, entertainment and retail offerings within the Far North Queensland region.

Acknowledging that the Aquis Resort hosts many of these premium services, only a share of total tourist expenditure can be realistically attributed to Aquis. Estimates for the level of tourist visitation and off-site expenditure have been guided by a combination of Aquis forecasts and TRA data for similar target cohorts. The key assumptions behind the measurement of off-site tourism Aquis driven revenue is presented in **Table 13-5**.

TABLE 13-5 OFF SITE TOURISM REVENUE ASSUMPTIONS

Categories	Peak Capacity Assumptions
<i>General Assumptions</i>	
Average length of stay	4.0
Average No of visitors/room	1.75
Share of visitors staying outside of Aquis	50%
<i>Visitor profile assumptions</i>	
Total Visitor nights at Aquis	838,000
International visitors	74%
Interstate visitors	9%
Intrastate visitors	6%
FNQ Visitors	11%

Because of these direct and indirect economic elements, the results presented in this section may not necessarily be comparable (and indeed are higher) than the projections outlined in other areas of the EIS, which take a narrower financial view and focus on on-site construction employment and tourism revenues.

13.2.3 Far North Queensland Economic Impacts

While the location, quality of natural attractions, access to gateway infrastructure and market opportunities will fundamentally determine where tourist resorts are constructed, there are a range of other factors that will influence the magnitude and distribution of the ensuing economic gains of major project development. This includes the size and composition of the economic centres proximate to the project, access to skilled labour and competitiveness of local businesses.

As a general rule, where inputs for projects can be readily (and efficiently) sourced from the locality, the regional economic impacts of from project development are considerably higher. Conversely,

where this is not possible, a larger share of the benefits from construction and operational and expenditure are enjoyed outside the region.

The Far North Queensland's, and in particular Cairn's longstanding recreational orientation is likely to enhance the regional economic benefits from the Aquis project due to the strong clustering of tourism operators and the accommodation, hospitality and retail sectors. This also means that there is likely to be an existing skills and capital base from which Aquis can draw on (i.e. tradespeople, chefs, retail assistants, clerks etc.).

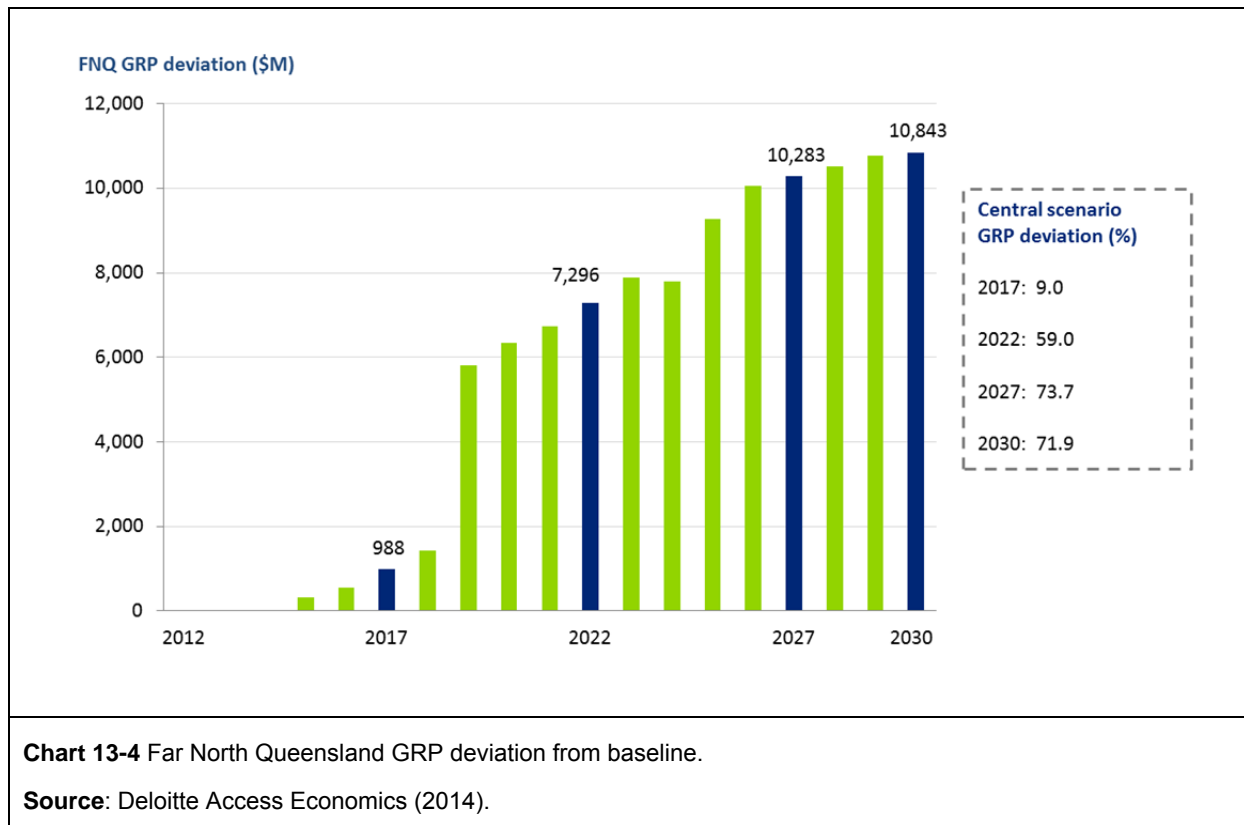
a) Output Impacts

Chart 13.4 depicts the additional economic output, in real 2014 terms, generated due to the Aquis Resort in the Far North Queensland region for the central and low scenarios. Over the period 2014 and 2024 increases in output are tied to the capital investments for project construction. After this time, deviations in output reflect the revenues earned by Aquis, its suppliers and other local tourism operators that benefit from higher visitation numbers.

For this reason, the charts highlight results at four static points of time that accord with specific project milestones, namely the peaks in the construction workforce for Stages 1 and 2 (2017 and 2022) and points in time after the Aquis Resort becomes fully operation (2027 and 2030).

The economic impacts ramp up over time. In 2017, construction activity sees Gross Regional Product (GRP) increase by 9.0% above the baseline — the equivalent of an almost \$1.0 billion addition to value added in the Far North Queensland region. Over the longer term as capacity expansions become functional, increases in GRP approach \$11.0 billion by 2030 (an increase of around 72% above the reference case).

This is an extraordinary change when remembering that in 2011, the Far North Queensland economy was \$13.5 billion in size. Another way to frame the economic impacts, especially the cumulative results over a long period of time is to converting the stream of value added gains into present terms. In this way, the net present value (NPV) of future GRP gains is estimated to be around \$52.5 billion over the period 2014 and 2030.



As is expected, during the capital intensive stages of the Aquis project the majority of the output impacts are concentrated in the construction sector. In the central scenario, output in the construction sector in the Far North Queensland is projected to increase by just under \$1.1 billion in 2017. Some of these gains are offset by much smaller decreases in other sectors such as agriculture and processing foods manufacturing.

By 2027, the industries most impacted by the Aquis project change dramatically. Around this time it is the recreational services (\$13.2 billion), trade (\$5.8 billion) and other transport (\$2.0 billion) sectors that are predicted to experience the highest output increases. Over the modelling horizon the impacts on the sugar cane sector appear to be relatively neutral.

Changes in air transport appear to be lower than first might be expected. This is because the airfares paid by international tourists visiting the Far North Queensland are incurred overseas and attributed to the national accounts of these countries. As a result, gains in the air transport sector are driven by interstate and intrastate visitors and workers travelling to Cairns for the Aquis Resort.

Table 13-6 provides a breakdown of output impacts across the sectors defined by the CGE modelling database. By definition, output impacts are larger than increases in gross value added measurements (shown in **Chart 13-4**).

TABLE 13-6 FAR NORTH QUEENSLAND SECTOR OUTPUT IMPACTS

Modelling Sectors*	Output deviation(\$M, 2017)	Output deviation(\$M, 2027)
Agriculture	-25	54
Sugar Cane	-1	-2
Coal	-4	-17
Oil	0	-3
Gas	-1	-6
Other Mining	6	-22
Processed foods	-19	334
Manufacturing	114	349
Electricity	4	162
Water	4	35
Construction	1,058	167
Trade	247	5,788
Other Transport	38	1,988
Water Transport	-11	33
Air Transport	-15	44
Communications services	21	514
Finance and Insurance	33	232
Other business services	365	2,403
Recreation	35	13,170
Other services	16	409
Dwellings	130	428

Source: Deloitte Access Economics (2014).

Note: *Refers to the sectors that are used in the CGE modelling database. These industries are similar to, but do not completely align with the ANZSIC industry classifications used by the ABS.

b) Employment impacts

Much like the broader economic impacts, the regional employment contribution of the Aquis project is significant. **Chart 13-5** presents the employment gains in Far North Queensland as absolute and percentage changes against the baseline. At the peak of construction and operations Aquis has estimated that the project is likely to directly employ around 3750 and 20 000 FTE staff respectively.

The economic modelling projections suggest that in 2017, an extra 2825 full-time jobs would be created indirectly across supplier industries in Far North Queensland that support project construction (see Chart 1.6). Similarly, in 2027, the Aquis Resort is projected to create about 30 675 full-time jobs in the region throughout supplier industries that are connected to resort operations.

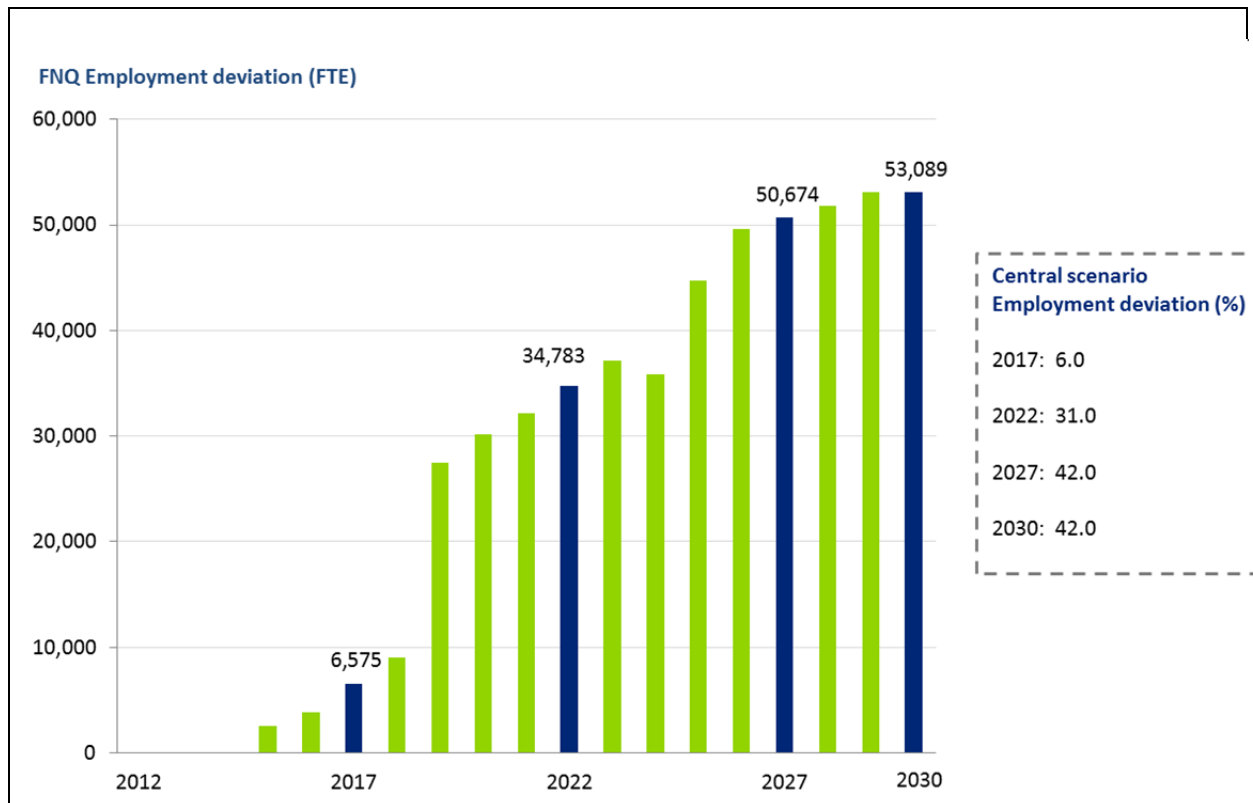


Chart 13-5 Far North Queensland total employment impact.

Source: Deloitte Access Economics (2014).

The employment impacts to the region are appreciable. In the long run, the Aquis Resort is estimated to cause employment deviations of close to 42% above the counterfactual in 2030.

13.2.4 Queensland economic impacts

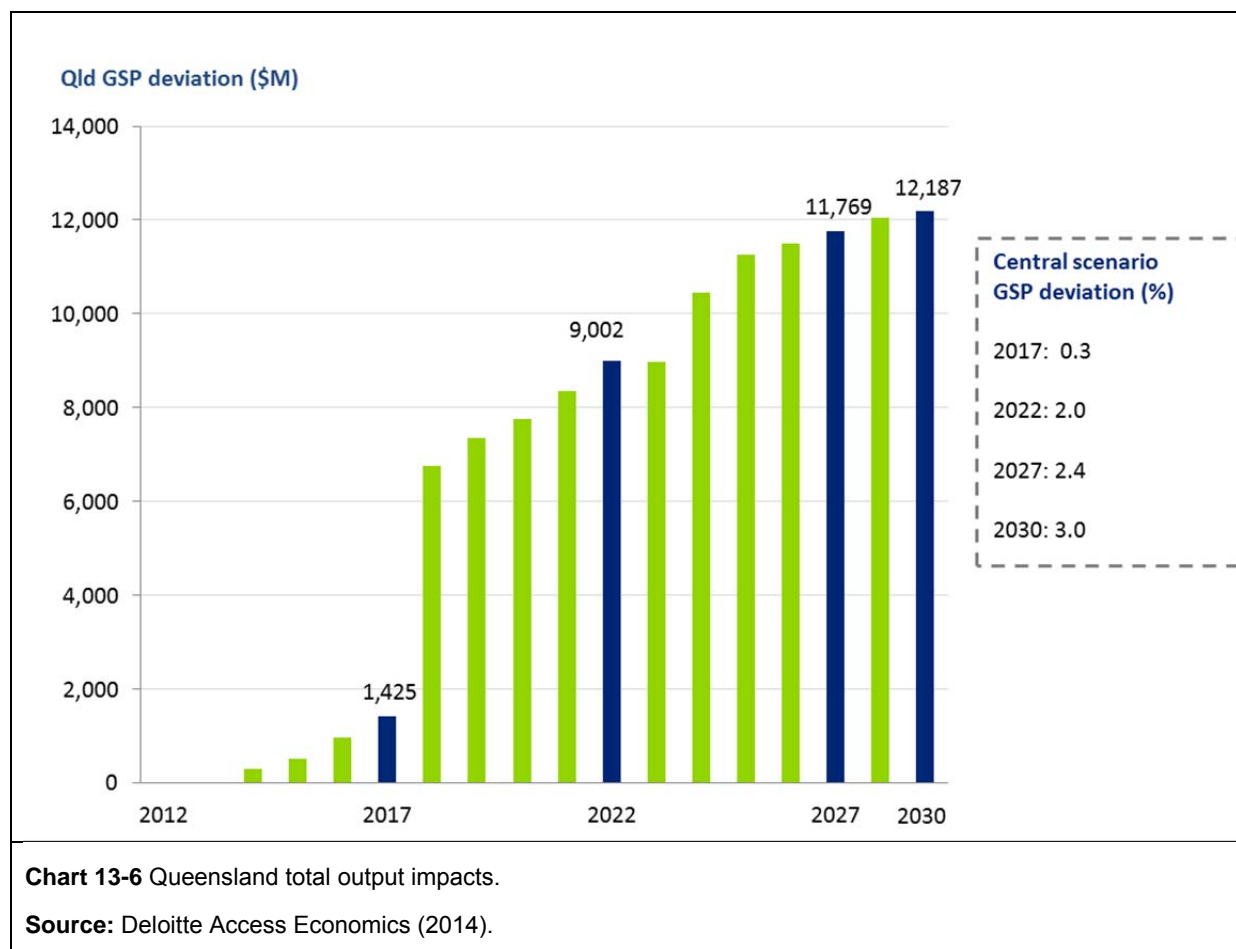
The economic impacts of the proposed Aquis Resort are widespread and extend beyond communities in the Far North Queensland region to the rest of Queensland and Australia. The pattern of Gross State Product (GSP), sectoral and employment impacts closely follow regional trends during project construction and operation. This is borne through the additional activity generated across the remainder of the State either because businesses are better placed to service Aquis project requirements or due to capacity constraints at the regional level.

By combining the economic impacts for the Far North Queensland and rest of the State, the results outlined below represent the total contribution of the Aquis project to the Queensland economy. Results that are greater than the impacts projected for the Far North Queensland highlight instances where there have been incremental gains to the rest of Queensland, while results that show a decrease in value added, output or employment going from the region to Queensland level imply that a 'crowding out', or redistribution of activity in the rest of the State to service the demands of the Aquis project.

a) *Output impacts*

The Aquis Resort contributes \$1.4 billion to GSP during the peak of construction in 2017. This is an incremental increase of over \$400 million in value added outside of the Far North Queensland region and across the rest of the State. Overall, this equates to a modest 0.3% increase in Queensland's GSP above the baseline (see **Chart 13.6**). The economic gains to the rest of Queensland continue to rise throughout the operational life of the Aquis Resort. By 2030, there is an incremental increase of \$1.3 billion in value added outside the Far North Queensland under the central scenario (3.0% above

the counterfactual); while in Net Present Value (NPV) terms to 2030 the increase in economy wide value added is \$55.4 billion.



During construction phase, the sectoral impacts in Queensland are quite similar to the equivalent scenario at the Far North Queensland level (see **Table 13-7**). This suggests that gains across the rest of the State occur because of a shortage of capacity at the regional level. In contrast, while the output increases in the recreation, trade and other transport sectors are comparable to the trends at the regional level during project operations, the prominence of the other businesses sector has increased noticeably.

TABLE 13-7 QUEENSLAND SECTOR OUTPUT IMPACTS

Modelling Sectors*	Output deviation(\$M, 2017)	Output deviation(\$M, 2027)
Agriculture	-37	109
Sugar Cane	-1	1
Coal	-77	-221
Oil	-8	-22
Gas	-11	-26
Other Mining	-10	-56
Processed foods	93	168
Manufacturing	8	173
Electricity	-3	186
Water	5	80

Modelling Sectors*	Output deviation(\$M, 2017)	Output deviation(\$M, 2027)
Construction	1,315	602
Trade	273	5,395
Other Transport	13	1,777
Water Transport	-12	35
Air Transport	-25	25
Communications services	38	912
Finance and Insurance	71	674
Other business services	383	4,050
Recreation	30	12,981
Other services	27	885
Dwellings	122	458

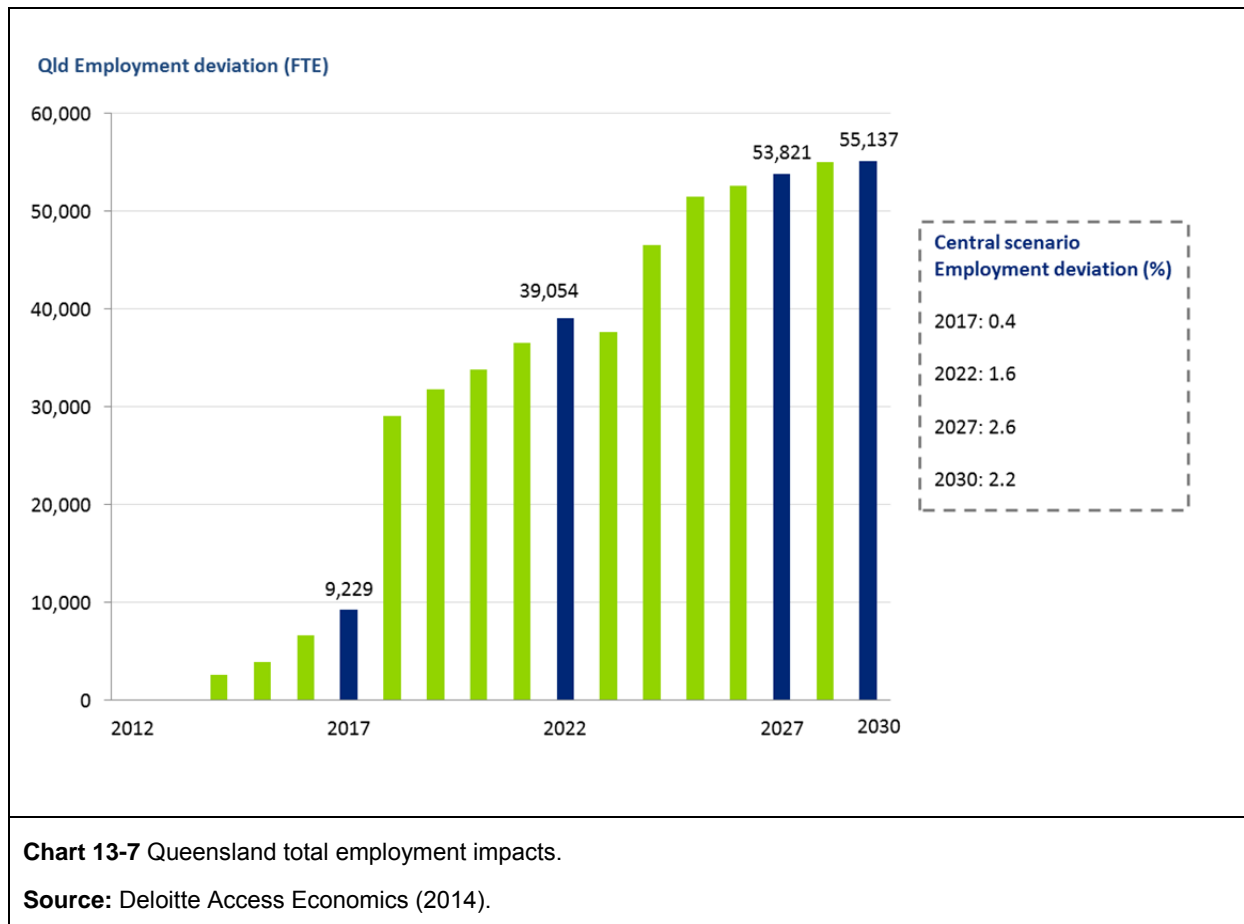
Source: Deloitte Access Economics (2014).

Note: *Refers to the sectors that are used in the CGE modelling database. These industries are similar to, but do not completely align with the ANZSIC industry classifications used by the ABS.

Employment impacts

Due to the smaller size of regional labour markets, a significant component of the workforce during the construction phase will likely be sourced from outside the Aquis Resort region. While some workers will relocate from other States, the majority are expected to be drawn from within Queensland. An important difference between the additional employment impacts seen across the rest of Queensland is that many of the jobs are likely to be created outside the construction and recreational sectors, especially as the gains from increased tourism activity and the broader increase in economic activity disseminate across the State.

At the peak of the construction phase in 2017, a further 2250 FTE jobs are created across the rest of Queensland. This totals to an additional 9229 full-time jobs to the Queensland economy (0.4% above the baseline). Once again, these forecasts include both the additional workers employed by Aquis directly and also the jobs created indirectly across supplying industries in the State. As the Aquis Resort transitions into its stable operational phase, the employment impacts pass 50,000 FTEs by 2025 (see **Chart 13-7**).



13.2.5 Fiscal Impacts

The construction and operation of the Aquis Resort will generate higher tax receipts for the State Government, including receipts in the form of payroll taxes, gaming-related taxes and the goods and services tax (GST).

There are a number of gambling taxes and levies applied by the Queensland Government, including gaming, wagering and casino taxes and levies and the health services levy. Estimates for the level of gambling taxes have been guided by usage and revenue projections from the Aquis financial model. On the other hand, changes in other taxes including payroll taxes and GST revenue have been gauged through the economic modelling. More specifically, each of the individual taxes and levies charged by local and the Queensland Government were mapped to variables such as employment and wages in the CGE model. This allowed taxation to move in line with the growth rates of the variables that play the most significant role in determining the level of revenue raised.

As with the economic results presented above, the incremental fiscal impacts of the Aquis Resort were estimated by comparing taxation levels under the baseline case in which the development did not proceed. Again, fiscal contributions represent only the direct impacts of taxation from Aquis. There are likely to be additional knock-on economic impacts as the Queensland Government looks to redistribute their revenues across the state.

Table 13-8 shows the estimated fiscal impacts of the Aquis Resort under the central and low scenarios. The total tax contribution of the Aquis Resort in the central scenario is \$18.5 billion over 2014 and 2030 in NPV terms. Federal taxes account for around half of these impacts. In comparison, under the low scenario, the fiscal impact is \$14.7 billion over the modelling horizon.

TABLE 13-8 FISCAL IMPACTS OF THE AQUIS PROJECT

NPV Period	2014-2023	2024-2030	2014-2030
Gaming Taxes (\$M)	1,278	2,085	3,363
Local and State government taxes(\$M)	2,293	2,887	5,180
Federal Taxes(\$M)	5,310	4,663	9,973
Total(\$M)	8,880	9,635	18,515

Source: Deloitte Access Economics (2014).

Note: NPVs have been calculated using a discount rate of 7%. Values are in real 2013–14 terms.

It must be noted that the final allocation of fiscal revenues is uncertain and is subject to an interaction between prevailing economic conditions in Queensland and Federal taxation regimes. The Commonwealth Grants Commission employs a horizontal fiscal equalisation (HFE) principle when determining how to equitably distribute GST gains across Australia's States and Territories. This process takes into account of a range of factors that are primarily associated with the underlying capacity of a region to raise sufficient revenues to cover the provision of services and infrastructure for its constituents.

Given the scale of the proposed development and related tourism activity that would to ensue, the Aquis Resort is likely to increase the Queensland Government's capacity to raise revenue and fund public initiatives. All other things being equal, this would reduce the share of GST revenue from the Commonwealth over time. Essentially, the higher fiscal revenues resulting from Aquis' operations in Queensland is likely to be offset by an expropriation or a 'claw back' of GST revenue to the rest of Australia until HFE is achieved.

13.2.6 Cumulative economic impacts

The proposed Aquis Resort is being considered as a standalone tourism project. It has no discernible relationships with other tourism or major projects planned for the wider Cairns areas. Some of the other key tourism developments that have been announced for the Far North Queensland region include the \$1.5 billion Satori Resorts near Innisfail and a \$200 million refurbishment of the Sheraton Mirage in Port Douglas. Together, all three developments are likely to raise the demand for local labour and inputs over the next decades. This is particularly true for the capital investment phases of the projects where they may compete for the same set of labour and skills sets.

It is difficult to ascertain the incremental impact of the individual projects in placing pressure on local thresholds without examining detailed commercial information about the other developments around the Aquis project vicinity. Changes in the scope, timing of investment, operative capacity and import intensity of each new project are the main factors typically influence whether there are any adverse cumulative impacts of tourism economic related activity.

In light of its unparalleled scale, it is probable that any resulting cumulative impacts of development in this sector would be traced back to the Aquis project. The cumulative impacts of the Aquis project have been implicitly treated in the CGE modelling. Though planned accommodation, casino or tourism projects are not individually added to the baseline, their combined impact on output and employment are entered in the recreation industry as a whole. Therefore, comparing the impacts of the Aquis Resort against the baseline scenario for the modelling regions produces only the incremental results that are above and beyond other similar developments in the modelling regions in question.

The incremental addition of the Aquis Resort over the baseline is projected to significantly impact the Aquis project area in Far North Queensland and Queensland.

13.2.7 Workforce Impacts

Given the scale of the Aquis Resort and its significant contribution to the regional economy, it is no surprise that the expected employment impacts are also large. Aquis estimates that it will directly employ up to 3750 during the peak of construction activity and offer 20,000 full-time positions for the ongoing operation of the resort. As the economic analysis highlights, another 2825 FTE jobs is estimated to be created in 2017 indirectly across the supplier industries supporting project construction in Far North Queensland in the central scenario. Similarly, a further 30 675 full-time jobs are projected to be generated indirectly throughout parts of the region connected to resort operations in 2027.

In the context of the Cairns and wider Far North Queensland region which employs 59 000 and 92 000 full-time workers respectively at present, the employment impacts from the Aquis Resort on the local labour market cannot be understated.

Overall the combination of two distinct project phases, construction and operation, along with the direct and flow-on employment impacts, is likely to see a substantial and enduring increase in the demand for a range of different occupations and skills. As is expected, during the two construction phases, there will be higher demand for trade and construction workers involved in the installation of capital works. There will also be greater demand for professionals that provide architectural, engineering, consulting and project management expertise.

As the Aquis project begins to transition into an operational resort in late 2018, accommodation, hospitality, retail and recreation service workers will be recruited. Due to the staging of capital investments starting in 2014 and again in 2020, there will be some overlap between the construction and operational labour force in Stage 2.

A detailed workforce analysis has been undertaken for the key occupations associated with both phases of the Aquis project. In order to identify where pockets of pressure may arise, three main considerations were taken into account:

- Current and historical patterns for vacancies, population, migration, employment and unemployment rates are all important when framing the capacity of a region to meet higher demand for positions in specific occupations.
- The matching between available skills sets and vacancies in an economy plays a large role in determining whether the demand for particular types of labour caused from a project such as Aquis can be absorbed by the regional workforce. Once again, analysing historical and current trends can give an indication as to whether training and up-skilling can adequately alleviate skills gaps.
- Where there is insufficient capacity to locally support project needs, recruitment from outside the Far North Queensland will be required to fill the vacancies created by the Aquis development. Factors such as the local industrial structure and workforce attributes will dictate areas where imported employment may be required and whether there will be excess capacity at the Queensland level to allow for this labour transfer.

The analysis has drawn on the latest ABS data for the industrial and occupational composition of the Far North Queensland and Queensland workforce. Growth rates for industries from the CGE modelling have been imposed on the current occupation structure labour force to form forward projections for labour demand. As noted above, supply responses depend on a number of demographic and skills factors.

The Aquis Resort is projected to support around 6575 and 53 000 direct and indirect FTE jobs during the peak in construction and operations respectively. Some of these jobs would be filled by existing capacity in the regional labour force. Unemployment rates in the Far North Queensland have recently

been sitting around the 7.0% mark, higher than historical rates of between 5.0% and 5.5%. While this does indicate the availability of some capacity in the local labour market, not all unemployed individuals have the experience or skills required to take up positions for the Aquis project. Where this is the case, it poses additional challenges to train and support unemployed individuals to re-enter the workforce, possibly resulting in a delay in employment beyond the needed timeframe.

Therefore, a large number of positions are likely to be sourced outside of the region from Queensland and the rest of Australia. Aquis estimates that around 40% of its workforce would be imported. There have been recent reports that suggest that there has been an easing in the demand for labourers and professionals due to a slowdown in new resource projects announcements across the nation. However given the number and size of projects in the approved projects pipelines in Western Australia and Queensland in particular, there may be some ongoing difficulties in importing these workers for the Aquis project.

The same can be said for imported workers in the accommodation and food or arts and recreation service sectors. As the Australian dollar continues its reversion back to the long term average over the next five years, there is likely to be a greater demand from both domestic and international tourists who find domestic travel more financially attractive — driving employment demand for the occupations that service visitors. Shortages of workers kitchen hands, commercial cleaners and bar attendants have already been evident, caused in some part due to the mining boom that has competed for the pool of workers who have re-trained and joined the higher paying mining and resource sectors. This was a key finding of the Deloitte Access Economics Tourism Labour Force Study undertaken in 2011.

Table 13-9 outlines the occupations that will be in most demand during the development and operation of the Aquis Resort by the two digit ANZSCO categories developed by the ABS. Workers in these occupations would either be directly engaged by Aquis or already be employed in supplier businesses. Ratings for skill levels have been defined from 1 to 5, with 1 representing occupations that require the completion of a bachelor degree or higher and 5 indicating a Certificate Level I or no on-the-job experience is needed.

The occupations projected to be in highest demand are consistent with the two project phases involved of the Aquis Resort. For instance, during the peak of construction in 2017, there is high demand for carpenters and joiners in both Far North Queensland (532 FTEs) and the Queensland level (573 FTEs). Data from the DEEWR Labour Market Portal suggests that in 2013 there were around 350 full time vacancies in this occupation across the State. This indicates there may be some shortfalls for workers in this occupation by the time construction commences in late 2014.

There is potential to train unemployed and underemployed people to gain their Certificate IV in carpentry; however a more likely outcome is the importation of workers from other parts of Australia and three years on-the-job experience is typically required to become fully qualified.

Based on current market vacancies, similar shortages are expected for plumbers and electricians in the Far North Queensland region in particular.

As project operations stabilise by 2027, the mix of occupations in high demand switches towards more sales assistants, gaming workers, retail managers and general clerks. While there is likely to be sufficient capacity in the Far North Queensland economy to meet the demand for sales assistants and retail managers due to the relatively larger size of the industry in Far North Queensland, the same cannot be said for general clerks. Census data from the ABS suggests that workers in this occupation are thinly spread across the economy and are even less represented in recreation and supply industries. However, the low entry qualifications for this type of work mean that up-skilling locals is a viable option.

Up-skilling will also be needed to fill Aquis vacancies for gaming workers. Based on the ABS 2011 Census, demand for this group doubles by the time the resort becomes operational. The low-skill level and advance notice of demand in this occupation will assist in increases supply responses in a timely manner.

TABLE 13-9 TOP TEN OCCUPATIONS PROJECTED TO BE IN HIGHEST DEMAND

2017					
Far North Queensland			Queensland		
Occupation	Skill level	Jobs	Occupation	Skill level	Jobs
Carpenters and Joiners	3	532	Carpenters and Joiners	3	576
Electricians	3	515	Electricians	3	546
Construction Managers	1	473	Construction Managers	1	503
Sales Assistants (General)	5	448	Sales Assistants (General)	5	448
Plumbers	3	325	Plumbers	3	351
General Clerks	4	268	Earthmoving Plant Operators	4	277
Earthmoving Plant Operators	4	260	General Clerks	4	276
Retail Managers	2	231	Retail Managers	2	231
Office Managers	2	223	Office Managers	2	229
Architectural, Building and Surveying Technicians	2	210	Architectural, Building and Surveying Technicians	2	226
2027					
Far North Queensland			Queensland		
Occupation	Skill level	Jobs	Occupation	Skill level	Jobs
Sales Assistants (General)	5	3018	Sales Assistants (General)	5	2538
Retail Managers	2	1707	Retail Managers	4	1497
Hairdressers	3	1304	General Clerks	4	1373
General Clerks	4	1218	Real Estate Sales Agents	3	1210
Gaming Workers	4	1200	Gaming Workers	4	1184
Commercial Cleaners	5	1026	Commercial Cleaners	5	1114
Real Estate Sales Agents	3	1016	Hairdressers	3	1114
Receptionists	4	954	Receptionists	4	1011
Bookkeepers	1	810	Bookkeepers	1	904
Checkout Operators and Office Cashiers	5	809	Office Managers	2	831

Source: Deloitte Access Economics (2014).

13.2.8 Airport and Ground Transport Networks

Cairns Airport will play a crucial role in connecting targeted tourist markets to the Aquis Resort. Once operational in 2018, the Aquis Resort expects to attract around 480 000 visitors from Asia (predominantly China) and another 57 000 interstate visitors each year—the vast majority will rely on Cairns Airport to facilitate their movement in and out of the region. As more capacity is added to the complex by 2024, visitation numbers are projected to be close to double this number. There would also be around 128 000 visitors who travel to Cairns to enjoy Aquis facilities but stay elsewhere.

Put in to context, these passenger numbers are equivalent to an extra seven daily A330 flights being added to the Cairns Airport schedule, with another three to four daily flights required to meet the demand from visitors who would stay outside the Aquis Resort.

This represents a significant increase from current passenger traffic at Cairns Airport — domestic arrivals in 2013 amounted to around 1.8 million and international arrivals totalled to 273 000.

While domestic passenger movements have grown at an average of 5.5% per year in the past decade, international arrivals have decreased by a total of 37% over the same period. The development of the Aquis Resort is likely to push inbound international numbers closer to the peaks observed in the earlier part of last decade.

This is positive news for Cairns Airport. The principal role of airports are transport infrastructure providers. Like other forms of economic infrastructure, these assets are long lived and have few, if any, alternative uses. More tourists in and out of the airport will bring much higher revenues through passenger movement charges and also through leasing arrangements for businesses on airport grounds and visitor spending on facilities such as parking.

The key question then becomes whether Cairns Airport has enough capacity to support a substantial and permanent increase in international tourism. Cairns Airport has informed Aquis that it has sufficiency latent capacity to manage the increases in workforce movements from Stage 1 of the project. This follows the completion of a \$200 million redevelopment of the domestic terminal and surrounding roads, car parks and transport facilities in 2010.

However in order to accommodate the growth in tourism that beings after Stage 1 construction is completed and increases after Stage 2, the airport may choose to review its present configuration of one international and two domestic terminals. Any expansions to Cairns Airport would involve some very large and upfront investments in capacity, ideally functional by 2024 (i.e. when the Aquis Resort becomes fully operational). These investments could be recouped over time through landing charges or revenues from leasing space around the new/expanded terminal to tourism operators.

Provisions for expansion at Cairns Airport have already been put in place with the Queensland Government granting the approval of a \$1.0 billion redevelopment. Upgrades are planned to occur over a 20 year period. It is likely that the operation of the Aquis Resort will support a business case for continued investments in Cairns Airport.

Mirroring capacity improvements at the airport, similar additions to ground transport to and from Cairns Airport and the Aquis Resort would need to be accommodated. It is likely that bus and taxi operations are the first modes of transport that would need to be expanded ahead of the peak in Stage 1 construction in 2017.

Much like the project itself, the ground transportation mix will need to change once the resort opens for business. For instance, there would be an increase in coach (particularly from Asian tourists travelling in groups), taxi and limousine transfers between Cairns Airport and the Aquis hotel area will have to be facilitated. Moreover, the premium location of the Aquis Resort is likely to create greater movements between the resort and the Cairns CBD for shopping and touring purposes (for example, reef trips).

Given the composition of Aquis visitors, it is likely that coaches and limousines will be in the most demand once the project becomes operational, while smaller increases for taxis and hire care usage will be driven by domestic tourists. Estimates for the increases in ground transfers during the two project development stages are provided in **Table 13-10**.

TABLE 13-10 ESTIMATED INCREASE GROUND TRANSFERS OVER CURRENT LEVELS DUE TO AQUIS

Type of transfer	Stage 1	Stage 2
Coaches	70-80%	140-160%
Limousines	70-80%	140-160%
Taxis	10-15%	20-30%
Hire Cars	5-7%	10-14%

Source: Aquis (2014).

13.2.9 Cost of Living Pressures

One of the potential consequences of greater economic activity is the upward pressure that tends to be placed on the costs of living. In 2011, reports by the Regional Economic Development Corporation and Local Government Association of Queensland (LGAQ) found that the large increases in population that have accompanied major projects in regional Queensland have driven up the demand for key social services and infrastructure. Often those who are most impacted by rising prices are the residents that have no direct (and limited indirect) exposure to the new project.

It should be noted the empirical evidence for rising living costs in Queensland is skewed towards large mining and resource projects in regional locations. Unlike resource development, where the influx of workers and investment subsides once the project is operational, the demands of the Aquis Resort will extend long after the construction phase has completed. Indeed, the sheer size and services-based nature of the Aquis Resort means that once it becomes operational, there will be a materially larger workforce, many of whom are drawn from wider parts of the region, State and Australia. Over time, the regional economy is likely to adjust as supply increases and prices move back to their long-term levels. Nevertheless, it is crucial to consider the extent to which its development will add to day-to-day costs for Cairns residents in the short to medium term.

Cost of living pressures are typically gauged by examining the price movements for a bundle of essential goods and services. Housing and accommodation, healthcare, education, social welfare and trade services are all likely to experience much higher demand as the Aquis project ramps up. Within this bundle, it is housing affordability that is typically the largest and consistent contributor to local living costs, on average taking up a quarter of household income in Queensland (ABS, 2011). The most severe property and rental price spikes are likely to be concentrated in the immediate project area in Yorkeys Knob, lessening in magnitude across Cairns and the wider region.

During the first stage of construction, it is the shorter term accommodation market that will be most impacted. As many workers relocate for specific tasks of the Aquis project construction, their contracts are relatively brief, lasting between a few months up to two years. The price impacts will depend on the capacity of the Cairns tourism accommodation and private rental markets to absorb a larger number of tenants.

Current indicators suggest that capacity in this market may be an issue. ABS data shows that vacancy rates for apartments in Cairns averaged around 2.1% towards the end of 2013. This would also impact other residents involved in the local rental and serviced apartment market. Without an increase in the number of dwellings available by the peak of project construction, Aquis workers may crowd out the ability of existing or new Yorkeys Knob/Smithfield residents to reside in the area.

These impacts are likely to become more pronounced during the longer, and more labour intensive, operational phase of the Aquis Resort. Around 40% of the 53,000 of the total direct and indirect operational workforce is expected to be sourced from outside of the region. Over time, as these workers settle in Cairns permanently, substantial pressure may be placed on the long term housing market and property prices. Population growth rates of close to 3.0% per year in Cairns have outpaced the growth in housing stock which has stayed around 1.2% over 2001 and 2012.

While it is inevitable that there will be some price impacts in local property and accommodation markets, it is difficult to ascertain the magnitude, or the net redistribution of wealth. There are a number of years before the Aquis project reaches peak construction and even longer until peak operations. It is possible for almost full market adjustments to occur in this time. This will largely depend on the CRC's response to the Aquis project and the rate at which land is released and development applications are approved. This would also apply to other local councils surrounding Cairns. Lag times for releasing land are not unusual, with such processes usually planned years in advance to concord to long term population and settlement trends. Renters may face higher costs before supply responses; this is only one side of the coin. Other market segments, namely landlords and asset holders, would see an appreciation in their wealth. The net effect of these two countervailing impacts on incomes is also unknown.

In terms of the costs of general goods and services, trade and construction services are likely to be in particularly short supply, with much of the local trade sector engaged in the Aquis project. There is also a risk that high levels of local construction sector involvement in the Aquis project may contain the rate at which new dwellings are erected after Council approval is granted. Local residential builders may face staff shortages. This is compounded by the intensity of small business operators in the Cairns trade sector.

Once the project enters its operational phase, construction and trade service providers would remain in higher demand to meet the needs of a larger population. Similar patterns are expected to be experienced for the health and education sector. However as the two current largest employing industries in the Far North Queensland region, these impacts may be relatively muted.

A point to emphasise is that while price increases, especially for housing and essential services, may certainly impact on the cost of living, the welfare implications for a region are determined by other variables such as economic growth, employment and investment. In this regard, the emergence of cost of living pressures in major project development areas has (and will continue to) stem from strong investment, rising incomes and low unemployment — each of which are crucial factors that underpin community living standards. Indeed the analysis of the economic contribution of the Aquis Resort has highlighted that much of the generated economic activity is retained in the region and that a considerable amount of spill over gains are also generated within non-recreational sectors in the economy.

These impacts can be contrasted with the economic performance in many other parts of Australia where high unemployment rates, declining primary industries and low levels of private sector activity and investment create their own — and much more harmful — community welfare problems.

13.3 IMPACTS ON TOURISM INDUSTRY

13.3.1 Visitor Numbers

The Aquis Resort can be expected to have a major impact on visitor numbers to the Cairns region and more broadly to Queensland and Australia.

The project will be especially targeted at the rapidly growing Chinese market in scale and in attractions offered. It will also have special appeal and attract visitors to Cairns from other markets. It is that expected that the resort will create its own additional demand.

Estimated visitor numbers are shown in **Table 13-11**.

TABLE 13-11 ESTIMATED VISITATION TO THE PROJECT WHEN FULLY OPERATIONAL

Year		Stage 1	Stage 2	Total
No. of rooms		4000	3500	7500
No. of room nights	365	1 460 000	1 277 500	2 737 500
Average occupancy	80%	1 168 000	1 022 000	2 190 000
Average guest/room	1.75			
No. of guest nights		2 044 000	1 788 500	3 832 500
Average stay (days)	4			
No. of guests		511 000	447 125	958 125
Visitation other hotels	25%	127 750	111 781	239 531
Visitation locals	25%	127 750	111 781	239 531
Total day visitors		255 500	223 563	479 063

Table 13-11 indicates a total non-local visitation in Stage 1 of 511 000 p.a. staying at the Resort and a further 127,750 staying away from the project but visiting the project facilities as part of their stay, an overall total of about 640 000p.a.

After completion of Stage 2 and lead-in period, total visitors are estimated at 958 000 as guests, and day visitors from other hotels at 236 000, making a total of about 1.2 million by about 2025.

While some who stay at the Resort may have come to Cairns and stayed elsewhere if the resort had not been built, this is likely to be offset by people attracted by the Resort to visit the region, but staying in other accommodation and making day visits to the Resort to use its facilities including the Casino.

It can be expected that the Resort development will attract additional visitors to the region of the order of 500 000 as a result of Stage 1, and 1 million following Stage 2.

This growth in visitor numbers can be expected to result in two major secondary impacts likely to further increase visitation to the region.

The first relates to the viability of air services. The large numbers the Resort can be expected to attract, especially from China, will underpin the establishment of direct services from major Chinese mainland cities. The Resort itself is expected to generate an extra seven flights a day, mainly from China. As a result, this will open up this rapidly growing potential market for visitation to Cairns and the region apart from that directly attracted by Aquis Resort.

The additional visitor numbers directly generated by the Aquis project are also likely to support the viability and frequency of existing services.

Table 13-12 lists the cities and regions where the additional visitor numbers generated by Aquis are likely to have an effect in improving flight connections and frequencies.

TABLE 13-12 POTENTIAL FLIGHT CONNECTIONS TO CAIRNS

City	Current situation	Effect
China		
Shanghai (Central China)	No scheduled flights	Regular scheduled flights (China Eastern)
Guangzhou (Southern China)	No scheduled flights	Regular scheduled flights (China Southern)
Beijing (Northern China)	No scheduled flights	Regular scheduled flights (Air China)
Hong Kong (Southern China)	Current scheduled flights bracket with Brisbane	Expanded scheduled flights (Cathay Pacific, possible Jetstar/Qantas)
Secondary cities (Chongqing, Chengdu, Hangzhou, Nanjing, Shenyang, Tianjin, Wuhan, Xiamen)	No scheduled flights	Possible some direct scheduled flights including possibly Sichuan Airlines & Hainan Airlines (currently 3 a week to Australia)
Other Asia		
Seoul (Korea)	No scheduled flights	Help re-establish scheduled flights, possibly on a triangulation with another Australian city
Taipei (Taiwan)	No scheduled flights (service lost 1998 – Qantas)	Help re-establish scheduled flights, possibly on a triangulation with another Australian city

City	Current situation	Effect
Singapore (SE Asia)	Direct scheduled flights lost. Access with delayed connection via Darwin	Help re-establish scheduled flights (Jetstar, Silk)
Japan	Current scheduled flights to Tokyo and Osaka	Help frequency and possibly help reestablishment to cities previously serviced (e.g. Nagoya)
Other Asian cities	No scheduled flights	Could help establish links with Jakarta, Bangkok, Manila
Pacific		
Guam	Current scheduled flights	Help increase frequency to daily (United Airlines)
Papua New Guinea	Current scheduled flights	Help strengthen services including via PNG to Manila
New Zealand	Current scheduled services Auckland	Help strengthen and perhaps extend to other cities

Direct flights to major Chinese cities will open up through links to/from Europe. Direct flights to Singapore which is a regional air hub that provides connections to over 100 destinations in Northeast Asia, South Asia and Southeast Asia <http://www.changiairport.com/flight-info/changi-connectivity>.

Current international visitors to the region are 700 000, with 144 000 from China. One daily service using an A330 aircraft could be expected to carry 75 000 visitors a year.

The additional numbers generated by the additional air links secured as a result of the extra business created by Aquis is difficult to estimate. In today's situation, it could be expected that the type of impacts on air service links outlined above could conservatively generate at least an additional 100 000 international visitors and possibly more like 200 000 over and above those directly attracted by Aquis.

Aquis Resort will provide a further powerful attraction in its own right but the additional visitors attracted to the region by Aquis, apart from adding additional traffic to existing attractions, are likely to result in additional attractions/product being developed in the region in fields that were previously not viable. There has been a long history of some attractions/product not being developed until volumes of visitors to the region became sufficient to sustain them. This expansion in the range of tourism attractions is likely to have an additional impact on visitation over and above that directly generated by Aquis.

This is difficult to estimate however while the air services' secondary effect is likely to be concentrated on international markets, especially from China, the range of product offering secondary effect is likely to be more broadly spread.

Aquis will also result in a major step up in marketing of the region and this is likely to attract additional visitors over and above those directly attracted to Aquis. This will be especially important in some markets such as Australia and New Zealand where the new facilities will help stimulate repeat visitation.

Total visitation generated by the Aquis project, including both direct and the secondary impacts outlined above is estimated to be of the following order of magnitude:

- Stage 1 700 000 to 800 000
- Stage 2 1.1 million to 1.2 million

It is estimated that composition of visitors will be of the following order of magnitude.

TABLE 13-13 ESTIMATED COMPOSITION OF VISITORS

Source	%
China	60%
Other international	15%
Subtotal international	75%
Interstate	9%
Intrastate	6%
Regional	11%
Subtotal domestic	25%
Total	100%

It is estimated that increase in numbers compared with most recent numbers from those sources will be as shown in **Table 13-14**.

TABLE 13-14 ESTIMATED INCREASE IN OVERNIGHT VISITORS AS A RESULT OF THE AQUIS PROJECT

Source		Stage 1	Stage 2	(cf Actual YE Sep 2013)	% Growth on 2013 Numbers	
Source	% ⁽¹⁾	'000	'000	'000	Stage 1	Stage 2
China	66%	330 - 400	730 - 800	144	+129 - 178%	+507 - 555%
Other international	17%	85 - 100	190 - 200	560	+15 - 18%	+34 - 36%
Total international	83%	415 - 500	920 - 1000	704	+59 - 71%	+131 - 142%
Total Domestic	17%	85 - 100	190 - 200	1672	+5 - 6%	+11 - 12%
Grand Total	100%	700 - 800	1100 - 1200	2376	+21 - 25%	+46 - 51%

* **Note:** Excluding regional day visitation.

Table 13-14 indicates that overall growth in overnight visitor numbers as a result of the project compared with current levels will be of the order of 21 to 25% in Stage 1 and 46 to 51% in Stage 2.

For international visitors, the growth will be about 60 to 70% in Stage 1 to 130% to 140% in Stage 2, with most of the growth being of Chinese visitors, involving about a 500% increase, i.e. a six-fold growth.

Table 13-15, **Table 13-16** and **Table 13-17** set out the growth trajectory of China's economy and per capita incomes, overseas visitation and visitation to Australia and to Cairns.

TABLE 13-15 GROWTH CHINESE ECONOMY 2002 TO 2012

Years	GDP US dollars trillion	% GDP 'real' growth	GDP per capita (Int \$ PPP)	Growth GDP per capita
2002	1453	9.1%	2891	8.4
2003	1641	10.0%	3227	9.3
2004	1932	10.1%	3625	9.4
2005	2258	11.3%	4115	10.7
2006	2713	12.7%	4759	12.0
2007	3496	14.3%	5562	13.6
2008	4522	9.6%	6201	9.1
2009	4991	9.2%	6798	8.7
2010	5931	10.4%	7571	9.9
2011	7325	9.3%	8411	8.8
2012	8227	7.8%	9185	7.2

Source: United Nations Statistics.

TABLE 13-16 CHINA'S OUTBOUND VISITOR NUMBERS (1)

Year	No.	Growth %
2006	34.5 m	
2007	41.0 m	18.6%
2008	45.8 m	11.9%
2009	47.7 m	4.0%
2010	57.4 m	20.4%
2011	70.2 m	22.4%
Total increase	35.7 m	15.3%

Source: Travel China Guide.

* **Note:** Includes travel to Hong Kong, Macau & Taiwan.

TABLE 13-17 GROWTH IN CHINESE VISITOR NUMBERS TO CAIRNS AND AUSTRALIA

Year	Cairns	Australia
2000	6,682	106,807
2001	14,936	145,134
2002	10,789	168,032
2003	11,970	161,116
2004	26,360	227,394
2005	33,325	268,442
2006	34,184	289,779
2007	55,276	329,813
2008	47,022	347,319
2009	38,503	343,821
2010	62,734	408,327
2011	73,757	490,427
2012	102,075	573,071
(YE Sep Qtr 2013)	(144,000)	(672,000)
Average annual growth	26% pa.	15% pa.

Source: Cummings Economics from TRA – International Visitor Survey.

A continuation of the growth trajectories of the past decade would put total Chinese visitors to the Cairns region at about 700 000 by 2000 and Australia about 1.8 million.

Of importance in assessing the scale of the potential Chinese market is to recognise that for every person in Japan, there are 10 in China. Peak visitor numbers from Japan under favourable exchange rates and air service conditions were over 200 000 per annum.

If China reaches similar levels of income, under favourable exchange rates and air service conditions, it could be expected to provide visitor numbers to the Cairns region of the order of 2 million a year.

Of importance in relation to Chinese visitation, apart from substantial direct charters over the Chinese New Year period, most are coming via Sydney with their Cairns visitation only part of their trip and spending only a few nights before returning via Sydney. The Aquis project and the establishment of direct flights from China will help see the Chinese market follow that of Japan towards longer stays and a substantial 'mono destination' component. The longer stays will have major positive implications for demand for accommodation and attractions, especially those other than reef trips and trips to Kuranda.

13.3.2 Tours and Attractions

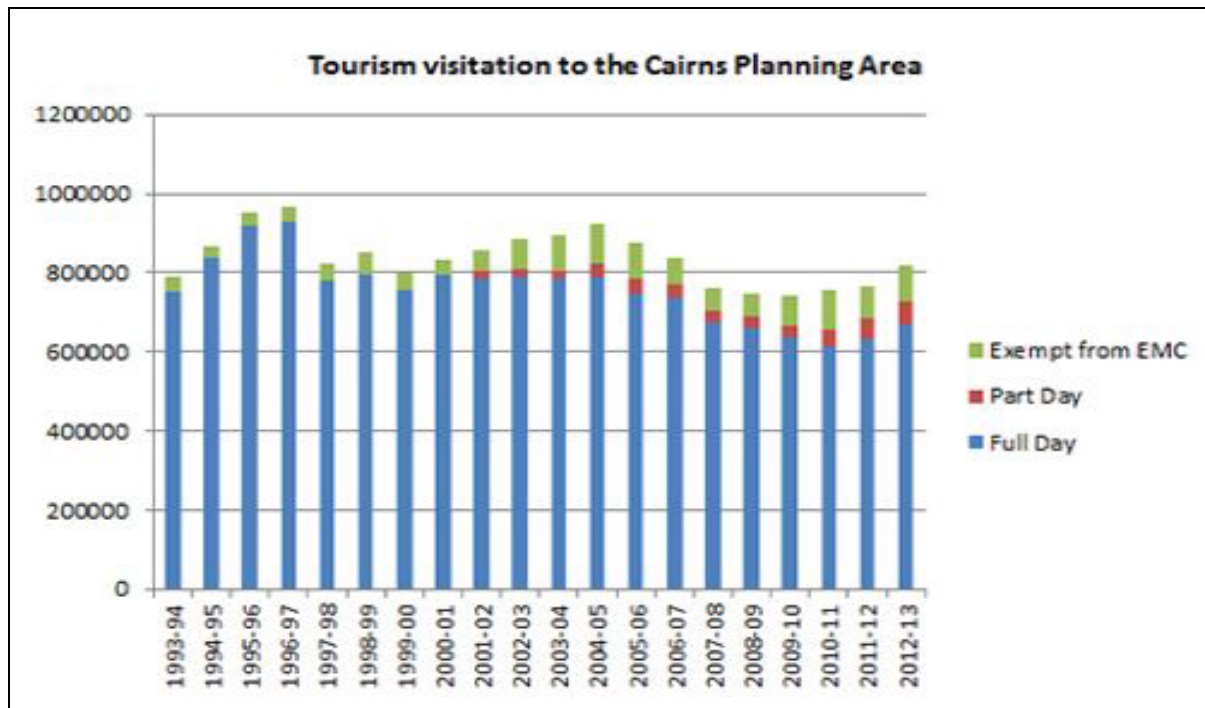
Currently the Cairns region caters for up to 40 000 visitors on any given day. Up to 600 different day trips and attractions are on offer. Domestic visitors record around 2.7 million day trips a year.

Impacts on tourism attractions in the region are thus likely to be very strongly positive, especially those heavily oriented to the international markets, and especially for those attractions that are heavily oriented to international tourism and Asian markets.

About 700 000 or about 30% of all visitors recorded to the region visit the reef. It is estimated that over a half of reef visitors are international.

It could be expected that a high proportion of the additional visitors generated and stimulated by the project will visit the reef. This would result in an increase of the order of 50% on current numbers in Stage 1 and 100% in Stage 2.

TABLE 13-18 VISITATION CAIRNS PLANNING REGION, GREAT BARRIER REEF



Source: Great Barrier Reef Marine Park Authority.

Substantial additional numbers of visitors can be expected to visit Kuranda and the attractions associated with it of Skyrail, the Kuranda Scenic Train, the Kuranda Markets, Rainforestation Nature Park and Tjapukai Aboriginal Dance Centre. Numbers of visitors to Kuranda are of the order of one million a year, but this includes a substantial local content and visitors from outside the region is of the order of 600 000 to 700 000 with a high proportion being international visitors.

As with the reef, increases over current numbers to the attractions are likely to be of the order of 50% in Stage 1 and 100% in Stage 2.

Numbers visiting Kuranda overall are likely to rise by about 30% in Stage 1 and 50% in Stage 2. (To be confirmed)

While past patterns indicate a tendency for Asian visitation to contain touring to the more immediate Cairns/Great Barrier Reef/Kuranda area, it can be expected there will be a substantial increase in visitation to the comparatively low Asian visitation to Mossman Gorge, the Daintree and Cape Tribulation area, the Tablelands and Paronella Park and Innisfail area.

A major factor in the increase will be increases in length of stay due to the project's effect in making direct flights viable, especially from China. While as a proportion of their total visitation, visitation to the outer attractions will rise less than the more central attractions, in some it could be quite substantial.

13.3.3 Shopping

Tourism generates substantial expenditure on shopping associated with attractions, in general shopping precincts and at the airport.

Tourism Research Australia data indicates that average expenditure per international visitor to the region is \$1017.

Expenditure on shopping at 10% of total expenditure would put international visitor shopping expenditure in the Cairns region at \$72 m per annum.

At an average rate of \$100 per visitor, additional shopping generated per annum is estimated to be of the order of \$70 m to \$80 m in Stage 1 and \$110 m to \$120 m in Stage 2.

There will be some shopping available as part of the project. However this is not likely to affect shopping at attractions that will relate to the increase in visitor flows. Because of shopping availability at the Resort and its location away from the Cairns CBD, additional shopping generated in the CBD area could be expected to be less than the general growth in visitation but still positive, especially in that type of shopping oriented to international and especially Asian markets.

Cairns Airport reports that airport shopping by Chinese visitors on flights returning direct to China is very high and this reflects early experience with Japanese visitors.

The extent that the project results in a change in Chinese visitors using direct flights from and especially back to China as opposed to the current pattern of flights via Sydney will mean a likely very major increase in shopping at Cairns Airport.

13.3.4 Airport

With most of the visitation generated by the project estimated to come by air, especially from China, the project will result in a substantial increase in traffic through Cairns International Airport.

The project itself is estimated to generate the equivalent of seven daily A330 flights in Stage 1, and with secondary impacts, generate a further three to four.

Passenger flows through the airport are expected to increase by about 35% in Stage 1 and 50% in Stage 2 with most of the increase through the international terminal.

13.3.5 Ground Transport

Apart from coach touring, there is very substantial demand for ground transport in the form of coach, taxi and limousine transfers between airport and hotel accommodation.

Asian traffic has been more likely to be in groups and use coach transfers.

In addition, the location of the project is likely to generate substantial movement between the project and the Cairns CBD for shopping and for boarding reef ferries and trips.

Current transfers and trips using ground transport apart from touring is currently heavily oriented to international visitors and domestic visitors arriving by air other than those hiring cars.

Given the composition of the additional visitor numbers as a result of the project, it seems likely that the percentage increased demand for this type of transport as a result of the project will be well above general increases in visitor numbers.

Indication from the taxi operator indicates that in Cairns, visitors represent 40% of business but this is likely to be more domestic oriented.

Some increase in hire car rental is likely to occur but given the composition of the increased visitors, this is likely to be low. Estimated increases in business over current levels is expected to be of the following order of magnitude.

TABLE 13-19 ESTIMATED INCREASE IN GROUND TRANSFER BUSINESS OVER CURRENT LEVELS AS A RESULT OF AQUIS PROJECT

	Stage 1	Stage 2
Coaches	70 – 80%	140 – 160%
Limousines	70 – 80%	140 – 160%
Taxis	10 – 15%	20 – 30%
Hire cars	5 – 7%	10 – 14%

13.3.6 Accommodation

The Aquis project involves a very large increase in the number of hotel rooms available in the region, especially in Cairns higher star rating categories of 4000 in Stage 1 and 3,500 in Stage 2, making a total of 7500.

Table 13-20 indicates the number of rooms, bed spaces and persons employed in hotels, motels and serviced apartments in the region.

TABLE 13-20 SUMMARY TABLE OF TOURISM ACCOMMODATION (BASED ON HOTELS, MOTELS AND SERVICED APARTMENTS WITH 15 OR MORE ROOMS), JUNE QUARTER 2013

Regions	Establishments	Rooms	Bed spaces	Persons employed
	— Number —			
Cairns City area (a)	61	5,339	14,851	2,399
Port Douglas (b)	43	2,444	7,342	1,277
Northern Beaches (c)	25	1,320	4,356	515
Tropical North Queensland (TR)	173	10,940	31,676	4,853
Queensland	1,137	61,768	183,448	28,315

Source: See below:

Australian Bureau of Statistics, Tourism Accommodation, Small Area Data, June 2013 (Cat No. 8635.3.55.001).

Cairns City SA2 (ASGS) used for January 2012 to June 2013 data and Cairns(R) – City SLA (ASGC) was used for data from January 2003 to December 2011. Both geographies shared a common boundary.

Area based on combining Port Douglas and Daintree SA2s for 2012 data and Cairns (R) – Douglas SLA for 2003 to 2011 data.

Area based on Cairns (R) - Northern Suburbs SLA

The total of 10,940 rooms in the region, 49% are located in the Cairns City area, 22% in the Port Douglas area, 12% in the Northern Beaches area and 17% elsewhere in the region.

The concentration of rooms in the Cairns City area compares with other concentrations in Australia as follows.

TABLE 13-21 TOP 10 TOURISM ACCOMMODATION DESTINATIONS IN AUSTRALIA BASED ON NUMBER OF ESTABLISHMENTS WITH ROOMS AND BED SPACES, JUNE QUARTER 2013

Rank	Statistical Area 2	State	Establishments(a)	Rooms	Bed spaces
			- Number -		
1	Melbourne	VIC	75	10,891	25,778
2	Sydney - Haymarket - The Rocks	NSW	73	15,612	36,186
3	Cairns City	QLD	61	5,339	14,851
4	Surfers Paradise	QLD	49	6,030	18,681
5	Perth City	WA	47	5,931	14,481
6	Jindabyne - Berridale	NSW	43	1,859	7,077
7	Port Douglas	QLD	39	2,315	7,050
8	Bright - Mount Beauty	VIC	37	1,009	4,012
9	Adelaide	SA	35	4,145	10,370
10	Brisbane City	QLD	34	5,417	14,326

Source: Australian Bureau of Statistics, Tourism Accommodation, Small Area Data, June 2013 (Cat No. 8635.1.55.001-8635.8.55.00).

Note (a): Based on hotels, motels and serviced apartments with 15 or more rooms.

Numbers are close to Surfers Paradise, Perth City, Brisbane City and almost 30% more than Adelaide City.

Numbers of rooms by star rating and type of accommodation are as follows.

TABLE 13-22 NUMBER OF ROOMS CAIRNS/TNQ REGION BY STAR RATING, JUNE QTR 2013

Rating	No.	%
Five Star	1,420	13%
Four Star	6,494	60%
Three Star	2,372	22%
Other	492	5%
Total	10,778	100%

Source: Australian Bureau of Statistics, Tourism Accommodation, Small Area Data, June 2013 (Cat No. 8635.1.55.001-8635.8.55.00).

TABLE 13-23 NUMBER OF ROOMS CAIRNS/TNQ REGION BY TYPE OF ACCOMMODATION, JUNE QTR 2013

	No.	%
Licensed hotels	3,892	36%
Motels and guest houses	3,068	28%
Serviced apartments	3,980	36%
Total	10,940	100%

Source: Australian Bureau of Statistics, Tourism Accommodation, Small Area Data, June 2013 (Cat No. 8635.1.55.001-8635.8.55.00).

Demand for hotel rooms in the region grew strongly up until about 2007 after which the cumulative effects of a high Australian dollar, especially in the Japanese market, change of Qantas Group flight delivery from Australian Airlines to lower status Jetstar on the Japanese route and subsequent major loss of seat numbers to Japan, along with the effects of the global financial crisis, saw numbers of room nights and occupancy rates fall through to 2010 after which there has been a recovery taking place but not yet back to levels of about 2005/06.

An increase in rooms available mainly in serviced apartments took place in the city area up to about 2007 by about 10%, but stagnated thereafter. In the rest of the region, the number of rooms available fell between 2007 to 2012 resulting in total room numbers available in 2013 being about the same as in 2003.

TABLE 13-24 AVERAGE OCCUPANCY RATES, CAIRNS CITY AREA

Year	Av Occupancy rate	Sep Qtr peak
2003	70.2%	78.3%
2004	73.8%	84.0%
2005	75.3%	85.7%
2006	76.2%	85.1%
2007	73.6%	83.0%
2008	68.6%	79.2%
2009	65.9%	73.3%
2010	65.5%	78.3%
2011	68.3%	79.6%
2012	70.2%	81.2%
2013 [2 qtrs]	(72.2%) ⁽¹⁾	(83.6%) ⁽¹⁾

Source: Australian Bureau of Statistics, (Cat No. 8635.3.55.001).

However if the recovery that has been taking place in occupancy rates since 2011 continues, it would seem likely that takings per room will reach a level by about 2017 where it will be attractive to build additional rooms.

It is likely that the construction period for Aquis, 2015 – 2020, will generate a demand for accommodation from the tourism sector. While this will mainly be in caravan park/cabin type accommodation and lower star motel rooms and apartments (see discussion Section 1.7), there could be expected to be some increased demand due to higher business travel activity in the four and five-star range.

It thus seems likely that, unless additional stock is constructed during the period Aquis is under construction and by the time Aquis comes on stream, the city will be in a period of high occupancy rates and shortage of room availability.

It is clear that unless there are major changes negatively affecting the region's tourism, the Aquis rooms will not be coming on stream against a background of a glut in rooms and low occupancy rates but against a background of shortage of rooms.

While there may be a year or so in which the Aquis traffic builds up to full operational levels when there is a dip in occupancy rates, it is likely that the Aquis project will more than create its own demand and there is a strong possibility that given the normal growth in the market, plus the secondary impacts of the project, additional rooms will be required, especially in the lower rating and non-hotel categories.

13.3.7 Conventions

The Aquis development includes a 25 000 m² convention centre and exhibition space.

Cairns Convention Centre covers 4560 m². There is substantial additional meeting/convention space in many of the region's hotels with larger hotels typically having over 400 m² of conference and meeting facilities.

Cairns has established itself as a convention location on a par with metropolitan centres and ahead of other regional centres with the exception of the Gold Coast. A continuing growth in demand is expected.

The Cairns Convention Centre generates expenditure in the region of over \$80 m per annum and total meetings and convention business is estimated to generate expenditure of the order of \$110 m a year.

The existing facilities in the city are geared to handle domestic and international meetings/conferences of up to about 2000 delegates.

The scale of convention business in Cairns is well above other Australian regional cities and up with metropolitan centres and the Gold Coast. The Cairns Convention Centre has a relatively high penetration of international conventions.

Aquis will have a capacity to take conventions well above 2000 and up to 10 000 delegates.

Cairns generally will benefit from being more heavily marketed as a location for conventions. While Cairns is positioned above domestic and at international level in the convention market, Aquis will position it globally and create a high level of additional demand.

Secondary impacts through creation of more direct international services and a wider range of tourism product will also benefit Cairns' position in the convention market.

13.3.8 Theatres

A theatre for night time entertainment is a common part of large integrated resort development.

The Aquis Resort will have 7500 hotel rooms and accommodate 12 000 at peak occupancy. The two 2 500 seat theatres would be in scale to provide nightly entertainment plus contribute to local needs.

Cairns city has an active residential cultural life that supports one main and a number of smaller theatre venues. Cairns Civic Theatre has a current seat capacity of 669.

The Cairns Convention Centre can take larger audiences but it is not set up as a theatre. Larger open air concerts have been occasionally held at Fogarty Park, the Cairns Showgrounds, and Cairns Botanic Gardens.

The current Civic Centre Theatre was built and opened in 1974 when Cairns' urban population was approximately 50 000 which reflects about one-third the current size of Cairns. It is estimated to be subsidised by ratepayers by about \$600 000 a year excluding depreciation.

The Council has been developing plans over the past decade for establishment of an upgraded Performing Arts Centre including a theatre capacity of about 1 200 and expanded stage and back of stage facilities to cater for larger touring productions. Even then, there would be concerts and productions that this scale of theatre could not accommodate. The city is struggling to find the capital funds for this development and there have been issues about location.

Two 2 500 seat facilities would give the city venues to take large touring stage productions and very large concerts.

13.4 IMPACT ON OF THE SUGAR INDUSTRY

13.4.1 Current Cane Production on the Land

The Aquis Resort development is proposed to take place on existing farmland producing sugar cane. Approval of the Aquis resort proposal will result in the discontinuation of cane farming operations on the parcels of land on which Aquis Resort is proposed. Those parcels are currently large rural holdings with 63% of the site cleared of natural vegetation to grow sugar cane (of this 55% is currently planted), with the remainder consisting of:

- remnant vegetation
- anthropogenic grasslands
- a farmer's residence
- man-made water bodies, previously used for barramundi farming.

Soils are relatively poor in the area, being mainly old coastal beach-line sands, overlaid with alluvial from the Barron River delta. Apart from needing substantial fertilisers, they do not hold moisture well and are subject to drought in prolonged dry spells.

Farm records reveal that an average of nearly 190 ha (62% of the site) has actually been farmed over the past six years. Some land formerly cleared for cane has been abandoned, as previously discussed.

13.4.2 Value of Production

On development of the site, this land will no longer be utilised for agricultural purposes, and the foregone value of associated agricultural activity will represent a cost stream to the Queensland economy. It is estimated the cessation of farming on the site would result in lost production of 13,300 tonnes of cane. This in turn would result in foregone sugar production of approximately 1900 tonnes. The current price (18 August 2013) of sugar is US\$0.17 per pound (i.e. US\$0.374 per kg or A\$411 per tonne). Accordingly, the annual value of forgone sugar cane production attributable to Aquis Resort is estimated at \$760 000.

13.4.3 Industry Background

Historically, the cane from this area has been hauled by narrow gauge rail to the Hambledon Mill at Edmonton and, following its closure in the 1980s, approximately 39 km south to the Mulgrave Mill at Gordonvale.

Substantial changes have taken place in the structure of the sugar industry in the region in recent decades.

The industry has faced greatly varying world market conditions. Devaluation of the Brazilian Real following the instability caused by the Asian financial crisis in 1988, saw the world price drop to as low as US4¢ per pound in the early 2000s, causing real doubts about the viability of the Australian industry. Since then, there has been a major recovery with world prices rising to over US20¢ per pound for a number of years, but dropping over the past 12 months to about US17¢.

During the low price period, the industry along the coast lost acreage to other farming sectors, especially bananas, cattle and managed investment schemes for forestry, involving plantings of Teak and Red Mahogany. The more recent higher prices have seen this situation reverse. Cyclone damage and market effects have seen MIS schemes abandoned and land coming back into cane production. It has been reported that in the coastal mill areas, something of the order of 5000ha has been returned to cane.

There have been four other major influences as noted below:

- Cost pressures and the 'land locked' situation of coastal mills have resulted in strong rationalisation to gain efficiencies of scale in mills. There have also been major changes in mill ownership with a move away from traditional cooperative and farmer-owned corporate structures. At the same time, cane production has spread from the coast to the Atherton Tablelands.
- The mill rationalisations have resulted in the closure of Hambledon Mill with its cane going to Mulgrave Mill. Continuing urban expansion of Cairns and loss of cane land was a factor in this closure. The mill site itself is the current site of the Sugarworld Water Park. Goondi Mill at Innisfail closed, with cane going to the other mills in the district. Following Cyclone Larry damage in 2006, Mourilyan Mill was closed, with cane going to South Johnstone Mill. Following Cyclone Yasi damage, Babinda Mill was closed in 2011.
- Ownership changes have seen Tully Mill sold to Chinese company COFCO. Mulgrave, Babinda, Mourilyan and South Johnstone mills have variously been sold to Bundaberg or Maryborough Sugar but are now owned by Thai based company, Mitr Phol. Mossman Mill has been sold to Mackay Sugar.
- Expansion of sugar cane growing on the Atherton Tablelands was initially facilitated by the development of B-double truck technology that allowed these freight-efficient vehicles carrying about 40 tonnes of cane to safely negotiate range roads, initially to Mossman Mill via the Rex Range Road and then to South Johnstone Mill via the Palmerston Highway. Acreages under cane grew and growers established a mill at Arriga outside Mareeba, which is now also owned by Mitr Phol. Mitr Phol recently expanded capacity of the mill to handle larger cane volumes. However Mossman Mill still competes for cane from this area with much of the 2014 Tablelands' crop currently proposed to be supplied to that mill.

Today, coastal mills have been rationalised from eight to four and although opportunity for coastal expansion is limited (except in the Tully valley), sugar growing on the Atherton Tablelands has proved viable. There is major room for expansion, with the Arriga mill and coastal mills (especially Mossman and South Johnstone) being capable of taking expanded output from that area.

13.4.4 Impact of the Proposed Development

a) *Mill and Rail System Viability*

Table 13-25 gives recent sugar mill production statistics.

TABLE 13-25 HECTARES HARVESTED BY MILL AREA BY SEASON

Mill Area	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Mulgrave	13,829	13,360	13,053	12,782	13,269	12,843	12,621	12,150	14,503	(1)
Babinda	9,912	9,316	10,600	9,898	24,156	7,507	7,094	Closed	Closed	
Innisfail /South Johnstone	14,653	13,580	18,523	17,864		14,668	13,642	17,450	21,529	(1)
Mourilyan	8,717	7,987	Closed	Closed	Closed	Closed	Closed	Closed	Closed	
SUB TOTAL	47,111	44,243	42,176	40,544	37,425	35,018	33,357	29,600	36,032	(1)
Tablelands	5,814	6,967	6,604	7,794	7,248	6,716	6,925	7,066	7,227	(2)
Mossman	11,051	7,937	7,307	7,103	7,300	7,050	7,150	7,320	7,100	(2)
Tully	24,122	24,843	24,418	23,431	22,711	22,181	21,000	24,610	23,911	(2)
TNQ TOTAL	88,098	83,990	80,505	78,872	74,684	70,965	68,432	68,596	74,270	

Source: (1) MFS Mulgrave Mill. (2) Queensland Canegrowers Council.

The indications from these figures are that, with the common ownership of the South Johnstone and Mulgrave Mills, some cane from the now closed Babinda Mill appears to be going to Mulgrave Mill, but most is being directed to South Johnstone.

The 190 ha loss of area harvested for Mulgrave Mill as a result of the Aquis Resort project represents 1.3% of 2012 total area harvested for Mulgrave Mill and 0.53% of the total area harvested by Mitr Phol's Mulgrave and South Johnstone Mills. Given the land coming back to cane production from forestry managed investment schemes, the ability for Mitr Phol to divert Babinda area cane from South Johnstone to Mulgrave, and the potential ability of South Johnstone to draw cane from expanded production in the Tablelands area, the impact on mill viability seems likely to be marginal.

The loss of cane from the Aquis Resort site is from the northern extremity of the mill area, involving a 39 km haul to the mill.

The area of cane in the Barron River delta is estimated to be in the order of 2300 ha (based on area estimates from Google Earth). The loss of cane land as a result of the project is about 8%. Much of the cane land in the Freshwater Creek and Barron River delta area is subject to flooding and is unlikely to be developed in the foreseeable future for uses other than agricultural production or low flood impact uses such as sporting fields. Against this background, the loss is unlikely to seriously affect viability of retaining the narrow gauge haulage line through Cairns from the Freshwater Creek and Barron River delta area to Mulgrave Mill.

Consultation with executives from the Mulgrave Central Mill (MCM) revealed the main impacts would be on transport infrastructure, as the cost of operating the line to Edmonton north relies on being spread across a 90 000 tonne production. The reduction to 77 000 tonnes would reduce efficiency in

terms of contributions to the maintenance of the line. The transport task would also be less efficient as the same number of train trips per day would be required and the length of season would be the same, however the yield per trip would be lower. Generally the economics of the cane transport will be impacted by the loss of production. MCM does not have access to the mitigation funds available that would be collected under the strategic cropping land legislation.

b) Mill Viability

MCM currently accepts between 1 to 1.1 million tonnes from the Mulgrave area and about 0.2 million tonnes from the Babinda area. It is anticipated the mill will increase its production rate to up to 1.5 million tonnes as more land is converted to sugar cane production. This suggests overall viability will not be affected as the loss caused as a result of the Aquis Resort will be offset by gains from other areas.

c) Harvesting Impacts

There are currently two harvesting contractors operating in the Barron River delta who share that area's 90 000 tonnes per year. Currently the larger contractor harvests 65 000 tonnes and the smaller contractor 25 000 tonnes. The loss of 13 000 tonnes from the Aquis Resort site would reduce the larger contractor's harvesting to 52 000 tonnes per year. This would represent a return to the level of historical operations as in recent years there has been a transfer of tonnage to the larger operator at the expense of the smaller operator.

d) Consequential Impacts

MCM's major concern is in regard to the consequential impacts of Aquis Resort on other cane land. Currently about 180 000 tonnes of cane comes from the Mt Peter area (Edmonton), made up of 140 000 tonnes west of the highway and about 40 000 tonnes at Edmonton. The economic boost from Aquis Resort is likely to result in increased growth in Cairns, such that cane land at Mt Peter and Edmonton would be 'consumed' in a shorter period of time, thereby alienating approximately 180 000 tonnes from MCM's catchment.

MCM can compensate from this by expanding to southern areas, however this cane is further away, in a wetter area of the catchment and less accessible. So, while MCM is concerned about the loss of 13 000 tonnes of cane, it will cope with it. The more specific concern is for CRC to advance the Mt Peter planning process to provide some certainty for the MCM's long-term planning.

13.5 MITIGATION STRATEGIES

While there are substantial economic gains, there is some potential local planning and management challenges associated with the Aquis Resort. The implementation of considered mitigation strategies can act to both minimise the adverse impacts of major project development and magnify the flow-on economic benefits for local residents and businesses.

Some of these mitigation strategies have been incorporated into standard project construction and operational features, including investment in infrastructure and environmental management systems. However the range and complexity of many of the adverse economic outcomes from the Aquis Resort means their influence on the community intersect the domains typically covered by various government and other stakeholder groups. Collaboration with these parties can serve to not only reduce the duplication of resources but also promote the sharing of information and expertise — ultimately strengthening the effectiveness of mitigation efforts and improving the economic outcomes.

Indeed an integral aspect of Aquis' mitigation strategies will be to continuously share information about project operations and impacts to relevant sections of the community and government. This is geared towards diminishing information asymmetries in the market and allows residents, businesses and government to expedite their supply responses to forecasted increases in project and tourism activity.

The four main adverse economic impacts that will be targeted for mitigation by Aquis are:

- cost of living pressures
- labour and skills shortages
- infrastructure and other goods and services
- pressures on local businesses.

Evidently there are clear linkages and common themes between the above impacts, and it is likely that there will be combined working groups and coordination throughout the mitigation task.

13.5.1 Cost of Living Pressures

Cost of living pressures refer to increases in the price of goods and services caused by stronger demand generated by the Aquis Resort. The impacts of cost of living pressures are usually faced by long term residents that experience a decrease in savings due to more spending on day-to-day items. To a lesser impact, visitors to Cairns are also affected by these pressures as they may have to pay more for tourism or recreational goods and services.

The discretionary spending patterns of people can shift over time and for this reason measures to address cost of living pressures mainly focus on the essential goods and services that consistently feature prominently in household purchases and expenditure. Unsurprisingly, it is housing and accommodation costs that account for the largest share of spend. ABS survey figures suggest that on average, residents in Queensland direct 23% of their total expenditure to housing costs (ABS 2011).

There are a number of options to mitigate housing and rental affordability pressures. The most direct avenue to reduce the impacts is to increase the number of dwellings available in the Yorkeys Knob and Cairns CBD area through redevelopment and densification. Development applications for this area fall under the purview of the CRC. Aquis will provide the Council with detailed workforce projections to better inform decision-makers about the number of dwellings required and the project fundamentals that dictate immediate and longer term employment and housing needs.

Due to the size of the operational workforce, it is likely that further land releases would be needed to accommodate people who permanently move to the region for work at the Aquis Resort. Similar communications and engagement will be undertaken with these Cairns and surrounding councils far in advance of business commencement.

Aquis engagement with the local councils and the State Department of Housing would leverage the recommendations made in the Queensland Government's population growth strategies: *Shaping Tomorrow's Queensland* and the related engagement plan, *Growth Management Queensland*. The desired outcome of this mitigation strategy is a sustainable increase in population that does not place undue stress on the cost of living for workers, long-term residents or other users of temporary accommodation facilities.

A more indirect way of reducing cost of living pressures for Cairns residents is to develop opportunities to attract locals into the Aquis workforce. However, such strategies typically benefit residents who were previously unemployed, looking for a job change or were out of the labour force to begin with. Otherwise, offers for work substitute the income people would have earned through their existing employers. Nevertheless local employment strategies can provide vital opportunities for some of the most disadvantaged groups in the labour market.

Mitigation measures will be identified and implemented in the Housing and Accommodation Plan (refer **Section 14.4.6**).

13.5.2 Labour and Skills Shortages

As a first step of the Aquis Resort recruitment process, appropriate skilled locals would be prioritised for job vacancies. The size of project labour requirements compared to the current employment mix in Far North Queensland suggests that around 40% of construction and operational workforce would be drawn from other parts of the State and rest of Australia.

There are, however, opportunities to increase the share of locals employed by the project. The current data does indicate that the Far North Queensland is experiencing high unemployment rates of 7.0% compared to the national average of 5.9%. This equates to 9000 and 132 000 people unemployed and looking for work at the Far North Queensland and State level respectively.

It is likely that the Aquis project could draw on some of this excess labour supply. Beyond this, there are people that are underemployed or not currently in the job market that could be assisted. This could be done by offering subsidised training in partnership with local TAFEs and apprenticeship placements for those who do not possess the required skills.

Where an individual comes from a culturally diverse or an indigenous background, Aquis could connect with other training programs in the region already operating in this area. For example, education providers who currently operate programs for indigenous groups in the community include the Far North Queensland Indigenous Schooling Support Unit, James Cook University and the Cairns Indigenous Youth Mobility Program.

The staging of construction and long-term nature of ongoing resort operations means that the employment impacts from the Aquis project will continue to be significant into the long term. As the workforce analysis shows, there will be a number of occupations and skills in short supply. This occurs for construction, trade, hospitality and earthmoving plant operators in particular. Aquis will share these projections with local education and training providers so that institutions can pre-emptively plan for an increase in courses and qualifications in the next few years.

In addition to this, Aquis would participate in gateway skills programs in local high schools in the region to promote career opportunities in the construction, hospitality and supplier industries. This includes distributing information to prospective apprentices or students and attending career fairs in the Far North Queensland region. Engaging schools and younger age cohorts was a key recommendation made by the Australian Workforce and Productivity Agency in their analysis of resource sector skill needs.

The success of these strategies will rely on the ability to engage with and encourage forward looking thinking amongst local Universities, TAFES, NGOs, schools and other community stakeholders.

Mitigation measures will be identified and implemented in the Workforce Development and Management Plan (refer **Section 14.4.2**).

13.5.3 Infrastructure and Other Goods and Services

The Aquis Resort will bring more people to Cairns, through the workers involved with the project and the tourists who enjoy the various resort offerings. This will underlie the demand for essential services, housing and accommodation, along with infrastructure upgrades due to the volume of traffic to and from major transport hubs and the Aquis Resort.

Some of the additions to housing stock and infrastructure upgrades are likely to have occurred in the baseline as part of long term plans to accommodate for the 2.0% per year growth in population projected for Cairns (Queensland Treasury). Hence, the development of the Aquis Resort will serve to bring forward and increase much of this forecasted population and infrastructure investment. Recognising the direct role the resort will play in placing pressure on housing, road networks and utilities in particular; Aquis has indicated that allocated investment for:

- trunk sewerage mains in Yorkeys Knob Road and the Marlin Coast WWTP
- trunk water mains between the Captain Cook Highway and Yorkeys Knob
- road upgrades to Yorkeys Knob Road and Dunne Road.

Beyond the immediate project site area, there are likely to be increased activity across the rest of Cairns. Most types of transport, housing and utility assets are characterised by extremely long asset lives (sometimes in excess of 50 years), but they are also associated with long lead in times. This means that expenditures made today can often take a period of several years to materialise into fully functional facilities. In order to ensure market demands can be met, expansion investments need to be identified far in advance of any forecasted shortfalls and reviewed periodically.

To streamline the forecasting and review process, Aquis will regularly communicate anticipated demand for residential, commercial and industrial development to local and state government, developers and local suppliers to ensure the timeliness and sufficiency of supply. For example, Aquis will provide the Cairns Airport Pty Ltd with forecasts for the expected level and type of visitation driven by the resort. These projections could be used to plan for capacity and determine whether an increase in passenger fees and landing charges will be necessary to recoup the upfront capital investments made to expand the international terminal. Similar visitation information will be given to the Queensland Department of Transport and Main Roads to help frame their decisions to award more taxi and limousine licences for Cairns.

Aquis will also collaborate with other stakeholders to provide advance on the need for increased investment in human services (e.g. schools and hospitals), based on Aquis related population growth.

Mitigation measures will be identified and implemented in the Strategic Change Management Plan and the Community Services and Facilities Plan (refer **Section 14.4.5** and **Section 14.4.7**).

13.5.4 Pressures on Local Businesses

The construction and operation of the Aquis Resort would not be possible without the participation of local businesses and suppliers. The location of the resort within a region that is experienced in supporting and delivering tourism initiatives is an advantage to the proponent. Due to the surge in demand for project inputs and materials expected during the construction of the Aquis Resort, a key consideration will be to ensure that businesses involved in the project can continue to meet the needs of other local users at a reasonable price.

Much of the mitigation task in this area will focus on creating mutually beneficial outcomes, rather than shielding businesses from the surge in demand. To help achieve this goal, Aquis is developing a local content and participation strategy.

The strategy will attempt to mitigate adverse supply constraints forced by the project by enhancing the ability for businesses to participate in the project and to invest in the human capital of their workforce:

- providing full, fair and reasonable opportunities for Far North Queensland businesses to bid for contracts
- improving local industry competitiveness by providing employment, training and apprenticeship, scholarship and higher education programs across a range of skills and occupations.

Aquis will collaborate with industry networks, State Government and local business groups such as Cairns Chamber of Commerce, Tropical Tourism North Queensland, Advance Cairns, TAFE, James Cook University and Non-Government Organisations.

There have been some suggestions that the project would crowd out existing tourism activity outside the Aquis Resort. While this may occur to some extent, especially amongst intrastate and interstate visitors, the high-end and Asian market focus of the resort differentiates Aquis from other tourism offerings in Cairns, reducing the likelihood of target market crossovers.

There is however opportunities to better connect other tourism operators in Cairns to the Aquis project. As around 128 000 visitors are likely to come to Cairns to enjoy Aquis facilities and stay elsewhere. Aquis will look into building partnerships with the local short-term accommodation providers that are most likely to cater for Aquis visitors. There are also opportunities to cross-promote services and develop transport options between the Aquis Resort and regional tourism operators specialising in food, shopping or rainforest and reef trips.

Mitigation measures will be identified and implemented in the Local Content Plan and Workforce Development and Management Plan (refer **Section 14.4.3** and **Section 14.4.2**).

13.6 CONSEQUENTIAL IMPACTS

Over the next decade and beyond, the Cairns economy will look rather different than it does today. It will be considerably larger, with more residents, workers and have greater connectivity both within Cairns and wider parts of Queensland and the rest of the world. It is likely to have a more imposing skyline, as new commercial and residential buildings are constructed to accommodate this growth (many of which are under consideration now). In general terms, it will be designed to have a more vibrant and global feel, just as today's Cairns looks far more urban and modernised than it did in the 1990s.

Most of these outcomes are likely to occur even in the absence of the Aquis Resort as an innate function of the region's strong economic fundamentals, coastal lifestyle and as Australia's relationship with Asia deepens into trading high-value service offerings. The latest forecasts by the Queensland Treasury suggest Cairns is expected to grow by 55 000 people over the next 10 years — with the city projected to surpass the populations of Geelong and Hobart by then. A natural increase in the gap between birth rates and death rates has been the main contributor to the recent population growth in Cairns, followed by overseas migration. The need to accommodate a larger population has been recognised as a key priority in the Cairns Community Plan 2011. The Community Plan is seen as a blueprint for how the city's growth should be best managed and guide to the emerging development needs for the region over the next two decades.

Once the Aquis Resort is factored into the equation, the growth in population, workers and dwellings will be more dramatic and accelerated than initially anticipated by the CRC. Should the Aquis Resort be approved, population growth rates are likely to double to around 4%. These population changes, that are beyond the direct and indirect economic impacts from the Aquis project, are what are considered as consequential impacts — that is, people moving due to the renewed intrinsic appeal of Cairns as a booming coastal city or to capitalise on the stronger Asian tourism prospects. Certainly, the Aquis Resort will continue to underpin and reinforce the longstanding specialisation of Cairns' services and tourism leanings, bringing with it a range of second order economic incentives for existing and new residents.

Taking into account of the baseline population growth (55 000), and combining the Aquis operational workforce (55 000 direct and indirect); the city is projected to be home to 250 000 residents; over a 10-15 year period cannot be understated. Not only would this influx greatly alter the spatial distribution of settlement in Queensland, Cairns would transform into a different class of city to become Australia's largest tropical destination.

The concept of a 'Bigger Cairns' poses certain planning and development challenges. To appropriately plan for the number, size and location of new dwellings and infrastructure it is important to consider the demographic characteristics of those most likely to be relocating. Going forward, it will be migration that will be the most significant force behind population change in Cairns. However, unlike other drivers such as birth and death rates, it is also the most difficult to predict.

Historically, domestic migration across the nation has been rather volatile and has occurred for a variety of reasons such as housing market changes, economic opportunities, changing household circumstances and preferences. The movement to coastal cities in Australia have generally been amongst older age cohorts looking for a 'sea change' or to fulfil retirement plans. In contrast to this,

ABS Census 2011 data for address changes shows that young age groups have moved large distances to live in Cairns and, have mainly done so to pursue economic or education and training opportunities. This lends back to Cairns' reputation as a lively mini-metropolis with great natural beauty.

The Aquis Resort would likely serve to accentuate the City's inherent dynamism drawing more people to its centre. Much like recent trends, this increase is likely to be in households without children.

There are a number of economic upsides associated with having a larger resident and worker base:

- Higher labour force participation: As most of the individuals moving to Cairns are expected to do so for job opportunities, this would increase the region's labour force participation rates, potentially offsetting the impact of upcoming baby boomer retirements.
- Higher productive capacity: In a period when most parts of Queensland and Australia are observing an acute ageing in its population, Cairns would effectively see population renewal. This would improve the capacity of the region as a whole to address the challenges associated with supporting an older population. These new residents are also less likely to place pressure on health and social welfare systems.
- Higher economic activity: A larger population drives the demand for basic goods and services, generating more income for local businesses. Similarly, there would be greater demand for dwellings and related infrastructure.

A proportion of these (younger) population growth benefits involve a pure transfer of economic activity from one part of country (previous residence) to another (Cairns) and therefore may not result in additions to overall growth at the Queensland or Australia level. There can however be important benefits associated with the mass relocation of people to high productivity precincts. This accrues through higher transaction efficiencies, the sharing of ideas and the general flow of creative energies that occurs when more people collaborate — that is, the very aspects which give cities like Cairns their vibrancy and economic purpose. This agglomeration benefit is borne out in the much higher incomes received by Cairns workers compared with other coastal cities with lower population densities.

There are also some adverse impacts of a 'Bigger Cairns'. The consequential impacts of the Aquis project will essentially bring forward and lift long-term population and settlement patterns — an increase of 29% alone on baseline and Aquis workforce levels over the next two decades to be more specific. Coordinated planning between Aquis, the CRC and other infrastructure providers is imperative, especially to ensure the protection of the city's core natural and environmental attractions. Some of these impacts include:

- demand for more water sources
- more urban development
- more built structures
- more waste (black and grey water and household waste) to be managed
- increased use of energy
- increased levels of traffic and potential road congestion particularly given the linear shape of Cairns.

The pressures on housing and accommodation markets are likely to be the most critical, with these markets under stress from the Aquis workforce and general population increases. Second order population movements due to the Aquis Resort would serve to exacerbate supply and affordability issues.

Beyond the immediate CBD area, there is a large supply of broad hectare land suitable for dwelling development located at Palm Cove, Trinity Beach, Smithfield, Redlynch, White Rock and Edmonton. However if the Aquis Resort is approved, this capacity is likely to be exhausted by 2031. Therefore an

increasing proportion of new dwellings would need to be supplied by infill and redevelopment clustered in and around regional activity centres and public transport nodes.

The CRC proffers Mount Peter as a potential expansion zone that can accommodate the bulk, but not all of the region's future growth.