Submission 54:
Attachment A

Regional Development Australia

TOWNSVILLE AND NORTH WEST QLD

Draft Regional Roadmap 2013-16 - Appendix

Townsville and North West Queensland

Boulia, Burdekin, Burke, Carpentaria, Charters Towers, Cloncurry, Doomadgee, Flinders, Hinchinbrook, Mornington Island, McKinlay, Mount Isa, Palm Island, Richmond, Townsville

Developing the long term sustainability of our region

An Australian Government Initiative

Queensland Government

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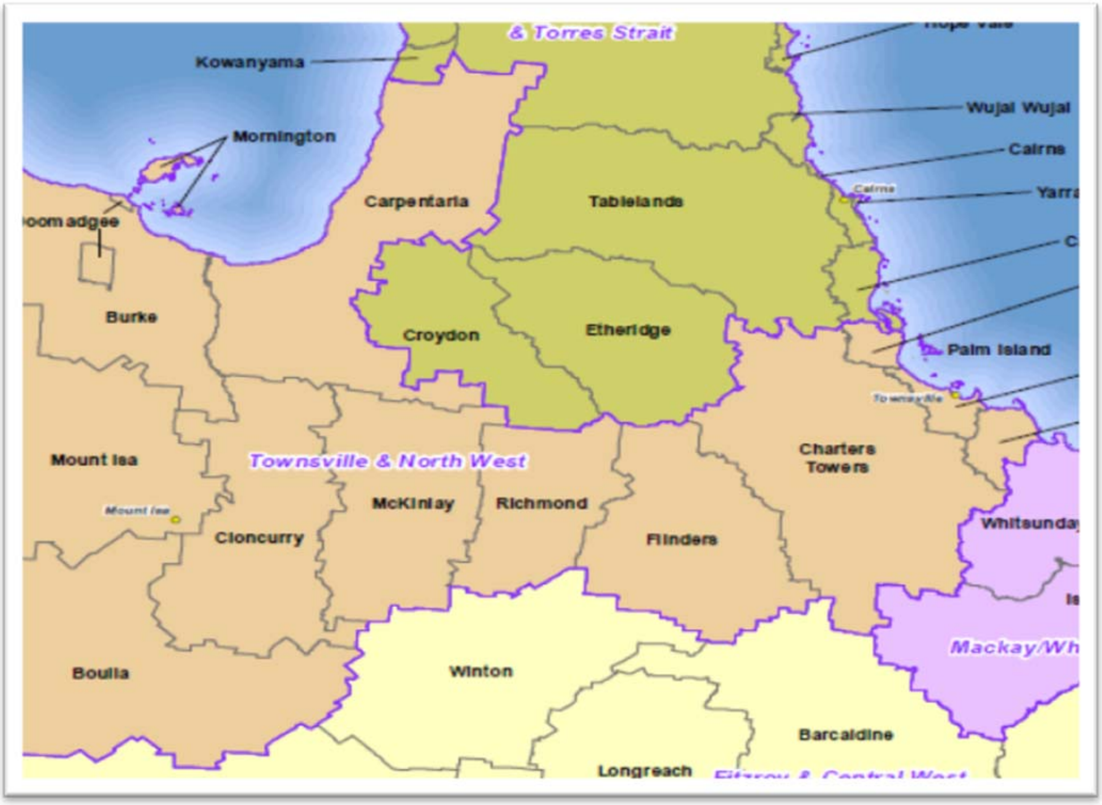
1 ANNEXURE ONE – REGIONAL PROFILE

1.1 SUMMARY – OUR REGION

The Townsville and North West Queensland Region is a large area encompassing 449,190.9 km^2 traversing across the centre of the state from the outback to the coast (Queensland Government, Treasurey and Trade Government Statistician, June 2013). As shown in Figure 1, this area represents the 15 Local Government areas of Townsville, Palm Island, Hinchinbrook, Burdekin, Charters Towers, Flinders, Richmond, McKinlay, Cloncurry, Mount Isa, Boulia, Doomadgee, Mornington Island, Burke and Carpentaria.

Figure 1: Map of the Townsville and North West Regional Development Australia region



Regional competitiveness indicators as published by the Regional Development Australia Institute, suggest that the Townsville and North West Region is ranked 50th out of Australia's 55 Regional Development Australia regions. The biggest area of advantage is institutions, where the region is ranked 8th out of 55 regions. Followed by innovation and business sophistication, 14th and 15th respectively. Figure 2, demonstrates the region's determinants affecting its regional competitiveness (Regional Development Australia Institute - Insight, 2013).

Figure 2:RDA Townsville and North West Region (Ranked 50 out of 55 for Regional Competitiveness)

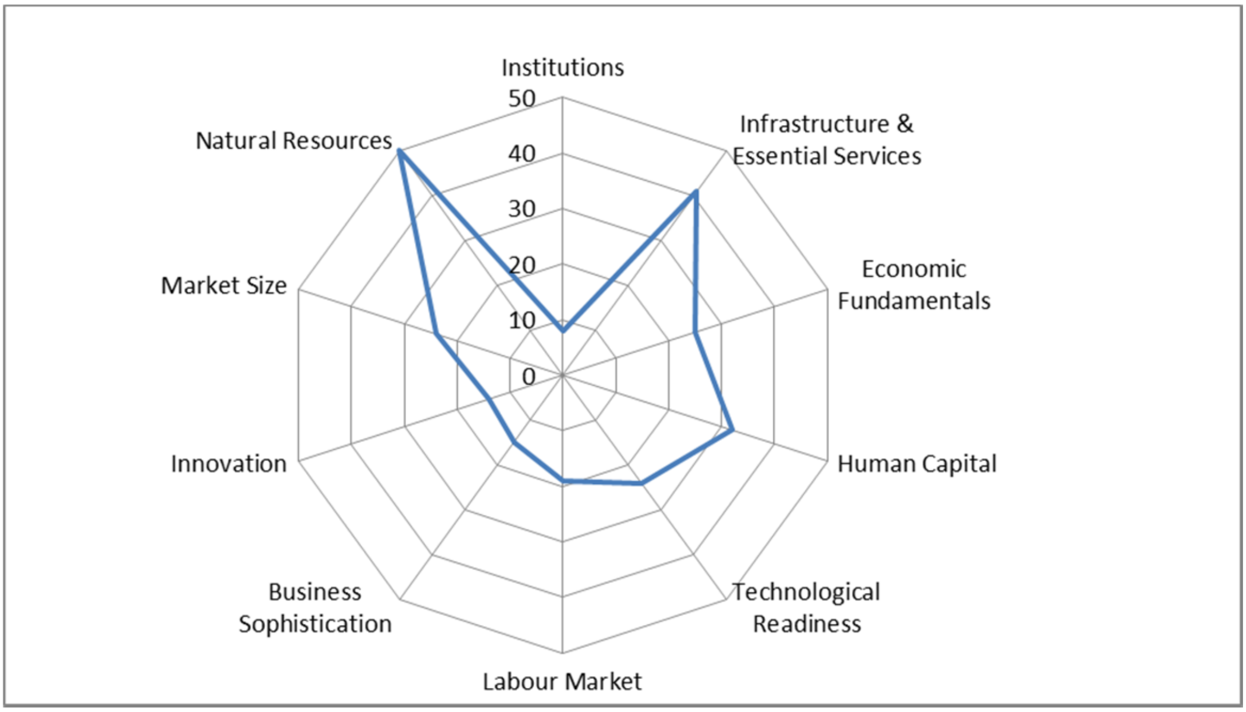


Figure 2, also demonstrates that the region as a whole is uncompetitive in the natural resources field and infrastructure and essential services.

1.2 KEY DETERMINANT ONE: HUMAN CAPITAL (EDUCATION AND SKILLS)

1.2.1 Human Capital

1.2.1.1 Child Care

The Australian Early Development Index (AEDI) measures young children's development across five domains: physical health and well-being; social competence; emotional maturity; school-based language and cognitive skills; and general knowledge. 2009 AEDI data indicated at a national level, 23.6 per cent of children were vulnerable on one or more domain and 11.8 per cent were vulnerable on two or more domains. The AEDI found that the AEDI community of Flinders had the lowest proportion of vulnerable children for the region, less than the national rates on both measures. However, except for Richmond, all other AEDI communities demonstrated vulnerability rates higher than the national averages on both measures. The AEDI communities of Burke, Carpentaria and Dalrymple had the highest proportions of vulnerable children (The Office of Regional Education, Skills and Jobs , July 2012).

Preliminary consultations undertaken by DEEWR with stakeholders in the region have revealed a degree of uncertainty in the early childhood education and care sector in light of legislative changes surrounding the National Quality Framework established in January 2012. The changes aim to raise the quality of care in the sector and to introduce continuous improvement frameworks. The industry will need to be responsive to potential outcomes such as current employees choosing to leave the sector rather than complete further education, and will need strategies to attract and retain new workers. There is a need to provide coordination and support to the sector as it transitions to the new arrangements (The Office of Regional Education, Skills and Jobs , July 2012).

As Table 1, the majority of child care services are located in Townsville, followed by Charters Towers – Ayr – Ingham areas. Community consultation suggests that there is a lack of childcare facilities in the Mount Isa region, not only in provision but offering flexible service to accommodate shift workers.

Table 1: Count of early childhood education and care services by type, by Local Government 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Family Day Care	Kindergartens	Long Day Care	School Aged Care	Limited Hours Care	Child Care and Family Support Hubs	Total early childhood education & care services
-Number-							
Boulia (S)	0	0	0	0	0	0	0
Burdekin (S)	1	3	6	0	0	0	10
Burke (S)	0	1	0	0	0	0	1
Carpentaria (S)	0	1	2	0	0	0	3
Charters Towers (R)	0	3	3	2	0	0	8
Cloncurry (S)	0	1	1	0	0	0	2
Doomadgee (S)	0	0	1	0	0	0	1
Flinders (S)	0	0	1	0	0	0	1
Hinchinbrook (S)	1	2	2	2	0	0	7
McKinlay (S)	0	0	1	0	0	0	1
Mornington (S)	0	0	0	0	0	0	0
Mount Isa (C)	1	6	4	3	0	1	15
Palm Island (S)	0	0	1	1	0	0	2
Richmond (S)	0	0	1	1	0	0	2
Townsville (C)	4	17	73	30	2	0	126
RDA – Tvl & NW Region	**7**	**34**	**96**	**39**	**2**	**1**	**179**
Queensland	100	461	1,372	692	42	10	2,677
RDA – Tvl & NW Region as % of Qld	7.0	7.4	7.0	5.6	4.8	10.0	6.7

1.2.1.2 Education and Schooling

According to the 2011 Census data, formal education levels in the Townsville and North West Queensland region as a whole remain below the State and National average benchmarks. 50.9% of residents aged over 15 years completed high school to Year 11 or 12. This compares to a state average of 55.3%. Of residents aged over 15 years, 13,927 have not completed education beyond Year 8. The Australian Government sees these figures as an opportunity to improve education attainment levels in the region (The Office of Regional Education, Skills and Jobs , July 2012).

Table 2: Number of persons of highest level of schooling per Local Government area, 2011

(Australian Government - Bureau of Statistics, 2013)

Local Government Area	Did not go to school, or Year 8 or below		Year 9 or 10 or equivalent		Year 11 or 12 or equivalent		Total (b)
	Number	%	Number	%	Number	%	Number
Boulia (S)	63	17.0	156	42.2	117	31.6	370
Burdekin (S)	1,639	12.4	5,254	39.8	5,113	38.7	13,213
Burke (S)	34	7.9	153	35.5	164	38.1	431
Carpentaria (S)	232	14.5	595	37.1	464	28.9	1,605
Charters Towers (R)	1,080	12.1	3,275	36.8	3,570	40.1	8,904
Cloncurry (S)	217	8.7	777	31.0	1,093	43.7	2,503
Doomadgee (S)	150	19.1	433	55.0	192	24.4	787
Flinders (S)	204	14.8	516	37.5	522	37.9	1,377
Hinchinbrook (S)	1,319	14.5	3,317	36.5	3,646	40.1	9,094
McKinlay (S)	67	7.6	276	31.3	414	47.0	881
Mornington (S)	144	19.9	305	42.2	250	34.6	722
Mount Isa (C)	938	6.0	4,587	29.4	7,384	47.4	15,588
Palm Island (S)	287	18.4	662	42.5	573	36.8	1,556
Richmond (S)	79	12.3	249	38.7	240	37.3	643
Townsville (C)	7,474	5.7	39,018	29.6	72,659	55.1	131,856
RDA – Tvl & NW Region	**13,927**	**7.3**	**59,573**	**31.4**	**96,401**	**50.9**	**189,530**
Queensland	219,102	6.6	977,116	29.4	1,836,995	55.3	3,320,761
RDA – Tvl & NW Region as % of Qld	6.4	-	6.1	-	5.2	-	5.7

According to the Office of Economic and Statistical Research, there were 44,847 school students in the region in 2009; 64.4 per cent attending a government school and 35.6 per cent attending a non- government school. The corresponding percentages for Queensland were 67.5 per cent and 32.5 per cent respectively. As of 2010 there are 142 schools identified across the region (Queensland Treasury and Trade – Government Statistician, 2013).

At the time of the 2006 Census there were 82,136 people aged 15 years and over who stated that Year 11 or 12 (or equivalent) was their highest level of schooling (46.4% of all people aged 15 years and over). This is similar to Queensland's average of 49.5 per cent. Townsville City had the highest proportion of people with Year 11 or Year 12 (or equivalent) as their highest level of schooling (50.8%). At the time of the 2011 Census, the region had 96,280 persons aged 15 years and over whose highest level of schooling was year 11 or 12 (or equivalent), representing 50.9 per cent of all persons aged 15 years and over (Queensland Treasury and Trade – Government Statistician, 2013). Over the 5 year period between Census information the percentage of persons aged 15 years and over whose highest level of schooling was year 11 or 12 (or equivalent) rose by 4.5%.

These statistics indicate that there is potential to raise education levels for people in the rural and more remote locations. In these more remote areas, students often must leave their community in order to attend boarding schools and complete Year 12 (The Office of Regional Education, Skills and Jobs , July 2012). Consultation outcomes in the Gulf and North West sub-regions show concern for the impact that the Queensland Governments decision to make Year 7 high school standard has meant that families have left the region as they feel that children are too young to attend boarding school at that age. This is combined with the issue that the number of state schools offering high school within rural centres has declined.

The 2010 Next Step Survey shows that Townsville and North West region high school graduates were less likely to enter university than the state average (31.2% compared to 36.1%). More than half of Year 12 graduates in the region left school with a vocational education and training (VET) qualification (55.8%), while 17.4 per cent were school-based apprentices or trainees. Those with a VET qualification had greatly improved rates of transition to employment-based training (24.1% compared to 7.5%). In comparison with state data, high school graduates from the region were more likely to be engaged in construction and twice as likely to be in mining (The Office of Regional Education, Skills and Jobs , July 2012).

1.2.1.3 Education Tertiary

The region has a presence of a large internationally recognised university with campus both in Townsville and Mount Isa. In 2011, James Cook University had 11,880 students studying the arts, business, creative arts, education, engineering, law, medicine and health sciences, science, information technology and social sciences at its largest campus of Townsville and 19 students at Mount Isa. These figures represent 60.5% and 0.1% of the university's total student population respectively. Of the domestic students studying at James Cook University 45.3% originated from the Northern Statistical Division. Following completion of studies 49.1% of graduates stayed within the region (James Cook University, 2013). The university also conducts internationally recognised research in areas such as marine sciences, biodiversity, tropical ecology and environments, global warming, tourism, and tropical medicine and public health care in under-served populations (The Office of Regional Education, Skills and Jobs , July 2012). Referring to

Table 3, the proportion of population with post school qualifications in the region has improved from 30% in 2001 to 38.9% in 2011. Though the region's proportion of population with post school qualifications has not been at as an improved rate compared to Queensland wide statistics.

Table 3: Post school qualifications by Local Government Area 2001 - 2011

(Australian Government - Bureau of Statistics, 2013)

	Proportion of Population (15 years and over) with a Post School Qualification	Proportion of Population (15 years and over) with a Post School Qualification	Proportion of Population (15 years and over) with a Post School Qualification
	%	%	%
Local Government	**2001**	**2006**	**2011**
Boulia (S)	0.22119	0.293269	0.280922
Burdekin (S)	0.248206	0.273907	0.314183
Burke (S)	0.425698	0.379759	0.419657
Carpentaria (S)	0.269559	0.283081	0.3094
Charters Towers (R)	0.234897	0.263505	0.30812
Cloncurry (S)	0.307318	0.358163	0.382719
Doomadgee (S)	0.07377	0.1125	0.199758
Flinders (S)	0.234245	0.258065	0.302905
Hinchinbrook (S)	0.242095	0.285655	0.327612
McKinlay (S)	0.324278	0.358506	0.371447
Mornington (S)	0.102339	0.146575	0.279799
Mount Isa (C)	0.324368	0.336839	0.37795
Palm Island (S)	0.078752	0.139241	0.212687
Richmond (S)	0.201733	0.257844	0.31407
Townsville (C)	0.322182	0.369666	0.41608
Townsville and North West Queensland	**0.301359**	**0.344029**	**0.38945**
Queensland	**0.316608**	**0.36791**	**0.425299**
Australia	**0.342672**	**0.389694**	**0.443882**

1.2.1.4 Education Vocational

TAFE institutes operate from various campuses located in Mount Isa, Burdekin, Charters Towers, Ingham and Palm Island, with major facilities in Townsville and a new Trade Training Centre.

Table 4 outlines the enrolment numbers per Local Government area throughout the region. The Barrier Reef Institute of TAFE is the major provider of VET for most of the region. It delivers over 200 training programs across a diverse range of community and industry areas, including mining, construction, health, tourism, hospitality, business and defence. Tec-NQ, formerly an Australian Technical College, offers VET programs to both industry and the community of Townsville with a focus on school-based apprenticeships. The Mount Isa Institute of TAFE services the North West part of the region and focuses on training to meet identified skill shortages in the mining, manufacturing, and building and construction industries. Some smaller registered training organisations offer training services to industry and the general public (The Office of Regional Education, Skills and Jobs , July 2012).

Table 4: VET student numbers by enrolment type by statistical area level 3 a) TVL and North West RDA Region, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Commencing Students		Continuing Students		Total (b)
	Number	%	Number	%	Number
Boulia (S)	26	74.3	8	22.9	35
Burdekin (S)	730	58.6	487	39.1	1,246
Burke (S)	13	68.4	6	31.6	19
Carpentaria (S)	150	64.9	81	35.1	231
Charters Towers (R)	610	65.5	315	33.8	932
Cloncurry (S)	167	47.0	187	52.7	355
Doomadgee (S)	96	69.6	41	29.7	138
Flinders (S)	67	46.9	66	46.2	143
Hinchinbrook (S)	944	70.0	404	29.9	1,349
McKinlay (S)	27	55.1	22	44.9	49
Mornington (S)	38	59.4	26	40.6	64
Mount Isa (C)	1,137	54.2	946	45.1	2,096
Palm Island (S)	0	. .	0	. .	0
Richmond (S)	38	50.0	38	50.0	76
Townsville (C)	8,878	66.2	4,514	33.7	13,412
RDA – Tvl & NW Region	**12,921**	**64.1**	**7,141**	**35.4**	**20,145**
Queensland	203,580	66.8	100,454	33.0	304,800
RDA – Tvl & NW Region as % of Qld	6.3	-	7.1	-	6.6

1.2.1.5 Education and Skills Strategies

In July 2012, the Regional Education, Skills and Job Plan Queensland – Townsville and North West 2012 – 2014 was launched (The Office of Regional Education, Skills and Jobs , July 2012). As of 1 July 2013, the Australian Government’s Remote Jobs and Communities Program will provide a more integrated and flexible approach, providing better participation and employment services for people living in remote areas of Australia. The new service will become the ‘one stop shop’ for people in remote Australia currently being assisted by Job Services Australia, Disability Employment Services, Indigenous Employment Program and the Community Development Employment Projects program.

Key education, skills and jobs challenges identified in the Regional Education, Skills and Job Plan Queensland – Townsville and North West 2012 – 2014 include:

- availability of suitably qualified staff to work in early childhood education and child care services within the region
- strengthening the coordination of services to ensure students successfully transition from school to further study, training and employment
- access to vocational and higher education services can be compromised by the isolation in rural and remote areas of the region
- the resources boom has created demand for workers in the mining and related support service industries, resulting in local industries losing staff to the high paying mining sector
- disadvantaged people, including those with a disability, youth, sole parents, the long-term unemployed and Indigenous Australians, face challenges in actively participating in, and benefiting from, the strong, diverse regional economy.

Skills Queensland are expecting that across Queensland there will be increasing competition for skilled labour due to the resources boom. Currently the mining and resources, construction, and health care and social assistance sectors currently face significant skills constraints across Queensland. This is reflective of the situation across the Townsville and North West region. The downturn in the housing construction and manufacturing sectors is exacerbating these constraints, as these sectors have traditionally trained many of the qualified skilled tradespeople available to other sectors. These factors are in turn placing pressure on the availability of skilled workers for other industries, such as agriculture. Meanwhile, the tight labour market threatens to constrain industry development for sectors such as tourism (Skills Queensland, 2012).

Statistics of employment by occupation (Table 5 and Figure 3) suggest that as a whole the region is under skilled in the areas of managers, clerical, administration and sales workers compared to the Queensland average.

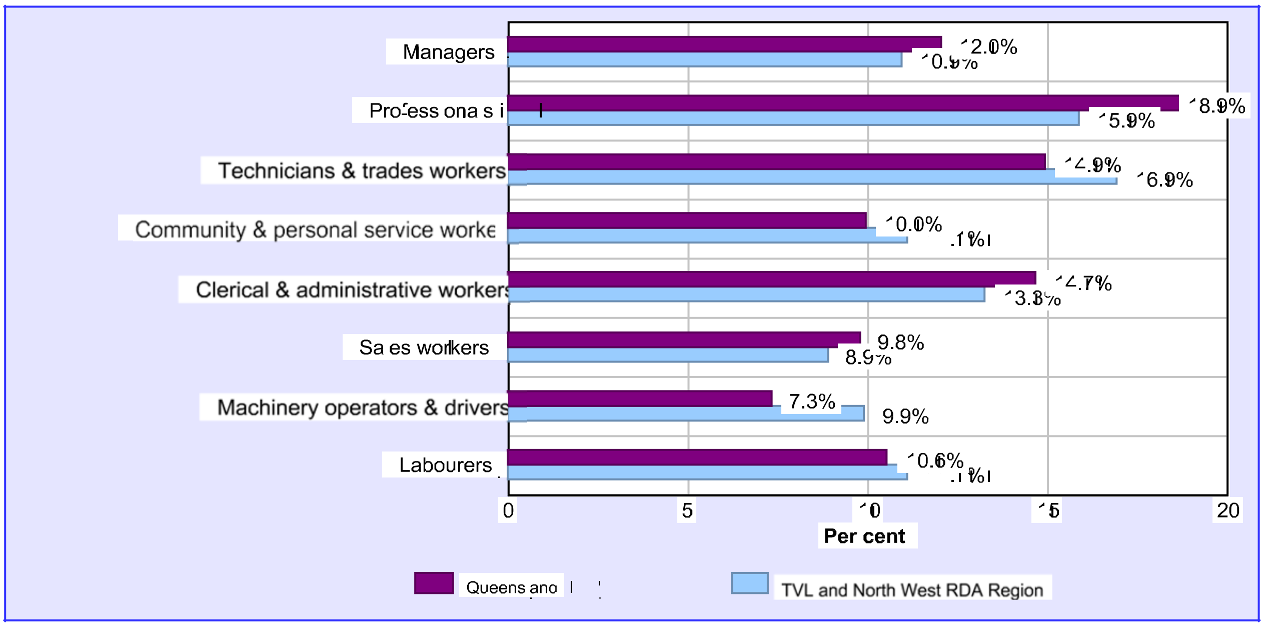
Table 5: Employment by occupation TVL and North West RDA Region, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Occupation	Tvl and North West RDA Region		Queensland		Specialisation ratio (c)
	Number	%	Number	%	Number
Managers	13,330	10.9	245,605	12.0	0.91
Professionals	19,329	15.9	385,583	18.9	0.84
Technicians & trades workers	20,620	16.9	304,564	14.9	1.13
Community & personal service workers	13,552	11.1	202,979	10.0	1.12
Clerical & administrative workers	16,147	13.3	299,326	14.7	0.90
Sales workers	10,826	8.9	199,633	9.8	0.91
Machinery operators & drivers	12,086	9.9	149,322	7.3	1.36
Labourers	13,552	11.1	215,236	10.6	1.05
Total (d)	121,749	100.0	2,039,278	100.0	1.00

Figure 3: Proportion of employment by occupation a) TVL and North West RDA Region and Queensland 2011

(Queensland Treasury and Trade - Government Statistician, 2013)



1.3 KEY DETERMINANT TWO: SUSTAINABLE (ECONOMICALLY, ENVIRONMENTALLY AND SOCIALLY) COMMUNITIES AND POPULATION GROWTH

1.3.1 Economic

1.3.1.1 Socio-Economic Disadvantage

The Index of Relative Socio-economic Disadvantage (IRSD) is a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area. Unlike the other indexes, this index includes only measures of relative disadvantage. A low score indicates relatively greater disadvantage in general. For example, an area could have a low score if there are (among other things), many households with low income, many people with no qualifications, or many people in low skill occupations. A high score indicates a relative lack of disadvantage in general. For example, an area may have a high score if there are (among other things), few households with low incomes, few people with no qualifications, and few people in low skilled occupations (Australian Bureau of Statistics, 2013).

Table 6, outlines the socio-economic index of disadvantage by Local Government areas throughout the region. As compared to Queensland wide statistics the region has a higher percentage of population in the quintile 2 (disadvantaged) and less percentage of population in quintiles 4 and 5 (least disadvantaged). The Indigenous Local Government areas of Palm Island, Doomadgee and Mornington Island experience nearly 100% of their population as being in quintile 1 (most disadvantaged).

Table 6: Socio-Economic Index of Disadvantage by Local Government area, 2011

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

Local Government Area	Quintile 1 (most disadvantaged)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (least disadvantaged)
	-percentage of population-				
Boulia (S)	48.3	51.7	0.0	0.0	0.0
Burdekin (S)	32.9	38.1	17.3	8.3	3.4
Burke (S)	38.8	61.2	0.0	0.0	0.0
Carpentaria (S)	87.4	0.0	12.6	0.0	0.0
Charters Towers (R)	43.1	35.1	15.8	4.3	1.7
Cloncurry (S)	36.6	26.6	36.7	0.0	0.0
Doomadgee (S)	97.8	2.2	0.0	0.0	0.0
Flinders (S)	53.3	0.0	27.0	19.7	0.0
Hinchinbrook (S)	32.6	37.5	23.7	6.2	0.0
McKinlay (S)	0.0	33.2	0.0	66.8	0.0
Mornington (S)	100.0	0.0	0.0	0.0	0.0
Mount Isa (C)	9.6	25.3	33.8	23.5	7.8
Palm Island (S)	100.0	0.0	0.0	0.0	0.0
Richmond (S)	27.4	34.6	38.0	0.0	0.0
Townsville (C)	13.4	28.2	19.7	15.8	23.0
RDA – Tvl & NW Region	**19.7**	**28.6**	**20.4**	**14.4**	**16.9**
Queensland	20.0	20.0	20.0	20.0	20.0

Table 7: Number of persons by total personal weekly income by Local Government area, 2011

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

Local Government Area	Less than $400 per week		$400 to $999 per week		$1,000 to $1,999 per week		$2,000 or more per week		Total (b)
	Number	%	Number	%	Number	%	Number	%	Number
Boulia (S)	126	34.2	147	39.9	51	13.9	11	3.0	368
Burdekin (S)	4,944	35.9	4,751	34.5	2,414	17.5	425	3.1	13,760
Burke (S)	72	16.5	137	31.4	91	20.8	46	10.5	437
Carpentaria (S)	468	28.9	542	33.5	255	15.8	45	2.8	1,617
Charters Towers (R)	3,686	39.2	2,655	28.3	1,614	17.2	427	4.5	9,397
Cloncurry (S)	579	22.6	595	23.2	684	26.7	294	11.5	2,564
Doomadgee (S)	517	65.0	189	23.8	59	7.4	9	1.1	795
Flinders (S)	496	35.1	431	30.5	255	18.0	53	3.7	1,414
Hinchinbrook (S)	3,861	40.6	3,245	34.1	1,408	14.8	270	2.8	9,520
McKinlay (S)	147	16.5	290	32.5	204	22.9	115	12.9	891
Mornington (S)	480	64.9	141	19.1	80	10.8	9	1.2	740
Mount Isa (C)	3,512	21.8	3,427	21.3	4,306	26.7	2,148	13.3	16,122
Palm Island (S)	1,060	66.1	393	24.5	102	6.4	8	0.5	1,604
Richmond (S)	195	30.1	263	40.6	86	13.3	28	4.3	647
Townsville (C)	41,942	30.5	42,618	31.0	33,259	24.2	7,017	5.1	137,631
RDA – Tvl & NW Region	**62,085**	**31.4**	**59,824**	**30.3**	**44,868**	**22.7**	**10,905**	**5.5**	**197,507**
Queensland	1,195,059	34.6	1,095,509	31.7	689,495	19.9	191,236	5.5	3,456,877
RDA – Tvl & NW Region as % of Qld	126	34.2	147	39.9	51	13.9	11	3.0	368

Table 8: Occupied private dwellings by tenure type by Local Government area, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Fully owned		Being purchased (b)		Rented (c)		Total (d)
	Number	%	Number	%	Number	%	Number
Boulia (S)	42	25.1	10	6.0	93	55.7	167
Burdekin (S)	2,665	41.1	1,766	27.2	1,823	28.1	6,491
Burke (S)	30	25.6	8	6.8	62	53.0	117
Carpentaria (S)	162	25.2	83	12.9	337	52.4	643
Charters Towers (R)	1,535	36.5	1,246	29.6	1,210	28.8	4,207
Cloncurry (S)	200	22.1	150	16.5	485	53.5	907
Doomadgee (S)	6	2.8	20	9.4	182	85.4	213
Flinders (S)	263	39.5	152	22.8	221	33.2	666
Hinchinbrook (S)	2,158	48.1	955	21.3	1,173	26.1	4,487
McKinlay (S)	128	42.7	47	15.7	98	32.7	300
Mornington (S)	0	0.0	3	1.2	234	94.4	248
Mount Isa (C)	1,165	18.2	2,162	33.8	2,801	43.8	6,399
Palm Island (S)	16	4.1	0	0.0	361	92.8	389
Richmond (S)	107	34.1	64	20.4	111	35.4	314
Townsville (C)	14,134	23.2	22,083	36.2	22,752	37.3	60,969
RDA – Tvl & NW Region	**22,611**	**26.1**	**28,749**	**33.2**	**31,943**	**36.9**	**86,517**
Queensland	448,617	29.0	533,868	34.5	513,415	33.2	1,547,303
RDA – Tvl & NW Region as % of Qld	5.0	-	5.4	-	6.2	-	5.6

1.3.1.2 Employment and Unemployment

The North West and Townsville region has a smaller unemployment rate of 4.5% as compared to 5.8% for Queensland. There is significantly higher unemployment rates (than that of Queensland wide) in the six Local Government areas of Boulia, Burke, Carpentaria, Doomadgee, Mornington, and Palm Island.

Table 9: Unemployment and labour force by Local Government area, December quarter 2012

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Unemployed	Labour Force	Unemployment Rate
	-number-		%
Boulia (S)	32	337	9.5
Burdekin (S)	393	10,238	3.8
Burke (S)	78	375	20.8
Carpentaria (S)	114	1,104	10.3
Charters Towers (R)	361	6,483	5.6
Cloncurry (S)	87	2,103	4.1
Doomadgee (S)	80	399	20.1
Flinders (S)	46	1,212	3.8
Hinchinbrook (S)	300	6,505	4.6
McKinlay (S)	8	718	1.1
Mornington (S)	64	494	13.0
Mount Isa (C)	733	12,159	6.0
Palm Island (S)	66	709	9.3
Richmond (S)	20	596	3.4
Townsville (C)	4,190	101,185	4.1
RDA – Tvl & NW Region	**6,572**	**144,617**	**4.5**
Queensland	143,637	2,480,728	5.8
RDA – Tvl & NW Region as % of Qld	4.6	5.8	-

Workforce participation rates have changed throughout the period 2001 – 2011. The majority of Local Governments have experienced a decline in workforce participation rates, these are Mount Isa, Mornington, McKinlay, Flinders, Doomadgee, Charters Towers, Carpentaria, Burke, Burdekin, and Boulia. There has been significant improvements in workforce participation rates on Palm Island and slight improvements in the local government areas of Townsville and Richmond (Table 10).

Table 10: Workforce Participation Rate per Local Government, 2001, 2006, 2011

(Australian Government - Bureau of Statistics, 2013)

	Participation Rate 2001	Participation Rate 2006	Participation Rate 2011
	%	%	%
Region Name	**2001**	**2006**	**2011**
Boulia (S)	78.47358	70.79208	64.83516
Burdekin (S)	61.89908	59.42125	59.23028
Burke (S)	70.13575	62.38185	60.1735
Carpentaria (S)	47.10337	45.54974	44.23653
Charters Towers (R)	57.76888	56.45954	55.7794
Cloncurry (S)	65.30718	71.50504	65.64448
Doomadgee (S)	53.78151	47.96238	47.99026
Flinders (S)	66.50602	66.34304	60.08429
Hinchinbrook (S)	54.51593	53.56884	54.7087
McKinlay (S)	79.60583	79.03226	69.05859
Mornington (S)	58.35777	56.88456	48.43554
Mount Isa (C)	69.00313	64.03437	64.23553
Palm Island (S)	31.7401	44.65558	52.64798
Richmond (S)	65.18905	66.06648	66.32258
Townsville (C)	64.49508	64.39523	65.29279
Townsville and North West Queensland	63.40941	62.80038	63.28067
Queensland	60.55803	61.08482	62.17507
Australia	60.30457	60.35896	61.38357

As compared to Queensland there is a larger percentage of employed in the agricultural, mining, electricity, public administration and education and training industries.

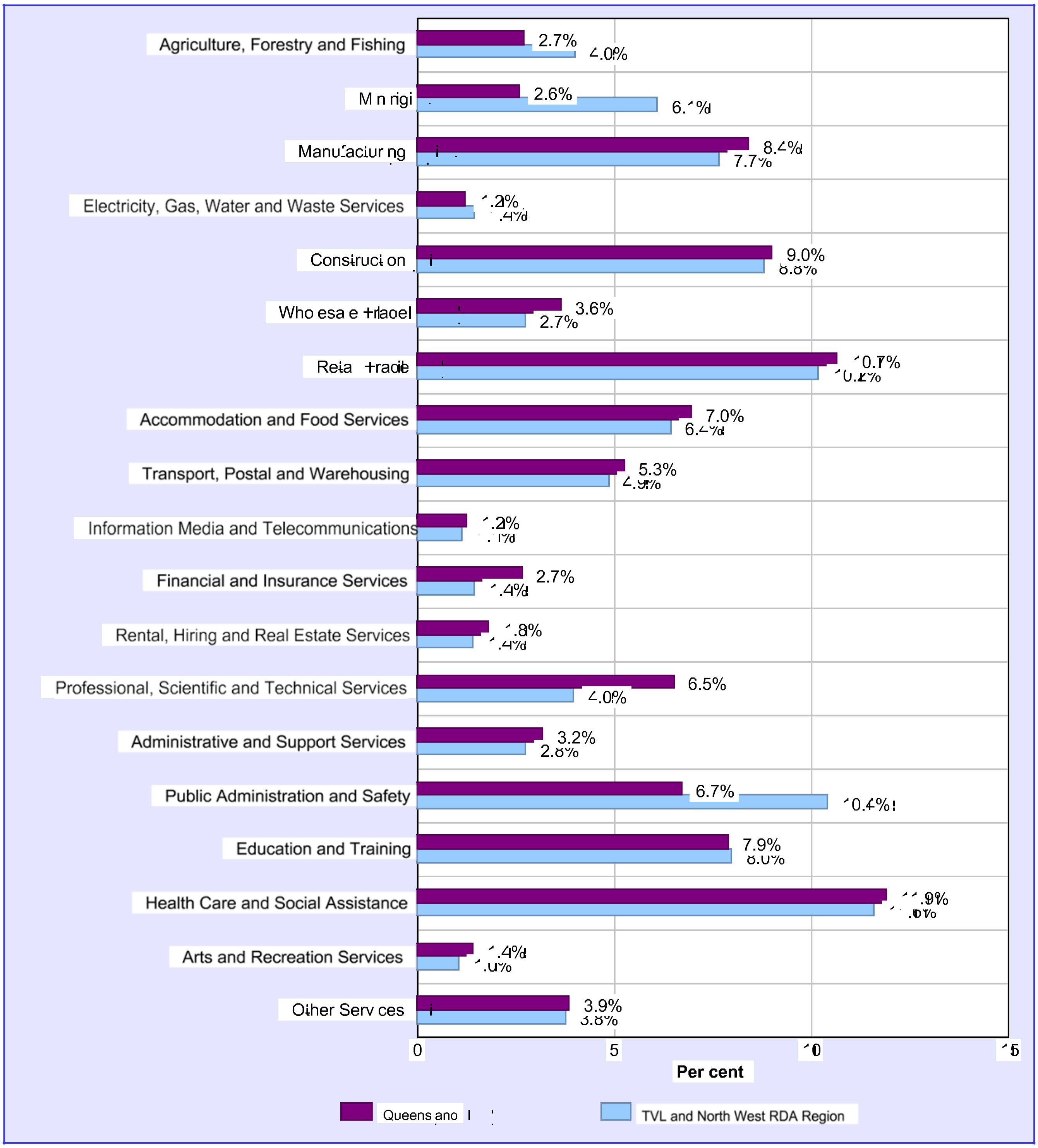
Table 11: Employment by industry Townsville and North West RDA Region, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Industry	Tvl and North West RDA Region		Queensland		Specialisation
	Number	%	Number	%	Number
Agriculture, Forestry and Fishing	4,882	4.0	55,416	2.7	1.48
Mining	7,430	6.1	52,955	2.6	2.35
Manufacturing	9,333	7.7	171,669	8.4	0.91
Electricity, Gas, Water and Waste Services	1,748	1.4	24,828	1.2	1.18
Construction	10,731	8.8	183,780	9.0	0.98
Wholesale Trade	3,344	2.7	74,288	3.6	0.75
Retail Trade	12,401	10.2	217,610	10.7	0.95
Accommodation and Food Services	7,828	6.4	141,855	7.0	0.92
Transport, Postal and Warehousing	5,910	4.9	107,072	5.3	0.92
Information Media and Telecommunications	1,378	1.1	25,358	1.2	0.91
Financial and Insurance Services	1,760	1.4	54,153	2.7	0.54
Rental, Hiring and Real Estate Services	1,715	1.4	37,007	1.8	0.78
Professional, Scientific and Technical Services	4,846	4.0	132,754	6.5	0.61
Administrative and Support Services	3,367	2.8	65,015	3.2	0.87
Public Administration and Safety	12,670	10.4	136,818	6.7	1.55
Education and Training	9,731	8.0	160,921	7.9	1.01
Health Care and Social Assistance	14,108	11.6	242,559	11.9	0.97
Arts and Recreation Services	1,273	1.0	28,444	1.4	0.75
Other Services	4,575	3.8	78,713	3.9	0.97
Total (d)	**121,749**	**100.0**	**2,039,275**	**100.0**	**1.00**

Figure 4: Proportion of employment by industry a) TVL and North West RDA Region and Queensland, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)



1.3.1.3 Priority Employment Areas

The Townsville and North West Region covers two priority employment areas (PEA) as defined by DEEWR (Department of Education, Employment and Workplace Relations, 2013).

(a) Townsville Priority Employment Area

The Townsville PEA includes the LGAs of Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville and has a working age population of 153,000 (Australian Government - Bureau of Statistics, 2013).

The unemployment rate for the Townsville PEA in December 2012 was 4.2 per cent, well below that for the state (5.8 per cent). Unemployment rates across the PEA ranged from a low of 3.8 per cent in the Burdekin Local Government Area (LGA), to a high of 9.3 per cent in the Palm Island LGA (Department of Education, Employment and Workplace Relations, 2012).

Despite the relatively low unemployment rate in the region, total employment declined by 8,700 in the Northern-North West Labour Force Region (LFR) (Department of Education, Employment and Workplace Relations, 2012) in the two years to May 2013. Over the same period, the participation rate also decreased from 76.4 per cent to 69.6 per cent (Australian Government - Bureau of Statistics, 2013).

The largest employing industries for people living in the Townsville PEA are Health Care and Social Assistance (12 per cent of all employment), Public Administration and Safety (11 per cent), and Retail Trade (11 per cent). Growth in employment between 2006 and 2011 was highest in the Health Care and Social Assistance and Construction industries, while employment fell significantly in the Agriculture, Forestry and Fishing industry. (Australian Government - Bureau of Statistics, 2013)

While the unemployment rate in the Townsville PEA has remained lower than that for the state and the other PEAs for much of the last five years, labour market conditions have moderated in the past two years and there are some signs of weakness in the region.

Overall employment and the labour force participation rate have declined in the last two years indicating that the labour market has softened;

There are also pockets of disadvantage within the Townsville PEA, with the Indigenous population in particular experiencing poorer labour market outcomes;

The survey results show a reduction in recruitment activity, although the level of recruitment is still in line with the average for all regions surveyed;

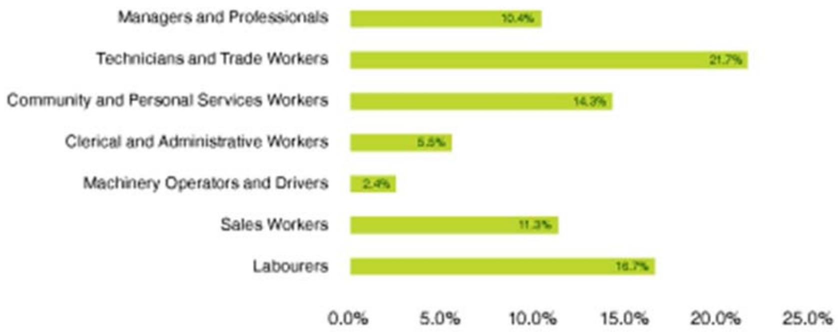
Since the last survey in November 2011, competition for vacancies has increased and the unfilled vacancy rate has decreased significantly, particularly for Technicians and Trades Workers, indicating that past skill shortages are easing;

While future recruitment expectations have softened since November 2011, there will be a range of employment opportunities, in both higher and lower skilled occupations, in the coming year.

A Survey of Employers’ Recruitment Experiences conducted by Department of Education, Employment and Workplace Relations (DEEWR) in November 2011, highlighted the positions that are the most difficult to fill within the Burdekin, Charters Towers, Hinchinbrook, Palm Island and Townsville. The most common positions included: Motor Mechanics, Child Carers, Electricians, Chefs, Registered Nurses and Metal Fitters and Machinists (Figure 5) (Move to Townsville, 2013).

Figure 5: Proportion of Unfilled Vacancies

(Move to Townsville, 2013)



At the time of the 2011 Census, 7 per cent of the working age population in the Townsville PEA identified as Indigenous (3 per cent for Queensland overall). A significantly lower proportion of the Indigenous working age population (44 per cent) in the Townsville PEA were employed compared with the non-Indigenous working age population (77 per cent).

Despite the apparent easing of skill shortages in the area, many surveyed employers still reported recruitment difficulty and that a majority of job applicants were unsuitable. Applicants were mostly considered unsuitable due to a lack of qualifications and experience. Increasing opportunities for apprenticeships, traineeships and work experience in the region may help to address this concern and assist with future skilled labour supply.

(b) Mount Isa Employment Service Area (ESA)

As at June 2011, the unemployment rate for the Mt Isa ESA was 5.4 per cent, similar to the Australian rate of 5.1 per cent. Several Statistical Local Areas (SLAs) within Mt Isa had much lower unemployment rates, such as Cloncurry (4.1 per cent), Longreach (2.9 per cent) and Barcaldine (2.6 per cent). Other SLAs had high unemployment rates such as Burke (17.6 per cent), Doomadgee (17.1 per cent), Mornington (12.1 per cent) and Carpentaria (11.3 per cent) (Department of Education, Employment and Workplace Relations, 2011). Issues identified in the Mount Isa Service area are:

Educational attainment is very low among Indigenous people in the Mt Isa ESA, with 21 per cent having completed year 12 or equivalent at the time of the 2006 Census, compared with 42 per cent among non-Indigenous people.6 Similarly, the unemployment rate for Indigenous people in the Mt Isa ESA (12.4 per cent) was five times higher than the non- Indigenous unemployment rate (2.4 per cent).

The Mt Isa ESA is dominated by the Mining industry, particularly the Xstrata zinc mines operating in the region, and the cattle industry. Almost one third (31 per cent) of the working age population is employed in these two trade-exposed industries. Significant challenges for the region are managing the 'boom and bust' nature of these primary production industries in a way that complements other industries in the region, as well diversifying industry to achieve more balanced economic growth.

Net population growth in the Mt Isa ESA has been almost non-existent when compared with the Australian average. Total population growth between 2005 and 2010 was 1.5 per cent, compared with 9.5 per cent for Australia over the same period. The increase in the working age population in Mt Isa over the same period was 0.7 per cent.9 Strong job growth in the Queensland Mining industry10 has not translated into population growth in the ESA, as there are a large number of non-resident workers who live in on-site worker villages or who live in temporary or leased accommodation and are not included in ABS resident population estimates. This varies by region. Most mining jobs in Cloncurry and McKinlay were filled by non-resident workers (83 per cent and 99 per cent respectively), yet non-resident workers accounted for a small minority (16 per cent) of mining jobs in Mt Isa.

Despite strong growth in the Mining industry, there is a shortage of affordable and/or adequate housing in Mt Isa, as well as an inadequate provision of infrastructure and social services, partly as a result of the transient/non-resident workforce and fluctuating population. This is a significant barrier to attracting and retaining staff in the region.

Opportunities for job seekers may exist for occupations with high unfill rates, high recruitment difficulty and low numbers of (suitable) applicants, such as:

- Labourers (namely Commercial Cleaners, Livestock Farm Workers and Motor Vehicle Parts and Accessories Fitters); and
- Technicians and Trades Workers (particularly Motor Mechanics, Metal Fitters and Machinists, Chefs and Cooks).

Opportunities may become available in the industries that are expecting a high level of future recruitment and with occupations difficult to fill, namely Accommodation and Food Services (Chefs, Commercial Cleaners, Bar Attendants and Baristas) and Other Services (Motor Mechanics, Metal Fitters and Machinists).

A small labour force, minimal population growth and lack of affordable accommodation means that employers may need to look to people not currently in the labour force to fill their labour needs. Opportunities exist in entry-level occupations (namely Sales Workers and Labourers) which could provide entry into the labour market for job seekers with little or no experience in the labour market, such as young people, mature aged people, parents returning to the labour force and Indigenous job seekers.

One of the main reasons applicants were deemed unsuitable was a lack of experience. Support for work experience programs, work readiness skills and support for apprentices and trainees could provide job seekers with the skills that employers are seeking.

Support for employers with apprentices and trainees could help increase the stock of skilled workers in the Mt Isa ESA, especially in difficult to fill occupations.

1.3.2 Environmental

1.3.2.1 Climate Change

The Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (2013) outlines that there will be potential impacts and costs to Queensland's industries, infrastructure, environment and people from climate change. Key impacts for the Townsville and North West region could include:

- Populated coastal communities are likely to be inundated from a sea level rise of 1.1 metres, this will not only impact on residential housing, but also roads, railways and commercial buildings.
- Rainfall variability across the state, combined with an increase in average temperate and evaporation rates may impact regional water supplies due to less surface water availability for water catchments and dams.
- Projections of an increase in the proportion of tropical cyclones in the more intense categories (3–5), yet overall a decrease in the number of cyclones. There is also a projection for tropical cyclones to move southward as sea surface temperatures increase. A greater intensity in tropical cyclones could result in damage to infrastructure and a decline in agricultural production. It is estimated that Cyclone Larry, a category 4 cyclone in 2006 resulted in a loss of $500 million to the economy.
- Extreme rainfall intensity to increase, leading to more flooding impacts.
- Impacts on the Great Barrier Reef Marine Park where the sea surface temperatures across the Great Barrier Reef have increased by 0.4 degrees in the past 30 years and increasing atmospheric carbon dioxide has also resulted in an increase in ocean acidity. This climate change has caused a number of coral bleaching events and could significantly impact on the economic value that the Great Barrier Reef provides to Queensland.
- The agricultural sectors of sugar and beef production will most be affected by climate change. With an estimated decline in production of 11.9% and 19% respectively by 2030 across Queensland.

Further there is expected to be significant public health risk with mosquitoes likely to spread, with a high likelihood of dengue fever ranging over a wider area (Hugo, 2012).

(a) Sub–Regional: North West Climate Change

Queensland's North West area is forecasted (on a medium emissions scenario) to experience the following by 2030: (Queensland Department of Environment and Heritage Protection, 2009)

- The annual mean temperature (the average of all daily temperatures within a given year) is projected to increase by 1.1 °C. There is little variation in projections across the seasons.
- Annual rainfall (the total rainfall received within a given year) is projected to decrease by two per cent (-11 mm). The largest seasonal decrease of seven per cent (-5 mm) is projected for spring.

- Across all seasons the annual 'best estimate' increase in annual and seasonal potential evaporation is projected to be around three per cent (83 mm), with some models projecting up to a six per cent increase in winter (29 mm).
- More extreme climate events, such as cyclonic weather and duration of heat waves to increase.

These projected temperature increases and reduced rainfall are most likely to affect communities within the area dependant on agriculture and tourism. There will also be greater energy demands to cater for the increasing temperatures and heat waves.

(b) Sub–Regional: Coastal North Queensland Climate Change

Queensland's coastal North Queensland area (incorporating Townsville, Charters Towers, Hinchinbrook and Burdekin Local Government areas) is forecasted (on a medium emissions scenario) to experience the following by 2030: (Queensland Department of Environment and Heritage Protection, 2009)

- The annual mean temperature (average of all daily temperatures within a given year) is projected to increase by 0.9 °C. There is little variation in projections across the seasons.
- The annual rainfall (the total rainfall received within a given year) is projected to decrease by two per cent (-16 mm). The largest seasonal decrease of seven per cent (-8 mm) is projected for spring.
- Across all seasons the annual 'best estimate' increase in annual and seasonal potential evaporation is projected to be around 3–4 per cent (61–81 mm), with some models projecting up to a six per cent increase in winter (21 mm) and autumn (27 mm).

Climate change is likely to impact on the area's agricultural, horticultural and tourism activities due to (Queensland Department of Environment and Heritage Protection, 2009):

- Sea surface temperature increases combined with increasing concentrations of carbon dioxide are leading to more regular occurrences of the coral bleaching in the Great Barrier Reef.
- Inundation from higher sea levels and storm surges causing damage to infrastructure and natural eco-systems.
- Health related problems due to temperature increases and exposure to catastrophic events.
- Longer duration of heatwaves can result in significant health impacts for the very young or old.
- Tropical diseases such as Ross River virus are expected to increase under climate change.
- Higher temperatures could exacerbate problems such as poor pasture quality. Thermal stress for animals is very likely also, reducing animal production, reproductive performance and increase mortality.

- Less rainfall and increasing evaporation will also deplete soil moisture, ground cover and stock carrying capacity.
- Tropical weeds may increase in abundance.

(c) Sub–Regional: Gulf Area Climate Change

Queensland's Gulf area is forecasted (on a medium emissions scenario) to experience the following by 2030 (Queensland Department of Environment and Heritage Protection, 2009):

- An annual mean temperature (the average of all daily temperatures within a given year) is projected to increase by 1.0 °C. There is little variation in projections across the seasons.
- Annual rainfall (the total rainfall received within a given year) is projected to decrease by one per cent (-9 mm). The largest seasonal decrease of six per cent (-5 mm) is projected for spring.
- Across all seasons the annual 'best estimate' annual and seasonal potential evaporation is projected to increase to be around three per cent (76 mm), with some models projecting up to a six per cent increase in winter (32 mm).

Climate change is expected to most impact the area local agricultural and fishing industries. Other impacts to the area are:

- Increased occurrence of tropical diseases such as the Ross River Virus, dengue fever and malaria.
- Increases in extreme storm events causing more cyclone damage and closest to the coast these storm events could cause, flash flooding, wind damage and considerable structural damage from falling trees, affecting industry and infrastructure including water, sewerage and stormwater, transport and communications.

1.3.2.2 Renewable Energy Sources

In 2008, renewable energy accounted for approximately 6 per cent or almost 750 megawatts of Queensland's total installed generating capacity of more than 12,500 megawatts (including solar hot water systems). Biomass co-generation (primarily from bagasse) is the major renewable energy source in Queensland and provides 415 megawatts of the state's renewable energy capacity. Hydroelectricity provides 169 megawatts and solar hot water systems around 144 megawatts. Wind, solar photovoltaic and geothermal sources provide only small amounts of electricity (Department of Employment, Economic Development and Innovation, 2009).

As of 2008, within the Townsville and North West Region there were the following identified renewable energy projects:

Renewable Energy Source	Project	Energy Generated	Status
Solar	Proposed Cloncurry Solar Thermal Plant	10MW	
	Townsville Solar City Project	0.5MW	The project has incorporated a range of initiatives to reduce wasteful energy usage, increase solar energy usage and cut greenhouse gas emissions by more than 50,000 tonnes (Townsville Queensland Solar City Project, 2013).
Hydro	Proposed Burdekin Falls Dam Hydroelectric Project	30MW	
Biomass – Sewerage Methane	Townsville	0.27MW	
Biomass – Bagasse	Macknade	3MW	
	Victor	50MW	
	Pioneer	7.2MW	
	Kalamia	9MW	
	Inkerman	12MW	

A lack of industry clarity on issues relating to land planning, native title, land tenure and environmental, noise and visual impacts has the potential to hinder renewable energy developments in Queensland. In addition, regulatory issues regarding transmission and connection to the grid have been identified as serious impediments. As many of these network issues are regulated through the National Electricity Rules, Queensland will position itself to take a leadership role to influence the continued development of the national regulatory framework (Department of Employment, Economic Development and Innovation, 2009).

Queensland also faces unique challenges as a result of its vast geographic area and highly decentralised population, particularly in regard to ensuring cost-effective and reliable supply of electricity to remote and sparsely populated regions. Renewable energy will play a key role in addressing all of these challenges (Department of Employment, Economic Development and Innovation, 2009).

Renewable energy generation projects will positively stimulate regional economies as a result of new investment and the provision of direct and indirect infrastructure and service delivery (Department of Employment, Economic Development and Innovation, 2009).

The renewable energy sector and the transition to a green economy will drive productivity and economic growth which means new jobs and new investment (Department of Employment, Economic Development and Innovation, 2009).

Renewable energy technology will be a fundamental component of industry's climate change response. A critical mass of research and development expertise in Queensland will create new investment opportunities and develop knowledge based export markets (Department of Employment, Economic Development and Innovation, 2009).

1.3.2.3 Natural Resources

The region has a significant natural resource base, which many industries within the region rely on for productivity. That is, this natural resource base provides the basis for the region to have a comparative advantage and business competitiveness.

The large span of land covered by the Townsville and North West Queensland Region is endowed with many natural assets. The region has a number of national parks, many of which are situated on traditional Indigenous Australians' lands and some are heritage listed. National parks in the region include: Bowling Green Bay, Boodjamulla National Park, Cape Pallarenda Conservation Park, Combo Waterhole Conservation Park, Camooweal Caves National Park, White Mountains, Paluma Range, Hinchinbrook Island and Magnetic Island National Park. A diverse variety of landscapes are represented in the region's national parks, from coral reefs, dry tropical savannahs, wet tropics and mountains to sandstone uplands.

The Great Barrier Reef runs along the coastline of North Eastern Australia, including Townsville and surrounding areas. The Great Barrier Reef was listed as a World Heritage site in 1981 and is home to over 1,500 species of fish, 4,000 species of molluscs, 400 species of sponge and 300 species of hard corals. The Great Barrier Reef is a popular tourist destination due to its uniqueness and beauty .

According to the Great Barrier Reef Marine Park Authority (GBRMPA), between July 1993 and November 2009, the area attracted an average of 55,828 tourists per month in the Townsville/Whitsunday area, although most of this activity is in the Whitsundays (outside of the Townsville and North West Queensland Region), with distance to the reef from Townsville constraining its use for tourism.

The Great Barrier Reef Marine Park contributed an estimated $5.4 billion to Australia's economy in 2006-07, largely through a thriving tourism industry and commercial and recreational fishing. It was also responsible for providing full time employment for approximately 53,800 people in Australia. (The Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education , 2013)

1.3.2.4 Land

The majority of land tenure in the region is leasehold (Queensland Government - State Development, Infrastructure and Industry Committee, May 2013) (refer to

Figure 6). Leases and licenses are granted over State land for specific purposes, including grazing, agriculture, industry and tourism. They are subject to a range of conditions to ensure they are managed appropriately. Additional requirements for rural leasehold land are detailed in the State Rural Leasehold Land Strategy (Queensland Government , 2013).

Native title has been extinguished at law in large parts of south-eastern Queensland, yet native title exists in large parts of north and west Queensland – much of this area is likely to be Crown land, or covered by pastoral leases or other tenures that never completely extinguished native title.

The CSIRO publication “Land Tenure in Northern Australia: Opportunties and Challenges for Investment” suggests three avenues by which impediments posed by land tenure to investment into Northern Queensland might be overcome:

- Increase consistency and reduce complexity through improved tenure arrangements.
- Improve development assessment.
- Improve landscape-scale planning (CSIRO, June 2013).

Figure 6: Land tenured under lease arrangements, Queensland

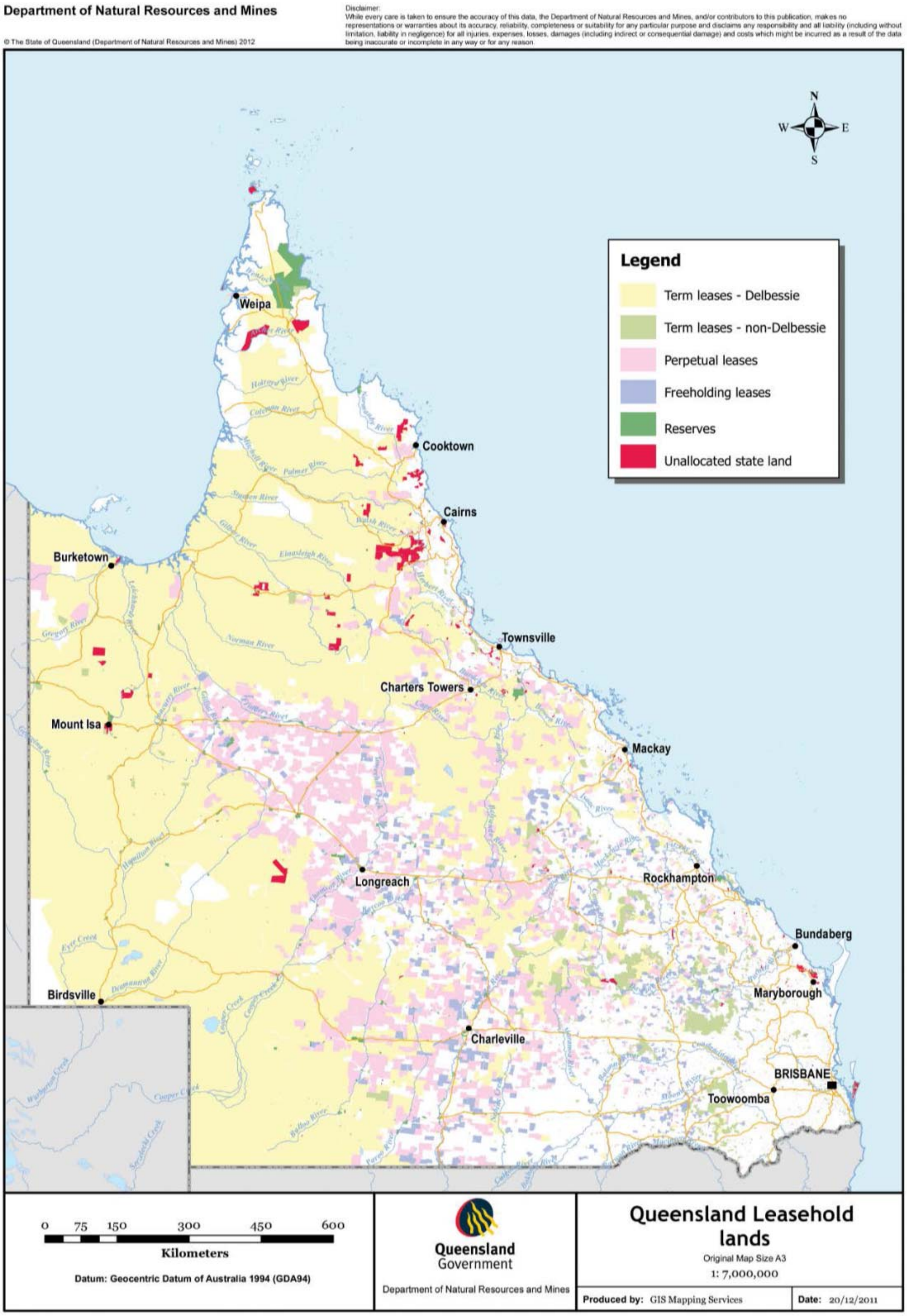


Table 12: Protected areas - park and forest estate by Local Government area, TVL and North West RDA Region, 2010

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	National Park (e)	State Forest	Timber Reserve	Forest Reserve	Total
	-area (km2)-				
Boulia (S)	0.0	0.0	0.0	0.0	0.0
Burdekin (S)	217.7	0.0	0.0	0.0	217.7
Burke (S)	1,555.2	0.0	0.0	0.0	1,555.2
Carpentaria (S)	1,509.6	0.0	0.0	0.0	1,509.6
Charters Towers (R)	1,501.4	65.6	0.0	<0.1	1,567.0
Cloncurry (S)	0.0	0.0	0.0	0.0	0.0
Doomadgee (S)	0.0	0.0	0.0	0.0	0.0
Flinders (S)	984.3	0.0	0.0	0.0	984.3
Hinchinbrook (S)	804.7	125.7	0.0	63.0	993.5
McKinlay (S)	0.2	0.0	0.0	0.0	0.2
Mornington (S)	0.0	0.0	0.0	0.0	0.0
Mount Isa (C)	2,401.9	0.0	78.2	0.0	2,480.1
Palm Island (S)	0.0	0.0	0.0	0.0	0.0
Richmond (S)	0.0	0.0	0.0	0.0	0.0
Townsville (C)	810.1	82.6	0.0	78.0	970.7
RDA - TVL and NW Region	**9,785.2**	**273.9**	**78.2**	**141.1**	**10,278.3**
Queensland	87,394.4	29,837.0	662.9	1,933.3	119,827.6
RDA - TVL and NW Region as % of Queensland	11.2	0.9	11.8	7.3	8.6

1.3.2.5 Minerals

Queensland is one of the world's largest producers of lead, zinc and silver and Australia's leading copper, lead, silver and zinc producer, the second-largest bauxite producer and the third-largest gold producer (Department of Agriculture Fisheries and Forestry, 2012).

The North West Minerals Province is a world-class ore resource area containing an estimated 75% of Queensland's total metal resources and covers an approximate area of 312,155 kilometres2 (Department of Infrastructure and Planning, 2010). The North West Queensland Mineral Province dominates base metal production and is a major gold and phosphate rock producer. Whilst the North Queensland area is also a leading mineral province and an important producer of bauxite, silica sand, base metals, gold and, more recently, tungsten (Department of Agriculture Fisheries and Forestry, 2012).

In north-west Queensland, mines under development are Xstrata Zinc's Lady Loretta zinc–lead–silver mine, Cudeco's Rocklands copper mine and Ivanhoe's high-grade Merlin molybdenum– rhenium mine. Minmetals Resources Limited aims to develop the Dugald River zinc–lead–silver mine by 2014. Cannington has the potential to be expanded by BHP Billiton with an extended mine life of 20 years. Several companies have discovered rare earth elements including Krucible Metals at the Korella phosphate prospect, and Chinalco Yunnan Copper Resources Limited at Elaine, the latter associated with polymetallic massive sulphides (Department of Agriculture Fisheries and Forestry, 2012).

In north Queensland, the Wolfram Camp and Mount Carbine tungsten mines have been reopened respectively by Deutsche Rohstoff and Carbine Tungsten Limited and the Silver Hill gold– silver–copper deposit is being developed by Evolution

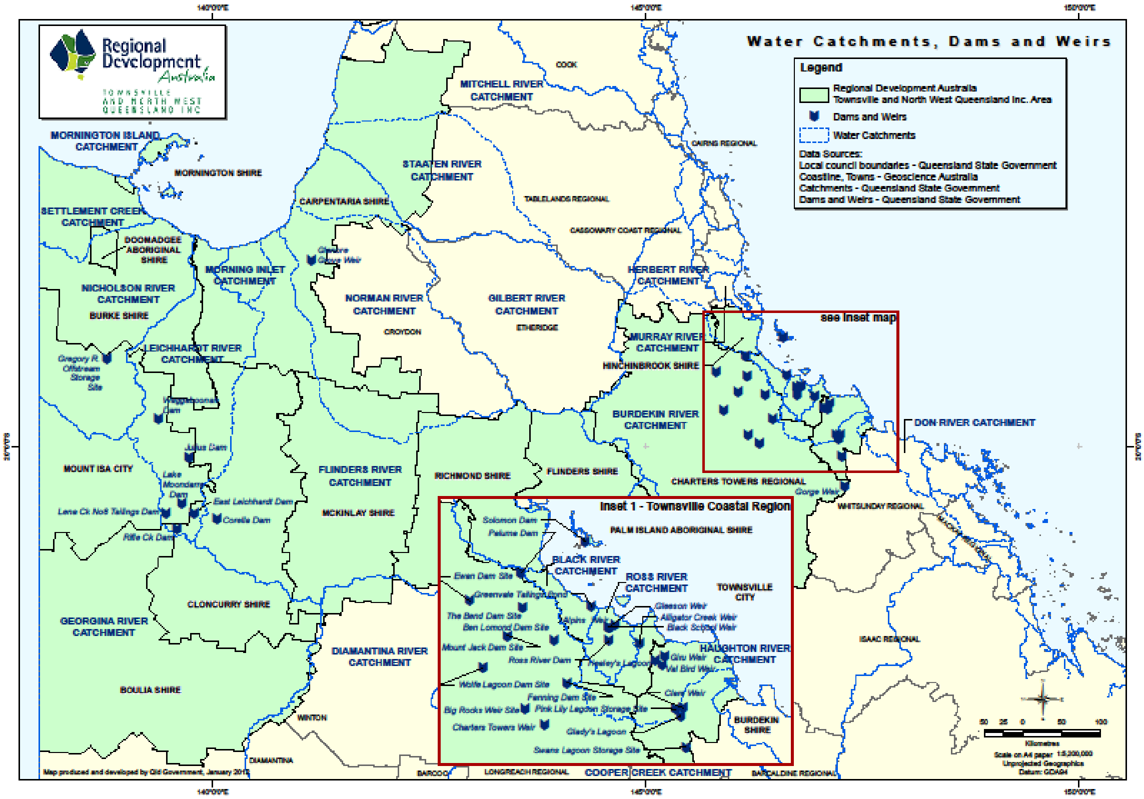
Mining Limited. Resolute Mining Limited has had encouraging results from the Welcome breccia, which has the potential to extend the Ravenswood gold mine. The Red Dome/Mungana gold-dominant deposit is being evaluated by Mungana Goldmines Limited under an agreement with Kagara Limited, a company that placed many high-quality assets in care and maintenance, following the appointment of voluntary administrators (Department of Agriculture Fisheries and Forestry, 2012).

Renewed interest in uranium as an energy source since 2005 saw a revival of interest in exploring for uranium in Queensland. Exploration should be enhanced by the new policy and may facilitate uranium projects reaching feasibility stage in the near future. The resource potential for uranium in Queensland totals 165.95 million tonnes of ore with total U3O8 content of 107,000 tonnes (Department of Natural Resources and Mines, 2013). The known uranium deposits in Queensland are hosted mainly by rocks belonging to two age groups: the Proterozoic and the Late Devonian–early Carboniferous. About 70% (281 deposits) occur within or adjacent to Proterozoic rocks. The majority of these deposits occur in the Mount Isa Inlier, and the remainder in the Georgetown Inlier (Department of Natural Resources and Mines, 2013).

1.3.2.6 Water

The northern headwaters of the Lake Eyre Basin are contained within the Townsville and North-West Region. The eastern coastal area is within the Burdekin Catchment. The Gulf area includes flows from the Settlement Creek, Nicholson River, Leichhardt River, Morning Inlet, Norman River, Gilbert River, Staaten River and Mitchell River Catchments. Management of regional water infrastructure is through Local Governments, Sunwater and private interests.

Figure 7: Water Catchments, Dams and Weirs in Townsville and North West RDA Region



Currently between 2000 – 3000 hectares of land is irrigated in the Flinders and Richmond Shires utilising off-stream storages and direct irrigation from watercourses. Potential exists for the development of off-stream water storage for agriculture in McKinlay, Flinders and Richmond Shires (Department of Infrastructure and Planning, 2010).

Table 13: Major Storages Located in North West Queensland

(Queensland Department of Environment and Resource Management, 2012)

Storage	Catchment	Storage Catchment Storage capacity (ML)	Entitlement (ML/a)	Utilisation
Julius Dam (WSS)	Leichhardt River	107 500	48 850 (high priority)	Urban—Mount Isa and Cloncurry/ mining and industrial
Moondarra Dam (WSS)	Leichhardt River	106 833	26 300 (medium priority)	Urban—Mount Isa/ mining and industrial
Lake Waggaboonya	Greenstone Creek	13 570	3953	Mining
Lake Mary Kathleen (East Leichhardt Dam)	East Leichhardt River	11 400	1100b	Unallocated water reserved under the Gulf WRP—Strategic Reserve
Rifle Creek Dam	Leichhardt River	9488	1500	PowerStation
Lake Corella (Corella Dam)	Corella Creek	10 000	2500b	Unallocated water reserved under the Gulf WRP—Strategic Reserve
Chinaman Creek Dam	Cloncurry River	2750	2000	Urban—Cloncurry
Glenore Weir	Norman River	4100	2100	Urban—Normanton and Karumba
Big Reef Dam Tributary	Copperfield River	363	not applicable	Urban—Forsayth
Dithery Creek Dam	Mornington Island	846	not applicable	Urban—Gununa
Nicholson River storage	Nicholson River	1500	500	Urban—Doomadgee
Belmore Creek Dam	Norman River	5200	not applicable	Urban—Croydon
Copperfield River (Kidston) Dam	Copperfield River	20 400	4650	Not utilised

- Where entitlement is not applicable this refers to a storage that captures overland flow where no entitlement is required for existing works, such as Belmore Creek Dam. Instead the water resource plan authorises continued take of overland flow using existing works subject to the department being notified that the works exist.
- These volumes relate to unallocated water identified in the Gulf WRP.

Principally, Water Resource Plans and their associated Resource Operations Plans govern the allocation and management of water from catchments.

Table 14: Surface Water related Water Resource Plans throughout the TVL and North West Region and their servicing uses

(Department of Natural Resources and Mines, 2012)

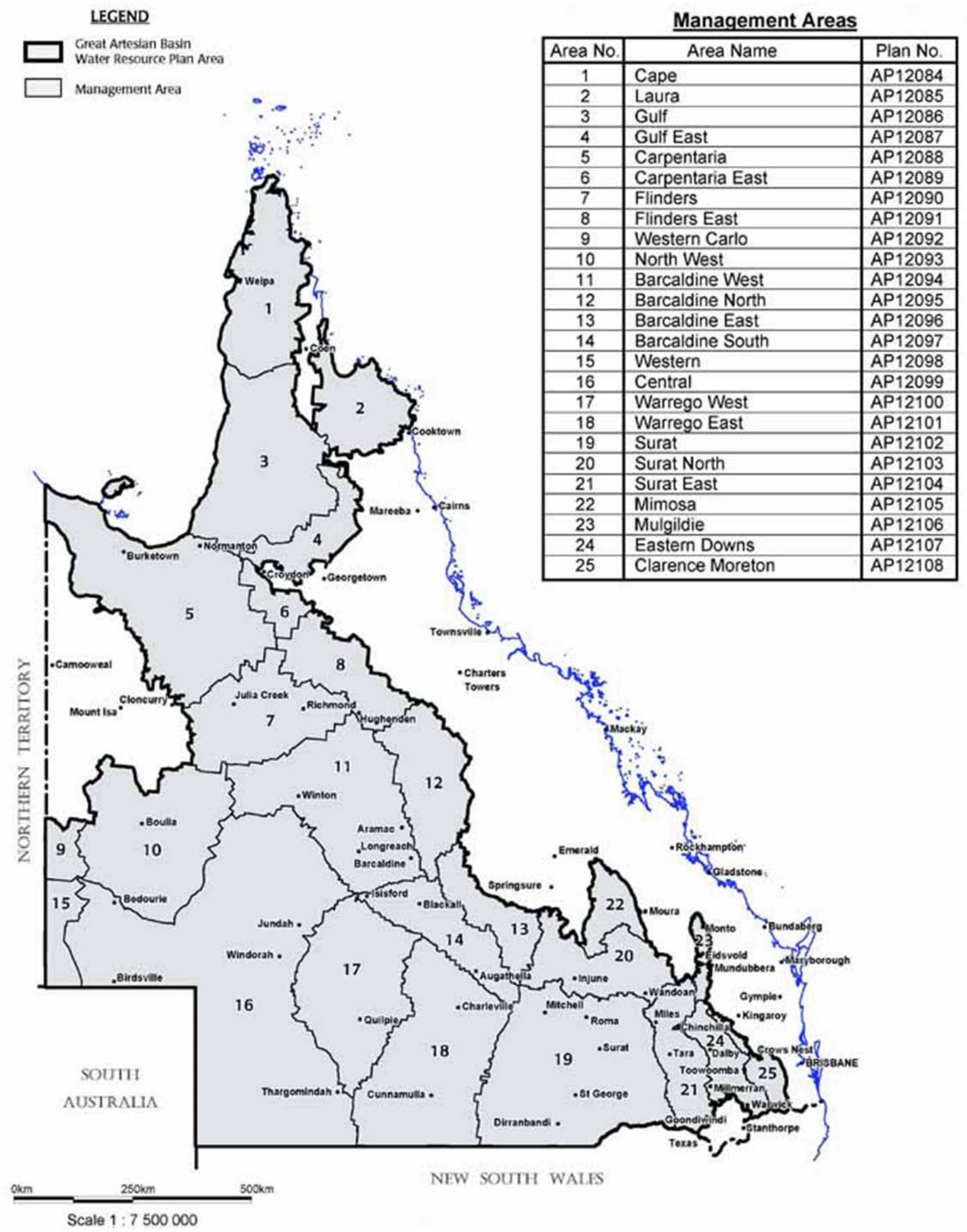
Water Resource Plan (WRP)	Water Storages and Capacity	Servicing
The Burdekin Water Resource Planning region contributes up to 7% of the Queensland's agricultural production in value.	Burdekin Falls Dam is supplied through the Burdekin Haughton Water Supply Scheme, while Eungella Dam is used to supply water through the Bowen Broken Water Supply Scheme.	The primary water user for the region is irrigation for sugarcane with urban, stock, domestic and industrial use comprising only 10 per cent of the total. Water resources also support mining as well as urban supplies for Townsville and Thuringowa, which are outside the WRP area.
The Cooper Creek WRP covers 243 500 square kilometres and makes up 80 per cent of the entire catchment. Rainfall in the region is highly sporadic with extended dry periods making the system ephemeral. The system consists of a network of channels, waterholes, wetlands, extensive floodplains and widely distributed shallow, ephemeral lakes.	There are no significant storages in the plan area.	Water predominately being used for town water supply and grazing with limited irrigated agriculture.
The Georgina and Diamantina WRP approximately covers 266 000 square kilometres and forms part of the Queensland section of the Lake Eyre basin. Streams in the plan area are considered to be ephemeral due to highly sporadic periods of rainfall and prolonged dry periods.	There are only a very small number of licences currently in the Georgina and Diamantina plan area which has resulted in the Georgina, Diamantina and Hay rivers retaining a near natural flow regime.	Water is predominately used for grazing and town water supply with mining and agricultural activities likely to increase in the future. The plan manages unsupplemented extractions, overland flow harvesting and groundwater whilst also setting aside unallocated water for future mining operations and growth in town water supply.
The Gulf WRP area covers approximately 315 500 square kilometres and incorporates eight catchments that flow into the Gulf of Carpentaria including the Settlement Creek, Nicholson River, Leichhardt River, Morning Inlet, Flinders River, Norman River, Gilbert River and Staaten River. Rainfall in the region is predominately monsoonal.	Water stored in Julius Dam and Moondarra Dam is used to support mining, industrial and urban water needs in the Mount Isa-Cloncurry region and is managed through water supply schemes.	There are a small number of agricultural developments in parts of the Flinders, Gilbert, Nicholson and Leichhardt river catchments. The river systems are also important for tourism and commercial and recreational fishing.

Water Resource Plan (WRP)	Water Storages and Capacity	Servicing
The Mitchell WRP is the northern most plan area in Queensland and flows into the Gulf of Carpentaria. The major tributaries for the plan include the Mitchell River, Lynd River, Walsh River, Alice River and Palmer River, with the headwaters of the Walsh and Mitchell rivers supplemented by the Mareeba-Dimbulah Water Supply Scheme and included in the Barron Water Resource Plan. The plan area covers approximately 70 000 square kilometres with a varied rainfall ranging between 825 to 1340 mm per annum.		Despite a large area, the plan only supports a population of around 3500 people with town water supply, grazing, aquaculture, small scale mining and small scale irrigation industries consuming water. The river systems are also important for tourism and commercial and recreational fishing.

The Great Artesian Basin (GAB) one-fifth of the Australian continent (Great Artesian Basin Coordinating Committee, 2013) covering 1.7 million km2 of largely arid and semi-arid regions west of the Great Dividing Range. The GAB is significant to Australia in a number of ways, contributing to the economies of pastoral, tourism and mining industries, providing water to communities and townships, supporting important environmental assets, and underpinning aboriginal cultural heritage and Australian settlement heritage legacies (Rolfe, 2008).

The Townsville and North-West Region incorporates the GAB management areas of Carpentaria, Carpentaria East, Flinders, Flinders East, North West, Western Carlo, Barcaldine West and Barcaldine North (Department of Environment and Resource Management, 2006).

Figure 8: Great Artesian Basin Management Areas, Queensland



Management Areas

Area No.	Area Name	Plan No.
1	Cape	AP12084
2	Laura	AP12085
3	Gulf	AP12086
4	Gulf East	AP12087
5	Carpentaria	AP12088
6	Carpentaria East	AP12089
7	Flinders	AP12090
8	Flinders East	AP12091
9	Western Carlo	AP12092
10	North West	AP12093
11	Barcaldine West	AP12094
12	Barcaldine North	AP12095
13	Barcaldine East	AP12096
14	Barcaldine South	AP12097
15	Western	AP12098
16	Central	AP12099
17	Warrego West	AP12100
18	Warrego East	AP12101
19	Surat	AP12102
20	Surat North	AP12103
21	Surat East	AP12104
22	Mimosa	AP12105
23	Mulgildie	AP12106
24	Eastern Downs	AP12107
25	Clarence Moreton	AP12108

Source: Queensland Government, http://www.nrm.qld.gov.au/wrp/gab_map.html

1.3.3 Social

1.3.3.1 Population Change

Population movement figures are provided from the June 2011 census. The estimated resident population of the region was 260,544 persons. This equates to a natural increase of 2,642 people during the year 2010- 2011. Assumed net migration, that is, the difference between the growth in estimated resident population and the natural increase, decreases the population movement to 53 across the region. The largest assumed negative net migration is expected to occur in the coastal country areas of Burdekin and Hinchinbrook Shire Local Government Area's.

Table 15: Components of Population Change by Local Government Area, 30 June 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Natural increase (a)	Assumed net migration (b)	Estimated resident population	Annual change
		-number-		
Boulia (S)	8	-1	496	7
Burdekin (S)	92	-235	17,784	-143
Burke (S)	5	7	569	12
Carpentaria (S)	16	-4	2,246	12
Charters Towers (R)	69	-36	12,461	33
Cloncurry (S)	39	-8	3,410	31
Doomadgee (S)	14	21	1,404	35
Flinders (S)	26	-33	1,845	-7
Hinchinbrook (S)	4	-79	11,852	-75
McKinlay (S)	7	26	1,086	33
Mornington (S)	18	16	1,246	34
Mount Isa (C)	344	-218	22,255	126
Palm Island (S)	20	95	2,651	115
Richmond (S)	14	-46	850	-32
Townsville (C)	1,966	442	180,389	2,408
RDA - TVL and NW Region				
Queensland	2,642	-53	260,544	2,589
RDA - TVL and NW Region as % of Queensland	36,433	13,507	4,474,098	49,940

1.3.3.2 Regional Demographics – Multi-culturalism

Table 16, suggests that 80.7% of the region's population were born in Australia. Of people born overseas, 6.3% were from an english speaking background, whilst 5.8% were from a non-english speaking background.

Table 16: Number of persons by birthplace by Local Government Area, 2011

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

			-Born overseas-						
Local Government Area	Born in Australia		Born in ESB countries (b)		Born in NESB countries (c)		Total (c)		Total persons (d)
	Number	%	Number	%	Number	%	Number	%	Number
Boulia (S)	431	89.6	16	3.3	3	0.6	19	4.0	481
Burdekin (S)	14,925	86.0	524	3.0	934	5.4	1,458	8.4	17,363
Burke (S)	386	75.0	16	3.1	21	4.1	37	7.2	515
Carpentaria (S)	1,608	78.3	65	3.2	85	4.1	150	7.3	2,053
Charters Towers (R)	10,575	86.9	444	3.6	281	2.3	725	6.0	12,168
Cloncurry (S)	2,563	79.4	162	5.0	103	3.2	265	8.2	3,227
Doomadgee (S)	1,255	97.4	7	0.5	15	1.2	22	1.7	1,289
Flinders (S)	1,551	86.6	47	2.6	36	2.0	83	4.6	1,791
Hinchinbrook (S)	9,768	84.4	383	3.3	842	7.3	1,225	10.6	11,568
McKinlay (S)	849	80.9	64	6.1	19	1.8	83	7.9	1,050
Mornington (S)	1,135	99.5	3	0.3	0	0.0	3	0.3	1,141
Mount Isa (C)	15,039	70.8	1,575	7.4	1,528	7.2	3,103	14.6	21,238
Palm Island (S)	2,320	99.3	0	0.0	0	0.0	0	0.0	2,337
Richmond (S)	718	86.8	30	3.6	16	1.9	46	5.6	827
Townsville (C)	431	89.6	16	3.3	3	0.6	19	4.0	481
RDA - TVL and NW Region	**14,925**	**86.0**	**524**	**3.0**	**934**	**5.4**	**1,458**	**8.4**	**17,363**
Queensland	386	75.0	16	3.1	21	4.1	37	7.2	515
RDA - TVL and NW Region as % of	1,608	78.3	65	3.2	85	4.1	150	7.3	2,053

1.3.3.3 Regional Demographics – Age Profile

The estimated resident population statistics suggest that as of 30 June 2011 (Table 17) that, 21.1% of the persons in the region were aged 0 – 14 years, 68.3% were aged 16 – 64 years and 10.5% were aged 65 years and over (Queensland Government, Treasurey and Trade Government Statistician, June 2013). Of concern to the region, is the population ratio of people in the 45 – 64 age statistical bracket is 2.2 times the number in the 65 plus statistical bracket.

Table 18 suggests that the medium age is not significantly changing throughout the region. This is likely to cause issues with provision of aged and health services to cater for future needs as the people in the 45 – 65 age statistical bracket age. During consultation, concerns were raised about the ability of current health infrastructure to cater for these needs and the ability of people to 'age in place' due to current restrictions on service provision, especially for those with high care needs.

Table 17: Estimated resident population by age by Local Government area, 30 June 2011

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

	-Population by age-									
Local Government Area	0-14		15-24		25-44		45-64		65+	
	Number	%	Number	%	Number	%	Number	%	Number	%
Boulia (S)	115	23.2	77	15.5	159	32.1	112	22.6	33	6.7
Burdekin (S)	3,641	20.5	2,007	11.3	4,174	23.5	4,905	27.6	3,057	17.2
Burke (S)	96	16.9	79	13.9	199	35.0	160	28.1	35	6.2
Carpentaria (S)	476	21.2	278	12.4	597	26.6	648	28.9	247	11.0
Charters Towers (R)	2,804	22.5	1,557	12.5	3,061	24.6	3,157	25.3	1,882	15.1
Cloncurry (S)	710	20.8	522	15.3	1,117	32.8	840	24.6	221	6.5
Doomadgee (S)	504	35.9	240	17.1	419	29.8	210	15.0	31	2.2
Flinders (S)	390	21.1	201	10.9	433	23.5	517	28.0	304	16.5
Hinchinbrook (S)	2,089	17.6	1,284	10.8	2,387	20.1	3,532	29.8	2,560	21.6
McKinlay (S)	187	17.2	155	14.3	389	35.8	267	24.6	88	8.1
Mornington (S)	442	35.5	155	12.4	346	27.8	252	20.2	51	4.1
Mount Isa (C)	5,274	23.7	3,376	15.2	7,500	33.7	4,740	21.3	1,365	6.1
Palm Island (S)	826	31.2	527	19.9	745	28.1	480	18.1	73	2.8
Richmond (S)	163	19.2	116	13.6	233	27.4	242	28.5	96	11.3
Townsville (C)	37,299	20.7	29,858	16.6	53,449	29.6	42,372	23.5	17,411	9.7
RDA - TVL and NW Region	**55,016**	**21.1**	**40,432**	**15.5**	**75,208**	**28.9**	**62,434**	**24.0**	**27,454**	**10.5**
Queensland	887,487	19.8	625,429	14.0	1,264,341	28.3	1,119,056	25.0	577,785	12.9
RDA - TVL and NW Region as % of	6.2	-	6.5	-	5.9	-	5.6	-	4.8	-

Table 18: Median age by Local Government area, 2006 and 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

	-Median age as at 30 June-		
Local Government Area	2006	2011	Change (2006 to 2011)
	-years-		years
Boulia (S)	32.2	29.4	-2.8
Burdekin (S)	39.9	40.9	1.0
Burke (S)	35.5	35.1	-0.4
Carpentaria (S)	34.4	37.3	2.9
Charters Towers (R)	36.0	38.0	2.0
Cloncurry (S)	29.9	32.3	2.4
Doomadgee (S)	21.5	23.3	1.8
Flinders (S)	35.8	41.2	5.4
Hinchinbrook (S)	43.3	46.0	2.7
McKinlay (S)	36.1	33.3	-2.8
Mornington (S)	27.3	26.3	-1.0
Mount Isa (C)	29.8	30.4	0.6
Palm Island (S)	22.4	24.1	1.7
Richmond (S)	33.2	37.9	4.7
Townsville (C)	32.8	33.2	0.4
RDA - TVL and NW Region	**n.a.**	**n.a.**	**n.a.**
Queensland	36.0	36.6	0.6

1.3.4 Population

1.3.4.1 Regional Demographics - General

With a population of 265,536 (Queensland Government, Treasurey and Trade Government Statistician, June 2013) persons, the region represents 5.8% of Queensland’s total populous. The coastal city of Townsville has the largest population of the region, with 69.5% of the region’s total population. Across the region the population has experienced an average annual growth rate between 2011 and 2012 of 1.9% (Queensland Government, Treasurey and Trade Government Statistician, June 2013). Though this figure also comprises a trend of negative population growth in four of the Local Government area’s over the period 2007 to 2012; these are Burdekin, Flinders, Hinchinbrook, and Richmond.

Table 19: Estimated resident population by Local Government area, 2007, 2011 and 2012

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

	-Estimated resident population as at 30 June-			-Average annual growth rate-	
Local Government Area	2007pr	2011pr	2012p	2007pr-2012p	2011pr-2012p
	-number-			-%-	
Boulia (S)	442	496	494	2.2	-0.4
Burdekin (S)	18,076	17,784	17,913	-0.2	0.7
Burke (S)	543	569	567	0.9	-0.4
Carpentaria (S)	2,129	2,246	2,235	1.0	-0.5
Charters Towers (R)	12,261	12,461	12,451	0.3	-0.1
Cloncurry (S)	3,357	3,410	3,492	0.8	2.4
Doomadgee (S)	1,259	1,404	1,404	2.2	0.0
Flinders (S)	1,896	1,845	1,835	-0.7	-0.5
Hinchinbrook (S)	12,172	11,852	11,798	-0.6	-0.5
McKinlay (S)	991	1,086	1,086	1.8	0.0
Mornington (S)	1,162	1,246	1,240	1.3	-0.5
Mount Isa (C)	21,338	22,255	22,793	1.3	2.4
Palm Island (S)	2,245	2,651	2,684	3.6	1.2
Richmond (S)	935	850	847	-2.0	-0.4
Townsville (C)	168,192	180,389	184,697	1.9	2.4
RDA - TVL and NW Region	**246,998**	**260,544**	**265,536**	**1.5**	**1.9**
Queensland	4,177,089	4,474,098	4,560,059	1.8	1.9
RDA - TVL and NW Region as % of	5.9	5.8	5.8	-	-

1.3.4.2 Regional Demographics - Projections

The region's population is projected to be 386,652 persons by June 2031. This is based on an average growth rate of 1.8% over the 20 year period. This matches the projected population increase rate of 1.8% across Queensland. Within the Townsville and North West region, the Townsville Statistical Area Level 3 has the largest increase in population projection for the period 2011 – 2031 with an expected average annual growth rate of 2.2% (Queensland Government, Treasurey and Trade Government Statistician, June 2013).

Table 20: Projected population by statistical area level 3, Townsville and North West RDA Region, 2011 - 2031

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

Statistical area level 3	2011 (b)	Projected population as at 30 June			2031	Average annual growth rate
		2016	2021	2026		2011 to 2031
		-number-				%
Charters Towers-Ayr-Ingham	46,273	47,594	48,645	49,692	50,611	0.4
Outback-North	34,673	36,319	37,887	39,100	40,388	0.8
Townsville	191,187	216,592	241,757	268,401	295,653	2.2
Tvl and North West RDA Region	272,133	300,505	328,289	357,193	386,652	1.8
Queensland	**4,611,491**	**5,092,858**	**5,588,617**	**6,090,548**	**6,592,857**	**1.8**
Tvl and North West RDA Region as % of Queensland	5.9	5.9	5.9	5.9	5.9	-

1.3.4.3 Regional Demographics – Indigenous Persons

As outlined in Table 21, the largest percentage of Indigenous persons reside in the Local Governments areas of Palm Island, Doomadgee and Mornington.

Table 21: Number of persons by Indigenous status by Local Government area, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

	-Indigenous persons-							
Local Government Area	Aboriginal	Torres Strait Islander	Both (b)	Total		Non-Indigenous persons		Total persons (c)
	-number-			Number	%	Number	%	Number
Boulia (S)	184	5	3	192	40.0	264	55.0	480
Burdekin (S)	671	98	123	892	5.1	15,631	90.0	17,362
Burke (S)	140	0	3	143	27.8	286	55.6	514
Carpentaria (S)	714	7	36	757	36.8	1,046	50.9	2,055
Charters Towers (R)	885	22	55	962	7.9	10,448	85.9	12,169
Cloncurry (S)	661	22	19	702	21.8	2,158	66.9	3,227
Doomadgee (S)	1,179	3	3	1,185	92.0	95	7.4	1,288
Flinders (S)	98	10	3	111	6.2	1,554	86.8	1,791
Hinchinbrook (S)	533	69	52	654	5.7	10,440	90.2	11,568
McKinlay (S)	39	0	0	39	3.7	894	85.3	1,048
Mornington (S)	986	4	15	1,005	88.0	131	11.5	1,142
Mount Isa (C)	2,984	100	122	3,206	15.1	15,112	71.2	21,237
Palm Island (S)	1,837	28	336	2,201	94.2	115	4.9	2,337
Richmond (S)	45	3	0	48	5.8	713	86.1	828
Townsville (C)	7,800	1,727	1,176	10,703	6.1	153,056	87.7	174,462
RDA - TVL and NW Region	**18,756**	**2,098**	**1,946**	**22,800**	**9.1**	**211,943**	**84.3**	**251,508**
Queensland	122,896	20,094	12,834	155,824	3.6	3,952,707	91.2	4,332,740
RDA - TVL and NW Region as % of Queensland	15.3	10.4	15.2	14.6	-	5.4	-	5.8

1.4 KEY DETERMINANT THREE: ACCESS TO INTERNATIONAL, NATIONAL AND REGIONAL MARKETS

1.4.1 Remoteness

As outlined in Table 22, the area covered by the Townsville and North West region population is classified as being outer regional Australia to very remote Australia. The Townsville statistical area is totally classified as outer regional Australia, along with the majority of people in the Charters Towers, Ayr and Ingham statistical area. Outback North has 69.1% of its population located within remote Australia and the remaining 30.9% classified as living in very remote Australia.

Table 22: Population in remoteness areas by statistical area level 3, TVL and North West RDA Region, 2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Local Government Area	Major City		Inner Regional Australia		Outer Regional Australia		Remote Australia		Very Remote Australia	
	Population	%	Population	%	Population	%	Population	%	Population	%
Boulia (S)	0	0.0	0	0.0	0	0.0	0	0.0	480	100.0
Burdekin (S)	0	0.0	0	0.0	17,164	98.8	200	1.2	0	0.0
Burke (S)	0	0.0	0	0.0	0	0.0	0	0.0	514	100.0
Carpentaria (S)	0	0.0	0	0.0	0	0.0	0	0.0	2,053	100.0
Charters Towers (R)	0	0.0	0	0.0	9,880	81.2	1,537	12.6	752	6.2
Cloncurry (S)	0	0.0	0	0.0	0	0.0	2,319	71.8	910	28.2
Doomadgee (S)	0	0.0	0	0.0	0	0.0	0	0.0	1,289	100.0
Flinders (S)	0	0.0	0	0.0	0	0.0	0	0.0	1,791	100.0
Hinchinbrook (S)	0	0.0	0	0.0	7,879	68.1	3,645	31.5	44	0.4
McKinlay (S)	0	0.0	0	0.0	0	0.0	0	0.0	1,050	100.0
Mornington (S)	0	0.0	0	0.0	0	0.0	0	0.0	1,142	100.0
Mount Isa (C)	0	0.0	0	0.0	0	0.0	20,567	96.8	670	3.2
Palm Island (S)	0	0.0	0	0.0	0	0.0	2,336	100.0	0	0.0
Richmond (S)	0	0.0	0	0.0	0	0.0	0	0.0	827	100.0
Townsville (C)	0	0.0	0	0.0	174,462	100.0	0	0.0	0	0.0
RDA - TVL and NW Region	**0**	**0.0**	**0**	**0.0**	**209,385**	**83.3**	**30,604**	**12.2**	**11,522**	**4.6**
Queensland	2,663,104	61.6	885,169	20.5	639,744	14.8	75,599	1.8	56,106	1.3
RDA - TVL and NW Region as % of Queensland	0.0	-	0.0	-	32.7	-	40.5	-	20.5	-

1.4.2 Infrastructure

1.4.2.1 Roads

Throughout the Townsville and North West Region there are over 5,222 kilometres of state-controlled roads, and 1,543 kilometres of the National Network (Department of Transport and Main Roads - Queensland Government, 2012).

Ten main roads form the backbone to the Townsville and North West Queensland Region road network.

- The **Bruce Highway** is the major transport corridor along the eastern coast of Queensland. The Highway connects the region’s largest city, Townsville, north to Cairns and south to Mackay and Brisbane. North Queensland’s economy is particularly dependent on trade via the Bruce Highway. Some 17% of all North Queensland jobs (59,923 jobs) and 13% of the economy’s gross value added ($5,306 million) is linked to goods and services traded along the Highway (AECGroup, February 2012). The road is often cut for several days each year during the wet season, particularly between Townsville and Cairns. Between 2010 and 2012 it is estimated it was cut over 400 times due to flooding. It is also noted by RACQ that sectors of the Highway in this region are some of the most unsafe roads in Australia (Bruce Highway Technical Advisory Group, October 2012). The Australian and Queensland Governments acknowledge the importance of upgrading this National Highway and have committed funding to upgrade projects, however, a much higher level of investment is required to bring it up to a truly National safety standard and to reduce the flooding impacts. The key requirement is an upgrade to several sections of the Highway to minimise the impact of flood delays. These upgrades are required both within the region and in sectors to the north and south of the region.
- The **Flinders Highway** provides the transport corridor through the centre of the Townsville and North West Queensland Region. The highway is owned by the State but Local Governments provide most of its maintenance under performance contracts. The Federal Government contributes Roads to Recovery funding for larger projects. The Highway begins in Townsville and ends in Cloncurry, connecting Charters Towers, Pentland, Hughenden, Richmond, and Julia Creek. The Australian Government funds improvements on this Highway and the Queensland Government is responsible for its maintenance.
- A further connection to Mount Isa is made via the **Barkly Highway** which continues to the Northern Territory border. The Highway has high freight traffic flows, particularly from North West Queensland’s mining and beef industries, which export much of their product out of Townsville.
- The **Burke Development Road** connects Cloncurry north to Normanton and Karumba. The road supports both local traffic and mining and agricultural freight movements.
- The **Landsborough Highway** travels south from Cloncurry and services Winton and the Central West Region. It is owned by the Commonwealth Government with the State Government providing maintenance support. It is

a major tourist route as evidenced by traffic counts and analysis within the North West Integrated Regional Transport Plan.

- The **Kennedy Development Road** connects Boulia with Winton, Hughenden and The Lynd. The Kennedy Development Road is also known as the Hann Highway.
- The **Gregory Development Road** connects The Lynd, Charters Towers and Clermont.
- The **Diamantina Development Road** connects Mount Isa through Boulia to Quilpie.
- The **Hervey's Range Developmental Road** connects Townsville with the North East Mineral Province and the Gulf country.
- The **Savannah Way** is an important tourist and freight route linking Cairns and Broome (WA) via Normanton and Katherine (NT). This road links Normanton with Burketown and Doomadgee and then to Katherine in the Northern Territory.

These above mentioned and other roads in the region are of varying quality, and often unsealed or narrow outside of urban areas.

Refer to Figure 9, showing the major identified roads within the region.

Figure 9: Map of the road network throughout the Townsville and North West Region

1.4.2.2 Rail

There are two key rail corridors in Townsville and North West Queensland: the North Coast line and the Townsville-Mount Isa Line with Queensland Rail as the below-rail provider and a number of key above-rail providers including Queensland Rail passenger services, and QR National and Pacific National providing freight services on these lines.

The North Coast Line that services the Townsville, Burdekin and Hinchinbrook Shires is the principal freight and passenger line within the Queensland Rail network, running along the coast of Queensland between Brisbane in the south and Cairns in the north, a distance of 1680 km. The system caters for all traffic tasks including containerised freight services, high speed tilt trains, commuter services, heavy haul single commodity trains of sugar, grain or minerals and cattle trains.1

The Mount Isa Line is 1030kms of track which extends from Stuart (near Townsville) to Mount Isa and includes the Phosphate Hill branch. The line services a number of communities along the line through passenger transport, the conveyance of general freight and remains a major employer along the corridor. The line is the critical link from the North West Minerals Province to the Port of Townsville where the majority of bulk products are exported.

The Mount Isa Line is of particular national interest as it runs along some of the world's largest deposits of copper, lead, zinc, silver and phosphate rock. The region surrounding the Mount Isa Line produces 75% of Queensland's non-coal mineral output. As a result of strong international demand for commodities, exploration in the North West Minerals Province has increased significantly in recent years.

In 2012 this rail link carried 5.8 million tonnes of product on the Mount Isa Corridor. This supported mineral production of $6.67 billion in the region. There are forecasts that the rail could support more than 40 million tonnes each year. Queensland Rail released the Mount Isa Line Rail Infrastructure Master Plan 2012 which undertook analysis to develop potential growth scenarios and to provide a broad vision of the rail infrastructure required to underpin the forecast growth (Queensland Rail, 2012).

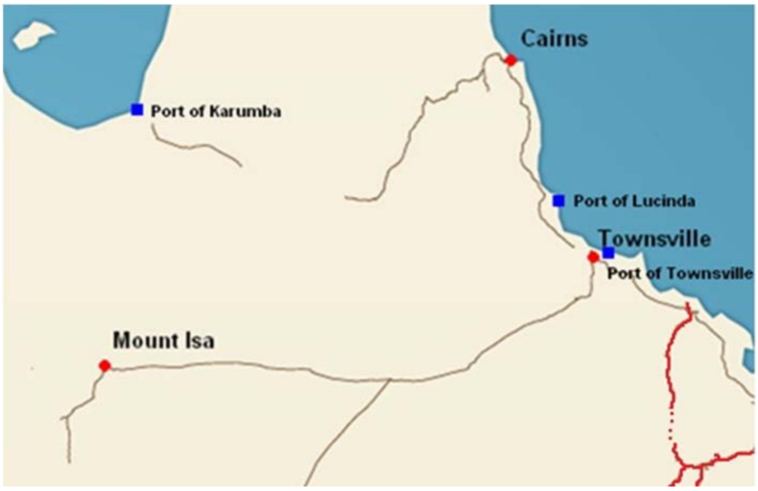
In recognition of the critical economic importance of the Mount Isa to Townsville supply chain, the Mount Isa Townsville Economic Zone has released the MITEZ 50-Year Freight Infrastructure Plan Final Report in May 2012 to inform future planning for this supply chain. A key consideration of the report is planning for the likely development of known coal deposits in the North Gallilee basin, close to the Mt Isa to Townsville rail corridor. This raises the possibility of significant coal tonnage on the line through the Port of Townsville in coming years as well as significant increases in bulk commodities including reserves of magnetite and haematite iron ore, rock phosphate and shale oil production. Queensland Rail as below-rail provider has very large increased tonnage projections driven by the expected coal development. The high case projections for metric tonne per annum (mtpa)

[1] Queensland Rail. 2012. http://www.queenslandrail.com.au/NetworkServices/DownloadsandRailSystemMaps/Freight/Pages/NorthCoastLineSystem.aspx

throughput for the Mt Isa to Townsville rail corridor has increased by 150 per cent in 3 years (from 20 mtpa to over 50 mtpa) (Juturna Consulting, May 2012).

The forecast change to the commodity profile of the Townsville to Mount Isa rail corridor has implications for infrastructure planning to support the freight movement requirements of a greater low-value, high volume bulk commodities freight task. This will require additional investment in rail-to-stockpile infrastructure. This infrastructure is not currently available with the current freight focus on high-value, low volume minerals concentrates that do not require stock piling. To accommodate the expected shift in the commodity profile for the Townsville to Mount Isa rail corridor, planning is already underway for a Townsville Eastern Access Rail Corridor (TEARC) to enhance the Port's

Figure 10: Queensland Rail Network in Townsville and North West Queensland



Source: Queensland Rail (2010), AEC*group* (2010), & QR National (2012)

Note: The Goonyella and Newlands lines (marked in red) are owned and operated by QR National servicing the Bowen Basin coal region. The Goonyella and Abbot Point Expansion Project construction is currently underway to link the Newlands system and the Goonyella system via a new 69 km railway. These works support the expansion of Abbot Point to 50 Mtpa.

1.4.2.3 Ports

The Townsville and North West Queensland Region has three major shipping ports, which are located at Townsville, Lucinda and Karumba. The ports primarily trade sugar, beef and metals, mineral ores and concentrates.

Table 23: Ports in Townsville and North West Queensland

Location	Primary Trade	Primary Service Region
Townsville	nickel ore, mineral concentrates, sugar, fertiliser, refined metals, petroleum, cement, molasses, general cargo	North West Queensland minerals province, the Burdekin region and the City of Townsville.
Lucinda	Sugar, general cargo*	Hinchinbrook region
Karumba	Zinc slurry (supplied via pipeline from Century Mine)	North West Queensland Minerals Province

(a) Port of Townsville

The Port of Townsville is a general-purpose cargo port and continues to be one of the State's fastest growing ports. The Port of Townsville has a dual role – public agency and business enterprise. On behalf of the Shareholding Ministers, the Port is committed to making a significant contribution to both the regional and State economy.

Preliminary assessments of 2012 business enquiries indicate that trade throughput at the Port of Townsville may increase from about 10 million tonnes to as much as 32 million tonnes in the next 15 years.

Table 24: Throughput Port of Townsville 2002/03 - April 2013

(Port of Townsville, April 2013)

Year	Actual
2002/03	9,818,752
2003/04	10,171,053
2004/05	9,989,298
2005/06	9,930,444
2006/07	9,557,477
2007/08	9,833,991
2008/09	9,084,821
2009/10	10,252,815
2010/11	10,601,137
2011/12	12,884,868

Port of Townsville Limited proposes an expansion of the Port of Townsville to address current capacity constraints and accommodate forecast growth in trade over a planning horizon to 2040.

These individual infrastructure projects either planned or underway at the Port of Townsville include:

- The Townsville Port **Inner Harbour Expansion** (TPIX) Project involves the redevelopment of Berth 10 to enhance cargo loading efficiency and provide North Queensland with a dedicated cruise and military berth. The program of works also features a concurrent upgrade of Berth 8 to enhance the port's capacity.
- Port of Townsville Limited has proposed an **expansion of the Port of Townsville** to accommodate the forecast trebling of trade volume over a planning horizon to 2040.
- Berth 12, to be located in the outer harbour, is planned to be a **bulk loading berth** similar to Berth 11 and capable of accommodating panamax-sized vessels (Port of Townsville , 2013).

(b) Port of Lucinda

The Port of Lucinda is owned and operated by the Port of Townsville. Situated about 100 kilometres north of Townsville, the Port is dedicated to the export of raw sugar from the Ingham sugar-growing district. It comprises on-shore sugar handling and storage facilities, and a single trestle jetty and conveyor running out to an off-shore berth and shiploader. The port terminal is operated by Lucinda Bulk

Sugar Terminal, a subsidiary of Queensland Sugar Limited (QSL). The terminal is supplied by the Victoria and Macknade sugar mills.

The jetty is one of the longest of its type in the world, extending for 5.6 kilometres and dipping 1.2 metres over its length as it follows the curvature of the earth. Sugar takes 22 minutes to travel along the conveyor from the on-shore storage sheds to the shiploader.

Lucinda Port jetty was extensively damaged during cyclone Yasi February 2011. All sugar product was exported through Townsville Port for 2011/12. Only a modest general freight throughput of 9552 tonnes was achieved for 2011/12. The Port was fully operational for 2012/13.

Table 25: Trade throughput at the Port of Lucinda

(Port of Townsville, March 2013)

Commodity	2007/08	2008/09	2009/10	2010/11	2011/12
General Cargo – Tonnage	4,812	7,455	8,504	15,865	12,858
Sugar Export – Tonnage	570,684	591,500	583,351	404,694	0
Lucinda Tonnage	575,496	598,955	591,855	420,559	12,858
Number of Cargo Vessels to Port	17	18	20	12	1

(c) Port of Karumba

The Port of Karumba is owned and operated by North Queensland Ports Corporation Limited. It is located at the mouth of the Norman River in the south-east corner of the Gulf of Carpentaria and has serviced remote Gulf communities since the late 1800s. The Century Mine started exporting zinc concentrate through the Port in December, 1999. Zinc slurry is piped 304 kilometres to the Port from the mine, dewatered and loaded onto a 5,000 tonne, fully enclosed transfer vessel for the 40 kilometre journey to the export ships that anchor in deep water in the Gulf of Carpentaria, about 24 nautical miles off the coast.

Other facilities in the Port provide for general cargo, fuel, fisheries products and the export of live cattle. Karumba also acts as a transhipment port for Mornington Island, other Gulf communities and the Port of Weipa for the majority of the year, with refrigerated semi-trailers bringing goods north to Karumba for transhipment (Ports North, 2013).

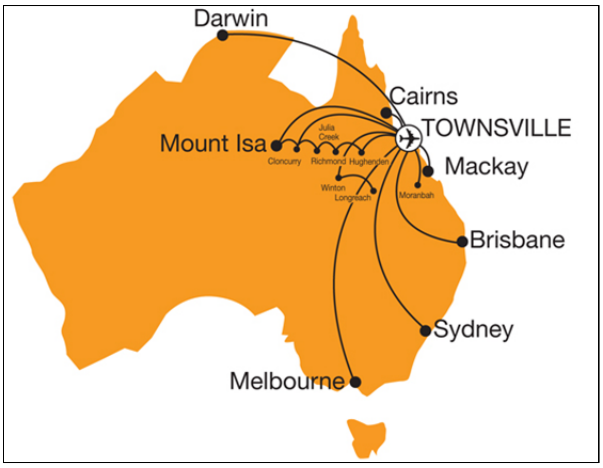
1.4.2.4 Airports

There are two major airports located at Townsville and Mount Isa, both of which are operated by Queensland Airports Limited.

(a) Townsville Airport

Townsville Airport's catchment area extends from Tully to the North, Charters Towers to the South West, and Bowen to the South. As the regional hub for North Queensland, Townsville is also a key transit and destination port servicing inland cities such as Mount Isa and the mining and residential communities of the Gulf of Carpentaria. Townsville Airport provides flights to a number of major capital cities and regional centres in Queensland, New South Wales, Victoria, and the Northern Territory.

Figure 11: Commercial Flight Routes Ex-Townsville Airport

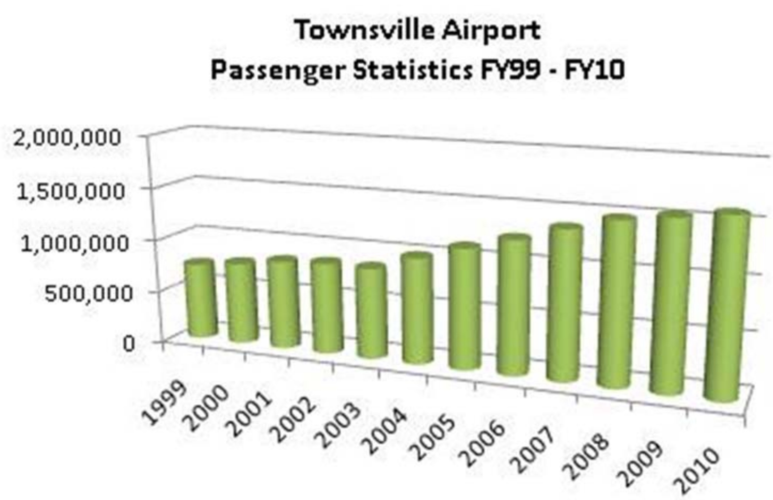


Source: Queensland Airports Limited. 2012

The following commercial airlines provide regular services from the Townsville Airport Terminal: Alliance Airlines; Jetstar Airways; West Wing Aviation; Qantas Airways; Airnorth; Virgin Australia and Regional Express.

Townsville Airport is North Queensland's aviation hub with more that 1.6million passengers annually. In the 2009/2010 financial year a 4% passenger growth was recorded. The Airport's continual growth has been partly due to a significant increase in the proportion of passengers connecting to another flight after leaving Townsville. Additional direct routes both domestically and internationally, cements Townsville's position as key regional hub connecting Queensland and major cities throughout Australia (Queensland Airports Limited, 2013).

Figure 12: Townsville Airport Passenger Statistics 1999 - 2010 financial years

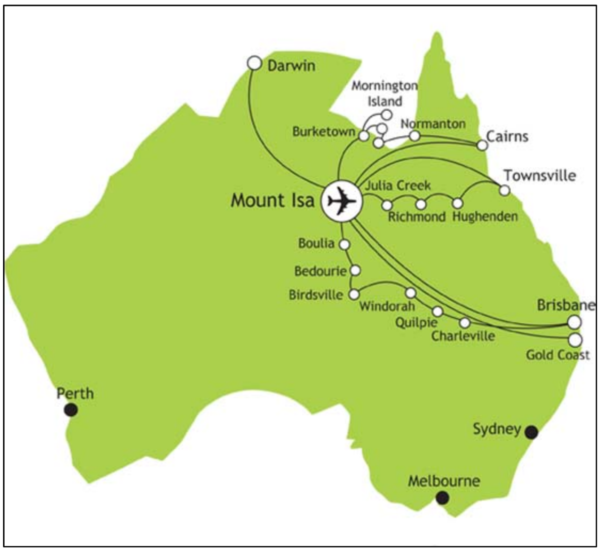


Townsville Airport's passenger mix is evenly spread the local catchment and those visiting Tonwsville, providing year round market stability. Locals make up over 40% of passengers, which is a significant proportion, amounting to over 600,000 passenger movements per year. The frequency of air travel for locals is evidenced by the fact the region has a population of only 160,000 in the immediate catchment area. Townsville Airport's passenger mix is evenly spread between business and leisure traffic. The itinerant population generates a strong visiting friends and relatives (VFR) market. Townsville's inbound tourism market is growing as the destination develops. Visitors to the region travelling by air are primarily from the South East Queensland market, reflecting the volume of seat capacity between Brisbane and Townsville (Queensland Airports Limited, 2013).

(b) Mount Isa Airport

Mount Isa Airport is strategically important given the remoteness of the region and hence reliance on air passenger transport. The Mount Isa Airport underwent a significant upgrade in 2010 which saw an investment of $13 million to do a complete runway overlay and a terminal upgrade. Mount Isa Airport services the Mount Isa community and the Carpentaria Minerals Province. Mt Isa is serviced by Airnorth, Alliance Airlines, Qantas Airways (including Qantaslink), Regional Express, Skytrans and now Virgin Australia.

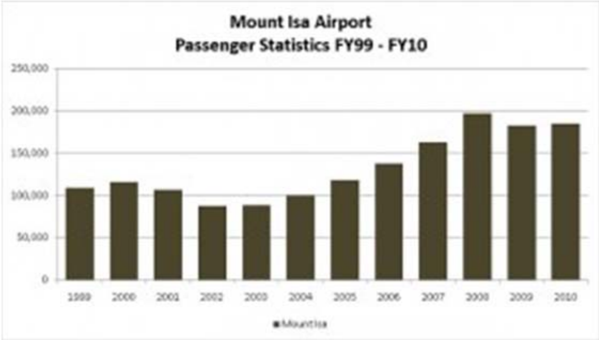
Figure 13: Commercial Flight Routes Ex-Mount Isa Airport



Source: Queensland Airports Limited. 2012

In the 2009/2010 financial year the airport experienced a 1.2% growth welcoming 184,860 passengers. The Airport continues to see growth and has rebounded from the global financial crisis as we see a return to profit in the resource sector. The future of the Airport's success is underpinned by some of the world's largest mineral deposits. A majority of Mount Isa passengers are visitors to the region making up 65% of total passengers. This is due to the large fly in fly out mining market (Queensland Airports Limited, 2013).

Figure 14: Mount Isa Airport Passenger Statistics 1999 - 2010 financial years



Mount Isa's passenger mix is predominately business driven (48% of passengers) underpinned by the mining sector and accompanying services. In contrast, locals' use of the airport is weighted towards visiting friends and relatives (VFR) market. There is a high frequency of travel amongst inbound visitors due to the remoteness of the area. However, local market use is limited to a couple of trips a year to see friends and family or vacation. The large portion of 'other' is travel for medical reasons, another common trend for regional ports (Queensland Airports Limited, 2013).

(c) Other Airports

The Townsville and North-West region is also serviced by private airports including the Century Mine Airport and smaller airports including Ayr, Boulia, Burketown, Charters Towers, Cloncurry, Doomadgee, Mornington Island Hughenden, Ingham, Julia Creek, Karumba, Normanton, Palm Island and Richmond. A number of smaller towns are highly dependent on their airports, at least for a portion of the year, as at times air is the only viable access mode due to flooding.

1.4.3 Telecommunications

1.4.3.1 National Digital Economy Strategy

The National Digital Economy Strategy update outlines eight digital economy goals including the next steps to realise the benefits of the National Broadband Network (NBN) and position Australia as a leading digital economy by 2020 (Australian Government, 2011).

Parts of the region have had an early roll-out of the National Broadband Network (NBN). Government surveys suggest that uptake of NBN has been limited, possibly because of misunderstanding of the benefits it poses. Expected benefits to the region of having high speed broadband are:

- Improved connections between centres within and outside of the region, including greater uptake of high-quality video conferencing and associated reduction in travel time and costs.
- Use of cloud computing for more efficient sharing and collaborating on information resources.
- Better access to specialised medical services in the health and aged care sectors.
- Education improvements through service provision on-line.

- Better data and research analytics, through the accessing of sensor networks in the industries of agriculture, mining and environmental management.
- Remote working opportunities with the potential to reduce travelling expenses and improve productivity.
- Safer working environments, particularly in mining where remote operating technologies can remove people from hazardous areas (Townsville City Council, May 2013).

An example of the roll-out benefits is the Townsville NBN-enabled diabetes Telehealth Trial, which commenced late in 2011. It aims to deliver high- quality monitoring and video-conferencing services to the homes of diabetics. Trial participants may receive services such as:

- home telehealth monitoring and medical alert systems
- virtual patient visits allowing patients to communicate with relevant health providers through high-quality video
- healthy living information and support.

The trial will initially target people living in the NBN first-release suburbs of Aitkenvale and Mundingburra in Townsville. The trial will extend to include participants in the second-release Townsville site.

The trial is funded through a National Partnership Agreement under the Digital Regions Initiative. It will be delivered by the Townsville General Practice Network in collaboration with the Townsville Health Service District and Queensland Health (Australian Government, 2011).

1.4.3.2 Telecommunications Services Coverage

Mobile phone services are available in urban areas, many regional areas and along a number of national and regional highways. Mobile phone services currently reach 99 per cent of the Australian population where people live. However, coverage is only available to around 25 per cent of the Australian landmass. Satellite mobile phone services cover 100 per cent of the Australian landmass and population (Department of Broadband, Communications and Digital Economy, 2013).

Consultation raised the issue that mobile phone coverage is limited to some major centres and predominately anywhere that is more than ten kilometres from a centre. Majority of travellers will rely on HF, UHF and Satellite phones.

A telecommunications “Infrastructure Review for the Townsville and North West Queensland Region in November 2012” confirms that the region is poorly serviced with telecommunications, and that connectively is insufficient to meet current requirements, let alone the future needs of business and community (Gravelroad Consulting, November 2012). This review concluded that despite the fact that the NBN is not likely to be rolling out its infrastructure in the region in the foreseeable future, there are potential opportunities to deliver high speed broadband connectivity to the region, utilising existing backbone infrastructure.

1.4.3.3 Telecommunications in Regional Australia

The Government is committed to the development and success of regional Australia and recognises the important role of telecommunications services in achieving these goals. The first independent inquiry to review telecommunications across Australia took place in 2000 in order to assess telecommunications services prior to the sale of Telstra. It found that many people in parts of rural and remote Australia had inadequate access to telecommunications services.

In 2002, a second inquiry focused on regional telecommunications recommended the introduction of a legislated process of conducting regular reviews of regional, rural and remote telecommunications services.

The 2011–12 Regional Telecommunications Review, found that much has changed for the better in regional telecommunications since the first review, mainly as a result of the Government's investment in the NBN and related regulatory reforms. In undertaking its review, the independent committee took a snapshot of existing telecommunications services and identified what future measures are needed for regional Australia to take advantage of future broadband services.

This review also had particular regard for the opportunities created by the NBN and provided advice on specific initiatives that will enable regional communities to participate in, and realise the opportunities of, the digital economy. A review is required to take place every three years (Department of Broadband, Communications and Digital Economy, 2013).

Throughout the region there 75% have internet connection at home. Local Government areas with less than 50% of residents with internet access in their homes are Doomadgee and Mornington Island (

Table 26).

Table 26: Internet Access per Local Government

(Queensland Government, Treasurey and Trade Government Statistician, June 2013)

Local Government Area	No internet connection		-With internet connection- Broadband	Dial-up	Total (c)		Total dwellings (d)
	Number	%	-Number-		Number	%	
Boulia (S)	58	34.5	85	4	95	56.5	168
Burdekin (S)	1,935	29.8	3,834	215	4,250	65.5	6,490
Burke (S)	36	31.0	67	0	67	57.8	116
Carpentaria (S)	229	35.6	284	23	342	53.2	643
Charters Towers (R)	1,237	29.4	2,456	145	2,761	65.6	4,208
Cloncurry (S)	267	29.4	525	22	589	64.9	907
Doomadgee (S)	131	60.9	37	4	80	37.2	215
Flinders (S)	200	30.1	401	18	436	65.7	664
Hinchinbrook (S)	1,457	32.5	2,566	161	2,849	63.5	4,487
McKinlay (S)	68	22.7	193	12	216	72.2	299
Mornington (S)	169	68.1	57	3	71	28.6	248
Mount Isa (C)	1,332	20.8	4,218	177	4,726	73.9	6,399
Palm Island (S)	42	10.9	74	6	341	88.3	386
Richmond (S)	85	27.0	178	14	204	64.8	315
Townsville (C)	10,829	17.8	43,526	1,806	47,913	78.6	60,969
RDA - TVL and NW Region	**18,075**	**20.9**	**58,501**	**2,610**	**64,940**	**75.1**	**86,514**
Queensland	281,467	18.2	1,103,036	45,088	1,211,884	78.3	1,547,301
RDA - TVL and NW Region as % of Queensland	6.4	-	5.3	5.8	5.4	-	5.6

1.4.4 Energy

The Queensland electricity industry is made up of 4 distinct, yet interconnected, sectors involved in producing electricity and delivering it to homes and businesses - electricity generation, transmission, distribution, and retail. The Queensland generation sector has a mixture of public and private ownership. The monopoly transmission and distribution assets are owned and operated by government-owned corporations, while the retail sector is entirely privately owned.

The Queensland Government owns electricity assets worth about $8 billion in generation, more than $3.9 billion in transmission and more than $13 billion in distribution. In addition, significant capital investment is being committed to transmission infrastructure (Powerlink) and distribution networks (ENERGEX and Ergon Energy) over the next 5 years (Queensland Government - Business and Industry Portal, 2013).

The Queensland Government's "The 30 year electricity strategy – Directions Paper" highlights the need for customers to have reliable and cost-effective supply of electricity to sustain them into the future. In particular the paper highlights that Queensland's 400,000 small businesses need secure, reliable and cost-effective electricity to insure their competitiveness and profitability (Queensland Government - Department of Energy and Water Supply, 2012).

1.4.4.1 Greater Northern Queensland perspective

Due to significant distances from power generation in Central and South-East Queensland to the energy users in the Townsville, industrial users of energy suffer higher energy costs associated with transmission costs (Transmission Use of System – TUOS charges) and energy losses (Marginal Loss Factors of more than 1.0) (ROAM Consulting , December 2007). This problem is accentuated the further north the energy user is located. The North West Queensland region is not connected to the National Electricity Market and has a different set of problems driven mainly by a lack of competition for generation. The West and Mid-west both suffer from a lack of access to a strong network. Residential and small business consumers in some parts of the region also suffer unreliable supply of energy due to insufficient infrastructure.

Across the region and in other areas of the State outside the south eastern corner, residential and small business consumers who purchase their electricity through Ergon Energy pay the same price per unit of energy regardless of where they are and the Queensland Government subsidises the tariff as a Community Service Obligation (CSO). State wide, CSO payments average between $350 and $650 million per annum. In the south eastern corner the households and businesses are supplied by other retailers (not Ergon) at a discount to the Ergon tariffs at a profit to those retailers.

1.4.4.2 Generation in Northern Queensland

There are three local generators in Townsville and a further four in the greater northern Queensland area (not including Pioneer Sugar Mill which has an embedded non-scheduled generator). These seven generators provide a total of 574MW of shoulder period supply and 333MW of peaking supply during the summer months. (There is a slightly higher capacity of 585MW and 361 MW respectively in the winter months).

The three power stations in Townsville area are:

- 419–379 (winter to summer) MW gas-fired peaking power station at Mount Stuart operated by Origin Energy; this is operated on aviation fuel and runs approximately 1-2% of the time;
- 244-235 (winter to summer) MW combined cycle power station operated by Transfield; and
- 39MW of co-generation at Invicta operated by CSR.

The North Queensland based generation is a combination of peaking plant (Mt Stuart), intermediate operating plant (Yabulu / Collinsville) and energy constrained hydro plant. The emerging energy resources in the region are primarily wind in the mid west and the potential for coal based generation in the northern Galilee Basin (Pentland). Solar resources are a fundamental characteristic of much of the resource corridor west of Townsville.

1.4.4.3 Transmission into Northern Queensland

North Queensland is connected to the remainder of Queensland and the National Electricity Market via four high voltage circuits stretching for over 700km from Broadsound, near Rockhampton, to Ross near Townsville; with two lines (275kV) only recently being installed in 2010. These lines have a firm delivery capacity of up to 1380MW and frequently operate at maximum capacity, already indicating a need to further upgrade. Powerlink, a State Government owned enterprise, is responsible for the building and maintenance of this transmission infrastructure.

1.4.4.4 Generation in North West Queensland

The North West Queensland Region is not connected to the national power grid. 325MW of gas-fired electricity is locally generated by Stanwell at Mica Creek Power Station in Mount Isa. In addition to that Xstrata generates 33.5MW of gas-fired electricity at Mount Isa Mines. A new $650m combined cycle (natural gas and steam) power station, Diamantina Power Station, is under construction in Mount Isa and Stage I is expected to be commissioned in December 2013 and Stage II three months later to generate 242MW. Gas is transported to Mount Isa from Ballera to the south. Solar farms are being established to support the energy requirements of Gulf communities including Normanton and Doomadgee. Burketown has standalone power run by Ergon generators.

The emerging loads in the North West Queensland Region face an ongoing problem with restricted access to gas for generation because of the focus of Queensland gas producers on supplying the emerging LNG processing and because of the lack of competition in the generation sector. This is likely to restrict the development of new mining operations in the region. Similarly, the expected closure of Century Mine in 2016 will impact on Gulf communities should current energy infrastructure (transmission lines) for the mine be dismantled. Consideration could be given to integration of this infrastructure with linkages to the national grid from Cairns to the Gulf communities.

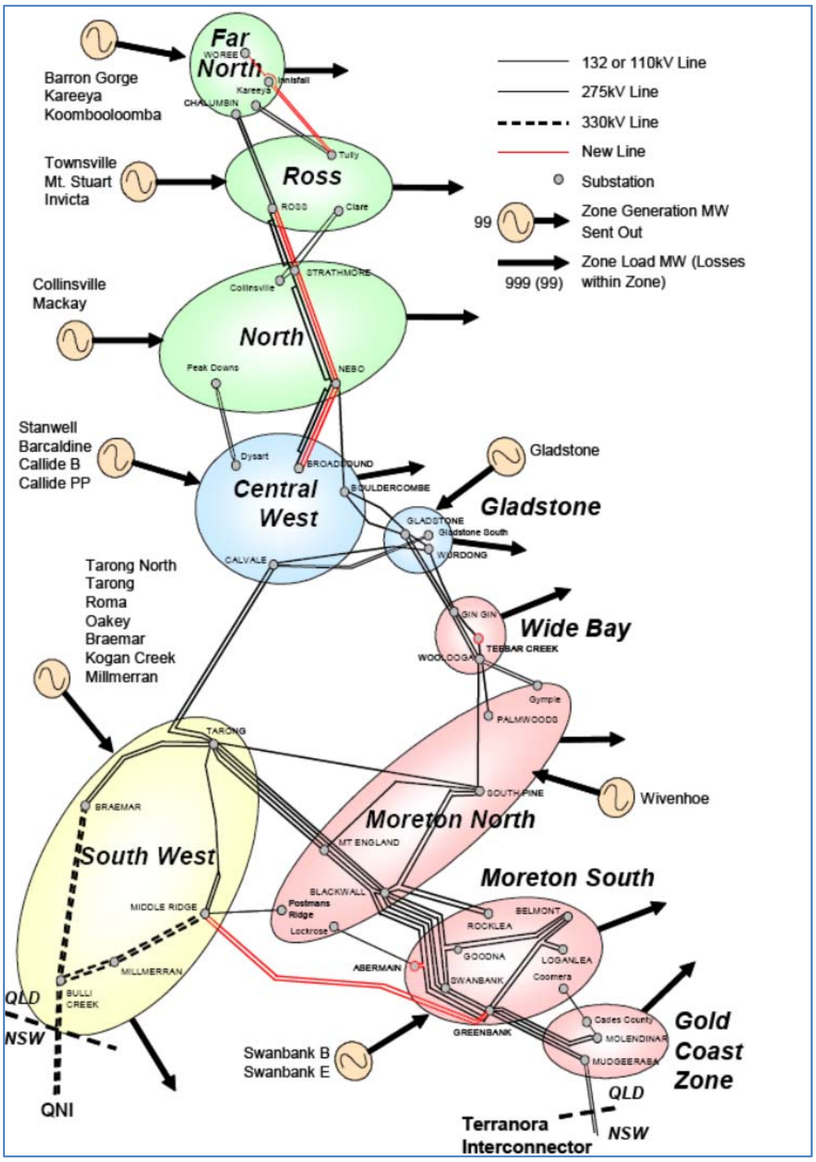
1.4.4.5 Distribution of energy across the region

Ergon Energy distributes energy to communities across the Townsville and North West Queensland region. The distribution system west of Charters Towers is particularly weak. The impact of this weak energy distribution system was recently highlighted in a government sponsored study of potential sites for an abattoir. It provides a demonstrative example of the relevant issues. The study found when power availability is compared with the required supply (2.4 to 4.8 MW), only Charters Towers and Cloncurry were deemed suitable to accommodate the capacity required for the project. Hughenden, Longreach and Normanton were deemed to have adequate capacity to support an abattoir with lesser head capacity while Richmond and Julia Creek were deemed to have insufficient capacity for minimum requirements for an abattoir facility of 100,000 head pa capacity. Winton’s network has no spare capacity. Mt Isa’s current infrastructure was assessed as being inadequate, however, with planned upgrades for 2017 this would address this shortfall (Department of Agriculture Fisheries and Forestry, 2012). Similarly, from a resource development perspective, the Ergon system would not be capable of supply to any of the proposed new coal mining developments in the northern Galilee Basin and significant upgrade would be required.

1.4.4.6 Demand

In 2011/12 actual delivered demand (MW) in the combined regions of Far North Queensland, North Queensland and Ross (Townsville area electricity zone) reached 1,151 MW. This demand, as forecast by Powerlink, is expected to grow to 1,623 MW by 2016-17 (Powerlink, 2012). There is also recognition that some zones may experience above average growth which would place significant pressure on generation and transmission facilities northwards from Central Queensland. Considering that significant mining growth is predicted, there is a real concern that future supply of energy will not meet demand. There is also the ongoing issue of a lack of competitive pricing of energy to industrial users which inhibits further value-adding industrial investment. This growing energy demand underlines the need for government policy positions that encourage the development of energy infrastructure that delivers growth in the region.

Figure 15: Ten geographical zones in the Queensland Electricity Network



Source: Townsville Enterprise Limited (2012)

1.4.5 Social Services Infrastructure - Hospitals, Aged Care, Emergency Services and Education

The region is home to over 24 public hospitals and several private facilities. Data released by the Australian Medical Association indicates that the two major public hospitals in the region, Townsville and Mount Isa, are running at, or near, full capacity. The Townsville General Hospital is the only tertiary level, teaching hospital outside South East Queensland (Queensland Health, 2010).

As per

Table 28, there are 144 identified schools servicing the region.

Table 27: Aged Care Services by Local Government area, TVL and North West RDA Region, 30 June 2010

(Queensland Treasury and Trade - Government Statistician, 2013)

	-Number of places by care type-					
Local Government Area	Aged care services	Community care (c)	Residential aged care (d)	Transition care (e)	Total places	Australian funding (f)
	Number	-Number-				$m
Boulia (S)	0	0	0	0	0	0.0
Burdekin (S)	5	33	193	0	226	8.9
Burke (S)	2	5	10	0	15	0.7
Carpentaria (S)	2	5	15	0	20	0.5
Charters Towers (R)	4	16	161	0	177	6.0
Cloncurry (S)	3	20	3	0	23	0.4
Doomadgee (S)	1	10	0	0	10	0.2
Flinders (S)	2	15	0	0	15	0.3
Hinchinbrook (S)	5	15	184	0	199	9.4
McKinlay (S)	1	5	2	0	7	0.1
Mornington (S)	2	5	15	0	20	0.6
Mount Isa (C)	5	26	86	0	112	3.6
Palm Island (S)	1	0	15	0	15	1.0
Richmond (S)	1	5	0	0	5	0.1
Townsville (C)	31	422	954	71	1,447	57.0
RDA - TVL and NW Region	**65**	**582**	**1,638**	**71**	**2,291**	**88.6**
Queensland	1,051	11,368	33,959	733	46,060	1,812.9
RDA - TVL and NW Region as % of Queensland	6.2	5.1	4.8	9.7	5.0	4.9

Table 28: Emergency services, schools and hospitals by Local Government area, TVL and North West RDA Region, 30 June 2010

(Queensland Treasury and Trade – Government Statistician, 2013)

Local Government Area	Police stations (a)	Ambulance stations	Fire stations (b)	Schools (c)	Hospitals (d)
			-number-		
Boulia (S)	1	1	1	2	1
Burdekin (S)	4	3	3	19	2
Burke (S)	1	1	0	1	1
Carpentaria (S)	2	2	0	3	2
Charters Towers (R)	4	4	1	13	1
Cloncurry (S)	2	2	1	3	2
Doomadgee (S)	1	1	0	1	1
Flinders (S)	3	1	1	5	1
Hinchinbrook (S)	2	2	3	18	1
McKinlay (S)	3	1	1	1	1
Mornington (S)	1	1	0	1	1
Mount Isa (C)	2	2	1	14	2
Palm Island (S)	1	1	0	2	1
Richmond (S)	1	1	1	1	1
Townsville (C)	7	4	5	60	7
RDA - TVL and NW Region	**35**	**27**	**18**	**144**	**25**
Queensland	340	262	243	1,734	271
RDA - TVL and NW Region as % of Queensland	10.3	10.3	7.4	8.3	9.2

1.5 KEY DETERMINANT FOUR: COMPARATIVE ADVANTAGE AND BUSINESS COMPETITIVENESS

1.5.1 Business

The Townsville and North West region has a significant number of registered business by industry that have a higher specialisation ratio than Queensland as a whole. These areas include agriculture, mining, construction, accommodation and food services, transport and postal warehousing, administrative and support services, education and training, health care and social assistance and other services. As outlined

Table 29, the majority of the region’s registered businesses earn less than $500,000 per annum.

Table 29: Counts of registered businesses by industry, Townsville and North West RDA Region, 2010-11

(Queensland Treasury and Trade - Government Statistician, 2013)

Industry	Tvl and North West RDA Region		Queensland		Specialisation ratio (c)
	Number	%	Number	%	Number
Agriculture, Forestry and Fishing	3,284	17.3	45,446	10.6	1.64
Mining	117	0.6	1,914	0.4	1.39
Manufacturing	699	3.7	18,090	4.2	0.88
Electricity, Gas, Water and Waste Services	42	0.2	1,189	0.3	0.80
Construction	3,654	19.3	77,805	18.1	1.07
Wholesale Trade	394	2.1	13,959	3.2	0.64
Retail Trade	1,334	7.0	28,424	6.6	1.07
Accommodation and Food Services	706	3.7	15,698	3.6	1.02
Transport, Postal and Warehousing	1,355	7.2	25,919	6.0	1.19
Information Media and Telecommunications	56	0.3	3,011	0.7	0.42
Financial and Insurance Services	760	4.0	29,048	6.7	0.59
Rental, Hiring and Real Estate Services	1,793	9.5	47,977	11.1	0.85
Professional, Scientific and Technical Services	1,305	6.9	45,173	10.5	0.66
Administrative and Support Services	674	3.6	16,751	3.9	0.91
Public Administration and Safety	64	0.3	1,448	0.3	1.01
Education and Training	247	1.3	5,110	1.2	1.10
Health Care and Social Assistance	872	4.6	19,516	4.5	1.02
Arts and Recreation Services	181	1.0	5,289	1.2	0.78
Other Services	1,049	5.5	19,433	4.5	1.23
Not Classified	343	1.8	9,206	2.1	0.85
Total (d)	**18,929**	**100.0**	**430,406**	**100.0**	**1.00**

Table 30: Counts of registered businesses by turnover range by statistical area level 3, Townsville and North West RDA Region 2010-2011

(Queensland Treasury and Trade - Government Statistician, 2013)

Statistical area level 3	$0 to less than $100k		$100k to less than $500k		$500k to less than $2m		$2m or more		Total
	Number	%	Number	%	Number	%	Number	%	Number
Charters Towers-Ayr-Ingham	1,681	37.1	1,961	43.3	730	16.1	160	3.5	4,532
Outback-North	889	39.2	835	36.8	408	18.0	138	6.1	2,270
Townsville	5,200	42.9	4,299	35.4	1,857	15.3	771	6.4	12,127
Tvl and North West RDA Region	**7,770**	**41.0**	**7,095**	**37.5**	**2,995**	**15.8**	**1,069**	**5.6**	**18,929**
Queensland	200,447	46.6	149,481	34.7	57,342	13.3	23,136	5.4	430,406
Tvl and North West RDA Region as % of Queensland	3.9	-	4.7	-	5.2	-	4.6	-	4.4

1.5.2 Gross Regional Product (GRP)

In interpreting statistical data from the Queensland Treasury and Trade, the North West and Northern areas form the Townsville and North West region. As outlined in Table 31, the region has contributed a total of $18,434 million to the gross regional product of the state in 2010-2011. This represents a 50% increase since 2000-2001.

Table 31: Nominal gross regional product, current prices ($m), Queensland, 2000-01, 2006-07 and 2010-11

(Treasury and Trade - Queensland, 2013)

				-Average Annual per cent growth-		
Region	2001-01	2006-07	2010-11	2000-01 to 2006-07	2006-07 to 2010-11	2000-01 to 2010-11
	-$m-			-%-		
Brisbane	55,971	101,799	129,680	10.5	6.2	8.8
Gold Coast	10,676	20,719	25,312	11.7	5.1	9.0
Sunshine Coast	5,179	10,007	12,600	11.6	5.9	9.3
West Moreton	1,424	2,024	2,651	6.0	7.0	6.4
Wide Bay-Burnett	5,202	8,587	10,209	8.7	4.4	7.0
Darling Downs	5,955	9,854	12,126	8.8	5.3	7.4
South West	1,463	1,533	2,100	0.8	8.2	3.7
Fitzroy	7,842	14,741	20,974	11.1	9.2	10.3
Central West	621	552	687	-1.9	5.6	1.0
Mackay	6,304	15,122	22,807	15.7	10.8	13.7
Northern	5,797	9,798	11,923	9.1	5.0	7.5
Far North	6,696	10,687	12,286	8.1	3.5	6.3
North West	3,431	7,430	6,511	13.7	-3.2	6.6
Total Queensland	**116,561**	**212,853**	**269,866**	**10.6**	**6.1**	**8.8**
Rest of Australia	**590,331**	**870,449**	**1,134,023**	**6.7**	**6.8**	**6.7**

1.5.2.1 Gross Regional Product – Northern

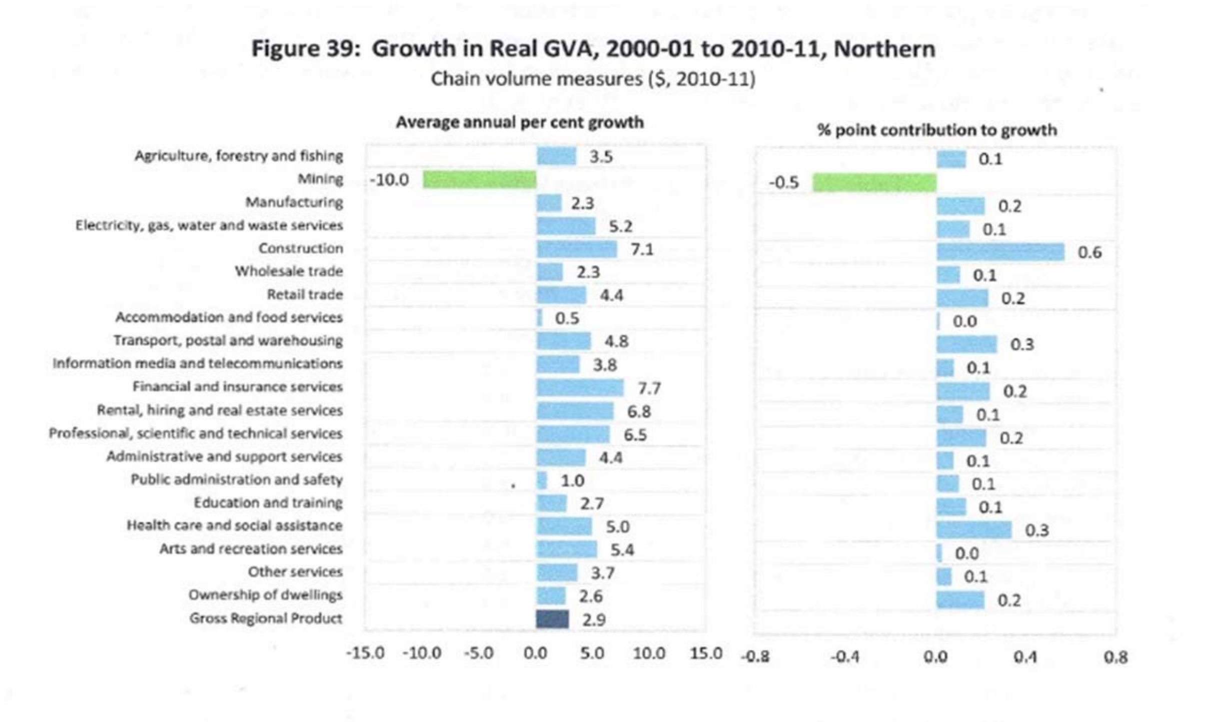
Table 32 outlines the contribution per industry area to the region's gross regional product for the Northern area. Within the Northern area, the largest contribution to gross regional product is from the manufacturing and public administration and safety sectors, followed by construction and retail trade. The Northern region experienced real average annual GRP growth of 2.9% over the ten years to 2010-2011, compared with the State average of 4.1%. In the Northern region all industries experienced growth with the exception of mining (down 10% in average annual terms). The highest contributor to growth in the Northern region was the construction industry with 0.6% point (Queensland Treasury and Trade - Queensland Government, March 2013).

Table 32: Composition of gross value added current prices, Northern 2000-01 and 2010-11

(Treasury and Trade - Queensland, 2013)

Industry	Composition		Change in composition
	2000-01	2010-11	
	-%-		Percentage points
Agriculture, forestry and fishing	5.7	4.1	-1.6
Mining	5.0	2.7	-2.3
Manufacturing	10.5	9.9	-0.6
Electricity, gas, water and waste services	2.0	3.4	1.4
Construction	7.3	10.6	3.3
Wholesale trade	5.0	4.6	-0.4
Retail trade	6.4	6.0	-0.4
Accommodation and food services	3.0	2.5	-0.5
Transport, postal and warehousing	7.3	6.6	-0.7
Information media and telecommunications	3.5	2.3	-1.2
Financial and insurance services	3.7	4.2	0.5
Rental, hiring and real estate services	1.8	2.3	0.5
Professional, scientific and technical services	3.1	4.4	1.2
Administrative and support services	1.7	2.0	0.3
Public administration and safety	11.0	10.0	-1.0
Education and training	5.5	5.2	-0.3
Health care and social assistance	6.9	8.1	1.2
Arts and recreation services	0.9	0.6	-0.3
Other services	2.2	2.0	-0.2
Ownership of dwellings	7.5	8.7	1.2
Gross Value Added	100.0	100.0	

Figure 16: North West Growth in Real Gross Value Added, 2000 - 2001 to 2010 - 2011



1.5.2.1 Gross Regional Product – North West

Table 33 outlines the contribution per industry area to the region's gross regional product for the North West area of the region. In the North West area the mining sector is the significant contributor to the gross regional product. The second largest sector is agriculture, forestry and fishing.

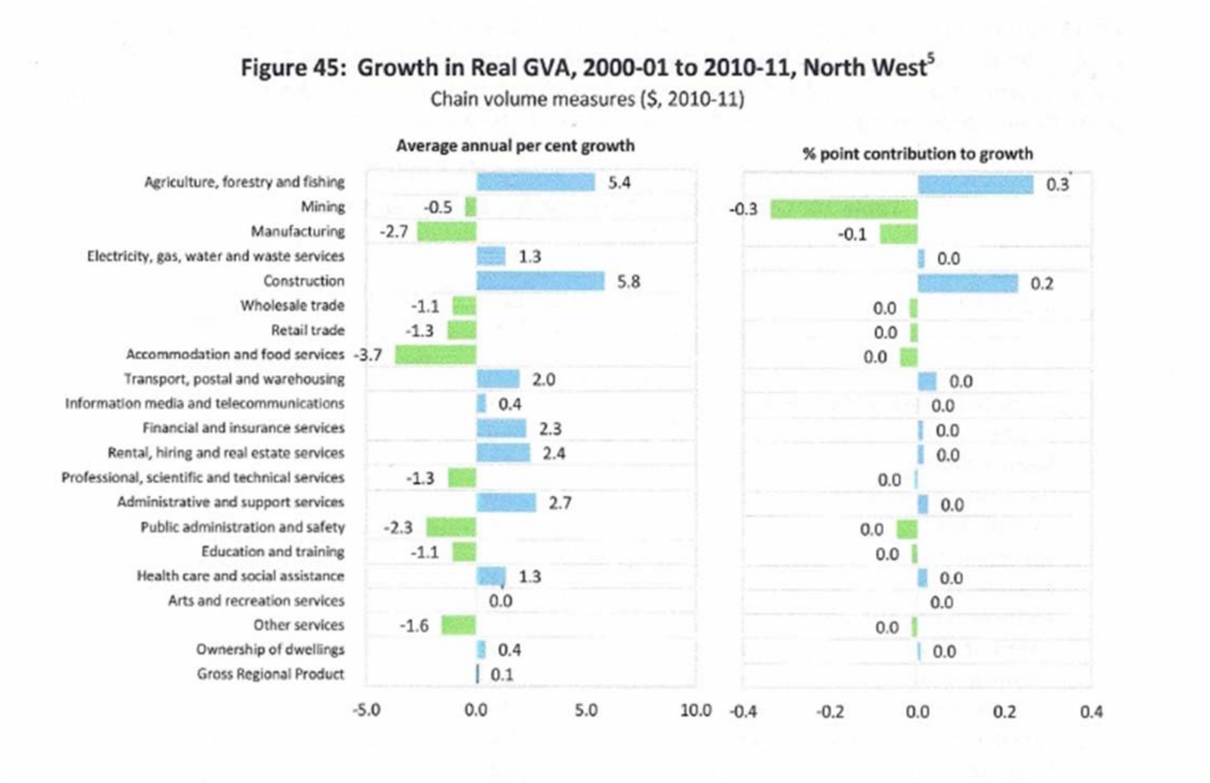
The North West region experienced a 0.1% rise in real GRP over the 10 years to 2010-11 reflecting mixed industry results. The agriculture, forestry and fishing and construction industries contributed positively to growth, 0.3 and 0.2 percentage point respectively. These offset the detractions by the Mining and Manufacturing industries (0.3 and 0.1 percentage point respectively). All other industries had a neutral impact on real GRP growth in the North West (Queensland Treasury and Trade - Queensland Government, March 2013).

Table 33: Composition of gross value added, current prices North West 200-01 and 2010-11

(Treasury and Trade - Queensland, 2013)

Industry	Composition		Change in composition
	2000-01	2010-11	
	-%-		Percentage points
Agriculture, forestry and fishing	7.1	6.7	-0.4
Mining	61.0	67.1	6.1
Manufacturing	4.5	2.8	-1.7
Electricity, gas, water and waste services	1.0	1.3	0.3
Construction	3.9	5.5	1.6
Wholesale trade	2.3	1.7	-0.7
Retail trade	2.1	1.2	-0.9
Accommodation and food services	1.5	0.9	-0.6
Transport, postal and warehousing	3.4	2.5	-0.9
Information media and telecommunications	0.8	0.4	-0.4
Financial and insurance services	0.9	0.6	-0.2
Rental, hiring and real estate services	0.7	0.7	-0.1
Professional, scientific and technical services	0.8	0.6	-0.2
Administrative and support services	0.9	1.0	0.1
Public administration and safety	2.6	1.9	-0.7
Education and training	1.6	1.1	-0.5
Health care and social assistance	1.9	1.8	-0.2
Arts and recreation services	0.2	0.1	-0.1
Other services	1.2	0.7	-0.5
Ownership of dwellings	1.6	1.6	0.0
Gross Value Added	**100.0**	**100.0**	

Figure 17: North West Growth in Real Gross Value Added, 2000-2001 to 2010-2011

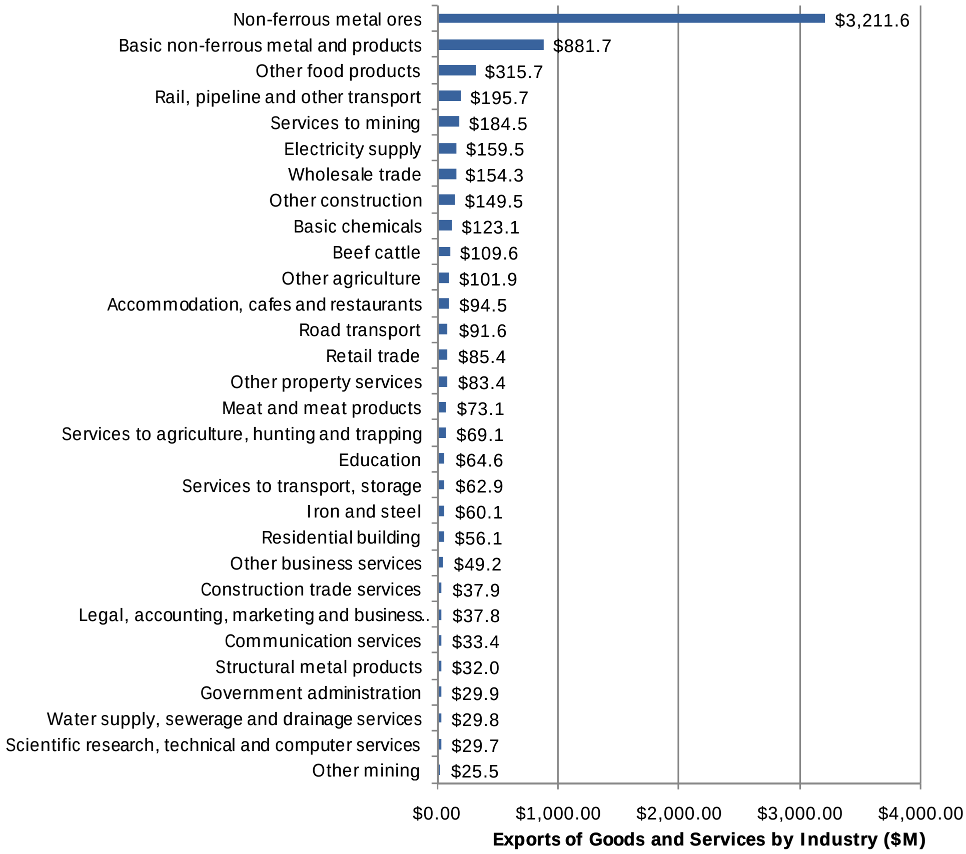


1.5.3 Imports and Exports

The high export dependence of the Mining sector is the standout of the exporting industries. Non-ferrous metal ores are the major export for the region totalling over $4 billion worth of non-ferrous metals, ores and products per year. Food products are the next largest exporting industry. These results align with the strong presence of mining and food production industries (such as sugar) in the region. Live beef cattle are also a significant export for the region.

Figure 18: Estimates of Exporting Industries in the Townsville and North West Queensland Region (2008-09)

(AEC Group, 2012)

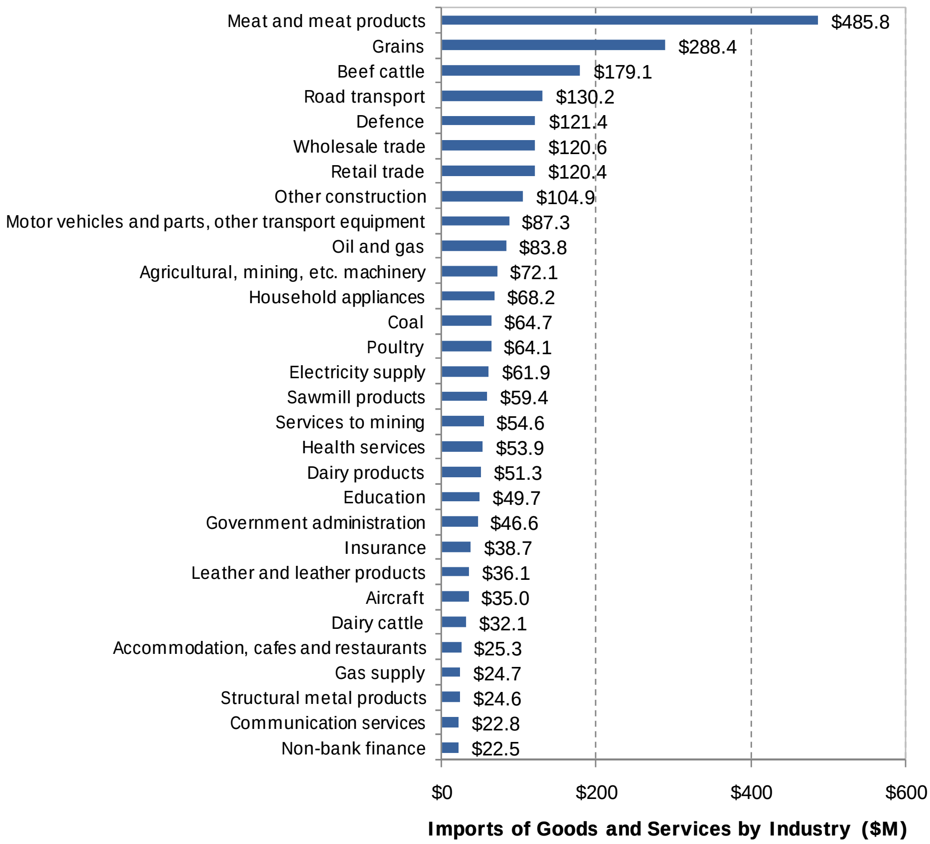


Note: Does not include Boulia Shire

From an imports perspective, the region imports a large amount of food, predominantly due to the region having a relatively narrow food-growing industry (focused on beef cattle, sugar and a few other horticultural crops). There is also minimal food processing (other than sugar refining and basic meat processing) in the region. Meat and meat products are imported ($485 million per annum) as are grains ($288 million per annum). The region is also an importer of beef cattle, which are used for breeding and food purposes in the region.

Figure 19: Estimates of Importing Industries of the Townsville and North West Queensland Region (2008-09)

(AEC Group, 2012)



Note: Does not include Boulia Shire

1.5.4 Net Exports

The region is a net exporter, meaning that by value it exports more than it imports. This means that the region is particularly dependent on national and international economies to support its industry. The region is exposed to economic peaks and troughs in line with conditions in the external economies that demand its key exports (particularly commodities) and the value of the Australian Dollar.

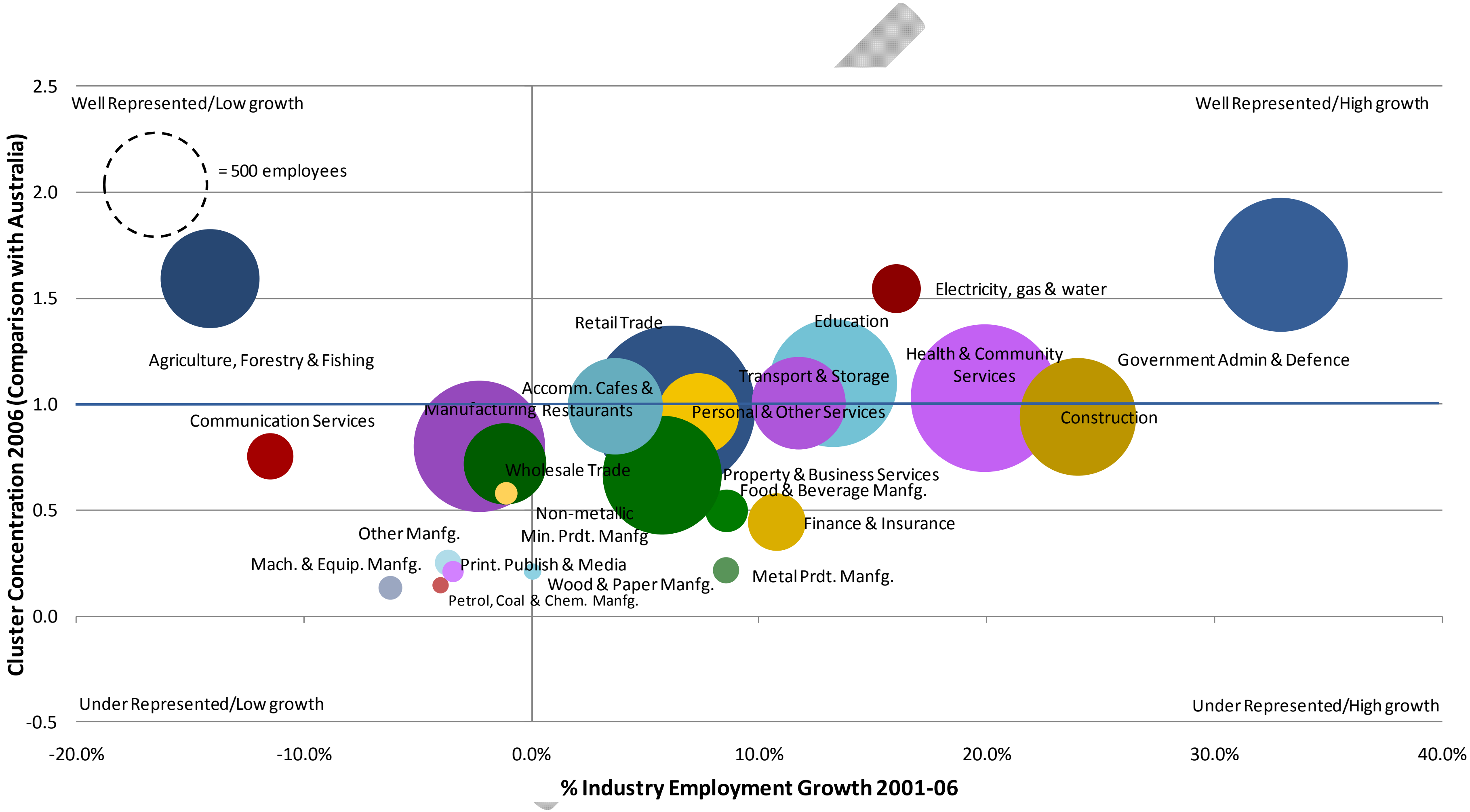
1.5.5 Cluster Mapping

The following cluster maps plot the size of the industry in the region (based on employment) against the industry's growth rate (on an Australia-wide level). The size of employment in the industry in the region's economy as a proportion of the national experience is shown on the vertical axis. Those industries with a value of greater than one are more represented in the regional economy than the national economy. On the horizontal axis, industry employment growth rates are shown. Growth rates below zero reflect declining industry employment and, most likely, declining industries. The cluster map establishes four quadrants – high representation of an industry in the region with positive or negative growth and industries with lower proportional representation and positive or negative employment growth.

The maps can be used to identify under-utilised strengths in the region. From the maps, it is clear that the region is enjoying a strong competitive advantage in the *Mining* sector. The map indicates that the region is devoting significant resources to this industry. Similarly, the region has a strong competitive advantage in the defence and government services sector. Sectors which the region may have opportunity for building and encouraging investment in are: *Finance & Insurance*, *Food & Beverage Manufacturing*, *Metal & Mineral Manufacturing* and *Property & Business Services*.

Figure 20: Cluster Mapping of Industries in the Townsville and North West Queensland Region, 2006 (close up map - excluding mining)

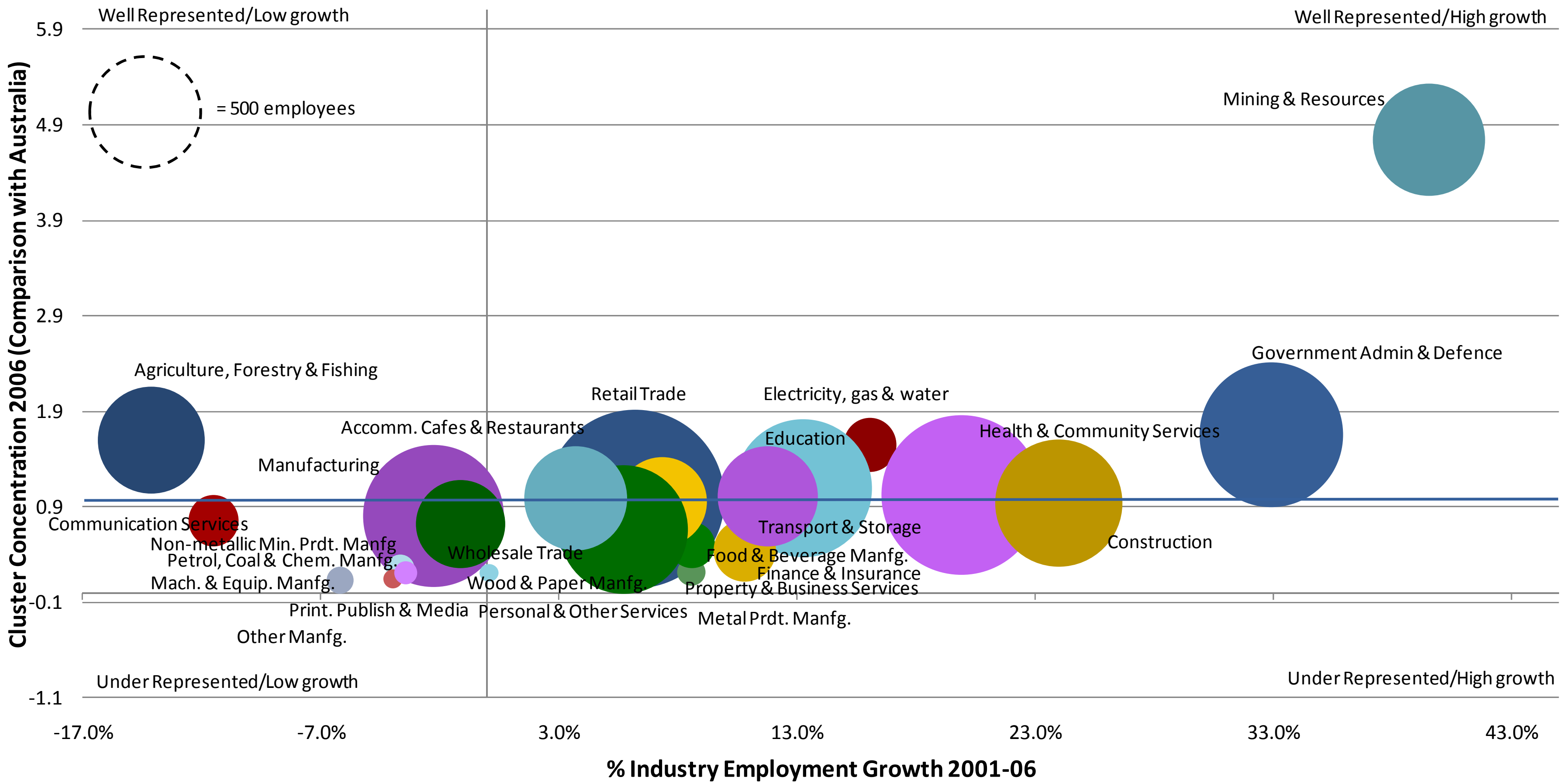
(AEC Group, 2012)



Source: ABS (2007), AEC*group* (2010)

Figure 21: Cluster mapping of industry in Townsville and North West Queensland Region, 2006 (including mining)

(AEC Group, 2012)



Source: ABS (2007), AEC*group* (2010)

1.5.6 Industry Areas

1.5.6.1 Tourism

The region benefits from a wide range of natural attractions and experiences that are enjoyed by both domestic and international tourists. The Townsville and North West Regional Development Australia footprint falls within the destination focus of three Regional Tourism Organisations (RTOs): Townsville Enterprise; Outback Queensland Tourism Association; & Tourism Tropical North Queensland. These organisations take a lead role in the destination marketing and development of the region.

Key visitor statistics for the region indicate that the Townsville /North Queensland region attracted 1,084,000 overnight visitors for the year ended March 2012. Domestic visitation to Townsville grew strongly in the year ended March 2012 that can be explained in part by the ongoing recovery in tourism after the flooding that occurred across Queensland early in 2011. International visitation to Townsville declined by 12% in the year ended March 2012, driven by declines in holiday visitation and travel from key source markets, such as the United Kingdom (UK), Germany and New Zealand (Tourism Queensland, 2012).

For the year ending March 2012 the Outback Queensland region attracted 462 000 overnight visitors with the vast majority domestic visitors (441 000), representing as increase of 4% in the three years to March 2012, strengthened by growth in domestic holiday and business travel. As with other regions throughout the state, the recovery of the tourism industry after the floods in early 2011 has contributed to this growth. Significantly, intrastate travel has been determined as the main driver of this growth, with regional Queensland being the largest source market of domestic holidaymakers (Tourism Queensland, 2012).

Overall, the predominant form of arrivals into the region is by car with the self-drive holiday being the most popular style of holiday in the region. Drive routes such as the Overlanders Way, Outback Highway, Great Tropical Drive, Savannah Way and Pacific Touring Route are branded and actively marketed to visitors as self-drive holiday journeys. In the North West area, the section of road with the most tourism traffic (as determined by traffic counts by DTMR) is the Barkly Highway (Cloncurry- Mount Isa) section of the Overlander’s Way, with most tourists arriving via the Landsborough rather than the Flinders Highway.

	Sub-Regional (Townsville - Australian Bureau of Statistics tourism region of Northern) (Tourism Queensland, 2012)	Sub-Regional Outback (Note this is an area covering Western Queensland and far extends beyond the area of the Townsville and North West Region) (Tourism Queensland, 2012)
Employment	In 2007-08 tourism directly accounted for 4,000 jobs, or 3.2% of direct tourism employment of 122,600 people in the state. Retail trade had the largest share of tourism employment (26%), followed by accommodation (19.3%) and cafes and restaurants (13.6%). [Source: STCRC – Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]	In 2007-08 tourism directly accounted for 1,600 jobs, or 1.3% of direct tourism employment of 122,600 people in the state. Retail trade had the largest share of tourism employment (28.8%), followed by accommodation (21.3%) and cafes and restaurants (15%). [Source: STCRC – Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]
Gross Regional Product	In 2007-08 tourism gross regional product was $336 million, or 3.7% of the total Queensland tourism gross state product of $9.2 billion. Gross Regional Product increased by 10.2% over the previous financial year. [Source: STCRC - Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]	In 2007-08 tourism gross regional product was $147 million, or 1.6% of the total Queensland tourism gross state product of $9.2 billion. Gross Regional Product increased by 6.5% over the previous financial year. [Source: STCRC - Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]
Economic Importance	Tourism accounts for 2.9% of the region's economy, compared to 3.7% for Queensland and 3.0% for the national average. This ranks Townsville 56th among the 77 tourism regions in Australia in terms of economic importance for its tourism industry. [Source: Tourism Research Australia – The Economic Importance of Tourism in Australia's Regions – published April 2011]	Tourism accounts for 6.5% of the region's economy, compared to 3.7% for Queensland and 3.0% for the national average. This ranks Outback Queensland 17th among the 77 tourism regions in Australia in terms of economic importance of its tourism industry. [Source: Tourism Research Australia – The Economic Importance of Tourism in Australia's Regions – published April 2011]
Tax Revenue	In 2007-08, net taxes on tourism products arising from tourism consumption in Townsville raised $83 million in federal, state and local government revenues, and were 4.8% of total taxes on tourism products of $1.7 billion for Queensland. [Source: STCRC – Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]	In 2007-08, net taxes on tourism products arising from tourism consumption in the region raised $49 million in federal, state and local government revenues, and were 2.8% of total taxes on tourism products of $1.7 billion for Queensland. [Source: STCRC – Regional Economic Contribution of Tourism Destinations in Queensland - published June 2010]

	Sub-Regional (Townsville - Australian Bureau of Statistics tourism region of Northern) (Tourism Queensland, 2012)	Sub-Regional Outback (Note this is an area covering Western Queensland and far extends beyond the area of the Townsville and North West Region) (Tourism Queensland, 2012)
Tourism Businesses	There are 2,215 tourism related businesses in Townsville as at June 2011, of which 9 in 10 are small businesses employing less than 20 employees. [Source: Tourism Research Australia – Tourism Businesses in Australia June 2009 to June 2011 – published July 2012]	There are 657 tourism related businesses in Queensland's Outback as at June 2011, of which 9 in 10 are small businesses employing less than 20 employees. [Source: Tourism Research Australia – Tourism Businesses in Australia June 2009 to June 2011 – published July 2012]
Visitor Expenditure	For the year ending June 2012, domestic overnight visitors spent $673 million, domestic day visitors spent $132 million and international visitors spent $81 million, totalling $886 million or $2.4 million per day. [Source: Tourism Research Australia – International Visitor Survey, National Visitor Survey]	For the year ending June 2012, domestic overnight visitors spent $405 million in Outback Queensland, equating to $1.1 million per day. [Source: Tourism Research Australia – National Visitor Survey]

1.5.6.2 Tropical Innovation

TropLinks (a not for profit organisation with Queensland Government seed funding) with a network of research bodies, companies, industry groups and economic development organisations) estimates that the global tropical economy is projected to reach US$40 trillion by 2025, that is 20 times greater than Australia's estimated economy. There is initial investigations into the development of a Smart Community Knowledge Precinct in Townsville at Douglas (TIDOR, January 2012).

1.5.6.3 Construction

The Construction sector is the second largest industry, employing approximately 9,346 throughout the region (ABS, 2006). In 2010-11, the Construction industry's Gross Value Added grew 7.1% in the Northern area and 5.8% in the North West.

Building approvals data for the region indicate that the residential sector was a lower proportion of Construction activity over the 2011/12 year. 43.0% of all building approvals in the year were for residential construction. For the State of Queensland, 58.8% of building values were for the residential sector (Queensland Government, Treasurey and Trade Government Statistician, June 2013). Referring to

Table 34, as compared to Queensland wide and Australian average statistics, the region experienced a growth in value of total building approvals between 2010/2011 and 2011/2012 financial years.

Table 34: Building Approvals by Local Government

(Australian Government - Bureau of Statistics, 2013)

	Total Dwellings	Value of total building	Total dwellings	Value of total building	Total dwellings	Value of total building	Average value of new houses	Average value of new houses	Average value of new houses	Growth value of total building approvals	Growth value of total building approvals
	Number	$ ('000)	Number	$ ('000)	Number	$ ('000)	$	$	$	%	%
Region Name	**2012**	**2012**	**2011**	**2011**	**2010**	**2010**	**2010**	**2011**	**2012**	**2010-2011**	**2011-2012**
Boulia (S)	5	1283	0	0	1	572.3	247300	0	245600	-100	0
Burdekin (S)	64	31651.8	48	35620.6	67	38169.9	305184.211	395095.556	338720	-6.67882284	-11.1418673
Burke (S)	0	59.3	0	1317	0	250	0	0	0	426.8	-95.4973424
Carpentaria (S)	4	1446.5	0	0	8	2847	124750	0	135875	-100	0
Charters Towers (R)	56	20532	34	15353.2	59	30529.7	220953.488	234471.875	277840.541	-49.7106097	33.73107886
Cloncurry (S)	17	28114.2	2	4623.8	13	8495.8	242563.636	277300	246347.059	-45.5754608	508.0323543
Doomadgee (S)	0	3634.9	0	0	0	2500	0	0	0	-100	0
Flinders (S)	2	673.8	2	709	0	1465	0	228000	170000	-51.6040956	-4.96473907
Hinchinbrook (S)	54	36651.2	43	20041.8	40	34541.5	255035.135	285626.667	286896	-41.9776211	82.87379377
McKinlay (S)	2	497	1	540	0	2549.9	0	150000	248500	-78.8226989	-7.96296296
Mornington (S)	0	7608.9	0	1892.9	0	2313.2	0	0	0	-18.1696351	301.9705214
Mount Isa (C)	27	27663	69	54614	66	61038.3	294380	350004.348	255750	-10.525031	-49.3481525
Palm Island (S)	0	3821.1	0	0	1	3985.6	1485600	0	0	-100	0
Richmond (S)	1	113.9	5	986.1	1	167.1	89000	136866.667	113900	490.1256732	-88.4494473
Townsville (C)	1354	921508.7	1191	670374.8	1797	916610.9	265449.375	269371.314	254718.917	-26.8637543	37.46171545
Townsville and North West Queensland	1586	1085259.3	1395	806073.2	2053	1106036.2	265175.95	274921.322	258726.601	-27.1205409	34.6353284
Queensland	26682	13216051	27506	15053893	33889	18037813	262182.451	270273.485	263999.412	-16.5425805	-12.2084187
Australia	145057	75382923	164263	76466568	171429	86833145	247812.383	266641.922	271453.17	-11.9385023	-1.41714835

The region accounted for $476.3 million or 8.2% of the State's total building value in 2011/12, while accounting for $608.9 million or an 11.2% share of total non-residential building value (Queensland Treasury and Trade - Government Statistician, 2013).

1.5.6.4 Agriculture, Forestry and Fishing

Agriculture plays an important role in the Queensland economy. In 2009-10, the state's agriculture production was valued at $9.2 billion. Future productivity growth may be affected by climate change in the medium to long term through higher temperatures, reduced rainfall and extreme weather events (The Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education , 2013).

Agriculture, Forestry and Fishing is also a key sector, employing approximately 4,882 throughout the region (Queensland Government, Treasurey and Trade Government Statistician, June 2013). This industry contributed 8% to GRVA in 2005-06, and produces relatively high employment relative to its GRVA. Key agricultural commodities for the region are sugar and beef cattle. 907 businesses are estimated to be operating in the sugar cane industry, producing about 10 million tonnes of sugar cane for crushing each year (34% of the Queensland total). All these businesses are in the Northern Region. Almost 25% of Queensland's beef cattle are raised in the Townsville and North West Queensland Region. Of these cattle, 73% are in Northern Queensland. The region also produces other agricultural products, including several horticultural crops, mangoes and prawns.

The three local councils of Flinders, Richmond and McKinlay are leading the Flinders River Agricultural Precinct (FRAP) stakeholder group, investigating options for an agricultural industry based around utilisation of the Flinders River catchment (Flinders River Agriculture Precinct (FRAP) Stakeholder Group, 2012).

1.5.6.5 Defence

The Australian Defence Force has a large presence in the region. In 2006, the Australian Census recorded 3,511 defence workers in the region (accounting for approximately 5% of employment in Townsville) though Census figures for defence workers should be considered an underestimate. The majority of these workers are in the North Queensland Region, which is home to the Townsville RAAF base, the Lavarack Army Barracks and with a small presence in Mount Isa. The outlook for the region's defence sector is positive and supported by the relocation of the Australian Army's 3RAR regiment to Townsville's Lavarack Barracks in early 2012. The Defence sector employment and families account for nearly 10% of the Townsville population.

1.6 KEY DETERMINANT FIVE: EFFECTIVE CROSS-SECTORAL AND INTERGOVERNMENTAL PARTNERSHIPS (INCLUDING THROUGH PLACE-BASED APPROACHES) AND INTEGRATED REGIONAL PLANNING

1.6.1 Cross-Sectoral and Intergovernmental Partnerships

There are a number of organisations operating within the region providing services on a number of issues. At a local government scale there is two operating Regional Organisations of Councils. At a state government scale there is two senior manager forums operating out of the two major hubs of Townsville and Mount Isa. This is where the majority of public service personal are operating. Public health services are represented by the two Hospital Boards operating in the region.

Cross sectorally there are a number of groups, these include the regional economic development groups of Townsville Enterprise Limited (TEL), Mount Isa Townsville Economic Zone (MITEZ), Gulf Savannah Development (GSD) and including coverage of the Boulia Local Government area is RAPAD (operating from Longreach). Within Townsville, TEL offer a successful mentoring program for identifying and assisting young leaders.

The Townsville and North West region is also influenced by five Natural Resource Management Groups, these are North Queensland Dry Tropics, Southern Gulf Catchments, Northern Gulf Resource Management Group, Desert Channels and Terrain Natural Resource Management.

Industry and business interests are represented by peak groups such as Queensland Local Government Association, AgForce, Chambers of Commerce, and the Queensland Mining Council.

Consultation did not identify any issues in representation at these groups, nor did it identify any gaps in need.

1.6.2 Northern Queensland Strategy

The Northern Queensland Strategy (NQS) is a collaborative partnership between RDA Townsville and North West Queensland, RDA FNQ&TS, RDA Mackay Isaac Whitsunday and RDA Fitzroy and Central West and the Commonwealth and Queensland governments. This strategy has allowed the 'super-zone' to take a consolidated and visionary approach to the development of strategic initiatives that strengthen the future of the North Queensland economy as well as build upon recognised Commonwealth and State Government priorities.

The RDAs agreed on four themes that would shape the discussion and direction of this strategy and includes key enablers to support effective economic growth. These four themes are explicitly interlinked and encompass multi-dimensional factors pertaining to achievement of sustainable regional development via the Queensland Government pillars. This strategy seeks to identify cross-regional synergies and correlating opportunities, which can be realised through leadership, leverage and partnerships. Furthermore, the NQS focuses on governance, capacity building and resources for reform and those required for planning and development.

1.6.3 Integrated Regional Planning

The *North-West Queensland Regional Plan 2010* is a land use plan as a means to influence social, economic and environmental outcomes in a region. This statutory regional plan developed under the Queensland Government's BluePrint for the Bush program also looks at integrated planning across the region. A North Queensland Economic and Infrastructure Framework is currently being prepared by the Queensland Government Department of State Development, Infrastructure and Planning. North Queensland and Cape York remain the only areas where no regional planning document has been prepared to date by the Queensland Government. The Gulf sub-region has a non-statutory regional planning document, the *Gulf Regional Development Plan 2000*.

2 ANNEXURE 2 – STAKEHOLDER CONSULTATION AND PARTNERSHIPS

Two underpinning elements of the COAG Framework for Economic Development are:

1. the need for integration of the different levels of government, industry and the community.
2. The need for evidence based approaches to decision making.

The consultation process that the RDA Townsville and North West Committee has taken to develop the 2013 Roadmap has worked on these above provisos.

RDA Townsville and North West staff and committee members held 13 workshops, 4 round tables and individual consultations with over 133 regional stakeholders and community across the region during the consultation period of June 2013 to July 2013. These stakeholders included:

- Elected representatives and staff from 15 Local Governments.
- State Government representatives.
- Economic Development Organisations.
- Not-for-Profit social services organisations.
- Natural Resource Management groups.
- Industry representative groups, including Local Government Association of Queensland and Chambers of Commerce.

An on-line survey of regional stakeholders and community members across the region received 62 responses. The RDA Committee discussed the development of the Regional Roadmap twice that is on the 24 June 2013 and 23 July 2013. The consultation period sought the following outcomes:

- Ensure that regional issues, priorities and initiatives currently identified remain relevant.
- Identify any new regional issues, priorities and initiatives.
- Determine stakeholder and community views of the RDA Committee's role.
- Determine future communication partnerships between stakeholders, community and the RDA Committee.
- Determine key messages for government Ministers and regional decision makers.

A summary of the consistent issues raised across the region during this above mentioned consultation process were:

Topic	**Summary of Issues Raised with Impact Across the Region**
HEALTH and SOCIAL SERVICES	• Aging infrastructure of health facilities. • Lack of coordination of services. • Limited access to some services in rural centres with declining population.
HOUSING	• Lack of affordable social housing stock throughout the region. • Lack of housing for attraction of new residents.
SCHOOLING and EDUCATION	• Access to child care facilities and viability of centres. • Access to public transport to attend school within centres. • Access to schooling within region, particularly for remote children in year 7. • Youth are leaving the rural centres for further tertiary studies and not returning. • Relevance of learning environment in TAFE and ability to skill individuals.
AGRICULTURE	• Ability to increase food production. • Ensuring limited impact on the resource base that production is reliant on.
TRANSPORT	• Limited public transport availability within centres, and also between centres. • Cost of transport, in particularly flight options.
AGING POPULATION	• Limited ability for people particularly throughout the Gulf, North West and mid Western areas to 'age in place' due to services not being available.
POPULATION	• Population decline in smaller centres. • Attracting and retaining skilled workers. • Statistical data is not reliant or reflective of the service population as compared to the resident population.
ENERGY	• Access to consistent reliant energy supply, particularly throughout the Gulf, North West and mid Western areas. • High energy costs.
WATER	• Water availability throughout the Gulf, North West and mid Western areas. • Access to reliant water quality.
LAND	• Access to land, with tenure restraints.

TELECOMMUNICATIONS	• Access to reliant **mobile** and landline reception. • Limited uptake of NBN for improving service delivery.
RAIL	• Access to the rail corridor for freight movement. • Cost of rail for freight movement.
ROAD	• Ability for road infrastructure to keep up with current demands. • Access during natural disasters due to long term road closures.
CLIMATE CHANGE	• Climate change adaption.
NATURAL RESOURCES	• Valuing the resource base and its contributing value to the regions output and industry.
INVESTMENT	• Need to reduce red tape to encourage greater investment into the region. • Need opportunities such as the Flinders Agricultural precinct and the meat processing facility to be taken up.
TOURISM	• Tourism numbers are decreasing due to a perception of the area being 'closed' following natural disasters.

This Regional Roadmap 2013 – 2016 was provided to the Australian Government on 16 August 2013 for their consideration and records. The identified priorities and identified RDA initiatives, projects and activities are incorporated into the RDA's annual business planning processes.

3 ANNEXURE 3: DESKTOP ANALYSIS OF REGIONAL PLANNING DOCUMENTS

A desktop analysis was undertaken of the following key planning documents of stakeholders throughout the region.

- Mount Isa Council Economic Objectives
- Mount Isa Community Plan 2011 - 2021
- Cloncurry Community Plan 2011 - 2031
- Boulia Community Plan 2011 - 2021
- Boulia Council Vision and Mission
- Burke Community Plan 2011 - 2021
- Carpentaria Community Plan 2012 - 2022
- McKinlay Community Plan 2010 - 2020
- Richmond Community Plan 2011 - 2021
- Flinders Community Plan 2011 - 2021
- Charters Towers Our Region Our Future 2035
- Townsville Community Plan 2011 - 2021
- Townsville City Economic Development Plan 2011 - 2016
- Palm Island Corporate Plan
- Hinchinbrook Shire Community Plan 2022
- Burdekin Corporate Plan 2012 - 2017
- North West Queensland Regional Plan
- Gulf Regional Development Plan
- North Queensland Economic and Infrastructure Framework (DRAFT VERSION AS OF 31 MAY 2013)
- Queensland Regionalisation Strategy (QRS)
- Queensland Infrastructure Plan (QIP)
- Townsville and North West RDA Regional Roadmap 2012 Vision and priorities

By examining the strategic intent per document and aligning to an interest area, a common set of outcomes was identified. These were then analysed for their regional context, that is they were relevant for a significant number of Local Government areas across the region. These common desired outcomes were identified as:

1. Access to education facilities within region.
2. Attraction and retention of a skilled workforce.
3. Coordination of services, particularly health and support services.
4. Maintenance and creation of local employment opportunities.
5. Planning for future supply of housing.
6. Affordable housing and living.
7. Sustainable population growth and people living long term in the region.
8. Provision of infrastructure to support sustainable population growth.
9. Supporting multi-culturalism.
10. Enhancing and promoting a great lifestyle.
11. Celebrating and respecting diversity of cultures.
12. Having vibrant arts and cultural development
13. A community where people feel safe.
14. Engaged youth in the region.

15. Sustainable and best practice actions to support the existing natural resource base.
16. An environmental ethos in community.
17. Climate change adaption.
18. Maintenance and improvement to existing infrastructure.
19. Future proofing infrastructure as an enabler for future economic development.
20. Coordinated and planned delivery of infrastructure.
21. Interconnectedness abilities through transport options for people and freight.
22. That existing and emerging industries are sustainable.
23. Tourism expansion through new or improved products, new markets, new or expanded events development, access to national parks, and investment attraction into accommodation.
24. That industry embraces innovation.
25. That there is land available to foster opportunities for industries sustainable development and innovation.
26. Water quality and quantity to support existing and future needs.
27. Sound economic base for future prosperity.
28. Diversity for growth and resilience.
29. Robustness and clarity in decision making through representation and partnerships.
30. Informed residents.
31. Coordination of service delivery for effectiveness and efficiency.
32. A government presence in region.
33. Strong leadership.
34. A culture of investment attraction.

4 ANNEXURE 4: REFERENCES (ATTACHMENT A)

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5 ANNEXURE 5: LIST OF ABBREVIATIONS

AEDI	Australian Early Development Index
COAG	Council of Australian Governments
DEEWR	Department of Education, Employment and Workplace Relations
ESA	Employment Service Area
ESB	English speaking background
FRAP	Flinders River Agricultural Precinct
GSD	Gulf Savannah Development
GRVA	Gross Regional Value Added
GRP	Gross Regional Product
GVA	Gross Value Added
IRSD	Index of Relative Socio-economic Disadvantage
MITEZ	Mount Isa Townsville Economic Zone
NBN	National Broadband Network
NESB	Non-english speaking background
NQS	Northern Queensland Strategy
PEA	Priority Employment Area
QIP	Queensland Infrastructure Plan
QRS	Queensland Regionalisation Strategy
RAPAD	Regional Area Planning and Development Board
RDA	Regional Development Australia
RTO	Regional Tourism Organisations
TEL	Townsville Enterprise Limited
TPIX	Townsville Port Inner Harbour Expansion
TUOS	Transmission Use of System
VET	Vocational Education and Training