Norling Consulting Pty Ltd
Business & Property Economics

Whitsunday Region Economic Analysis: Economic and Population Study

prepared for Whitsunday Regional Council

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Table of Contents

Tables

Figures

1 Introduction

1.1 Background and Study Objectives

Norling Consulting has been commissioned by the Whitsunday Regional Council to prepare an Economic and Population Study for the Whitsunday Regional Council Local Government Area.

As part of Council's preparation of a single Planning Scheme for the Region, Council seeks to obtain a greater understanding of the economic opportunities and risks that present to Council.

The primary purposes of the Economic and Population Study are to:
(a)   Provide Council with an understanding of the possible economic and population growth scenarios for the Region;
(b)   Identify key strategies and responses for managing the possible scenarios;
(c)   Engage with Council in selecting preferred economic and growth outcomes to feed into its statutory planning tools; and
(d)   Develop a set of population and employment projections based upon the preferred growth scenario to inform key elements of the new Planning Scheme, including the Priority Infrastructure Plan.

The Study objectives are to:
(a)   Provide Council with a sound understanding of the factors likely to influence economic growth of the Region in the short, medium and long terms;
(b)   Identify the key opportunities and risks to economic growth and establish a robust strategy for managing and responding to the various growth scenarios the Region may face;
(c)   Define specific implementation measures to support the preferred economic growth scenario;
(d)   Develop a population and employment model that allows Council to understand the composition of its future community and their needs in terms of housing and infrastructure;
(e)   Develop a population model that provides a sound foundation for understanding how infrastructure can be efficiently planned for the future growth of the Region and to inform the Priority Infrastructure Plan; and
(f)   Identify key initiatives and land use planning recommendations that will enable the new Planning Scheme to support and promote the preferred economic growth outcome.

This Study has been undertaken in two Stages, in order to provide Council with an opportunity to consider and select a preferred growth scenario prior to the development of a more detailed population and employment model.

Stage 1 was referred to as the Economic Analysis and Stage 2 is referred to as the Population and Employment Projections. This Report includes both Stage 1 and Stage 2.

1.2 Methodology

In preparing the Stage 1 Economic Analysis, Norling Consulting has employed the following methodology:

(a) Held an inception meeting with Council staff to agree on Study methodology, timing, background material, reporting, etc. Council staff also agreed upon a set of Council objectives, which later Scenarios would be benchmarked against;

(b) Reviewed all relevant background materials, data and projections, including ABS Census, economic and population data, Government Statistician population projections and tourism statistics;

(c) Developed a current economic profile of the Region;

(d) Reviewed current and future economic drivers of the Region by referencing current information, established economic trends, reasonable expectations of future economic parameters and select targeted communication with government agencies and key industry organisations;

(e) Identified the economic strengths, weaknesses, opportunities and threats of the Region;

(f) Identified potential Council responses to managing the identified strengths, weaknesses, opportunities and threats;

(g) Undertaken consultation with Council staff in order to identify potential economic growth scenarios for testing and future consultation. These include a Base Scenario (no major new economic activity), Tourism Scenario (strong tourism growth), Mining Scenario (strong coal mining expansion near Collinsville), Industrial Scenario (strong industrial growth at Abbot Point State Development Area), Agricultural Scenario (strong growth in agricultural sector), Modest Growth Scenario (modest growth in each industry sector) and High Growth Scenario (strong growth in all industry sectors);

(h) Developed broad population and employment projections for the agreed economic growth scenarios at the Regional level, with identification of how the population and employment growth may be distributed across major urban centres. Comparisons to the low, medium and high population growth scenarios prepared by the Government Statistician should be provided and the implications of proposed amendments to historic populations by the ABS have been taken into account;

(i) Undertaken testing of the scenarios against the agreed Council objectives; and

(j) Conducted a workshop with Council staff (and Councillors) at Bowen to review the assumptions and results of the economic growth scenarios and assist Council in selecting a preferred economic growth scenario.

In preparing the Stage 2 Population and Employment Projections, Norling Consulting has employed the following methodology:

(a) Defined ten small areas within the Whitsunday Regional Council;

(b) Developed population and employment projections for each small area based on both Council's preferred scenario, the Modest Growth Scenario, and an All Potential Growth Scenario; and

(c) Concluded a set of recommendations based on the findings of these projections.

2 Economic Profile

2.1 Overview

The Whitsunday Region is a local government area (LGA) located in North Queensland, approximately 1,000 kilometres north of Brisbane and 600 km south of Cairns. The region comprises the former LGAs of Bowen and Whitsunday Shires, which from March 2008 formed the Whitsunday Regional Council. The coast is a gateway to the 74 islands wonders and to the Great Barrier Reef whilst the mainland contains agriculturally and mining rich areas, including direct access to the northern tip of the coal-rich Bowen Basin. The estimated Gross Regional Product (GRP) for the 2011/12 year was $2.3 billion as shown in TABLE 2.1.

TABLE 2.1 Gross Regional Product, Whitsunday LGA 2011-12

#	Industry	Level ($ million)	% of total
1	Mining	565.3	25.0%
2	Tourism	229.5	10.1%
3	Construction	155.4	6.9%
4	Agriculture, Forestry and Fishing	133.7	5.9%
5	Manufacturing	111.0	4.9%
6	Wholesale Trade	83.9	3.7%
7	Transport, Postal and Warehousing	79.2	3.5%
8	Health Care and Social Assistance	78.0	3.4%
9	Professional, Scientific and Technical Services	59.9	2.6%
10	Public Administration and Safety	58.0	2.6%
11	Education and Training	58.0	2.6%
12	Accommodation and Food Services	56.3	2.5%
13	Financial and Insurance Services	55.5	2.5%
14	Retail Trade	54.0	2.4%
15	Administrative and Support Services	42.6	1.9%
16	Electricity, Gas, Water and Waste Services	28.4	1.3%
17	Non Classifiable Industry	22.8	1.0%
18	Rental, Hiring and Real Estate Services	22.1	1.0%
19	Information Media and Telecommunications	18.2	0.8%
20	Other Services	15.2	0.7%
21	Arts and Recreation Services	2.9	0.1%
	Total Industry Value Added	**1,929.7**	**85.2%**
	Ownership of dwellings	194.2	8.6%
	GRP at Factor Cost / Total Factor Income	**2,123.9**	**93.8%**
	Taxes less subsidies on production and imports	141.8	6.3%
	Statistical Discrepancy	-1.70	-0.1
	Gross Regional Product	**2,264.0**	**100.0%**

Source: Lawrence Consulting, ABS Key National Accounts Aggregates, Norling Consulting's Estimates, Tourism Research Australia

GRP is considered to be the most appropriate measure of the Region's economic performance. The Whitsunday Region generated approximately 0.7% of Queensland's Gross State Product in 2011/12. The major industries in the Region, in order of importance, were mining, tourism, construction, agriculture and manufacturing. It is recognised that the construction sector included elements of mining, tourism and lifestyle population growth.

The Global Financial Crisis (GFC) has particularly hit the Whitsunday Region in recent years, primarily through the significant strengthening of the Australian dollar and the restriction on finance, adversely affecting the investment market and household expenditure. These have led to falls in tourism numbers, forced sales of tourism assets and reduced returns from export products such as coal and sugar.

2.2 Population

TABLE 2.2 below sets out the historic and current population for the Region between 1991 and 2013. Historic estimates are based upon data from the Australian Bureau of Statistics (ABS) Household Censuses which are conducted every five years.

The 2013 figure in TABLE 2.2 is based on the 2011 (actual) ERP published by the ABS and subsequent building approvals published by the ABS for the Whitsunday Region. It is noted that on 30 August 2013, the ABS released a revised 2012 ERP estimate of 33,324 persons, representing a significant 2.8% growth from 2011. However, this substantial growth is not supported by the building approval estimate for the 2011-2012 period (75 total dwellings) or by our research and discussions with local representatives. Building approvals pick up in the 2012-2013 period (194 total dwellings) which is incorporated in the 2013 estimate below.

TABLE 2.2: Whitsunday Region Historical Population

	1991	1996	2001	2006	2011	2013	% p.a. 1991-2013
ERP	24,921	26,851	27,396	30,255	32,416	33,080	1.3
Households	9,585	10,530	11,090	12,400	13,395	13,700	1.6
Persons per Household	2.60	2.55	2.47	2.44	2.42	2.42	n/a

Source: ABS and Norling Consulting's estimates

In April 2013, the ABS announced that it had rebased its population estimates in the 2011 Census results, after introducing a new method for processing the Census Post Enumeration Survey (PES) which resulted in an improved, and lower, measure of net undercount than would have been derived had the same methodology been used in processing the 2006 PES. As a result, the new method led to an intercensal error for 2006-11 of 294,000. Due to the relatively high error, the ABS proposed adjusting historical ERPs over the last 20 years of population estimates back to 1991. The ERP figures in the above TABLE 2.2 have been adjusted downward to reflect this intercensal error, based on new estimates released by the ABS on 30 August 2013. FIGURE 2.1 overleaf illustrates the likely effect of the adjustment in the ERP for the Whitsunday Region.

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FIGURE 2.1 Original and adjusted ERPs: 1991-2011
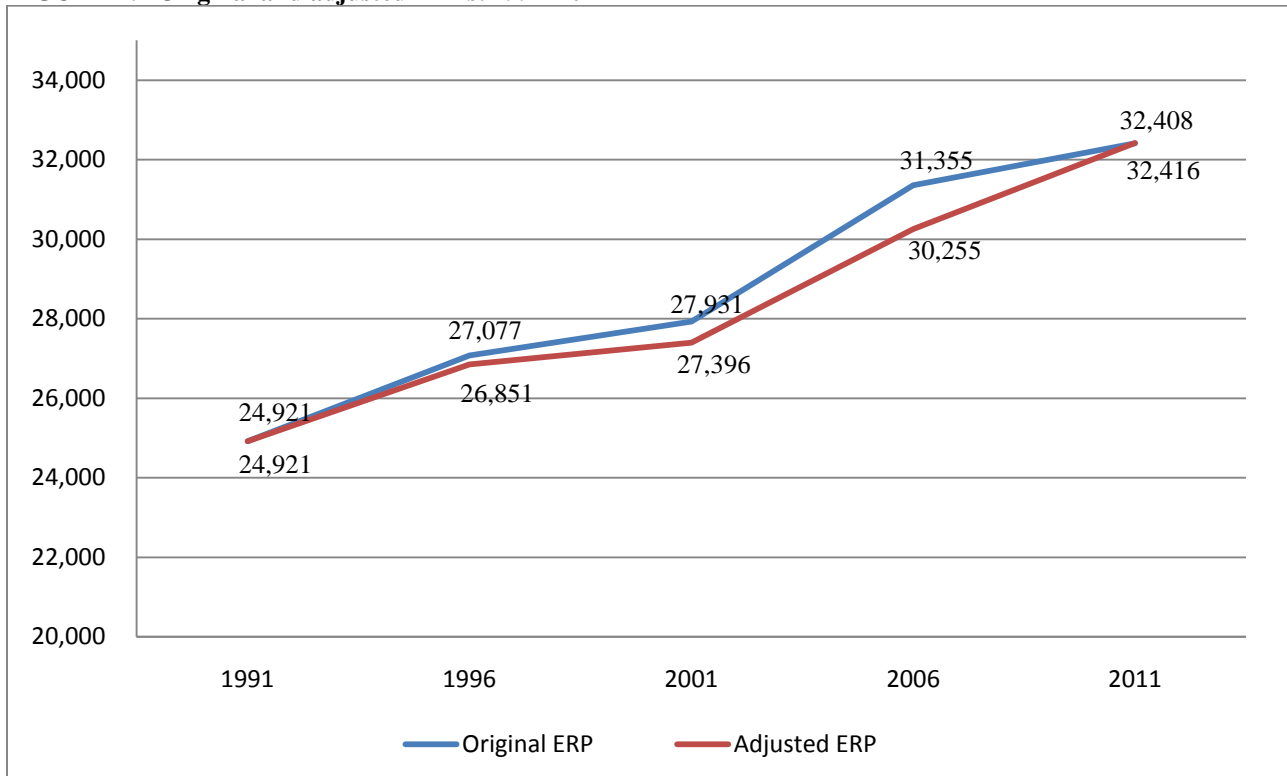
Source: ABS and Norling Consulting's calculations based on the rebased Queensland figures

As illustrated in TABLE 2.2, the Whitsunday Region has experienced steady population growth between 1991 and 2013, with 1.3% annual growth being significantly below the state average of 2.1% over the same period.

Population growth in the Region has been quite varied during this 22 year period. Strong growth occurred in the 2001 to 2006 period (2.0% per annum), modest growth in the 1991 to 1996 period (1.5% per annum) and 2006 to 2013 period (1.3%) per annum) and very low growth in the 1996 to 2001 period (0.4% per annum). This indicates that the Region's population growth is significantly affected by the performance of a handful of industry sectors and the vagaries of a range of external macroeconomic factors.

Future population growth is examined in greater detail in Chapter 5.

2.3 Employment Profile

Analysis of the ABS Household and Population Census data has revealed the following residential workforce information for the Whitsunday Region since 2001. The following TABLE 2.3 provides an historic breakdown of the number of Whitsunday residents who were employed at the time of the 2001, 2006 and 2011 Censuses.

TABLE 2.3: Resident Worker Growth Whitsunday Region 2001 to 2011

	2001	p.a. growth	2006	p.a. growth	2011
Whitsunday	13,890	4.2%	17,030	1.1%	17,970

Source: 2001, 2006 and 2011 ABS Household and Population Censuses, based on place of usual residence

As illustrated above, the number of resident workers within the Whitsunday Region has increased significantly during the 2001 and 2006 period, whereas little growth has been achieved during the 2006 to 2011 period, coinciding with the GFC.

Labour force participation rates have demonstrated healthy levels over this period, increasing from 79% in 1996 to 83% in 2006 and to 84% in 2011. Unemployment rates within the Whitsunday Region improved significantly between 2001 and 2006, in-line with downward trends experienced across the State and Australia over this period, decreasing from 6.7% in 2001 to 3.7% in 2006. Following the GFC and its ramifications, the unemployment rate increased to 4.7% in 2011, which was below the State and Australian averages at that date.

An estimated 15,930 jobs were provided within the Whitsunday Region in 2011. The following TABLE 2.4 illustrates the historical workforce between 2001 and 2011 based on the results of the ABS Household and Population Censuses.

TABLE 2.4: Jobs within Whitsunday Region 2001 to 2011

	2001	p.a. growth	2006	p.a. growth	2011
Whitsunday	13,590	4.4%	16,840	-1.1%	15,930

Source: 2001, 2006 and 2011 ABS Household and Population Censuses

Similar to resident workers, jobs growth was stronger in the period between 2001 and 2006, driven by a combination of strong demand from increased labour force participation and declining unemployment, as well as strong growth within the wider economy recorded over this period. Since 2006, and particularly following late 2008/09, the slowing economy has impacted negatively upon the provision of jobs.

A comparison of TABLES 2.3 and 2.4 reveals the net jobs balance for the Region, which measures the proportion of jobs supplied in the Region to the number of workers residing in the Region. A net jobs balance of less than 100% means that fewer jobs are supplied than there are workers residing in the Region – implying a net export of workers to jobs located outside the Region. The net jobs balance for the Region is estimated below:

Year	Jobs Balance
2001	97.8%
2006	98.9%
2011	88.6%

This shows a trend within the Region of increasingly providing fewer jobs than required to support the number of resident workers. Whilst this could be viewed as a disturbing trend, especially reflecting the decline in tourism jobs, it is also influenced by a positive aspect. There is evidence of a number of Bowen Basin workers choosing to live in the Region, but remain working in other parts of the Bowen Basin on a DIDO basis. This benefits the Region through expenditure in the Region of high incomes earned elsewhere.

While the net jobs balance indicates that overall there are more resident workers than there are jobs provided within the Region, the Whitsunday Region hosts a number of non-resident workers. These are the workers who live in the area temporarily while rostered on but have their usual place of residence elsewhere. The following TABLE 2.5 highlights these estimates (reflecting temporary residents of Collinsville and Bowen, with the 2011 figure also including Merinda):

TABLE 2.5 Non-resident workers on-shift*

LGA	2006	2010	2011	2006-2011
Whitsunday (R) (Bowen only)	220	480	720	+500

*due to shift arrangements, not all members of the non-resident workforce are present in the local area at one time. The figures therefore reflect the average number of non-resident workers on-shift, rather than total non-resident workforce numbers.
Source: Queensland Treasury and Trade Office of Economic and Statistical Research

Queensland Treasury and Trade estimated that there were a total of 735 non-resident workers at Collinsville, Bowen and Merinda in 2012 (the latest date for which estimates have been released). It is expected that this figure has fallen significantly as at 2013 due to the contraction of the coal industry during this period.

Journey to Work data shows how many residents work locally and how many commute out of the area and where they commute. In 2011, at the time of the Census, 1,120, or 7.2% of working residents travelled outside of the Whitsunday Region to work. There are however, nearly 2,000 residents who have stated their work location as unknown (or more specifically, the ABS categories 'State/Territory undefined' [865], 'No Fixed Address' [616] and 'Not Stated' [445]). Such a high number of persons in these categories are unusual and could include workers at mines who may be unsure of the exact location.

The following FIGURE 2.2 illustrates how the industries of the Whitsunday Region workforce have trended since 2001.

FIGURE 2.2: Industry of the Resident Workforce, Whitsunday (R)- 2001, 2006 and 2011

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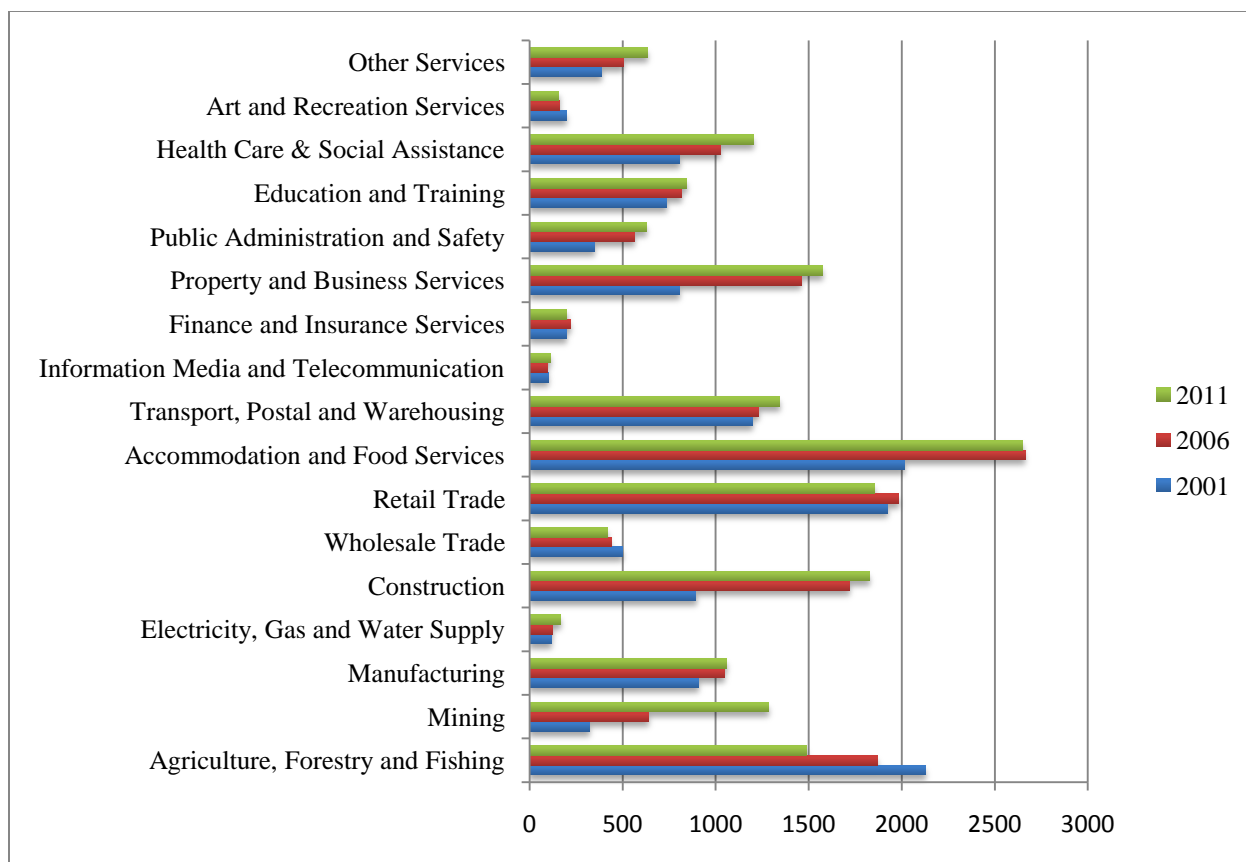
Source: 2001, 2006 and 2011 ABS Household and Population Censuses

The above is also documented below in more detail:

TABLE 2.6: Industry of the Resident Workforce, Whitsunday (R) - 2001, 2006 and 2011

	2001	2006	2011	Difference between 2001 - 2011
Agriculture, Forestry and Fishing	2,129	1,867	1,490	-639
Mining	322	637	1,285	+963
Manufacturing	910	1,048	1,059	+149
Electricity, Gas and Water Supply	116	122	166	+50
Construction	894	1,719	1,825	+930
Wholesale Trade	500	438	417	-83
Retail Trade	1,923	1,985	1,856	-67
Accommodation and Food Services	2,017	2,663	2,651	+634
Transport, Postal and Warehousing	1,196	1,232	1,342	+147
Information Media and Telecommunication	103	99	110	+8
Finance and Insurance Services	198	219	201	+3
Property and Business Services^	804	1,459	1,576	+772
Public Administration and Safety	351	564	628	+277
Education and Training	737	815	844	+107
Health Care & Social Assistance	806	1,025	1205	+399

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Art and Recreation Services		197	161	158	-38
Other Services		388	506	631	+243
Inadequately described/Not stated		302	470	526	+224
TOTAL		13,890	17,029	17,971	+4,080

Source: 2001, 2006 and 2011 ABS Household and Population Censuses
^includes rental hiring and real estate services, professional, scientific and technical services and administration and support services

In contrast to the GRP data, the most important industries in terms of employment in the Region are tourism (which encompasses more industry sectors than accommodation and food services), retail, construction, agriculture, mining and health.

As shown above, the major increases have occurred within the mining (963 persons); construction (increase of 930 persons); Property and Business Services (increase of 772 persons); and accommodation and food services (increase of 634 persons) sectors.

The majority of decreases have occurred within the agriculture, forestry and fishing industry, with 639 fewer jobs in 2011 than in 2001, which is consistent with the industry's technological shifts that are reducing reliance on manual labour as well as the higher wages on offer in the mining sector attracting workers from the agriculture sector. The wholesale and retail trade industries also reduced their employment bases by 83 and 67 jobs, respectively, as a reflection of increased competition from Mackay centres, online shopping and the strong buying power of the Australian dollar overseas.

2.4 Regional Profile

TABLE 2.7 below shows the proportion of the resident workforce employed by industry within the key urban areas of Proserpine, Airlie Beach/Cannonvale/Shute Harbour/Jubilee Pocket, Bowen and Collinsville as well as the balances of the former Whitsunday Shire and the former Bowen Shire. The most dominant industries of employment within each area are highlighted.

TABLE 2.7: Industry of the Resident Workforce, 2011

	Proserpine	Cannonvale/ Airlie Beach/ Shute Harbour/ Jubilee Pocket Urban Area	Balance Whitsundays	Bowen Urban Area	Collinsville	Balance Bowen Shire
Agriculture, Forestry and Fishing	4.0%	0.8%	7.3%	12.7%	0.4%	36.8%
Mining	5.4%	6.1%	5.1%	5.4%	34.2%	7.7%
Manufacturing	10.4%	4.6%	7.1%	5.4%	1.6%	6.2%
Electricity, Gas and Water Supply	1.0%	0.3%	0.6%	1.1%	4.6%	0.6%
Construction	9.9%	11.7%	9.5%	9.8%	6.8%	9.6%
Wholesale Trade	2.8%	2.1%	1.8%	2.9%	0.4%	3.1%
Retail Trade	13.7%	11.8%	8.9%	10.3%	7.8%	6.1%
Accommodation and Food Services	7.9%	17.9%	24.7%	9.0%	9.6%	3.5%

Transport, Postal and Warehousing	6.0%	9.6%	5.8%	8.3%	6.0%	4.2%
Information Media and Telecommunication	0.6%	0.8%	0.6%	0.6%	0.0%	0.3%
Finance and Insurance Services	1.0%	1.5%	0.9%	1.0%	1.2%	0.3%
Property and Business Services^	7.0%	12.8%	8.5%	7.3%	3.4%	5.0%
Public Administration and Safety	6.3%	3.1%	2.3%	4.5%	2.9%	2.4%
Education and Training	6.9%	4.2%	3.9%	5.4%	7.2%	3.0%
Health Care & Social Assistance	9.0%	5.1%	5.5%	9.1%	7.5%	5.2%
Art and Recreation Services	1.1%	1.5%	0.9%	0.3%	0.5%	0.0%
Other Services	4.1%	3.5%	4.0%	3.4%	2.5%	2.4%
Inadequately described/Not stated	2.7%	2.6%	2.5%	3.5%	3.6%	3.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: 2001, 2006 and 2011 ABS Household and Population Censuses
^includes rental hiring and real estate services, professional, scientific and technical services and administration and support services

The agriculture, forestry and fishing industry is the major industry of employment for the Bowen urban area (12.7%) and the balance of the former Bowen Shire (36.8%). Unsurprisingly, mining is the dominant industry in Collinsville, comprising 34.2% of resident workers.

The accommodation and food services sector is the key employer within the balance of the former Whitsunday Shire (24.7%), as well as the Cannonvale/Airlie Beach/Shute Harbour/Jubilee Pocket urban area (17.9%).
Retail trade and manufacturing (sugar) are the major industry sector of workers living in Proserpine.

2.5 Key Industries

This section provides a brief overview of the key industries in the Whitsunday Region.

Mining

Australia

Australia has benefited from mining booms in the late 1960's and the early 1980's and during the 2000's. The latest boom has been driven by rapid urbanisation and industrialisation of emerging Asian countries, resulting in significant commodity price increases and leading to strong levels of mining exploration and investment. Coal, iron ore and gas have been the major growth sectors in the current boom. The importance of mining in Australia is illustrated through the investment in mineral exploration up until twelve months ago. Mining expansion sustained Australia during the GFC. However, recent price falls have led to cost-cutting measures being taken by miners, including delays to new projects, reduction in exploration, closure of some mines and negotiations with workforces to reduce wage costs and improve productivity.

There are three different types of coal: coking coal, thermal coal and pulverised coal injections which are utilised in different applications. Coking coal is primarily used in steel production and can be classified as soft, semi-soft or hard. Hard coking coal is the highest quality coal and therefore attracts the highest prices in the world market. Thermal coal is a lower grade coal utilised primarily in the production of electricity by power stations.

The mining industry is heavily affected by fluctuating commodity prices, international markets and climate change mitigation efforts, such as carbon pricing. When commodity prices fall or there is a downturn in a major importing economy, the coal industry can be adversely affected. This can lead to sporadic changes in employment, population and the demand for services and facilities in mining-driven regions. Recent falls in coal prices, together with a slowing of China's economic growth, has caused the closure of several coal mines and delayed the commencement of several new mines.

The Bowen Basin contains the largest coal reserve in Australia, with reserves in the region comprising largely of coking coal and supplies around 80% of the coal produced in Queensland, and three quarters of the total value of exports. The Bowen Basin encompasses an area of 60,000 square kilometers, from Collinsville in the north, to Theodore in the south. The Bowen Basin contains the majority of operational coal mines in the State. There were 38 mines operating in the Bowen Basin as at July 2012.

The Galilee Basin is a large reserve of thermal coal located to the west of the Bowen Basin and centred around Alpha. Up to nine large mines have been proposed, of which Alpha Coal Project has received approval.

Queensland

Coal is Queensland's most important commodity, with more than 34 billion tonnes (raw coal) identified, of which 8.7 billion tonnes have been identified as hard coking coal. During 2011-12, Queensland produced 187.6 million tonnes of saleable coal, of which more than 88% (worth A$31 billion) was exported. The Bowen Basin in Central Queensland contains almost all of the state's hard coking coal, making it the most important source of export coal in Queensland. The Callide, Clarence-Moreton, Tarong and Surat Basins are important sources of thermal coal for domestic power generation.

In addition, there is now a focus on exploration for export thermal coal in the Galilee Basin in western Central Queensland, where major thermal coal developments are proposed for the regions south-west and north-west of Alpha, including new railways and expanded port infrastructure at Abbot Point and Dudgeon Point on the Central Queensland coast. Coal from the Bowen Basin is currently exported from five coal terminals located at three ports: Abbot Point north of Bowen, Hay Point near Mackay, and the Port of Gladstone.

Recent flooding events and lower global coal prices have increased production costs and reduced performance. This has particularly affected Central Queensland's mining dependent towns such as Mackay, Collinsville and Moranbah and related regional economies over the past twelve months.

Contributing to over 25% of the Region's GRP, mining has become the principal economic driver in Whitsunday, with direct access to the north of the Bowen Basin. Two coal mines operate in this area, Collinsville Mine and the newer Sonoma Mine, producing up to 7 million tonnes per annum, and exporting to Abbot Point Coal Terminal.

Supported by robust price rises in 2009 and 2011 and despite severe weather events, production of saleable coal in the Collinsville and Sonoma Mines have exhibited relatively stable production levels, as illustrated in FIGURE 2.3.

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FIGURE 2.3 Production of saleable coal, Sonoma and Collinsville Mines (tonnes)
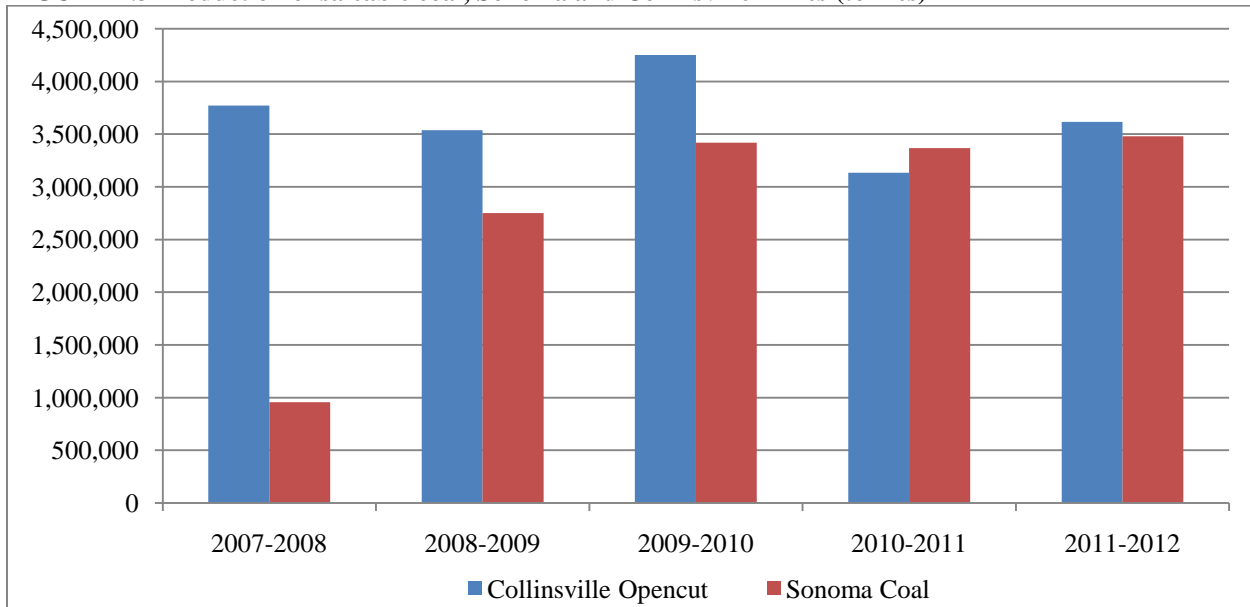
Source: Department of Natural Resources and Mines, Coal Statistics

Future Outlook

While the very long term future of coal mining is uncertain due to pressures relating to climate change, any fundamental change in China's, Japan's or Australia's dependence on coal-based fuels are not expected within the next 15 or 20 years. In spite of stable production, the mining sector is continuing to struggle with increasing operation costs and easing coal prices, forcing mining operators to cut back costs and jobs. For example, at Collinsville Mine, 400 jobs are in the balance with Glencore operator warning that measures to improve productivity and cost cutting are required for the loss-making operations to continue and the union claiming that no changes should be made to the workforce conditions at a long-established mine.

However, there is still optimism for prices of thermal and coking coal to increase. Data from the World Bank's July 2013 Commodity Market Outlook predicts a steady increase for Australian coal prices (per mt), from US$90.0 in 2013 to US$94.9 in 2020 and to $100.0 in 2025. This could indicate that, although in challenging conditions, the industry could experience moderate growth in the long term. However, costs will need to be contained to ensure that a sufficient profit margin is maintained in the long term.

At the same time, a number of mining and mining-related projects in the Region are planned or awaiting approval, summarised in TABLE 2.8, that are likely to create employment directly or indirectly for industries and businesses that provide supporting products and services. The most significant projects for the region are discussed below:

- Jax, Drake and Byerwen Mines, currently awaiting approval, on hold, have the potential to almost triple coal production in the Whitsunday Region and create approximately 1,000 operating jobs.

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- Abbot Point Coal Terminal in Bowen is planned to increase coal export capacity in the Bowen Basin from the existing 50 Mtpa capacity. The proposed three terminals, T0 (extension of T1, combined 70Mtpa), T2 and T3 (50-60 Mtpa each) will add a combined capacity of 170 to 190 Mtpa. Furthermore, the state Government is proposing the AP-X project, an additional terminal that would provide mining operators with access to exports in the long term. The Multi-Cargo Facility concept proposed by the previous government was discontinued on May 2012 on the basis that the AP-X option was more "scalable".

- Activity in the Galilee Basin is expected to increase with proposed projects in the area that include railway to and port infrastructure components in the Abbot Point Coal Terminal, included in TABLE 2.7. If they are constructed, it would have the potential to increase jobs at Abbot Point and allow the Region's workforce to access Galilee Basin jobs on a FIFO or DIDO basis.

- There is a proposal called the Project Iron Boomerang from East West Line Parks Ltd aiming to connect Port Hedland to Abbot Point proposing first stage iron and steel smelting plants at both Port Hedland and Abbot Point. The rail connection would efficiently transport iron ore to the east and coal to the west and result in substantially reduced shipping costs.

TABLE 2.8: Mining and Mining Related Proposed Projects

Bowen Basin	Proponent	Description	Construction Jobs	Operation Jobs	Expected Start	Life of Project (years)	Status
Jax Coal	Qcoal	Coking and Thermal Coal Mine	40	100	2013	21	Progressing mining lease application, bulk sample project on site since 2012
Cows Coal Project	Qcoal	Coking and Thermal Coal Mine	<20	<20	2013	15	Construction will start in early 2013
Drake Coal Project	Qcoal	Coking and Thermal Coal Mine	300	480	2014	30	Public review for EIS closed on June 2012. Awaiting approval.
Byerwen Coal Project	Qcoal	Premium Hard Coking Coal Mine	350	500	2015	50	EIS and submissions being assessed
Alpha Coal Project	Hancock Coal	Mine, 495km railway and port facility at Abbot Point	2,100 (rail only)	190 (rail only)	2013-2016	30	Approved subject to conditions on August 2012
China First Coal Project	Waratah Coal	Mine and 468km railway and port facility at Abbot Point	3500 (mine, rail and port)	2360 (mine, rail and port)	late 2016	30+	Conditional approval given from State Government on August 2013, awaiting Commonwealth approval
North Galilee Basin Rail Project	Adani Mining	300 km railway from Galilee Basin to Abbot Point	3,800	125	2016	90	EIS being prepared by proponent
Goonyella to Abbot Point Rail Project	BHP Billiton	260km railway from Goonyella Riverside Mine to Abbot Point	2,000 (peak)	500	2016	100	EIS being prepared by Proponent
Central Queensland Integrated Rail Project	Aurizon	Proposal to replace multiple mine-specific rail proposals with 200km railway	2,500	800	2015	100+	EIS being prepared by Proponent

Source: Department of State Development, Infrastructure and Planning; Qcoal website

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Tourism

Australia

Australia received 5.7 million international visitors in 2012, representing an increase of 5% from the previous year. International visitation, however, has declined significantly since the GFC affected key inbound markets to Australia, such as Western Europe and the United States. The Tourism Forecasting Committee (TFC) project a modest growth of 2.7% in 2013/14 and a return to around 4% per annum for the remainder of this decade. The strongest growth rates are expected from India, China, Middle East and Indonesia.

Domestic visitation, however, has increased each year since the large downturn experienced from 2006-2007. However, the strong Australian dollar has also contributed to an increase of outbound travel for Australians. The TFC projects annual increases of 1% over the next two years and 0.8% for the remainder of the decade, with the business sector generating the strongest growth rate.

The tourism market is sensitive to global and Australian political and macroeconomic shocks and can therefore be expected to experience variations from these forecasts as they occur.

Queensland

Tourism generated $22 million in visitor expenditure and contributed $17.5 billion to the state economy for the year ending in March 2013. For that period international visitation increased by 5%, whilst domestic visitation only increased for the day trips (8%), reflecting the conservative mindset of domestic travellers. Direct international air access to Queensland is mainly from the Brisbane, Gold Coast and Cairns International airports. The top destination in Queensland is the Great Barrier Reef (GBR), which attracts up to 2 million visitors per year.

The mining boom has represented a double-edged sword for Queensland tourism. On the positive side, higher household incomes have led to stronger demand for leisure and business travel, creating employment and new businesses. On the negative side, stronger commodity prices are correlated with a stronger Australian dollar, which is a competitive disadvantage in attracting international visitors and provides a price advantage for Australians travelling overseas for leisure rather than travelling domestically.

Local events such as the Queensland floods in 2010/2011 have also significantly impacted upon visitor numbers.

The TFC has forecast tourism growth to Queensland at very similar percentages applying to Australia for each of the international and domestic sectors.

<u>Whitsunday</u>

Even accounting for a recent significant decline in tourism visitation and expenditure, Whitsunday Region is still the most tourism dependent regional economy in Queensland, in terms of the contribution of tourism to the GRP. Only after mining, tourism represents the second highest contributor to the GRP, with approximately $228 million per year. The region received almost 1 million overnight visitors and daytrippers for the year ending in July 2012.

Two airports service the area, the Great Barrier Reef Airport (HTI) on Hamilton Island with services from Brisbane, Melbourne and Sydney and the Whitsunday Coast Airport (PPP) in Proserpine with daily services from Brisbane. For the year ending in May 2013, the busiest routes to the area were Brisbane - Proserpine (235,300 passengers), Sydney – Hamilton Island (200,400 passengers) and Brisbane – Hamilton Island (155,500 passengers).

Currently, some 30 cruise ships dock at Airlie Beach per year, carrying 1,800 to 2,400 passengers.

As at March 2013, there were 35 tourism accommodation establishments (hotels, motels and serviced apartments) offering some 10,400 bed spaces, representing a decline from the 51 establishments reported in 2010. The main concentrations of accommodation in the Region comprise:

(a) Middle to upper market islands resorts;
(b) Airlie Beach accommodation dominated by serviced apartments and backpacker accommodation; and
(c) Small scale resorts and caravan parks at Bowen.

Of the estimated 991,000 visitors (including day trips) to the Region for the financial year 2011-12, only 16% were international. The lack of an international airport and international standard destination resorts contributes to this. Brisbane is the key source market for intrastate visitors and New South Wales for interstate visitors, whilst the United Kingdom, Germany and the United States are the main key international markets.

FIGURE 2.4 shows visitation patterns to the Whitsunday region, revealing that domestic visitation declined from the 2006-07 financial year, followed by the international market in 2007-08. Since then, international visitation has continued to decline to its lowest point of the decade, as a result of GFC effects in key international markets and a strong Australian dollar. Conversely, domestic overnight visitation has recently recovered, increasing from 421,000 to 590,000 visitors (almost reaching pre GFC levels) for the 2011-12 year, reflecting the budget conscious mindset of Australians travelling closer to home. The fluctuating "day trip" market, more volatile to economic changes, is recovering at a much slower pace than the domestic overnight market.

FIGURE 2.4: Visitors to Whitsunday (R), 1999-00 to 2011-12
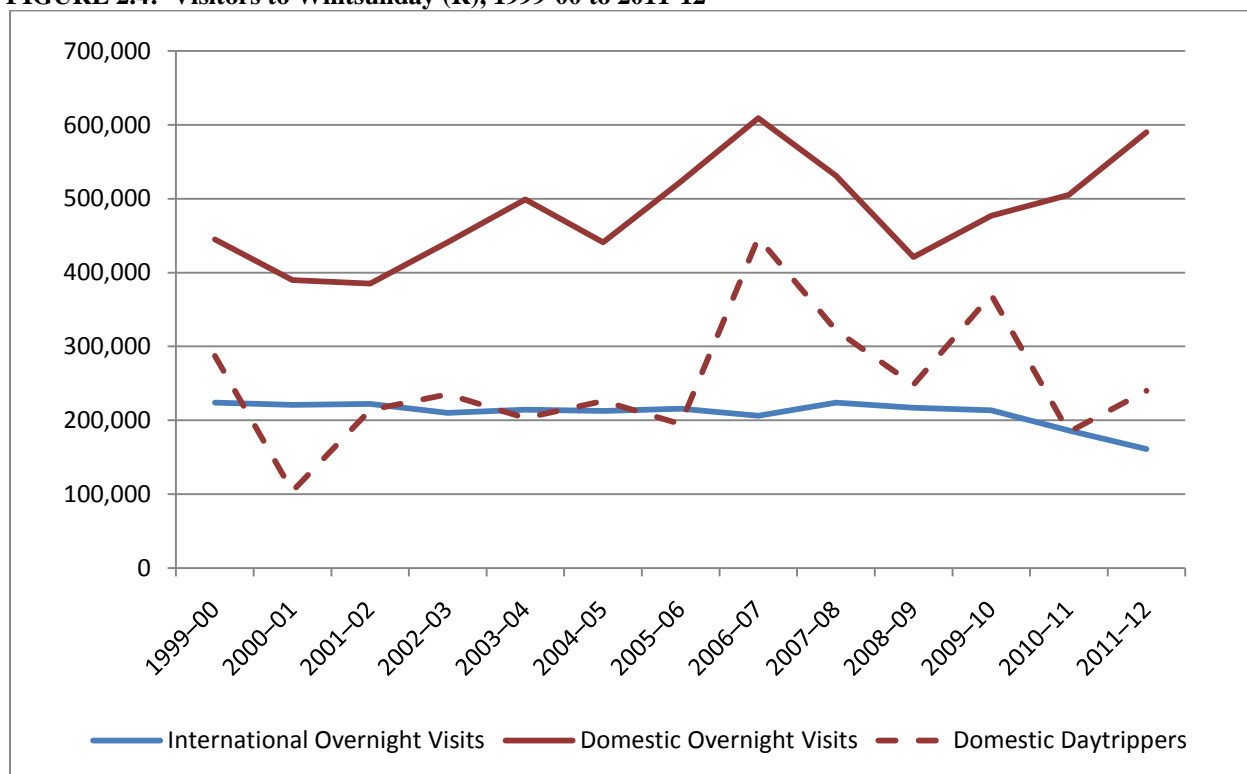
Source: OERS

The Whitsunday Region is known as a "sailing paradise", capitalising upon the protected waterways of its 74 islands. This sector comprises an important part of the Whitsunday experience.

Future Outlook

It is very difficult to project visitor growth in coming years, due to the vagaries of the tourist industry and changes in tourist patterns and fluctuating markets due to unforseen events such as the value of the Australian dollar, weather events and epidemics. However, recent trends suggest that domestic tourism might continue its gradual recovery from the large contraction during the 2008-09 economic downturn, surpassing pre-GFC figures. Investment in other sectors of the economy, particularly mining, could potentially deliver some additional benefits to leisure tourism in this Region.

The Tourism Forecasting Committee (TFC) predicts that domestic visitor nights in Regional Queensland will increase at a modest average annual growth rate of 0.7%, whilst international visitor nights in Regional Queensland will grow by an average growth rate of 3.3%. International visitor nights are expected to represent 43% of the market by 2021-22 (35% as of 2011-12). These predictions rely heavily on the expectation of a falling Australian dollar.

In terms of potential future projects, there is currently a proposal for an integrated marina, resort hotel and residential community development at Shute Harbour. The project site has been subject to investigations for a previously declared significant project that did not proceed. However, supplementary information has been provided by the proponent (Shute Harbour Marina Development Pty Ltd), and the proposal is currently undergoing the EIS project. The $252million project is proposed to include the following:

- 395-berth marina;
- 109-room hotel;
- commercial, retail and dining precinct;
- 52-allotment managed resort accommodation precinct; and
- retirement resort comprising 70 apartments and a communal leisure centre.

It is estimated that the development would provide 107 construction jobs and 245 operational jobs.

Agriculture

Australia

The Australian agriculture sector is a critical element of the Australian economy. The total value of Australia's farms and fisheries food production was $42.6 billion in 2011-12, of which livestock and livestock products, particularly cattle, contributed to almost half (43%) of this value, followed by crops (34%), horticulture (18%) and fisheries (5%). Although the value of farms and fisheries continues to grow annually, increased productivity and capital intensity (such as machinery) in agriculture has seen employment decline over recent years, particularly in the grains industry.

Queensland

Agriculture industries are integral to the Queensland economy, and are the backbone of many rural and regional communities in Queensland. In April 2013, the total farm-gate value of Queensland's primary industry commodities for 2011-12 was $11.5 billion, of which livestock and livestock products comprised the majority (38%) of that value, followed by horticulture (31%), crops (25%), fisheries (4%) and forestry and logging (2%). For 2012-13, Queensland's agriculture commodities have a forecast estimated value of $13.7 billion (gross value of production). Queensland is an important source of tropical products, supplying 94% of Australia's sugar cane, 90% of bananas, 89% of limes, 55% of mangoes and almost all of the country's pineapples and lychees. However, the sector is currently facing a number of major challenges, including the continuing global economic uncertainty, increasing production costs and the adverse effects of natural disasters.

Whitsunday

Horticulture, sugar cane and grazing industries are the main agricultural sectors in the Whitsunday Region. The horticulture industry contributes more than $400 million to the

Australian horticulture sector. Due to its tropical dry climate and fertile soil, Bowen is Australia's most significant winter growing region, supplying the majority of Australia's tomatoes and capsicums. The industry is made up of over 13 major crop varieties which include tomatoes, capsicums, chillies, melons, beans and mangoes. The tomato industry is by far the most significant crop, with the region producing some $122 million in the 2011-12 period, representing half of Queensland's production.

Sugar cane is also a prominent industry in the area, mainly grown and processed around the town of Proserpine. Production at the Proserpine Mill was severely affected by prolonged rainfall in 2010, plummeting production levels and cane content supply (CCS), a measure of recoverable sugar in the cane. However, the 2011 and 2012 seasons have shown signs of recovery with both higher levels of cane crushed and CCS, as shown on FIGURE 2.5. The Mill was recently bought by Sucrogen, the largest raw sugar producer and refiner in Australia, whose intention is to increase production at all its plants, including the Proserpine Mill.

FIGURE 2.5 Cane Crushed and Cane Content Supply at Proserpine Mill 2003-2012
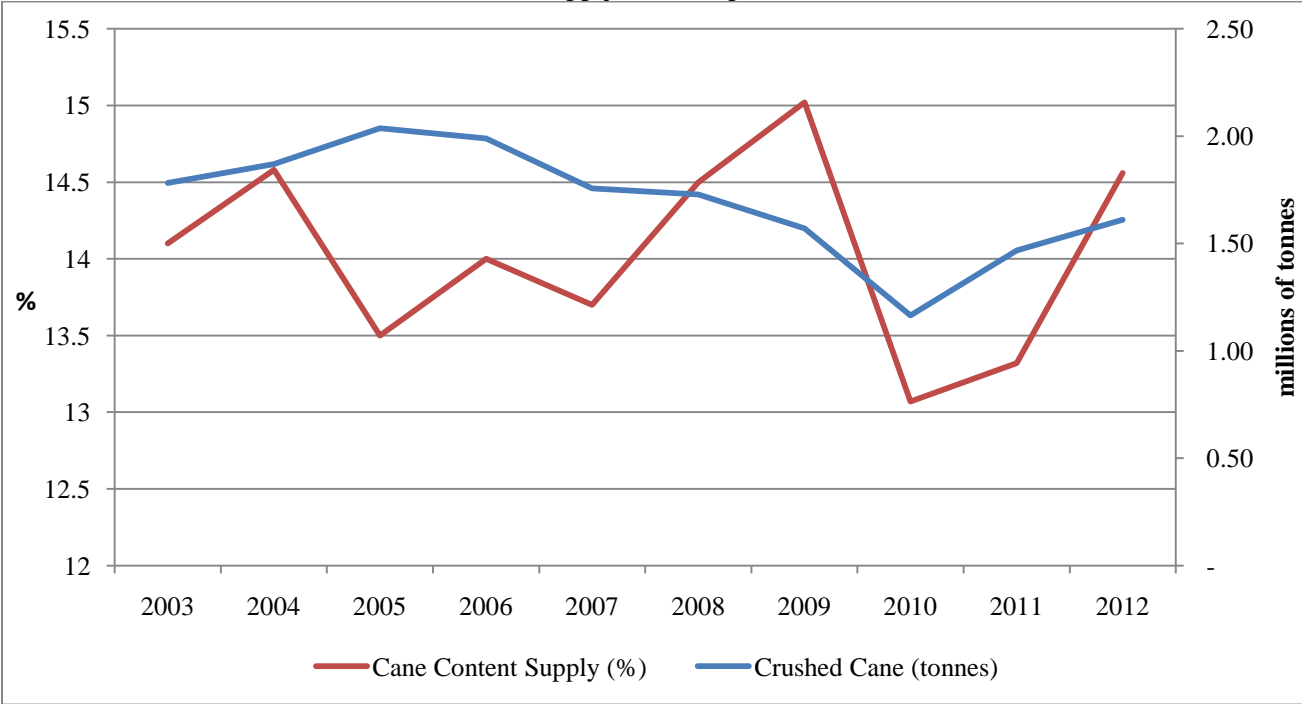
Source: Canegrowers Annual Reports 2003-2011, Whitsunday Times (2012)

It is estimated that the Whitsunday Region contains a beef cattle herd in excess of 250,000 heads, which generates annual output of $50m.

Future Outlook

Future growth in the agricultural sector is dependent upon many factors including obtaining new sources of water, attracting interest from farmers willing to invest in the region, sourcing new winter markets for the horticultural sector and the future global price of sugar. Unfortunately, the outlook for sugar in the region appears to be bleak, against a backdrop of falling raw sugar

prices and predictions of this decline to continue. The World Bank predicts prices to decrease from 41.0 USc/kg in 2013 to 37.7 in 2016 and to 35.0 in 2025.

Therefore, despite the more positive attitude of the new owner of the Proserpine Sugar Mill, expansion of the agricultural sector may prove difficult. Any expansion would certainly require a decrease in production costs to remain competitive.

Manufacturing

Australia

Manufacturing is an integral part of the Australian economy. As of the March quarter 2013, the manufacturing industry employed approximately 941,400 people. In 2012, it contributed approximately $106 billion to the economy. Manufacturing is also central to innovation, accounting for over one quarter of all Business Expenditure in R&D in 2010-11, representing around $4.8 billion invested in research and development. In 2009-10, the Food and beverage manufacturing industry was the largest manufacturing industry in Australia in terms of industry value added, wages and salaries paid and sales and service income, followed by the Machinery and equipment manufacturing industry. Manufacturing in Australia has been challenged with the impact of the GFC, increasing production costs and global competition, resulting in low production levels, reduced profit and consequently reduction of the manufacturing workforce.

Queensland

Manufacturing is a significant contributor to the Queensland economy. In 2010-11, there were over 10,000 manufacturing businesses employing over 187,000 people and which generated a $20.7 billion share of the state's economy. Queensland's manufacturing industry services several important sectors, such as engineering, mining, medicine and aviation. The state also boasts newer sectors with high growth potential, such as electronics, rail equipment and services, and fibre composites. However, manufacturing businesses in Queensland have been affected by the competitive pressures caused by the GFC, including a slow demand from a recovering global economy and a high Australian dollar.

Whitsunday

In the Whitsunday Region, manufacturing activity is mainly comprised of the sugar mill in Proserpine and small businesses specialised in the manufacture of steel, sheet metal, aluminium and glass products. In the Airlie Beach vicinity, there is also a variety of sailing and marine equipment and shade structure manufacturers that service the cruising, racing and charter fleet in the Whitsundays and surrounding areas.

Future Outlook

Future opportunities for the manufacturing sector for the region are twofold and could include:
- One or two major ore smelters at Abbot Point State Development Area (SDA); and
- Additional engineering services servicing the mining sector.

Other projects planned or approved that will support the manufacturing industry in the Region are

- The Abbot Point SDA, identified by the government for the establishment of large scale industrial development, is situated adjacent to the port. A concept plan for the first stage has been presented. Declared in 2008, the Abbot Point SDA lends itself to industrial development due to its close proximity to the Port of Abbot Point, easy access to rail and roads, including the Bruce Highway and is a considerable distance from urban development. Industries considered suitable for the Abbot Point SDA include:
    a. Large scale, value adding industrial development;
    b. Bulk mineral resource unloading and stockpiling facilities;
    c. Mineral processing;
    d. Integrated steel mill;
    e. LNG facility;
    f. Fuel storage and associated infrastructure; and
    g. Extractive industries.

  Approximately 1,580ha of land within the 5,300ha study area has been identified as suitable for large scale industrial development.[1]

- A proposed redevelopment of the Bowen Boat Harbour at Bowen might support future marine manufacturing and servicing opportunities.

- Powerlink Queensland is replacing its existing Collinsville Substation, which was established in the 1960s, adjacent to the existing Substation. Construction works commenced in late 2012 and are expected to be completed in late 2014. Powerlink is also continuing to reinforce its high voltage transmission network between Central and North Queensland with their long term plan being to construct three new substations at Peak Downs North, Moorvale South and Gumtree Creek.

- The owner of the Collinsville Coal Fired Power Station (RATCH Australia Corporation Limited) is partnering with the University of Queensland to investigate the feasibility of converting the now decommissioned coal-fired Collinsville Power Station into a 30 MW hybrid solar thermal and gas-fired power station. Under the proposal, the converted base load power station would use existing infrastructure to connect to the transmission network in the Bowen Basin and potentially supplement power supply in the northern Bowen Basin region.

- The proposed Project Iron Boomerang aiming to connect Port Hedland to Abbot Point, transporting iron ore to the east and coal to the west, also includes first stage iron and steel smelting plants at Abbot Point.

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[1] *Queensland Government 'Land and Infrastructure Planning Study for the Central Portion of the Abbot Point State Development Area', November 2010.*

3 Economic SWOT Analysis of Region

The following TABLE 3.1details the economic strengths, weaknesses, opportunities and threats of the Region for each of the major industries:

TABLE 3.1: Economic SWOT Analysis – Whitsunday Region

Industry	S	W	O	T
Mining	• Significant quality coal deposits • Few environmental constraints in Bowen Basin	• Limited water availability • Proximity to environmentally protected areas (GBR) • Movement to FIFO/DIDO	• Abbot Point Terminal Expansion • Jax, Drake and Byerwen coal mines • Recommence power station in Collinsville • Global demand for coal still increasing • Falling AUD • Projected coal price increases	• China's slowdown • Falling coal prices • Global competition (e.g. Indonesia, USA) • Local competition (Bowen and Galilee Basin) • Region prone to severe weather events • Action from environmental groups • Potential closure of Collinsville Mine
Tourism	• Year round weather and tourism assets (GBR, 74 Island Wonders, Accommodation, Activities) • Region accessible from major cities (Bne., Melb., Syd.) & capacity for airport expansion at PPP. • Significant investment in tourism assets	• Poor highway visibility and town landmarks • Tourism activities limited to the coast and to water-based activities (e.g. sailing), mainland misses out • Lack of integration between regions (especially between Bowen and Airlie Beach) • Age of some tourism assets	• Falling AUD • Cater for high spending and growing Chinese market • LAX-BNE flights may activate US and Canada markets • Increase cruising capacity • Capitalise on variety of local produce (markets, fairs, events) • Fishing tourism able to grow	• Key inbound markets' economies are still weak • Relatively strong AUD • Global and regional competition (South East Asia, Pacific, TNQ) • Vulnerable to severe weather events
Agriculture	• Largest winter growing horticultural region • Established sugar cane infrastructure • New sugar mill owner keen to invest and expand	• Seasonality of industry • Water limitations • Access to transport infrastructure (sugar cane) • Ageing of farmers	• Access to new (winter) markets for horticulture • Interested end users could support "Water for Bowen" project • Farmer incentives	• World oversupply of sugar and falling prices • Recent loss of New Zealand tomato market • Need to source new markets • Need to source investment form large number of farmers
Manufacturing	• Small base of local manufacturers	• No multi Cargo Facility • High labour costs • Need for water, power and gas supply	• Abbot Point State Development Area • Several large projects proposed	• Lower labour costs in Asia • Rising energy costs in Australia
General	• Diverse economy, tropical weather, lifestyle opportunities, natural assets • Largest industrial precinct north of Gladstone • Planning regime for Abbot Point • Abbot Point Terminal	• Limited Road and Air Access • Proximity to Protected Areas • Limited Infrastructure • Sewerage issues at Bowen • Require significant new water supply	• Falling AUD • Service Galilee Basin • Attract FIFO/DIDO workers to live in Region • Steel mill and / or aluminium mill • Recommence power station at Collinsville	• Vulnerable to natural disasters • Vulnerable to negative currency movements

4 Recommended Council Responses

In an attempt to manage the strengths, weaknesses, opportunities and threats identified in the previous Chapter, it is Norling Consulting's recommendation that Council consider undertaking the following actions with regard to each industry. These actions recognise that Council has limited funds at the present time.

General
- Promote Whitsunday Coast Airport for FIFO links to Bowen and Galilee Basins
- Lobby for a State High School at Cannonvale

Mining
- Lobby for the approval of a water source near Collinsville to support existing and proposed coal mines
- Lobby for Proserpine to Moranbah/Emerald/Alpha air services

Tourism
- Improve entrance to Bowen on the Bruce Highway
- Improve entrance to Airlie Beach on Bruce Highway to southbound traffic
- Improve linkages between Bowen and Airlie Beach products
- Facilitate expansion of Bowen marina
- Upgrade Whitsunday Coast Airport and lobby for additional services
- Promote Airlie Beach mainland accommodation and services

Agriculture
- Promote backpackers as a source of labour to horticultural sector
- Facilitate approvals for prawn and fish farms
- Promote increased local usage of local produce
- Lobby for additional source of water for Bowen for the horticultural sector
- Ensure all existing and potential horticulture lands are identified as Good Quality Agricultural Land (GQAL)
- Ensure all existing and potential sugar cane lands are identified as GQAL
- Lobby for increased water allocation from Peter Faust Dam to sugar cane farms
- Investigate water potential on O'Connell and Andromache Rivers for sugar cane

Manufacturing
- Lobby for State Government to progress Multicargo terminal at Abbot Point
- Lobby for approval of water source to supply Abbot Point
- Ensure sufficient land available for engineering services at Bowen, Proserpine and Collinsville
- Support recommencement of Collinsville power station
- Support gas pipeline to link Abbot Point to Moranbah to Townsville gas pipeline

5 Projected Growth Scenarios

In providing a greater understanding of the economic opportunities and risks to the Whitsunday Region, this Chapter examines seven possible economic and population growth scenarios. This will assist Council in their planning for future growth and infrastructure. This Chapter outlines the assumptions underpinning each scenario, followed by the implications and probabilities of each scenario occurring.

The seven scenarios are named as follows:
1. Base Scenario
2. Tourism Scenario
3. Mining Scenario
4. Industrial Scenario
5. Agricultural Scenario
6. Modest Growth Scenario
7. High Growth Scenario

Population and employment projections have been estimated for each scenario. Chapter 2 set out the historical population for the Whitsunday Region as follows:

TABLE 5.1: Whitsunday Region Historical Population

	1991	1996	2001	2006	2011	2013	% p.a. 1991-2013
ERP	24,921	26,851	27,396	30,255	32,416	33,080	1.3
Households	9,585	10,530	11,090	12,400	13,395	13,700	1.6
Persons per Household	2.60	2.55	2.47	2.44	2.42	2.42	n/a

Source: ABS and Norling Consulting's estimates

In order to project future population for the Region, Norling Consulting examined the Queensland Government's Office of Economic and Statistical Research (OESR) projections (2011 Edition), historical estimates and building approvals. The low, medium and high series OESR projections are shown in FIGURE 5.1 below along with the adjusted historical ERPs:

FIGURE 5.1: Adjusted ERPs and OESR Projections

	1991	1996	2001	2006	2011	2016	2021	2026	2031
Adjusted ERPs	24,921	26,851	27,396	30,255	32,416				
High Series				31,355	36,062	41,841	48,451	54,635	60,428
Medium Series				31,355	35,743	40,618	46,008	50,928	55,451
Low Series				31,355	35,608	39,289	43,126	46,392	49,180
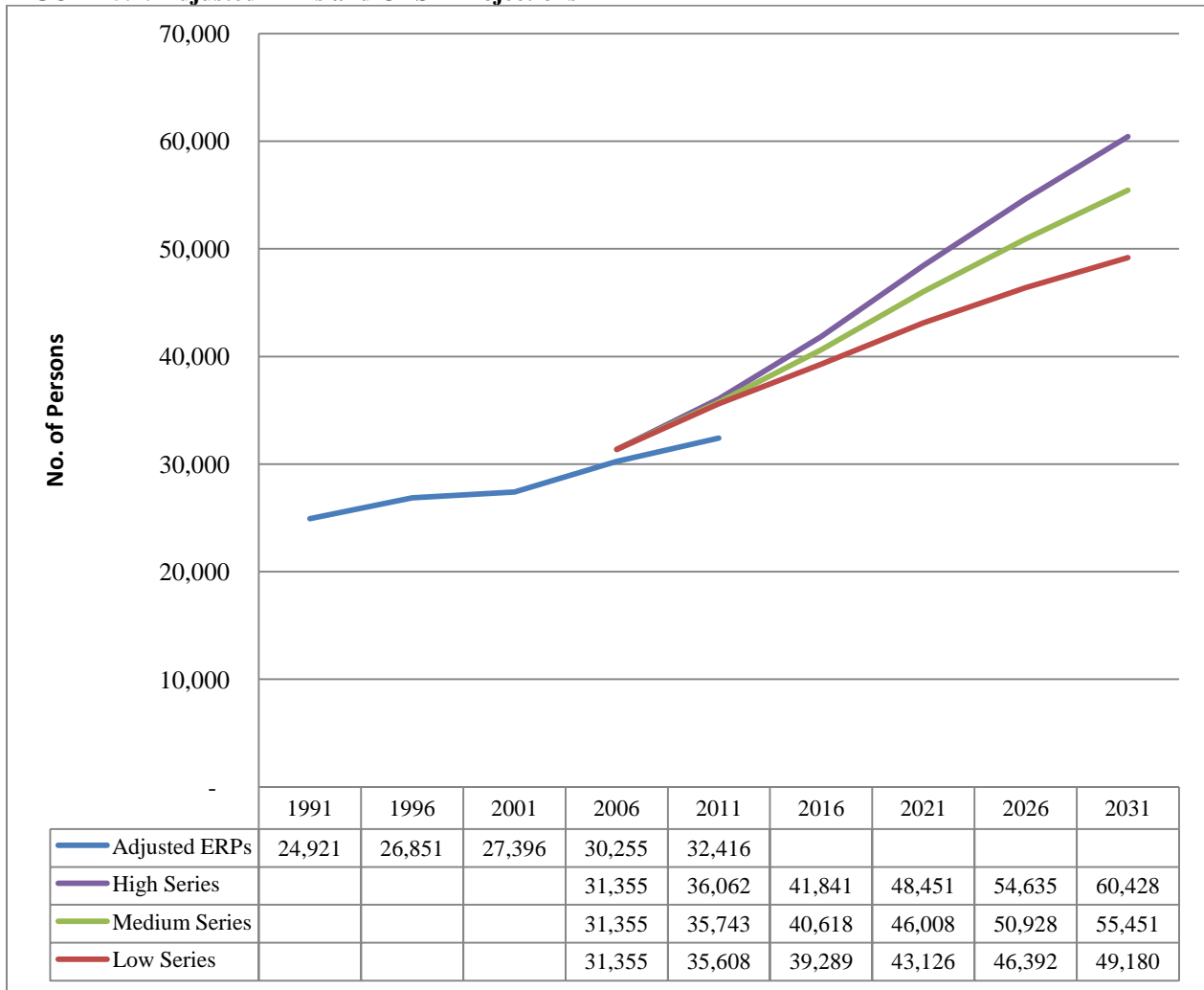
Source: ABS, Norling Consulting Estimates, 2011 OESR Projections

The above graph highlights the differences between the adjusted ERPs and the base 2006 figure used in the OESR projections. Such a different base indicates the OESR 2031 estimates are too high because they start from a higher base. Furthermore, for illustrative purposes, the following FIGURE 5.2 shows the 2031 estimates when rebasing the OESR projections.

FIGURE 5.2: Adopting OESR Projections Growth Rates

High Series, 54,319
Medium Series, 50,290
Low Series, 44,771
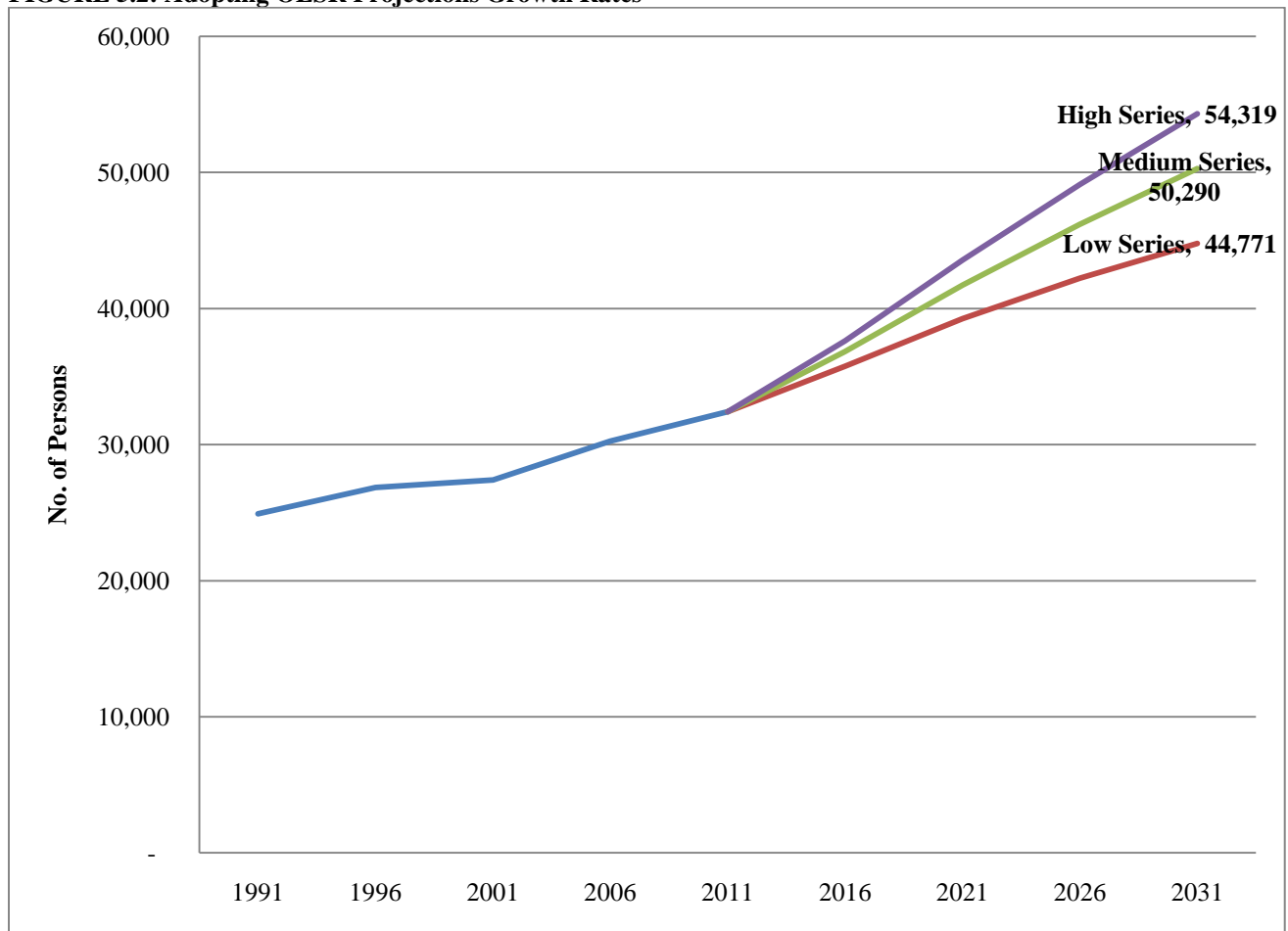
Source: ABS, Norling Consulting Estimates, 2011 OESR Projections

As shown above, even when rebasing the OESR projections, historical growth rates suggest the projections are optimistic and are only supported by one of the four intercensal periods. Projections for each scenario are detailed in the following sections.

5.1 Scenario Assumptions

The key assumptions underpinning the population and employment projections for each Economic Growth Scenario are as follows:

1. Base Scenario – no major new economic activity. Low population growth.

2. Tourism Scenario – strong tourism growth, centred mainly around Airlie Beach

3. Mining Scenario – strong coal mining expansion near Collinsville and elsewhere in the Bowen and Galilee Basins.

4. Industrial Scenario – strong industrial growth at Abbot Point State Development Area, assuming the operation of two major manufacturing plants by 2031.

5. Agricultural Scenario – strong growth in agricultural sector centred around both Bowen and Proserpine.

6. Modest Growth Scenario – modest growth in each industry sector. In many respects, similar to the assumptions underlying the OESR's medium series projections.

7. High Growth Scenario – strong growth in all industry sectors, similar to the assumptions underlying the OESR's high series projections.

5.2 Scenario Implications

Using the above assumptions, population and employment projections were estimated to 2031. The 2031 population and jobs estimates as well as implications flowing from the scenarios are set out in the following TABLE 5.2:

TABLE 5.2: Scenario Implications

Scenarios	2031 Population	2031 Jobs	Other Implications
Base	41,000	18,300	Low Net Jobs Balance Most growth at Cannonvale Decline in agricultural jobs
Tourism	43,500	21,700	High Net Jobs Balance High growth at Cannonvale
Mining	45,000	19,400	Lowest Net Jobs Balance High growth at Cannonvale Some growth at Collinsville and Bowen Many miners live in the Region and work outside Region
Industrial	44,600	21,100	High growth at Bowen
Agricultural	42,200	20,000	Moderate growth at Bowen and Proserpine Only Scenario showing growth in agricultural jobs
Modest	44,000	20,800	Medium population growth Wide distribution of growth
High	49,000	23,200	High population growth Wide distribution of growth

Source: Norling Consulting Estimates, ABS

FIGURE 5.3 illustrates the ERP and workforce numbers likely to be achieved by each scenario. Unsurprisingly, the high growth scenario achieves the highest population and job numbers.

FIGURE 5.3: 2031 ERP and Workforce by Scenario
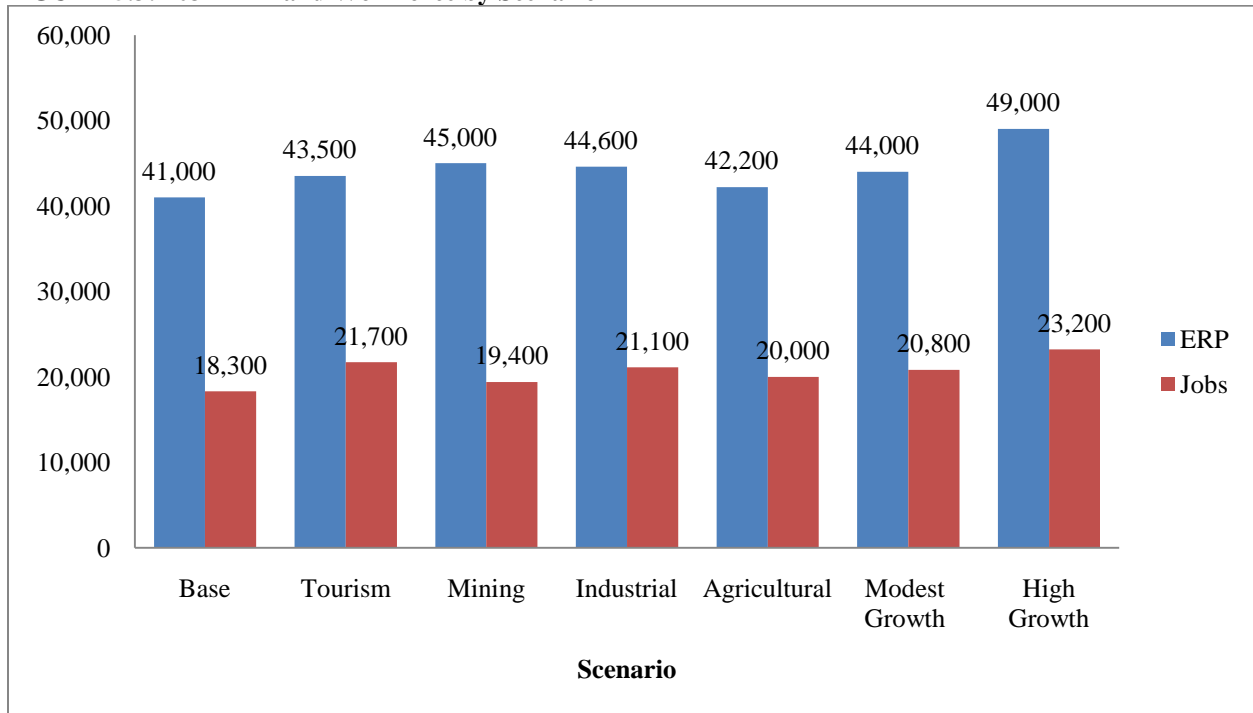
Source: Norling Consulting Estimates, ABS

5.3 Suggested Criteria

Council staff and Norling Consulting have agreed to the following qualitative criteria as being an appropriate base to assess the relative merits of each Economic Growth Scenario.

TABLE 5.3: Suggested Criteria

Theme	Criteria
Lifestyle	• Continue to provide a region where people want to live, work, play and invest • Work to developing greater social cohesion and appreciation of our unique communities and valuing their role in the function of our regional diversity • Promote the superior lifestyle characteristics of the region, particularly in relation to climate, the natural environment, community well being and overall sense of place • Provide a region that is accessible to everyday services such as quality health care, education and social and cultural recreational facilities
Employment	• Provide for full employment within the region • Provide a surplus of local jobs, encouraging skilled migration and settlement within the community • Provide an array of skilled employment opportunities over key industries
Economic Diversification	• Encourage growth and diversification of existing local enterprise • Provide opportunities for economic growth and business diversification to set up shops within our region • Establish a competitive economy that extends beyond the regional government boundary
Economic Resilience	• Establish resilience through the targeted and strategic diversification of our economy particularly in relation to key industries such as: Agriculture, Industry, Resource and mining sector and Tourism. • Build an economy that is based on a variety of markets and not overly exposed to fluctuating factors such as the Australian dollar or export demand
Environment	• Protect, maintain and enhance those areas that have a high ecological and biodiversity value • Protect and conserve areas of cultural significance • Recognise the importance of preserving our natural environment given its relationship to tourism and regional lifestyle values

Source: Norling Consulting, Whitsunday Regional Council

5.4 Scenario Assessment

TABLE 5.4 assesses each of the seven Economic Growth Scenarios against suggested criteria by applying a score (out of 5) against each of the five themes. The table also provides an indicative probability percentage, to indicate the relative likelihood of each Economic Growth Scenario, in Norling Consulting's opinion.

TABLE 5.4: Economic Growth Scenarios Assessment

Themes	Scenarios						
	Base	Tourism	Mining	Industrial	Agricultural	Modest	High
Lifestyle	2	4	4	3	3	4	5
Employment	2	3	3	4	3	3	4
Economic Diversification	1	3	3	4	3	3	4
Economic Resilience	1	2	2	3	2	3	4
Environment	3	3	2	2	2	2	2
Total Score	9	15	14	16	13	15	19
Probability (%)	30	30	50	40	30	60	15

Source: Norling Consulting Estimates

The High Growth Scenario perhaps unsurprisingly achieves the highest score against the suggested criteria. This was followed by the Industrial, Modest and Tourism Growth Scenarios.

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However, the scoring process should not be the final determinant as to which Economic Growth Scenario is pursued by the Council. This is due to the fact that most of the factors influencing the future of sectors of the Region's economy lie outside the control of Council, with many dependent upon global events and actions taken by businesses and other levels of government.

It is Norling Consulting's opinion that the Modest Growth Scenario (60%) and Mining Growth Scenario (50%) have the highest probabilities of being achieved. The High Growth Scenario has the lowest probability of being achieved, at 15%.

The challenge facing Council is to plan to accommodate all valid Economic Growth Scenarios in a manner that does not commit the Council to over-spend on infrastructure and/or result in an over taxing of its ratepayer base.

5.5 Recommendations

After considering the above assessment of the Economic Growth Scenarios, from a planning perspective, Norling Consulting recommends that Council plan to accommodate for an 'All Potential Growth Scenario' within the Strategic Framework (and zoning part of the Planning Scheme [if allowed by QPP]). This scenario would achieve the highest population growth and the highest increase in jobs and would occur if all identified projects and opportunities were realised. It results in a slightly higher total population growth than the High Growth Scenario. While this scenario has a very low probability of occurring, planning for such a scenario would avoid the adverse outcome of failing to plan for sufficient growth.

Council's commitment to infrastructure expenditure (Priority Infrastructure Plan [PIP]), however, should be based upon the most realistic population scenario, which is the Modest Growth Scenario. This would prevent the potential over-spending on infrastructure and subsequent burden on ratepayers.

6 Definition of Planning Areas

For economic, planning and infrastructure purposes, ten smaller Planning Areas have been identified in order to conduct more detailed employment and population projections. These ten Areas represent discrete communities and have been defined based on:

    (a) The ABS 2011 Urban Centre Localities (UL);
    (b) The smallest ABS statistical area available, Statistical Area 1 (SA1);
    (c) Natural and engineering constraints;
    (d) Planning and infrastructure limitations; and
    (e) Discussions with Council staff.

The ten Planning Areas are described and illustrated below:

1. **Abbot Point/Merinda**
   The Abbot Point/Merinda area includes the Abbot Point SDA and the rural area located to its south to Euri Creek which forms its southern boundary. It also includes the small township of Merinda and the rural and open space area to its north, extending to the coastline and bordered by Don River to the east.

2. **Bowen North**
   The urban area of Bowen has been separated into Bowen North and Bowen South. Bowen North comprises the northern part of the Bowen UL to the north of Doughtys Creek, including the Bowen CBD and Queens Beach, and the rural lands to the east of the Don River and to the north of Richmond Road.

3. **Bowen South**
   Bowen South includes the southern part of the Bowen urban locality, which includes non-developable land to the south of Doughtys Creek, such as the Bowen Saltworks and the Bowen Airport, as well as the small residential pockets located south of the airport and along Ocean View Drive.

4. **Collinsville**
   The Collinsville area includes the urban localities of Collinsville and Scottsville, north of Pelican Creek.

5. **Balance of Former Bowen Shire**
   Excluding the above four areas, the Balance of Former Bowen Shire includes the remainder of the former Bowen Shire, including the small townships of Gumlu, Guthagundra and Heronvale.

6. **Whitsunday Islands**
   As the name states, this area includes the Whitsunday Islands that are located within the Whitsunday Region. Islands include Daydream, Hamilton, Hayman, Hook, Long and South Molle.

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7. **Jubilee Pocket - Shute Harbour**

The Jubilee Pocket-Shute Harbour area extends from the intersection of Hermitage Drive and Shute Harbour Road in the west to include the suburbs of Jubilee Pocket, Mandalay, Flametree, Mt Rooper and Shute Harbour to the east.

8. **Cannonvale – Airlie Beach**

This area comprises the suburbs of Cannon Valley, Cannonvale and Airlie Beach, from the intersection of Gregory-Cannon Valley, Mountney and Shute Harbour Roads in the west to the intersection of Hermitage Drive and Shute Harbour Road in the east.

9. **Proserpine**

The Proserpine area includes the urban area of Proserpine to the west of the Bruce Highway and the south of the Proserpine River.

10. **Balance of Former Whitsunday Shire**

Excluding the urban areas of Proserpine, Cannonvale, Airlie Beach, Jubilee Pocket, Shute Harbour and the Whitsunday Islands (the above four areas), the Balance of Former Whitsunday Shire includes the remainder of the former Whitsunday Shire.

FIGURE 6.1 overleaf illustrates the location of these areas.

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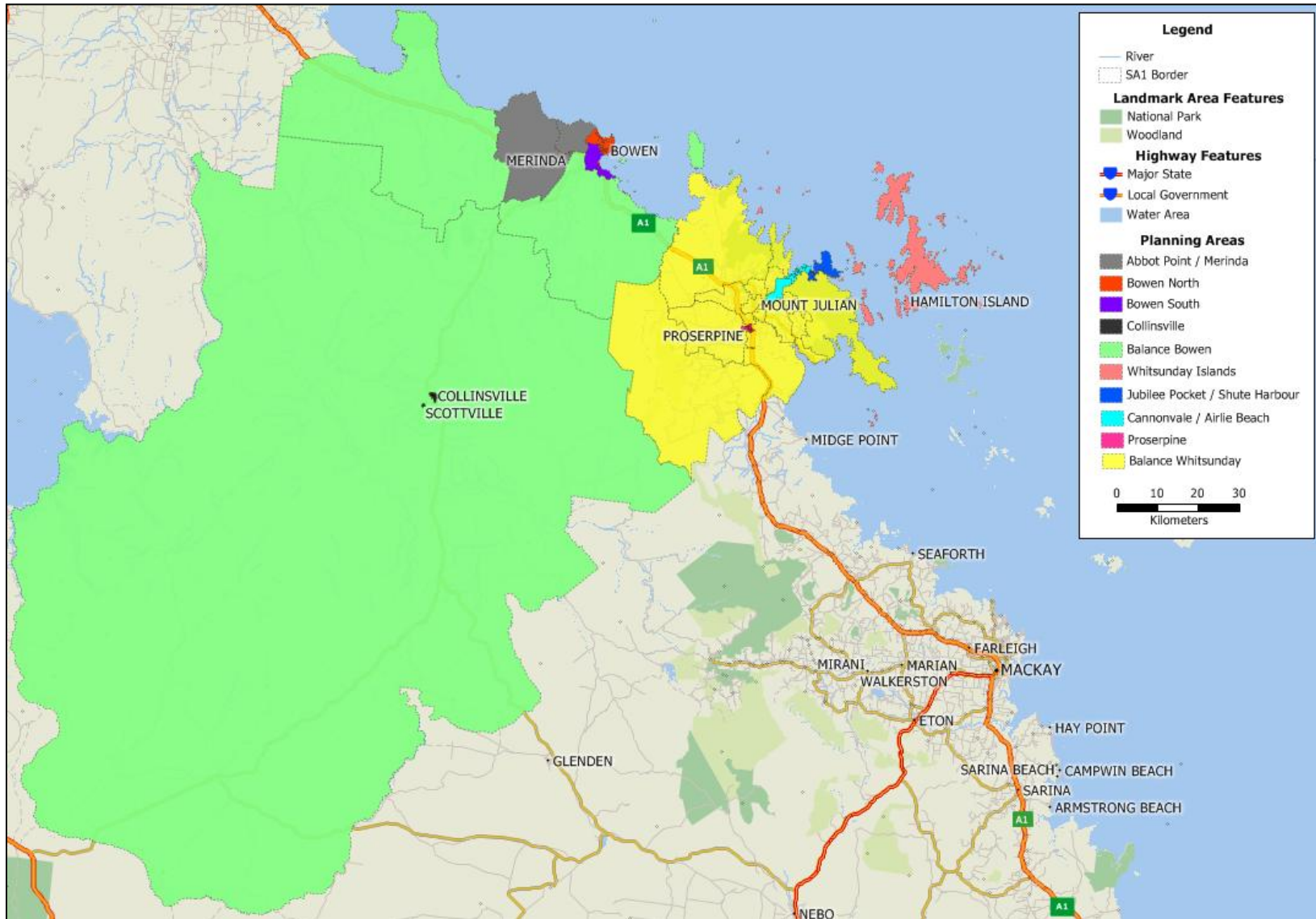
7 Planning Area Population and Employment Projections

The Stage 1 analysis resulted in the recommendation that Council adopt the 'Modest Growth Scenario' and an 'All Potential Growth Scenario' for planning purposes. Council staff have subsequently confirmed this recommendation for Stage 2. This Chapter details the population and employment projections for the ten Planning Areas and for each scenario. At Council's request, projections in this chapter have been extended to 2036.
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The **Modest Growth Scenario** projections estimate the Whitsunday Region to reach a 2036 population of 47,200 persons with a workforce of 22,130. This Scenario is estimated to have the highest probability of being realised and assumes that there is modest growth across the key industries for the region with some, but not all identified projects proceeding.

An **All Potential Growth Scenario** for the Region has now been calculated which assumes strong population growth and strong growth across a wide range of industries and most projects identified are realised. While this scenario has a very limited probability of occurring, it should be planned for in order to prevent the adverse impacts of not adequately planning for future growth. In such a Scenario, the Region could achieve a population of 55,000 by 2036 and with a workforce of 26,100.

TABLE 7.1 below summarises the regional projections for these Scenarios:

TABLE 7.1: ERP Projections for the Whitsunday Region 2013 - 2036

	2013	2016	2021	2026	2031	2036	% p.a. growth
Modest Growth Scenario	33,070	34,400	37,400	40,700	44,000	47,200	1.56%
All Potential Growth Scenario	33,070	35,000	39,500	44,800	50,000	55,000	2.24%

Source: ABS historical ERP estimates, Norling Consulting projections

TABLE 7.2 provides a summary of the detailed projections undertake for the ten Planning Areas for the Modest and All Potential Growth Scenarios. The attached TABLES 7.3 and 7.4 show a detailed breakdown of these population and employment projections per Planning Area for the Modest Growth Scenario and the All Potential Growth Scenario.

TABLE 7.2: 2013 - 2036 Population and Employment Projections – Modest & All Potential Growth Scenarios

Modest Growth Scenario						
	2013 Population	2013 Jobs	2036 Population	2036 Jobs	2013 - 2036 Population Difference	2013-2036 Jobs Difference
Abbot Point/Merinda	800	400	900	700	+100	+300
Bowen North	8,200	3,800	8,900	4,300	+700	+400
Bowen South	1,000	300	2,800	400	+1,800	+100
Collinsville	1,900	1,600	2,200	1,900	+300	+200
Balance Former Bowen Shire	1,400	600	1,400	600	0	0
Whitsunday Islands	1,800	900	1,900	1,200	+100	+300
Jubilee Pocket – Shute Harbour	2,300	900	5,500	1,200	+3,200	+300
Cannonvale – Airlie Beach	6,800	3,400	12,700	7,300	+5,900	+3,900
Proserpine	3,600	1,800	4,200	2,000	+600	+200
Balance Former Whitsunday Shire	5,200	2,400	6,600	2,600	+1,400	+200
TOTAL*	**33,100**	**16,200**	**47,200**	**22,100**	**+14,100**	**+5,900**
All Potential Growth Scenario						
	2013 Population	2013 Jobs	2036 Population	2036 Jobs	2013 - 2036 Population Difference	2013-2036 Jobs Difference
Abbot Point/Merinda	800	400	1,000	1,000	+200	+600
Bowen North	8,200	3,800	9,700	4,800	+1,500	+900
Bowen South	1,000	300	4,000	600	+3,000	+300
Collinsville	1,900	1,600	2,600	2,200	+700	+600
Balance Former Bowen Shire	1,400	600	1,400	600	0	0
Whitsunday Islands	1,800	900	2,000	1,400	+200	+500
Jubilee Pocket – Shute Harbour	2,300	900	6,600	1,400	+4,300	+500
Cannonvale – Airlie Beach	6,800	3,400	14,400	8,500	+7,600	+5,100
Proserpine	3,600	1,800	5,700	2,700	2,100	+900
Balance Former Whitsunday Shire	5,200	2,400	7,500	3,000	+2,300	+500
TOTAL*	**33,100**	**16,200**	**55,000**	**26,100**	**+21,900**	**+9,900**

*may be differences due to rounding
Source: ABS, Norling Consulting Estimates

The following points summarise the above:

- **Abbot Point/Merinda** is expected to generate future employment opportunities, with 300 (Modest Growth Scenario) and 600 (All Potential Growth Scenario) additional jobs projected within this area. A large proportion of workers will live within Bowen rather than within this area. Abbot Point is quite remote (approx. 30mins drive from Bowen) from services and a camp structure for a temporary workforce might be appropriate. However, permanent workers should be encouraged to live in Bowen where they have better access to goods and services and thereby contributing to the local economy. Population growth is therefore likely to be limited, with only 100 (Modest Growth Scenario) and 200 (All Potential Growth Scenario) additional people projected between 2013 and 2036. Merinda presently houses temporary workers camp and pressure may be exerted to increase the capacity of Merinda to house temporary construction workforces.

- **Bowen North** is expected to experience a limited population growth of 700 and 1,500 persons within the Modest Growth Scenario and All Potential Growth Scenario, respectively, between 2013 and 2036 due to most of the residential areas being located within flood prone land. Therefore the majority of future growth within Bowen will be directed to Bowen

South. With the town centre being located within this Area, an additional 400 jobs is projected when adopting the Modest Growth Scenario and an additional 900 jobs under the All Potential Growth Scenario. Jobs growth is most likely to occur within the tourism, employment servicing and agriculture servicing industries as well as some growth in mining and transportation-related industrial uses.

- **Bowen South** functions as a dormitory suburb, with the majority of residents living in this area working within Bowen North. This is projected to continue into the future. In terms of population growth, the area is projected to house an additional 1,800 persons within the Modest Growth Scenario and 3,000 persons within the All Potential Growth Scenario. As a dormitory area, jobs growth will be minimal, with only an additional 100 and 300 jobs projected under the Modest Growth and All Potential Growth Scenarios, respectively.

- Under the Modest Growth Scenario, only 300 extra persons between 2013-2036 are envisaged to settle in **Collinsville.** A large proportion of new jobs are expected to go to persons living elsewhere on a FIFO or DIDO basis. An additional 200 workers are projected to be based in Collinsville, pursuant to the Modest Growth Scenario. The All Potential Growth Scenario allows for greater population and employment growth, with an additional 700 new residents and 600 additional jobs. The variation between the two Scenarios is the difference between all proposed mining projects proceeding and the more realistic view (Modest Growth Scenario) that some will not proceed.

- Growth in the **Balance of Former Bowen Shire** is likely to be minimal, with no additional persons estimated to reside within the area between 2013 and 2036. Subsequently, there will be no to limited jobs growth. This area has a number of physical constraints, including agricultural and environmental, that require protection from encroachment of urban development.

- Growth within the **Whitsunday Islands** is reliant upon the state of the tourism industry. However, changed work practices and the desire by businesses to reduce costs is likely to lead to the majority of future persons employed on the Islands living in the Cannonvale-Airlie Beach Area. Between 2013 and 2036, this Area's population is projected to grow by only 100 persons under the Modest Growth Scenario and 200 persons within the All Potential Growth Scenario. Stronger jobs growth is projected, with 300 and 500 jobs added under the Modest and All Potential Growth Scenarios, respectively.

- Also likely to experience strong population growth, the **Jubilee Pocket-Shute Harbour** area will capitalise on the tourism recovery in Airlie Beach, however, planning and engineering constraints need to be addressed to accommodate the additional population projected to settle in Jubilee Pocket-Shute Harbour (3,200 under the Modest Growth Scenario and 4,300 under the All Potential Growth Scenario). This area is currently functioning as a dormitory suburb with the majority of persons located within this area being employed elsewhere, particularly within the Cannonvale-Airlie Beach area where the majority of businesses and services are located. Jobs growth will therefore be limited within this area unless the Shute Harbour Marina Project is approved, with an additional 300 jobs projected under the Modest Growth Scenario and 500 within the All Potential Growth Scenario between 2013 and 2036.

- The **Cannonvale-Airlie Beach** area is likely to experience the strongest growth of all areas, due to its large capacity for housing, proximity to employment-generating tourism, business and retail areas, ready infrastructure and lifestyle opportunities. Cannonvale-Airlie Beach could accommodate an additional 5,900 persons and 3,900 jobs from 2013 to 2036 under the Modest Growth Scenario. Tourism growth in Airlie Beach will be the main source of direct and indirect employment growth in the area. Under the All Potential Growth Scenario, Cannonvale-Airlie Beach is projected to accommodate an additional 7,600 persons and 5,100 jobs by 2036.

- When adopting the Modest Growth Scenario, **Proserpine** is projected to grow by an additional 600 persons between 2013 and 2036, reaching some 4,200 persons in total. An additional 200 jobs would also be required within Proserpine when adopting this Scenario. The All Potential Growth Scenario would result in an increase in 2,100 persons and 900 jobs. The strong growth projected in the All Potential Growth Scenario would primarily be driven by growth in the administration sector and the agriculture and sugar cane industry. There is a significant difference between the two Scenarios because while Proserpine has the potential and should be encouraged to become a greater administration and entertainment hub, it is considered unlikely that this will occur within the projected period. Nevertheless, the evolution of Proserpine into a more prominent regional centre should be encouraged and in our view is a supportable and valid role for the strategically located town.

- The **Balance of Former Whitsunday Shire** is projected to experience a modest rate of population growth, due to its limited capacity for residential expansion. Between 2013 and 2036, an additional 1,400 persons is projected to live within the area under the Modest Growth Scenario and 2,300 persons within the All Potential Growth Scenario. This area has a number of physical constraints, including agricultural and environmental, that require protection from encroachment of urban development. Jobs growth will also be limited and heavily reliant upon the state of the agriculture industry, with 200 new jobs projected under the Modest Scenario and 500 projected under the All Potential Growth Scenario.

8 Recommendations

The following TABLE 8.1 summarises our analysis of what changes (if any) must be made to the current planning schemes (Whitsunday Shire Planning Scheme and Bowen Shire Planning Scheme) to accommodate the employment and population projections identified for the ten areas within the Whitsunday Region.

This was a desktop task undertaken by examining the planning scheme zoning maps and online aerial photomaps to identify vacant lands within the key areas to determine whether there is adequate capacity to accommodate the proposed residential and future jobs.

TABLE 8.1: Recommended Changes to Current Zoning Maps

	General Comments	Capacity to Accommodate Projected Growth
Abbot Point/ Merinda	The Abbot Point State Development Area and Port is located within this area and developments and expansions to these areas will influence future growth. Abbot Point is quite remote (approx. 30mins drive from Bowen) from services and a camp structure for a temporary workforce might be appropriate. However, permanent workers should be encouraged to live in Bowen where they have better access to goods and services and thereby contributing to the local economy.	• The majority of the projected employment growth within this area will occur within the Port of Abbot Point and adjoining SDA. • Future workers at the Port of Abbot Point and SDA are likely to live within Bowen North or South. • May be a need for workers camps to house up to 1200 construction workers in the short term at Abbot Point and/or Merinda.
Bowen North	The urban centre of Bowen is likely to benefit and grow as a result of industrial projects outside of the Bowen North area including the State Development Area at Abbott Point and expansion of the Port. Jobs growth is most likely to occur within the tourism, employment servicing and agriculture servicing industries as well as some growth in mining and transportation-related industrial uses.	• There is adequate theoretical capacity within the Bowen North area to accommodate future population growth, however, a large portion of this land is flood-prone. It is therefore envisaged that future growth within Bowen will be directed to the Bowen South area. • Adequate business land is provided with several areas being underutilised. • **Much of the industrial land is held by state government and appears to not be available in the short term. If this cannot be remedied, additional land will need to be identified**.
Bowen South	The urban centre of Bowen is likely to benefit and grow as a result of industrial projects outside of the Bowen North area including the State Development Area at Abbot Point and expansion of the Port.	• **Additional residential land will be required in Bowen South to accommodate the projected population, up to 100ha**.
Collinsville	Population growth occurring in Collinsville will be highly dependent on thermal and coking coal prices increasing and of the progress of agreements made between unions and mine operators. It is expected that the Collinsville mine will reopen, however, it will need to operate more efficiently with fewer workers.	• **There is limited residential capacity within Collinsville and additional 30ha residential zoned land should be identified. Such land should be located as close as possible to the town centre**. • In planning for the transient population, an additional workers camp should be planned for. Queensland Treasury and Trade have prepared four projection series based on different outcomes for the Bowen Basin which are largely based on the status of projects in the Environmental Impact Statement (EIS) process. Non-resident workers are projected to 2019 and range from 630 (series A) to 1,000 (series D). There are

General Comments	Capacity to Accommodate Projected Growth
	currently an estimated 610 non-resident workers at Collinsville (down from 730 as at 2012). Norling Consulting projects an additional 300 and 600 workers within the Modest Growth and All Potential Growth Scenarios, respectively, between 2013 at 2036. • There is an approved site for a workers camp to the north west of the town (Morriscorp), although this site is not ideal as it is not within walking distance to the town centre. If this approval lapses, a camp closer to town is recommended. • Sites should also be preserved for other accommodation forms, such as motels and serviced apartments. Land to the west of Garrick Street or to the west of Scottville Road is close to and within walking distance to the town centre. It is noted that there are two recent approvals at Henderson Street (camp) and Driftwood (motel). • Future employment growth is projected to occur predominantly within mines so additional employment lands within the town are not considered a high priority. However, **additional industrial land (30ha) should be identified to support mining activity**. This could potentially be located south of the township where there is good access to the Bowen Developmental Road. Land adjacent to existing industrial zoned land would be suitable if available and would allow for potential co-location opportunities.
Balance Former Bowen Shire	Growth in this area will be highly dependent upon the future of mining and agriculture. There is likely to be an impact from the closure of the Collinsville mine and the transition from the mining boom. However it is expected that this mine will reopen and at least one of the proposed mining projects gets approval.	• Containing predominantly rural areas, the Balance area can accommodate projected future population growth under both scenarios. • This balance area has a number of physical constraints, including agricultural and environmental, that require protection from encroachment of urban development.
Whitsunday Islands	Growth within this area is reliant upon the state of the tourism industry.	• Future persons employed in the Whitsunday Islands are likely to live in the Cannonvale-Airlie Beach Area. There are a number of environmental constraints that prevent further urban development upon the islands.
Jubilee Pocket – Shute Harbour	Similarly to the Cannonvale-Airlie Beach area, the Jubilee Pocket – Shute Harbour area is likely to experience growth, capitalising from a tourism recovery in Airlie Beach. Growth will also be	• There is capacity within the current zoning to accommodate projected growth under both scenarios unless environmental and engineering constraints prevent zoned lands from being fully developed.

General Comments	Capacity to Accommodate Projected Growth
dependent upon the approval of the Marina.	• Future employed residents will primarily work elsewhere so no additional business or industrial land is required to accommodate the future jobs projected for this area.
Cannonvale – Airlie Beach The Cannonvale and Airlie Beach Area is likely to experience significant growth due to its capacity for housing, proximity to employment-generating tourism businesses, business and retail areas, ready infrastructure and lifestyle opportunities. Tourism growth in Airlie Beach will be the main source of direct and indirect employment growth in the area, owing to a falling Australian dollar and improved confidence in tourism investment.	• There is adequate capacity within this Area to accommodate the projected residential growth for the Modest Growth Scenario within the Residential House, Residential Multiple Dwelling Zones and the Emerging Community Zone. • There should also be just enough capacity within existing residential zoned areas for the All Potential Growth Scenario. • There is considered to be adequate capacity within the business areas to accommodate the projected jobs growth. • **There is a need for additional industrial land (50ha) and a decision is required as to whether this should be provided at Cannonvale or at Proserpine to provide additional stimulus to that town**.
Proserpine Growth in Proserpine will primarily be driven by growth in the sugar cane and agriculture industry as well as growth in government administration and services (Whitsunday Regional Council). There is a significant difference between the two scenarios because while Proserpine has the potential and should be encouraged to become a greater administration and entertainment hub, however, it is unlikely that this will occur within the projected period.	• There is future residential capacity within Proserpine within the existing zoning and when including the Emerging Community Zone. There are also redevelopment opportunities within the Residential Multiple Dwelling zone. There would be adequate land to accommodate an additional 600 persons under the Modest Growth Scenario. • With an additional 2,100 persons projected under the All Potential Growth Scenario, **additional residential land will need to be identified, approximately 50ha**. This could be achieved by identifying new Emerging Community Zone land which should be located as close as possible to the town centre to ensure a compact urban form is achieved. • Under the Modest Growth Scenario, there is adequate capacity within the business and industrial areas to accommodate the projected jobs growth. • With 900 jobs projected under the All Potential Growth Scenario, additional business and industrial lands would be required. Business growth is likely to be able to be accommodated by a combination of old residential housing in the commercial zone being converted to business activities and the new Scheme allowing expansion of business onto site adjoining Commercial zoned land where impacts are appropriately

General Comments	Capacity to Accommodate Projected Growth
	managed. **At least 30ha of Industrial land should be identified**.
Balance Former Whitsunday Shire	Moderate population growth is projected for this area. - Containing predominantly rural areas, the Balance area can accommodate projected future population growth under both scenarios. - This balance area has a number of physical constraints, including agricultural and environmental, that require protection from encroachment of urban development.

Appendices

Table 7.3: Population and Employment Projections - Modest Growth Scenario

	2001		2006		2011		2013		2016		2021		2026		2031		2036
Proserpine																	
Population	3,261	1.03%	3,432	0.38%	3,498	0.88%	3,560	0.84%	3,650	0.70%	3,780	0.68%	3,910	0.71%	4,050	0.63%	4,180
Dwellings	1,294	18	1,384	12	1,445	12	1,470	15	1,520	15	1,600	15	1,680	15	1,760	15	1,840
Persons per household	2.52		2.48		2.42		2.42		2.40		2.36		2.33		2.30		2.27
Resident Workforce Raw	1,373	6.26%	1,861	-1.98%	1,683		1,946		1,988		2,039		2,088		2,130		2,171
Employed Workforce					1,515	7.53%	1,752	0.71%	1,789	0.51%	1,835	0.48%	1,879	0.40%	1,917	0.38%	1,954
Net Jobs Balance					90.0%		90.0%		90.0%		90.0%		90.0%		90.0%		90.0%
Cannonvale-Airlie Beach																	
Population	4,745	2.99%	5,499	3.38%	6,494	2.25%	6,790	2.35%	7,280	3.29%	8,560	3.12%	9,980	2.61%	11,350	2.32%	12,730
Dwellings	2,045	67	2,381	84	2,799	52	2,900	80	3,140	115	3,720	128	4,360	128	5,000	128	5,640
Persons per household	2.32		2.31		2.32		2.34		2.32		2.30		2.29		2.27		2.26
Resident Workforce Raw	2,673	6.11%	3,595	1.89%	3,947		3,712		3,966		4,618		5,330		5,969		6,611
Employed Workforce					3,553	-2.12%	3,404	3.15%	3,736	3.99%	4,544	3.77%	5,468	3.11%	6,375	2.86%	7,338
Net Jobs Balance					90.0%		91.7%		94.2%		98.4%		102.6%		106.8%		111.0%
Jubilee Pocket - Shuteharbour																	
Population	1,624	4.12%	1,987	2.64%	2,264	1.45%	2,330	3.86%	2,610	4.42%	3,240	3.88%	3,920	3.74%	4,710	3.15%	5,500
Dwellings	650	36	828	29	972	10	990	40	1,110	55	1,390	60	1,690	70	2,040	70	2,390
Persons per household	2.50		2.40		2.33		2.35		2.35		2.33		2.32		2.31		2.30
Resident Workforce Raw	909	7.05%	1,278	0.32%	1,298		1,274		1,422		1,748		2,093		2,477		2,856
Employed Workforce					973	-2.64%	923	1.86%	975	2.19%	1,087	1.45%	1,168	0.93%	1,224	0.08%	1,228
Net Jobs Balance					75.0%		72.4%		68.6%		62.2%		55.8%		49.4%		43.0%
Whitsunday Islands																	
Population	1,463	5.28%	1,893	-0.92%	1,807	-0.19%	1,800	0.74%	1,840	0.11%	1,850	0.11%	1,860	0.11%	1,870	0.21%	1,890
Dwellings	697	22	809	0	810	2	810	2	820	2	830	2	840	2	850	2	860
Persons per household	2.10		2.34		2.23		2.22		2.24		2.23		2.21		2.20		2.20
Resident Workforce Raw	994	3.60%	1,186	0.44%	1,212		984		1,002		998		993		983		982
Employed Workforce					1,091	-8.74%	909	1.86%	960	1.09%	1,014	1.02%	1,067	0.85%	1,113	0.97%	1,168
Net Jobs Balance					90.0%		92.3%		95.8%		101.6%		107.4%		113.2%		119.0%
Balance Former Whitsunday Shire																	
Population	4,271	2.24%	4,771	1.46%	5,128	0.60%	5,190	1.08%	5,360	1.10%	5,660	1.17%	6,000	1.04%	6,320	0.90%	6,610
Dwellings	1,499	43	1,714	34	1,885	7	1,900	18	1,950	23	2,070	28	2,210	28	2,350	28	2,490
Persons per household	2.85		2.78		2.72		2.73		2.75		2.73		2.71		2.69		2.65
Resident Workforce Raw	2,703	0.73%	2,804	1.18%	2,973		2,838		2,920		3,053		3,204		3,324		3,433
Employed Workforce					2,527	-2.68%	2,394	0.57%	2,435	0.51%	2,497	0.57%	2,570	0.33%	2,612	0.24%	2,643
Net Jobs Balance					85.0%		84.4%		83.4%		81.8%		80.2%		78.6%		77.0%
Bowen North																	
Population	7,528	0.62%	7,765	1.08%	8,192	0.17%	8,220	0.20%	8,270	0.29%	8,390	0.45%	8,580	0.37%	8,740	0.41%	8,920
Dwellings	3,048	38	3,235	41	3,442	15	3,470	15	3,520	15	3,600	20	3,700	20	3,800	25	3,930
Persons per household	2.47		2.40		2.38		2.37		2.35		2.33		2.32		2.30		2.27
Resident Workforce Raw	3,130	3.88%	3,787	1.88%	4,157		4,494		4,505		4,526		4,582		4,596		4,633
Employed Workforce					3,534	4.31%	3,845	0.41%	3,892	0.41%	3,974	0.57%	4,087	0.37%	4,164	0.46%	4,262
Net Jobs Balance					85.0%		85.6%		86.4%		87.8%		89.2%		90.6%		92.0%
Bowen South																	
Population	504	4.89%	640	6.70%	885	6.30%	1,000	3.85%	1,120	6.44%	1,530	5.40%	1,990	4.16%	2,440	3.01%	2,830
Dwellings	223	7	258	13	322	22	370	35	480	35	660	40	860	40	1,060	35	1,240
Persons per household	2.26		2.48		2.75		2.69		2.34		2.32		2.31		2.30		2.28
Resident Workforce Raw	322	-5.05%	248	15.08%	502		547		610		825		1,063		1,283		1,470
Employed Workforce					301	2.09%	314	1.28%	326	3.46%	386	2.04%	427	0.18%	431	-1.65%	397
Net Jobs Balance					60.0%		57.4%		53.4%		46.8%		40.2%		33.6%		27.0%
Abbot Point																	
Population	800	0.22%	809	0.63%	835	0.30%	840	0.79%	860	0.91%	900	0.00%	900	0.00%	900	0.22%	910
Dwellings	291	0	290	3	303	3	310	3	320	3	340	1	350	1	360	1	370
Persons per household	2.75		2.79		2.76		2.72		2.70		2.66		2.59		2.51		2.47
Resident Workforce Raw	198	14.21%	384	4.90%	488		459		468		485		481		473		473
Employed Workforce					390	-0.08%	389	3.44%	431	3.22%	505	2.00%	558	1.67%	606	1.78%	662
Net Jobs Balance					80.0%		84.8%		92.0%		104.0%		116.0%		128.0%		140.0%
Collinsville																	
Population	1,941	0.94%	2,034	-1.44%	1,892	1.00%	1,930	0.52%	1,960	0.80%	2,040	0.87%	2,130	0.47%	2,180	0.45%	2,230
Dwellings	816	9	858	1	864	10	880	10	910	10	960	10	1,010	5	1,040	5	1,070
Persons per household	2.38		2.37		2.19		2.19		2.15		2.12		2.11		2.10		2.08
Resident Workforce Raw	696	4.26%	857	0.81%	893		1,055		1,068		1,100		1,138		1,146		1,158
Employed Workforce					1,384	8.86%	1,640	0.52%	1,666	0.73%	1,728	0.79%	1,797	0.28%	1,823	0.33%	1,853
Net Jobs Balance					155.0%		155.4%		156.0%		157.0%		158.0%		159.0%		160.0%
Balance Former Bowen Shire																	
Population	1,258	2.54%	1,426	-0.08%	1,420	-0.35%	1,410	0.47%	1,430	0.00%	1,430	-0.28%	1,410	0.00%	1,410	-0.14%	1,400
Dwellings	513	16	594	-10	546	2	550	2	560	2	570	1	580	1	590	1	600
Persons per household	2.45		2.40		2.60		2.57		2.56		2.51		2.44		2.39		2.34
Resident Workforce Raw	892	2.89%	1,029	-4.51%	817		771		779		771		753		742		727
Employed Workforce					654	-2.74%	619	0.50%	628	-0.05%	626	-0.33%	616	-0.16%	611	-0.25%	603
Net Jobs Balance					80.0%		80.2%		80.6%		81.2%		81.8%		82.4%		83.0%
TOTAL Whitsunday Region																	
Population	27,395	2.01%	30,255	1.39%	32,415	1.01%	33,070	1.30%	34,380	1.69%	37,380	1.71%	40,680	1.57%	43,970	1.43%	47,200
Dwellings	11,075	233	12,350	205	13,388	135	13,650	220	14,330	275	15,740	305	17,280	310	18,850	310	20,430
Persons per household	2.47		2.45		2.42	135	2.42	220	2.40	275	2.37	305	2.35	310	2.33		2.31
Resident Workforce Raw	13,890	4.16%	17,029	1.08%	17,971		18,081		18,728		20,164		21,725		23,123		24,513
Employed Workforce					15,922		16,187		16,839		18,196		19,638		20,876		22,109
Net Jobs Balance					88.6%		89.5%		89.9%		90.2%		90.4%		90.3%		90.2%

Table 7.4: Population and Employment Projections - All Potential Growth Scenario

	2001		2006		2011		2013		2016		2021		2026		2031		2036
Proserpine																	
Population	3,261	1.03%	3,432	0.38%	3,498	0.88%	3,560	1.48%	3,720	2.11%	4,130	2.44%	4,660	2.14%	5,180	1.86%	5,680
Dwellings	1,294	18	1,384	12	1,445	12	1,470	25	1,550	40	1,750	50	2,000	50	2,250	50	2,500
Persons per household	2.52		2.48		2.42		2.42		2.40		2.36		2.33		2.30		2.27
Resident Workforce Raw	1,373	6.27%	1,861	-1.99%	1,683		1,946		2,026		2,228		2,489		2,724		2,987
Employed Workforce					1,515	7.54%	1,752	1.35%	1,824	1.91%	2,005	2.24%	2,240	1.82%	2,452	1.86%	2,688
Net Jobs Balance					90.0%		90.0%		90.0%		90.0%		90.0%		90.0%		90.0%
Cannonvale-Airlie Beach																	
Population	4,745	2.99%	5,499	3.38%	6,494	2.25%	6,790	3.32%	7,490	4.08%	9,150	3.66%	10,950	2.96%	12,670	2.59%	14,400
Dwellings	2,045	67	2,381	84	2,799	52	2,900	110	3,230	150	3,980	160	4,780	160	5,580	160	6,380
Persons per household	2.32		2.31		2.32		2.34		2.32		2.30		2.29		2.27		2.26
Resident Workforce Raw	2,673	6.11%	3,595	1.89%	3,947		3,712		4,080		4,936		5,848		6,663		7,573
Employed Workforce					3,552	-2.07%	3,407	4.18%	3,852	4.83%	4,877	4.36%	6,035	3.50%	7,169	3.42%	8,482
Net Jobs Balance					90.0%		91.8%		94.4%		98.8%		103.2%		107.6%		112.0%
Jubilee Pocket - Shuteharbour																	
Population	1,624	4.12%	1,987	2.64%	2,264	1.45%	2,330	5.68%	2,750	5.18%	3,540	5.24%	4,570	4.11%	5,590	3.38%	6,600
Dwellings	650	36	828	29	972	10	990	60	1,170	70	1,520	90	1,970	90	2,420	90	2,870
Persons per household	2.50		2.40		2.33		2.35		2.35		2.33		2.32		2.31		2.30
Resident Workforce Raw	909	7.05%	1,278	0.31%	1,298		1,274		1,498		1,910		2,441		2,940		3,471
Employed Workforce					974	-2.74%	921	3.53%	1,022	2.79%	1,172	2.59%	1,333	1.07%	1,405	0.25%	1,423
Net Jobs Balance					75.0%		72.3%		68.2%		61.4%		54.6%		47.8%		41.0%
Whitsunday Islands																	
Population	1,463	5.28%	1,893	-0.92%	1,807	-0.19%	1,800	0.74%	1,840	0.11%	1,850	0.32%	1,880	0.63%	1,940	0.51%	1,990
Dwellings	697	22	809	0	810	2	810	2	820	2	830	4	850	5	880	5	910
Persons per household	2.10		2.34		2.23		2.22		2.24		2.23		2.21		2.21		2.19
Resident Workforce Raw	994	3.60%	1,186	0.43%	1,212		984		1,002		998		1,004		1,020		1,047
Employed Workforce					1,091	-8.18%	920	2.43%	988	1.60%	1,070	1.68%	1,163	1.77%	1,269	1.86%	1,392
Net Jobs Balance					90.0%		93.4%		98.6%		107.2%		115.8%		124.4%		133.0%
Balance Former Whitsunday Shire																	
Population	4,271	2.24%	4,771	1.46%	5,128	0.60%	5,190	1.58%	5,440	1.71%	5,920	1.89%	6,500	1.52%	7,010	1.41%	7,520
Dwellings	1,499	43	1,714	34	1,885	7	1,900	28	1,980	38	2,170	46	2,400	45	2,630	45	2,860
Persons per household	2.85		2.78		2.72		2.73		2.75		2.73		2.71		2.67		2.63
Resident Workforce Raw	2,703	0.74%	2,804	1.18%	2,973		2,838		2,963		3,193		3,471		3,686		3,955
Employed Workforce					2,527	-2.76%	2,389	0.97%	2,460	1.01%	2,587	1.18%	2,742	0.69%	2,839	0.88%	2,966
Net Jobs Balance					85.0%		84.2%		83.0%		81.0%		79.0%		77.0%		75.0%
Bowen North																	
Population	7,528	0.62%	7,765	1.08%	8,192	0.17%	8,220	0.48%	8,340	0.66%	8,620	0.87%	9,000	0.83%	9,380	0.71%	9,720
Dwellings	3,048	38	3,235	41	3,442	15	3,470	25	3,550	30	3,700	35	3,880	40	4,080	40	4,280
Persons per household	2.47		2.40		2.38		2.37		2.35		2.33		2.32		2.30		2.27
Resident Workforce Raw	3,130	3.88%	3,787	1.88%	4,157		4,494		4,543		4,650		4,806		4,933		5,112
Employed Workforce					3,533	4.37%	3,849	0.73%	3,934	0.83%	4,101	1.03%	4,316	0.88%	4,509	1.06%	4,754
Net Jobs Balance					85.0%		85.6%		86.6%		88.2%		89.8%		91.4%		93.0%
Bowen South																	
Population	504	4.89%	640	6.70%	885	6.30%	1,000	5.97%	1,190	8.99%	1,830	6.61%	2,520	5.35%	3,270	4.06%	3,990
Dwellings	223	7	258	13	322	22	370	45	510	55	790	60	1,090	65	1,420	65	1,750
Persons per household	2.26		2.48		2.75		2.69		2.34		2.32		2.31		2.30		2.28
Resident Workforce Raw	322	-5.09%	248	15.15%	502		547		648		987		1,346		1,720		2,098
Employed Workforce					301	2.18%	314	3.51%	349	6.14%	470	3.47%	557	1.67%	605	0.11%	609
Net Jobs Balance					60.0%		57.5%		53.8%		47.6%		41.4%		35.2%		29.0%
Abbot Point																	
Population	800	0.22%	809	0.63%	835	0.30%	840	0.79%	860	0.91%	900	0.87%	940	0.84%	980	0.80%	1,020
Dwellings	291	0	290	3	303	3	310	3	320	3	340	3	360	3	380	3	400
Persons per household	2.75		2.79		2.76		2.72		2.70		2.66		2.60		2.59		2.56
Resident Workforce Raw	198	14.17%	384	4.91%	488		459		468		485		502		515		536
Employed Workforce					390	1.98%	406	5.24%	473	4.59%	592	3.92%	718	3.32%	845	3.26%	992
Net Jobs Balance					80.0%		88.4%		101.0%		122.0%		143.0%		164.0%		185.0%
Collinsville																	
Population	1,941	0.94%	2,034	-1.44%	1,892	1.00%	1,930	0.52%	1,960	1.77%	2,140	1.80%	2,340	1.33%	2,500	1.10%	2,640
Dwellings	816	9	858	1	864	10	880	10	910	20	1,010	20	1,110	15	1,190	15	1,270
Persons per household	2.38		2.37		2.19		2.19		2.15		2.12		2.11		2.10		2.08
Resident Workforce Raw	696	4.25%	857	0.83%	893		1,055		1,068		1,154		1,250		1,315		1,388
Employed Workforce					1,384	8.79%	1,638	0.47%	1,661	1.65%	1,803	1.68%	1,960	1.10%	2,069	1.17%	2,194
Net Jobs Balance					155.0%		155.2%		155.6%		156.2%		156.8%		157.4%		158.0%
Balance Former Bowen Shire																	
Population	1,258	2.54%	1,426	-0.08%	1,420	-0.35%	1,410	0.47%	1,430	0.00%	1,430	-0.14%	1,420	0.14%	1,430	0.14%	1,440
Dwellings	513	16	594	-10	546	2	550	2	560	2	570	2	580	2	590	2	600
Persons per household	2.45		2.40		2.60		2.57		2.56		2.51		2.44		2.42		2.40
Resident Workforce Raw	892	2.90%	1,029	-4.51%	817		771		779		771		758		752		757
Employed Workforce					654	-2.72%	619	0.50%	628	-0.05%	626	-0.19%	620	-0.02%	620	0.28%	629
Net Jobs Balance					80.0%		80.2%		80.6%		81.2%		81.8%		82.4%		83.0%
TOTAL Whitsunday Region																	
Population	27,395	2.01%	30,255	1.39%	32,415	1.01%	33,070	1.93%	35,020	2.44%	39,510	2.54%	44,780	2.21%	49,950	1.94%	55,000
Dwellings	11,075	255	12,350	208	13,388	135	13,650	310	14,600	410	16,660	470	19,020	475	21,420	475	23,820
Persons per household	2.47		2.45		2.42	135	2.42	310	2.40	410	2.37	470	2.35	475	2.33	475	2.31
Resident Workforce Raw	13,890	4.16%	17,029	1.08%	17,970		18,081		19,077		21,313		23,915		26,268		28,924
Employed Workforce					15,921		16,214		17,191		19,303		21,684		23,782		26,128
Net Jobs Balance					88.6%		89.7%		90.1%		90.6%		90.7%		90.5%		90.3%