Economic

15

Chapter 15 - Table of Contents

VERSION CONTROL: 29/06/2017

List of Figures

List of Tables

15 Economic

15.1 Introduction

This chapter of the EIS seeks to quantify the direct and indirect economic impacts on local, regional and State economies arising from the restoration of a key tourism asset to operational status. Overall the construction and operation of the proposed resort will have significant impact on Regional GDP with a final development cost of approximately $583 million generating total employment during construction of 1,750 person years (FTE) in the Mackay Region. Potential benefits and costs along with any relevant positive or negative externalities have been valued, where reasonable, and results of the assessment are presented as the net present value of the project. This chapter also provides an analysis of the likely labour demand, transport infrastructure networks, housing market costs and local business and supply chain associated with the proposed project.

Addendum: *This EIS was initially prepared assuming that the safe harbour was to be part of the Lindeman Great Barrier Reef Resort Project. With the commencement of the Great Barrier Reef Marine Park Authority's (GBRMPA) Dredging Coral Reef Habitat Policy (2016), further impacts on Great Barrier Reef coral reef habitats from yet more bleaching, and the recent impacts from Tropical Cyclone Debbie, the proponent no longer seeks assessment and approval to construct a safe harbour at Lindeman Island. Instead the proponent seeks assessment and approval for upgrades to the existing jetty and additional moorings in sheltered locations around the island to enable the resort's marine craft to obtain safe shelter under a range of wind and wave conditions. Accordingly, remaining references to, and images of, a safe harbour on various figures and maps in the EIS are no longer current.*

15.2 Terminology

Lindeman Island is located at the northern boundary of the Mackay Region local government authority, with nearby Hamilton Island (only 13km to the northwest) being located within the adjoining Whitsunday Region local government area. As the site is potentially relevant to two regions and local government areas, this section of the EIS uses the following terminologies:

(a) Mackay Local Area – refers to the Mackay Region local government area within which the subject site is located (**Figures 15.1** and **15.2**);

(b) Whitsunday Local Area – refers to the Whitsunday Region local government area. The subject site is located within 5km of the boundary of this Local Area and is likely to directly impact this area due to the proposed transport of employees, materials, supplies and tourists through this local government area (via Shute Harbour) (**Figures 15.1** and **15.2**);

(c) Mackay Region – refers to the Mackay Region Statistical Area 4, which is defined by the Australian Bureau of Statistics as including Mackay Region, Whitsunday Region and Isaac Region local government areas. This Region is defined as a Region for economic purposes by state and federal government agencies and economic data is more readily available for this Region (**Figure 15.1**);

(d) Mackay Tourism Area – refers to the Mackay Region and Isaac Region local government areas, which has been defined as a tourist destination by state and federal tourism agencies and for which tourism data is readily available (**Figure 15.1**);

(e) Whitsunday Tourism Area – refers to the Whitsunday Regional local government area, which has been defined as a tourist destination by state and federal tourism agencies and for which tourism data is readily available. This Area equals the Whitsunday Local Area, defined above (**Figure 15.1**); and

(f) Airlie Beach Local Area – refers to the urban area of the corridor from Shute Harbour to Cannon Valley, including Airlie Beach and Cannonvale. It is equal to the Airlie – Whitsundays SA2 defined by the ABS and is a smaller area contained within the Whitsunday Local Area. This smaller area is considered relevant when assessing the housing market, as it is most likely that workers not accommodated on the island would live within the Airlie Beach Local Area, which is within about 20km of the ferry terminal at Shute Harbour (**Figure 15.3**).

Figure 15-1. Relevant Local Areas and Regions.

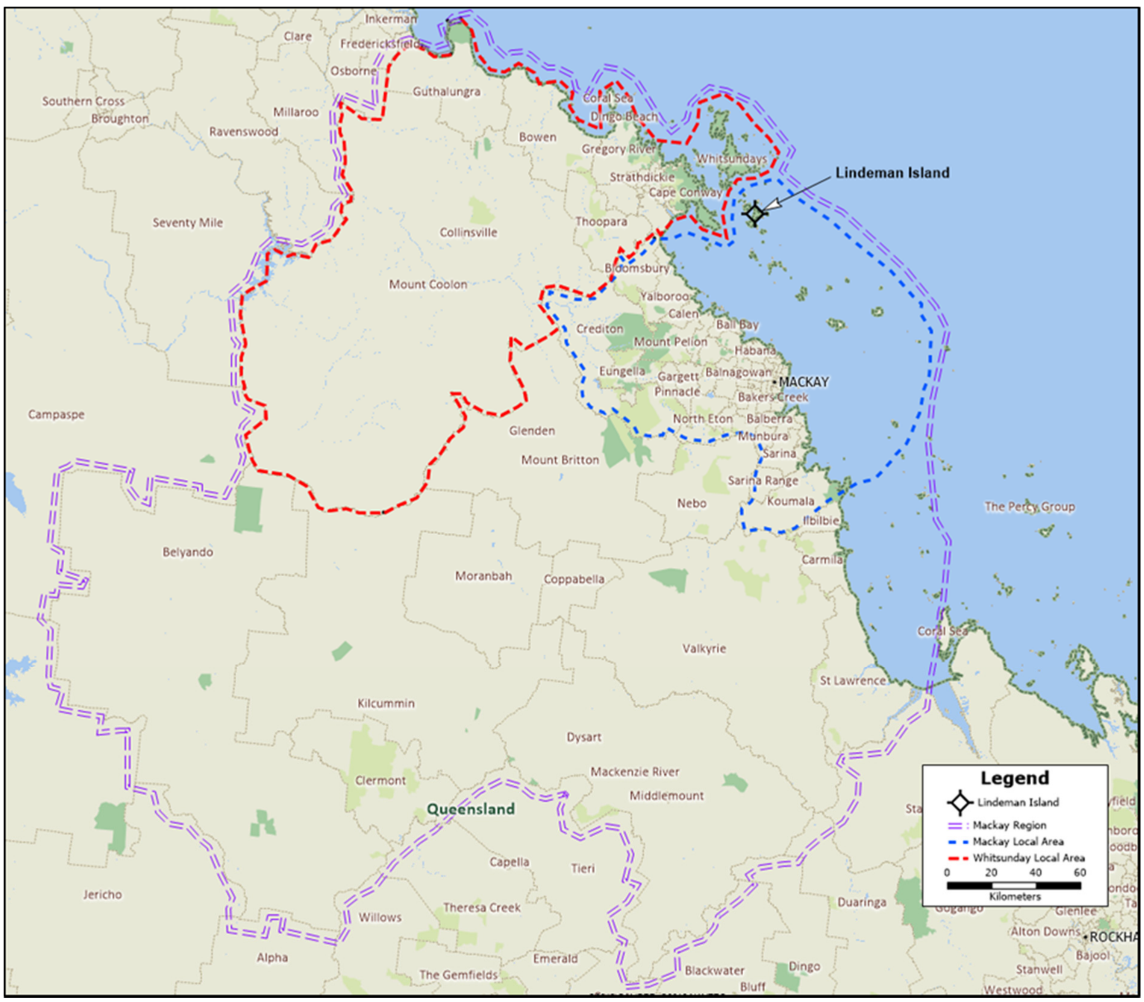


Figure 15-2. Whitsunday and Mackay Tourism Areas.

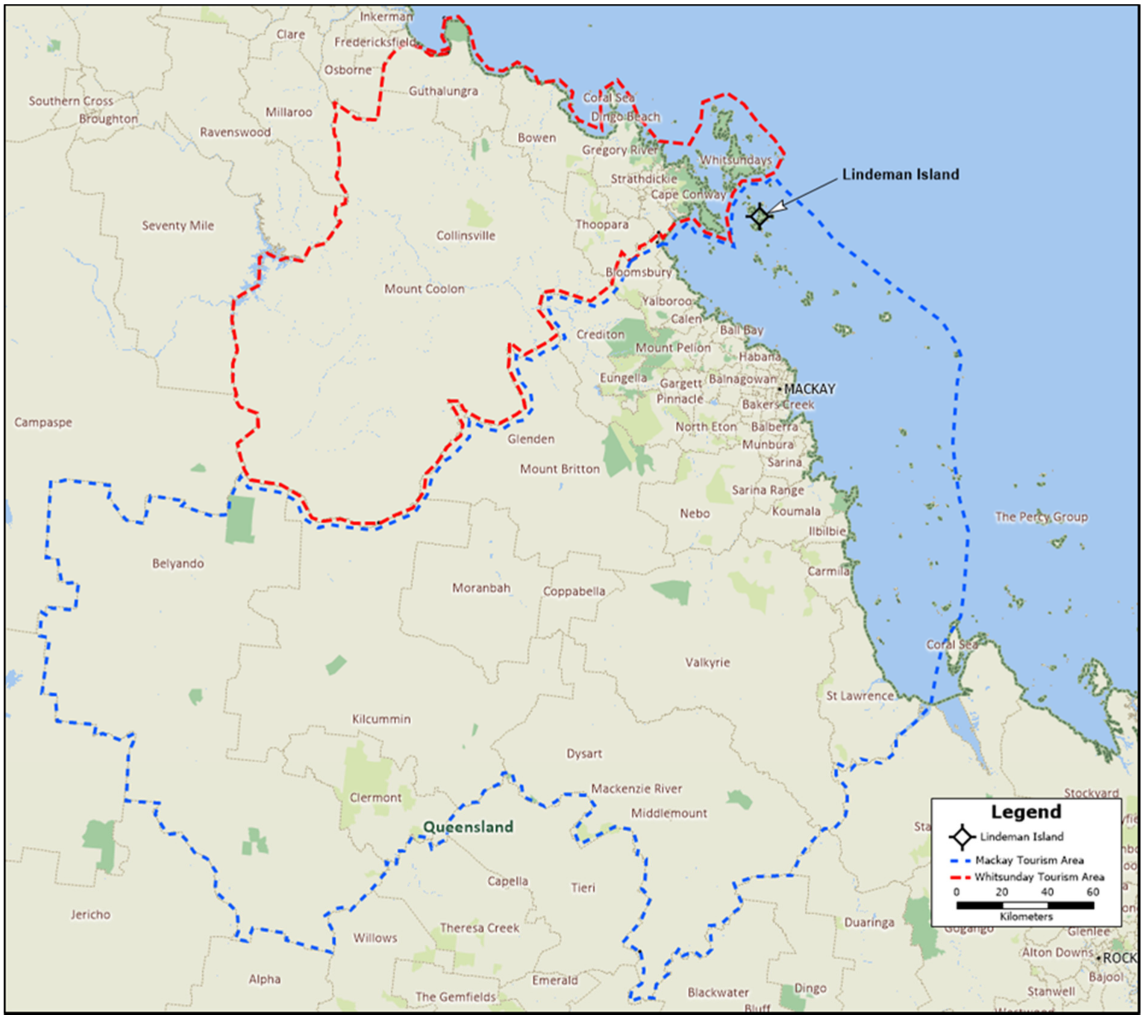
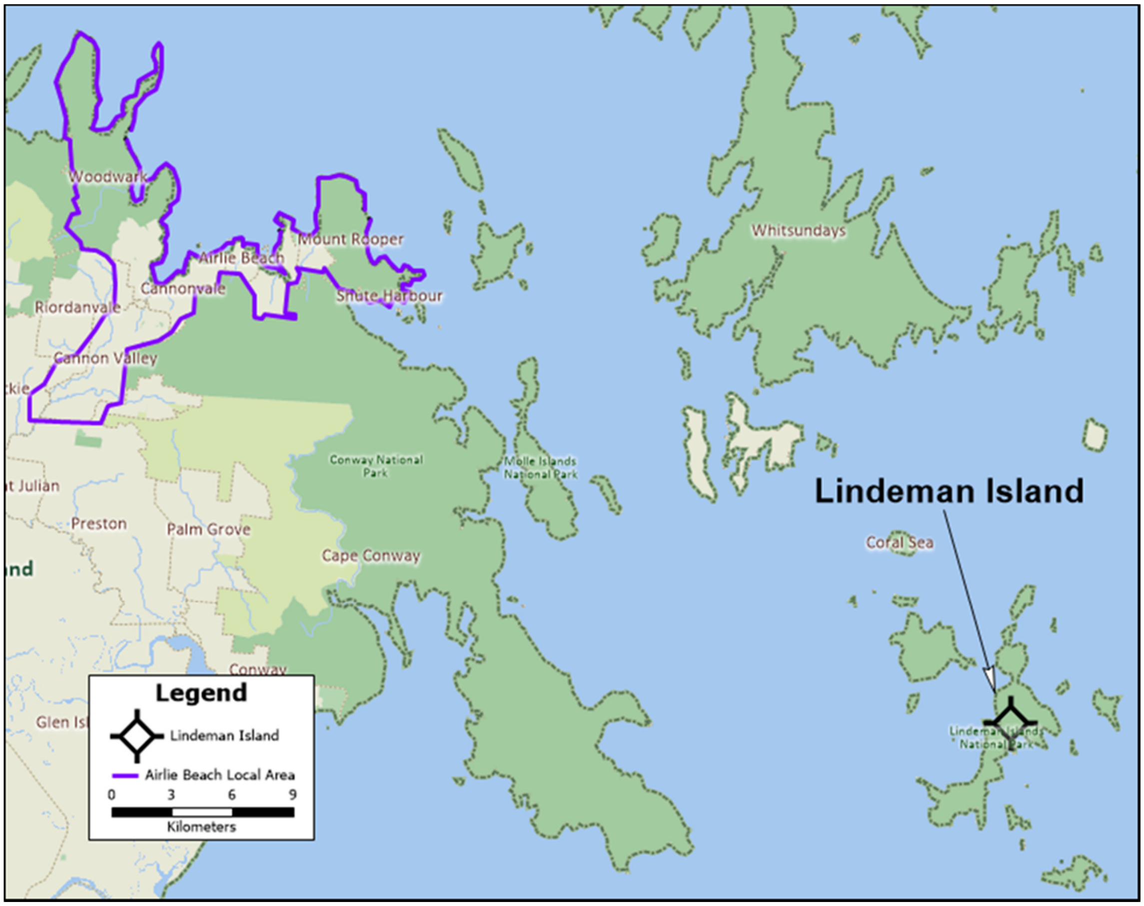


Figure 15-3. Airlie Beach Local Area.



15.3 Proposed Development

Whilst tourist operations commenced on Lindeman Island in 1928, the current 225-room resort was developed by Club Med in 1992, operating successfully for many years after. It operated as a 3-star facility, mostly targeting the family market (but also understood to have targeted the singles market in its early years). Following damage by Cyclones Ului (2010) and Yasi in March (2011) and the tourism downturn suffered by Queensland resorts in the GFC period (post late 2008), Club Med closed its resort in January 2012 and sold it to the proponent, White Horse Australia Lindeman Pty Ltd later that year. The resort has remained closed for the three and a half year period as the new owner explored development options and is now embarking upon obtaining necessary approvals to expand and refurbish the resort. The resort, suffering from cyclone damage at the time of its closure remains in a significant state of disrepair and requires a major refurbishment, as a minimum. The proposed development has been designed by DBI Design, intending to create a luxury resort that reflects the beauty of the island and responds to the World Heritage values of the Great Barrier Reef. Three distinct resorts are proposed to be developed, supported by a range of villas that are more suited to the accommodation of family groups.

Major elements of the proposed development include:

(a) Beach Resort - redevelopment of the existing resort to achieve a new 5 star Beach Resort with 136 suites, conference centre, beach club and a central facilities building with restaurants, bars and lounges;

(b) Spa Resort - a new 6 star Spa Resort with 59 villas, central facilities, entry lounge, spa, sea view restaurant, pool and a signature rock bar providing spectacular alfresco dining close to the sea;

(c) Eco Resort - a new 5 star Eco Resort near the existing lake consisting of 41 villas, a central facility, boathouse and a waterside restaurant;

(d) Tourist villa precincts - two precincts accommodating 89 tourist villas are proposed to the north-east and north-west of the existing resort;

(e) Village - a central village precinct comprising restaurants, bar, night club, conference facility buildings, arrival centre, shops, sport and recreation centre and a staff village;

(f) Services infrastructure precinct - a new precinct with services including power generation (solar with diesel back-up), sewage treatment and water treatment designed to reflect current best practice;

(g) Airstrip - the existing airstrip is proposed to be upgraded to provide for near all-weather status, capable of landing light aircraft and helicopters;

(h) Marine access – upgrades to the existing jetty and additional moorings are proposed. The existing barge landing point will be used for the delivery and collection of goods, materials and waste throughout the construction and operation of the resort;

(i) Golf course – an upgrade to the existing recreational golf course is proposed;

(j) Ecotourism facilities - a National Park and Great Barrier Reef Educational Centre and 30 glamping facilities are being investigated in consultation with the State Government; and

(k) Environmental enhancements – native vegetation replanting, improvements to stormwater management and a shift towards renewable energy sources are proposed.

It is anticipated that construction would commence in mid-2018 with the resort opening in late 2021. The vision for the resort is that it operates at the top end of the market in competition with Qualia at Hamilton Island and One&Only at Hayman Island. The proponent intends that a single luxury resort operator will be appointed to manage the three resorts on the island. No agreement has been reached as yet with an operator, although the operator would potentially include Starwood Hotels (Sheraton, St Regis, W Hotels, Westin, The Luxury Collection), Hilton, Four Seasons, Banyan Tree, Intercontinental and Shangri-La. Guests would primarily arrive on the island by ferry from Shute Harbour and Hamilton Island, with some guests potentially flying into the island on small charter flights. With Hamilton Island Airport (17 flights from Sydney, 13 flights from Brisbane, 7 flights from Cairns and 5 flights from Melbourne) currently attracting many more weekly flights than the Proserpine Airport (19 flights from Brisbane, 5 from Sydney and 3 from Melbourne) and its much closer proximity to Lindeman Island, it is expected that the majority of guests would arrive by ferry to the island via Hamilton Island Airport. The proponent expects that the majority (80% to 90%) of guests would comprise domestic tourists, with the international market comprising the balance of between 10% and 20%.

15.4 Stakeholder Consultation

Consultation with key stakeholders has been undertaken since the commencement of the project to examine different project alternatives and refine the key project elements. In March 2016 a Newsletter was issued to 144 stakeholders seeking comments on the proposed project, with feedback mainly provided from State Agencies and the Local Governments (refer to **Chapter 14 - Social**). The proponent has also launched a project website to provide information and the opportunity to provide comments on the project (http://lindeman.net.au). To date responses received via the website indicate support for the project and querying potential job opportunities. The Project Team has also met with State and Local Members of Parliament, key State/Commonwealth Government agencies and presented the project to Local Marine Advisory Committee in Airlie Beach and Mackay (refer to **section 14.5**). The proponent is seeking wider community feedback during the EIS public notification phase to gather additional input on the social impact assessment of this project. Information regarding the stakeholders and impacted communities of interest are described in **Chapter 14 – Social** and **Appendix L – Social Impact Assessment (sections 3** and **5)**.

15.5 Economic Profile of the Mackay Region and Relevant Local Areas

Located centrally within Queensland, the Mackay Region's economy is primarily based upon coal, tourism and agriculture, with sugar cane being the main agricultural product of the Region. Coal is Queensland's largest export and the western part of the Region contains the northern part of the Bowen Basin, Australia's largest coal resource (and comprising a high proportion of the higher priced coking or metallurgical coal). The Bowen Basin recorded a boom in activity during the 2008 to 2012 period, followed by three years of contraction, in line with falling coal prices. This contraction has led to the closure of some mines, the scaling back of operations at other mines and delays to the commencement of new mines that were ready to proceed in the post-2012 period. In turn, this has led to lower population growth, higher unemployment rates and excess housing capacity in the Region. Overall, the coal industry has undergone several rapid expansion and contractions over the past few decades in response to global demand levels and prices. Ultimately, the future of the coal mining industry will guide the pace of growth in the Region. In the short to medium term, the state of the coal industry will most likely be subject to further volatility. Due to climate change, in the long term, the future of the coal industry will be dependent upon the ability of the industry to develop carbon capture and storage techniques to sequester the carbon released from the burning of coal into the ground. Tourism is an especially important economic sector for the Whitsunday Local Area, which boasts a number of popular island resorts and associated infrastructure at Airlie Beach and Shute Harbour. The tourism product elsewhere in the Region is more focused upon business travellers and the self-drive tourist market. This sector has suffered from the adverse impacts of the GFC, the high Australian dollar and impacts from floods and cyclones.

The Region has traditionally been a strong sugar producer and exporter, generating 30% of Australia's sugar production. With falling world sugar prices, rationalisation within the industry and increased competition from other crops, the local sugar industry has experienced difficult trading conditions over the past 15 years. Over this period, its economic strength to the Region has declined in proportion to the contributions from coal and tourism. It should be noted that the Australian dollar has depreciated significantly in the past year or so and is expected to depreciate further. This is positive for the prospects of these three main export-oriented industries of the Region. The Region (182,000 persons) accommodated almost 4% of the state's population as at June 2015. It achieved a slightly higher growth rate than the state in the 2001 to 2015 period (2.2% per annum compared with 2.1%). However, the effect of the current poor state of the coal sector in the Region is illustrated by a much more subdued population growth in the Region of only 0.6% from 2013 to 2015.

15.5.1 Population and Demographic Characteristics

The Whitsunday Local Area has a small population of 34,300 persons as at June 2015. Its population is mainly housed in the Airlie Beach area, Proserpine, Bowen and Collinsville. It has obtained a population growth rate below that of the Mackay Local Area, Mackay Region and the state (**Table 15-1** and **Table 15-2**). The Mackay Local Area has a moderate population, numbering 123,700 persons as at June 2015. It houses the state's seventh largest city, Mackay, as well as Sarina. It has enjoyed strong population growth (2.4% per annum), although the rate of growth has waned, recording only 0.3% over the past year. The Mackay Region accommodates almost 4% of the state's population with 182,300 persons as at June 2015. It is the state's seventh largest Region outside Greater Brisbane (where there are ten in total). It has enjoyed a population growth rate (2.2% per annum) slightly above the state average (2.1% per annum) (**Table 15-1** and **Table 15-2**).

Table 15-1. Historic Population – 2001 to 2015.

Area/Region	2001	2006	2011	2015
Whitsunday Local Area	27,396	30,255	32,416	34,312
Mackay Local Area	89,337	103,567	115,960	123,724
Mackay Region	134,902	154,194	171,564	182,303

Source: Australian Bureau of Statistics

Table 15-2. Historic Population Growth Rates– 2001 to 2015.

Area/Region	2001-2006	2006-2011	2011-2015	2001-2015
Whitsunday Local Area	2.0%	1.4%	1.4%	1.6%
Mackay Local Area	3.0%	2.3%	1.6%	2.4%
Mackay Region	2.7%	2.2%	1.5%	2.2%

Source: Analysis of data from the Australian Bureau of Statistics

Official medium series projections prepared by the Queensland Government Statistician's Office in 2015 indicate that the Mackay Local Area and the Mackay Region should obtain strong population growth into the future, with the Whitsunday Local Area obtaining moderate population growth (**Table 15-3** and **Table 15-4**). By 2036, the Whitsunday and Mackay Local Areas are expected to reach populations of 49,700 and 197,900 persons, respectively. The Mackay Region is projected to reach a population of 284,300 persons in the same year.

Table 15-3. Projected Population – 2016 to 2036.

Area/Region	2016	2021	2026	2031	2036
Whitsunday Local Area	35,213	37,923	40,869	43,692	46,652
Mackay Local Area	126,370	135,312	146,269	158,464	171,313
Mackay Region	186,498	199,605	215,309	232,236	249,898

Source: Queensland Government Statistician's Office 2015

Table 15-4. Projected Population Growth Rates– 201 to 2014.

Area/Region	2011-2016	2016-2021	2021-2026	2026-2031	2031-2036	2011-2036
Whitsunday Local Area	1.7%	1.5%	1.5%	1.3%	1.3%	1.5%
Mackay Local Area	1.7%	1.4%	1.6%	1.6%	1.6%	1.6%
Mackay Region	1.7%	1.4%	1.5%	1.5%	1.5%	1.5%

Source: Analysis of data from the Queensland Government Statistician's Office 2015

However, a review of **Table 15-3** and **Table 15-4** indicates that the actual growth rate achieved in the 2011 to 2015 period has fallen short of the projected rate for the 2011 to 2016 period in all three Areas/Regions. The poor current state of the coal sector has significantly undermined confidence, business activity and population growth in the Whitsunday and Mackay Local Areas and the Mackay Region. The tough tourism market experienced by the Whitsunday Local Area has also negatively impacted population growth in that Local Area. It is also relevant to note that Queensland is expected to experience low economic and population growth rates over the next few years, with the recently released 2015 medium series projections for the state reflecting a future annual growth rate of 1.7%. Reflecting the poor state of the coal sector, the 2015 medium series projections for the Whitsunday Local Area, Mackay Local Area and Mackay Region are much lower than the previous 2013 population projections. All three Areas/Regions are expected to derive annual population growth in the order of 1.5%, substantially below that enjoyed previously.

In describing the demographic characteristics of these communities, a description of how the Mackay Region differs from the Queensland averages is provided in the first instance, followed by descriptions of how the two Local Areas differ from the Mackay Region. This analysis is based upon the 2011 Census conducted by the Australian Bureau of Statistics.

The Mackay Region:

(a) Is a younger community, with the proportion of children aged 14 years and younger being 6% more than the state average and the proportion of persons aged 60 years and older being 20% less than the state average. The proportion of persons aged 15 to 24 years is slightly below average (4%) due to greater education opportunities being provided in South East Queensland;

(b) Had a much higher proportion of visitors on Census night (15.1%) compared to the state average of 6.5%, caused by the influence of the tourism and mining (with large numbers of workers staying in temporary accommodation near the mines) sectors to the Region;

(c) Is a more mobile community, with the proportion of households having two or more vehicles being 14% more than average;

(d) Occupies a higher proportion of detached dwellings (5% higher), with the proportion of semi-detached dwellings (4%) and units and flats (6%) being lower than average; and

(e) Is a more affluent community, with average household incomes being 18% higher than for the state.

With the Mackay Local Area accommodating 68% of the Mackay Region's population on Census night, it is not surprising that this Area exhibits a similar demographic profile to that of the Mackay Region. Relevant differences between the Mackay Local Area and the Mackay Region are noted below:

(a) The Local Area had a slightly older population, with the proportion of persons aged 65 years and older being 7% more than for the Region;

(b) The Local Area had a much lower proportion of visitors on Census night (6.6% and similar to the state average) compared to the Region's 15.1%, indicating a much lower reliance upon tourism in the Local Area;

(c) The Local Area had a similarly high level motor vehicle ownership, indicating a highly mobile community;

(d) Both communities had a similar mix of detached, semi-detached and attached dwellings, with 90% of the Local Area's dwellings comprising detached dwellings; and

(e) Has the same average household incomes as for the Region, being 18% higher than for the state.

The Whitsunday Local Area comprised an older and less affluent population that was more reliant upon the tourism industry. It had:

(a) A slightly older population, with the proportion of persons aged 55 years and older being 18% more than for the Region, indicating the popularity of this Area for retirees and semi-retirees;

(b) A very high proportion of visitors on Census night, accounting for 20% of all persons, demonstrating the importance of tourism to this Local Area;

(c) Lower levels of mobility, with the proportion of households having two or more vehicles being 13% below the Region's average;

(d) A much lower reliance upon detached dwellings (9% lower), with the proportion of attached dwellings being 86% above that for the Region and the proportion of other dwellings (especially caravans and houseboats) being 74% above that for the Region; and

(e) A much lower average household income, being 20% below the Region average and 6% below the state average.

15.5.2 Employment Characteristics

The three communities all had a strong workforce as at 2011: high workforce participation rates; low unemployment levels; and relatively low unemployment rates for the more vulnerable age groups of 15 to 19 year olds and 20 to 24 year olds, in comparison to the state averages.

Table 15-5. Labour Force Participation and Unemployment – 2011.

Labour Force Statistics	Whitsunday Local Area	Mackay Local Area	Mackay Region	Queensland
Workforce Participation Rate	71.6%	72.0%	73.2%	66.8%
Unemployment Rate	4.7%	3.6%	3.6%	6.1%
- **15-19 year olds**	10.7%	10.7%	10.1%	16.6%
- **20-24 year olds**	5.7%	5.2%	5.0%	9.9%

Source: Analysis of Australian Bureau of Statistics 2011 Census data.

However, as mentioned above, since the date of the 2011 Census, the coal sector has suffered significantly due to low coal prices, which has substantially weakened the economies and labour markets of these communities. Small Area Labour Market Data published by the Commonwealth Department of Employment indicates that after the 2011 Census, the unemployment rate reached a low of 5.4% in the December 2011 quarter. Since this date, the state's unemployment rate has steadily increased due to below average rates of economic growth in the state. It has now reached 6.5% in June 2015, slightly higher than the 6.1% recorded by the 2011 Census. In contrast, the unemployment rates reached their nadirs slightly later, in September quarter 2012 in the Mackay Local Area (2.9%) and the Mackay Region (3.0%). This was due to a booming coal sector at that time. The unemployment rates for these two communities steadily increased as employment levels in the coal sector were reduced, reaching 4.5% for both communities in the September quarter 2014. The unemployment rates have subsequently jumped to reach 7.6% (Local Area) and 7.4% (Region) in the June 2015 quarter, eclipsing the state average for the first time. This rapid rise in unemployment indicates the difficult economic conditions being faced by these two communities and the speed at which employment in the coal sector reduced.

The unemployment rate for the Whitsunday Local Area travelled a different path, although reaching a worse position. Its unemployment rate gradually increased after the 2011 Census, before eclipsing the state average by the June 2013 quarter (6.6%). It has remained at about that level before jumping to 9.0% in the March 2015 quarter and to 10.0% in the June 2015 quarter. This trajectory suggests that this Local Area continued to be adversely affected by post-GFC conditions in the tourism market, as well as also being adversely impacted by the coal sector during 2015.

Aside from several Aboriginal communities, the 10.0% unemployment rate in the Whitsunday Local Area recorded in the June 2015 quarter was only exceeded by five other local authorities in the state: Charters Towers; Bundaberg; Fraser Coast; Gympie; and South Burnett Regions. The three communities all have generally low levels of non-school qualifications, although the proportions of Certificate level is higher than the state average, indicating a strong blue collar workforce (refer to **Table 15-6**). Of the three communities, the Whitsunday Local Area has the lowest levels of non-school qualifications.

Table 15-6. Qualifications of Persons Aged 15 Years and Over – 2011.

Qualifications	Whitsunday Local Area	Mackay Local Area	Mackay Region	Queensland
Postgraduate Qualification	1.5%	1.9%	1.8%	4.2%
Bachelor Degree	6.2%	7.4%	7.3%	11.7%
Diploma and Advanced Diploma	6.2%	5.5%	5.5%	7.5%
Certificate	23.4%	24.9%	24.6%	19.9%
Total Non-school Qualifications	37.3%	39.7%	39.2%	43.3%

Source: Analysis of Australian Bureau of Statistics 2011 Census data

The three communities have more blue collar-oriented workforces, a further reflection of the importance of the mining and agricultural sectors and very low proportions of professionals (refer to **Table 15-7**).

Table 15-7. Occupation of the Labour Force – 2011.

Occupations	Whitsunday Local Area	Mackay Local Area	Mackay Region	Queensland
Managers	13.3%	10.3%	11.1%	12.0%
Professionals	10.4%	12.9%	12.1%	18.9%
Community and Personal Services	9.7%	7.1%	7.3%	10.0%
Clerical and Administrative Workers	10.7%	13.0%	12.1%	14.7%
Sales workers	8.9%	8.7%	8.1%	9.8%
Technicians and Trades Workers	17.7%	21.2%	20.5%	14.9%
Machinery Operators and Drivers	12.0%	13.9%	15.0%	7.3%
Labourers	15.5%	11.1%	12.0%	10.6%
Other	1.8%	1.8%	1.8%	1.8%
Total	100.0%	100.0%	100.0%	100.0%

Source: Analysis of Australian Bureau of Statistics 2011 Census data

The Whitsunday Local Area had:

(a) A higher proportion of blue collar workers, 38% above the state average;

(b) A higher proportion of managers, 11% above the state average, reflecting the higher incidence of farm managers and small tourism business managers in the Area;

(c) A very low proportion of professionals, 45% below the state average; and

(d) A low proportion of clerical and administrative workers, 27% below average, reflecting the small scale of this Local Area.

The Mackay Local Area had:

(a) A higher proportion of blue collar workers, 41% above the state average, with the proportion of technicians and trades workers being 42% above and the proportion of machinery operators and drivers being 90% above;

(b) A higher proportion of managers, 11% above the state average, reflecting the higher incidence of farm managers and small tourism business managers in the Area; and

(c) Low proportions of managers (14% below the state average) and professionals (32% below the state average).

The Mackay Region had a similar occupation of the workforce profile to the Mackay Local Area due to the Local Area comprising 68% of the Region's population at the time of the Census. Examination of the labour force by industry provides clear evidence of the dominance of the mining, agriculture and tourism sectors, as set out in **Tables 15-8** (industry of the labour force) and **Table 15-9** (industry specialisation index of the workforce, where numbers above 100 indicated a higher proportion of the labour force working in that industry). The Mackay Region's labour force is heavily focused upon the mining sector, attracting the largest proportion of workers and that proportion being more than five times the state average. The agricultural sector is also important to the Region attracting almost twice the state average, with sugar, horticultural crops and cattle dominating. The transport sector also features prominently due to the transport requirements of the coal and sugar sectors, including the operation of several ports. The Mackay Local Area reflects a similar industry profile to the Region. However, it's more cosmopolitan nature means that there is proportionately less employment in the agricultural sector and more employment in the wholesale trade and manufacturing sectors, influenced by the extensive industrial area at Paget. Housing the service city of Mackay, it is not surprising that this Local Area also has higher proportions of employment than the other two communities in the financial and insurance services, professional, scientific and technical services, public administration and safety services, education and training and health care and social assistance sectors.

The Whitsunday Local Area had high levels of industry specialisation in the agriculture (307), mining (273) and accommodation and food services (210) sectors. Agriculture mainly comprises horticulture, which is highly labour intensive (it is also a seasonal crop and the Census was undertaken in the busy season). The Local Area includes the Collinsville community, where two coal mines are located. The tourism industry in the Whitsunday Islands and at Airlie Beach has generated strong employment demands in the accommodation and food services sector. There is also a high level of specialisation in the transport sector (142) involving the carriage of coal to and through the Abbot Point Coal Terminal.

Table 15-8. Industry of the Labour Force – 2011.

Occupations	Whitsunday Local Area	Mackay Local Area	Mackay Region	Queensland
Agriculture, Forestry and Fishing	8.3%	3.2%	4.9%	2.7%
Mining	7.1%	11.1%	14.4%	2.6%
Manufacturing	5.9%	9.5%	7.9%	8.4%
Electricity, Gas, Water & Waste Services	0.9%	0.9%	0.9%	1.2%
Construction	10.2%	10.3%	9.7%	9.0%
Wholesale Trade	2.3%	4.5%	3.7%	3.6%
Retail Trade	10.3%	10.1%	9.5%	10.7%
Accommodation and Food Services	14.7%	5.9%	7.6%	7.0%
Transport, Postal & Warehousing	7.5%	6.8%	6.4%	5.3%
Information Media & Telecommunications	0.6%	0.6%	0.6%	1.2%
Financial and Insurance Services	1.1%	1.3%	1.2%	2.7%
Rental, Hiring & Real Estate Services	1.9%	1.8%	1.8%	1.8%
Professional, Scientific and Technical	3.2%	4.7%	4.0%	6.5%
Administrative and Support Services	3.7%	2.5%	2.8%	3.2%
Public Administration and Safety	3.5%	4.0%	3.8%	6.7%
Education and Training	4.7%	5.8%	5.5%	7.9%
Health Care and Social Assistance	6.7%	8.7%	7.6%	11.9%
Arts and Recreation	0.9%	0.5%	0.5%	1.4%
Other Services	6.5%	7.8%	7.2%	6.2%
Total	100.0%	100.0%	100.0%	100.0%

Source: Analysis of Australian Bureau of Statistics 2011 Census data

Table 15-9. Industry Specialisation Index of the Labour Force – 2011.

Occupations	Whitsunday Local Area	Mackay Local Area	Mackay Region	Queensland
Agriculture, Forestry and Fishing	307	119	181	100
Mining	273	427	554	100
Manufacturing	70	113	94	100
Electricity, Gas, Water & Waste Services	75	75	75	100
Construction	113	114	108	100
Wholesale Trade	64	125	103	100
Retail Trade	96	94	89	100
Accommodation and Food Services	210	84	109	100
Transport, Postal & Warehousing	142	128	121	100
Information Media & Telecommunications	50	50	50	100
Financial and Insurance Services	41	48	44	100
Rental, Hiring & Real Estate Services	106	100	100	100
Professional, Scientific and Technical	49	72	62	100
Administrative and Support Services	116	78	88	100
Public Administration and Safety	52	60	57	100
Education and Training	59	73	70	100
Health Care and Social Assistance	56	73	64	100
Arts and Recreation	64	36	36	100
Other Services	105	126	116	100
Total	100	100	100	100

Source: Analysis of Australian Bureau of Statistics 2011 Census data

Of some relevance to the proposed development is information about how employees get to work, particularly on island resorts. The ABS Census reported that only 0.20% of the Queensland labour force utilised a ferry to get to work on the day of the Census. In the Mackay Region, the proportion was similar at 0.16%. However, in the Whitsunday Local Area, the proportion was a significant 0.75% in comparison to 0.02% for the Mackay Local Area. This demonstrates the relevance of ferries in the Whitsunday Local Area for employees of the island resorts. It is also relevant to note that in the Whitsunday Local Area, the largest industry employer of the vulnerable (high unemployment levels) 15 to 24 year olds is the accommodation and food services sector. This sector employs 23.6% of this age group, with the next highest employment sector being retail trade

(17.8%). This demonstrates the suitability of these industry sectors in the employment of the younger and less experienced component of the labour force.

15.5.3 Gross Regional Product

There is a general lack of current published data on the gross regional product (GRP) at the small area level. The most reliable source in Queensland is the Experimental Estimates of Gross Regional Product for the periods 2000/1, 2006/7 and 2010/1 released by the Queensland Treasury and Trade in March 2013. Reference will be made to this document and more recent data published in respect of the state and nation in order to present the most relevant data for the Local Areas and Region. During 2014/5, Australia's gross domestic product (GDP) was $1,612b (at current prices) (ABS Catalogue No. 5206.0). Since the commencement of the GFC, our GDP has increased by only 2.4% per annum (at chain volume measures [net of price increases]), below the average experienced in the period leading up to the GFC. The ABS no longer reports imports and exports at the state level, meaning that it reports state final demand (SFD) rather than gross state product (GSP). GSP takes account of exports and imports, whereas SFD excludes these items. Queensland achieved a SFD of $318.5b in 2014/5 (at current prices), which represented 19.5% of domestic final demand (DFD) (ABS Catalogue No. 5206.0). Queensland Treasury and Trade has estimated GSP for the year ended 31 March 2015 at $301.1b (at current prices) (Queensland State Accounts). Based upon the two sets of data it is estimated that during 2014/5 Queensland's GSP approximated $304b (at current prices) (Norling Consulting estimate). This represents 18.9% of Australia's GDP for the same period.

The Mackay Region is one of 13 regions for which GRPs have been prepared in the Experimental Estimates of Gross Regional Product. In 2010/1, the Mackay Region contributed 8.5% of the state's GSP, with its GRP estimated at $22.8b. The Mackay Region generated the third largest GRP in the state. With its population representing less than 4% of the state's population, its 8.5% contribution resulted in very high GRP being recorded on a per capita basis (second largest amongst the Regions and beaten only by the North West Region, which contains the northwest minerals province and is sparsely populated). Amongst all Queensland Regions, the Mackay Region recorded the largest percentage increase of its GRP (in nominal terms), averaging 13.7% per annum from 2000/1 to 2010/1.

The dominance of the mining sector in the Mackay Region is demonstrated by it contributing more than half of the Region's economic output (measured in gross value added terms) (**Table 15-10**). Mining's contribution to economic output was more than five times the state average. The next largest industry sector was construction, which contributed just over 10% of economic output, which was 9% greater than for the state average. The Region's third largest contributor to economic output was the accommodation and food services sector (7.6%), which was almost three times the state contribution. This reflects the strong tourism sector in the Whitsunday Local Area.

Table 15-10. Gross Value Added by Industry – 2010/1.

Occupations	Mackay Region	Queensland
Agriculture, Forestry and Fishing	2.7%	2.7%
Mining	54.2%	10.7%
Manufacturing	4.4%	8.1%
Electricity, Gas, Water & Waste Services	1.0%	2.6%
Construction	10.1%	9.3%
Wholesale Trade	3.3%	5.3%
Retail Trade	2.3%	5.4%
Accommodation and Food Services	7.6%	2.6%
Transport, Postal & Warehousing	1.7%	6.2%

Occupations	Mackay Region	Queensland
Information Media & Telecommunications	4.6%	2.1%
Financial and Insurance Services	0.6%	6.6%
Rental, Hiring & Real Estate Services	1.3%	1.8%
Professional, Scientific and Technical	1.4%	2.5%
Administrative and Support Services	1.8%	6.1%
Public Administration and Safety	1.1%	2.1%
Education and Training	1.4%	5.6%
Health Care and Social Assistance	1.3%	4.1%
Arts and Recreation Services	1.9%	6.4%
Other Services	0.1%	0.6%
Ownership of Dwellings	1.5%	1.8%
Total Gross Value Added	100.0%	100.0%

Source: Analysis of Queensland Treasury and Trade 2013 data

Economic data derived from Lawrence Consulting and contained on the respective local government websites indicates that the Mackay Local Area generated 46% and the Whitsunday Local Area generated 15% of the Mackay Region's GRP in 2013/4. This source reported the GRP for the three communities at far lower numbers than reported above for 2010/1: Whitsunday Local Area - $2.2b; Mackay Local Area – $6.8b; and Mackay Region - $14.6b. Whilst the different source of data may explain some of the differences, the 36% reduction in the Mackay Region's GRP in the three years could also be explained by the significant fall in the coal price and the consequent significant reduction in mining activity. Another source of more current GRP data is the Regional Tourism Satellite Account prepared by Deloitte Access Economics for Tourism and Events Queensland for the 2013/4 year. Total GRPs were reported for the Whitsunday Local Area and the Mackay Region at $2.4b and $20.3b, which is higher than estimated by Lawrence Consulting. This publication also estimated that the tourism industry (which is not separately defined in the National Accounts) contributed a very significant 33% of the Whitsunday Local Area's economy and only 7% of the Mackay Region's economy. It is therefore estimated that the 2014/5 GRPs for the Whitsunday Local Area, Mackay Local Area and Mackay Region are respectively $2.4b, $9.5b and $20.7b with their proportionate contributions to the GSP being 0.8%, 3.1% and 6.8%, respectively.

15.5.4 Housing Markets

Given the proposed ferry connection between Lindeman Island and Shute Harbour to transfer those staff not accommodated on the island, the most relevant local area to examine for the housing markets is considered to be the Whitsunday Local Area. However, this local government area also includes the mining towns of Bowen, Collinsville and Proserpine, which are located remote from Shute Harbour. Consequently, the relevant local housing market is considered to be the urban community extending from Shute Harbour through Airlie Beach and Cannonvale to the Cannon Valley, an area extending to about 20km from the Shute Harbour ferry terminal. This smaller community will be referred to as the Airlie Beach Local Area given the central location of Airlie Beach. The housing market in the Airlie Beach Local Area is a weak, but higher priced market. There is a high proportion of units, a high proportion of rental accommodation, large numbers of unoccupied private dwellings and large numbers of dwellings available for rent or purchase, yet median prices are comparatively high, presumably due to the attractiveness of living in the coastal environment of the Whitsundays.

The Airlie Beach Local Area had a 2014 population of 11,946 persons, having increased from 8,192 persons in 2001 at a relatively strong rate of growth (2.9% per annum). As at the 2011 Census this community:

(a) Was housed in a total of 4,419 private dwellings, of which a very significant 1,036 (23.4% of the total compared with only 10.3% for the state) were vacant on Census night;

(b) Units comprised a very high proportion of occupied private dwellings (28.0% compared with only 11.8% for the state), with detached dwellings comprising less than 60%;

(c) Rental tenure comprised a high proportion of occupied private dwellings (48.4% compared with 34.3% for the state), with the proportion of dwellings owned outright (19.1%) and owned with a mortgage (32.5%) being significantly lower than the state average. Approximately 75% of all semi-detached and attached dwellings were being rented (which was also significantly below the state average);

(d) Average mortgage repayments for those households with a mortgage were $2,182 per month, which was 10.4% higher than the state average; and

(e) Average rents for those households renting were $325 per week, which was 9.0% higher than the state average.

Based upon population and dwelling increases since the Census, it is estimated that as at June 2015, there were a total of 4,700 private dwellings in the Airlie Beach Local Area, of which a significant 760 (16.2%) were vacant. The Airlie Beach Local Area has sustained a relatively strong housing and unit market during the GFC. Volumes of sale have averaged a relatively constant 120 and 180 per annum for houses and units, respectively (**Table 15-11**, derived from data obtained from APM PriceFinder). There is also evidence that the GFC led to a reduction in house and unit prices to a low in 2011 ($429,250 for houses and $285,000 for units), with slight price increases being obtained subsequently.

Table 15-11. House and Unit Sales in Airlie Beach Local Area – 2008-2014.

Years	Houses		Units	
	Volume of Sales #	**Median Price $**	**Volume of Sales #**	**Median Price $**
2008	118	495,000	183	385,000
2009	137	447,500	223	347,500
2010	94	442,500	184	345,000
2011	110	429,250	127	285,000
2012	127	436,975	151	292,000
2013	113	445,000	183	317,000
2014	130	445,000	224	290,000

Source: Analysis of APM PriceFinder data

The ABS reports that the median house price during 2014 in Brisbane was $472,000 and in the remainder of Queensland was $402,500. The Airlie Beach Local Area house price sits squarely between these two values, suggesting that prices are above that recorded in many other parts of regional Queensland. The ABS reports that the median unit price during 2014 in Brisbane and the remainder of Queensland was $374,500 and $337,700, respectively. The Airlie Beach Local Area unit price sits well below both of these figures and, in combination with the data presented in the following paragraph, suggests that the market for units in this Local Area is significantly weaker. As at mid-September 2015, APM PriceFinder reported that there were considerable numbers of houses and units for sale or rent in the Airlie Beach Local Area:

(a) There were 248 houses for sale (median price of $479,000), representing 8.6% of all houses;

(b) There were 194 units for sale (median price of $269,500), representing a significant 12.0% of all units;

(c) There were 81 houses for rent (median price of $392 per week), representing 0.3% of all houses; and

(d) There were 119 units for rent (median price of $290 per week), representing 7.4% of all units.

The proposed construction project is not expected to have an adverse impact upon the local or regional housing market. With all of the on-site temporary construction workers planned to be housed on the island, demand for mainland accommodation is expected to be derived from a small proportion of workers likely to relocate their families to the Region and from indirect employment resulting from the project. As explained above, the local and regional housing markets are in a weakened state and have sufficient capacity to absorb any resulting demand for housing in the local area, as such no further audit of mainland housing is proposed.

15.6 Tourism Markets

This section provides an overview of the Mackay and Whitsunday Tourism Areas with respect to international and domestic visitation. The following **Table 15-12** provides a summary of international and domestic visitation to these regions for 2013/4.

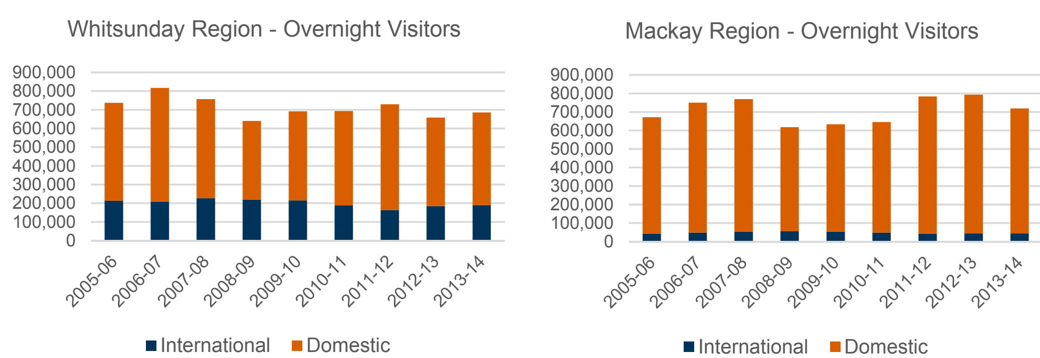
Table 15-12. International and Domestic Overnight Visitors – 2013/4.

	International Overnight Visitors			Domestic Overnight Visitors		
Region	No.	Annual % Change	Trend % Change	No.	Annual % Change	Trend % Change
Mackay	44,000	3.7%	-0.4%	819,000	26.2%	9.7%
Whitsunday	207,000	13.2%	7.5%	436,000	-13.7%	-6.0%
Queensland	2,148,000	5.5%		18,552,000	5.6%	

Source: Tourism and Events Queensland

The Mackay and Whitsunday Tourism Areas attracted 4.2% and 3.1%, respectively, of the Queensland tourism market in 2013/4, with the Mackay Tourism Area dominated by domestic visitors (95%) – generated by the large numbers of FIFO and DIDO workers – and the Whitsunday Tourism Area attracting a much larger numbers of international visitors (9.6% of the state's total). Over the last decade, visitor numbers have fluctuated, falling during the early GFC period, rising during the mining boom and falling slightly subsequent to the mining boom (illustrated in **Figure 15-4**).

Figure 15-4. Whitsunday and Mackay Region – Overnight Visitors.



Source: Tourism and Events Queensland

15.6.1 International Visitors

15.6.1.1 Mackay Tourism Area

(a) The Mackay Tourism Area recorded 44,000 international overnight visitors in the year ended December 2014. This represented a 3.7% increase from the previous year. The number of international visitors to this region has remained relatively stable over the past decade at only around 2% of the state's total;

(b) The major source of international visitors to Mackay comprises persons from New Zealand and the United Kingdom, although travel from these sources had declined from the previous year. This was however offset by growth from the smaller European markets and North America, to result in a small overall increase in visitation;

(c) International travel to the Mackay Tourism Area accounts for only a small proportion (5.2%) of total overnight visitation;

(d) The average length of stay for international visitors was 14 nights, a figure that has declined from the previous year; and

(e) International overnight expenditure was stable at $26.1 million.

15.6.1.2 Whitsunday Tourism Area

(a) The Whitsunday Tourism Area recorded 207,000 international overnight visitors in the year ended December 2014. This represented a 13.2% increase from the previous year, driven by the holiday sector;

(b) The two major sources of international visitors are the United Kingdom and Germany, both of which increased from the previous year. However, the biggest growth market by far is the Chinese market. 9,000 Chinese visitors travelled to the region, which represented a doubling from the previous year;

(c) The average length of stay for international visitors declined only marginally (-0.2%) to an average of 7 nights; and

(d) International overnight expenditure increased by a significant 34.9% to reach $146 million as a result of strong growth from the higher yielding holiday market.

15.6.2 Domestic Visitors

15.6.2.1 Mackay Tourism Area

(a) The Mackay Tourism Area received 819,000 overnight domestic visitors for the year ending December 2014, which represented a 26.2% increase from the previous year. This strong increase from 2013 was driven by strong growth in the business travel sector. The business sector represents more than half of all domestic travel to this region;

(b) The average length of stay increased to 4.5 nights following an increase in both domestic visitation and domestic visitor nights; and

(c) Expenditure increased by 28.3% to $404.7 million, which represented an extra $89.3 million more than the previous year.

15.6.2.2 Whitsunday Region

(a) The Whitsunday Region received 436,000 overnight domestic visitors for the year ending December 2014, which represented a 13.7% decline from the previous year. Both the holiday market and the visiting friends and relatives market recorded a decline in visitor numbers;

(b) Lower cost international holiday destinations such as Bali, Thailand and Fiji continues to attract Australian residents and impacts upon destinations such as the Whitsundays;

(c) While visitor numbers declined, the average length of stay increased by 0.5 nights to reach an average of 4.5 nights stay; and

(d) Domestic overnight expenditure was down by 15.1% from 2013, due to fewer domestic overnight visitors to the region. A total of $507.4 million in expenditure was estimated from this market.

15.6.3 Future Visitation

Both Tourism Areas have recently released Destination Tourism Plans that set out the Areas' visions, brands, market opportunities, growth strategies and target visitation levels. Both Plans are based upon the state government's commitment to double tourism expenditure by 2020. The (latest) 2016 Tourism Forecasts released by Tourism Research Australia projects international visitor arrivals to Australia to increase by 5.6% per annum over the next decade, whereas domestic visitor nights are projected to increase by 3.1% per annum over the same period. International visitor arrivals will be driven by the emerging China market, which is expected to increase at 13% per annum over the next decade. Other strong generators of international visitors are expected to be New Zealand, the United States, India, the United Kingdom and Singapore.

15.6.3.1 Mackay Tourism Area

The Mackay Tourism Area has been recognised as offering an abundance of natural attractions including the Great Barrier Reef and tropical islands, such as Lindeman. Opportunities for growth include a range of sectors, including leisure tourism events, leisure add-ons to business trips and domestic fly-drive holidays. The priority strategies to target these growth opportunities include marketing the Area's natural assets, re-opening established major accommodation establishments such as Lindeman Great Barrier Reef Resort (Island Resort), increasing the average length of stay, implementing a tourism events strategy and establishing a clear identity for the Tourism Area. The Mackay Tourism Area is aiming to increase domestic visitor expenditure by 45% in the 2013 to 2020 period and international visitor expenditure by 71% in the same period.

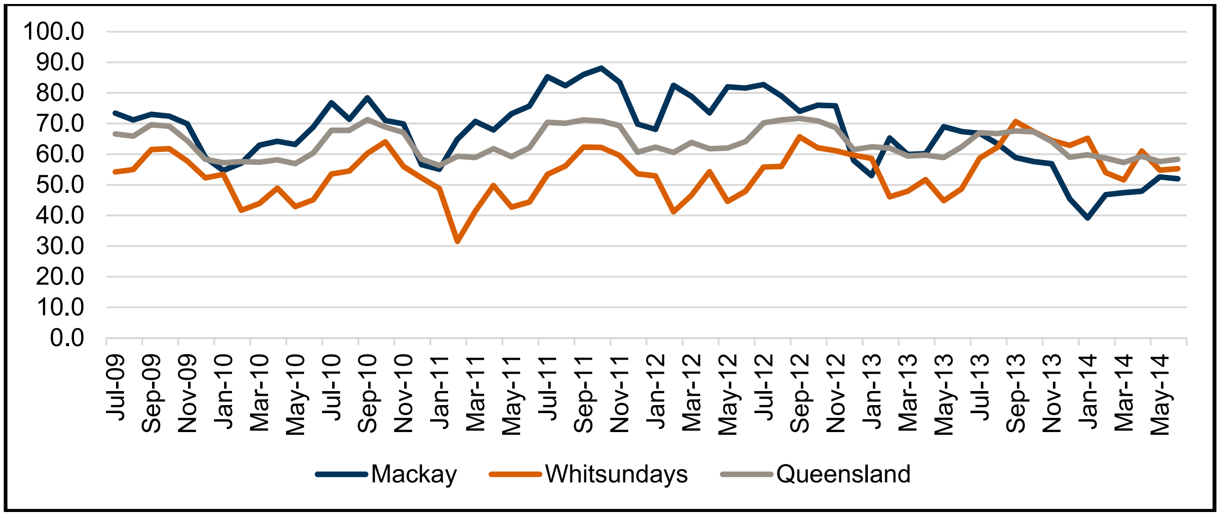
15.6.3.2 Whitsunday Tourism Area

The Whitsunday Tourism Area has established its vision that "by 2020 the Whitsundays will be globally recognised as one of the world's leading tropical island and marine leisure holiday destinations." A number of implementation measures have been identified to achieve this, including offering iconic experiences, growing investment in island resorts, developing tourism events, improving the international access of the Whitsunday Coast Airport and developing integrated resort developments. The Whitsunday Tourism Area is aiming to increase domestic visitor expenditure by 76% in the 2013 to 2020 period and international visitor expenditure by 78% in the same period.

15.6.4 Supply of Tourism Accommodation

According to the Australian Bureau of Statistics (ABS), the Mackay Tourist Area provided a total of 54 hotels, motels and serviced apartments (with 15 rooms or greater), as at June 2014. These facilities achieved an average occupancy rate during 2013/4 of 52.9%, representing a 23% decline from the previous financial year. This occupancy rate was also lower than the State average (61.9%), which may be explained (at least in part) by the end of the mining industry boom. The following chart shows occupancy rates by month, revealing the seasonal differences in occupancy rates. The Whitsunday Region provided a total of 32 hotels, motels and serviced apartments (with 15 rooms or greater), as at June 2014. These facilities achieved an average occupancy rate in 2013/4 of 60.7%, which was an 11% increase from the previous year and nearly on par with the State average (61.9%). The following chart graphs the average room occupancy rates for the Mackay and Whitsunday Tourism Areas and Queensland from July 2009 to June 2014 (refer to **Figure 15-5**).

Figure 15-5. Room Occupancy Rates for the Mackay and Whitsunday Tourist Areas and Queensland - July 2009 to June 2014.



Source: Australian Bureau of Statistics

The Mackay Tourism Area has mostly achieved higher occupancy rates that the Whitsunday Tourism Area and Queensland during the Global Financial Crisis period, thanks to a resurgent mining sector during this period. Within both Areas and at the state level, the fluctuations associated with Queensland's wet season is evident. Overall, Queensland is more popular during the cooler and dryer months thanks to domestic visitors from southern states seeking Queensland's warmer climate. The chart also shows the Whitsunday Tourism Area's susceptibility to greater seasonal differences, due to its reliance on tourists and holiday makers rather than business travellers. The ABS also provides separate details of the performance of hotels and resorts of greater than 15 rooms. Within the Mackay Tourism Area, there were 10 such establishments with an average of only 42 rooms each. These facilities achieved a 2013/4 occupancy rate of 57.4% and average takings per occupied room of $155.26. These facilities are not considered competitive with the proposed Lindeman Island Resort. Within the Whitsunday Tourism Area, there were seven hotels or resorts having an average number of 195 rooms. These establishments achieved a 2013/4 occupancy rate of 63.8% and average takings per occupied room of $241.32. This performance level is more similar to the standard of facility proposed for Lindeman Island. **Table 15-13** sets out the key parameters of the island resorts operating or now closed within the Whitsunday Islands.

Table 15-13. Island Resorts, Whitsunday Islands.

Name	Island	No. of Rooms	Rates	Comments
One&Only	Hayman Island	160 rooms, suites, penthouses and a villa	$849+ (incl. breakfast)	
Daydream Island Resort and Spa	Daydream Island	296 rooms	$375+ (incl. breakfast)	Recently sold to Chinese company, which plans to refurbish and add a second higher standard resort.
South Molle Island Resort/Koala Adventure Resort	South Molle Island	200 rooms	$499 + $60 local admin fee (incl. all-inclusive and en-suite accommodation, trip to Whitsunday Island including Whitehaven Beach, snorkelling)	The Resort is now utilised for overnight accommodation for 18-35 year old travellers included as part of the Koala Adventure Sail and Stay package.

Name	Island	No. of Rooms	Rates	Comments
Long Island Resort	Long Island	160 rooms	N/a	Currently closed for renovations (since 30th January 2015). Planning is also underway for a new 160 unit accommodation facility.
qualia	Hamilton Island	60 pavilions	$1,050+ (two night minimum stay, includes breakfast only)	
Beach Club	Hamilton Island	57 rooms	$650+	
Reef View Hotel	Hamilton Island	379 rooms	$370+	
Palm Bungalows	Hamilton Island	49 bungalows	$370+	
Holiday Units/Homes	Hamilton Island	100+ units/homes	$295+	
Lindeman Island Resort	Lindeman Island	N/a	N/a	Lindeman Island Resort closed in January 2012. EIS for redevelopment plans currently underway.
Brampton Island Resort	Brampton Island	N/a	N/a	The 106 room Brampton Island Resort closed for renovations in January 2011 and has never re-opened. A redevelopment of the Resort to create a 7-star boutique eco-resort has recently been approved, providing for a maximum of 30 guests.
	Keswick Island	N/a	N/a	A small number of guest houses/rentals – not considered competitive.

Source: Norling Consulting, Internet Searches

Therefore, three of the Whitsunday Island resorts are currently closed due to a combination of cyclone damage and poor trading conditions experienced during the Global Financial Crisis, leaving only four islands accommodating operating resorts. Hamilton Island, supported by its own airport, dominates this market in terms of quantum and range of facilities offered. Whilst technically competing with the above Whitsunday island resorts, the proposed luxury standard facility on Lindeman Island is more likely to compete with other luxury resort facilities located on Queensland's islands. The following table details these competitive facilities.

Table 15-14. Luxury Island Resort Accommodation – Queensland.

Name	Island	No. of Rooms	Rates
Lizard Island Resort	Lizard Island	40 villas	$1,365+ single share $1,699+ twin share (incl. all meals and beverages)
Bedarra Island Resort	Bedarra Island	8 villas	$1,090+ per villa (incl. all meals and beverages)
Orpheus Island Resort	Orpheus Island	14 rooms	$1,200+ per room (incl. all meals & beverages)
One&Only	Hayman Island	160 rooms, suites, penthouses and a villa	$849+ (incl. breakfast)
qualia	Hamilton Island	60 pavilions	$1,050+ (two night minimum stay, includes breakfast only)

Source: Norling Consulting, Internet Searches

The above listed luxury resorts are located in central and northern Queensland with Lizard Island being the northern-most facility. Bedarra Island and Orpheus Island are located off the coast between Cairns and Townsville and Hayman and Hamilton Island are within the Whitsundays, as shown in **Figure 15-6**.

Figure 15-6. Island Resort Destinations.

Source: Bing Maps, Norling Consulting

<u>Lizard Island</u> is a National Park of the same name located on the Great Barrier Reef within the Lizard Island Group of islands. Lizard Island is located 27km from the coast of Tropical North Queensland and 240km north of Cairns. The Lizard Island Resort is the only accommodation facility on the island and is situated on the island's north-western side. It focuses on providing a secluded getaway for its visitors with snorkelling, fishing and diving trips popular. The island is accessible only by private charter from Cairns Airport.

<u>Bedarra Island</u> is located within the Family Islands National Park approximately seven kilometres from the Queensland coastline. The island is divided into three sections – one section includes the Bedarra Island Resort, a small and exclusive facility targeting the luxury market. Another section known as East Bedarra includes a number of private homes. The third section includes a now-closed facility known as Bedarra Hideaway, which has not operated since 1991. The Bedarra Island Resort offers only 8 villas, focussing on providing a private and luxurious experience for its guests. A scheduled launch service operates between Mission Beach and the island and helicopter transfers are also available from Cairns Airport.

<u>Orpheus Island</u> is one of the islands within the Palm Island Group and is located within the Great Barrier Reef World Heritage Area. The island contains a research facility as well as the Orpheus Island Resort. Accommodating a maximum of 28 guests, this secluded facility offers 14 newly refurbished rooms. Popular activities include fishing, snorkelling and diving. Access is via helicopter from Cairns or Townsville Airport.

Hayman Island is the most northerly of the Whitsunday Islands, part of the Cumberland Island Group. Perhaps one of the most internationally renowned luxury island resort destinations in Australia, Hayman Island Resort has received several renovations since its initial opening in 1950. Extensive renovations were made in 2011 during which the island's vegetation was also restored following the significant impact of Tropical Cyclones Anthony and Yasi. This included the development of a new botanical garden, designed by Jamie Durie. One&Only took over management of the resort in 2013 and relaunched as One&Only Hayman Island in July 2014, once the extensive renovations were complete. The One&Only resort is much more family friendly than the other identified luxury destinations, offering a kids club and babysitting service. Transfers are available from Hamilton Island Airport or Whitsunday Coast Airport by launch or by helicopter or seaplane.

Hamilton Island is the largest inhabited island of the Whitsunday Islands and the only island in the Great Barrier Reef with its own commercial airport. Commercial airlines Qantas, Virgin and Jetstar all operate flights to/from Hamilton Island Airport. While the Island offers six different types of accommodation, qualia targets the luxury end of the market. Situated on the secluded northern-most tip of the island, qualia offers 60 private one-bedroom 'pavilions' and a beach house, each with ocean views. Having opened in 2007, the name 'qualia' means "a collection of deep sensory experiences" with the design of the facility focused on providing these luxury experiences.

15.7 Impacts of Project Construction

15.7.1 Methodology

This report utilises input-output multipliers to estimate the direct and indirect impacts of the proposed project construction upon the economy. Input-output multipliers have been widely used to provide an estimation of the impact of a particular project or policy upon the surrounding regional, state and/or national economies. The use of published input-output multipliers is a cost-effective tool for providing 'order of magnitude' economic impacts in comparison to the more expensive and time-consuming measures of a targeted survey-based input-output model or a computable general equilibrium (CGE) model (which is generally applied to national and global economies). CGE models are an expensive tool that is not required for this project. They are particularly relevant in circumstances where the new project or policy being tested would result in such a shock or structural change to the economy that it would result in significant price changes to other economic sectors. This might occur when one is introducing a new major sector to the economy (such as uranium mining) or where one is testing a Free Trade Agreement that is likely to change the overall economic structure of the economy. It is most often used to test policy changes at the national level and is rarely used to model impacts from single projects of the scale proposed. In contrast, the proposed Lindeman Island redevelopment represents an expansion of an existing and large economic sector (tourism) in a part of Queensland where tourism is already a dominant sector. Its impacts are expected to represent a marginal change to the existing economy where a CGE model offers no particular benefits. Input-output tables have been widely used by many countries over the past several decades to describe the production and consumption interdependencies of economies at the regional, national and global levels. A number of input-output multipliers can be derived from these tables, including output multipliers, income multipliers, value-added multipliers and employment multipliers.

The use of input-output multipliers to new projects or policies implicitly assumes that they can be applied to marginal changes to the economy. However, the underlying input-output tables implicitly reflect the average relationships that exist between outputs, inputs, income and employment rather than marginal relationships. Therefore, application of input-output multipliers to reflect marginal changes to the economy requires the following simplified assumptions:

(a) There is a fixed input structure in each industry, described by fixed technological coefficients;

(b) All products of an industry are identical or are made in fixed proportions to each other;

(c) Each industry exhibits constant returns to scale in production;

(d) There is unlimited labour and capital available at fixed prices – so that any change in the demand for productive factors will not induce any change in their cost (also referred to as ignoring the opportunity cost of applying additional labour and capital). It is relevant to note that unemployment rates have recently risen to highs of 7.4% in the Mackay Region and 10.0% in the Whitsunday Local Area, which supports the application of an unlimited labour market assumption for this project. It is also relevant to note that interest rates are very low at present, with the proponent able to source foreign funds, which also supports the application of an unlimited capital at fixed prices assumption; and

(e) There are no other constraints, such as the actions of government and budget constraints, on the response of each industry to a stimulus.

These simplifying assumptions are more likely to be violated in circumstances where the significance of the proposed new project or policy is large with respect to the economy being evaluated, which is more likely to be experienced with large projects/policies and/or small regions. It should also be recognised that failure of each of these simplifying assumptions to hold true is likely to result in an overstatement of economic impacts rather than an understatement. Value-added and employment multipliers are preferred and have been used to describe the economic and employment effects of the new project/policy, respectively. The smaller value-added multiplier has been used in preference to the more widely used output multiplier as it avoids double-counting revenues between businesses and it contributes directly to Gross Regional, State and Domestic Products (which are widely accepted measures of economic performance). Value-added multipliers ignore the costs of inputs purchased in the production process, which are outputs to other production processes (and which would result in double-counting).

Input-output multipliers have been sourced from the Australian Bureau of Statistics' Australian National Accounts and from the Queensland Government's Statistician's Office. Type 2 multipliers are preferred as the most relevant in this instance (including the changes in consumption by the household sector in response to income changes resulting from the change in output) due to the high unemployment rates that are in existence in the Local Areas at present. That is, it is expected that this project has the potential to increase employment in the Local Areas and therefore the quantum of household consumption. Data derived from Type 1 multipliers has also been presented in brackets for those readers who prefer to utilise Type 1 over Type 2 multipliers.

All dollar values are expressed in current 2015 dollar values and therefore do not reflect future movements in dollar values caused by inflation.

Employment numbers have been expressed in full-time equivalent (FTE) terms. FTE is a widely-used comparative measure of employment where an FTE of 1.0 is equivalent to a full-time worker. It allows comparison across different industry sectors, where differing proportions of full-time, part-time and casual workers may exist.

15.7.2 Assumptions

Based upon information supplied by the proponent, the following key assumptions have been made in respect of estimating the economic impacts of the project's construction phase:

(a) Capital investment would total $583 million;

(b) The construction period would involve a period of approximately 3 years (36 months), with construction due to commence mid-2018 and overall project completion in mid-2021. The 5-star Beach Resort is due for completion by mid-2020, the Spa and Eco Resort in mid-2021, with the remaining facilities progressively completed through 2021. The different resorts would open at the same time with the first full year of trading is estimated to be 2022;

(c) The construction workforce on the island is expected to average 300 (FTE) during the construction period;

(d) Construction materials would primarily be sourced from local sources to the extent available. Some items would need to be sourced from Brisbane and internationally (such as glazing);

(e) All of the on-site construction workforce is expected to be accommodated on the island; and

(f) The construction workforce is to be transported to and from the island between work period breaks by ferry from Shute Harbour.

15.7.3 Impacts

Construction of the proposed development would have an overwhelmingly positive impact upon the Whitsunday and Mackay Local Areas and the Mackay Region primarily due to the current weak economy in these Areas and the Mackay Region and the availability of skilled trades' persons within the construction industry. These current weak economic conditions are expected to remain during the proposed construction period, due to a weak outlook for commodity prices, particularly coal.

Construction of the project is expected to contribute $480m ($360m – Type 1) to the Mackay Region's GRP. Over the three and a half year construction period, this represents an average increase to the Mackay Region's GRP of 0.7% (0.5% - Type 1).

Construction of the project is expected to contribute $620m ($430m – Type 1) to the state's GSP. Over the three and a half year construction period, this represents an average increase to the state's GSP of 0.06% (0.04% - Type 1).

During the three and a half year construction period, employment on the island is expected to average 300 persons (FTE). The construction stage is expected to generate total employment of 1,750 (1,490 – Type 1) (FTE) person years in the Mackay Region (averaging 490 [420 – Type 1] FTE jobs over the three and a half year construction period). In Queensland, total employment generated is expected to total 2,660 (1,970 – Type 1) FTE person years (averaging 740 [550 – Type 1] FTE jobs over the three and a half year construction period). The estimate of construction jobs over the total construction period is considered to be a more reliable estimate than an annual estimate of construction jobs over specific construction years. Whilst it is proposed that construction will occur over a three year time period, experience with other projects indicates that construction periods can vary over time, depending upon market, financial and other factors.

The expected annual employment generation represents 0.4% (0.3% - Type 1) of the projected 2018 labour market for the Mackay Region and 5.1% (4.3% - Type 1) of the current number of unemployed persons in these areas. Accordingly, unlike the situation experienced during the recent mining boom, the proposed construction project is not likely to place an undue strain on the Mackay Region's labour market and no significant impact upon wage levels in the Mackay Region is expected to result due to the significant spare capacity that exists within the Mackay Region's labour market.

The proposed construction project is not expected to have an adverse impact upon the local or regional housing market. With all of the on-site temporary construction workers planned to be housed on the island, demand for mainland accommodation is expected to be derived from a small proportion of workers likely to relocate their families to the Region and from indirect employment resulting from the project. As explained above, the local and regional housing markets are in a weakened state and have sufficient capacity to absorb any resulting demand for housing in the local area and as such a further audit of mainland housing is not proposed.

The proposed construction project is expected to have a positive impact upon the local Whitsunday marine transport operators. These operators have suffered adverse economic impacts during the GFC period due to a contraction of visitor numbers to the Whitsundays and, in particular, the closure of a number of island resorts. The proposed construction project is expected to improve the utilisation of under-performing marine transport assets that are presently in existence at either Shute Harbour or Airlie Beach or both.

The local businesses in the Whitsunday Local Area are likely to also benefit during the three and a half year construction period, with the dollar value of that impact contained within the estimated $480m expected to be injected into the Mackay Region's GRP. These businesses will benefit through the opportunity to provide materials to the construction process, supply goods necessary to support the on-site workers living on the island, provide transport services to the island and provide goods and services to the families of workers who elect to live in the local area.

15.7.4 Proposed Mitigation Measures

The potential major negative impact of the proposed construction project would occur during periods when a tight labour market existed, such as was the case in the Mackay Region during the 2010 to 2013 period. As has been explained above, the mining boom has ceased and there is significant excess capacity within the local labour market, including skilled trades' persons.

In order to minimise any possible negative impacts that may arise during the construction process, it is recommended that:

(a) The proponent monitor the Mackay Region's labour market during the construction process, with negative impacts not likely to occur whilst the unemployment rate remains above 4%; and

(b) The contracted builder be encouraged to employ local labour.

15.8 Impacts of Project Operation

15.8.1 Methodology

This report utilises input-output multipliers to estimate the direct and indirect impacts of the proposed project operation upon the economy. Input-output multipliers have been widely used to provide an estimation of the impact of a particular project or policy upon the surrounding regional, state and/or national economies. The use of published input-output multipliers is a cost-effective tool for providing 'order of magnitude' economic impacts in comparison to the more expensive and time-consuming measures of a targeted survey-based input-output model or a computable general equilibrium (CGE) model (which is generally applied to national and global economies). CGE models are an expensive tool that is not required for this project. They are particularly relevant in circumstances where the new project or policy being tested would result in such a shock or structural change to the economy that it would result in significant price changes to other economic sectors. This might occur when one is introducing a new major sector to the economy (such as uranium mining) or where one is testing a Free Trade Agreement that is likely to change the overall economic structure of the economy. It is most often used to test policy changes at the national level and is rarely used to model impacts from single projects of the scale proposed.

In contrast, the proposed Lindeman Island redevelopment represents an expansion of an existing and large economic sector (tourism) in a part of Queensland where tourism is already a dominant sector. Its impacts are expected to represent a marginal change to the existing economy where a CGE model offers no particular benefits. Input-output tables have been widely used by many countries over the past several decades to describe the production and consumption interdependencies of economies at the regional, national and global levels. A number of input-output multipliers can be derived from these tables, including output multipliers, income multipliers, value-added multipliers and employment multipliers. The use of input-output multipliers to new projects or policies implicitly assumes that they can be applied to marginal changes to the economy. However, the underlying input-output tables implicitly reflect the average relationships that exist between outputs, inputs, income and employment rather than marginal relationships. Therefore, application of input-output multipliers to reflect marginal changes to the economy requires the following simplified assumptions:

(a) There is a fixed input structure in each industry, described by fixed technological coefficients;

(b) All products of an industry are identical or are made in fixed proportions to each other;

(c) Each industry exhibits constant returns to scale in production;

(d) There is an unlimited labour and capital available at fixed prices – so that any change in the demand for productive factors will not induce any change in their cost (also referred to as ignoring the opportunity cost of applying additional labour and capital). It is relevant to note that unemployment rates have recently risen to highs of 7.4% in the Mackay Region and 10.0% in the Whitsunday Local Area, which supports the application of an unlimited labour market assumption for this project. It is also relevant to note that interest rates are very low at present, with the proponent able to source foreign funds, which also supports the application of an unlimited capital at fixed prices assumption; and

(e) There are no other constraints, such as the actions of government and budget constraints, on the response of each industry to a stimulus.

These simplifying assumptions are more likely to be violated in circumstances where the significance of the proposed new project or policy is large with respect to the economy being evaluated, which is more likely to be experienced with large projects/policies and/or small regions. It should also be recognised that failure of each of these simplifying assumptions to hold true is likely to result in an overstatement of economic impacts rather than an understatement.

An over-arching assumption that is typically overlooked in these types of impact analyses is the degree to which the tourism market attracted to the refurbished and expanded Lindeman Island resort represents a market that would not have otherwise been attracted to the Mackay Region or Queensland. Most analyses implicitly assume that 100% of the market attracted to the new facility would not have otherwise been accommodated elsewhere in the Mackay Region or Queensland, resulting in an overstatement of economic impacts. Due to the existence of identified competitors to the proposed refurbished and expanded resort, this report addresses this important issue in the next section dealing with assumptions. Value-added and employment multipliers are preferred and have been used to describe the economic and employment effects of the new project/policy, respectively. The smaller value-added multiplier has been used in preference to the more widely used output multiplier as it avoids double-counting revenues between businesses and it contributes directly to Gross Regional, State and Domestic Products (which are widely accepted measures of economic performance). Value-added multipliers ignore the costs of inputs purchased in the production process, which are outputs to other production processes (and which would result in double-counting).

Input-output multipliers have been sourced from the Australian Bureau of Statistics' Australian National Accounts and from the Queensland Government's Statistician's Office. Type 2 multipliers are preferred as the most relevant in this instance (including the changes in consumption by the household sector in response to income changes resulting from the change in output) due to the high unemployment rates that are in existence in the Local Areas at present. That is, it is expected that this project has the potential to increase employment in the Local Areas and therefore the quantum of household consumption. Data derived from Type 1 multipliers has also been presented in brackets for those readers who prefer to utilise Type 1 over Type 2 multipliers.

All dollar values are expressed in current 2015 dollar values and therefore do not reflect future movements in dollar values caused by inflation.

Employment numbers have been expressed in full-time equivalent (FTE) terms. FTE is a widely-used comparative measure of employment where an FTE of 1.0 is equivalent to a full-time worker. It allows comparison across different industry sectors, where differing proportions of full-time, part-time and casual workers may exist.

15.8.2 Assumptions

As identified above, a key assumption underpinning the operational impacts of the proposed tourism development concerns the extent to which the tourist market attracted to the facility represents tourists who would not otherwise have travelled to the Whitsundays or Queensland. There is conflicting evidence surrounding this assumption.

The following evidence supports the contention that all tourists would not have otherwise have travelled to the Whitsundays or Queensland:

(a) The proponent claims that it will target new tourist demand, particularly those tourists that might have been to the Whitsundays previously, but who are seeking a new experience;

(b) During the GFC (and with a rising Australian dollar) there was evidence that the contraction of the Whitsunday tourism market occurred at a time when overseas visitation by Australians increased significantly. Destinations such as Hawaii and Fiji replaced the Whitsundays for some Australian tourists;

(c) International tourism is the fastest growing tourism market in Australia, although is expected to represent only 10%-20% of Lindeman Island Resort's future market;

(d) The state government is seeking to double tourism expenditure in the state by 2020, which requires a significant increase in accommodation capacity and visitor numbers in order to achieve this goal; and

(e) Destination Plans prepared by the local tourism authorities also project significant increases in visitor expenditure, relying upon a significant increase in accommodation capacity to generate increases in visitor numbers.

The following evidence supports the contention that a proportion of tourists travelling to Lindeman Island would have visited elsewhere in the Whitsundays or Queensland if the proposed resort project does not proceed:

(a) The proponent's expectation that the domestic Australian domestic tourist market will comprise the majority of future patronage (80%-90%). This market is likely to draw comparisons between different islands when choosing an Australian island resort;

(b) The falling Australian dollar (and expectations that it will fall further) indicates that overseas resort destinations will become less competitive, with some Australian tourists likely to refocus their interest back to Australian resort destinations. This may result in fewer tourists choosing directly between Lindeman Island Resort and an overseas destination; and

(c) There are a number of Queensland island resorts that are considered to be competitive with the standard proposed at Lindeman Island Resort including resorts at Hayman, Hamilton (qualia), Lizard, Bedarra and Orpheus Islands.

On balance, it is admitted that there is no objective data upon which to provide a quantitative assumption on this issue. Accordingly, it is proposed to assess the economic impacts of the operation of the proposed resort on two bases: gross and net. The gross basis assumes that 100% of tourists visiting the proposed resort would not have otherwise visited other resorts in the Whitsundays or Queensland. The net basis assumes that 30% of tourists visiting the proposed resort would have stayed at another island resort in the Mackay Region and that 35% of tourists visiting the proposed resort would have stayed at another island resort within Queensland.

Based upon information supplied by the proponent, the following key assumptions have been made in respect of estimating the economic impacts of the project's construction phase:

(a) The resort elements would be finished in late 2021, with 2022 expected to be the first full year of trading. Due to the significant ramp-up required in marketing and brand positioning, it is not expected that maximum sustainable occupancies would be achieved until 2023;

(b) A single international hotel operator will operate all components of the Lindeman Island Resort, which would contribute to its future performance levels;

(c) The proponent expects the Resort to achieve an occupancy rate of 70% upon maturity. After reviewing the performance levels of other upmarket resorts and there being evidence of the wet season adversely affecting the seasonality of tourism accommodation in central and north Queensland, this report adopts an annual occupancy rate of 65% upon maturity;

(d) In keeping with the intended standard of the Resort, advertised overnight prices are expected to average (in current 2015 dollars) $500 for the 5-star Beach Resort, $700 for the 5-star Eco Resort and $1,000 for the 6-star Spa Resort and Tourist Villas;

(e) The operational workforce on the island is expected to average 300 (FTE), all of which are intended to be accommodated on the island to ensure the provision of a full range of services to guests for extended hours each day; and

(f) Guests would primarily arrive on the island by ferry from Hamilton Island, Shute Harbour and Airlie Beach (en route from the Hamilton and Whitsunday Coast [Proserpine] Airports). A small number may arrive by air charter on the island's airstrip, most likely to have transferred from the Mackay Airport.

15.8.3 Impacts

The operation of the proposed upmarket Lindeman Island Resort is expected to create positive economic impacts within the Region in terms of lifting the tourism profile of the Region, contributing to the Region achieving its tourism targets, enhancing the economic activity and creating employment in an area currently suffering from high unemployment levels. Operation of the proposed Lindeman Island Resort would add $140m ($110m – Type 1) to the annual GRP of the Mackay Region in gross terms and $100m ($80m – Type 1) in net terms. Respectively, this represents 0.7% (0.5% - Type 1) and 0.5% (0.4% - Type 1) of the Region's GRP.

Operation of the proposed Lindeman Island Resort would add $195m ($130m – Type 1) to the state's annual GSP in gross terms and $125m ($85m – Type 1) in net terms. Respectively, this represents 0.06% (0.04% - Type 1) and 0.04% (0.03% - Type 1) of the state's GSP.

During operations, employment on the island is expected to average 300 FTE persons. The operational stage is expected to generate total employment of 800 (650 – Type 1) (FTE) persons in the Mackay Region in gross terms and 560 (460 - Type 1) FTE persons in net terms. In Queensland, total employment generated is expected to total 1,050 (750 - Type 1) FTE persons in gross terms and 680 (490 - Type 1) FTE persons in net terms.

The expected operational employment generation represents 0.5% (0.4% - Type 1) of the projected 2023 labour market for the Mackay Region in gross terms and 0.4% (0.3% - Type 1) in net terms. It also represents 8.3% (6.8% - Type 1) of the current number of unemployed persons in these areas in gross terms and 5.8% (4.8% - Type 1) in net terms. Accordingly, unlike the situation experienced during the recent mining boom, operation of the proposed resort is not likely to place an undue strain on the Mackay Region's labour market and no significant impact upon wage levels in the Mackay Region is expected to result due to the significant spare capacity that exists within the Mackay Region's labour market. Traditionally, the Whitsundays tourist facilities have been largely staffed by the itinerant backpacker market that visits the state's tourism hotspots during peak tourist periods. During the recent GFC-induced downturn in tourism, lower levels of backpackers have been attracted to the Whitsundays (and other tourist destinations) due to the lower levels of work opportunities. Accordingly, the proposed Resort is likely to stimulate this backpacker segment of the tourism market.

Operation of the proposed resort is not expected to have an adverse impact upon the local or regional housing market. With all of the operational staff planned to be housed on the island, demand for mainland accommodation is expected to be derived from a small proportion of workers likely to relocate their families to the Region and from indirect employment resulting from the project. As explained above, the local and regional housing markets are in a weakened state and have sufficient capacity to absorb any resulting demand for housing in the local area.

Operation of the proposed resort is expected to have a positive impact upon the local Whitsunday marine transport operators. These operators have suffered adverse economic impacts during the GFC period due to a contraction of visitor numbers to the Whitsundays and, in particular, the closure of a number of island resorts. The proposed Resort is expected to improve the utilisation of under-performing marine transport assets that are presently in existence at either Shute Harbour or Airlie Beach or both.

The local businesses in the Whitsunday Local Area are likely to also benefit during the operation of the proposed resort, with the dollar value of that impact contained within the estimated $140m ($110m – Type 1) (gross) and $100m ($80m – Type 1) (net) expected to be injected into the Mackay Region's GRP. These businesses will benefit through the opportunity to provide goods and services to the operation of the resort, supply goods necessary to support the workers living on the island, provide transport services to the island and provide goods and services to the families of workers who elect to live in the local area.

15.8.4 Proposed Mitigation Measures

The potential risk of the operational aspect of this project is that the actual economic benefits fall short of that estimated due to the resort falling short of its target to attract new markets to the Whitsundays and Queensland (i.e. attracting some visitors who would otherwise have visited other Queensland resorts). However, it is important to note that such an occurrence would simply reduce the positive economic benefits of the project rather than result in negative economic impacts.

Mitigation measures to reduce the potential of this occurrence include:

(a) The proponent obtaining the services of an international hotel operator of high international standing to operate the resort;

(b) The proponent maintaining a high standard of construction and finishes, as well as a regular refurbishment program;

(c) The proponent committing to a significant initial and ongoing marketing campaign to establish and maintain new markets to the Whitsundays;

(d) Competitive operators (such as Qualia and One&Only) maintaining their marketing and refurbishment programs to ensure that they strive to maintain their share of the market; and

(e) Marketing programs are supported by the local tourism authorities and the State government.

Ultimately, this identified risk is considered to be a naturally occurring business risk and should not be viewed as a weakness of the proposed resort. It is axiomatic that failure to refurbish and extend the closed Lindeman

Island Resort would substantially diminish the Region's chances of attracting new markets and meeting its tourist expenditure targets.

15.9 Net Present Value of Resort

15.9.1 Methodology

As requested by the Terms of Reference, this section presents the significant economic benefits and costs arising from all stages of the project, using a net present value methodology. Although not specifically mandated by the Terms of Reference, this requirement is similar to that of a Cost Benefit Analysis. Two streams of impacts are assessed: the direct project benefits to and costs borne by the proponent; and the indirect project benefits to and costs incurred by the broader community. This approach will identify whether or not the benefits derived by the community from the proposed resort outweigh any community costs associated with the project. The indirect project benefits and costs are also referred to as externalities by economists as they are not usually quantified in a feasibility assessment by a proponent.

By definition, externalities are benefits and costs that affect parties beyond the proponent of the project. Typically, these externalities may include issues such as environmental degradation, noise pollution, public safety, etc. The reports prepared by all of the technical consultants feeding into this Environmental Impact Statement have been reviewed to ensure that all relevant benefits and costs likely to arise from impacts of the proposed resort are included in this analysis. All significant externalities have been noted in this section and, where possible, monetary values have been assigned so that they can be included in the net present value calculations.

Net present value is a key performance measure derived from a Discounted Cash Flow model. This model identifies the cash flows (or equivalents if necessary) arising from a project over a long period of time and applies one or more discount rates to bring those dollar values back to a single point in time, usually the present value. The sum of all of the cash flows in present value terms is referred to as the net present value (NPV). When the NPV is positive, the project can be said to provide a net benefit over costs. When the NPV is negative, the project costs outweigh the benefits and the project should not be proceeded with. In circumstances where only one of several projects can proceed at a single time, the project yielding the largest positive NPV should be preferred. In circumstances where the projects are not mutually exclusive, all projects showing a positive NPV should be selected.

Typically, businesses undertake Discounted Cash Flow analyses to assess the feasibility of projects to those businesses. When this same technique is broadened to include externalities to the broader community, it can be used to assess the impacts of the project on the economic welfare of the broader community and to determine the most economic use of valuable resources.

This analysis estimates real resource costs and benefits and therefore excludes:

(a) Taxes and subsidies, which are considered transfer payments to government;

(b) Depreciation and other amortisations, which are accounting entries;

(c) Inflationary impacts; and

(d) Economic multipliers from an input-output model.

15.9.2 Assumptions

The key assumptions underpinning the Net Present Value analysis are detailed below:

(a) The date at which the Net Present Value is calculated is December 2016;

(b) The analysis has been undertaken over a 20 year time horizon from December 2016;

(c) Terminal values have been assumed for the remaining assets at the end of the 20 year period, applying real yields of 8% for the resort and 5% for the villas owned by external parties;

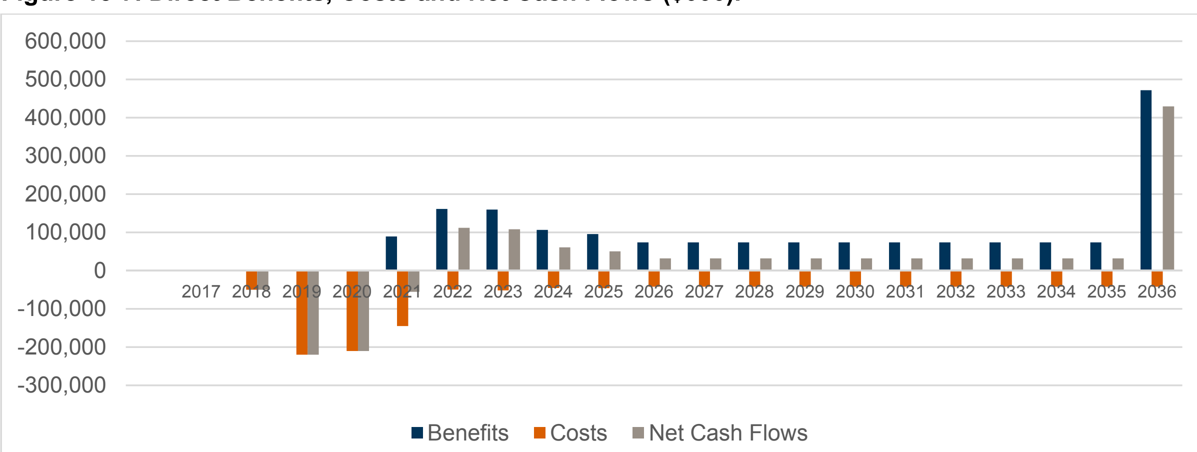
(d) Real discount rates of 5% to 9% have been adopted for the direct cash flows of the resort and real discount rates of 2.5% to 4.5% have been adopted for the indirect cash flows of external parties. These different discount rates reflect the inherent differences between private and social discount rates, with the former placing greater emphasis on short term returns and the latter recognising the relative importance of future generations and also referred to as the Social Time Preference Rate; and

(e) 80% of the villas and 100% of the eco and spa units would be sold to external parties over a four year period, which reduces the capital outlay of the proponent and provides the opportunity for external parties to participate in the operation of the resort.

15.9.3 Direct Project Benefits and Costs

Direct project benefits and costs refers to the benefits derived by and the costs incurred by the proponent in developing and operating the resort. Direct project benefits comprise revenues from resort operations, villa sales to third parties and an assumed terminal value of the resort assets at the end of the 20-year projection period. Direct project costs comprise the construction costs of the resort, the costs associated with the various revenue streams and the fixed overhead costs of the resort (refer to **Figure 15-7**Error! Reference source not found.).

Figure 15-7. Direct Benefits, Costs and Net Cash Flows ($000).



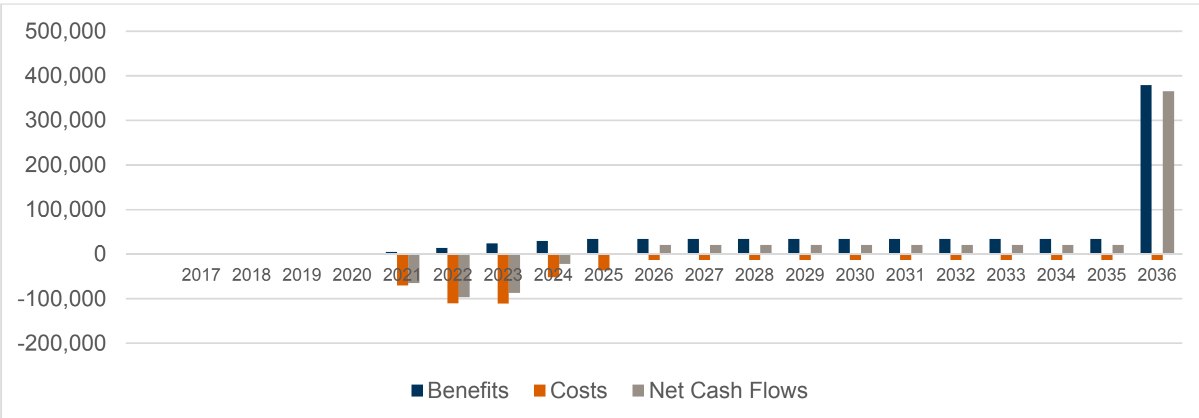
Source: Norling Consulting

The Net Present Values of the direct net cash flows are estimated at $103m (5% discount rate), $55m (6% discount rate) and $15m (7% discount rate). It should be noted that these values are all positive.

15.9.4 Indirect Project Benefits and Costs

The significant indirect project benefits and costs is limited to one issue, the ownership of 80% of the villas and 100% of the eco and spa units by third parties, involving costs of purchasing the villas/units, revenues derived from rental of the villas/units as part of the resort's operations, costs involved in obtaining those revenues and a terminal value of the villas/units at the end of the 20-year projection period. These are illustrated in **Figure 15-8.**

Figure 15-8. Indirect Benefits, Costs and Net Cash Flows ($000).



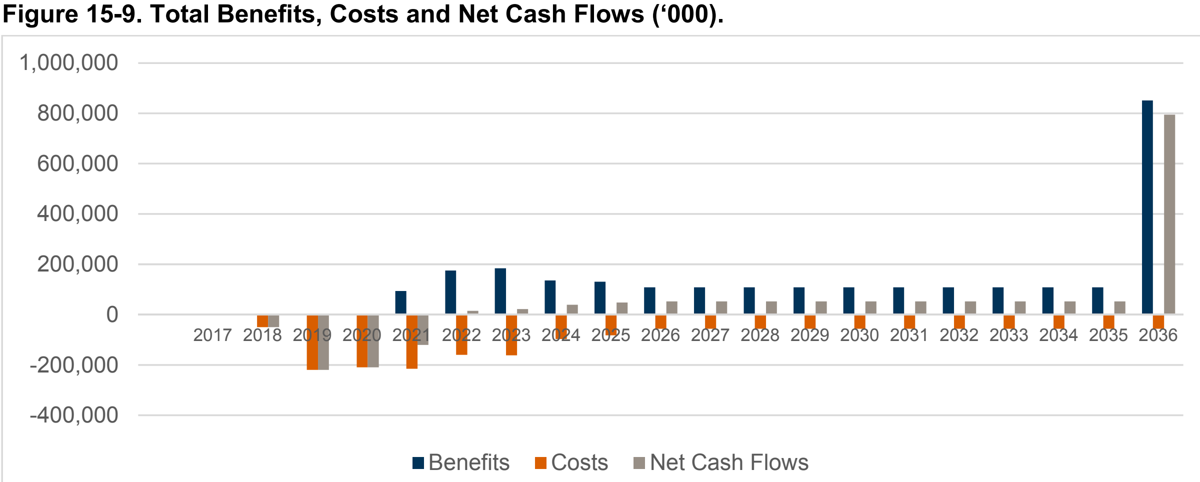
Source: Norling Consulting

The Net Present Values of the indirect net cash flows are estimated at $1334m (2.5% discount rate), $89m (3.5% discount rate) and $54m (4.5% discount rate). It should be noted that these values are all positive.

15.9.5 Total Project Benefits and Costs

The combined direct and indirect benefits and costs of the resort are presented below as the total benefits and costs of the proposed resort (refer to **Figure 15-9**).

Figure 15-9. Total Benefits, Costs and Net Cash Flows ('000).



Source: Norling Consulting

The Net Present Values of the total net cash flows are estimated at $237m (5% private and 2.5% social discount rates), $144m (6% private and 3.5% social discount rates) and $69m (7% private and 4.5% social discount rates). Based upon these findings of large positive Net Present Values, the proposed Lindeman Island resort should proceed.

15.10 Summary

The proposed redevelopment and expansion of the Lindeman Island Resort is expected to provide large positive community benefits. In summary, the key economic benefits of the project include:

(a) Restoring a key tourism accommodation facility to operational status;

(b) Assisting the Region to attain its goal of almost doubling visitor expenditure (as included in the State's DestinationQ Blueprint) through the reopening and expansion of a key tourism facility;

(c) Adding $480m during construction to the Mackay Region's Gross Regional Product over a three and a half year period;

(d) Generating total employment during construction of 1,750 person years (FTE) in the Mackay Region. Due to the expected three and a half year construction period, this translates to an average of 490 persons (FTE) over this period;

(e) Adding $140m (gross) or $100m (net) during operations to the Mackay Region's annual Gross Regional Product, where "gross" assumes that all visitors would not have otherwise stayed elsewhere in the Region and "net" assumes that 30% of visitors would have stayed elsewhere in the Region;

(f) Generating total employment during operations of 800 (gross) and 560 (net) (FTE) persons in the Mackay Region, where "gross" assumes that all visitors would not have otherwise stayed elsewhere in the Region and "net" assumes that 30% of visitors would have stayed elsewhere in the Region;

(g) Generating a Net Present Value to the community of between $69m and $237m, indicating that the project should proceed;

(h) Generating a positive impact upon the local marine transport operators through the need for a significant increase in visitors being transported between Lindeman Island and the mainland; and

(i) Generating a positive lift in backpacker visitors to the Region, as an increase in operational staff stimulates this market, which is an important source of operational labour.

The Region's high unemployment levels at present and expected over the next few years will prevent the resort construction or operational phases from placing undue price pressures on the Region's labour market, which had occurred during the recent mining boom. The high quality of the proposed resort facilities and expected growth of the tourism market will also ensure that it will mostly target a new market for the Whitsundays, thus limiting the extent to which the proposed resort facility would simply take trade from existing Whitsunday tourism operations.