Brimbin Employment Lands Assessment

PREPARED FOR

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July 2013

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July 9, 2013

REPORT DETAILS:

Job Ref No:	C11083
Version:	Final
File Name:	C11083 Brimbin Employment Lands Assessment FINAL 090713

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1. EXECUTIVE SUMMARY

The 3,763ha Brimbin release area, 8km north of Central Taree, is identified in the NSW Department of Planning & Infrastructure's Mid-North Coast Regional Strategy (2009) as a Major Growth Area, with the capacity to provide around 8,000 dwellings for 22,000 residents. The Regional Strategy also nominates the site as including planned employment lands (380ha), retail provision, conservation land and a variety of community uses.

Following the inclusion of the site in the Regional Strategy, a Draft Local Environmental Plan (Draft LEP) is being prepared to rezone the land. The Draft LEP is required to be supported by a detailed Structure Plan. As part of this process Hill PDA has been engaged to determine demand for employment lands at Brimbin. For the purpose of this report employment lands are nominated as including land commonly zoned B4 Mixed Use, B5 Business Development, B6 Enterprise Corridor, IN1 General Industrial and IN2 Light Industrial.

Preliminary investigations of employment land supply in the Mid-North Coast Region indicated that whilst Greater Taree has recently rezoned employment land (e.g. South Taree/Purfleet), there is a lack of available and vacant land in the surrounding local government areas of Great Lakes and Gloucester. Furthermore, the size and scale of the proposed employment lands in Brimbin also allows for the future and long term planning of employment lands in Greater Taree and the Mid-North Coast Region, once the likes of South Taree and other precincts are absorbed.

As a result, given the size and scale of the proposed employment lands component of Brimbin this Employment Lands Assessment determined demand based on a large regional worker catchment (including resident workers from Greater Taree, Great Lakes and Gloucester[1]). The aim being to determine if there is sufficient zoned land within the regional catchment to meet demand from local resident workers over time.

This methodology is based on an examination of historical ABS data trends that represent a potential increase or decline in demand for particular industries across the region. For example the forecasts continue the trend of strong resident worker growth in construction, health care, social assistance, and retail trade, and forecast declines in agriculture, forestry and fishing, manufacturing and wholesale trade. The modelling results indicate that based on resident worker growth in the regional catchment there is sufficient supply of employment lands (420.4ha) to meet demand (396.8ha) to 2036.

However, this did not account for demand from new residents who move into the residential component of the Brimbin release area. Whilst it is recognised that demand and take up of residential lots in the release area are not fixed and will largely be driven by the employment lands component, new residents will impact demand for local urban services (e.g. auto repairs, household repairs and trades). Hill PDA's modelling determined demand for a further 47.36ha of employment land to 2036 driven by new Brimbin residents.

Whilst it is recognised the Taree South precinct is sufficient to meet demand from forecast workers in the regional catchment, once potential demand from new residents in Brimbin is considered – the gap between supply and demand of employment zoned lands within the regional catchment reduces to undersupply of 23.76ha by 2036. Greater Taree will therefore need to consider the provision of new or expanded employment lands for local urban

[1] Greater Taree, Great Lakes and Gloucester were chosen due to their proximity (i.e. travel times), existing limited provision of vacant supply, and existing journey to work patterns (e.g. workers travelling between Great Lakes and Greater Taree for work). Port Macquarie-Hastings was excluded given that whilst

services (e.g. light industrial) to meet this demand. The most appropriate location for this employment land will be in proximity of the new residents within the proposed employment lands component of the Brimbin release area.

Whilst determining employment lands demand from a resident worker forecast is sound, it does not account for market or supply led demand. This is based on the premise that locational decisions by some firms, in particular for large industry, are often based on a range of factors compared across a greater geographical area. These considerations can include local market attributes (e.g. land values, rents and construction costs), individual site characteristics (e.g. site configuration and accessibility), labour force characteristics (e.g. prevalence of blue or white collar workers), perceptions regarding potential government support or otherwise, the level of existing developer activity and so on. This is largely because these firms are less dependent on being located close to a particular market or city.

Whilst a small proportion of the employment lands component of Brimbin could serve a local role, the size and location of the site is of strategic importance to Greater Taree and the broader Mid-North Coast Region. The site presents a unique opportunity to plan for the future success of the local economy through the protection of sufficient and flexible employment land for a range of new and emerging industries. This in turn supports the ongoing growth of the regional economy and aims to arrest some of the economic challenges experienced by the region by encouraging further and diversified employment opportunities.

In this respect, it is recognised that large employment precincts in Greater Taree, such as Brimbin, will compete regionally to attract new industries and businesses. Whilst there will be some competition between employment precincts within Greater Taree itself, existing precincts will largely continue to meet demand for local urban services, with few being able to compete with Brimbin on scale. Therefore, of more relevance to the planning process will be other large comparable precincts in the broader Mid-North Coast Region. From analysis in this report, the most comparable precinct in this regard is the Sancrox employment precinct in Port Macquarie-Hastings.

Whilst the 220ha Sancrox site is comparable in size to the proposed employment lands component of the Brimbin release area (380ha), even when compared to the South Taree precinct which is highly accessible, vacant and appropriately zoned, the Sancrox site is superior. This is largely due to its location immediately adjacent to the Pacific Highway, and due to already commenced plans to upgrade Highway access to the site. As a result of its attributes, Port Macquarie-Hastings Council has been promoting Sancrox as a future logistics, warehousing and freight cluster, with transport and steel fabrication companies already interested in establishing at the site.

However, if it is assumed the South Taree precinct can meet existing local demand, and the Sancrox precinct is targeting logistics and freight, the opportunity exists to promote the Brimbin release area for new, emerging and large scale industry (e.g. new technologies and lean manufacturing, research and development, diverse and value added agriculture and others as identified within this report). These industries are generally not accommodated in traditional and local industrial precincts due to the size and nature of their site requirements, their need for significant buffer areas, and the lack of large available and vacant land.

The relative affordability of land in Brimbin when compared to metropolitan and regional city markets (e.g. Newcastle and Wollongong – given large industries and businesses compare potential locations over a much greater geographical area than just within the Mid North Coast itself), and the flexibility of the site to accommodate a range of configuration requirements would also support this. Brimbin can accommodate industry that cannot otherwise be catered for in smaller industrial precincts.

If new industries can be encouraged to locate in Brimbin, this would not only stimulate additional investment and strengthen employment drivers, but would lead to a diversification of a regional economy that has been traditionally reliant on declining base industries. For the prosperity of Greater Taree itself, there is a need to not only provide more jobs, but a more diverse range of jobs. This in turn would not only attract new residents, but would encourage the retention of the young labour force, and encourage additional services to cater for an increasing population.

Whilst it is rare to encounter such a large employment land precinct in single ownership and without significant potential barriers or constraints to development, the provision of suitable land alone will not drive demand for new industry. Significant investment attraction strategies and an aggressive marketing approach will be required to encourage new businesses to relocate or existing businesses to expand.

This includes strong partnerships with all levels of government which will be essential in promoting the benefits of Brimbin and Greater Taree not only for business and investment but for potential workers and new residents (which also contributes to a firm's decision to relocate). Greater Taree City Council together with government agencies like RDA Mid-North Coast and the NSW Department of Trade & Investment have policies supporting the protection and provision of future employment and industrial land to meet a wide range of businesses, including new and emerging industry. The NSW Department of Trade & Investment also aids in the facilitation of businesses to regional locations.

The identification and attraction of new industry to a particular location is also the result of long term planning. As a result, it is difficult to quantify the amount of land that should be planned for; however, to meet this type of demand, in excess of 23.76ha of employment land should be provided in Brimbin. Furthermore, it is also difficult to determine the staging of that land and the economic impacts of such development given the future industry that absorbs that supply is not currently known. In many cases, the requirement will be to assess the impacts on a case by case basis.

Whilst the value of an investment stimulus like Brimbin is often difficult to directly quantify, given the effects are often not realised for many years (after facilities and infrastructure have been built and are operational), investment like that of the proposed scale, will go a long way to contributing to the sustainability of the local economy and will positively impact on the local area by promoting Greater Taree as a place to live, work and invest.

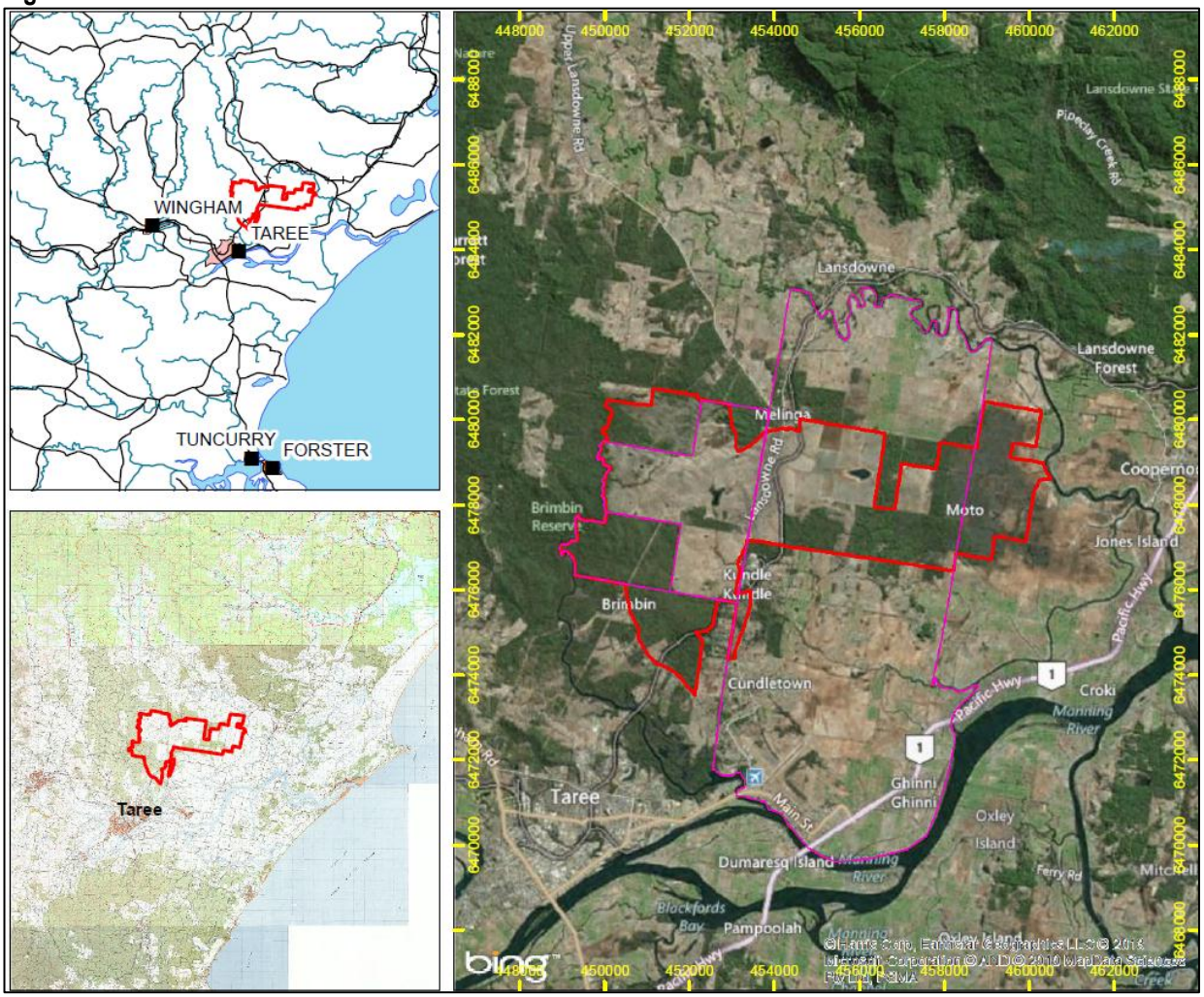
2. INTRODUCTION

2.3 Background

The 3,763ha Brimbin release area is located 8km north of Central Taree, within the Greater Taree Local Government Area, 80km south of Port Macquarie and 35km north of Forster-Tuncurry.

The site is bounded by farmland and the small settlement of Melinga and to the north, Lansdowne River to the east, the rear of properties fronting Kundle Kundle Road to the south, Brimbin Road to the south and south-west, and the Dawson River in the west. The North Coast Railway line and Lansdowne Road traverse the central part of the site. The North Coast Railway line provides services from Sydney to Brisbane with the closest station to the site being the Taree Railway Station in Central Taree. Vehicular access to the site is from Brimbin Road and Lansdowne Road. Existing uses on site are largely pastoral.

Figure 5 - Brimbin Release Area

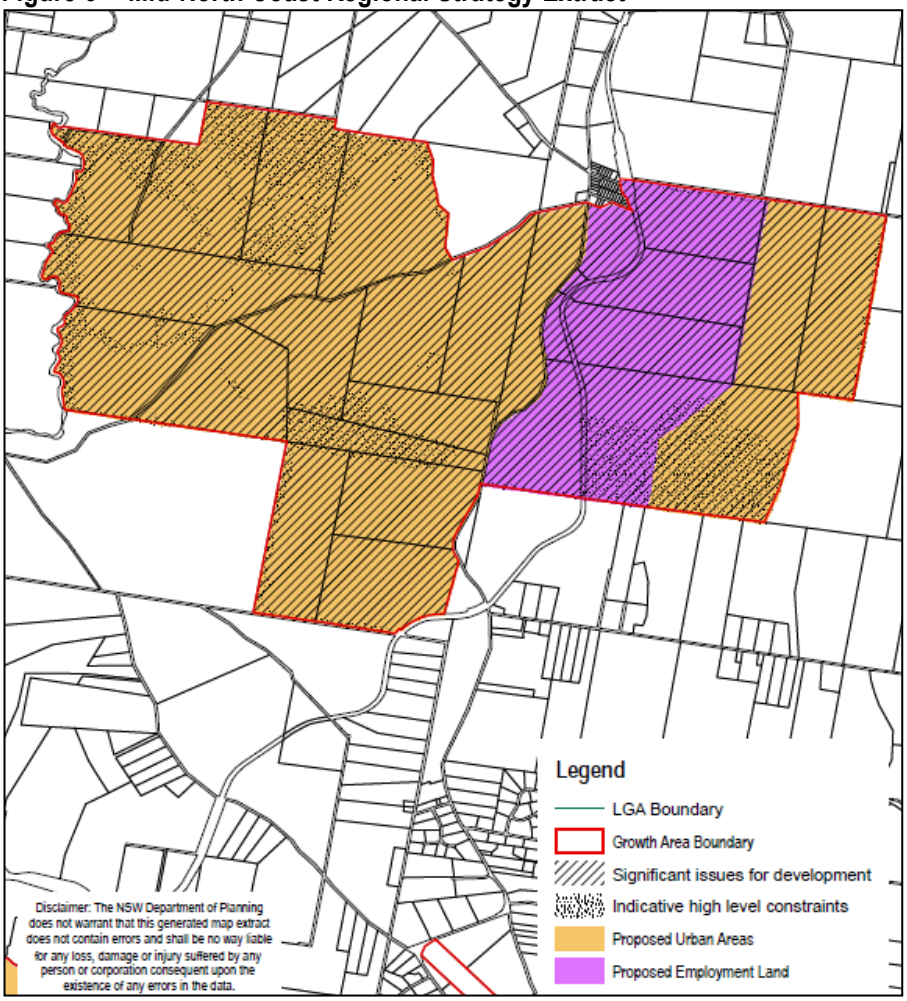


Source: Niche Environment and Planning (2013)

The Brimbin site was identified as a The Brimbin site was identified as a Major Growth Area in the NSW Department of Planning & Infrastructure's Mid-North Coast Regional Strategy (2009). The Strategy nominates that the site has the capacity to provide 8,000 residential dwellings for 22,000 residents, together with 380ha of

employment lands, retail provision, conservation land and a variety of community uses consistent with a self-sufficient new town.

Figure 6 - Mid-North Coast Regional Strategy Extract



Source: Mid-North Coast Regional Strategy, NSW Department of Planning (2009)

In 2009, following the inclusion of the site in the Mid-North Coast Regional Strategy, Greater Taree City Council advised the Department of its intention to prepare a Draft Local Environmental Plan (LEP) to rezone the Brimbin release area.

The Department nominated that the Draft LEP is to be supported by and consistent with a detailed Structure Plan[2] and the requirements of the Regional Strategy. Together with conservation principles, the Regional Strategy nominates that the Structure Plan must maximise the locational opportunities of the site (such as context to adjacent major employment area and Taree), and plan for the appropriate release of land consistent with infrastructure provision.

In October 2010 a Planning Proposal was lodged by the proponent Roche Group Pty Ltd (Roche Group) to transition the Draft LEP into the Gateway process.

[2] Plus the matters listed in Appendix 2 of Mid-North Coast Regional Strategy– "growth areas requiring significant issues to be resolved".

2.4 Study Brief

Hill PDA has been appointed by Roche Group for the provision of consultancy services to undertake an Employment Lands Assessment for the Brimbin release area. The aims of this Assessment were to:

- Assess the demand for employment land in Brimbin based on a regional catchment of working residents from Greater Taree, Great Lakes and Gloucester Shire;
- Assess the potential for new and sustainable industries such as urban agriculture and local food production to be accommodated in Brimbin and as analysed through case studies; and
- Evaluate the attributes of the site in Brimbin against competing employment lands in Greater Taree and surrounding localities to better determine the suitability of Brimbin for employment uses in comparison to competing locations.

It is noted that analysis within this Assessment is based on ABS 2006 Census data and 2010 Greater Taree Council population forecasts which was the latest data available when this Assessment commenced in 2011. It is acknowledged however, that final and minor amendments to this Assessment have been made since that time based on client advice, with July 2013 being the date of this Final Report.

2.5 Background Documentation

Documents reviewed as background to this report included:

- Brimbin Economic Assessment, Hill PDA (2010)
- Draft Brimbin Structure Plan, Roche Group (2013)
- Brimbin Development Strategy, Roche Group and Edge Land Planning (2010)
- Manning Valley Community Plan 2010-2030, Greater Taree City Council (2010)
- Greater Taree State of the Environment Report 2009-2010, Greater Taree City Council (2010)
- Mid-North Coast Regional Strategy, NSW Department of Planning (2009)
- The Mid-North Coast Region Regional Business Growth Plan, NSW Department of State & Regional Development (2010)
- Mid-North Coast Regional Economic Profile, Mid-North Coast Regional Development Board (2008)
- Greater Taree Conservation & Development Strategy, Edge Land Planning (2005)
- Greater Taree Economic Profile, Hunter Valley Research Foundation (2005)
- State of the Environment Report 2008-2009, Greater Taree City Council (2008)
- Dawson River Downs Economic Assessment, Andrews Neil (2004)
- Manning Valley Economic Development Strategy, Greater Taree City Council (2002)
- Port Macquarie-Hastings Industrial Land Strategy Review, Hill PDA (2009)
- Port Macquarie-Hastings Retail Centres Strategy Review, Hill PDA (2009)
- Great Lakes Council Employment Lands Implementation Strategy, Hill PDA (2008)

3. PLANNING POLICY AND CONSIDERATIONS

When considering an appropriate quantum and mix of uses for the site it is important to take account of the existing and emerging planning policy framework. The following chapter briefly outlines the key regional and local plans and policies applicable to the future planning of the Brimbin release area.

3.3 Regional Planning

Delivering sustainable growth in the right locations is a key priority for NSW. The NSW Department of Planning & Infrastructure recognises the need for sufficient land to be allocated for housing whilst ensuring an adequate amount is reserved and available for industry, commerce and services.

The Mid-North Coast Regional Strategy (2009), which includes the 8 local government areas of Clarence Valley, Coffs Harbour, Bellingen, Nambucca, Kempsey, Port Macquarie–Hastings, Greater Taree and Great Lakes, plans for residential and employment growth in the Region to 2031. The purpose of the Regional Strategy is to ensure sufficient land is made available and maintained to accommodate planned growth in an appropriate manner. In doing so, the Strategy nominates that the main economic challenges of the Region are to:

- Assist in creating service jobs;
- Augment industrial land supply within the Region, in particular in Coffs Harbour, Port Macquarie and Taree to accommodate future needs;
- Recognise the value of existing agricultural industries and ensure land use planning decisions do not hinder the growth and diversification of agricultural production;
- Generate enough new export industries to employ the 11,000 people who will be in the jobs market but will not be needed to service the extra population within the Region; and
- Build on the employment sectors that are currently successful.

The key driver for jobs and dwelling demand is population growth and in this regard the Regional Strategy projects that the Mid-North Coast will grow to 424,600 people by 2031, an increase of 91,200 persons (27%) from 2006. This population growth generates the need for a minimum of 59,600 additional homes and 48,500 additional jobs to 2031. Demand for new jobs in the Region translates to a need for an additional 232ha of industrial land and about 210ha of commercial land (total 442ha) in the Mid-North Coast by 2031.

As a Major Regional Centre, the Strategy notes that Taree serves the Greater Taree-Great Lakes subregion with major services and some regional functions, notably health care. It has land and infrastructure capacity to accommodate significant industrial and residential growth.

Figure 7 - Extract from the Mid-North Coast Regional Strategy Map (2009)

Source: Mid-North Coast Regional Strategy, 2009, NSW Department of Planning and Infrastructure

3.4 Local Planning

The local statutory planning framework in Greater Taree comprises the Greater Taree Local Environmental Plan (LEP 2010) and the Greater Taree Development Control Plan (DCP 2010) which provides more detailed design guidelines for new developments. Other local policies and plans of relevance to this study include the Manning Valley Community Plan (2010- 2030) and the Draft Greater Taree Conservation & Development Strategy (2005).

The Manning Valley Community Plan (2010-2030) is the future vision for Greater Taree. The Plan was prepared in collaboration with the local community to determine how Greater Taree should develop over the next 20 years. With regard to ensuring a strong economy, the key directions for Greater Taree will be:

- Supporting and developing existing businesses;
- Encouraging new businesses to relocate to the region;
- Targeting support to key business development opportunities;
- Providing the infrastructure that supports business, such as communications technology, adequately zoned land and access to vocational training;
- Continuing to develop opportunities for tourism; and
- Connecting with other communities and partners to encourage economic growth.

The Community Plan indicates that in order to develop a strong economy a regional view of existing businesses and emerging opportunities is required. This will enable the influence of national and international trends at a local level to be taken into consideration and acted upon. Some of the business development opportunities identified through the consultation process include:

- Emerging technologies
- Airport related development
- Aged services
- Environmental services
- Waterfront industrial development
- Medical services and facilities
- Local food production and distribution

In order to support and grow the role of Greater Taree in the regional economy, the Community Plan seeks to ensure that there is an appropriate supply of appropriately zoned land.

The Draft Conservation & Development Strategy (Draft CADS) is consistent with the aims and objectives established within the Mid-North Coast Regional Strategy and provide a good basis for a Local Growth Management Strategy. In this regard, both the Regional Strategy and the Draft CADS identify the site at Brimbin as a self-sufficient new town with links to the regional centre at Taree.

The Draft CADS nominates the site at Brimbin as having the capacity to provide greater than 300ha of land for employment generating uses and 8,000 dwellings (accommodating 18,000-20,000 people) in an attractive environment benefiting from its proximity to the Dawson River and Lansdowne escarpment. Key findings and recommendations within the Draft CADS as relevant to this study include:

- Whilst there were a number of industrial zoned lots, many were covered in dense vegetation or were limited by other environmental constraints.
- There were a limited number of vacant industrial lots that could be readily developed and as a result there is the need to establish new areas for employment generating developments, especially those that require large sites.
- Brimbin is identified as being suitable for future manufacturing development including food and beverage manufacturing, machinery and equipment manufacturing (including boat building) and construction and building industries.
- Bulky goods, light industrial and business park uses are proposed in South Taree and Cundletown, which may impact upon demand for similar land uses in Brimbin.

4. LOCAL EMPLOYMENT AND BUSINESS PROFILE

Given Brimbin's location within Greater Taree, this chapter provides a demographic and employment profile of the LGA benchmarked against the Mid-North Coast Region (Clarence Valley, Coffs Harbour, Bellingen, Nambucca, Kempsey, Port Macquarie-Hastings, Great Lakes and Gloucester LGA's). This analysis was undertaken to better understand current employment trends which are likely to impact on demand for future land uses at Brimbin.

4.3 Population

The population of Greater Taree LGA in 2006 was 44,632 persons. In 1996 the population was 42,410 persons. This represents a growth of 2,222 persons or 0.51% per annum compound growth. This can be compared to the Mid-North Coast Region (0.90% per annum). Compared to the remainder of the Mid-North Coast, strong growth was experienced in Port Macquarie-Hastings (1.76% per annum) and Great Lakes (1.47% per annum).

Other general demographic data pertaining Greater Taree is provided in Appendix 1.

4.4 Resident Workforce by Occupation

The characteristics of the resident workforce are an important factor in defining a region's employment strengths and weaknesses. It is important to note that the resident workforce (or labour force) may travel outside the local government boundary to work.

In line with broader regional trends, since 1996 there has been an increase in the proportion of professionals, community and personal service workers, sales workers and labourers in Greater Taree. There has been a corresponding decrease in the proportion of managers, technicians and trades workers, clerical and administrative workers and machinery operators and drivers.

In 2006 there were 15,795 working residents in Greater Taree. The most common occupations of residents were technicians and trade workers (15.6%) and professionals (14.9%). The Mid-North Coast Region had a relatively similar breakdown of occupations, although slightly more white collar workers (managers, professionals, administration, etc.) compared to blue collar workers (technicians and trade workers, labourers, etc.).

With an unemployment rate of 10.6% in 2006, Greater Taree experienced slightly higher levels of unemployment compared to the Mid-North Coast Region (9.82%).

4.5 Resident Workforce by Industry

Since 1996, the proportion of working residents in industries commonly located in non-urban or industrial zones has declined (manufacturing, wholesale trade, agriculture, forestry and fishing) in Greater Taree, albeit at a lower rate than the broader region.

In 2006, the industries that employed the most residents in Greater Taree were retail trade (14.5%), health care and social assistance (14.3%) and manufacturing (11.3%). In total, 28% of working residents in Greater Taree

were employed in industries commonly located on industrial zoned land (11.3% in manufacturing, 9% in construction, 3.3% in wholesale trade and 4.2% in transport, postal and warehousing).

By contrast there has been an increase in the proportion of residents employed in the industries of construction, retail trade, professional, scientific and technical services, and health care and social assistance.

Table 30 - Resident Workforce by Industry, Proportion Split (1996 to 2006)

Industry	Greater Taree			Mid-North Coast Region		
	1996	2006	Change	1996	2006	Change
Number of Working Residents	*14,020*	*15,797*	*1,775*	*85,278*	*103,258*	*17,980*
Agriculture, forestry, fishing	8.1%	5.5%	-23.2%	7.6%	5.1%	-19.2%
Mining	0.3%	0.3%	8.3%	0.2%	0.2%	-3.0%
Manufacturing	15.1%	11.3%	-15.6%	10.1%	7.7%	-7.0%
Electricity, gas, water, waste	1.0%	1.2%	32.7%	1.2%	1.6%	60.9%
Construction	6.7%	9.0%	50.7%	6.9%	8.5%	47.7%
Wholesale trade	4.5%	3.3%	-18.7%	4.3%	3.0%	-15.9%
Retail trade	12.5%	14.5%	30.2%	13.1%	14.7%	35.3%
Accommodation, food	6.5%	6.6%	13.7%	8.9%	8.9%	21.8%
Transport, postal, warehousing	4.2%	4.2%	12.6%	3.9%	4.0%	23.8%
Information media, telecomm.	1.8%	1.0%	-34.7%	2.1%	1.3%	-24.7%
Financial, insurance	2.0%	1.6%	-12.5%	2.4%	2.1%	7.5%
Rental, hiring, real estate	1.4%	1.6%	30.9%	1.9%	1.9%	19.3%
Professional, scientific, technical	2.8%	3.5%	44.7%	3.3%	3.8%	39.2%
Administrative, support	1.8%	2.6%	66.9%	2.3%	2.7%	41.2%
Public administration, safety	3.3%	4.2%	41.4%	4.7%	5.8%	51.1%
Education, training	7.7%	8.0%	16.6%	7.9%	8.2%	26.3%
Health care, social assistance	11.8%	14.3%	36.5%	10.6%	13.1%	49.2%
Arts, recreation	0.7%	1.3%	97.1%	1.2%	1.3%	37.9%
Other services	4.2%	3.9%	4.0%	4.6%	4.0%	6.0%
Inadequately described/Not stated	3.4%	2.1%	-30.3%	3.0%	2.2%	-9.1%
Total	**100.0%**	**100.0%**	**12.7%**	**100.0%**	**100.0%**	**21.1%**

Source: ABS Census Data Time Series Profile (1996 to 2006)

4.6 Jobs and Businesses Based in Greater Taree

Traditionally, the Mid-North Coast Region has been characterised by agricultural industries such as dairy farming, beef cattle and forestry. The key characteristics of the region being[3]:

- 85% of businesses employ less than 5 people, or don't employ (i.e. sole or family operator) and only 0.3% employ 100 people or more.
- The Mid-North Coast relies heavily on the manufacturing sector contributing 9.1% of the regions Gross Regional Product. This is followed by property and business services (8.6%), retail trade (7.4%) and health and community services (7.4%).
- Strong small and medium enterprise (SME) base and the diverse spread of industry sectors indicate the region has stable local investment. 40% of the businesses in the region turnover less than $1million pa.

[3] Source: Regional Development Australia (RDA) Mid-North Coast, Regional Plan (2010-2015)

Greater Taree itself is a rich agricultural and timber region, with dairy and beef production well represented. However dairy deregulation and the reclassification of certain forests to National Parks have changed the base industries.

The following table shows the number and types of businesses that were based in Greater Taree from 2003 to 2006. The results show growth businesses associated to personal services, and the decline in businesses in manufacturing, retail and wholesale trade over the period.

Table 31 - Number of Businesses in Greater Taree by Industry (2003-2006)

Industry	2003	2004	2005	2006	Change 2003-2006
Agriculture, forestry and fishing	777	774	768	759	-18
Mining	0	6	3	6	6
Manufacturing	195	174	162	150	-45
Electricity, gas and water supply	3	3	3	6	3
Construction	531	555	570	582	51
Wholesale trade	126	114	111	105	-21
Retail trade	462	471	453	429	-33
Accommodation, cafes and restaurants	141	171	150	150	9
Transport and storage	165	168	174	174	9
Communication services	51	51	51	57	6
Finance and insurance	129	129	120	126	-3
Property and business services	546	537	540	531	-15
Education	27	24	21	21	-6
Health and community services	183	159	180	180	-3
Cultural and recreational services	72	81	84	81	9
Personal and other services	81	66	90	105	24
Total businesses	3 489	3 483	3 480	3 462	-27

Source: 1379.0.55.001 ABS National Regional Profile, Greater Taree (C), 2002 to 2006 (2008)

These trends are supported by an analysis of jobs in Greater Taree over time. In 2006, Greater Taree accounted for 14% of all jobs in the Region. When analysing job trends from 2001 and 2006:

- Between 2001 and 2006, the number of jobs in Greater Taree grew from 12,971 jobs to 14,053 jobs, equivalent to growth of 1,082 jobs over the period. The Mid-North Region grew by over 6,500 jobs over the period.
- Within Greater Taree in 2006 most jobs were in health care and social assistance (15.7%), retail trade (15.5%) and manufacturing (12.2%). By comparison, most jobs in the Region were in retail trade (15.8%), health care and social assistance (13.8%) and accommodation and food services (9.8%).
- Since 2001, there has been a reduction in the proportion of jobs in agriculture, forestry and fishing, retail trade and wholesale trade in Greater Taree. There has also been a slight decrease in the proportion of manufacturing jobs. There has been an increase in the proportion of jobs in construction, accommodation and food services, transport, postal and warehousing, and health care and social assistance.

Demographic tables comparing the number of jobs by industry located in Greater Taree and the Mid-North North Coast Region in 2001 and 2006[4] are provided in Appendix 1.

[4]This data is sourced from the ABS Census in 2001 and 2006. This data is not available for the 1996 Census, and care should be taken when comparing 2001 to 2006 as there are some differences between the industry classifications (i.e. the introduction of the 'professional, scientific and technical services' classification in the 2006 Census).

4.7 Jobs vs. Working Residents

According to 2006 ABS data, when comparing the number of working residents[5] in Greater Taree (15,795 persons) to the number of jobs available in the LGA (14,053), there is a shortfall of some 1,742 jobs. The results indicate that there is a significantly high worker containment rate of around 89%.

Table 32 - Greater Taree Jobs vs. Working Residents (2006)

Industry	Working Residents	Jobs	Difference	Job Containment
Agriculture, forestry, fishing	869	800	-69	92%
Mining	52	32	-20	62%
Manufacturing	1,786	1,711	-75	96%
Electricity, gas, water, waste	195	156	-39	80%
Construction	1,417	941	-476	66%
Wholesale trade	517	480	-37	93%
Retail trade	2,283	2,173	-110	95%
Accommodation, food	1,044	985	-59	94%
Transport, postal, warehousing	669	562	-107	84%
Information media, telecomm.	162	138	-24	85%
Financial, insurance	251	242	-9	96%
Rental, hiring, real estate	250	221	-29	88%
Professional, scientific, technical	560	494	-66	88%
Administrative, support	414	302	-112	73%
Public administration, safety	659	602	-57	91%
Education, training	1,259	1,177	-82	93%
Health care, social assistance	2,252	2,210	-42	98%
Arts, recreation	203	179	-24	88%
Other services	617	558	-59	90%
Inadequately described/Not stated	336	90	-246	27%
Total	**15,795**	**14,053**	**-1,742**	**89%**

Source: ABS 2006 Census

There were notably fewer jobs in construction (941 jobs) than there were working residents in the construction industry (1,417 working residents). This indicates that 476 working residents leave the Greater Taree LGA to work in construction.

Whilst this was the most significant difference, there were also a greater number of working residents in the likes of retail trade, transport, postal and warehousing and administrative and support services, than there were jobs to meet them.

4.8 Where Residents Travel for Work

Journey to work data as compiled by the NSW Bureau of Transport Statistics that utilises ABS Census data, uses employment counts for specific locations to analyse the likes of commercial centres, daytime population, profile of resident workforce, industry trends and method of travel to work. The following table shows where working

[5] 'Working Residents' generally refers to those residents who are employed (both full time and part time). It excludes the unemployed. The ABS defines this as over the age of 15 through to aged 85+ who are still employed.

residents within the local government areas of Gloucester, Greater Taree, Great Lakes and Port Macquarie-Hastings work.

Table 33 - Where Residents Work (2006)

Origin of Working Residents (LGA)	Destination (LGA)					Total Working Residents
	Greater Taree	Great Lakes	Gloucester	Port Macquarie-Hastings	Other	
Gloucester	41	53	1,535	4	248	1,881
Greater Taree	12,766	997	81	249	1,882	15,975
Great Lakes	788	7,604	56	27	2,143	10,618
Port Macquarie-Hastings	199	35	35	21,451	3,388	25,108
Note: this data is not available by industry type.						**53,582**

Source: ABS (2006), NSW Bureau of Transport Statistics (2006)

The above results indicate:

- Around 45,921 (85.7%) of all resident workers in Greater Taree, Great Lakes, Gloucester and Port Macquarie-Hastings live and work within the region;
- 80% of Greater Taree working residents are employed within Greater Taree with the remainder largely working in Great Lakes;
- 72% of Great Lakes working residents are employed within Great Lakes, with the remainder mostly travelling to Greater Taree for work;
- 82% of working residents in Gloucester Shire are employed within Gloucester Shire; and
- 85% of Port Macquarie-Hastings working residents are employed within Port Macquarie-Hastings.

4.9 Implications

Based on the analysis of employment and job statistics, the most relevant trends impacting on demand for employment and industrial land uses in Greater Taree are:

- There were more businesses in Greater Taree associated with agriculture, forestry and fishing (22% of all businesses) than any other industry in 2006. This was followed by construction (17%), and property and business services (15%).
- The growth experienced in the number of construction and personal service businesses in Greater Taree are not surprising given strong population and dwelling growth in the region.
- Notwithstanding growth in the number of construction businesses in Greater Taree, construction had the lowest job containment rate (jobs to working residents) of all industries. This would indicate that many construction jobs in Greater Taree are being filled by workers from outside the local government area.
- Manufacturing, wholesale, agriculture, forestry and fishing businesses have declined in Greater Taree with a corresponding decline in resident workers in those industries. Notwithstanding this, these industries all have high job containment rates (over 90%), with total jobs in manufacturing increasing (e.g. less businesses but employing more workers).

- Whilst only representing a small proportion of all businesses in Greater Taree, there have been increases in the number of businesses in accommodation, café's and restaurants, transport and storage, and cultural and recreational services since 2003.
- Whilst blue collar occupations still dominate, the resident workforce in Greater Taree is increasingly skilled as demonstrated by the growth of resident professionals.

5. ASSESSMENT OF EMPLOYMENT LANDS SUPPLY

This chapter reviews existing and proposed industrial and employment areas within Greater Taree and the surrounding local government areas of Great Lakes, Port Macquarie and Gloucester for the purpose of assessing their attributes in comparison to potential employment lands in Brimbin. For the purposes of the assessment, Hill PDA considered all lands subject to the following zonings as applicable under the relevant Local Environmental Plans:

- B4 Mixed Use
- B5 Business Development
- B6 Enterprise Corridor
- IN1 General Industrial
- IN2 Light Industrial

5.3 Assessment of Local Supply

For the purposes of assessing industrial and employment land supply, the following precincts in Greater Taree have been identified for assessment (note all land areas are approximate and as provided by Council):

- **Central Taree North** – This precinct comprises a large industrial area of some 104.49, located north of the Central Taree commercial and retail core and is bounded by Muldoon Road, although several additional, smaller parcels are located further north adjacent to Grey Gum Road and Bushland Drive. This established industrial comprises land zoned IN1 General Industrial, IN2 Light Industrial and B5 Business Development. The precinct contains a diverse mix of businesses which are predominately focused on local urban and industrial services, such as car sales, building supplies, small transport and logistic businesses, trade related sales, and bulky goods provision.
- **Central Taree South** - Central Taree South is a 37.09ha precinct which stretches around 1.8km along Victoria Street, Crescent Avenue and Oxley Street. It comprises land zoned B4 Mixed Use, B6 Enterprise Corridor, and IN2 Light Industrial. Land uses in this precinct largely include a mix of retail, bulky goods, car sales, auto services, light industry, and warehousing.
- **Central Taree South East** - The 11.8ha B4 Mixed Use zoned precinct is linear in nature along the north-western bank of the Manning River from Nelson Street to Gregory Close. The northern area has frontage onto Manning River Drive and is fully developed. The southern area is larger and comprises much older industrial stock which is predominately vacant (i.e. former Dairy Farmers site) although it is still in use for some low intensity uses such as vehicle storage and Taree Fishermans Co-op.
- **Taree Airport/Cundletown** – The Airport is located around 8km east of Central Taree. It is understood Council is seeking to facilitate further expansion of the Airport in the future with expansion of aviation related businesses, hangers and storage space and provision for a flying school. Additional industrial land is planned for adjacent to the Airport in Cundletown as highlighted in the Mid-North Coast Regional Strategy (2009). It is understood the precinct could provide up to 18ha of employment lands, however this additional land is unlikely to proceed mainly as a result of cancelling a new bypass road to the north of Cundletown.
- **Taree South (Purfleet) –** The 73.49ha Taree South precinct is 2.6km south of Central Taree and less than 1km north of the Pacific Highway. The precinct is highlighted in the Mid-North Coast Regional Strategy (2009) as providing future employment lands for Greater Taree. It is understood Council is

promoting the South Taree precinct as the next logical location for bulky goods and industrial development given the strong connection between the precinct and Central Taree (along Manning River Drive) strengthening the gateway into Central Taree. However, it should be noted that whilst rezoned for employment land uses, a development control plan is yet to be completed for the precinct.

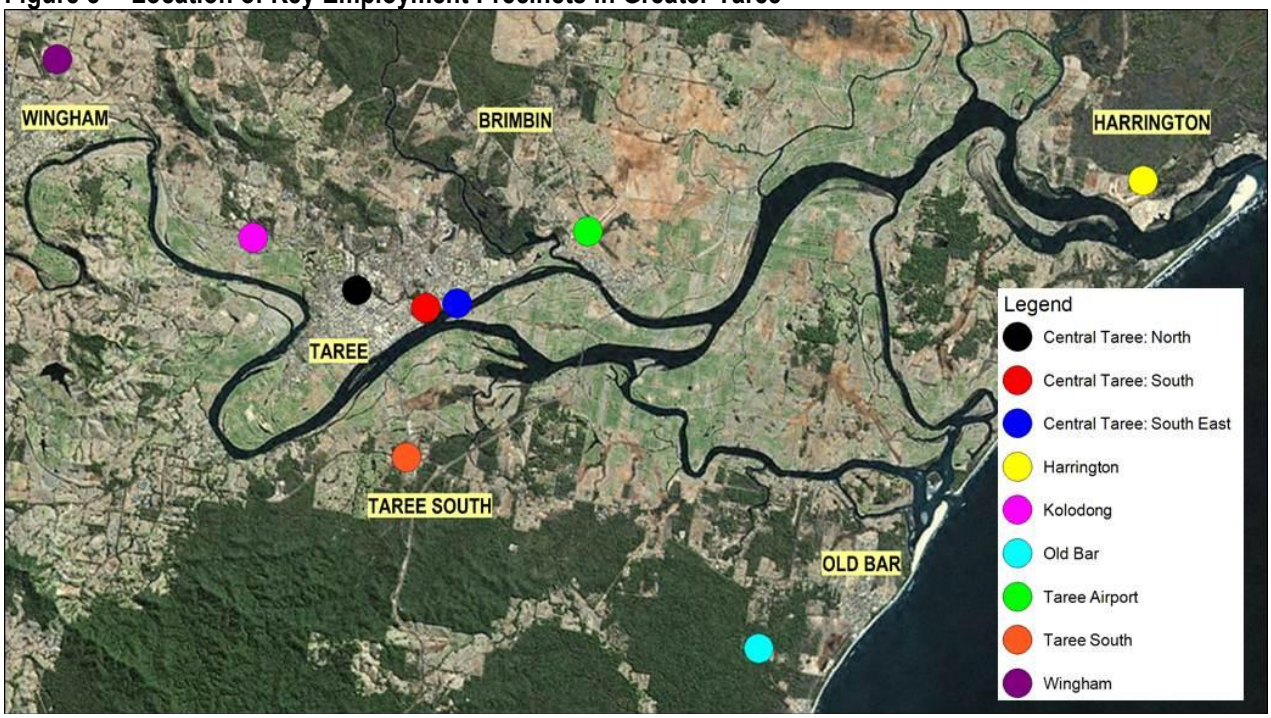
- **Kolodong –** the Council developed Kolodong Industrial Estate is located between Wingham and Central Taree. The 66ha industrial precinct is bounded by Wingham Road to the north, Kolodong Road to the west and south, and Hargreaves Place to the east. The precinct is zoned IN1 General Industrial. Land uses in this precinct largely include local urban services (e.g. Council depot, light manufacturing, self-storage), however the precinct also accommodates some impacting industries (e.g. Boral Asphalt).
- **Wingham –** the small isolated 8.4ha IN2 Light Industrial zoned precinct is located some 1.5km north of Wingham town centre. The precinct ccommodates such uses as Southcott Hydraulics, SBS Self Storage, Wingham Welding Works and the volunteer fire service.
- **Harrington –** the 7.2ha Harrington precinct is around 30km north-east of Taree. The small IN2 Light Industrial includes Harrington Smash Repairs, Holkin, Harrington Caravan and Boat Storage, Harrington Self Storage, Harrington Landscape Supplies, Medlas, and a utility substation.
- **Old Bar –** the 13.3ha Old Bar light industrial precinct is located on Peets Avenue and Berry Close which connects to Salt Water Road. It comprises an isolated precinct which is situated 4km south-west of the Old Bar residential area and 15km south-east of Taree. The precinct comprises 13.3ha of IN2 Light Industrial zoned area encompassing a number of small local services including truck repairs, car repairs, storage and removals, furniture and self-storage. It is understood that existing development approval exists for further industrial subdivisions which could create up to 6.2ha of additional industrial land, to be named 'Saltwater Industrial Park'.

Based on discussions with Council some small employment sites were dismissed prior to the assessment given their modest size and limited contribution to Greater Taree's local employment land provision. This includes:

- 5.19ha of IN2 Light Industrial zoned land on Viscount Road in Wingham (predominately a cemetery);
- 2.51ha of IN2 Light Industrial zoned land in central Wingham;
- 1.75ha of B6 Enterprise Corridor zone in Cundletown;
- 2.3ha of proposed employment lands at Halliday's Point;
- 1.45ha of B6 Enterprise Corridor zone accommodating a McDonalds restaurant at 11 Manning River Drive between Central Taree and Cundletown; and
- IN4 Working Waterfront zoned land in Crowdy Head which are not comparable to the employment lands component of the Brimbin release area.

A full appraisal of each precinct which informed this assessment is provided in Appendix 2. The full appraisal includes a description of each precinct, together with its business profile (land use mix), nomination of constraints and opportunities, availability of land for further expansion, and encumbrances.

Figure 8 - Location of Key Employment Precincts in Greater Taree



Source: MapInfo, Hill PDA (2011)

The assessment of existing employment lands in Greater Taree was based on fieldwork observations, discussions with Council, and desktop research. Each precinct was assessed using the following criteria:

Table 34 - Assessment Criteria

Accessibility	Access to main arterial roads and internal access within the precinct for large vehicles/machinery, as well as the precincts location to available infrastructure and services, is a key factor in determining the suitability of a site for industrial use.
Minimal Land Use Conflict	Ensuring that the surrounding uses are conforming uses. Industrial lands with limited conflict with surrounding incompatible land uses (i.e. surrounding residential or commercial), are not suitably zoned for industrial/employment purposes. Conflict with residential for example may occur where industrial land directly adjoins residential uses. Alternatively it may result from trucks and other industrial traffic accessing sites through residential streets.
Topography	The slope of the land is an important consideration when assessing the most appropriate land use zone for a site. Land that is rather steep or sloped is not appropriate for industrial uses.
Minimal Potential Residential Amenity	The surrounding natural environment and setting may prove more appropriate for residential land uses, than industrial or employment. For example, proximity to an escarpment or beach may have a higher aesthetic appeal or be more suitable for tourism and/or residential uses.
Site Encumbrances	Issues such as environmental protection, proximity to airport obstacle lines and surfaces, a site's cultural significance, flooding/bushfire issues, proximity to creek lines, and contamination.
Size and Agglomeration	The size and clustering in precincts is a consideration when assessing the future zoning of existing industrial land (i.e. it is appropriate to preserve large sized or clustered industrial lands).
Expansion and/or Available Land Potential	The availability of existing zoned and vacant land or the potential for the precinct to expand into the future.

Furthermore constraint mapping derived from the Greater Taree LEP (2010) was used to evaluate the precincts. This involved examination of maps relating to: floor space ratio, heights, lot size, heritage constraints, obstacle limitation surfaces and urban release.

In the assessment of each industrial precinct the following rating and evaluation table was applied.

Table 35 - Scoring System Employment Lands Evaluation Table

	Assessment Criteria	If Rating = 1	Rating = 3	Rating = 5
1	Arterial Road Accessibility	Poor	Average	Good
2	Internal Road Accessibility	Poor	Average	Good
3	Minimal Land Use Conflict	High	Moderate	Minimal
4	Topography	Steep/sloped	Moderate Slope	Flat
5	Residential Amenity	High Potential	Average	Minimal Potential
6	Agglomeration	No Existing Cluster	Reasonable Cluster	Large Cluster
7	Low Flood Risk	High Risk	Average	Minimal Risk
8	Low Site Encumbrances	Significant	Minor	None
9	Expansion and/or Available Land Potential	None	Minor	Significant
	TOTAL RATING (out of 45) =	SUM OF ABOVE RESULTS		

In general terms each precinct had the ability to score ratings between 1 and 5. The higher the rating for each assessment criteria, the more suited the precinct is for industrial and employment type uses. For example, a rating of 5 for arterial road accessibility indicates that the precinct has good access to strategic road networks which is an important characteristic for an industrial or employment lands zone. The total rating for the precinct is the sum of all score results.

It should be noted that in some cases a total high rating may not necessarily equate to a recommendation that the land is capable of accommodating further industrial uses, as certain criteria in particular areas have more significance than others. Also a site may be well suited towards industrial development and score highly, but have no further ability to accommodate expansion in the future. Although the total rating may be reasonable, one factor for assessment may cause a significant constraint rendering the site inappropriate for some industrial uses.

The following table summarises the results of the assessment.

Table 36 - Greater Taree Employment Lands Assessment Results

	Assessment Criteria	Central Taree North	Central Taree South	Central Taree South East	Taree South	Taree Airport and Cundletown	Kolodong	Wingham	Old Bar	Harrington
1	Arterial Road Accessibility	2	3	2	4	2	1	1	1	1
2	Internal Road Accessibility	3	3	2	4	4	4	4	4	4
3	Minimal Land Use Conflict	4	2	2	4	4	3	4	4	2
4	Topography	3	4	3	4	4	4	2	3	4
5	Residential Amenity	4	3	2	3	5	3	4	4	2
6	Agglomeration	4	3	2	3	3	4	2	2	2
7	Flood Risk	4	2	1	3	3	5	5	5	1
8	Site Encumbrances	4	2	2	3	2	3	5	5	4
9	Expansion and/or Available Land Potential	4	2	4	5	3	2	2	3	2
	TOTAL RATING (max. 45)	**32**	**24**	**20**	**33**	**30**	**29**	**29**	**31**	**22**
	Ranking	**2**	**6**	**8**	**1**	**4**	**5**	**5**	**3**	**7**

South Taree and Central Taree North ranked the highest in terms of performance and appropriateness for industrial development (33 and 32 out of 45 respectively). This was followed by Old Bar (31 out of 45) and Taree Airport/Cundletown (30 out of 45).

These results are not surprising given the availability of land with good access in the South Taree precinct and the relatively good performance of the Central Taree North precinct as an established employment lands precinct (noting it also has expansion potential as part of the Bunnings site).

Based on the above results it is also important to note:

- Whilst Old Bar, Wingham and Kolodong have performed well in the overall rankings their extremely poor access by arterial road, limited expansion areas, and inability to cater for large industry reinforces their role as precincts to meet local urban services demand from immediate surrounding residents. In this role, they will not compete with proposed employment lands in Brimbin.
- The lowest scoring precinct was Central Taree South East – this was not surprising given the significant constraints (access, flooding etc), and land use conflicts associated with the precinct. It is unlikely this precinct will attract any new industries unless they are marine and water related, in which case the precinct will not compete with proposed employment lands in Brimbin.
- Whilst Harrington achieved an average result it is one of the smallest pockets of industrial in Greater Taree and given its distance from Central Taree and the proposed Brimbin release area, is unlikely to impact or be impacted upon by employment lands at Brimbin. Harrington will continue its role as a small local industrial precinct.
- Central Taree South achieved an average result and does have some redevelopment potential in its light industrial zone however this is largely contained on the former dairy farmers site which is subject to heritage protection. The B6 Enterprise Corridor Zone along Victoria Street and Crescent Avenue which permits a mix of business, bulky goods, retail, office and light industry is largely built out although over time is likely to provide some infill development opportunities. However, given surrounding residential and limited vacant land, redevelopment for large industry in the Central Taree South Precinct is limited when compared to opportunities at Taree South or Brimbin.
- Whilst Taree Airport has been allocated funding to improve and encourage industrial land development within the Airport precinct itself, its theme of aviation related industry and business distinguishes the precinct from other employment lands areas in Greater Taree and is discounted from comparisons with Brimbin and other employment lands precincts for this reason.
- Employment and industrial lands are planned adjacent to the Airport in Cundletown, however its understood there is some uncertainty as to whether these will be realised given the proposed bypass. Regardless, the proposed industrial precinct in Cundletown is only a small in comparison to other established and planned precincts and if realised is unlikely to compete with larger precincts in Greater Taree, including the proposed employment lands at Brimbin.

As a result, given the size and attributes of the Brimbin release area, those existing or planned precincts in Greater Taree which are most comparable or will compete with proposed employment lands in Brimbin are Central Taree North and Taree South.

Central Taree North is an established older industrial precinct of 104.49ha. Based on analysis within this report there is limited vacant land still available in this precinct. However, vacant land in the precinct largely surrounds the Bunnings Warehouse development at the corner Wingham Road and Bushland Drive equivalent to around 3.46ha of IN2 General Industrial land. The site is zoned B5 Business Development and is targeting bulky goods rather than industrial land. Available space for pre-lease prior to construction is 12,350sqm of bulky goods (26

units) and 11,380sqm of industrial (5 units). Local agents suggest there has been some interest in the development, however level of pre-commitments is low. At present, the levels achieved are not sufficient to gain development finance.

Apart from the Taree Homemaker Centre site there are limited significant sites for large or impacting industry, with the remainder of the precinct including only a few vacant lots. Expansion of this precinct is limited due to surrounding residential development and the railway line.

The 73.4ha Taree South precinct has only recently been rezoned to allow bulky goods and industrial uses. It is recognised that 28.7ha have been rezoned IN1 General Industry, 17.8ha B6 Enterprise Corridor and 26.9ha B5 Business Development. The B5 Business Development zone which permits bulky goods is located west of Manning River Drive and is largely vacant land. The B6 Enterprise Corridor zone is predominately located to the east of Manning River Drive where a mix of uses (auto sales, sheds, light industry) already exist.

In the short term, it is likely the Central Taree North precinct will compete with the South Taree precinct in terms of bulky goods provision and some light industry provision. However, given the attributes, size and intention of the South Taree precinct, it is the most comparable site to the Brimbin release area, and is likely to be in direct competition for attracting industry and bulky goods.

5.4 Assessment of Regional Supply

Given that this Employment Lands Assessment is seeking to determine the requirement for local and regional employment lands in Greater Taree and its implications for the Brimbin release area, it is necessary to consider the provision of employment lands in the wider region which will compete for businesses and industry.

This is of particular relevance given the size of the proposed employment lands component of the Brimbin release area. With upwards of 380ha of potential employment land, the Brimbin release area has the potential to cater for large industry which cannot be accommodated in the smaller and local industrial precincts of Greater Taree and the broader Mid-North Coast Region.

This is especially important for industries which aren't as reliant on being close to the end user and whose locational decisions are often supply based. Example industries include large manufacturing firms, green technologies, logistics and distribution facilities, and industries which require significant buffering. Their locational requirements are very different from local urban services, where locational decisions are largely based on being close to a local customer base (e.g. car smash repairs, building supplies).

For the purposes of assessing industrial and employment land supply in the broader Mid-North Coast Region that would be comparable to the proposed Brimbin release area the following precincts have been assessed, all of which are within the Port Macquarie-Hastings local government area:

- **Bago Road, Wauchope** - the Bago Road precinct is 3.6km south of Wauchope CBD and 71km north-east of Central Taree. It comprises 97ha of IN1 General Industrial zoned land with businesses focussed on light industrial, building materials and agricultural uses. The precinct is around 57% developed and at the time of Hill PDA's site inspections in 2009 there was a high quantum of industrial land for sale.
- **Herons Creek -** the Herons Creek precinct is around 28km south-west of Port Macquarie CBD and 59km north-east of Central Taree. It comprises some 97ha of zoned IN3 Heavy Industrial land of which only

around 22% is developed. The most significant current employment uses in the precinct is the Boral timber processing plant.

- **Sancrox** - the Sancrox precinct contains 16ha of zoned IN1 General Industrial Land of which 58.5% is developed. Existing zoned land comprises 3 properties which are all greater than 2ha and existing occupiers include Expressway Spares and TNT. This precinct is 77km from Central Taree and 12.3km west from Port Macquarie. There are plans to significantly expand the area of land zoned for industrial uses at Sancrox. A 220ha site at Sancrox was recommended by Port Macquarie-Hastings Council for further investigation in an effort to accommodate future industrial development and employment generating industries.

These precincts were chosen due to their attributes, size, level of vacant land or potential expansion, and their intended role and function. It is recognised that there are also other employment and industrial lands in Port Macquarie-Hastings, Great Lakes and Gloucester. Land in Great Lakes and Gloucester were considered for the purposes of examining demand and supply for resident worker demand from a regional catchment as indicated in Chapter 4 of this report.

However, for the purposes of understanding supply led demand for large industry and for the purpose of assessing large comparable sites to the Brimbin release area, the following employment lands precincts in Port Macquarie-Hastings, Great Lakes and Gloucester have been excluded:

- The Lake Road precinct in Port Macquarie whilst a well performing and established industrial precinct, was excluded from this analysis given it is largely built out and meets demand for local urban services as opposed to large industry. It is comparable to the Central Taree North precinct in Greater Taree. The Bellbowrie, Hastings River Drive, Munster Street, Wauchope CBD, Laurieton, Lindfield Park Road, Area 15 (Camden Haven/Kew) and Area 14 (Lake Cathie/Bonny Hills) precincts were also disregarded due to their small size, lack of vacant land and predominately local role.
- The proposed 36ha Partridge Creek (Area 13 Thrumster) industrial precinct in Port Macquarie-Hastings whilst yet to be developed, is intended to meet demand for local urban services from the new residential population of the Partridge Creek release area, being the next logical place for local industry expansion once the Lake Road precinct is fully occupied.
- Future employment and industrial land is planned for the Birdon Marine site (2.5ha) and Port Macquarie Airport (23.34ha). Birdon Martin will have a focus on marine related industry and therefore is not comparable to Brimbin, whilst the Airport would lend itself to the introduction of higher technology, freight, logistics and aviation affiliated industries, which is likely to compete with plans for Taree Airport more so then the potential development of the Brimbin release area.
- Of the 54ha of industrial land in Great Lakes, there was only 15ha of vacant land in Great Lakes spread across the Forster, Tuncurry and Sweet Pea Road precincts, some of which is constrained by poor traffic connections and ecological constraints. None of the precincts provide opportunities for larger scale industry and as a result were discounted from the analysis.

- Employment land in the Gloucester Shire is limited and focussed on the 8.9ha Gloucester Industrial Estate[6]. The estate comprises small industrial lots of between 1,000sqm and 5,000sqm for small local industry and does not provide opportunities for large scale industry.

As a result, the following section provides a summary of key findings following an analysis of each comparable regional employment precinct. A full appraisal of each is contained at Appendix 3.

The assessment of regional employment lands was based on Hill PDA's 2009 Port Macquarie-Hastings Industrial Land Strategy Review together with recent discussions with Port Macquarie-Hastings Council. Each precinct was assessed using the same criteria as the assessment of lands in Greater Taree being accessibility, land use conflict, topography, potential residential amenity, site encumbrances, size and agglomeration, and expansion opportunities.

Furthermore constraint mapping derived from the Port Macquarie-Hastings LEP (2011) was used to evaluate the precincts. This involved examination of maps relating to: floor space ratio, heights, lot size, heritage constraints, obstacle limitation surfaces and urban release. In the assessment of each industrial precinct the following rating and evaluation table was applied.

Table 37 - Scoring System Employment Lands Evaluation Table

	Assessment Criteria	If Rating = 1	Rating = 3	Rating = 5
1	Arterial Road Accessibility	Poor	Average	Good
2	Internal Road Accessibility	Poor	Average	Good
3	Minimal Land Use Conflict	High	Moderate	Minimal
4	Topography	Steep/sloped	Moderate Slope	Flat
5	Residential Amenity	High Potential	Average	Minimal Potential
6	Agglomeration	No Existing Cluster	Reasonable Cluster	Large Cluster
7	Low Flood Risk	High Risk	Average	Minimal Risk
8	Low Site Encumbrances	Significant	Minor	None
9	Expansion and/or Available Land Potential	None	Minor	Significant
	TOTAL RATING (out of 45) =	SUM OF ABOVE RESULTS		

In general terms each precinct had the ability to score ratings between 1 and 5 with a similar criteria to those used for assessment local employment lands. The following table summarises the results of the assessment.

Table 38 - Regional Employment Lands Assessment Results

	Assessment Criteria	Bago Road	Herons Creek	Sancrox
1	Arterial Road Accessibility	1	3	5
2	Internal Road Accessibility	4	3	4
3	Minimal Land Use Conflict	5	5	5
4	Topography	4	4	4
5	Residential Amenity	3	3	3
6	Agglomeration	3	1	3
7	Flood Risk	4	4	4
8	Site Encumbrances	4	2	4
9	Expansion potential	2	2	4
	TOTAL RATING (max. 45)	**30**	**27**	**36**
	Ranking	**2**	**3**	**1**

[6] Source: Development and Employment Land and Commercial Strategy: Business Study, Ratio Consultants (2006)

Sancrox ranked the highest in terms of performance and appropriateness for industrial development (36 of 45). This was followed by Bago Road (30 out of 45) and Herons Creek (27 out of 45).

These results are not surprising given the superior location, advanced planning and expansion potential of the Sancrox precinct. Whilst the Sancrox precinct only contains 16ha of zoned land, a 220ha site at Sancrox was recommended by Port Macquarie-Hastings Council for further investigation. It is understood that transport and steel fabrication companies are already interested in establishing at the site.

It is understood Stage 1 of the proposed Sancrox Employment Precinct is around 100ha of industrial land of which 85ha is considered developable. Future employment uses could comprise transport, logistics, light, general and heavy industry. This is the best location at which to accommodate future regionally significant employment lands in Port Macquarie-Hastings. To date Council has focussed investigations on a review of ecological constraints, and resolution of buffer issues to the adjoining Hanson Quarry.

One of the greatest strengths of the Sancrox precincts is its location adjacent to Pacific Highway, and the commenced plans to upgrade the Highway access to the site. Council has been in negotiation with the RTA since 2007 for an overpass at the Sancrox Road intersection with the Pacific Highway as part of an application under Part 3A of the Environmental Planning & Assessment Act for duplication of the Pacific Highway between Port Macquarie and Kempsy. The overpass was not planned for construction (due to funding) for the next 10-15 years, however discussions and negotiations between Council, landowners, RTA and NSW Department of Trade & Investment have resulted in:

- RTA brining forward 50% of funding (to a max of $4.5m);
- Landowner contributions in kind, to a value of $2.4m (land dedication etc);
- Council project management and some funding equivalent to an estimated $150,000-200,000; and
- NSW Department of Trade & Investment funding of $4.6m or up to 40% of project cost (whichever is less).

Based on the results of assessment, it is also important to note:

- Whilst the Bago Road precinct has been encouraged to accommodate the majority of heavy and noxious industry in Port Macquarie-Hastings, there are conflicts between passing traffic and industrial traffic into and out of the precinct. Furthermore, whilst half the precinct is vacant with much land for sale, with potential to accommodate additional uses, the constraints on this precinct are likely to prevent significant future investment in this location at the current time due to:
    - Poor accessibility and isolated location from Oxley Highway (through Wauchope CBD) and Pacific Highway; and
    - Its inferiority to other industrial precincts in Port Macquarie-Hastings due to location. This is the main reason why the market has been slow to take up vacant land in the precinct.
- Whilst the Herons Creek precinct is within close proximity to the Pacific Highway, the precinct will require significant road upgrades. Access to the Pacific Highway in a northerly direction is restricted to small vehicles due to a limited railway underpass clearance. Large vehicles access the Highway about 5km to the south via the existing gravel section of Herons Creek Road.

- It is noted that plans have been approved for a modern industrial park on the western boundary of the Herons Creek precinct, focussing on an intermodal terminal which would provide businesses on the estate with the opportunity to shift product from road to rail. However, this may be a longer term option given that it is subject to significant constraints. These comprise:
    - Concerns over the ecological significance of parts of the precinct;
    - The precinct is heavily vegetated and is still to be serviced;
    - There is very limited water supply to the precinct and no further development would be allowed without significant water supply works;
    - It is unlikely that the precinct has sewer access;

By comparison to precincts in Greater Taree (see Section 5.2 of this report), Sancrox was ranked higher than South Taree (33 out of 45). However Central Taree North and Old Bar (32 and 31 out of 45 respectively) ranked higher than Bago Road and Heron's Creek.

As a result, given the size and attributes of the Brimbin release area, Sancrox is not only the most comparable regional precinct, but is also the precinct most likely to compete with both South Taree and the proposed employment lands in Brimbin.

6. POPULATION LED DEMAND

This chapter investigates the demand for employment and industrial land that may be appropriate for the Brimbin release area. Employment lands in this study are defined as including commercial, business park, general and light industrial, traditional and new age industries. These forms of employment generating uses can be located in town centres, business parks, industrial lands, special use zones, rural lands and in a minority of cases in residential areas. The growth or decline of industries in these zones will have an impact on the extent of land required and the appropriate form of planning controls.

6.3 Methodology for Determining Demand

Given the size and attributes of the proposed employment lands in the Brimbin release area, and its regional status as nominated in the Mid-North Coast Regional Strategy (2009), the purpose of this Assessment is to consider the suitability of the Brimbin release area to meet regional employment demand. Hence for the purposes of the Employment Lands Demand Model (ELDM), Hill PDA has reviewed the future needs of a catchment area (i.e. catchment of resident workers) which comprises the local government areas of Greater Taree, Gloucester, and Great Lakes. This excludes potential resident workers that may locate in the proposed residential component of the Brimbin release area.

Working residents from Gloucester and Great Lakes were included in this catchment given:

- The relatively short travel time (around 40 minutes) between Great Lakes and Greater Taree employment and industrial precincts.
- Journey to work data indicating higher work flows between Great Lakes and Greater Taree than Port Macquarie-Hastings and Gloucester[7].
- Great Lakes has around 15ha[8] of vacant employment land to meet future job targets.
- Gloucester only has around 9ha[9] of zoned industrial land and whilst over an hour's drive from Greater Taree, it would be the closest regional centre to the Shire.

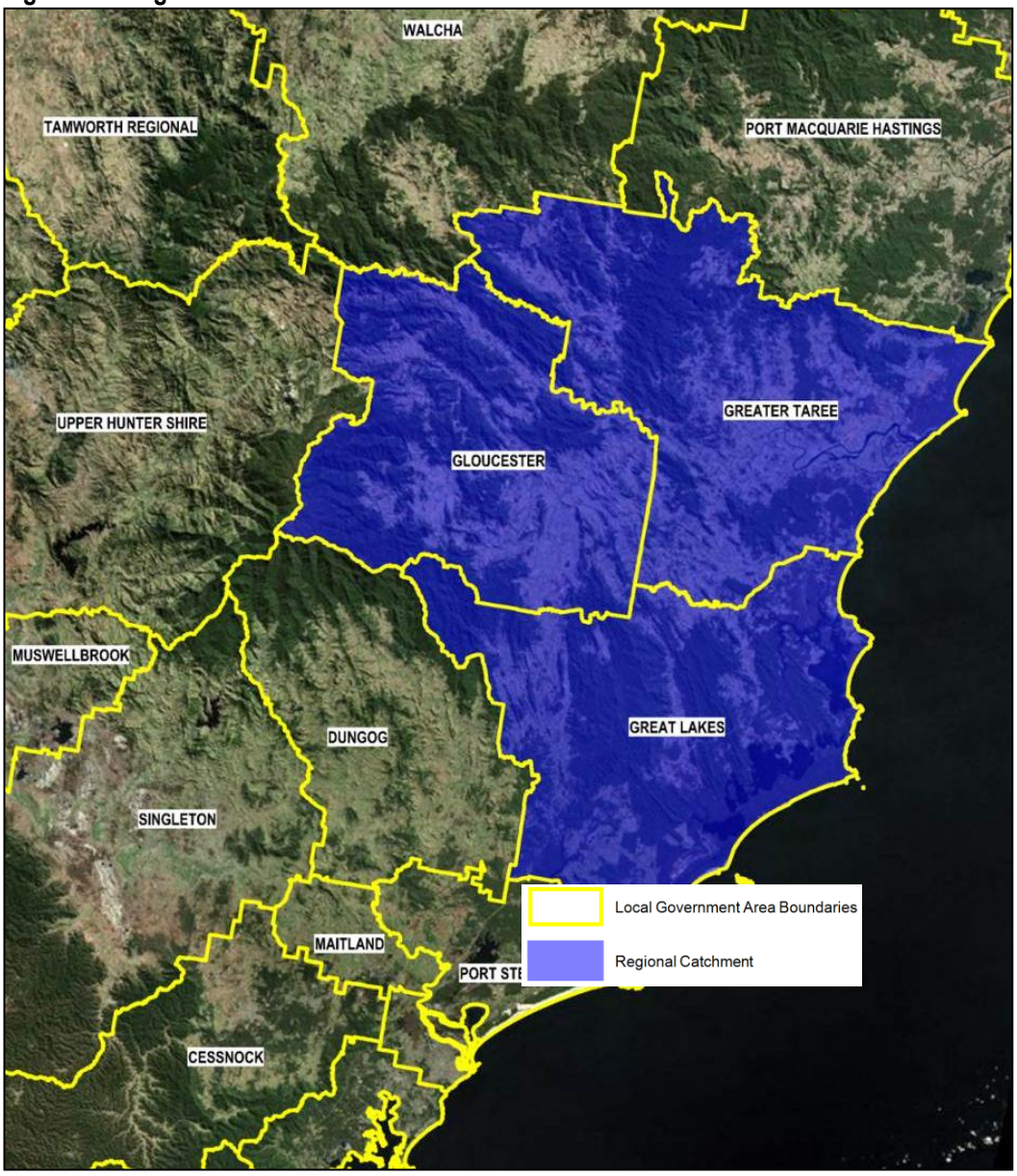
Port Macquarie-Hastings has been excluded from this catchment for the following reasons:

- Whilst its recognised that Port Macquarie captures retail expenditure from residents in Greater Taree, journey to work data demonstrated that there is a limited number of resident workers in Greater Taree who commute to Port Macquarie-Hastings to work and vice versa.
- Port Macquarie-Hastings has a considerable amount of vacant employment land (around 187.3ha[10]) to meet future job targets, with further land available for expansion.

As a result, this catchment will hereafter be referred to as the "regional catchment", the extent of which is depicted in the following map.

[7] Note: 788 working residents in Great Lakes travelled to Greater Taree for employment in 2006, none travelled to Port Macquarie. 1,000 working residents in Greater Taree travelled to Great Lakes and 249 travelled to Port Macquarie for employment in 2006. Source: ABS and Journey to Work data (2006).
[8] Source: Forster - Tuncurry Employment Lands Implementation Strategy (Hill PDA, 2009)
[9] Source: Gloucester Shire Development and Employment Land and Commercial / Retail Strategy: Business Study (Ratio Consultants, 2006)
[10] Source: Port Macquarie Hastings Industrial Land Strategy Review, Hill PDA 2010

Figure 9 - Regional Catchment



Source: MapInfo 10.5, Hill PDA (2011)

The methodology used for forecasting demand is via a custom-made employment lands demand model (ELDM) developed by Hill PDA. This method converts job forecasts to land area requirements by industry type within a defined area.

The ELDM estimates land area requirements by utilising the following steps:

- Deriving population and/or dwelling forecasts for the regional catchment based on projections by the NSW Department of Planning & Infrastructure in April 2010. These cover the period 2006 to 2036;
- Estimating the number of Full-Time Equivalent (FTE) workers within the Regional Catchment (that is the number of resident workers) based on an examination of the number and type of resident workers from ABS Census 2006 data;
- Forecasting the number of jobs by industry (proportion) based on historical ABS data for the regional catchment;
- Apportioning these jobs by industry to broad zones – commercial centre and industrial;

- Applying required floorspace areas (GFA in square metres) to each job by industry by zone;
- Dividing the result by a most likely floorspace ratio (FSR) for each zone to arrive at land area (hectares); and
- Allowing for local roads and other inefficiencies to arrive at required developable land area (hectares).

These steps as applied to demand in the regional catchment are provided in Appendix 4, with the following section outlining demand for employment land from forecast resident workers in the regional catchment.

6.4 Forecast Demand for Employment Land

Forecast demand for employment land is based on projections of resident workers in the regional catchment. In order to forecast resident workers by industry, Hill PDA examined historical ABS data and extrapolated any trends that represent a potential increase or decline in demand for work in particular industries[11]. The proportion of working residents by industry is provided in the following table, with trends extrapolated to 2036.

Table 39 - Proportion of Working Residents by Industry in Regional Catchment to 2036

Industry	2006*	2016	2026	2036
Agriculture, forestry, fishing	6.3%	5.0%	3.9%	3.0%
Mining	0.6%	0.5%	0.4%	0.3%
Manufacturing	9.2%	7.7%	6.4%	5.3%
Electricity, gas, water, waste	1.3%	1.5%	1.7%	1.9%
Construction	10.1%	11.8%	13.6%	15.4%
Wholesale trade	2.7%	2.2%	1.7%	1.3%
Retail trade	13.9%	14.0%	13.9%	13.6%
Accommodation, food	8.4%	8.3%	8.1%	7.8%
Transport, postal, warehousing	4.0%	3.9%	3.8%	3.6%
Information media, telecomm.	1.0%	0.7%	0.6%	0.4%
Financial, insurance	1.7%	1.4%	1.2%	1.0%
Rental, hiring, real estate	2.0%	2.1%	2.2%	2.2%
Professional, scientific, technical	3.6%	4.0%	4.5%	4.9%
Administrative, support	2.6%	3.0%	3.4%	3.7%
Public administration, safety	4.6%	4.8%	4.9%	5.0%
Education, training	7.4%	7.4%	7.2%	7.0%
Health care, social assistance	13.1%	14.3%	15.4%	16.3%
Arts, recreation	1.5%	2.0%	2.7%	3.6%
Other services	3.8%	3.4%	3.0%	2.6%
Inadequately described/Not stated	2.3%	1.8%	1.4%	1.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

* As at the 2006 ABS Census. Note: comprises cumulative data for Greater Taree, Gloucester Shire and Great Lakes LGA's.
Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2011)

The results above indicate that there will be a forecast decline in the proportion of working residents employed in agriculture, mining, manufacturing, wholesale trade, accommodation and food, transportation and warehousing, information media and telecommunications financial and insurance services, and education and training.

[11] NSW Bureau of Transport job forecasts were not utilised to forecast jobs within Hill PDA's modelling as the data does not extend beyond the Sydney Greater Metropolitan Area.

Conversely, there will be an increase in the proportion of working residents employed in utilities, construction, retail trade, real estate, professional, scientific and technical services, administration, health care and arts and recreation.

It should be noted that a decrease in the proportion of working residents in a particular industry does not necessarily mean that the number of workers has dropped – it means that the overall growth of the labour force may have outpaced the growth experienced by that particular industry.

The forecast of resident workers by industry is calculated by applying the above employment trends (proportion of working residents by industry) to the number of Full Time Equivalent workers (28,928) in the regional catchment (see Appendix 4). The results are indicated in the following table.

Table 40 - Forecast Resident Workers by Industry in Regional Catchment (2016 to 2036)

Industry	2016	2026	2036	Change 2016-2036
Agriculture, forestry, fishing	1,446	1,220	992	-454
Mining	145	125	99	-46
Manufacturing	2,227	2,002	1,753	-474
Electricity, gas, water, waste	434	532	629	195
Construction	3,414	4,254	5,095	1,681
Wholesale trade	636	532	430	-206
Retail trade	4,050	4,348	4,499	449
Accommodation, food	2,401	2,534	2,580	179
Transport, postal, warehousing	1,128	1,189	1,191	63
Information media, telecomm.	202	188	132	-70
Financial, insurance	405	375	331	-74
Rental, hiring, real estate	607	688	728	121
Professional, scientific, technical	1,157	1,408	1,621	464
Administrative, support	868	1,064	1,224	356
Public administration, safety	1,389	1,533	1,654	265
Education, training	2,141	2,252	2,316	175
Health care, social assistance	4,137	4,817	5,393	1,256
Arts, recreation	579	845	1,191	612
Other services	984	938	860	-124
Inadequately described/Not stated	521	438	364	-157
Total	**28,928**	**31,281**	**33,083**	**4,155**

Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2011) * Assumes 100% containment

The results indicate that by 2036 there will be strong resident worker growth in the construction, health care and social assistance, arts and recreation, professional services, and retail trade. There are also forecast declines in agriculture, forestry and fishing, manufacturing and wholesale trade.

For the purpose of determining demand, the model assumes 100% capture of resident worker jobs within the regional catchment. The apportionment of forecast jobs to land use zones together with the required floorspace per worker is presented in the following table.

Table 41 - Apportionment of Jobs to Zones and Gross Floor Area Assumptions in the Regional Catchment

Industry	Apportionment to Zones			GFA per worker (sqm)	
	Commercial Centre	Industrial Zone	Total	Commercial Centre	Industrial Zone
Agriculture, forestry, fishing	-	-	-	-	-
Mining	-	-	-	-	-
Manufacturing	-	100%	100%	85	85
Electricity, gas, water, waste	-	100%	100%	200	200
Construction	-	100%	100%	85	85
Wholesale trade	-	100%	100%	85	85
Retail trade	83%	17%	100%	50	85
Accommodation & catering	83%	17%	100%	60	60
Transport, postal, warehousing	-	100%	100%	200	200
Information media, telecomm.	50%	50%	100%	650	650
Financial, insurance	80%	20%	100%	25	25
Rental, hiring, real estate	80%	20%	100%	25	25
Professional, scientific, technical	50%	50%	100%	25	25
Administrative, support	80%	20%	100%	25	25
Public administration, safety	50%	50%	100%	25	25
Education, training	80%	20%	100%	50	50
Health care, social assistance	80%	20%	100%	50	50
Arts, recreation	80%	20%	100%	50	50
Other services	70%	30%	100%	50	85
Inadequately described/Not stated	50%	50%	100%	50	85

Source: Hill PDA Estimate (2011)

It should be noted that for the purpose of later comparing demand and supply, the model assumes the commercial centre zone in the above table corresponds to local neighbourhood, local, commercial centre and mixed use zones. Furthermore, it's assumed the industrial zone in the above table corresponds to general and light industrial, business development and enterprise corridor zones.

Whilst it is recognised that in reality retail and commercial can occur in the business development and enterprise corridor zones, reviewing such lands in Greater Taree reveals that the existing B5 Business Development and B6 Enterprise Corridor zones are largely located adjacent to Greater Taree's industrial zones, not commercial centre zones. Furthermore, in many cases, these zones predominately cater for a mix of uses which are more semi industrial in nature than commercial office or retail oriented (exception being bulky goods).

The results indicate the regional catchment demands approximately 1,296,000sqm of industrial zoned floorspace and around 840,000sqm of commercial zoned floorspace by 2036 as indicated in the following table.

Table 42 - Commercial and Industrial Floorspace Demand in Regional Catchment to 2036 (sqm)

Industry	Commercial Centre Zones			Industrial Zones		
	2016	2026	2036	2016	2026	2036
Agriculture, forestry, fishing	-	-	-	-	-	-
Mining	-	-	-	-	-	-
Manufacturing	-	-	-	189,334	170,169	149,039
Electricity, gas, water, waste	-	-	-	86,784	106,355	125,715
Construction	-	-	-	290,148	361,608	433,056
Wholesale trade	-	-	-	54,095	45,201	36,557
Retail trade	168,072	180,444	186,720	58,521	62,829	65,015
Accommodation & catering	119,571	126,181	128,508	24,490	25,844	26,321
Transport, postal, warehousing	0	0	0	225,638	237,736	238,198
Information media, telecomm.	65,811	60,998	43,008	65,811	60,998	43,008
Financial, insurance	8,100	7,507	6,617	2,025	1,877	1,654
Rental, hiring, real estate	12,150	13,764	14,557	3,037	3,441	3,639
Professional, scientific, technical	14,464	17,596	20,263	14,464	17,596	20,263
Administrative, support	17,357	21,271	24,481	4,339	5,318	6,120
Public administration, safety	17,357	19,160	20,677	17,357	19,160	20,677
Education, training	85,627	90,089	92,632	21,407	22,522	23,158
Health care, social assistance	165,468	192,691	215,701	41,367	48,173	53,925
Arts, recreation	23,142	33,783	47,640	5,786	8,446	11,910
Other services	34,424	32,845	30,106	25,081	23,930	21,934
Inadequately described/Not stated	13,018	10,948	9,098	22,130	18,612	15,466
Total	**744,560**	**807,278**	**840,007**	**1,151,815**	**1,239,815**	**1,295,656**

Source: Hill PDA (2011)

Dividing the resultant floorspace by assumed floorspace ratios (FSRs) provides land area requirements (in hectares). A limitation with this method is the considerable variation in FSR that occurs between areas. For example commercial zones in urban areas (e.g. Sydney) will account for significantly higher FSRs than those in more rural areas (e.g. Taree). Most industrial lots are developed at a FSR between 0.5:1 and 0.75:1. Many planning instruments allow a FSR of 1:1 but the economics of achieving this is difficult due to cost implications.

There are some land uses in industrial areas that have a much lower FSR because much of the activity is outdoors for example: recycling, vehicle hiring yards, storage and wholesale of outdoor landscape, building materials, and so on.

Assuming an FSR of 0.45:1 in the commercial zone and a FSR of 0.40:1 in the industrial zone for the regional catchment, demand for employment land (developable area) is provided in the following table.

Table 43 - Forecast Occupied Employment Land to 2036 (Developable Area ha)

Zone	Commercial Centre	Industrial Zone	Total Demand
Assumed FSR	0.45	0.4	
2016	165.46	287.95	453.41
2026	179.40	309.95	489.35
2036	186.67	323.91	510.58

The above results show absolute net developable area. Generally internal roads can make up as much as 20% of the developable area depending upon urban design. Local roads and other inefficiencies have been assumed at 22.5%. Demand for net employment land is provided in the following table.

Table 44 - Forecast Occupied Employment Land to 2036 (Net ha)

Year	Commercial Centre	Industrial Zone	Total Demand
2016	202.69	352.74	555.43
2026	219.76	379.69	599.45
2036	228.67	396.79	625.46
Growth 2016-2036	25.98	44.05	70.03

The above results indicate that over 625ha of employment land is demanded in the regional catchment by 2036, of which approximately 229ha (37%) is located in commercial centre zones and approximately 397ha (63%) is located in industrial zones. This is equivalent to growth of 70ha between 2016-2036 of which almost 26ha is associated to commercial centre zones and just over 44ha with industrial zones.

6.5 Demand versus Supply

A high level analysis of supply of industrial and commercial centres within the regional catchment indicates there is almost 510ha of employment land supply. This includes almost 90ha of land in commercial centre zones and a further 420.4ha appropriate for industrial zones. Supply by local government area and land use zone is provided in the following table.

Table 45 - Commercial Centre and Employment Land Supply

Land Use	Land Area (ha)
Commercial Centre Zones:	
Greater Taree[1]	
B1 Neighbourhood Centre	18.3
B2 Local Centre	13.1
B3 Commercial Centre	33.5
B4 Mixed Use	12.7[5]
Sub-total Greater Taree	65.9
Great Lakes[2]	10.0
Gloucester[3]	2.0
Total Commercial Centre Zones	**89.6**
Employment Land Zones:	
Greater Taree[1]:	
IN1 General Industrial	125.0
IN2 Light Industrial	125.0
B5 Business Development	38.0
B6 Enterprise Corridor	49.0
Planned Industrial[4]	20.6
Sub-total Greater Taree	357.6
Great Lakes[2]	53.8
Gloucester[3]	9.0
Total Employment Land Zones	**420.4**
Total	**510.0**

Sources: 1- Supplementary State of the Environment Report 2009-2010, Greater Taree Council (2010)
2 - Forster - Tuncurry Employment Land Implementation Strategy, Hill PDA (2009)
3 - Gloucester Shire Development & Commercial Strategy: Business Study, Ratio Consultants (2006)
4 - Greater Taree Council (2011) includes Hallidays Point and Taree Airport/Cundletown.
5 – 0.8ha as nominated in the Supplementary State of the Environment Report 2009-2010, Greater Taree Council (2010) plus 11.89ha associated to the Central Taree South East precinct fronting Manning River.

Therefore by 2036 there is an overall undersupply of 115.5ha of employment land in the regional catchment as indicated in the table below. This comprises unmet demand for some 139.1ha of commercial centre zoned land whilst there remains sufficient industrial zoned land supply to meet demand.

Table 46 - Employment Land Demand verses Supply (ha)

Zone	Current Supply	Demand in 2036	Difference
Commercial Centre Zones	89.6	228.7	-139.1
Employment Land Zones	420.4	396.8	23.6
Total	510.0	625.5	-115.5

Source: Hill PDA (2011), Greater Taree Council State of the Environment Report (2009-2010), Greater Taree Council (2011), Forster - Tuncurry Employment Land Implementation Strategy (Hill PDA, 2009), Gloucester Shire Development and Employment Land and Commercial / Retail Strategy: Business Study (Ratio Consultants, 2006). Red denotes undersupply.

However, it is recognised that the above demand results are based on organic growth, being growth through population increase in the regional catchment. It does not account for a new industry relocating to the region or the significant investment by a new firm that leads to an increased number of people relocating to the region for employment.

This type of demand is either supply led (i.e. based on vacant land available and suitable for a specific need), based on market conditions (e.g. cheaper land available in regional locations compared to metropolitan areas), occurs through significant intervention (e.g. government support or aggressive investment attraction strategies) or through the particular locational decisions of firms. This type of demand is further discussed in Chapter 7.

7. MARKET LED DEMAND

Employment lands demand modelling is regularly based on the provision of land for localised services and jobs that support urban function as a result of a residential workforce. These services include auto repairs, household repairs and trades. These businesses, which are well suited to light industrial zones, are located in close proximity to the centres and the urban areas they serve.

However, there is some uncertainty in the prediction of future workforces due to social and economic changes and whilst the resident worker demand methodology is sound, it is recognised that apart from population led demand, there is also supply or market led demand for employment land. This is based on the premise that locational decisions by some firms and industries (in particular for large industry) are often based on the attributes of individual sites over a greater geographical area. This is largely because they are less dependent on being located close to a particular market, city, or labour force.

The purpose of this chapter is to therefore understand the current challenges of industry in the Mid-North Coast Region and in turn identify potential new and emerging industries that may be attracted to the Mid-North Coast. Some of these industries may not necessarily be tied to any one centre or location, with their location decisions largely based on the supply and competitive advantages of individual sites.

7.3 Regional Trends

Economic Challenges

It would notionally be expected that prospects for industry and the workforce in the Mid-North Coast Region, as a result of population growth, will remain in the sectors which are currently strongest – they being manufacturing, agriculture, tourism and retail. However, it's recognised that demographic shifts and a changing economy have negatively impacted on the performance of the Mid-North Coast compared to other markets. Current economic challenges include[12]:

- Pressures on the natural environment from urban expansion and climate change;
- Pressures on the rural/agricultural sector from urban expansion, fluctuating commodity prices, water constraints and climate change;
- A private sector largely dominated by small service-based businesses and with few established large-scale industries;
- Historically high unemployment, with the most commonly occurring employment types being intermediate and elementary clerical sales and service workers, typically unskilled, low paid and/or a casual work;
- A narrow population mix which needs to be broadened so that it may support some of the regional priorities in terms of investment in intensive agriculture and the need for services to support the existing rapidly ageing community.

[12] Source: RDA Mid North Coast and Mid-North Coast Regional Economic Profile, Mid-North Coast Regional Development Board (2008)

- The lack of education opportunities in the region which has contributed to an exodus of young people immediately post-secondary school.
- A heavy reliance on road transport in the region for intermodal freight contributes to carbon emissions. Potential for greater use of rail freight for intermodal (non-bulk) as well as bulk freight in and through the region.

However, it is recognised that to counter the economic challenges of the region, there is a need to not only increase the number of jobs on the Mid-North Coast, but also to diversify the industries of employment.

Diversity and Flexibility of Supply

Industrial and employment zones tend to display an agglomeration of land uses that have established for a variety of reasons. Cumulative experience with individual firms demonstrates that locational decisions range between the logical (i.e. access to labour/market etc) and the highly personal and original. The land requirements of different firms can vary including needs for different land size, tenure (leasehold versus freehold), particular requirements for large lots, space for expansion and operational constraints (e.g. sensitivity to electromagnetic radiation or vibration etc).

Some sectors will tend to be more predictable (e.g. bulky goods retail, local service industries such as car servicing and home improvements); however, the general run of development is highly variable in its demand characteristics. Whist the planning controls in Greater Taree permit varying levels of development and land, the development of Greater Taree's industrial and employment areas have generally resulted in a similar level of activity across the precincts.

Based on analysis within this report, industrial development in Greater Taree is resulting in minimal business diversity and precincts with land use conflicts due to adjacent residential dwellings. Furthermore, there is a high proportion of small industrial lots (i.e. below 5,000sqm) prevalent in the City. Hill PDA's research (as provided in Appendix 5) revealed that demand is strongest for industrial buildings between 400sqm to 600sqm in size. Vacancy rates for this type of property are very tight, with few properties available to be leased in the current market. Reflecting demand, the total supply or quantum of this type of property represents approximately 75% of the total number of industrial properties within Greater Taree.

As a result, there is a need to understand and cater not only for local urban services, commercial services and retail, but for new and expanded industries as well. Land use and employment plans need to be flexible to ensure the preservation of excess supply of industrial or commercial land for future uses and to allow a range of lot sizes.

Land Values and Costs

Whilst jobs are plentiful in capital cities, the cost of living is high and infrastructure can be insufficient. In Australia, unlike other countries, many of our largest companies are accommodated in capital city areas. However, costs and land values are significantly higher in Sydney than in regional areas like the Mid-North Coast.

Hill PDA's research (as provided in Appendix 5) revealed there have been few land (and/or improved) industrial property transactions over the past 12 months in Greater Taree, Port Macquarie-Hastings and Great Lakes. However, reviewing sales over a longer period (since January 2007) revealed the value of subdivided and fully serviced (road, electricity, water, sewer, telephone/internet) employment land within Greater Taree is achieving

around $90-$100/sqm for sites 3,000sqm to 5,000sqm and $60-$70/sqm for 1ha sites. The evidence indicates Greater Taree, Port Macquarie-Hastings and Great Lakes have similar values, although Port Macquarie-Hastings is achieving slightly higher values.

Table 47 - Industrial Market Land and Capital Values (2011)

	Greater Taree	Port Macquarie	Great Lakes
Land Area (sqm)	**Land Value ($/sqm)**	**Land Value ($/sqm)**	**Land Value ($/sqm)**
3,000 to 5,000sqm	$90 - $100	$90 - $100	$90 - $100
1ha to 2ha	$60 - $70	$60 - $75	$60 - $70
5ha +	$15 - $20	$15 - $20	$15 - $20
Building Area (sqm)	**Capital Value ($/sqm)**	**Capital Value ($/sqm)**	**Capital Value ($/sqm)**
300sqm to 1,000sqm	$700 - $1,000	$700 - $1,100	$700 - $1,000
1,500sqm to 3,000sqm	$500 - $600	$500 - $660	$500 - $600
1ha +	$400 - $500	$400 - $500	$400 - $500

Source: Red Square, RP Data, Hill PDA Research (2011)

By way of comparison, land values in Newcastle are noticeably stronger than those within the Mid-North Coast Region, with values in the range of $80-$165/sqm for around 2,500sqm lots. Larger lots of 1.5ha are achieving values of $55-$135/sqm. Excluding the Outer West industrial precinct of Newcastle, which is the poorest performing precinct, land values are significantly higher achieving $110-$135/sqm for 2,500sqm lots and $100-$135/sqm for 1.6ha lots[13].

Comparing the regional market to Sydney's metropolitian market, industrial land values in Sydney are almost four times the values of the Mid-North Coast Region. The Sydney Northwest market (i.e. Greater Western Highway, Arndell Park, Castle Hill, Eastern Creek) is achieving land values of between $200-$350/sqm for sites 0.25ha-1.6ha, with the Outer Central West market (i.e. Wetherill Park, Greystanes) achieving $275-$375/sqm and Outer South West market (i.e. Ingleburn, Minto, Campbelltown) achieving $175-$375/sqm for similar sized sites[14].

7.4 Potential Growth Industries

Various opportunities have been identified for diversifying the economic base of Greater Taree and the Mid-North Coast Region. This has been informed by discussions with RDA Mid-North Coast, NSW Department of Trade & Investment, Greater Taree City Council, developers of land for new and emerging industries in comparable locations, and a review of various government and research reports. From these sources, current growth industries include:

- Innovation and technology;
- Lean manufacturing;
- Eco-industry;
- Urban agriculture; and
- Freight and logistics.

[13] Source: Marketview, Newcastle Office and Industrial, 1st Quarter 2011, CBRE (2011)

[14] Source: Industrial Market Report 4th Quarter 2010, CBRE (2011)

These are discussed below with relevant case studies expanded upon in Appendix 6.

Innovation and Technology

Despite a long term decline in manufacturing and agriculture, there are various new and innovation technologies and products which are supplementing these industries. Examples include nanotechnology (BlueScope Steel, Amcor, BHP Billiton and Rio Tinto are all looking at nanotechnology activities)[15], biotechnology, and clean technology (current areas of significant investment include solar energy, wind management and optimisation, energy efficiency and energy storage[16]).

In support of innovation and technology, an aim of the RDA Mid-North Coast Regional Plan (2010-2015) is for the region to be recognised as a national leader for innovation thereby increasing productivity and competitiveness. Opportunities in technology and innovation identified by RDA Mid-North Coast include[17]:

- Timber production research and development of superior varietal plantations to be used for specific commercial high-value end-uses;
- Establishing innovative food technology precincts to support research and development of superior quality products and industry leading technology;
- Develop innovative clusters; and
- Capture momentum in innovation, particularly in relation to longer term projects in alternative energy enterprises.

An example of where innovation and technology is broadening a region's industry base is in the Barwon South West region of Victoria (i.e. Geelong). Agriculture and tourism are the major industries across the region, as are transport and education. Geelong has a longstanding manufacturing and engineering base, with particular strengths in automotive and textiles. While manufacturing remains critical to the region's economy, its industrial base has become more diversified over time, with growing capabilities in various services sectors, aviation technology and biotechnology – supported by the city's extensive tertiary education and research facilities and proximity to Melbourne. This proximity also has disadvantages, with Geelong being relatively under-represented in rental, real estate services and financial and insurance services as people in these sectors are more likely to work in Melbourne. However, Geelong's diversity reduces the region's reliance on and exposure to its traditional base of car-making and car component manufacturing. The Barwon South West region is also expected to benefit from the development of alternative energy sources (such as gas, wind, geothermal and wave energy power plants), which may also help to maintain the region's presence in aluminium production.

In order to encourage and support these industries many are being clustered. Successful clustering can occur via research and development functions, and in many cases there is often some scope for research facilities with affiliations with universities to occur, especially in the areas of agricultural sciences. Examples include:

[15] Nanotechnology is the engineering and manipulating of materials at a microscopic level that changes the properties of surfaces (e.g. coatings). The technology can potentially lead to developing new products in a wide range of manufacturing industries, such as scientific and mining equipment, micro-electronics, specialist materials, pharmaceuticals and biotechnology. Source: Australian Manufacturing: Today and Tomorrow, Inquiry into the state of Australia's manufactured export and import competing base now and beyond the resources boom, House of Representatives Standing Committee on Economics, Finance and Public Administration (July 2007)
[16] Source: 'Starfish's Clean Sweep', BRW (June 2-8, 2011)
[17] Source: RDA Mid-North Coast Regional Plan (2010-2015) and NSW Department of Trade & Investment Regional Growth Plan for the Mid-North Coast Region (2010)

- Coffs Harbour Technology Park which aims to help underpin emerging e-commerce opportunities in the Mid-North Coast Region providing an environment which captures the business synergies resulting from the collocation of Information and Communication (ICT) based industry, technology business incubation facilities and higher education and vocational training institutions.
- Ballarat Technology Park, adjacent to the University of Ballarat, is designed to support the development of both emerging and existing technology-oriented enterprises. The current expansion plans of the Park will focus on attracting biotechnology, biomedical, and green technology companies.
- Wollongong Innovation Campus which aims to provide an environment for commercial and research entities to co-locate with University of Wollongong teams and establish successful productive partnerships. Specific outcomes of the Campus are: more productive interface with commercial/ industrial partners, diversification of Illawarra economy; creation of sustainable employment in the region, access to quality office, research, teaching, conference and accommodation facilities; growth in the University's reputation through association with high-profile and /or innovative commercial partners; introduction and integration of commercial acumen into University research activities; and improved research outcomes for students.

Lean Manufacturing

The Mid-North Coast Region is supported by transport infrastructure and is easily accessible (by road, rail and air) which benefits the manufacturing industry. Regional centres such as Greater Taree, Kempsey, Macksville and Coffs Harbour produce timber products, automotive parts, vehicle products, steel products, rail and transport equipment and pyrotechnics.

The Port Macquarie-Hastings and Greater Taree areas also have a strong composites (reinforced plastics) and boat building industry. Composites are used across an extensive range of industries for a wide range of applications like boat building, manufacturing and industrial applications, aerospace, consumer products and construction products. Greater Taree also accommodates the likes of food processing, heavy engineering, automotive body and parts, concrete, stone and granite, aluminium and beverages.

Notwithstanding these strengths, it is widely evidenced that the manufacturing industry has been in decline. In Greater Taree alone, the number of manufacturing firms declined by 23% (45 businesses) over the 3 year period between 2003 and 2006[18].

The relative decline in manufacturing has principally been induced by increasing offshore production, improved labour productivity, accompanying rising incomes and by greater consumer preferences for services. For regional locations that were previously dependent on the manufacturing to provide local jobs, this has a significant impact.

Notwithstanding this decline, there are new trends in manufacturing that are creating new opportunities for the industry. These include the move to more lean and sustainable manufacturing processes.

A lean production system emphasises the elimination of waste, the creation of goods in lock step with the demand of the market, the input of factory workers in creating an efficient production environment (employee involvement),

[18] Source: 1379.0.55.001 ABS National Regional Profile, Greater Taree (C) 2002-2006 (2008)

and the pursuit of continuous improvement[19]. Many manufacturers have been implementing lean practices during the last decade and have produced significant efficiency and eliminated waste. The movement toward green and sustainable business practices is the next step in the lean, just-in-time movement. It is a means to reduce a significant amount of waste and cost in the manufacturing process.

The Australian and New Zealand Standard Industrial Classification Divisions (ANZSIC) have registered numerous Australian case studies of manufacturing companies taking on corporate sustainability and eco-efficient practices in their production processes[20]. The sub-industries that are initiating these practices include: machinery and equipment, metal product manufacturing and non-metallic mineral product manufacturing, food, beverage and tobacco and motor vehicle part manufacturing. An example firm is the Fuji Xerox Australia Eco Manufacturing Centre in Zetland, which is a world leader in the development of ecologically sustainable remanufacturing solutions. The Eco Manufacturing Centre was opened in Sydney in 2000 and now has the capacity to service the entire Fuji Xerox Asia-Pacific region. A facility employs some 120 people and is purely dedicated to remanufacturing used parts and components for the Asia Pacific Region. The Eco Manufacturing Centre now accounts for 80% of Fuji Xerox Australia's spare parts requirements - these parts would have otherwise gone to landfill.

Apart from the eco-manufacturing firms themselves, there are opportunities to help foster new and sustainable conscious industries through agglomeration or 'eco-industrial estates' – which are not limited to manufacturing firms. An eco-industrial park or estate is a community of businesses that seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues. By working together, the community of businesses seeks a collective benefit that is greater than the sum of individual benefits each company would realise by only optimizing its individual performance.

There are various international examples of eco-industrial estates including[21] Trenton in New Jersey (redevelopment of an existing industrial area for clean industry) and Riverside in Vermont (agricultural industrial park in an urban setting featuring bio-energy and waste treatment), and Synergy Park in Queensland.

Synergy Park comprises 37ha within the Carole Park Industrial Estate south-west of Brisbane. The Park is intended to be a high quality "cluster" development targeting food and beverage manufacturers and their support industries. The Park seeks to create opportunities for the development of synergies of associated industries involved in a cluster. The concept optimises efficiency in use of energy, materials handling, integrated logistics and shared facilities/amenities. A major co-generation plant provides energy, superheated steam and super-cooled water to service core business activities associated with the food cluster.

On the Mid-North Coast, green manufacturing and manufacturing agglomeration is supported by RDA Mid-North Coast and the NSW Department of Trade & Investment. A key strategy of the RDA Mid-North Coast Regional Plan (2010-2015) is to develop cluster programs as a means to facilitate expansion and attract investment in focus sectors including manufacturing.

Strategy 2 of the NSW Department of Trade & Investment's Regional Growth Plan for the Mid-North Coast Region (2010) is to support innovation in regional manufacturing. In doing this, they aim to develop and support the

[19] Source: 2010 Trends: Manufacturing, Donna Hedge Burns (December 2009).
[20] Source: Department of Environment & Heritage (October 2005).
[21] Source: Designing Eco-Industrial Parks, Raymond P. Cote and E Cohen-Rosenthal (1998)

Manufacture Coffs Coast network (industry network of world class advanced manufacturers) and the Nambucca Vehicle Body Building Manufacturing Cluster as well as facilitate development of other local manufacturing networks involving, where relevant, training providers and the delivery of business development workshops. The Department will also conduct Lean Manufacturing workshops to assist productivity improvements and is investigating and facilitating the formation of innovation clusters based around existing businesses and organisations.

The implications of these trends on employment land supply in Greater Taree and in the broader Mid-North Coast indicates a need to not only provide sufficient zoned land to accommodate a range of uses, but to accommodate major industrial and manufacturing developments that require large sites and extensive buffers to sensitive uses.

Freight and Logistics

NSW is responsible for 26% of Australia's total freight haulage. 60% of all interstate freight in Australia is carried on roads, and NSW accounts for 34% of the country's total road freight. However, it is the rail transport sector (including passenger transport) which has been the fastest growing segment of the NSW freight transport, logistics and warehousing industry - recording an annual average employment growth of 11.8% in five years to 2009[22].

In 2006 the NSW Government's Statement on Innovation identified the freight logistics industry as significant and important to the State economy and having potential for boosting productivity through innovation. In 2008 the Freight & Logistics Council of NSW (FALCONSW) published the *Innovation in the NSW Freight Logistics Industry* report providing an overview and the foundation for a series of innovation strategies and actions for the freight logistics industry. The project addresses four important supply chain sectors in NSW being food and beverage, heavy construction materials, steel and grain. The food and beverage sector is viewed as one of the most significant in NSW given it's largely driven by population growth. NSW's sources of food and beverages have changed significantly over recent decades, and so have the products themselves and the channels to market. The retail industry is now built around shopping centres where the majority of family groceries are bought at large full-service supermarkets.

The 2008 report indicated that NSW has the scale and locational advantages to be Australia's pre-eminent freight and logistics centre given:

- Large population and a strong base in agriculture, manufacturing and commerce give NSW scale advantages over other Australian States in many freight and logistics activities;
- BITRE estimate that NSW carries 34% of the Australian road freight task compared with no more than 21% by any other State; and
- NSW's central position on the east coast, and the importance of its air and sea freight ports support, should give the State with unmatchable advantages as a national logistics hub, but Brisbane is growing faster and Melbourne is handling more container traffic than Sydney.

However, there are various challenges to logistics and freight in NSW including:

- Accommodating difficult physical geography and natural infrastructure gaps around and within Sydney;

[22] Source: NSW Department of Trade & Investment

- The little acknowledged high cost of building roads and railways across the mountain ranges and rivers separating Sydney from the rest of the State;
- There are limited possibilities for alternative routes across or around Sydney's numerous waterways;
- The "inside-out" layout of Sydney caused by its coastal location forcing port traffic to go in and out of the residential centres with distribution facilities to be located in the west;
- High land costs which are compatible with a populated large urban centre and limited expansion options for industrial facilities in inner Sydney; and
- Tri-axle B-doubles are today's productivity standard for interstate highway haulage however NSW is regarded as having a limited Higher Mass Limit (HML) road network and the most cumbersome and costly HML application procedures in Australia, which appear to discourage operators from investment in higher productivity trucks.

The NSW Department of Trade & Investment reports that OneSteel delivers 400,000 tonnes of steel per year from Newcastle to Sydney. Rail capacity is unavailable so it all goes by truck down the F3. Ideally, each truck could make two trips a day, but delays on the F3 due to accidents, bushfires and increasing traffic congestion often limit trucks to one trip a day, halving utilisation. During 2008 OneSteel's truck utilisation to Sydney has been halved on 25% of business days, up from only a few percent 5 years ago[23].

As a result, the Department recognises that new freight facilities should be developed in appropriate areas, but in some cases residential development has encroached on long established freight infrastructure. This reduces available operating hours and increases logistics costs. Furthermore, current import/export intermodal terminals servicing rail freight within the Sydney metropolitan area are near capacity and growth is constrained by land availability.

In terms of the Mid-North Coast, the NSW Department of Trade & Investment's Regional Growth Plan for the Mid-North Coast Region (2010) includes strategies to develop initiatives to assist investment facilitation in logistics. The Pacific Highway, together with modern rail and road freight facilities and air links in Coffs Harbour, Port Macquarie and Greater Taree, put the Mid North Coast in an ideal position to access various markets. However, keeping containers so close to the port is also part of the container matching issue, with exporters in regional locations often finding it difficult to locate appropriate containers.

Notwithstanding this, it's recognised the proposed Sancrox precinct in Port Macquarie-Hastings is targeting the likes of transport, logistics, light to general and heavy industry given its prime location adjacent to the Pacific Highway and the commenced plans to upgrade the Highway access to the site. It is understood that transport and steel fabrication companies are already interested in establishing at the site.

Urban Agriculture

Regions lose primary sector jobs, such as agriculture, forestry and fisheries as they become more urban. In their place they create industrial and services jobs. Land faces greater demand and fetches higher prices as buildings and infrastructure multiply and density increases. Greater Taree is currently experiencing challenges in maintaining cultural and rural attributes due to increased pressure from an expanding and populated region.

[23] Source: NSW Department of Trade & Investment

Whilst there has been a decline in the number of agriculture businesses and the number of resident workers in the industry, the areas physical character is well known for providing an abundance of land suitable for such purposes. Furthermore, despite the decline, agriculture, forestry and fishing operations still represent the most businesses in Greater Taree (22% of all businesses in 2006[24]).

However, in response to changing economic conditions and markets, some local farmers (including new farmers to the region) and residents are taking advantage of the area's temperate climate and rich agricultural soils to pursue new and innovative agricultural activities (e.g. organic and value-added products). This has not only been in response to meeting changing needs, but in response to the growing importance of food sustainability and local food production.

As a result there has been a national and global movement towards 'food sensitive planning' and urban agriculture as a response to growing concerns regarding climate change, scarcity of resources, chemicals used in food production, the loss of agricultural land to competing uses, and disparities in income, transport and physical access to fresh food.

In Europe agriculture is seen and dealt with as part of a mix of disciplines including natural resource management, tourism, landscape management, resource and waste e-cycling, direct marketing, and rehabilitation and care of injured or intellectually handicapped people[25]. The multi-functional approach generates off-farm income and brings urban capital into rural areas. Other global initiatives include:

- Singapore has been developing and integrating food technologies with urban and building design, agro-technology parks and has been supporting rooftop hydroponics, bio-security, and local food production and distribution systems[26].
- The Netherlands has been integrating different forms of urban agriculture with ecosystems, natural resource management, water and organic resource recycling, natural and built environments/landscapes (allotment gardening), and other complementary industries such as tourism[27].
- The United States Environmental Protection Agency has implemented a brownfield urban agriculture program whilst also supporting farmers markets, urban agriculture and agricultural land preservation[28].

This movement not only provides social benefits but is also diversifying the local economies of both urban and regional areas. The types of users who pursue urban agriculture do so for a variety of reason including[29]:

- Recreational benefits and social interaction;
- Access to organic or otherwise healthy foods;
- As a contribution to food security;
- As a means to supplement income;
- For employment and education; and

[24] Source: 1379.0.55.001 ABS National Regional Profile, Greater Taree (C) 2002-2006 (2008)
[25] Source: Urban Agriculture, David Mason Churchill Fellow (2006)
[26] Source: Urban Agriculture, David Mason Churchill Fellow (2006)
[27] Source: Urban Agriculture, David Mason Churchill Fellow (2006)
[28] Source: www.epa.gov
[29] Source: Growing Cities, Growing Food, Urban Agriculture on the Policy Agenda, N. Bakker, M. Dubbeling, S. Guendel, U. Sabel Koschella, H. de Zeeuw (eds.) (2000).

- As a commercial rather than subsistence activity undertaken to take advantage of growing markets for high value product (e.g. viticulture).

Given the increasing importance of local food production, the diversification urban agriculture provides to a local economy, and the attributes of Greater Taree that make it suitable for such agricultural purposes – urban agriculture (and its various forms) should be encouraged and strengthened as a local industry and an attractor which can potentially set Greater Taree apart from surrounding towns and settlements.

In doing so, it is recognised that urban agriculture is different from and complementary to, rural agriculture. It complements supplies from rural areas and takes various forms at different levels of development. In the US and Europe there are various examples where producers access land from a variety of sources – from small home spaces (window sills, rooftops, walls), to recreational grounds, utility and transportation rights-of-way (lake or roadside) and to suburban public or private estates. Urban agricultural forms include[30]:

- Home plots or gardens adjacent to dwelling places, typically utilised for family consumption rather than for sale (e.g. backyards);
- Cultivated or grazed areas that are apart from the household on public and/or land, the output from which may be for sale or own consumption, or some combination of both (e.g. community gardens); and
- Peri-urban cultivation or grazing distinguished from urban, since there does exist a transitional zone around many urban areas (e.g. allotment gardens).

Whilst these forms of urban agriculture are not widely undertaken in Australia, there are a number of local and regional initiatives that support local food production and recognise its importance to local economies including:

- The Manning Valley Produce Cooperative, a farmer owned non-profit cooperative, has recently been formed with financial contributions from Greater Taree City Council and NSW Department of Trade & Investment. The Cooperative supports the sale and distribution of its members products locally and nationally. Current members include Windy Ridge Free Range Eggs, Red Plateau Organic Produce, Rainbow Mushrooms and Manning Valley Tomatoes.
- The Northern Rivers Flood Links project was established to encourage local councils and the community to develop strategies and actions to future proof urban communities (Byron, Ballina, Clarence, Kyogle, Lismore, Richmond, Tweed and Rous Water) against the impacts of climate change and peak oil by addressing the environmental impacts of food supply chains locally. The project assists the local government to build capacity and develop the skills, resources and tools needed to support urban agriculture; increases community education on links between sustainability and buying local; supports a reduction of transportation and petrol costs associated with food supply; and, develops better connections between the region's growers and consumers.
- Conceived as an extension of the Hawkesbury Food Program, Hawkesbury Harvest aims to increase consumer access to nutritious, safe foods while developing the opportunity for agri-based tourism. Members of Hawkesbury Harvest share a common commitment to preserving the farming and agricultural heritage of the region. As part of a self-regulating standard, Hawkesbury Harvest growers sell their own produce and value added product. The NSW Department of Primary Industries has been a long-time advocate of the Hawkesbury Harvest model.

[30] Source: Food Production, Urban Areas and Policy Responses, Frank Ellis and James Sumberg, World Development Vol 26. No.2 (1998)

Furthermore, there is support at all levels of government including:

- Greater Taree's Manning Valley Community Plan (2010-2030) recognises the need to preserve high quality agricultural land, promote sustainable farming practices, and supports the role of local food production together with new opportunities for rural landholders.
- The NSW Department of Primary Industries promotes sustainable agricultural development in urban and urbanising situations including growing food in your own backyard, supporting locally grown food to minimise transport costs and environmental effects, and rooftop and community gardens[31].
- The RDA Mid-North Coast Regional Plan (2010-2015) supports the region in becoming the 'Australia East Coast Food Bowl'. The Plan aims to become self-sufficient for the provision of staple food, production for sale and consumption within the region, reducing food miles and increasing local nutrition. The Plan also: encourages the settlement of skilled migrants and relocation of skilled farmers to assist the development of intensive agriculture; aims to research the barriers related to planning and production due to landholding size and ownership; and aims to harness community aspiration for intensive agriculture and aquaculture through demonstration, marketing and skills.
- The NSW Department of Trade & Investment's Regional Growth Plan for the Mid-North Coast Region (2010) includes strategies to develop initiatives to assist investment facilitation in value-add agriculture (e.g. including organics).

7.5 Implications

It is possible for Greater Taree and more specifically Brimbin to attract various new and expanded industries which would promote local job growth and economic sustainability. However, much can be learned from the case studies mentioned earlier within this chapter. In many cases the success of these developments has been in the promotion of a particular theme, as opposed to the provision of conventional accommodation (e.g. commercial space) which can be found in town centres. This has led to not only clusters of like industry, but the co-location of businesses which benefit from each other through the supply chain or through collaboration in managing environmental and resource issues.

Whilst clustering and agglomeration supports the ongoing sustainability of the likes of technology parks (e.g. Coffs Harbour Technology Park), logistic hubs (e.g. Sancrox) and manufacturing clusters (e.g. Synergy Park), driving the momentum for new clusters is innovative leadership between government and the private sector.

Furthermore, whilst the likes of Ballarat Technology Park and Innovation Campus Wollongong were established in connection with universities and with the assistance of government funding, in many cases their success was also largely in securing an 'anchor' tenant that was the catalyst for further investment and tenant attraction.

Ballarat Technology Park secured its first tenant IBM in 1995, whose prime reason for relocation was the availability of skilled labour (as a product of being located adjacent to the University). Today IBM has over 800 workers on site and are investigating further expansion. Likewise Wollongong's Innovation Campus opened in 2008 with the Australian Institute for Innovative Materials and the Institute for Transnational & Maritime Security which was a catalyst for further tenants such as the Sydney Business School and Digital Media Centre.

[31] The Department is actively involved in the strategic planning of urban agriculture in communities. Source: http://www.dpi.nsw.gov.au/agriculture

8. IMPLICATIONS FOR THE BRIMBIN RELEASE AREA

8.3 Demand from the Regional Catchment

For the purpose of this report Hill PDA considered all lands subject to the following zonings in the Greater Taree LEP (2010) as being nominated as employment lands:

- B4 Mixed Use
- B5 Business Development
- B6 Enterprise Corridor
- IN1 General Industrial
- IN2 Light Industrial

Excluding new working residents in Brimbin, demand modelling within this report was based upon a regional catchment that included forecast resident workers in Greater Taree, Great Lakes and Gloucester local government areas. The results of which indicated demand for over 625ha (net) of employment land to 2036 of which 228.7ha was associated to commercial centre zones, and 396.8ha to industrial zones. This is equivalent to growth of 70ha between 2016-2036 of which almost 26ha is associated to commercial centre zones and just over 44ha with industrial zones.

Table 48 - Employment Land Demand verses Supply (ha)

Zone	Supply	Demand			Residual Capacity		
		2016	2026	2036	2016	2026	2036
Commercial Centre	89.6	202.7	219.8	228.7	-113.1	-130.2	-139.1
Industrial Zone	420.4	352.7	379.7	396.8	67.7	40.7	23.6
Total	510.0	555.4	599.5	625.5	-45.4	-89.5	-115.5

Source: Hill PDA (2011), Greater Taree Council State of the Environment Report (2009-2010), Greater Taree Council (2011), Forster - Tuncurry Employment Land Implementation Strategy (Hill PDA, 2009), Gloucester Shire Development and Employment Land and Commercial / Retail Strategy: Business Study (Ratio Consultants, 2006). Red denotes undersupply.

A high level analysis of supply within the regional catchment indicates that there is almost 510ha of employment land. This includes almost 90ha of land in commercial centre zones and a further 420.4ha of land in industrial zones.

The results therefore show that by 2036 there is sufficient supply of zoned employment lands (420.4ha) to meet demand (396.8ha) from a regional catchment. This comprises unmet demand for some 139.1ha of commercial centre zoned land, whilst there remains sufficient industrial zoned land supply to meet demand.

It should be noted that for the purpose of comparing demand and supply, it has been assumed that commercial centre zones correspond to local neighbourhood, local, commercial centre and mixed use zones, where as industrial zones correspond to industrial, business development and enterprise corridor zones.

Whilst it is recognised that retail and commercial land uses can occur in a variety of zones, reviewing such lands in Greater Taree reveals that the existing B5 Business Development and B6 Enterprise Corridor zones are largely located adjacent to industrial zones. Furthermore, in many cases, these zones predominately cater for a mix of uses which are more industrial in nature than commercial or retail oriented (with exception to bulky goods).

Given the results of the supply and demand modelling, an assessment of local industrial zoned employment lands in Greater Taree was undertaken to assess the potential for existing precincts to meet demand. The assessment revealed that not all existing precincts were appropriate for employment lands, with only a few precincts capable of further development and/or expansion unless the density of development was intensified.

This was largely because:

- Although vacant land exists in precincts like Central Taree South East, Kolodong Industrial Estate, Harrington and Central Taree South East, heritage constraints, their relative small sizes, site encumbrances (e.g. vegetation), and residential land use conflicts render these precincts unlikely to accommodate further industry or infill development.
- Whilst Old Bar and Wingham have appropriately zoned and vacant land available, their extremely poor access by arterial road, and inability to cater for large lots, limits their potential.
- Although Taree Airport (estimated at 3.8ha of employment land) is a future employment lands precinct, it will be catering for aviation related industry – the demand for which will largely be supply led, rather than occur due to natural population growth.

Outside of Greater Taree it is also recognised that some of the 15ha of vacant land available in Great Lakes, within the regional catchment, is constrained by poor traffic connections and ecological constraints.

As a result, it is likely the supply side of available and zoned land in the regional catchment is in fact less than estimated in this report. Notwithstanding this, it is likely that remaining vacant land in the Central Taree North precinct (e.g. the 3.46ha of land available adjacent to the Bunnings site), and the 73.4ha Taree South precinct are sufficient to meet demand for local employment land (70ha) from the regional catchment to 2036.

8.4 Demand from New Residents in Brimbin

Excluding new working residents in Brimbin, there is sufficient supply of zoned employment lands (420.4ha) to meet demand (396.8ha) from a regional catchment which includes Greater Taree, Gloucester and Great Lakes local government areas to 2036.

However, it should be recognised that as the Brimbin release area develops, any new residents will contribute to demand and put further pressure on existing industrial services and employment land. Hill PDA analysed demand for employment lands from new working residents in Brimbin based on a similar methodology as identified for the regional catchment. This included forecasting new working residents who would reside in Brimbin and subsequent demand for employment land.

As provided in Appendix 7, Hill PDA forecast Brimbin could accommodate 5,025 working residents upon full development of the residential component of the Brimbin release area by 2046. This results in demand for 62.95ha of employment land.

In keeping with the timelines for the regional catchment, 47.36ha of land for local urban services (e.g. auto repairs, household repairs and trades) is demanded to 2036 based on a population of 16,154 new residents in the residential component of the Brimbin release area.

This demand reduces the gap between supply and demand within the regional catchment by 23.76ha. Greater Taree will therefore need to consider the provision of new or expanded employment lands for local urban services to meet this demand. The most appropriate location for this employment land will be in proximity of the new residents, within the proposed employment lands component of the Brimbin release area.

Whilst it is recognised that demand and take up of residential lots in the Brimbin release area is not fixed and the absorption of this new resident demand over time can alter, the appropriate planning of employment lands to ensure sufficient supply is an objective of both local and State government.

The provision of around 23.76ha of employment land in the Brimbin release area is equivalent to the provision of around 2,500 jobs for working residents. Given there is forecast to be around 5,000 working residents living in the Brimbin release area upon full development, the proposed development is providing around half of the required number of jobs. The remaining jobs are assumed to be located within other employment lands precincts in Greater Taree (e.g. the Taree South precinct). The generation of new employment would also enhance the number and diversity of local employment opportunities for the existing community both for new residents in Brimbin and for the broader local government area.

8.5 Demand from the Market

Demand modelling within this report is based on resident worker forecasts for a regional catchment. This methodology gives consideration to the existing high levels of job containment (i.e. jobs to working residents), and is based on an examination of historical ABS data trends that represent a potential increase or decline in demand for particular industries. For example the forecasts continue the trend of strong resident worker growth in construction, health care, social assistance, and retail trade, and forecast declines in agriculture, forestry and fishing, manufacturing and wholesale trade.

However, the economic growth and prosperity of Greater Taree and the Mid-North Coast Region is not only dependent on demand for land from growth in resident workers, but also on the strength of existing and emerging industries to provide new employment opportunities for the region's population. If Greater Taree is to continue to grow its economy, reduce youth migration and accommodate population growth, there is a need to not only provide more jobs, but a more diverse range of jobs.

The attributes of the Mid-North Coast Region that make it attractive for further investment include[32]:

- Plentiful agriculture, forestry and fishing resources, with a climate that supports a number of horticulture activities. Opportunities exist for the region to diversify into a wide range of organic and bio diverse crops of high quality.
- Location between Brisbane and Sydney, with significant road and rail infrastructure capable of freight carriage.

[32] Source: Mid-North Coast Regional Economic Profile, Mid-North Coast Regional Development Board (2008), RDA Mid-North Coast Regional Plan (2010-2015)

- The region's North-South linear corridor is characterised by the National Highway No 1 (Pacific Highway), with a committed $3.6 billion to upgrade the highway to a four lane dual carriageway. Upgrades are planned from the end of the F3 Freeway to Port Macquarie.
- Port Macquarie Airport and Taree Airport which contribute significantly to the $300 million tourist industry in the region.
- Sydney-Brisbane Rail Link passes through the Mid-North Coast Region and is used primarily for freight movements (approximately 90 trains per week).
- Potential for the development of strategically located transport interchanges and industrial precincts to facilitate commodity and tourist movement between transport forms and fixed infrastructure.
- Significant investment in water management infrastructure in specific areas.
- Positioned adjacent to the major north-south fibre optic corridor.

This report has identified various industries which are being targeted by all levels of government as potential future growth areas for the Mid-North Coast Region to combat the economic challenges of the region.

However, unlike organic growth in demand from resident workers, land demand for these industries is often supply or market led. This is based on the premise that locational decisions by some firms and industries (in particular for large industry) are often driven by the attributes of individual sites and markets over a greater geographical area. This is largely because they are less dependent on being located close to a particular market, city, or labour force.

Furthermore, future workforces are flexible in terms of distance between their residential home and work location. Lifestyle choices mean people are willing to commute across a region, from country town to city workplace or vice versa.

The size and scale of the proposed Brimbin release area allows for the future planning of employment lands in Greater Taree and the Mid-North Coast Region. The scale of the proposed employment lands component could accommodate industry that cannot otherwise be catered for in smaller industrial precincts, and would provide a strong base for further investment and development.

In this respect, whilst the likes of employment lands precincts like South Taree can meet resident worker demand, it is recognised that larger employment precincts in Greater Taree, like Brimbin, would compete regionally to attract new industries and businesses. Whilst there will be some competition between employment precincts within Greater Taree itself, of more relevance to the planning process will be other comparable precincts in the broader Mid-North Coast Region that are comparable in size and attributes to Brimbin.

From the assessment of regional employment lands within this report, the most comparable precinct in this regard is the Sancrox employment precinct in Port Macquarie-Hastings. The 220ha site is comparable in size to the proposed employment lands component of Brimbin (380ha).

Compared to the Brimbin release area and even the South Taree precinct, the Sancrox site is in a superior location being immediately adjacent to the Pacific Highway and given already commenced plans to upgrade access to the site from Pacific Highway. As a result of the sites attributes, Port Macquarie-Hastings has been

promoting the site as a future logistics, warehousing and freight cluster, with transport and steel fabrication companies are already interested in establishing at the site.

If it is assumed the South Taree precinct can meet existing resident worker demand, and the Sancrox precinct is targeting logistics and freight, the opportunity exists to promote the Brimbin release area for new, emerging and large industry (e.g. new technologies and lean manufacturing, research and development, diverse and value added agriculture, and eco-industry). These industries are generally not accommodated in traditional and local industrial precincts due to the size and nature of their site requirements, their need for significant buffer areas, and the lack of large available and vacant land.

The relative affordability of land in Brimbin (based on achieved land values in Greater Taree) when compared to metropolitan and regional city markets (e.g. Newcastle and Wollongong) would also support this. There are significant cost savings to be made if some of these businesses set up in regional areas (and not just on occupancy costs).

If new businesses can be encouraged to locate in Brimbin, this additional investment together with strengthened employment drivers would lead to a diversification of the regional economy that has been reliant on traditional base industries. Furthermore, it would lead to the attraction of new residents, and additional services to cater for an increasing population.

However, the provision of suitable land alone will not drive demand for new industry. Investment attraction strategies and an aggressive marketing approach will be required to encourage new businesses to relocate or existing businesses to expand. Furthermore, strong partnerships between landowner and all levels of government will be essential in promoting the benefits of Greater Taree not only for business but for potential workers (i.e. lifestyle benefits).

Greater Taree City Council together with government agencies like RDA Mid-North Coast and the NSW Department of Trade & Investment have policies supporting the protection and provision of future employment and industrial land to meet a wide range of businesses – including new and emerging industry.

By way of example, the NSW Department of Trade & Investment's Regional Business Development Scheme offers financial and other assistance to businesses expanding in, or relocating to, regional NSW. In doing so, the Department helps potential investors identify and develop commercial opportunities, assists businesses wanting to relocate to regional areas, assists regional firms to expand and find new markets, and helps firms to diversify and add value to products. Hill PDA's discussions with the Department[33] have revealed that the Department could already identify various food processing and manufacturing firms currently investigating sites within the Mid-North Coast Region that would be appropriate for the Brimbin release area. These firms have largely been pushed out of Sydney Metropolitan locations due to increasing land prices and their specific site and operational requirements (e.g. buffer areas). It is understood that these firms are currently reviewing potential sites in Port Macquarie-Hastings which are possibly inferior to the opportunities presented by Brimbin.

The identification and attraction of new industry to a particular location is also the result of long term planning. As a result, it is difficult to quantify the amount of land that should be planned for; however, to meet this type of

[33] Ron McDermott, Business Development Manager at NSW Department of Trade & Investment responsible for Greater Taree.

demand, in excess of 23.76ha of employment land should be provided in Brimbin. Furthermore, it is also difficult to determine the staging of that land and the economic impacts of such development given the future industry that absorbs that supply is not currently known. In many cases, the requirement will be to assess the impacts on a case by case basis.

DISCLAIMER

This report is for the confidential use only of the party to whom it is addressed (the client) for the specific purposes to which it refers. We disclaim any responsibility to any third party acting upon or using the whole or part of its contents or reference thereto that may be published in any document, statement or circular or in any communication with third parties without prior written approval of the form and content in which it will appear.

This report and its attached appendices are based on estimates, assumptions and information sourced and referenced by Hill PDA and its sub consultants. We present these estimates and assumptions as a basis for the reader's interpretation and analysis. With respect to forecasts we do not present them as results that will actually be achieved. We rely upon the interpretation of the reader to judge for themselves the likelihood of whether these projections can be achieved or not.

As is customary, in a report of this nature, while all possible care has been taken by the authors to prepare the attached financial models from the best information available at the time of writing, no responsibility can be undertaken for errors or inaccuracies that may have occurred both with the programming or the financial projections and their assumptions.

This report does not constitute a valuation of any property or interest in property. In preparing this report we have relied upon information concerning the subject property and/or proposed development provided by the client and we have not independently verified this information excepted where noted in this report.

Appendix 1 - **LOCAL DEMOGRAPHIC PROFILE**

The population of Greater Taree in 2006 was 44,632 persons. In 1996 the population was 42,410 persons. This represents a growth of 2,222 persons or 0.51% per annum compound growth. This can be compared to the Mid-North Coast Region (0.90% per annum). When looking at individual LGA's on the Mid-North Coast, strong growth was experienced in Port Macquarie-Hastings (1.76% per annum) and Great Lakes (1.47% per annum).

Population and Age Characteristics (1996 to 2006)

Characteristic	Greater Taree LGA				Mid-North Coast Region			
	1996		2006		1996		2006	
Median age	37		43		38		44	
Age Profile:	No.	%	No.	%	No.	%	No.	%
0-4 years	3,096	7.3%	2,490	5.6%	18,096	6.9%	15,627	5.4%
5-14 years	6,893	16.3%	6,581	14.7%	41,552	15.8%	40,338	14.0%
15-19 years	2,751	6.5%	2,954	6.6%	16,473	6.3%	18,877	6.6%
20-24 years	1,996	4.7%	1,841	4.1%	11,860	4.5%	11,673	4.1%
25-34 years	4,735	11.2%	3,781	8.5%	29,264	11.1%	24,842	8.6%
35-44 years	6,183	14.6%	5,544	12.4%	39,398	15.0%	36,393	12.7%
45-54 years	5,424	12.8%	6,570	14.7%	32,652	12.4%	42,748	14.9%
55-64 years	4,441	10.5%	6,265	14.0%	27,585	10.5%	39,605	13.8%
65-74 years	4,167	9.8%	4,661	10.4%	28,117	10.7%	30,319	10.5%
75-84 years	2,169	5.1%	3,000	6.7%	14,380	5.5%	20,649	7.2%
85 years +	555	1.3%	945	2.1%	3,472	1.3%	6,521	2.3%
Total persons	**42,410**	**100.0%**	**44,632**	**100.0%**	**262,849**	**100.0%**	**287,592**	**100.0%**
Growth 1996-2006	2,222				24,743			
Compound Annual Growth	0.51%				0.90%			

Source: ABS Census Data Time Series Profile (1996 to 2006)

The median age of Greater Taree residents increased from 37 years to 43 years between 1996 and 2006. Similar ageing of the population was experienced in the Mid-North Coast Region (38 years to 44 years). Both Greater Taree and the Region had an older population structure evidenced in the greater proportion of residents aged 45 years and over (48% and 49% respectively in 2006).

In 2006 Greater Taree had an estimated 17,938 households. This represents a growth of 1,931 households since 1996. The average household size has decreased between 1996 and 2006 in both Greater Taree and the Mid-North Coast Region. In 2006, Greater Taree had an average household size of 2.4 persons per household, the same as the Region, however by comparison this was slightly higher than Great Lakes (2.2 persons) and Port Macquarie-Hastings (2.3 persons).

Household Characteristics (1996 to 2006)

Characteristic	Greater Taree LGA		Mid-North Coast Region	
	1996	2006	1996	2006
Total Households	16,007	17,938	99,721	115,736
Average household size	2.6	2.4	2.6	2.4
Household Type				
Separate house	83.80%	86.10%	77.10%	79.30%
Semi-detached/terrace house	4.70%	5.10%	6.30%	7.60%
Flat, unit or apartment	6.20%	6.40%	9.00%	8.70%
Other dwelling	3.30%	2.40%	5.90%	4.50%
Not stated	2.10%	0.00%	1.70%	0.00%
Total	100.00%	100.00%	100.00%	100.00%
Ownership Structure				
Owned / being purchased	70.00%	70.30%	67.60%	67.70%
Rented	25.50%	24.60%	27.80%	26.00%
Other tenure type	1.10%	0.80%	1.40%	1.20%
Not stated	3.40%	4.30%	3.20%	5.20%
Total	100.00%	100.00%	100.00%	100.00%
Household Structure				
Family Households	72.50%	69.60%	70.10%	67.20%
Lone Person Household	22.80%	25.10%	22.40%	25.20%
Group Household	2.20%	2.30%	2.80%	2.60%
Other	2.50%	3.00%	4.70%	5.00%
Total	100.00%	100.00%	100.00%	100.00%
Family Structure				
Couple without children	41.20%	44.60%	41.20%	44.80%
Couple with children	43.70%	37.00%	42.80%	36.30%
One parent family	13.80%	17.40%	14.70%	17.80%
Other family	1.30%	1.00%	1.20%	1.10%
Total	100.00%	100.00%	100.00%	100.00%
Median Weekly Household Income	**$451**	**$636**	**$446**	**$642**

Source: ABS Census Data Time Series Profile (1996 to 2006)

The most common household type in Greater Taree in 2006 was detached dwellings (86.1%) followed by flats and units (6.4%). Since 1996 there has not been a significant change in the types of dwellings in Greater Taree. In comparison, the Region has a smaller proportion of separate houses and a higher proportion of medium and higher density households (terraces and units).

The home ownership structure in Greater Taree and the Mid-North Coast Region are relatively similar, with the majority of households either owned or in the process of being purchased. Home ownership levels have increased marginally since 1996.

The majority of households across Greater Taree and the Mid-North Coast Region are family households. Since 1996, the proportion of family households has generally fallen, and lone person households have increased.

Of the family households, there are a slightly higher proportion of families without children across the study areas, when compared to families with children. Since 1996, there has been a decrease in couples with children, likely due to an increase in 'empty nesters' and retirees along the coast.

The weekly household income of Greater Taree in 2006 ($636/week) is slightly below the average for the Region ($642/week). By comparison, Non-Metro NSW had a median household income of $795/week as of 2006.

The following table shows the number and types of businesses that were based in Greater Taree from 2003 to 2006. The results show growth businesses associated to personal services, and the decline in businesses in manufacturing, retail and wholesale trade over the period.

Number of Businesses in Greater Taree by Industry (2003-2006)

Industry	2003	2004	2005	2006	Change 2003-2006
Agriculture, forestry and fishing	777	774	768	759	-18
Mining	0	6	3	6	6
Manufacturing	195	174	162	150	-45
Electricity, gas and water supply	3	3	3	6	3
Construction	531	555	570	582	51
Wholesale trade	126	114	111	105	-21
Retail trade	462	471	453	429	-33
Accommodation, cafes and restaurants	141	171	150	150	9
Transport and storage	165	168	174	174	9
Communication services	51	51	51	57	6
Finance and insurance	129	129	120	126	-3
Property and business services	546	537	540	531	-15
Education	27	24	21	21	-6
Health and community services	183	159	180	180	-3
Cultural and recreational services	72	81	84	81	9
Personal and other services	81	66	90	105	24
Total businesses	3 489	3 483	3 480	3 462	-27

Source: 1379.0.55.001 ABS National Regional Profile, Greater Taree (C), 2002 to 2006 (2008)

These trends are supported by an analysis of jobs in Greater Taree over time. The following tables compare the number of jobs by industry located in Greater Taree and the Mid-North North Coast Region in 2001 and 2006[34]. In 2006, Greater Taree accounted for 14% of all jobs in the Region.

Jobs by Industry (2001)

Industry	Greater Taree		Mid-North Coast Region	
Agriculture, Forestry and Fishing	922	7.1%	6,393	6.9%
Mining	20	0.2%	270	0.3%
Manufacturing	1,626	12.5%	7,773	8.4%
Electricity, Gas and Water Supply	118	0.9%	957	1.0%
Construction	616	4.7%	5,366	5.8%
Wholesale Trade	767	5.9%	3,921	4.2%
Retail Trade	2,577	19.9%	18,395	19.9%
Accommodation, Cafes and Restaurants	690	5.3%	7,405	8.0%
Transport and Storage	398	3.1%	2,897	3.1%
Communication Services	156	1.2%	1,252	1.4%
Finance and Insurance	243	1.9%	2,045	2.2%
Property and Business Services	793	6.1%	6,750	7.3%
Government Administration and Defence	416	3.2%	3,871	4.2%

[34]This data is sourced from the ABS Census in 2001 and 2006. This data is not available for the 1996 Census, and care should be taken when comparing 2001 to 2006 as there are some differences between the industry classifications (i.e. the introduction of the 'professional, scientific and technical services' classification in the 2006 Census).

Industry	Greater Taree		Mid-North Coast Region	
Education	1,052	8.1%	7,667	8.3%
Health and Community Services	1,802	13.9%	11,441	12.4%
Cultural and Recreational Services	260	2.0%	1,944	2.1%
Personal and Other Services	415	3.2%	3,362	3.6%
Non-classifiable economic units	39	0.3%	259	0.3%
Not stated	61	0.5%	430	0.5%
Total	**12,971**	**100.0%**	**92,398**	**100.0%**

Source: ABS 2001 Census

Jobs by Industry (2006)

Industry	Greater Taree LGA		Mid-North Coast Region	
Agriculture, forestry & fishing	800	5.7%	5,076	5.2%
Mining	32	0.2%	239	0.2%
Manufacturing	1,711	12.2%	7,678	7.8%
Electricity, gas, water & waste services	156	1.1%	1,664	1.7%
Construction	941	6.7%	6,528	6.6%
Wholesale trade	480	3.4%	2,784	2.8%
Retail trade	2,173	15.5%	15,651	15.8%
Accommodation & food services	985	7.0%	9,726	9.8%
Transport, postal & warehousing	562	4.0%	3,660	3.7%
Information media & telecommunications	138	1.0%	1,173	1.2%
Financial & insurance services	242	1.7%	2,201	2.2%
Rental, hiring & real estate services	221	1.6%	2,090	2.1%
Professional, scientific & technical services	494	3.5%	3,797	3.8%
Administrative & support services	302	2.1%	2,253	2.3%
Public administration & safety	602	4.3%	5,917	6.0%
Education & training	1,177	8.4%	8,625	8.7%
Health care & social assistance	2,210	15.7%	13,667	13.8%
Arts & recreation services	179	1.3%	1,323	1.3%
Other services	558	4.0%	4,093	4.1%
Inadequately described/Not stated	90	0.6%	793	0.8%
Total	**14,053**	**100.0%**	**98,938**	**100.0%**

Source: ABS 2006 Census

When analysing job trends from 2001 and 2006:

- Between 2001 and 2006, the number of jobs in Greater Taree grew from 12,971 jobs to 14,053 jobs, equivalent to growth of 1,082 jobs over the period. The Mid-North Region grew by over 6,500 jobs over the period.
- Within Greater Taree in 2006 most jobs were in health care and social assistance (15.7%), retail trade (15.5%) and manufacturing (12.2%). By comparison, most jobs in the Region were in retail trade (15.8%), health care and social assistance (13.8%) and accommodation and food services (9.8%).
- Since 2001, there has been a reduction in the proportion of jobs in agriculture, forestry and fishing, retail trade and wholesale trade in Greater Taree. There has also been a slight decrease in the proportion of manufacturing jobs. There has been an increase in the proportion of jobs in construction, accommodation and food services, transport, postal and warehousing, and health care and social assistance.

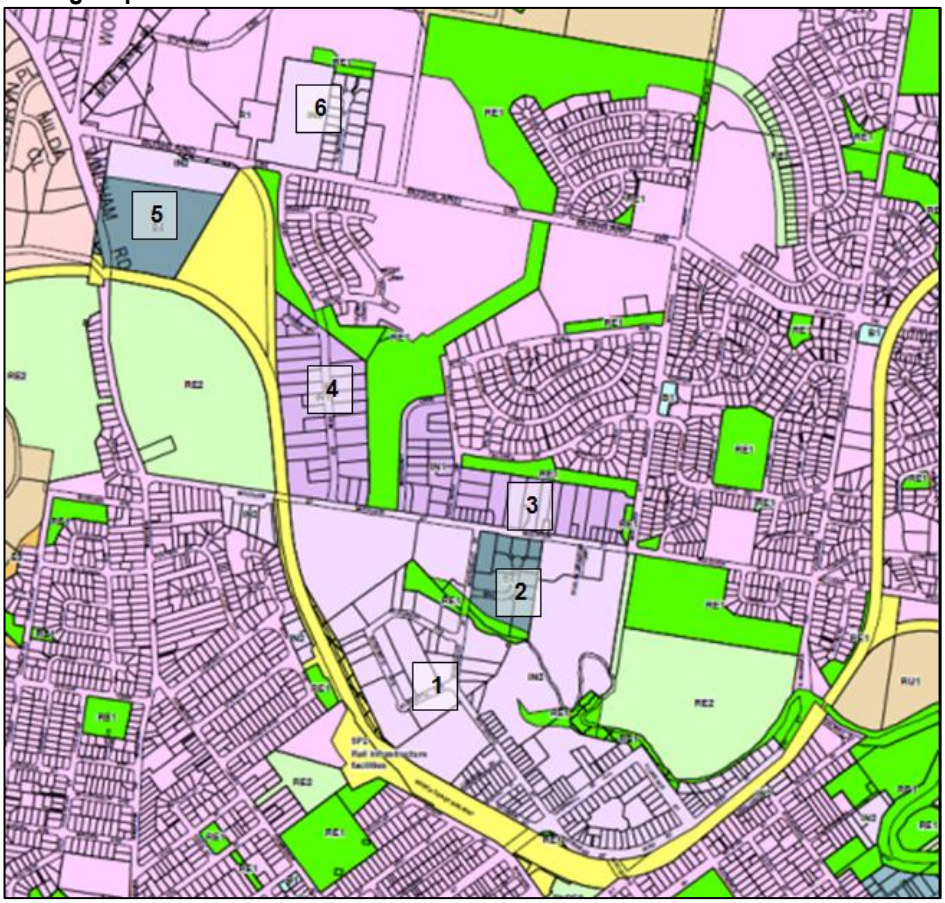
Appendix 2 - **ASSESSMENT OF LOCAL EMPLOYMENT LANDS**

Central Taree: North

Central Taree North comprises a large industrial area of some 104.49ha, located north of the Central Taree commercial and retail core. The Precinct consists of a number of separately zoned parcels of land situated to the north of, and bounded by, the railway line (identified as Areas 1 to 6 in the map below).

The precinct is also bounded by Muldoon Road, although several additional, smaller parcels are located further north adjacent to Grey Gum Road and Bushland Drive.

Zoning Map: Central Taree North



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	104.49ha
Vacancy	Piecemeal vacant land and buildings. For example there is a vacant site adjacent to Harvey Norman and a vacant retail unit adjacent to Sleep City in the homemaker retail area. There were 2 industrial/warehouse/office buildings for lease at the time of inspection. Currently available for pre-lease prior to construction are industrial units and bulky goods retail units within the Taree Homemaker Centre. This development is situated on the residue land of the Bunnings Warehouse site (Area 5) located at the corner Wingham Road and Bushland Drive. The development comprises 12,350sqm of bulky goods (26 suites) and 11,380sqm of industrial units (5 units), plus 13,300sqm of completed floorspace containing a Bunnings Warehouse and approximately 765 car spaces. Local agents suggest there has been some interest in the development, however has not specified to what level the development has been pre-committed. At present, the levels achieved are not sufficient to gain development finance.

Characteristic	Comment
Lot Size Typologies	The majority of allotments range in size from approximately 3,000sqm to 6,000sqm. A smaller number of allotments provide smaller land sizes, ranging in size from approximately 600sqm to 1,200sqm and larger allotments, from approximately 8,000sqm to 1.6ha.
Zoning*	IN1 General Industrial (23.99ha) IN2 Light Industrial (76.28ha) B5 Business Development (4.22ha)
Floor Space Ratio Map	Area 2- 1:1 (N) Area 5- 1:1 (N)
Heights of Buildings Map	Area 2: Restricted to 8.5m (I2) Area 5: Restricted to 8.5m (I2)
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Part of Area 1 within Flood Planning Area
Obstacle Limitation Surface Map	Some restrictions apply to ensure heights do not interfere with Taree Airport. Obstacle height restrictions vary from 90m to 131m maximum height
Urban Release Area Map	Not applicable

* Areas provided by Council

Land uses in this precinct largely include local urban services, light industry, warehousing, transport, building and construction, wholesale, and bulky goods retail. Some residential uses are mixed within the periphery of the industrial zones. Example businesses are identified below.

Area	Zoning	Example Businesses
Area 1	IN2 Light Industrial	Taree Containers, Crossinghams Plumbing Service, Mechanical and Exhausts, Manning Valley Saddlery, Mid Coast Bearing Centre, Vittal Building Company, Detail Joinery, Campbell and Jones Timber, Logan Leigh Benchtops, Locksmiths, Country Energy, Taree Produce, Smash Repairs, Taree Radiators. Coach Storage and Servicing, One Steel, Manning Valley Industries, Sewage Treatment Works.
Area 2	B5 Business Development	Harvey Norman, Pet Barn, Carpet Court, Everyday Living, Reece Plumbing, Whites Hardware, Sleep City, Chip Rock and Plasterboard, Monkey Mayhem Fun Centre and Café
Area 3	IN1 General Industrial	Paint, Solar Heat, Powder Coaters, Bayview Seafoods. Retail/Wholesale - Fantastic Furniture, Repco, Concept Design Kitchens, AG Mowers.
Area 4	IN1 General Industrial	Garfield, Pumps and Irrigation, Vehicle Graphics, Toll Logistics, Taree Engineering, Rexel, Glass and Aluminum, Timber Building Supplies, Brake Service.
Area 5	B5 Business Development	Bunnings
Area 6	IN2 Light Industrial	Tradelink, Mechanical Staff Track Express, Shevill Smash Repairs, Pavertruss.

Strengths and opportunities of the precinct include:

- Existing agglomeration of local urban services. For example certain parts of the precinct provide strong clusters of automotive sales and repairs, building/construction/wholesale supplies, bulky goods.
- Additional bulky goods retail development is planned for the area adjacent to Bunnings as part of the Taree Homemaker Centre development – as part of the Taree Homemaker Centre. Bunnings should provide a key anchor/attractor for further bulky goods development in this location. Unlike Area 5, the Bunnings site is a superior location for bulky goods retail given its high visibility, potential passing trade, large level sites with provision for on grade car parking.

Weaknesses and constraints of the precinct include:

- Limited opportunities for further expansion in the main employment area (Areas 1, 2, 3, 4) due to the restrictive presence of the railway line and adjoining existing residential development/ heritage land.

- Whilst the area has a small cluster of bulky goods in Area 5 anchored by the Harvey Norman, this area is hidden within the broader industrial precinct and does not have the attributes or characteristics of a successful bulky goods precinct. The main issue being that Area 5 is not located near any main road. This results in a lack of passing trade, with the retailers located on low lying and sloping land in a hidden pocket of the broader precinct. The area is largely unknown to visitors and is difficult to find.

Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Precinct adjoins two protect heritage areas located to the east of Area 1 and to the south and west of Area 1. The northern part of the precinct is hilly which would increase construction costs, as we understand was the case for the Bunnings development
Access to main roads/ transport	Close to the railway station and Wingham Road which forms the main arterial route out to the north of Taree and south to the Pacific Highway. However the Pacific Highway is located some 6km to the south and is only accessible via Taree.
Land use conflicts	The precinct is abuts, and in perimeter areas is interspersed with, residential uses. Potential for residential conflicts if the existing industrial uses are intensified and there are limited opportunities for expansion. Little potential to accommodate high impact industrial uses. As previously noted in parts the precinct borders protected heritage lands.
Agglomeration of industry	Agglomeration of some types of uses already occurs such as homemaker bulky goods retail within Area 2 and automotive sales, servicing and repair.
Ability of the Precinct to meet sustainability objectives/ vision	Limited potential given that the majority of land is already developed.

Central Taree: South

The Central Taree South precinct is situated to the north-east of the commercial core of Central Taree. The precinct includes both industrial and enterprise corridor zoned land stretching from the Victoria Street/ Macquarie Street junction in the west to the Chatham Neighbourhood Centre in the north-east. The precinct stretches north and is largely contained on Railway Parade, Bent Street and Beeton Parade, and in some cases adjoins residential or recreation zones.

Zoning Map: Central Taree South

Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	37.09ha
Vacancy	Limited undeveloped land in this precinct although there is scope for further development given the derelict nature of the old dairy site.
Lot Size Typologies	Land within the precinct ranges from smaller allotments of approximately 300sqm to lots over 6,000sqm. Most lots within the precinct would be between approximately 500sqm to 1,500sqm.
Zoning	B4 Mixed Use (0.8ha) B6 Enterprise Corridor (25.14ha) IN2 Light Industrial (11.95ha)
Floor Space Ratio Map	Area 1- Predominately 1:1 but on some individual plots ranges from 0.45:1 to 2:1 Area 5- 1:1
Heights of Buildings Map	Area 1: Restricted to 8.5 metres (I2) Area 5: Restricted to 8.5 metres (I2) Up to 14.5 metres in the Mixed Use zone (N)
Lot Size Map	Not applicable
Heritage Map	Area 4 former dairy farmers building heritage protected as 'General' under I171 Small plots which fall in Area 1 identified as 'General' heritage protected
Flood Planning Map	Area 2, Area 3 and the north-eastern part of Area 1 located in Flood Planning Area
Obstacle Limitation Surface Map	Area 3, Area 4 and Area 5 and north-eastern part of Area 1 within 56m obstacle height limitation, Area 2 within 60m-70m obstacle height limitation, the south-west part of Area 1 is within the 60m-100m obstacle height limitation
Urban Release Area Map	Not applicable

Land uses in this precinct largely include a mix of retail, bulky goods, auto services, local urban services, light industry, and warehousing. Some residential uses exist in the industrial zones. Example businesses are identified in the following table.

Area	Zoning	Example Businesses
Area 1	B6 Enterprise Corridor	Elders, Chelmsford Farm Equipment, Holden Car Repairs, Autobarn, Cullen Auto Group, KFC, Taree Motorama, Yokohama, Taylor Auto Repairs, McAlpin & Maurer
Area 2	IN2 Light Industrial	Old warehouse buildings still in non-intensive use for industrial purposes
Area 3	IN2 Light Industrial	Towers Smash Repairs, Silkenbar Repairs, Griffo's Automotive, Taree Independent Towing, SGB Mechanical Repairs, Manning Gas Company, All Vehicle Services, Welding Supplies, Holiday Coast Heavy Vehicle Driver Training, Trotters Transport
Area 4	IN2 Light Industrial	Disused Old Dairy Building, Manning Valley Motors
Area 5	B6 Enterprise Corridor	Newsagency, Laundromat, Thrifty car rental, motels and hotels, Chatham Pharmacy, Taree Off Road, Leading Edge Computers, Bottle-o, Manning River Hotel, Hays Twin Cinema

Strengths and opportunities of the precinct include:

- Well established industrial cluster.
- Agglomeration especially with relation to car and auto services.
- Some scope to intensify existing uses or bring back into use derelict buildings such as the former dairy farmers building.

Weaknesses and constraints of the precinct include:

- Little undeveloped land, the focus for intensification would therefore be on reusing vacant or derelict buildings which may be heritage protected and need to be retained. However, these are also unsuited towards the requirements of modern industrial uses and may be better reused for other purposes such as residential uses.
- Given the former industrial nature of many of the derelict sites contaminants may be present which would increase the cost of adaptive reuse further.

Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Land is relatively flat although given that the precinct situated with close proximity of the Manning River much of it is susceptible to flooding. Land contaminants may be present due to previous industrial uses
Access to main roads/ transport	Situated adjacent to the main east-west arterial road which connects to the Pacific Highway around 6.7km to the east and 4.6km to the south-west (via Commerce Street). Access around the precinct itself is somewhat disjointed, given the linear nature of the precinct and the lack of connectivity between different land zonings
Land use conflicts	Precinct is bounded by residential land use on most sides which present potential for conflict for heavy industrial use. Area 2 is also borders by parkland. Limited potential to expand the area of zoned employment lands further
Agglomeration of industry	The precinct already accommodates an agglomeration of local service industries (such as car servicing and repairs), and hotels and motels along Crescent Avenue and Victoria Street. Limited potential for agglomeration of other types of industry due to land constraints
Ability of the Precinct to meet sustainability objectives/ vision	Extremely limited, given that the majority of the precinct is built out and contaminants may be present.

Central Taree: South East

The South East precinct is linear in nature along the north-western bank of the Manning River from Nelson Street to Gregory Close. It comprises two separately zoned precincts of mixed use zoned land separated by green space.

Zoning Map: Central Taree South East

Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified in the following table.

Characteristic	Comment
Land Supply	11.8ha
Vacancy	Area 1 is completely built out. Area 2 contains some vacant and underused buildings and land which is run-down and under-used at present.
Lot Size Typologies	The majority of lots within the precinct have areas of between 600sqm to 1,000sqm, mostly comprising those lots situated on the northern side of Pitt Street. There are a number of larger lots focused along the southern side of Pitt Street and in Area 2, comprising areas up to approximately 3ha.
Zoning	B4 Mixed Use
Floor Space Ratio Map	Not applicable
Heights of Buildings Map	Not applicable
Lot Size Map	Not applicable
Heritage Map	Strip of land abutting the Manning River in Area 1 identified as heritage 'General' (I11)
Flood Planning Map	Precinct is within Flood Planning Area
Obstacle Limitation Surface Map	56m height limit on obstacles
Urban Release Area Map	Not applicable

Land uses in this precinct largely include car showrooms, hotels, motels and bulky goods fronting Victoria Street and Crescent Avenue, with local urban services, car smash repairs, and warehousing located off road along Bent and Beeton Street. Example businesses are identified below.

Area	Zoning	Example Businesses
Area 1	B4 Mixed Use	Mid Coast Ford, Kia
Area 2	B4 Mixed Use	Dairy Farmers, Taree Fishermans Co-op, Taree Concrete Plant, vehicle storage

Strengths and opportunities of the precinct include:

- Area 2 has potential for intensification of uses.

Weaknesses and constraints of the precinct include:

- Area 1 is completely built out, no scope for further intensification
- Area 2 has limited visible frontage from main arterial roads, may be unattractive to some potential occupiers as a result. Also heritage status of the existing buildings and the possibility of the presence of containments related to previous uses would increase the cost of any reuse or redevelopment. May be more suitable for alternative uses such as residential

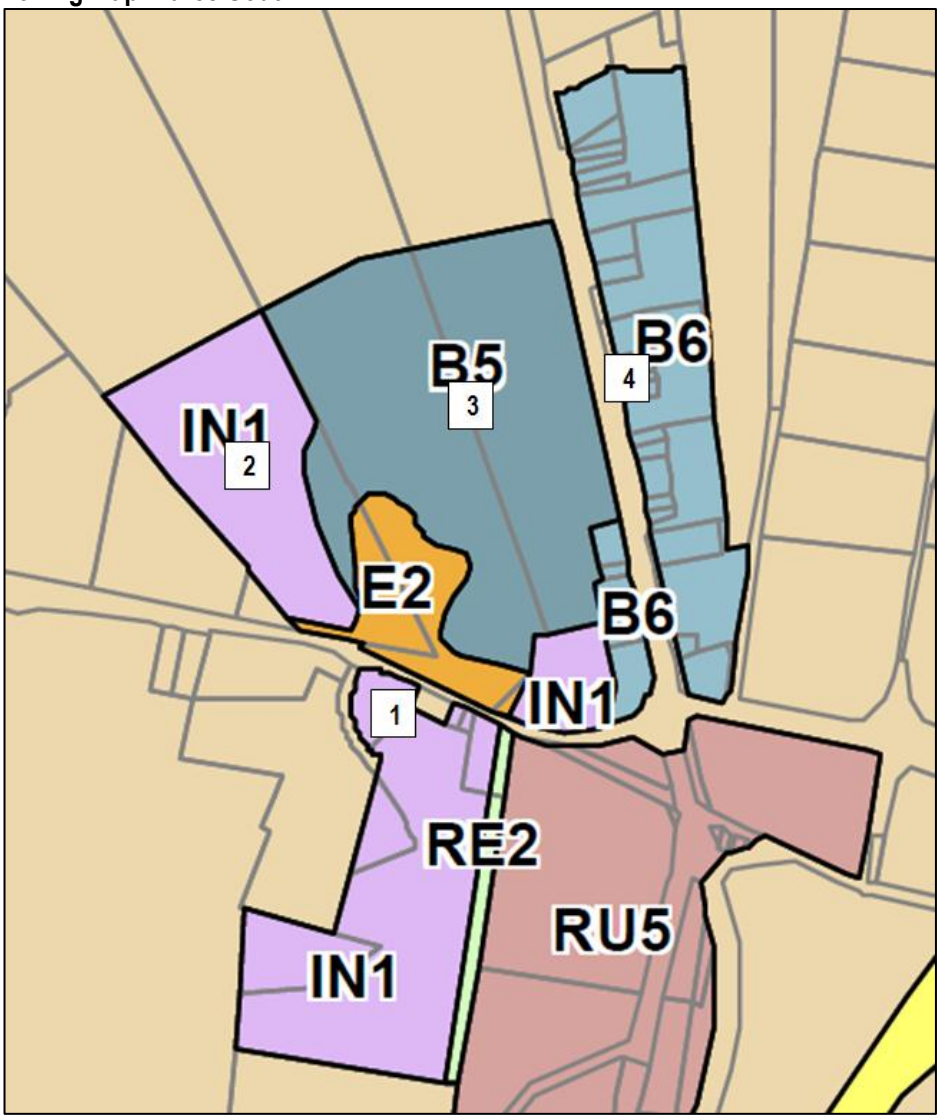
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Land is flat but presence of Manning River means that the area is susceptible to flooding
Access to main roads/ transport	Situated adjacent to the main east-west arterial road which connects to the Pacific Highway around 5.2km to the east and 6.5km to the south-west (via Commerce Street). Disused railway line runs to Area 2.
Land use conflicts	Residential uses abut the precinct. Presence of Manning River adjacent to the precinct may restrict the potential for some types of industry due to environmental concerns
Agglomeration of industry	Limited potential due to location and size of Area 2
Ability of the Precinct to meet sustainability objectives/ vision	Limited, given that Area 1 is completely development and functioning well, whilst Area 2 has heritage buildings and may be contaminated.

Taree South

This Precinct is situated in between Taree and the Pacific Highway adjacent to Commerce Street and Bucketts Way. It is located approximately 2.6km south of Central Taree and less than 1km north of the Pacific Highway.

Zoning Map: Taree South



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	73.49ha
Lot Size Typologies	Lot sizes vary significantly within the Taree South precinct. The land zoned B6 Enterprise Corridor comprises lots sizes ranging from approximately 2,000sqm to 2ha. The IN1 General Industrial and the B5 Business Development zoned land comprises lot sizes that vary from approximately 500sqm to approximately 15ha.
Zoning	B5 Business Development (26.9ha) B6 Enterprise Corridor (17.8ha) IN1 General Industrial (28.7ha)
Floor Space Ratio Map	Area 3 and Area 4: 1:1
Heights of Buildings Map	Area 3 and Area 4: Restricted to 8.5m in height (I2)
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Part of Area 4 within Flood Planning Area
Obstacle Limitation Surface Map	120m-199m Obstacle Height Limitation
Urban Release Area Map	Area 3 identified as comprising 'Manning River Drive Business Park Urban Release Area'

Land uses in this precinct largely include car showrooms, hotels, motels and bulky goods fronting Manning River Drive, with local urban services, car smash repairs, and warehousing located off road along Bent and Beeton Street. Example businesses are identified below.

Area	Zoning	Example Businesses
Area 1	IN 1 General Industrial	Tyre Recycling Yard, Bricks and Paves, Garden Centre, Ellis and Butler, Taree Recycling Centre, Cattle Yards
Area 2	IN 1 General Industrial	Vacant
Area 3	B5 Business Development	Saxbys Soft Drinks
Area 4	B6 Enterprise Corridor	Fusco Trucks, hotels and models, Suzuki, Creative Store, Yamaha, Mitsubishi, Barbrie Machinery, Recycled Building Materials, Twilight Caravan Park, Gnomes Landscape and Garden Supplies, Sharpe's Tractor Centre

Strengths and opportunities of the precinct include:

- Identified as a growth area in the Mid North Coast Regional Strategy.
- It is understood a Woolworths distribution centre is planned for the Precinct and that a development application has been submitted to Council.
- Plans have also been mooted for a business park.
- Area 2 and Area 3 are largely undeveloped.
- Plans already mooted for this area for business park/ distribution uses so not all of the undeveloped land may be available for redevelopment.

Weaknesses and constraints of the precinct include:

- Multiple landowners.

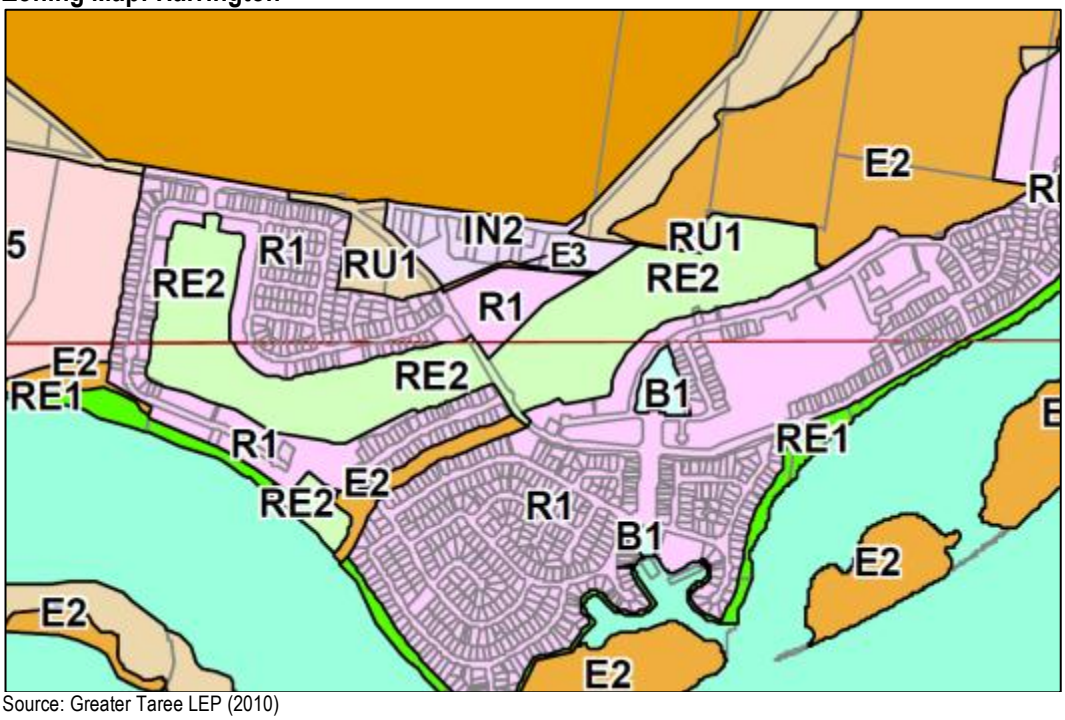
Comments against the criteria for assessment are provided in the following table.

Criteria	Comment
Topography and environmental constraints	Land is flat
Access to main roads/ transport	Located less than 1km from the Pacific Highway
Land use conflicts	Isolated precinct not located near to existing residential or other uses which may cause land use conflicts
Agglomeration of industry	Potential to agglomerate distribution type industries on the undeveloped land within the precinct in conjunction with a future Woolworths distribution centre or through the future development of a business park
Ability of the Precinct to meet sustainability objectives/ vision	Some potential given that parts of the precinct are undeveloped, although development plans have already been mooted

Harrington

Precinct of 7.2ha is located to the east of Harrington Road. It comprises a small modern industrial precinct of less than 15 lots. Harrington is around 30km north-east of Taree and around 30km east of Brimbin.

Zoning Map: Harrington



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	7.2ha Vacant 2.1ha
Vacancy	Contains some vacant buildings.
Lot Size Typologies	All lots within the precinct are generally between approximately 1,000sqm to 3,000sqm.
Zoning	IN2 Light Industrial
Floor Space Ratio Map	Harrington Smash Repairs, Holkin, Harrington Caravan and Boat Storage, Harrington Self Storage, Harrington Landscape Supplies, Medlas, Sub Station
Heights of Buildings Map	Not applicable
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Not applicable
Obstacle Limitation Surface Map	Within Flood Planning Area
Urban Release Area Map	Not applicable
	Not applicable

Businesses in this precinct include Harrington Smash Repairs, Holkin, Harrington Caravan and Boat Storage, Harrington Self Storage, Harrington Landscape Supplies, Medlas, and an utility substation.

Strengths and opportunities of the precinct include:

- Well established businesses.

Weaknesses and constraints of the precinct include:

- The precinct is limited in size with little potential to expand.
- The precinct has clear flooding issues.
- The market for industrial land in this location is doubtful given the relative distance of Harrington from Central Taree and a lack of potential workforce given the predominance of retirees in the local area.

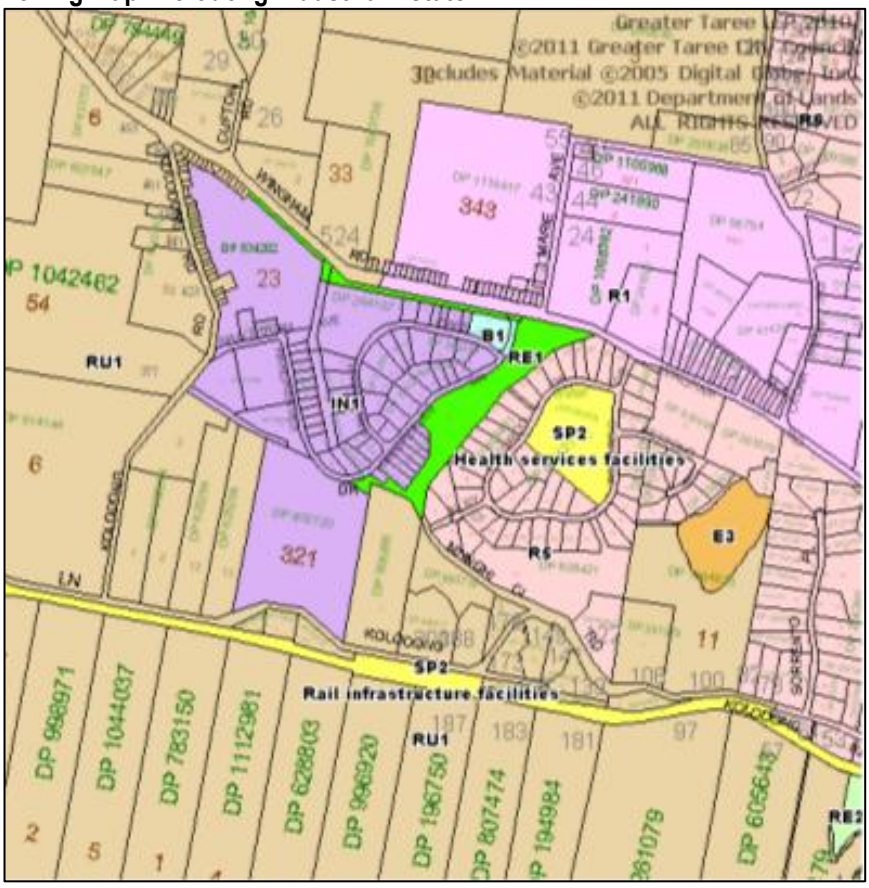
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Area is flat but situated close to residential uses which may make heavy industrial uses inappropriate
Access to main roads/ transport	Located off Harrington Road which connects directly to the Pacific Highway 7.5km to the north-west
Land use conflicts	Countryside to the north of site. Existing/ future residential uses to the west and south of the site
Agglomeration of industry	Limited scope due to the modest size of the precinct
Ability of the Precinct to meet sustainability objectives/ vision	Limited potential given that the precinct is nearly fully developed and appears well established. Little potential for expansion of IN2 zoning

Kolodong Industrial Estate

The Council developed Kolodong Industrial Estate is located between the towns of Wingham and Taree. It is situated around 5.5km north-west of Central Taree and around 15km south-west of Brimbin. The 66ha industrial precinct is bounded by Wingham Road to the north, Kolodong Road to the west and south, and Hargreaves Place to the east.

Zoning Map: Kolodong Industrial Estate



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified in the following table.

Characteristic	Comment
Land Supply	66ha
Vacancy	Vacant lots still remain adjacent to the entrance to the estate.
Lot Size Typologies	Most lots within the Kolodong precinct are between approximately 1,700sqm to 7,000sqm. Noticeably, there are some larger lots, between approximately 1.7ha to 16ha, however a significant proportion of these lots are covered/ partly covered in heavy vegetation.
Zoning	IN1 General Industrial
Floor Space Ratio Map	Not applicable
Heights of Buildings Map	Not applicable
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Not applicable
Obstacle Limitation Surface Map	Not applicable
Urban Release Area Map	Not applicable

Land uses in this precinct largely include local urban services, however there are some impacting industries (e.g. Boral Asphalt) are also located in the precinct. Example businesses include: Uses include: Gunnebo, Council depot, Ausmining, Boral Asphalt, Australia Post Delivery Centre, Master Masonry, Agrifarm, Greg Milligan, McNeil Smash Repairs, Rallyspeed, API Manufacturing, Rivercity Sheet Metal, Ardagh Group, Taree Mini Storage, Powdercoat Specialties, Visions Kitchens. Also has helicopter landing facilities

Strengths and opportunities of the precinct include:

- Vacant lots still remain adjacent to the entrance to the estate, with expansion potential also to the west.
- 400 to 700 residential lots planned for west of the precinct which will result in additional demand for local urban services in this location into the future.
- Well established cluster. Possibility to intensify uses or to provide niche uses which service the adjacent Mayo Private Hospital.

Weaknesses and constraints of the precinct include:

- Significant koala corridor along the western length of the precinct, which will restrict potential expansion.
- Residential, aged care and health land uses located to the east and north resulting in potential land use conflicts.

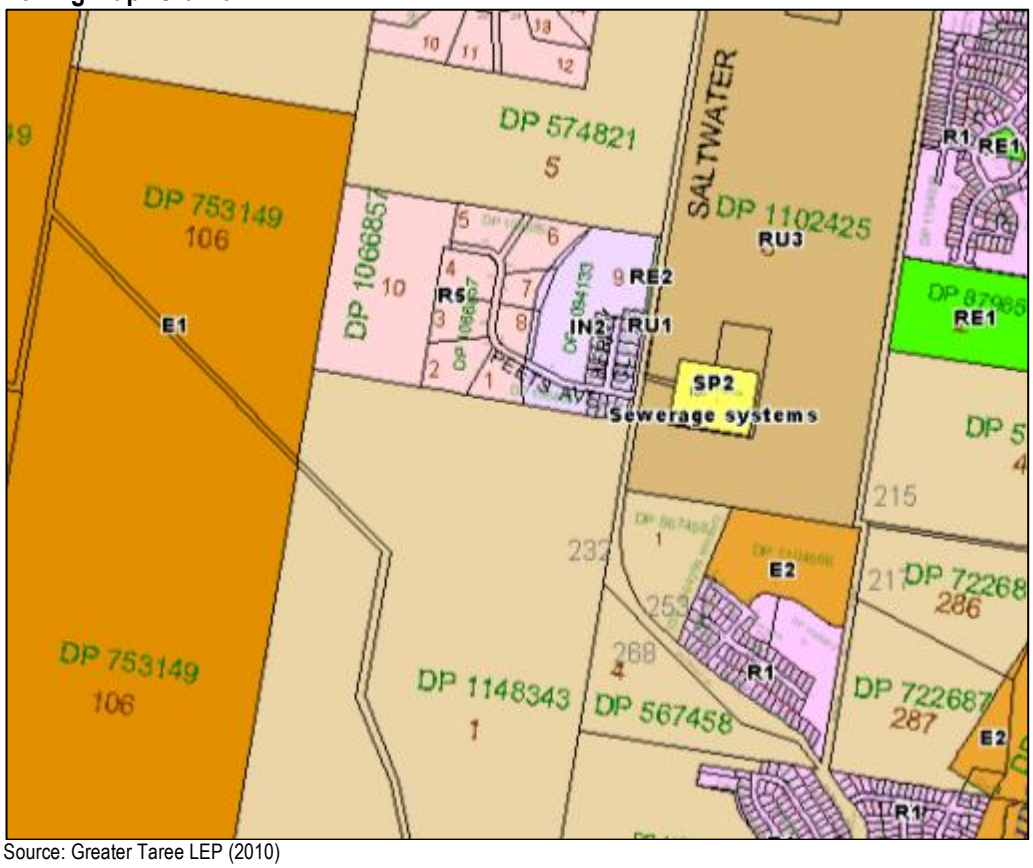
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Precinct is flat. Countryside adjoins site to the west, south and north (beyond Wingham Road).
Access to main roads/ transport	Located adjacent to Wingham Road, which connects to Taree and beyond that the Pacific Highway which is located some 22km to the south-east.
Land use conflicts	Neighbouring uses include residential, a retirement village, Mayo Private Hospital and Taree Christian College. High impacting industrial development is unlikely to be encouraged although there is existing impacting industry located in the precinct.
Agglomeration of industry	Potential to accommodate some further agglomeration of existing uses, potentially Council related given the presence of a Council depot or linked to the Mayo Private Hospital
Ability of the Precinct to meet sustainability objectives/ vision	Limited potential given that the precinct is nearly fully developed and incorporates a range of long established businesses and other employment/ industrial uses

Old Bar

The 13.3ha Old Bar light industrial precinct is located on Peets Avenue and Berry Close which connects to Salt Water Road. It comprises an isolated precinct which is situated 4km south-west of the Old Bar residential area and 15km south-east of Taree. The industrial area is called Saltwater Industrial Park.

Zoning Map: Old Bar



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified in the following table.

Characteristic	Comment
Land Supply	13.3ha, comprising 16 allotments of between 1,400sqm to 2,000sqm, with the remaining land, approx. 8.9ha (i.e. 1 x 7.8ha and 1 x 1.1ha) available for further subdivision.
Vacancy	Around half of the zoned industrial land has yet to be developed.
Lot Size Typologies	Lot sizes within the precinct fall within the approximate range of 1,400sqm to 2,000sqm. There are also larger lots that appear to be 'super lots' or residue lots from the initial industrial subdivision, totaling approximately 8.9ha over 2 lots.
Zoning	IN2 Light Industrial
Floor Space Ratio Map	Not applicable
Heights of Buildings Map	Not applicable
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Not applicable
Obstacle Limitation Surface Map	Not applicable
Urban Release Area Map	Not applicable

Land uses in the precinct include local urban services including truck repairs, car repairs, storage and removals, furniture and self-storage.

Strengths and opportunities of the precinct include:

- It is understood that the Saltwater Industrial Park has outstanding development approval for a 31 industrial lot subdivision providing some 62,000sqm of industrial land.
- Large predominately vacant and flat land.

Weaknesses and constraints of the precinct include:

- The relative distance of the precinct from a potential worker population.

Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Precinct is relatively flat. Kiwakka State Forest located due west.
Access to main roads/ transport	The Precinct is situated 11km south-east of the Pacific Highway, which is accessible via Salt Water Road then Old Bar Road.
Land use conflicts	Kiwakka State Forest is situated directly opposite the Precinct to the east. Land to the west of the Precinct is zoned for large lot residential.
Agglomeration of industry	Some potential to create a specialist industrial cluster through the future development of land in the Saltwater Industrial Park subject to extant development application approval.
Ability of the Precinct to meet sustainability objectives/ vision	Some potential given that much of the precinct has yet to be built out, although it has outstanding development approval for further industrial uses.

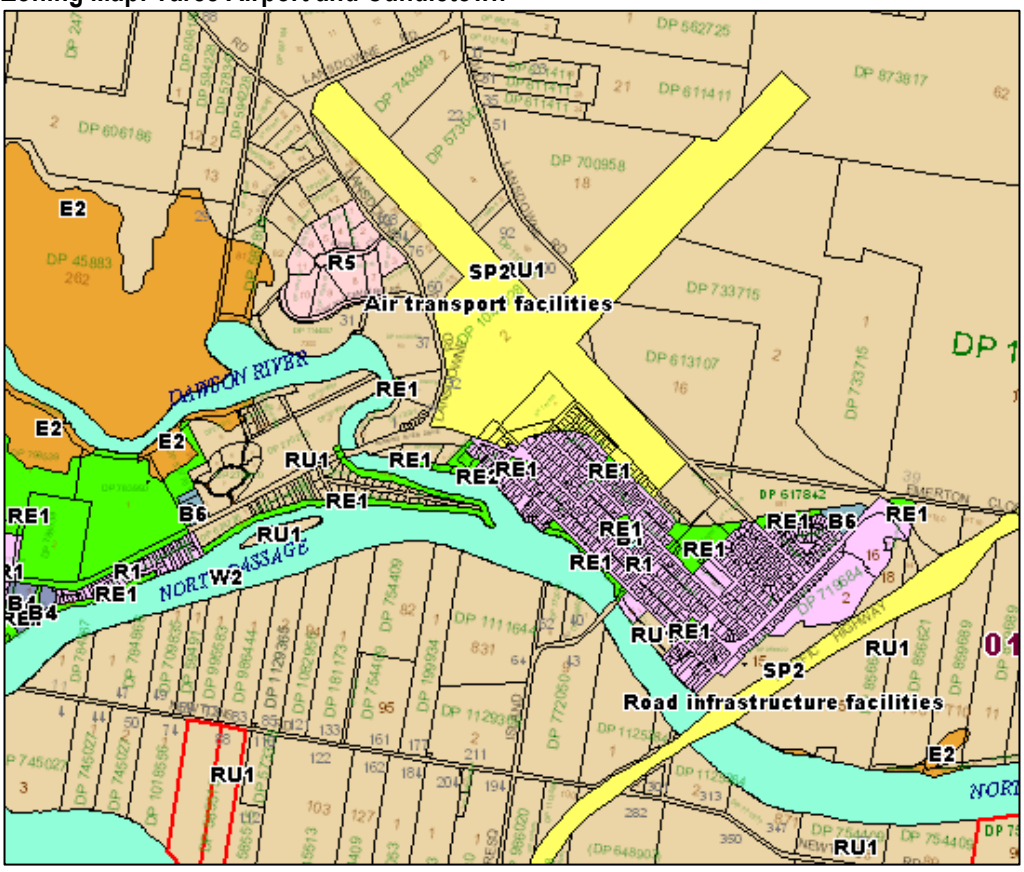
Taree Airport and Cundletown

Taree Airport is situated around 12km from Taree Major Centre and around 5km from the Brimbin release area. Currently Regional Express Airlines is the only airline providing services to and from Taree Airport. Council estimates that around 20,000 passengers use the Airport every year.

It is understood funding has recently been allocated to the Airport to further improve a precinct adjacent to the airport for encouragement of airport and aviation related industry within the grounds of the Airport.

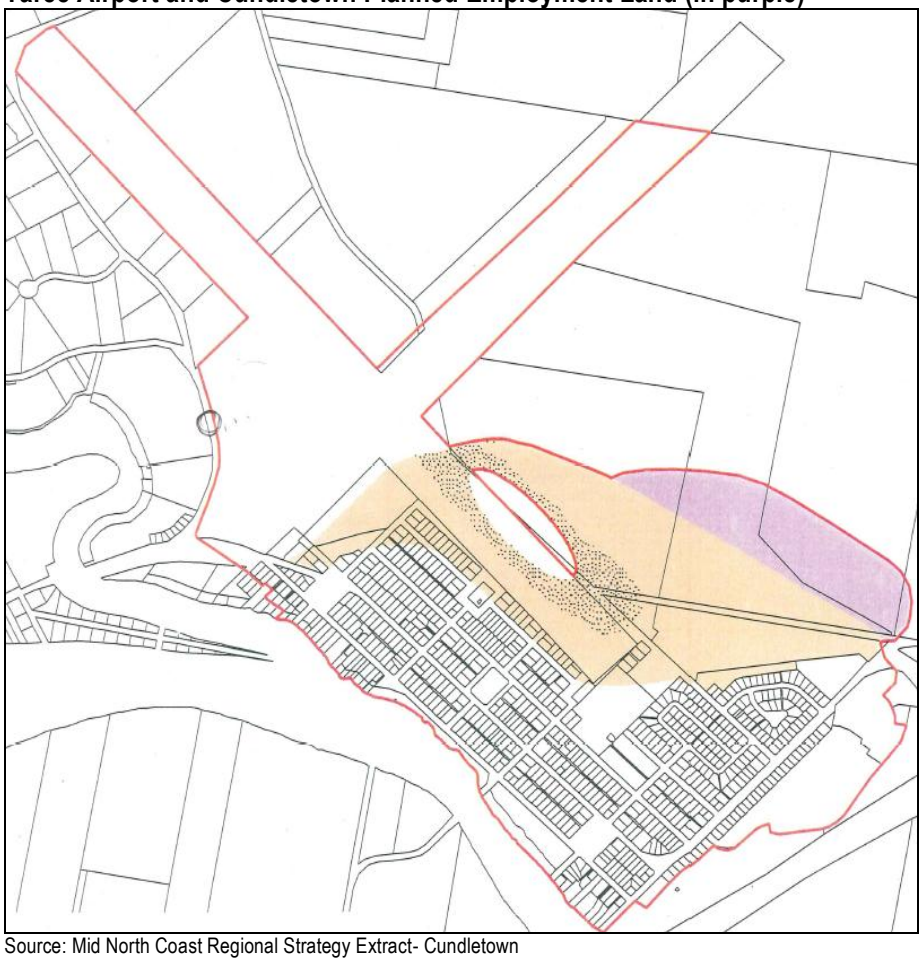
Additional industry land is planned for adjacent to the Airport in Cundletown as highlighted in the Mid-North Coast Regional Strategy (2009). It is understood the precinct could provide up to 18ha of employment lands.

Zoning Map: Taree Airport and Cundletown



Source: Greater Taree LEP (2010)

Taree Airport and Cundletown Planned Employment Land (in purple)



Source: Mid North Coast Regional Strategy Extract- Cundletown

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	Up to 18ha
Vacancy	Vacant land available for expansion, however is considered unlikely to proceed as a result of cancelling a new bypass road to the north of Cundletown.
Lot Size Typologies	Land within this precinct does not appear to be subdivided into individual lots, with each parcel comprising part of the larger airport site. Industrial parcels are in the vicinity of 3,000sqm to 5,000sqm.
Zoning	Zoned SP2 (Air Transport Facilities) in the Greater Taree LEP (2010). The area of Proposed Employment Land currently zoned RU1 Primary Production in the Greater Taree LEP (2010).
Floor Space Ratio Map	Not applicable
Heights of Buildings Map	Not applicable
Lot Size Map	Area of Proposed Employment Land restricted to 40ha (AB3)
Heritage Map	Not applicable
Flood Planning Map	Within Flood Planning Area
Obstacle Limitation Surface Map	56m Obstacle Height Limit
Urban Release Area Map	Not applicable

Businesses in the existing Airport precinct include Morgan Aeroworks, Skydive NSW, Manning River Aero Club, Aircraft Kits, Taree Airport.

Strengths and opportunities of the precinct include:

- Future expansion of the Airport precinct for an aviation business park. The proposed expansion includes provision of designated areas for aviation related businesses, helicopters and helicopter related business, general aviation hangers, storage space and provision for a flying training school.
- Funding recently allocated for upgrading of the road access into the precinct from NSW Industry & Investment.
- Small established cluster of aviation related industry already exists.

Weaknesses and constraints of the precinct include:

- The probability of the planned industrial precinct to the north will be dependent on whether a bypass road to and from Brimbin is required around the Airport.

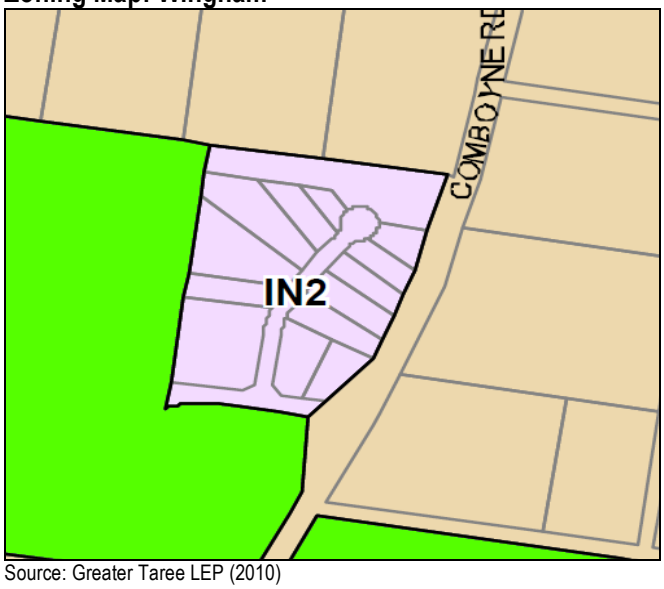
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Relatively flat. Minimal environmental constraints.
Access to main roads/ transport	Well located within close proximity (500m) to the Pacific Highway and immediately adjacent to Taree airport
Land use conflicts	Existing and proposed residential uses to the south and west of the Proposed Employment Land
Agglomeration of industry	Potential to agglomerate airport related industries and businesses
Ability of the Precinct to meet sustainability objectives/ vision	Limited, given that future employment/ industrial development in this area would be related to airport uses only

Wingham

Small isolated precinct of 8.4ha located on Coghlan Avenue/ Industrial Close, off Comboyne Road. Located around 2.5km north of Wingham and 12km north-west of Taree.

Zoning Map: Wingham



Source: Greater Taree LEP (2010)

Relevant planning considerations from Greater Taree LEP (2010) and Greater Taree DCP (2010), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	8.4ha (gross). Approx. 3.4ha supply.
Vacancy	Some small undeveloped lots (1,600sqm to 1.4ha) available.
Lot Size Typologies	Land sizes within the precinct range from approximately 1,600sqm to 1.4ha. Most lots within the precinct would be between approximately 2,500sqm to 4,500sqm.
Zoning	IN2 Light Industrial
Floor Space Ratio Map	Not applicable
Heights of Buildings Map	Not applicable
Lot Size Map	Not applicable
Heritage Map	Not applicable
Flood Planning Map	Not applicable
Obstacle Limitation Surface Map	Not applicable
Urban Release Area Map	Not applicable

Land uses in the precinct include a mix of commercial, transport, emergency services, and urban services. Businesses include Southcott (hydraulic components, wholesale cycles, fluid equipment), SBS Self Storage, Wingham Welding Works, Volunteer Fire Service.

Strengths and opportunities of the precinct include:

- Capacity to expand with vacant land still available.

Weaknesses and constraints of the precinct include:

- Fairly remote location and modest size of precinct is unlikely to be attractive to some potential industrial occupiers.

Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Some undulation evident on the land which may increase development costs.
Access to main roads/ transport	Not well connected to main roads, being some 20km north-west of the Pacific Highway which is accessible only be first driving through either Taree or Wingham.
Land use conflicts	None, the precinct is relatively isolated.
Agglomeration of industry	Limited potential for agglomeration in view of the limited size of the Precinct and given that it is predominantly developed.
Ability of the Precinct to meet sustainability objectives/ vision	Limited given that the Precinct is nearly completely built out.

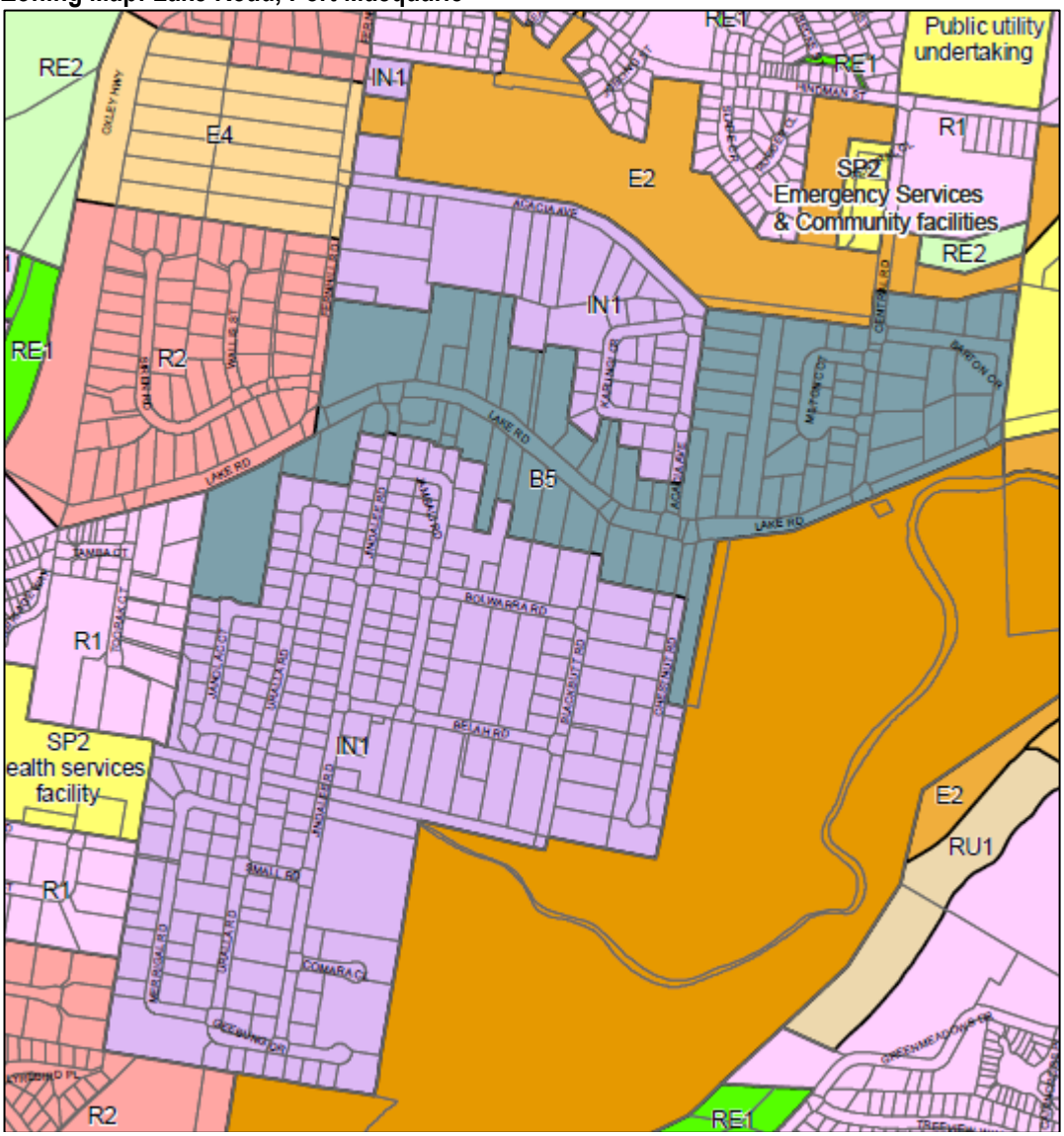
Appendix 3 - **ASSESSMENT OF REGIONAL EMPLOYMENT LANDS**

Lake Road, Port Macquarie

The Lake Road precinct is in Port Macquarie-Hastings LGA, around 3.5km south-west of Port Macquarie CBD and 82km north-east of Central Taree. It provides some 80.5ha of employment land. It is located to the north and south of Lake Road between Fernhill Road and Barton Crescent.

The Lake Road Precinct is the major industrial area in Port Macquarie-Hastings LGA playing a regional role in the provision of industrial land. Light industrial is the predominant land use, although there has been an increase in the provision of bulky goods retailers in the Precinct.

Zoning Map: Lake Road, Port Macquarie



Source: Port Macquarie-Hastings LEP (2011)

Relevant planning considerations from Port Macquarie-Hastings LEP (2011), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	80.5ha
Vacancy	The precinct is largely built out with around 95% of zoned land developed. Hill PDA's Port Macquarie Hastings Industrial Land Strategy Review (2010) indicated there was around 4.1ha of vacant land in the precinct.
Lot Size Typologies	The majority of sites within the Precinct are in the range of 1,000-2,000sqm.

Characteristic	Comment
Zoning	IN1 General Industrial B5 Business Development

Land uses in this precinct largely include local urban services, light industry, warehousing, transport, building and construction, wholesale, and bulky goods retail. Some recreational/entertainment uses are mixed within the industrial zones. Example businesses are identified below.

Land Use	Example Businesses
Industrial	TLE Electrical, Amber Tiles, Peter's Mowing Centre, Trademark Building Supplies, Horseland, Eastland Truss & Timber, Kennards Hire, Superlook Smash Repairs, Our Town Fencing, Repco Servicing, Alco Battery Sales and Jim Pearson Transport.
Retail	Spotlight, The Good Guys, Everyday Living, Sleep City, Bunnings, Fantastic Furniture, Radio Rentals, Baby Warehouse, and One Stop Pine.
Recreation/Entertainment	Some recreational users also exist in the Precinct including Jumbos Playland, Hastings Dance Centre, Vicki's Swim Centre, and Centre of Gravity Indoor Adventure Centre.

Strengths and opportunities of the precinct include:

- The precinct has always been developed and promoted as Port Macquarie's main industrial area. It is located in close proximity to the existing urban area of Port Macquarie.

Weaknesses and constraints of the precinct include:

- There is little room for expansion due to encroaching residential development and vegetation which restricts bulky goods development expanding onto land fronting Lake Road.

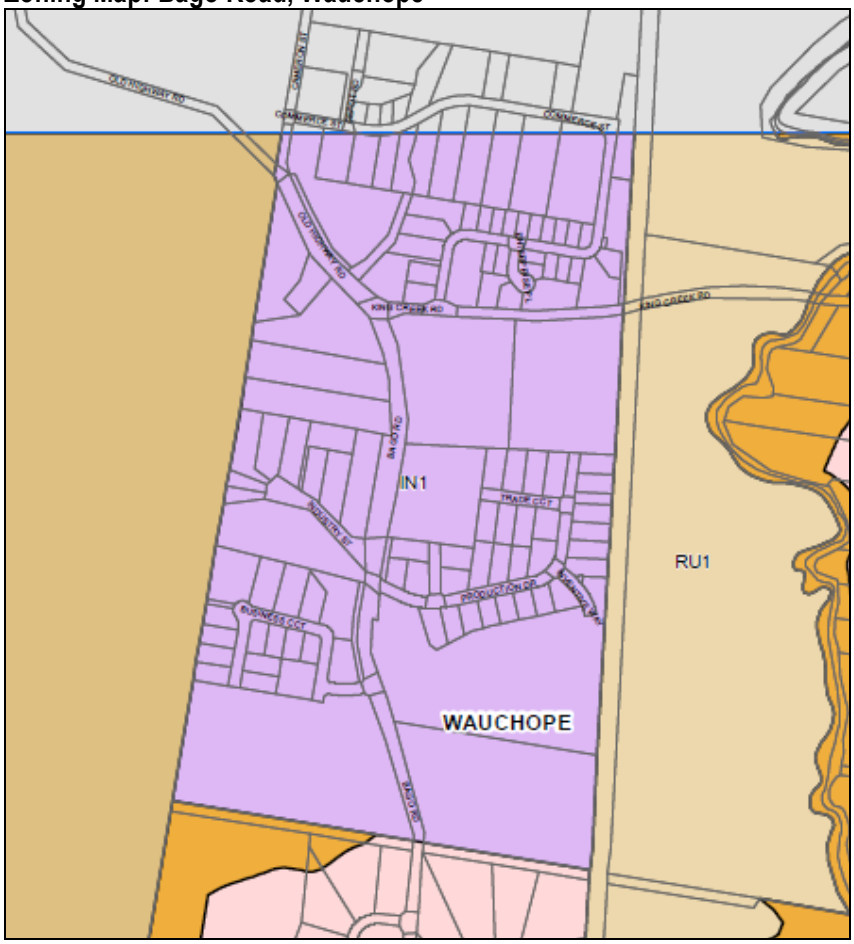
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Vegetation issues constraining expansion.
Access to main roads/ transport	Located adjacent to Oxley Highway (34) which intersects with the Pacific Highway 6.8km to the west. Lake Road carries significant traffic volumes at peak hours being the key east/west link for traffic movements between Ocean Drive and Oxley Highway. We understand that Council is investigating options to cater for existing and future traffic growth along Lake Road.
Land use conflicts	The Precinct is generally well buffered from surrounding residential land uses and is easily accessed from Oxley Highway or via Hindman Street and Fernhill Road
Scope to accommodate additional regional employment lands	Limited, given that the majority of this precinct has already been developed and in view of traffic constraints imposed by the high volumes of traffic which pass along Ocean Drive and Oxley Highway.

Bago Road, Wauchope

The Bago Road industrial area is around 3.6km south of Wauchope town centre, 20km west of Port Macquarie and around 71km north-east of Central Taree.

Zoning Map: Bago Road, Wauchope



Source: Port Macquarie-Hastings LEP (2011)

Relevant planning considerations from Port Macquarie-Hastings LEP (2011), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	96.74ha
Vacancy	Just over half (56.7%) is fully developed with the remainder vacant (41.9ha).
Lot Size Typologies	There is generally a mix of lot sizes from 1,000sqm to 10,000sqm, with some over 1ha to 2ha.
Zoning	IN1 General Industrial

At the time of Hill PDA's inspections in 2010 there were various sites for sale within the Precinct including (but not limited to):

- Wauchope Business Park - 36 industrial lot subdivision with lots from 1,113sqm and asking prices from $50/sqm to $65/sqm. It's understood 6 lots have sold, and design and construction packages are available. The subdivision offers underground power and wide access roads.
- A substantial Greenfield site adjacent to Wauchope Business Park. The site is around 31,000sqm. The adjoining developers will negotiate rear access rights from the existing small lot subdivision. This site is surplus to the developer's requirements. The property is currently being advertised for sale with an asking price of approximately $30/sqm.

Based on the Hill PDA Port Macquarie Hastings Industrial Land Strategy Review (2010) the main users of Wauchope Industrial Estate were light industry, building materials and agricultural businesses. Example businesses include North Coast Fire Systems, Holiday Coast Manufactured Homes, Aquasonic, A Class Auto Refinishers, Herc Equipment, Wauchope Frames & Trusses, Redhead Machinery Sales, Slade Refrigerator Transport, Heritage Wholesale Blinds, and Wauchope Mower & Hire Centre.

Strengths and opportunities of the precinct include:

- The main advantage of industrial development in this location is the presence of existing industrial land users and the availability of already serviced land.

Weaknesses and constraints of the precinct include:

- Bago Road has historically been encouraged to account for the majority of heavy and noxious industry. As a result, the precinct has access issues resulting in conflicts between passing traffic and industrial traffic in and out of the Precinct.
- Poor accessibility and isolated location from Oxley Highway (through Wauchope CBD) and Pacific Highway.
- Its inferiority to other industrial precincts in the LGA like Lake Road and Hastings River Drive due to location. This is the main reason why the market has been slow to take up vacant land in the Precinct.

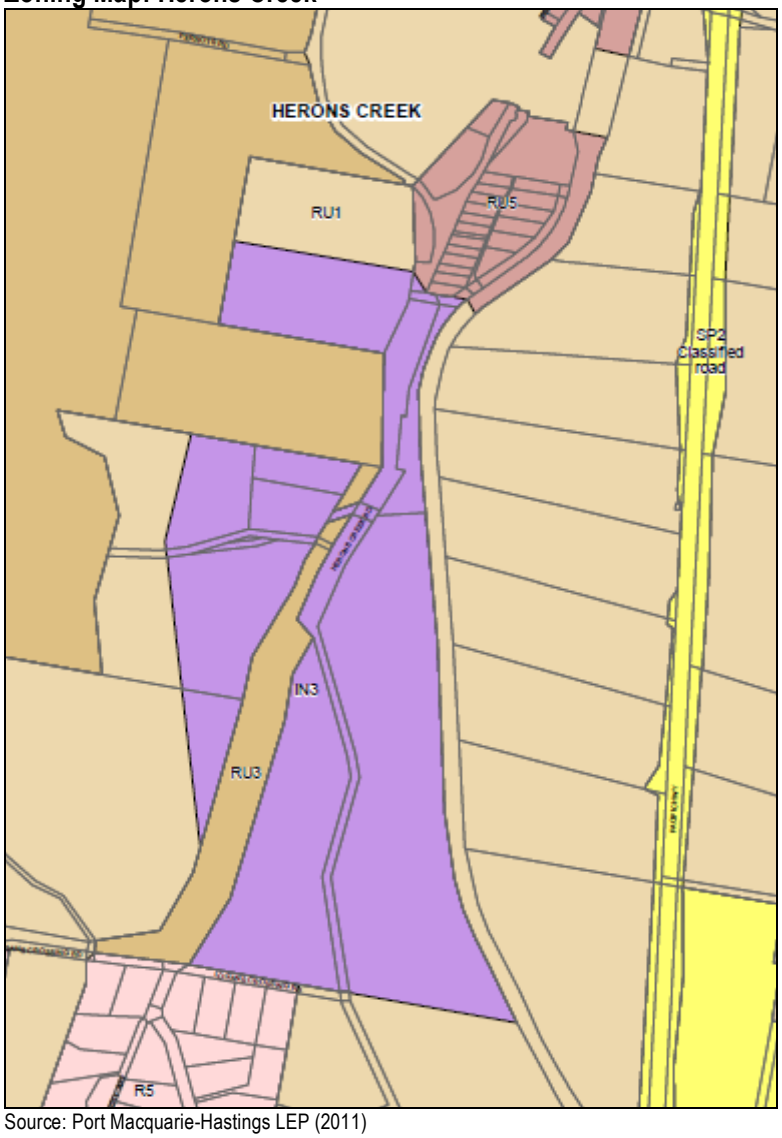
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	36.64ha of vacant land outside of the Bago Road Precinct is affected by Koala habitats.
Access to main roads/ transport	Strategically the access from Pacific Highway to Wauchope is poor and generally inefficient for heavy vehicle movements.
Scope to accommodate additional regional employment lands	Limited potential given the constraints which apply to this precinct

Herons Creek

The Herons Creek industrial precinct is located around 28km south-west of Port Macquarie CBD and 59km north-east of Central Taree.

Zoning Map: Herons Creek



Source: Port Macquarie-Hastings LEP (2011)

Relevant planning considerations from Port Macquarie-Hastings LEP (2011), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	The Precinct is the largest parcel of industrial zoned land in the LGA comprising 96.74ha.
Vacancy	Only 22.3% or 16.13ha of the Precinct is developed due to concerns regarding the balance of the site (threatened species, koala habitat)
Lot Size Typologies	All lots exceed 1ha, with most at least 2ha in size and suitable for major industry.
Zoning	IN3 Heavy Industrial

Strengths and opportunities of the precinct include:

- Much of the precinct has yet to be developed. It potentially offers the opportunity to accommodate a significant quantum of employment land in the future.
- A development application for a 41 lot industrial subdivision has been approved on the western boundary of the North Coast Railway line between Kew and Herons Creek. The 40.5ha estate proposes a modern industrial park involving manufacturing, warehousing and freight with a focus on an intermodal terminal which would provide businesses in the estate with the opportunity to shift product from road to rail.

Weaknesses and constraints of the precinct include:

- Concerns over the ecological significance of parts of the Precinct.
- The Precinct is heavily vegetated and is still to be serviced.
- There is very limited water supply to the Precinct and no further development would be allowed without significant water supply works.
- It is unlikely that the Precinct has sewer access.
- Access to the Pacific Highway in a northerly direction is limited to small vehicles due to a limited railway underpass clearance.
- Large vehicles access the Highway about 5km to the south via the existing gravel section of Herons Creek Road.

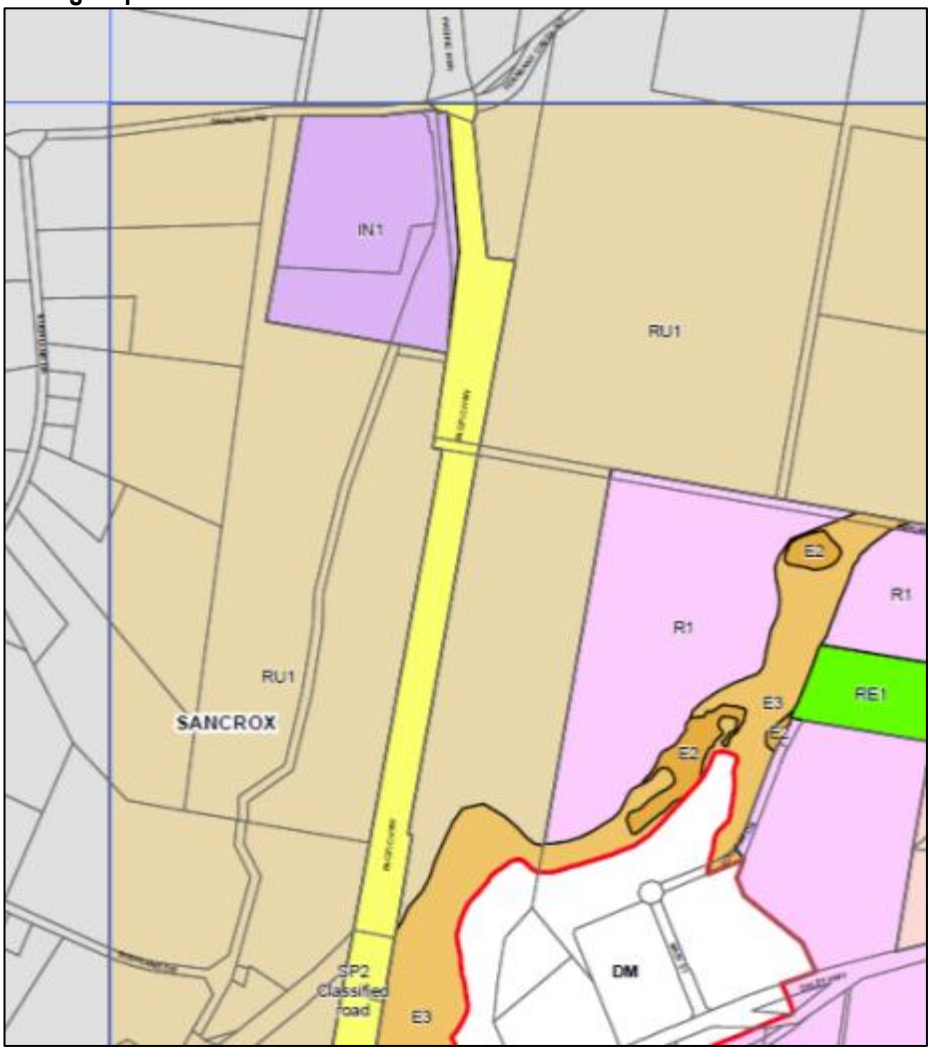
Comments against the criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Concerns regarding the balance of the site being threatened species and koala habitat.
Access to main roads/ transport	It is situated within close proximity to the Pacific Highway with access via Herons Creek Road (subject to the height restrictions mentioned above). Future development of the precinct will require a significant upgrade to this road.
Land use conflicts	It is understood concerns over the ecological significance of much of the land has limited its expansion potential.
Scope to accommodate additional regional employment lands	Limited potential given the constraints which apply to this precinct.

Sancrox

The Sancrox industrial area is located 12km from Port Macquarie CBD and 77km from Central Taree.

Zoning Map: Sancrox



Source: Port Macquarie-Hastings LEP (2011)

Relevant planning considerations from Port Macquarie-Hastings LEP (2011), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	16.36ha of zoned land. Council is seeking to rezone additional land in the Sancrox area to provide a new employment precinct. It is understood Stage 1 of the Sancrox Employment Precinct comprises around 114ha of industrial land of which 75ha is considered developable.
Vacancy	6.8ha of vacant zoned land exists in the precinct.
Lot Size Typologies	The 3 properties which make up the Precinct are all over 2ha each.
Zoning	IN1 General Industrial

Land uses and existing businesses in this precinct include Expressway Spares and TNT.

Strengths and opportunities of the precinct include:

- Subject to access issues, the Precinct is potentially an ideal location for further industrial expansion possibly warehousing, transport, logistics and some manufacturing.
- Port Macquarie is expanding west with significant residential growth planned for the area between Wauchope and Port Macquarie with 70% of planned future residential growth to be located in this corridor.

Weaknesses and constraints of the precinct include:

- The Precinct is not quite flat and it contain pockets of vegetation but in comparison to other locations is relatively unconstrained

Comments against the criteria for assessment are provided below.

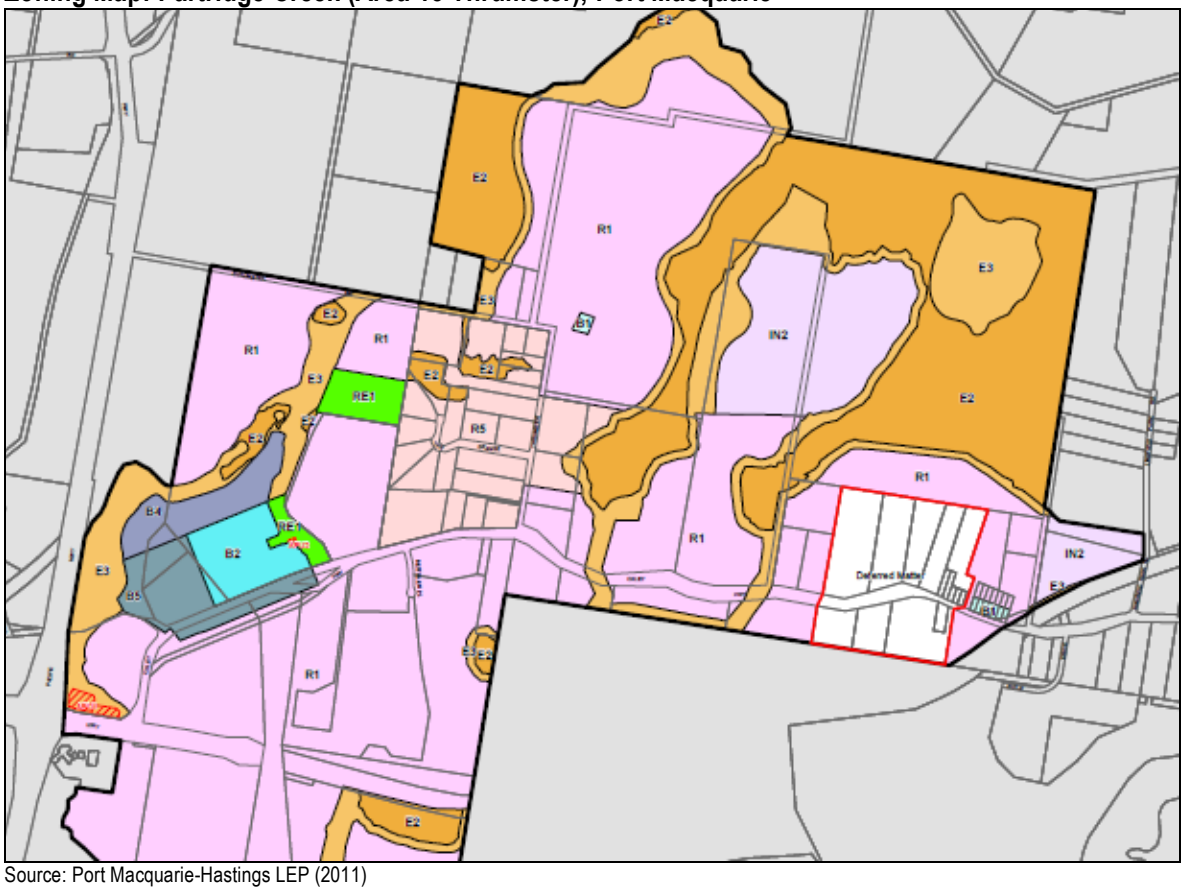
Criteria	Comment
Access to main roads/ transport	The RTA, Council and landowners are negotiating an overpass south of Sancrox Road to enable improved access to Precinct to/from the upgraded and realigned Pacific Highway. The Precinct is well located for good access to other regional locations like Kempsey and Taree.
Land use conflicts	There are few land use conflicts with surrounding residential land.
Scope to accommodate additional regional employment lands	This precinct would be suitable for regionally significant employment lands and Council is seeking to progress rezoning of additional employment land in this location. The Hill PDA Port Macquarie Hastings Industrial Land Strategy Review concluded in relation to the potential role and land use of the Sancrox Employment Precinct is that: "Major new dedicated site for export and larger businesses with land area and layout capable of providing sub precincts. Transport, logistics, light and general, heavy industry vertically integrated with quarry"

Partridge Creek (Area 13 Thrumster), Port Macquarie

The Port Macquarie-Hastings (Area 13 Thrumster) LEP was gazetted in December 2008. 36ha of employment and industrial land is already zoned in the precinct with plans for a significantly greater quantum in the future. It provides a 'Vision' for the future community to be established in the new town of Thrumster.

The site of the proposed future development is adjacent to the Pacific Highway and on either side of the Oxley Highway, around 76km from Central Taree.

Zoning Map: Partridge Creek (Area 13 Thrumster), Port Macquarie



Source: Port Macquarie-Hastings LEP (2011)

Relevant planning considerations from Port Macquarie-Hastings LEP (2011), together with the main characteristics of the precinct are identified below.

Characteristic	Comment
Land Supply	36ha
Vacancy	Yet to be developed so this presents a significant opportunity to provide future employment lands.
Zoning	IN2 Light Industrial - land within the Precinct at the southern end of the Port Macquarie Airport. B4 Mixed Use - the commercial centre further west on the Oxley Highway and permits only light industry in a proposed mixed use zone. B5 Business Development – along Oxley Highway.

Strengths and opportunities of the precinct include:

- Close proximity to Port Macquarie and well located in relation to the broader urban area.
- The land is appropriate for local service industrial and in that sense can be viewed as having a similar function to Lake Road.

- Land that cannot be developed for residential under the flight path of Port Macquarie Airport can be developed for industrial land uses and employment land uses.

Weaknesses and constraints of the precinct include:

- Concerns over the ecological significance of parts of the Precinct.
- The Precinct is heavily vegetated and is still to be serviced.
- There is very limited water supply to the Precinct and no further development would be allowed without significant water supply works.
- It is unlikely that the Precinct has sewer access.
- Access to the Pacific Highway in a northerly direction is limited to small vehicles due to a limited railway underpass clearance.
- Large vehicles access the Highway about 5km to the south via the existing gravel section of Herons Creek Road.

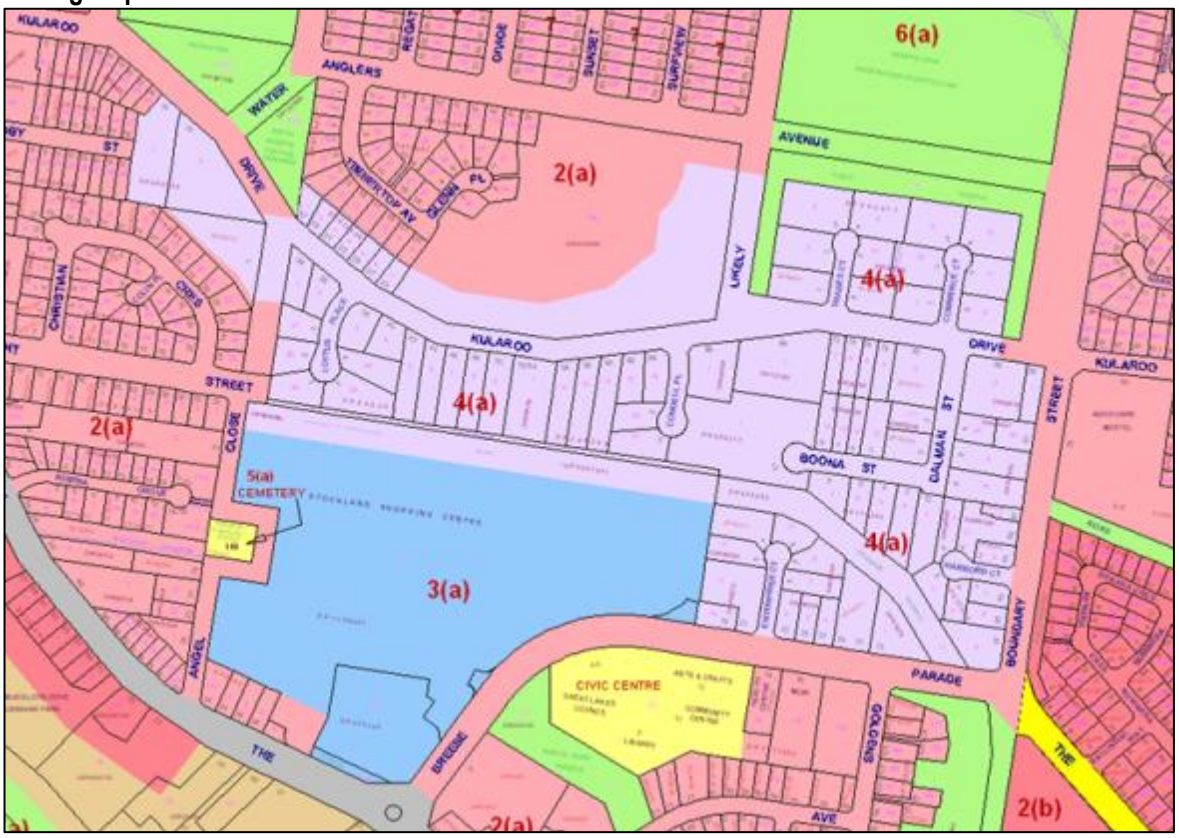
Comments against the criteria for assessment are provided below.

Criteria	Comment
Access to main roads/ transport	Adjacent to Pacific Highway
Land use conflicts	The main concern may be regarding potential land use conflicts with surrounding residential development.
Agglomeration of industry	NA
Scope to accommodate additional regional employment lands	Potential to accommodate additional future employment lands, although it may be more appropriate for this to be local in nature. Long term planning option.

Forster Industrial Precinct

The Forster Industrial Precinct is located within the north-eastern section of the Breese Parade Centre approximately 4km south-east of the Wallis Lake Bridge by road. The main roads serving the area are Breese Parade, Boundary Street and Kularoo Drive. The majority of the industrial area is bounded by residential land. Stockland Shopping Centre is located to the south-west of the industrial zone, with the Council Civic Centre to the south and some land zoned 6(a) Open Space and Recreation Zone to the north.

Zoning Map: Forster Industrial Precinct



Source: Great Lakes LEP (1996)

The area is zoned 4(a) General Industrial. The area is approximately 20ha based on the existing Great Lakes Zoning Map.

Characteristic	Comment
Land Supply	20ha
Vacancy	2.8ha (13.6%)[35]. The majority of lots in the Forster Industrial area are occupied. The main portion of vacant land is located north of Kularoo Drive and west of Likely Street.
Zoning	4(a) General Industrial

The majority of the Precinct is used for industrial purposes of varying intensities, with a number of lots in the south-east occupied by bulky goods premises.

Land Use	Example Businesses
Industrial	John Fletchers Trucks Centre, Pongrac Upholstery, Boona Mini Storage, Booral Great Lakes Bricks, Shoreline Trimming, P & J McNamara Pty Ltd, Forster Glass & Aluminum, Colour Worx, Forster Bus Co., Readymix Concrete and the Water Filter Co
Retail	Retravision, Harvey Norman Furniture, Barbeques Galore,
Recreation/Entertainment	Sweat Shed Gym

Strengths and opportunities of the Precinct include:

- Well established Precinct providing a wide range of locally focused industrial and retail goods and services close to Forster CBD.

[35] Source: Great Lakes Council Survey (2009)

Weaknesses and constraints of the Precinct include:

- Traffic connections to the Precinct are restrictive, particularly for the large trucks which serve the area.

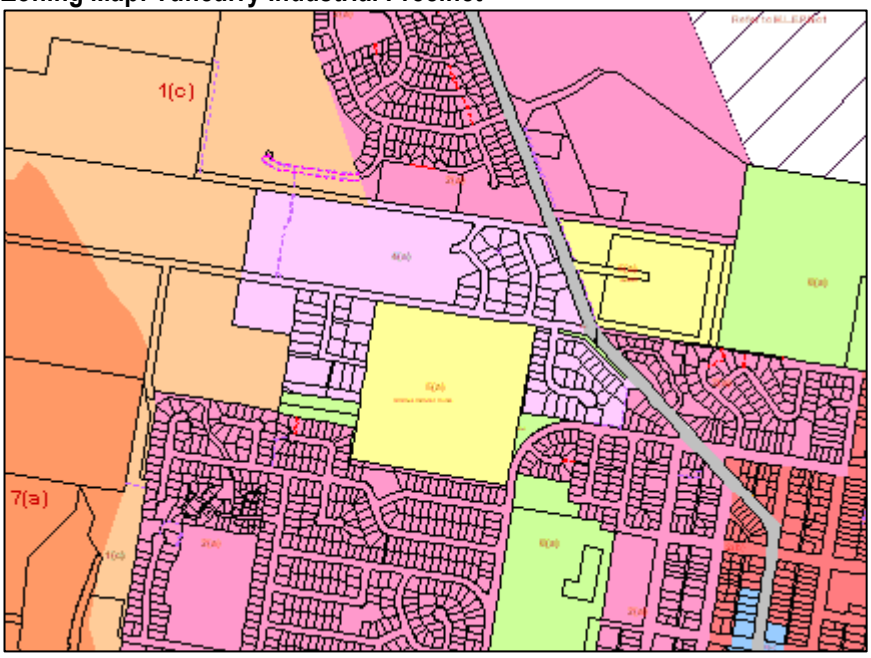
Comments against selected criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Surrounding area to the south is hilly
Access to main roads/ transport	The Pacific Highway can be accessed to the north and south of the Precinct. The road network connecting Forster to the Pacific Highway in the north is by far the better quality and more direct link of the two; however it is constrained by the capacity of the two lane bridge crossing Wallis Lake. The bridge often experiences congestion, particularly during the tourist season, when the population of the Study Area increases dramatically. To the south, the existing road network is hilly and winds around Wallis Lake and Myall Lake, stretching over 50km to the Pacific Highway. The road is more of a scenic drive than a major transport link and not ideal for transport vehicles. As a result, the industrial area experiences access constraints which have the potential to impact on the efficiency of the industrial area.
Land use conflicts	A large portion of the industrial area is surrounded by residential, which has the potential to cause conflict with the operation of industrial uses.
Scope to accommodate additional regional employment lands	Limited in view of the lack of land currently available and the limited scope to expand upon the existing industrial zoning given surrounding land use conflicts and traffic issues

Tuncurry Industrial Precinct

The Tuncurry Industrial Precinct is located approximately 2km north of the Wallis Lake Bridge by road. The main roads serving the area are Manning Street, Grey Gum Road and Leo Street.

Zoning Map: Tuncurry Industrial Precinct



Source: Great Lakes LEP (1996)

The area is zoned 4(a) General Industrial. The area is approximately 26.5ha based on the existing Great Lakes Zoning Map. The majority of the area is used for industrial purposes of varying intensities.

Characteristic	Comment
Land Supply	26.5ha
Vacancy	12.2ha (46%)[36]. The main portion of vacant land is a single large lot located in the north-west. This land is yet to be subdivided and is in single private ownership.
Zoning	4(a) General Industrial

Existing uses in the Precinct comprises an array of light industrial business providing local services, such as car mechanics and repairers and tradesmen.

Land Use	Example Businesses
Industrial	Mid-Coast Smash Repairs, Holiday Coast Storage, Fazio Bricks, Span Line, Ditchfield Contracting Pty Ltd, Great Lakes Moulding, Berklee Exhaust & Muffler Centre, Coastal Detail Joinery, B & W Kitchens & Craft, John Carmichael Auto Repairs, Fibreglass Pool Coating, Oasis Workware & Uniform Centre, Highline Formwork, Council Works Depot, Tuncurry Trailer, ABA Storage, Dairy Farmer Depot, Advanced Motorcycle & Mower Repairs, and Eggins Comfort Coaches
Retail	n/a
Recreation/Entertainment	n/a

Strengths and opportunities of the Precinct include:

- Good array of key local service functions.
- Has some capacity to accommodate additional locally significant businesses in the future.

Weaknesses and constraints of the Precinct include:

- Subject to a number of constraints given that the surrounding area is subject to Future Urban Investigation Zoning.

Comments against selected criteria for assessment are provided below.

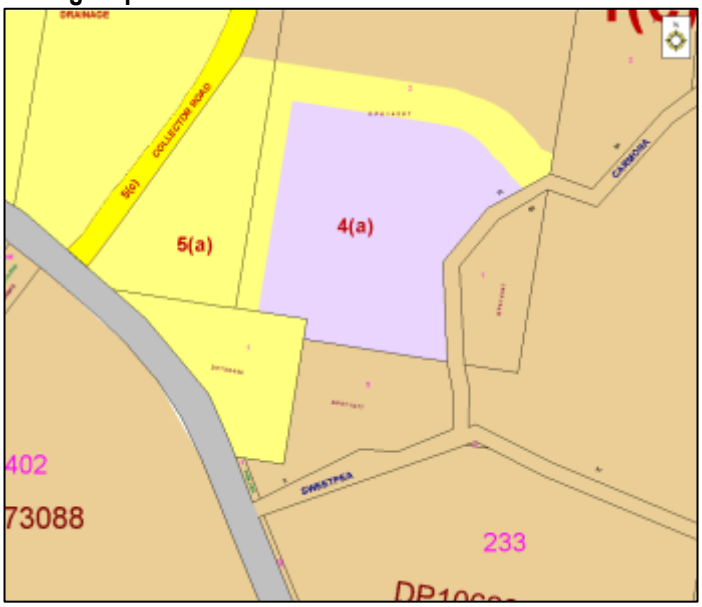
Criteria	Comment
Topography and environmental constraints	None of significance
Access to main roads/ transport	Connects to the Pacific Highway approximately 14.6km (18 minutes) to the north-west via The Lakes Way.
Land use conflicts	The area is bounded by residential uses to the north, south and east and 1(c) Future Urban Investigation Zone to the west, with some 5(a) Special Uses Zone to the south and east. This has the potential to create conflict
Scope to accommodate additional regional employment lands	Provision of regionally significant employment lands in this location would not be appropriate given its distance from the Pacific Highway, land use conflicts and lack of sufficient vacant land to support a new regional employment hub.

Sweet Pea Road Precinct (Undeveloped)

The Sweet Pea Road Industrial Precinct is located approximately 7.5km south-east of the Wallis Lake Bridge by road. The main road serving the area is Sweet Pea Road, which connects to The Lakes Way. The industrial zone is bound by land zoned 5(a) Special Uses to the north and west, and 1(c) Future Urban Investigation to the south and east. At present the land zoned as industrial is undeveloped.

[36] Source: Great Lakes Council Survey (2009)

Zoning Map: Sweet Pea Road Precinct



Source: Great Lakes LEP (1996)

The area shown shaded in the plan above is currently zoned 4(a) General Industrial. The zone covers approximately 7.3ha based on the existing Great Lakes Zoning Map. There is a concrete plant located adjacent to the Precinct as well as the Mid Coast Water Treatment Plan and two Quarries to the East (Hunter Ready Mix Concrete and Mobile Crushing Co.).

Characteristic	Comment
Land Supply	7.3ha
Vacancy	n/a
Zoning	4(a) General Industrial

The South Forster Structure Plan 2006 identifies the Sweet Pea Road sand quarry site as potentially suitable (in the medium to long term) for industrial uses, dependant on the existing sand extraction operations. Subject to the completion or movement of the sand mining quarry, it is recommended by the Structure Plan that the land closer to the Lakes Way (and within the Sewerage Treatment Plant Buffer) is zoned and developed for industrial / employment generating purposes. This would then allow for the existing section of land zoned industrial to become available for residential purposes with the retention of the existing vegetated corridor as a buffer to separate the residential from future industrial.

The Plan also highlights the potential for a well-designed, landmark industrial building at the junction of the Lakes Way and Sweet Pea Road.

A Council resolution supports the recommendations of the South Forster Structure Plan confirming the preparation of a draft LEP relating in part to the land swap discussed above.

Strengths and opportunities of the Precinct include:

- Undeveloped and therefore provides a blank canvas for developers and Council.

Weaknesses and constraints of the Precinct include:

- Not yet developed and yet to be included in an adopted local planning policy zoning. Medium to long-term option.

- Any development of land within the Sweet Pea Road Industrial Zone or surrounding area (such as the lots at the junction of the Lakes Way and Sweet Pea Road) would need to be subject to various environmental assessments including an ecological assessment and approval by the Department of Primary Industries.

Comments against selected criteria for assessment are provided below.

Criteria	Comment
Topography and environmental constraints	Environmental Assessments including an ecological assessment would be required as part of any development of the Precinct
Access to main roads/ transport	Located adjacent to The Lakes Way with access to the Pacific Highway 53km (43 minutes) south-west or 25km (33 minutes) north-west
Land use conflicts	Potential environmental conflicts given that the land is currently underdeveloped. Will be located adjacent to residential uses in the future although buffering is planned.
Scope to accommodate additional regional employment lands	The modest size of the site makes it unsuitable for accommodating regionally significant employment lands.

Appendix 4 - **REGIONAL CATCHMENT - EMPLOYMENT LANDS DEMAND MODELLING**

Methodology for Determining Demand

Given the size and attributes of the proposed employment lands in the Brimbin release area, and its regional status as nominated in the Mid-North Coast Regional Strategy (2009), the purpose of this study is to consider the suitability of the Brimbin release area to meet regional employment demand. Hence for the purposes of the Employment Lands Demand Model (ELDM), Hill PDA has reviewed the future needs of a catchment area (i.e. catchment of resident workers) which comprises the local government areas of Greater Taree, Gloucester, and Great Lakes. This excludes potential resident workers that may locate in the proposed residential component of the Brimbin release area.

Working residents from Gloucester and Great Lakes were included in this catchment given:

- The relatively short travel time (around 40 minutes) between Great Lakes and Greater Taree employment and industrial precincts.
- Journey to work data indicating higher work flows between Great Lakes and Greater Taree than Port Macquarie-Hastings and Gloucester[37].
- Great Lakes has around 15ha[38] of vacant employment land to meet future job targets.
- Gloucester only has around 9ha[39] of zoned industrial land and whilst over an hour's drive from Greater Taree, it would be the closest regional centre to the Shire.

Port Macquarie-Hastings has been excluded from this catchment for the following reasons:

- Whilst its recognised that Port Macquarie captures retail expenditure from residents in Greater Taree, Journey to work data demonstrated that there is a limited number of resident workers in Greater Taree who commute to Port Macquarie-Hastings to work and vice versa.
- Port Macquarie-Hastings has a considerable amount of vacant employment land (around 187.3ha[40]) to meet future job targets, with further land available for expansion.

As a result, this catchment will hereafter will be referred to as the "regional catchment", and includes Greater Taree, Gloucester and Great Lakes local government areas.

The methodology used for forecasting demand is via a custom-made employment lands demand model (ELDM) developed by Hill PDA. This method converts job forecasts to land area requirements by industry type within a defined area.

The ELDM estimates land area requirements by utilising the following steps:

- Deriving population and/or dwelling forecasts for the defined area for a defined period;
- Estimating the number of Full-Time Equivalent (FTE) workers within the Regional Catchment, that is the number of resident workers;
- Forecasting the number of jobs by industry (proportion) based on historical ABS data in regional areas;
- Apportioning these jobs by industry to broad zones – commercial centre and industrial;

[37] 788 working residents in Great Lakes travelled to Greater Taree for employment in 2006, none travelled to Port Macquarie. 1,000 working residents in Greater Taree travelled to Great Lakes and 249 travelled to Port Macquarie for employment in 2006. Source: ABS and Journey to Work data (2006).

[38] Source: Forster - Tuncurry Employment Lands Implementation Strategy (Hill PDA, 2009)

[39] Source: Gloucester Shire Development and Employment Land and Commercial / Retail Strategy: Business Study (Ratio Consultants, 2006)

[40] Source: Port Macquarie Hastings Industrial Land Strategy Review, Hill PDA 2010

- Applying required floorspace areas (GFA in square metres) to each job by industry by zone;
- Dividing the result by a most likely floorspace ratio (FSR) for each zone to arrive at land area (hectares); and
- Allowing for local roads and other inefficiencies to arrive at required developable land area (hectares).

These steps as applied to demand in the regional catchment are discussed below.

Forecast Working Residents

The latest population projections for the regional catchment are those published by the NSW Department of Planning & Infrastructure in April 2010. These cover the period 2006 to 2036 as shown in the following table.

Table 49 - Population Projections for the Regional Catchment (2006-2036)

Year	Greater Taree	Gloucester	Great Lakes	Total Regional Catchment	
				Population	Annual Average Growth
2006	47,000	5,000	34,200	86,200	-
2011	48,300	5,000	37,100	90,400	0.96%
2016	49,700	5,000	40,000	94,700	0.94%
2021	50,800	5,100	42,900	98,800	0.91%
2026	51,900	5,100	45,600	102,600	0.87%
2031	52,700	5,100	48,100	105,900	0.83%
2036	53,200	5,100	50,400	108,700	0.78%
Change 2006-2036	6,200	100	16,200	22,500	0.87%

Source: NSW Department of Planning & Infrastructure Statistical Local Area Population Projections, 2006-2036 (April 2010)

The data shows that over the 2006 to 2036 period the population of the Regional Catchment is forecast to grow from 86,200 residents to 108,700 residents. This equates to an increase of 22,500 residents or 26% growth over the 30 year period. These population projections make no allowance for the proposed residential component of the release area in Brimbin.

To calculate the anticipated resident workforce, Hill PDA examined the number and type of resident workers across the catchment as indicated in the following table.

Table 50 - Employed Working Residents in the Regional Catchment (2006)

Characteristic	Greater Taree		Gloucester		Great Lakes		Total Regional Catchment	
	Working Residents	Proportion	Working Residents	Proportion	Working Residents	Proportion	Working Residents	Proportion
Full Time	9,171	57.4%	1,144	60.9%	5,699	53.7%	16,014	56.2%
Part Time	5,698	35.7%	620	33.0%	4,169	39.3%	10,487	36.8%
Away from Work	688	4.3%	55	2.9%	466	4.4%	1,209	4.2%
Not Stated	421	2.6%	59	3.1%	285	2.7%	755	2.7%
Total	**15,978**	**100.0%**	**1,878**	**100.0%**	**10,619**	**100.0%**	**28,475**	**100.0%**
Proportion of Total Catchment	56.1%		6.6%		37.3%		100%	

Source: ABS Census 2006

Of the 28,475 working residents in the regional catchment 56.2% work full time and 36.8% part time. Assuming that 1 part time job is equivalent to 0.5 full time jobs[41], there were around 0.71 full time equivalent workers per occupied dwelling in the regional catchment as demonstrated below.

Table 51 - Full Time Equivalent Workforce in the Regional Catchment (2006)

Characteristic	Greater Taree	Gloucester	Great Lakes	Regional Catchment
Full Time Equivalent (FTE)	13,129	1,568	8,535	23,232
Number of Occupied Dwellings (2006 census)	17,402	1,927	13,420	32,749
Number of FTE Workers per Dwelling	0.75	0.81	0.64	0.71

Source: ABS Census 2006, Hill PDA (2011)

The number of resident workers in the regional catchment has been determined by applying the average number of persons per household in 2006 to forecast population. This process is shown in the following table.

Table 52 - Full Time Equivalent Workforce in the Regional Catchment to 2036

Year	Greater Taree		Gloucester Shire		Great Lakes		Total Dwellings
	Population	Dwellings	Population	Dwellings	Population	Dwellings	
Av. Persons per Dw.	2.4	-	2.3	-	2.2	-	-
2016	49,700	20,708	5,000	2,174	40,000	18,182	41,064
2026	51,900	21,625	5,100	2,217	45,600	20,727	44,570
2036	53,200	22,167	5,100	2,217	50,400	22,909	47,293

Source: ABS Census 2006, Hill PDA (2011)

The number of FTE in the regional catchment has been calculated by applying the number of FTE workers per dwelling from Table 9 to the projected number of dwellings shown in Table 10. The results indicate the regional catchment will accommodate over 33,000 resident workers by 2036.

Table 53 - Cumulative Number of FTE Working Residents in the Regional Catchment to 2036

Year	Greater Taree	Gloucester Shire	Great Lakes	Regional Catchment Total
2016	15,531	1,761	11,636	28,928
2026	16,219	1,796	13,266	31,281
2036	16,625	1,796	14,662	33,083

Source: ABS Census 2006 and Hill PDA (2011)

In order to forecast worker residents by industry in the regional catchment, Hill PDA examined historical ABS data and extrapolated any trends that represent a potential increase or decline in demand for work in particular industries[42].

Forecast working residents by industry and forecast to 2036 is provided in the following table.

[41] Source: ABS National Accounts Input Output Tables 2006-07 Catalog 5209.0

[42] NSW Bureau of Transport job forecasts were not utilised to forecast jobs within Hill PDA's modelling as the data does not extend beyond the Sydney Greater Metropolitan Area.

Table 54 - Proportion of Working Residents by Industry in Regional Catchment to 2036

Industry	2006*	2016	2026	2036
Agriculture, forestry, fishing	6.3%	5.0%	3.9%	3.0%
Mining	0.6%	0.5%	0.4%	0.3%
Manufacturing	9.2%	7.7%	6.4%	5.3%
Electricity, gas, water, waste	1.3%	1.5%	1.7%	1.9%
Construction	10.1%	11.8%	13.6%	15.4%
Wholesale trade	2.7%	2.2%	1.7%	1.3%
Retail trade	13.9%	14.0%	13.9%	13.6%
Accommodation, food	8.4%	8.3%	8.1%	7.8%
Transport, postal, warehousing	4.0%	3.9%	3.8%	3.6%
Information media, telecomm.	1.0%	0.7%	0.6%	0.4%
Financial, insurance	1.7%	1.4%	1.2%	1.0%
Rental, hiring, real estate	2.0%	2.1%	2.2%	2.2%
Professional, scientific, technical	3.6%	4.0%	4.5%	4.9%
Administrative, support	2.6%	3.0%	3.4%	3.7%
Public administration, safety	4.6%	4.8%	4.9%	5.0%
Education, training	7.4%	7.4%	7.2%	7.0%
Health care, social assistance	13.1%	14.3%	15.4%	16.3%
Arts, recreation	1.5%	2.0%	2.7%	3.6%
Other services	3.8%	3.4%	3.0%	2.6%
Inadequately described/Not stated	2.3%	1.8%	1.4%	1.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

* As at the 2006 ABS Census. Note: comprises cumulative data for Greater Taree, Gloucester Shire and Great Lakes LGA's.
Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2011)

The results above indicate that there will be a forecast decline in the proportion of working residents employed in agriculture, mining, manufacturing, wholesale trade, accommodation and food, transportation and warehousing, information media and telecommunications financial and insurance services, and education and training. Conversely, there will be an increase in the proportion of working residents employed in utilities, construction, retail trade, real estate, professional, scientific and technical services, administration, health care and arts and recreation.

It should be noted that a decrease in the proportion of working residents in a particular industry does not necessarily mean that the number of workers has dropped – it means that the overall growth of the labour force may have outpaced the growth experienced by that particular industry.

The forecast of resident workers by industry is calculated by applying the above employment trends (proportion of working residents by industry) to the number of FTE workers in the regional catchment.

The results are indicated in the following table.

Table 55 - Forecast Resident Workers by Industry in Regional Catchment (2016 to 2036)

Industry	2016	2026	2036	Change 2016-2036
Agriculture, forestry, fishing	1,446	1,220	992	-454
Mining	145	125	99	-46
Manufacturing	2,227	2,002	1,753	-474
Electricity, gas, water, waste	434	532	629	195
Construction	3,414	4,254	5,095	1,681
Wholesale trade	636	532	430	-206
Retail trade	4,050	4,348	4,499	449
Accommodation, food	2,401	2,534	2,580	179
Transport, postal, warehousing	1,128	1,189	1,191	63
Information media, telecomm.	202	188	132	-70
Financial, insurance	405	375	331	-74
Rental, hiring, real estate	607	688	728	121
Professional, scientific, technical	1,157	1,408	1,621	464
Administrative, support	868	1,064	1,224	356
Public administration, safety	1,389	1,533	1,654	265
Education, training	2,141	2,252	2,316	175
Health care, social assistance	4,137	4,817	5,393	1,256
Arts, recreation	579	845	1,191	612
Other services	984	938	860	-124
Inadequately described/Not stated	521	438	364	-157
Total	**28,928**	**31,281**	**33,083**	**4,155**

Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2010) * Assumes 100% containment

The results indicate that by 2036 there will be strong resident worker growth in the construction, health care and social assistance, arts and recreation, professional services, and retail trade. There are also forecast declines in agriculture, forestry and fishing, manufacturing and wholesale trade.

Forecast Demand for Employment Land

For the purpose of determining demand, the model assumes 100% capture of resident worker jobs within the regional catchment. The apportionment of forecast jobs to land use zones together with the required floorspace per worker is presented in the following table.

Table 56 - Apportionment of Jobs to Zones and Gross Floor Area Assumptions in the Regional Catchment

Industry	Apportionment to Zones			GFA per worker (sqm)	
	Commercial Centre	Industrial Zone	Total	Commercial Centre	Industrial Zone
Agriculture, forestry, fishing	0%	0%	0%	-	-
Mining	0%	0%	0%	-	-
Manufacturing	0%	100%	100%	85	85
Electricity, gas, water, waste	0%	100%	100%	200	200
Construction	0%	100%	100%	85	85
Wholesale trade	0%	100%	100%	85	85
Retail trade	83%	17%	100%	50	85
Accommodation & catering	83%	17%	100%	60	60
Transport, postal, warehousing	0%	100%	100%	200	200
Information media, telecomm.	50%	50%	100%	650	650
Financial, insurance	80%	20%	100%	25	25
Rental, hiring, real estate	80%	20%	100%	25	25

Industry	Apportionment to Zones			GFA per worker (sqm)	
	Commercial Centre	Industrial Zone	Total	Commercial Centre	Industrial Zone
Professional, scientific, technical	50%	50%	100%	25	25
Administrative, support	80%	20%	100%	25	25
Public administration, safety	50%	50%	100%	25	25
Education, training	80%	20%	100%	50	50
Health care, social assistance	80%	20%	100%	50	50
Arts, recreation	80%	20%	100%	50	50
Other services	70%	30%	100%	50	85
Inadequately described/Not stated	50%	50%	100%	50	85

Source: Hill PDA Estimate (2011)

It should be noted that for the purpose of later comparing demand and supply, the model assumes the commercial centre zone in the above table corresponds to local neighbourhood, local, commercial centre and mixed use zones. Furthermore, it's assumed the industrial zone in the above table corresponds to general and light industrial, business development and enterprise corridor zones.

Whilst it is recognised that in reality retail and commercial can occur in the business development and enterprise corridor zones, reviewing such lands in Greater Taree reveals that the existing B5 Business Development and B6 Enterprise Corridor zones are largely located adjacent to Greater Taree's industrial zones, not commercial centre zones. Furthermore, in many cases, these zones predominately cater for a mix of uses which are more semi industrial in nature than commercial office or retail oriented (exception being bulky goods).

The results indicate the regional catchment demands approximately 1,296,000sqm of industrial zoned floorspace and around 840,000sqm of commercial zoned floorspace by 2036.

Table 57 - Commercial and Industrial Floorspace Demand in Regional Catchment to 2036 (sqm)

Industry	Commercial Centre Zones			Industrial Zones		
	2016	2026	2036	2016	2026	2036
Agriculture, forestry, fishing	-	-	-	-	-	-
Mining	-	-	-	-	-	-
Manufacturing	-	-	-	189,334	170,169	149,039
Electricity, gas, water, waste	-	-	-	86,784	106,355	125,715
Construction	-	-	-	290,148	361,608	433,056
Wholesale trade	-	-	-	54,095	45,201	36,557
Retail trade	168,072	180,444	186,720	58,521	62,829	65,015
Accommodation & catering	119,571	126,181	128,508	24,490	25,844	26,321
Transport, postal, warehousing	0	0	0	225,638	237,736	238,198
Information media, telecomm.	65,811	60,998	43,008	65,811	60,998	43,008
Financial, insurance	8,100	7,507	6,617	2,025	1,877	1,654
Rental, hiring, real estate	12,150	13,764	14,557	3,037	3,441	3,639
Professional, scientific, technical	14,464	17,596	20,263	14,464	17,596	20,263
Administrative, support	17,357	21,271	24,481	4,339	5,318	6,120
Public administration, safety	17,357	19,160	20,677	17,357	19,160	20,677
Education, training	85,627	90,089	92,632	21,407	22,522	23,158
Health care, social assistance	165,468	192,691	215,701	41,367	48,173	53,925
Arts, recreation	23,142	33,783	47,640	5,786	8,446	11,910
Other services	34,424	32,845	30,106	25,081	23,930	21,934
Inadequately described/Not stated	13,018	10,948	9,098	22,130	18,612	15,466
Total	**744,560**	**807,278**	**840,007**	**1,151,815**	**1,239,815**	**1,295,656**

Source: Hill PDA (2011)

Dividing the resultant floorspace by assumed floorspace ratios (FSRs) provides land area requirements (in hectares). A limitation with this method is the considerable variation in FSR that occurs between areas. For example commercial zones in urban areas (e.g. Sydney) will account for significantly higher FSRs than those in more rural areas (e.g. Taree). Most industrial lots are developed at a FSR between 0.5:1 and 0.75:1. Many planning instruments allow a FSR of 1:1 but the economics of achieving this is difficult due to cost implications.

There are some land uses in industrial areas that have a much lower FSR because much of the activity is outdoors for example: recycling, vehicle hiring yards, storage and wholesale of outdoor landscape, building materials, and so on.

Assuming an FSR of 0.45:1 in the commercial zone and a FSR of 0.40:1 in the industrial zone for the regional catchment, demand for employment land (developable area) is provided in the following table.

Table 58 - Forecast Occupied Employment Land to 2036 (Developable Area ha)

Zone	Commercial Centre	Industrial Zone	Total Demand
Assumed FSR	0.45	0.4	
2016	165.46	287.95	453.41
2026	179.40	309.95	489.35
2036	186.67	323.91	510.58

The above results show absolute net developable area. Generally internal roads can make up as much as 20% of the developable area depending upon urban design. Local roads and other inefficiencies have been assumed at 22.5%. Demand for net employment land is provided in the following table.

Table 59 - Forecast Occupied Employment Land to 2036 (Net ha)

Year	Commercial Centre	Industrial Zone	Total Demand
2016	202.69	352.74	555.43
2026	219.76	379.69	599.45
2036	228.67	396.79	625.46
Growth 2016-2036	25.98	44.05	70.03

The above results indicate that over 625ha of employment land is demanded in the regional catchment by 2036, of which approximately 229ha (37%) is located in commercial centre zones and approximately 397ha (63%) is located in industrial zones. This is equivalent to growth of 70ha between 2016-2036 of which almost 26ha is associated to commercial centre zones and just over 44ha with industrial zones.

Appendix 5 - **MARKET RESEARCH**

Hill PDA has undertaken a market appraisal of the local property market (Greater Taree LGA) and the broader market comprising parts of the Mid-North Coast and Hunter Regions. A range of property and economic data sources have been utilised including a review of published data sources such as market reports (from sources such as commercial property agencies) and sales and leasing databases. We have also conversed directly with real estate agents and developers active in the property market.

General Market Overview

The outlook for the Greater Taree industrial market over the next 12 to 24 months is stable. The market was slow to recover from the effects of the Global Financial Crisis (GFC) and is presently thought be in line with pre-GFC conditions. Local agents are weary of speculating on the long term performance of the market; however they believe it will perform parallel to the broader economic conditions.

Rents have stabilised throughout the second half of 2010 though to present, whilst capital values showed modest increases. These trends are expected to continue.

There have not been any significant additions to industrial stock over the last 5 years; however the recent rezoning of employment land should act as a catalyst to kick-start construction activity within Taree LGA. The industrial market itself is a well-established market. Research by Hill PDA indicates that there is strongest demand within the locality for industrial accommodation of around 400sqm to 600sqm (GFA).

Rental Market

Rental rates achieved in Taree are in line with those in nearby Forster/Tuncurry and Port Macquarie. The local rental market is a relatively inexpensive market. The low rental rates achieved reflect the low underlying land values (i.e. $90 to $100/sqm for serviced industrial land of approximately 2,000 to 2,500sqm).

The table below indicates the current rental rates being achieved within Taree.

Table 60 - Notional Net Face Rents for Industrial in Greater Taree

Industrial Type (Size of Improvements)	Net Rent ($/sqm)
Industrial (400-600sqm)	$70 to $80
Industrial, prime / main road location (400-600sqm)	$100
Industrial (1,000-1,500sqm)	$55-$60
Industrial (approx. 10,000sqm)	$40
Bulky Goods Retail	$110

Source: Hill PDA Research (2011)

Demand for industrial premises is strongest for properties of between 400sqm to 600sqm in size. Vacancy rates for this type of property are very tight, with few properties available to be leased in the current market. Reflecting demand, the total supply or quantum of this type of property represents approximately 75% of the total number of industrial properties within Greater Taree.

The following table indicates rental rates for industrial in Port Macquarie and Forster/Tuncurry. As evidenced to following, these precincts command similar rental rates to Taree, with Port Macquarie achieve slightly higher rates on average in some areas.

Table 61 - Notional Net Face Rents for Industrial in Port Macquarie and Forster/Tuncurry

Industrial Type(Size of Improvements)	Port Macquarie Net Rent ($/sqm)	Forster/Tuncurry Net Rent ($/sqm)
Industrial (400-600sqm)	$75 to $85	$70 to $80
Industrial (1,000-1,500sqm)	$55-$60	$60
Industrial (approx. 10,000sqm)	$45	$40
Bulky Goods Retail	$120 to $130	$110

Source: Hill PDA Research (2011)

The Newcastle rental market is a significantly stronger market than that of Greater Taree, particularly due to the size of the City, and a strong industrial focus due to its Port related activities and the strong mining industry of the Hunter Region. Typical rental rates are characterised to follow.

Table 62 - Notional Net Face Rents for Industrial in Newcastle for A grade accommodation

Precinct	Net Rent ($/sqm)
F3 Precinct	$80-$90
Steel River	$85-$95
Tomago	$70-$75
Outer West	$75-$85

Source: Hill PDA Research (2011), CB Richard Ellis, Market View, First Quarter 2011

Capital Values

Due to the scale of Brimbin, it is necessary to consider a broad range of property market (i.e. property types and locations) to inform capital values of employment land within Brimbin. As such, we have considered the following:

- **Rural Land.** Rural land within the immediate surrounds of the Brimbin release area has been considered as these values represent the underlying or base value of all land within the locality.
- **Industrial Land.** Industrial land within Greater Taree and the broader region provides informs comparable land uses within Brimbin. Consideration has to be made of the size of the existing industrial land sales when drawing value conclusions to the englobo employment land of Brimbin.
- **Englobo Land and Development Sites.** This is a very small segment of the market, with very little activity occurring within the Region. On market activity of both residential and employment sites has been considered due to the small number of evidence available.

Rural Land

Hill PDA has researched sales evidence of rural land surrounding Brimbin (within Greater Taree LGA). We have analysed 59 sales occurring from January 2010 to present, with land values indicated in the table to follow.

Table 63 - Rural Land Values

Land Size	Land Size (ha)	Land Value ($ / ha)
Small	5 to 10	$43,584 to $90,774
Medium	10 to 20	$10,235 to $63,975
Large	20 +	$10,153 to $37,622

Source: Red Square, RP Data, Hill PDA Research (2011)

The fairly broad range of values for each land size category reflects; the range in land areas (whereby, larger properties will typically command lower values on a rate per hectare basis); and improved and unimproved properties; as well as the individual characteristics of each property, such as aspect, access, topography etc.

Industrial Land

There have been few land (and/or improved) industrial property transactions with Greater Taree, Port Macquarie and Forster/Tuncurry over the past 12 months. Reviewing sales over a longer period (i.e. since January 2007) the following value trends are evident.

Table 64 - Industrial Values, Greater Taree, Port Macquarie and Forster/Tuncurry

Type	Greater Taree		Port Macquarie		Forster/Tuncurry	
	Land Size (sqm)	Land Value ($ /sqm)	Land Size (sqm)	Land Value ($ /sqm)	Land Size (sqm)	Land Value ($ /sqm)
Small Sites – Land Value	3,000 to 5,000	$90 to $100	3,000 to 5,000	$90 to $100	3,000 to 5,000	$90 to $100
Small Sites – Improved	3,000 to 5,000	$150 to 250	3,000 to 5,000	$175 to 275	3,000 to 5,000	$150 to 250
Medium Sites – Land Value	1 ha to 2ha	$60 to $70	1 ha to 2ha	$60 to $75	1 ha to 2ha	$60 to $70
Large Sites – Improved	5ha +	$15 to $20	5ha +	$15 to $20	5ha +	$15 to $20

Source: Red Square, RP Data, Hill PDA Research (2011)

Noticeably, these centres have similar levels of land values, ultimately reflecting the rental levels / returns that can be achieved.

Also useful as a guide to values is on market information. Currently advertised for sale is vacant land within the Kolodong Industrial Estate with site areas of 2,000sqm to 2,500sqm, advertised at prices equivalent to $90 to $100/sqm.

By way of comparison, land value in Newcastle noticeable stronger than those within the Mid North Coast Region, with the exception of the Outer West precinct. This precinct performed very poorly with value falling up to 40% over the 12 month (to April 2011).

Table 65 - Industrial Values in Newcastle

Precinct	Land Value ($/sqm) - Circa 2,500sqm Lot	Land Value ($/sqm) - Circa 1.6 ha Lot
F3 Precinct	$165	$130
Steel River	$140	$115
Tomago	$110	$100
Outer West	$80	$50

Source: Hill PDA Research (2011), CB Richard Ellis, Market View, First Quarter 2011

Englobo Land and Development Sites

Hill PDA has researched englobo and development sites throughout the Mid North Coast, focussing on the release areas identified by the Mid North Coast Regional Strategy, particularly Forster/Tuncurry, Port Macquarie (Sancrox), Kempsy and Macksville/Nambucca Heads and their surrounds.

There have been few englobo land transactions within the broader Mid North Coast Region in recent years. The long timeframes involved in developing large englobo sites or within release areas, means land tends to be long held (throughout the development/approval process), often over a period of greater the 10 years, and as such, sales are often dated and do not provide a useful guide to understanding values.

In order to better understand the englobo land market we have made enquiries with active real estate agents and developers involved in the Mid North Coast market. Recent examples of market activity as summarised to follow.

Available for sale in Harrington (approximately 30 kilometres east of Taree) is a residential development site of approximately 30ha (developable) with development approval for a 51 lot subdivision. The site is zoned Rural Residential. The property is for sale with an asking price of $5,250,000, equating to $17.5/sqm ($175,000/hectare).

Currently for sale by CB Richard Ellis (Newcastle) by Expression of Interest is a 93.74ha site located on Herons Creek Road, Kew (approximately 50 kilometres north of Taree) comprising approximately 58.6ha of IN1 General Industrial and 26ha RU1 Primary Production zoned lands (Port Macquarie – Hasting LEP 2011) with development approval for 37 lots. The selling agent indicates that there has been interest for the property from approximately 5 or 6 parties, with and offer currently being considered from one party.

Capital Value Conclusions for Brimbin

Based upon our discussions with real estate agents and developers as well as considering the underlying (base) value established from rural lands, Hill PDA considers the value of employment land within Brimbin, on an englobo basis to be between $50,000 to $75,000/hectare.

Subdivided and fully serviced (road, electricity, water, sewer, telephone/internet), Hill PDA considers the value of employment land within Brimbin to be in line with value within Taree, i.e. $90 to $100/sqm (sites 3,000 to 5,000sqm) and $60 to $70/sqm (1ha sites).

Appendix 6 - **MARKET LED DEMAND CASE STUDIES**

Eco-Industrial Estates

An eco-industrial park ('EIP') or estate is a community of manufacturing and service businesses located together on a common property. Member businesses seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues. By working together, the community of businesses seeks a collective benefit that is greater than the sum of individual benefits each company would realize by only optimizing its individual performance.

"The goal of an EIP is to improve the economic performance of the participating companies while minimizing their environmental impacts. Components of this approach include green design of park infrastructure and plants (new or retrofitted); cleaner production, pollution prevention; energy efficiency; and inter-company partnering. An EIP also seeks benefits for neighbouring communities to assure that the net impact of its development is positive."[43]

Communities and businesses that create eco-industrial parks will have a foundation for industrial development that is more competitive, more efficient, and cleaner than traditional industrial parks. In addition, new business niches will be opened for recruitment or incubation of new companies.

One organisations waste becomes another's raw material. The concept needs to evolve over time, be regionally focussed and have a firm economic base.

Industrial ecologies allow the collocation of industrial activities that enable waste or energy surplus from industries from one or more industries to be used or reprocessed by industries in the same location. Industrial ecologies often form naturally through an agglomeration or clustering[44]. The objective of industrial ecology is to minimize the use of virgin material - especially non-renewable resources - and waste by maximizing the effort on materials and energy recovery.

First, the idea of 'industrial park' – a tract of land zoned for industrial and commercial development, and used simultaneously by firms that share a common infrastructure. The second concept is 'eco' – the ecological orientation of the development which encompasses the interactions of the industrial park with the natural environment, internal relationships within the estate, and the connotation of a more environmentally beneficial structure[45].

EIPs area a specialized industry cluster comprised of four basic internal components[46]:

- Core firms around which most of the facilities are designed and networks established;
- A set of specialist firms that support the cluster's core;
- An internal social infrastructure; and
- An internal physical infrastructure.

All EIPs also encompass two fundamental objectives: firstly, enhanced individual economic competitiveness; and secondly, reduced collective environmental impacts. Both of these goals are achieved through greater efficiency, sharing of services and by-product exchanges.

[43] Lowe, Moran & Homes, 'Field Book of the Development of Eco Industrial Parks', Report to the EPA on Industrial Ecology, Washington 1997

[44] Roberts & Greenhalgh, 'Planning for Eco-Industrial Parks to Facilitate Industrial Ecologies within South East Queensland', 2000.

[45] Cote, 'Promoting Eco-Industrial Park Development: Exploring Benefits, Challengers, Drivers and Opportunities for Progress in Canada', Canada 1998.

[46] Roberts & Greenhalgh, 'Planning for Eco-Industrial Parks to Facilitate Industrial Ecologies within South East Queensland', 2000.

One of the greatest risks to eco-industrial developments are economic risk to individual enterprises. For eco-industrial parks to reach their full potential there is a need to establish a critical mass of industries to form the basis of an industry reprocessing and production system. These can be very specialized industries associated with a cluster of industry activities such as food, chemicals or minerals. It is relatively easy to start building systems, but as these grow in terms of sophistication the risk of supply chain collapse becomes greater. If one industry in a supply chain were to fail, the system risks collapse. Since industries are spatially dependent, substitution of a reprocessed product or energy from an alternative source may not be viable[47].

The most successfully planned industrial ecologies are those associated with larger core industries, such as power stations and food processing, where the supply of waste materials, water and energy are continuous and the likelihood of disruption to flows low.

The successful development of eco-industrial parks requires very careful consideration to planning at two levels.There is a tendency for many local governments to promote the development of EIP's as a means of demonstrating support for sustainable development. There is considerable myth generated that EIP's lead to zero emissions, establish a market that will leads to the commercial exchange of materials and energy, and that environmental companies will naturally want to locate on an EIPs. The successful development of EIPs must be considered at a city or regional scale before a detailed feasibility study is undertaken to develop specific sites. Unless the macro context of waste flows, markets, production, and material transport costs and requirements are fully understood, the prospects for developing a successful EIP will be considerably weakened.

Unlike traditional industrial estates, where there is very little attempt to encourage industrial synergies, EIPs are built around networks of associated supplier and distribution chains that have a greater dependence upon local material and energy flows. In traditional industrial areas industries are much freer to switch suppliers and material from non-virgin to virgin sources. In this situation, waste is absorbed into the cost of the final product. There is little incentive for industries to look for potential by-product users if disposal costs are much cheaper than reprocessed materials can fetch on waste exchange markets.

EIPs operate best at the confluence of waste streams, where there is a critical mass of waste material, water or energy flow that can be utilized by clusters of related industries that find advantage in using by-products from production processes. In most cases, EIPs will have a strong focus on the development of industries that utilize recycled water or benefit from co-generation. Once optimal locations for EIP's have been determined at the broader scale, detailed planning will need to give careful consideration to the following:

- Organisation arrangements for developing the EIP.
- A local champion or catalyst industry that provides a core or base industry for other industries to congregate around.
- A core project team to work with the champion industry to develop other potential industry partners.
- Performance objectives for an EIP, including community level economic performance objectives and environmental performance objectives provided in design guidelines.
- A detailed development plan.
- Financing and risk management strategies for the development and ongoing management of the EIP.

- An effective marketing plan.
- Performing an owner economic analysis of the potential for product exchange.
- Determine the potential for using membership in any EIP and marketing strategy.
- Examine potential to reduce regulatory costs.
- Formal economic analysis of alternative design options.
- Determining the next EIP partners and reducing risks.
- Appropriate technologies to be developed.
- Flexibility of the industry performance requirements to respond to changing, environmental, economic and social conditions.
- Technical assistance in training and technology transfer programs available.
- Maintaining flexibility in the implementation of environmental regulations other incentives.
- Special challenges in the design of physical infrastructure with respect to, transportation, energy, water, materials by-product and solid waste, telecommunication and common user utilities and services.
- Special challenges for integrated facility and building designs, life-cycle building design.
- Energy savings, materials handling and water management.

The possible incentives provided to a firm to locate to an eco-industrial park is two fold. Firstly there are the possible public sector incentives for undertaking eco practices and participating in an eco-industrial park. Secondly there are the incentives and effects of the relocation on the firm's profit function. Will more customers buy its product? Will it gain revenues by selling its waste products to other firms in the Eco-industrial Park? Will input costs for labour, materials, or capital go down, and thus reduce production costs? Will abatement costs and regulatory costs decrease?

A key instrument of policy is the creation of incentives for eco-industrial park developers, for park managers, and for companies located in EIPs. This is a form of industrial development that seeks major environmental, economic, and social benefits. Incentive programs are probably already in place that can be directed toward eco-industrial development. For instance, the Indian government has established the following incentives to encourage environmentally friendly activities by industry[48]:

- The government realizes that most medium and small scale manufacturers cannot afford to install pollution control equipment. Therefore, the government will subsidize pollution control treatment facilities in industrial parks.
- Industrial facilities may take a 100% depreciation allowance on devices and systems installed for minimizing pollution or for conservation of natural resources.
- Donations given to any association or institution for programs on conservation of nature and natural resources are tax exempt.
- India's Ministry of Non-conventional Energy Sources and state governments offer incentives, concessions, and fast-track approvals for such projects. Most of the projects are expected to generate power for their own use, while

[48] Indigo Development, 2001

some will interface with the government power grid. Thus far, most projects have used wind, solar, co-generation, and mini-hydro electric sources.

There are a number of investment incentives being initiated in the US for eco-industrial enterprises. They include:

- Preferential Lease Terms - Land lease subsidies: Investors participating in this program and complying with the ETP entrance requirements shall receive a 50% land lease subsidy, effective from the finalisation of the lease or purchase contract until the year 2011. Those applying for a land lease subsidy under this program may not also apply for other incentive subsidies related to land lease.
- Production Subsidies - In order to encourage investors to produce goods in the park, this program offers production subsidies and incentives including subsidies for the use of practicable technology to produce environmentally friendly products. In principle, the subsidy to each investor shall be 10% of the initial investment capital, with the subsidy period starting when the investor begins mass production (with production volume reaching 8% of planned capacity), paid in annual instalments over a five year period.
- Technology Research and Development - In order to encourage investors and research institutions to carry out R&D in new products and technologies, this program offers R&D subsidies based on the contents of the R&D proposal (such as management and operating guidelines) and the approved amount of subsidized costs. In principle, the subsidy will amount to 50% of the amount of costs for which the subsidy is applied and the implementation period will be one year, extendable to two years if necessary.
- Performance Incentives - The Regulations Governing Merit Awards for Institutions Carrying Out Waste Management and Resource Reduction, Recovery and Reuse, based upon the Resource Recycling and Reuse Act and the Waste Disposal Law, provide recognition and incentives for those companies displaying good performance in the development of reuse and recycling technology and in the actual practice of reuse and recycling, waste disposal, and waste reduction.

Currently there are a number of Australian State Governments considering ways to stimulate innovation and economic development through industry clustering, which may lead to public sector incentives for eco-industry clustering as well.

Coffs Harbour Technology Park, NSW

Coffs Harbour Technology Park was an initiative in collaboration with NSW Department of Trade & Investment and Southern Cross University. The Park will help underpin emerging e-commerce opportunities in the Mid-North Coast Region. The Park aims to provide an environment which captures the business synergies resulting from the collocation of Information and Communication (ICT) based industry, technology business incubation facilities and higher education and vocational training institutions. The establishment of such an environment offers unique benefits and advantages which contribute to the expansion and enhancement of ideas and products, promotes sustained growth and, ultimately, plays a significant role in regional economic development efforts. The Coffs Harbour Innovation Centre has current tenants whose product development has directly benefited from the close proximity of university research and development resources which, as a result, have accelerated the company's development and growth opportunities.

Ballarat Technology Park, VIC

Ballarat Technology Park is adjacent to the University of Ballarat campus in Mt Helen (8km south of Ballarat CBD). Hill PDA is currently working with the University on expansion plans for the Technology Park (equivalent to an additional 22ha) after the successful development and occupation of the existing 29ha site. Adjacent to the University the Park is situated to take

advantage of the applied, academic and research knowledge available at its doorstep, with the opportunity to broker strategic alliances and commercial relationships. This critical mass of knowledge allows tenants of the Technology Park to attract the skills and talent that will afford them high-yield economic opportunities. The Technology Park is a precinct designed to support the development of both emerging and existing technology-oriented enterprises. The expansion of the Park will focus on attracting biotechnology, biomedical, and green technology companies.

The first tenant to locate in the Technology Park in 1995 was IBM whose prime relocation reason was the availability of skilled labour (as a product of being located adjacent to the University). Today IBM has over 800 workers on site which is equivalent to half of all jobs within the Park. IBM has been a catalyst for further businesses locating there. The Greenhill Enterprise Centre and the Global Innovation Centre are principally business incubation environments and host a range of businesses including: the Internet Commerce Security Laboratory, Centre for Regional Innovation and Competitiveness, Juggernaut Technology, Centre for eCommerce & Communications, and Advanced VTOL Technologies. Other businesses located within the Park include Ambulance Victoria, the Emergency Services Telecommunication Authority, and the State Revenue Office.

Innovation Campus, Wollongong NSW

Innovation Campus aims to provide an environment for commercial and research entities to co-locate with University of Wollongong teams and establish successful productive partnerships. The 33ha Campus has largely been driven by the University of Wollongong, was established with seed funding from the New South Wales State Government and has ongoing support at the Commonwealth, State and Local government levels. To be developed in stages, Innovation Campus will provide a total of 135,000sqm (GFA) for research and office space, retail and service facilities, hotel and conference centre and residential accommodation.

Innovation Campus opened in 2008 with iC Central, the Australian Institute for Innovative Materials and the Institute for Transnational and Maritime Security. The Sydney Business School and Digital Media Centre officially opened in 2010 while the Australian Institute for Innovative Materials (Processing and Devices) building and a commercial building (iC Enterprise 1) are currently under construction and will be completed in mid 2011. Innovation Campus' long term project that will span 10-15 years and upon completion some 5,000 people will be part its working community of business and research enterprises.

Specific outcomes of the Campus are: more productive interface with commercial/ industrial partners, diversification of Illawarra economy; creation of sustainable employment in the region, access to quality office, research, teaching, conference and accommodation facilities; growth in the University's reputation through association with high-profile and /or innovative commercial partners; introduction and integration of commercial acumen into University research activities; and improved research outcomes for students.

Discussions with the managers of Innovation Campus have revealed the following:

- The success of the park is due to the push towards technology (i.e. a typical business park would not have performed as well).
- Strengths include the relationships built with the students of the University (e.g. they are often involved in the research conducted on site), the access businesses onsite have to graduates, and the proximity of the site to Sydney and access to domestic and international airports (the latter to a lesser extent).
- The challenge has been attracting new tenants as opposed to existing tenants from the Wollongong City Centre.

- Strong funding support from state and federal government (e.g. the Federal Government provided $12m towards the third building to be constructed on the Campus being the Centre for Transnational Crime Prevention).
- Other government assistance included the State government Illawarra Advantage Fund which was established to attract new industries to the Illawarra and boost business growth in the region. The fund provides assistance to eligible businesses looking to establish or expand in the region assistance. The fund may include contributions towards:
    - Establishment costs of a business that will generate new jobs
    - Costs of substantial workforce expansion
    - Infrastructure costs
    - Payroll tax, land tax and stamp duty relief
    - Project facilitation
    - The cost of engaging external expertise to implement a job generating project

Wingercarribbee Eco Enterprise Zone, NSW

The 600ha corridor commonly known as the Moss Vale industrial corridor extends north from Moss Vale to New Berrima. The zone is located 77km from Wollongong, and 66km from Nowra.

The area currently consists of a mix of rural land with light and heavy industrial land uses. The Main Southern Railway line dissects the western side of the zone with a spur line branching west dissecting the zone. The Corridor is located between the western side of Moss Vale and New Berrima, extending from Berrima Road to Douglas Road and the Blue Circle Spur Line.

There are approximately 30 parties with ownership within this zone with the majority of parcels being large rural pasture land. The eastern end of the Corridor is occupied by a mixture of light and general industrial uses such as manufacturing, car repairs, and rural suppliers. Three main industrial users and owners of land within the zone include:

- The Lime works
- Ingham's Feed Mill
- Blue Circle Southern Cement (Berrima Works). The largest cement works in the southern hemisphere. Located in the North West corner of the zone. Blue Circle has just undertaken a $70m upgrade to make the works more environmentally sensitive. The cement works are located outside the north-west corner boundary of the zone.

The Corridor land was identified in the WLEP 1989. The underlying 1(a) Rural land zoning was retained, however, Clause 41 of WLEP 1989 allowed the Council to consider and approve development for industrial purposes within the subject area despite the 1(a) rural zone. This in effect provided flexibility for industrial development to be considered as the demand arose.

In 2006 together with Hill PDA and Parson's Brinckerhoff, Council investigated the potential of this site as an eco-enterprise zone. The Hill PDA and PB study confirmed that the area was suitable for industrial development due to its proximity to rail services (Main Southern Line and Moss Vale – Unanderra Rail line) and to the Hume Highway, providing a development potential of some 450-500 hectares.

As a result, under the draft Shire Wide LEP, the majority of the area cross hatched in WLEP 1989 has been zoned to IN1 General Industrial. Some land on the eastern side of the Main Southern Railway Line along McCourt Road has not been included in the IN1 General Industrial zone due to sensitive landscape issues and proximity to Wingecarribee River.

The Blue Circle site, Southern Limestone site, and land on the eastern side of McCourt Road north of the proposed by-pass, including Joy Manufacturing, will all be zoned IN3 Heavy Industrial. Light Industrial zones will be provided on the south eastern edge of the Moss Vale Enterprise Corridor at Bulwer Road and on Suttor Road, Moss Vale. Characteristics of the zone include:

- The zone is bounded by the Main Southern Railway to the west and includes Berrima Road, along the western edge of the zone and Douglas Road which follows the spur line off the rail track. The zone is well positioned to the rail line with the spur line dissecting the zone from east to west. The Hume Highway bypasses the site via the Berrima By-Pass, although exists onto the Old Hume Highway provide access via Taylors Avenue to the zone.
- Heavy industrial uses within the Shire only currently exist within the area earmarked as the eco-enterprise zone – Cement works, Lime works and Chicken feed mill.

Steel River, Newcastle NSW

Steel River is developing a successful industrial ecology environment in Newcastle. The Steel River development has been planned to accommodate industrial ecology principals and philosophies.

Steel River is the only centrally positioned industrial estate offering new land for sale in Newcastle. It covers 104 hectares of prime industrial land bordered by Industrial Drive and Tourle Street. It is less than 10km from the Central Business District and is adjacent to the Pacific Highway with connections to the F3 freeway to Sydney, Brisbane and the New England Highway.

The original land owner was BHP who remediated the land between 1997 and 2000. The site was then sold by BHP to Steel River Pty Ltd, who developed and marketed the site until July 2005 at which time the remainder (approx. 57.3ha) was purchased by Domaine Property Funds Ltd.

The site is zoned 4(c) Steel River Zone (Eco Industrial Zone), with an aim to facilitate employment generating industrial, research service or storage activities. The zone also allows commercial, retail or other development where it is ancillary to the primary employment objective.

As an industrial centre, Steel River offers easy access to the Port of Newcastle, where the new Multi Purpose Container Terminal is to be developed. Access to the rail network can be provided to the site and Newcastle airport is just 15 minutes away. The site provides easy access to labour sources in Newcastle and surrounding centres such as Maitland and Port Stephens.

The estate can accommodate a variety of lot sizes ranging from 4,000sqm to 5ha. It is anticipated most will fall between 4,000sqm and 3ha. Opportunities also exist for strata title developments within individual lots.

Important to this project is the unique Strategic Impact Assessment Study defining environmental entitlements, design guidelines and social objectives for the estate.

Steel River is covered by an environmental envelope, which defines allowable levels for air, water, traffic, noise, waste management and emissions. The environmental standards have already been apportioned to the sub-divided sites so that the sum of all businesses located on Steel River will comply with the environmental envelope.

The whole estate has a pre approved environmental envelope for air, water, traffic and noise emissions, even if a development is a designated development. Individual lots receive a proportional entitlement so that the sum of all these entitlements complies with the total estate environmental envelope.

The environmental envelope consists of quantitative and qualitative standards and objectives to guide developments on the estate and collectively these define the total impact the estate will have on the local environment. The environmental envelope related to the areas of:

- Environmental management
- Air quality
- Water quality
- Noise emissions
- Energy management
- Waster management
- Socio economic and cultural objectives
- Development guidelines
- Hazards and risk management

The estate has been subdivided under the community titles legislation, with the Community Association constituted on registration of the community plan. All land owners in the estate are members of the Community Association with voting rights proportional to their land area.

The community association has had the responsibility for overseeing, monitoring and administering the Environmental envelope which includes[49]:

- An air monitoring station maintained and operated under contract by the Community Association to monitor air emissions from the estate.
- Periodic noise monitoring is conducted to monitor noise generation and to validate computer projections.

Environmental entitlements have been introduced to describe the level of air and noise emissions permitted from each lot in the estate. An Environmental Entitlements Certificate setting out these entitlements is issued to each lot owner on completion of their contract to purchase a lot in the estate.

An easement on title for each lot benefiting all other lots, allows for pipelines connecting waste generators and resource users, to be laid across each lot in the minimum 5m setback at the front of each lot. This is expected to be of particular attraction to environmentally conscious organisations seeking to establish in close proximity to their by product users or raw material generators.

Steel River has already secured high profile tenants such as Horan Steel, Computer Science Corporation and the CSIRO for their Energy Research Headquarters.

[49] Steel River Eco Industrial Estate, August 2005

Carole Synergy Park, Queensland

The Energy Park comprises an area of approximately 37 hectares on the Carole Park Industrial Estate south west of Brisbane. The Park is intended to be a high quality "cluster" development targeting food and beverage manufacturers and their support industries.

The Energy Park seeks to create opportunities for the development of synergies of associated industries involved in a cluster. The concept optimises efficiency in use of energy, materials handling, integrated logistics and shared facilities/amenities. A major co-generation plant will provide energy, superheated steam and super-cooled water to service core business activities associated with the proposed food cluster. The total investment by the private sector in the Park is expected to be in the order of $300M with employment for up to 3,000 people. A Master Plan for the Energy Park and development code has been prepared and will be incorporated into the Ipswich City Planning Scheme. The code will set the land use, development and operational standards for intending occupiers. Some principles used in the development of the Park include the following:

- Aim to capture and create opportunities within industrial systems to value-add to by-product, waste and energy recovery.
- Be strategically located within cities and regions to optimize the capture and concentration of industry by-products, waste material flows and energy losses for use by other industries which would gain economic advantage by being co-located or clustering close to these concentrations or sinks of waste materials, water and energy surplus to production requirements.
- Create the catalysts for more specialized industrial synergies to occur in these optimum locations.
- Be market driven developments or publicly assisted developments if it considered in the public interest to achieve or provide a catalyst for sustainable industry development outcomes.
- Be supported by industry policies and incentives to encourage, innovation, collaboration and commercialization of new and improved product developments using materials, water and energy surplus to production.
- Provide a catalyst and environment for fostering technological advancement in cleaner production, waste management and sustainable industry practices.
- Be supported by appropriate 'smart infrastructure', especially human capital and competencies, to ensure industries on EIPs have the commercial and technological leadership, entrepreneurship and flexibility to maintain high levels of innovation to remain competitive.
- Demonstrate commitments to industrial ecology and sustainable development.
- Promote opportunities to establish genuine partnerships and engagement with communities and government in overcoming suspicions and concerns about the industry developing a more responsive attitude to sustainable development principles.

Appendix 7 - **BRIMBIN NEW RESIDENTS - EMPLOYMENT LANDS DEMAND MODELLING**

The methodology used for forecasting demand for employment land is a custom-made employment lands demand model (ELDM) developed by Hill PDA. This method converts job forecasts to land area requirements by industry type within a defined area. For the purpose of the ELDM, Hill PDA has defined this area as the Brimbin release area.

The ELDM estimates land area requirements by utilising the following steps:

- Estimate population and/or dwelling forecasts for the defined area for a defined period;
- Estimate the number of Full-Time Equivalent (FTE) workers within the defined area, that is the number of resident workers;
- Forecast the number of jobs by industry (proportion) based on historical ABS data in regional areas;
- Apply job containment rates by industry i.e. the proportion of Brimbin working residents that will be employed within Brimbin itself by industry;
- Apportioning these jobs in Brimbin by industry to broad zones – commercial centre and industrial zones;
- Applying required floorspace areas (GFA in square metres) to each job by industry by zone;
- Dividing the result by a most likely floorspace ratio (FSR) for each zone to arrive at land area (hectares); and
- Allowing for local roads and other inefficiencies to arrive at net land area (hectares).

These steps as applied to demand in Brimbin are discussed further below.

Forecast Working Residents

To calculate the anticipated resident workforce in the Brimbin release area, Hill PDA examined the number of resident workers per household across Greater Taree LGA as well as the Mid-North Coast Region as indicated in the following table.

Employed Working Residents in Greater Taree and Mid-North Coast Region (2006)

Characteristic	Greater Taree LGA		Mid-North Coast Region	
	Working Residents	Proportion of Total	Working Residents	Proportion of Total
Full Time	9,171	57.4%	57,037	55.4%
Part Time	5,698	35.7%	38,670	37.6%
Away from Work	688	4.3%	4,338	4.2%
Not Stated	421	2.6%	2,826	2.7%
Total	**15,978**	**100.0%**	**102,871**	**100.0%**

Source: ABS Census 2006

Of the 15,978 working residents across the Greater Taree LGA, 57.4% work full time, 35.7% part time and so on. These were trends also experienced across the broader Mid-North Coast Region.

Assuming that 1 part time job is equivalent to 0.4 full time jobs, there were around 0.72 full time equivalent workers per occupied dwelling in Greater Taree LGA, and 0.69 full time equivalent workers per occupied dwelling in the Mid-North Coast Region.

Full Time Equivalent Workforce in Greater Taree and Mid-North Coast Region (2006)

Characteristic	Greater Taree LGA	Mid-North Coast Region
Full Time Equivalent (FTE)	12,559	79,669
Number of Occupied Dwellings (based on 2006 census)	17,402	115,740
Number of FTE Workers per Dwelling	0.72	0.69

Source: ABS Census 2006, Hill PDA (2010)

However, there will most likely be a greater number of full time equivalent workers per occupied dwelling in Brimbin compared to Greater Taree and the Mid-North Coast Region. This will be due to a forecast higher proportion of family households in Brimbin.

For this reason Hill PDA has assumed 0.90 full time equivalent workers per dwelling in the Brimbin release area (assuming full occupancy).

Based on these assumptions and together with the population projections for the Brimbin release area of this report, the number of resident workers per dwelling can be calculated. The table below indicates there are around 7,209 working residents forecast for the Brimbin release area to 2046 (being 2 years after assumed full occupation of the residential precincts).

Cumulative Number of FTE Working Residents in Brimbin to 2046

Year	Cumulative Dwellings	Cumulative Population	FTE Working Residents
2016	534	1,469	481
2026	3,204	8,811	2,884
2036	5,874	16,154	5,287
2046	8,010	22,028	7,209

Source: ABS Census 2006 and Hill PDA (2010)

Forecast Jobs by Industry

In order to forecast jobs by industry in Brimbin, Hill PDA examined historical ABS data for Greater Taree and extrapolated any trends that represent a potential increase or decline in demand for work in particular industries[50]. Jobs in Greater Taree in 2006 and forecast to 2046 are provided in the following table.

Forecast Working Residents by Industry in Greater Taree (2016 to 2046)

Industry	2006*	2016	2026	2036	2046
Agriculture, forestry, fishing	5.5%	3.6%	2.5%	1.7%	1.2%
Mining	0.3%	0.3%	0.3%	0.3%	0.3%
Manufacturing	11.3%	9.9%	8.6%	7.5%	6.6%
Electricity, gas, water, waste	1.2%	1.3%	1.4%	1.5%	1.5%
Construction	9.0%	9.9%	11.2%	12.4%	12.6%
Wholesale trade	3.3%	2.8%	2.2%	1.7%	1.5%
Retail trade	14.5%	15.3%	15.9%	16.1%	16.1%
Accommodation, food	6.6%	7.3%	7.2%	6.9%	6.9%
Transport, postal, warehousing	4.2%	4.1%	4.1%	4.2%	4.4%
Information media, telecomm.	1.0%	0.9%	0.7%	0.5%	0.4%
Financial, insurance	1.6%	1.4%	1.2%	1.0%	1.0%
Rental, hiring, real estate	1.6%	1.7%	1.8%	1.8%	1.8%
Professional, scientific, technical	3.5%	4.2%	4.8%	5.4%	6.0%

[50] NSW Bureau of Transport job forecasts were not utilised to forecast jobs within Hill PDA's modelling as the data does not extend beyond the Sydney Greater Metropolitan Area.

Administrative, support	2.6%	3.4%	4.3%	5.2%	6.3%
Public administration, safety	4.2%	4.8%	5.4%	6.0%	6.5%
Education, training	8.0%	7.6%	7.0%	6.4%	5.7%
Health care, social assistance	14.3%	15.0%	15.5%	15.6%	15.4%
Arts, recreation	1.3%	1.7%	1.9%	2.2%	2.6%
Other services	3.9%	3.5%	3.2%	3.1%	2.9%
Inadequately described/Not stated	2.1%	1.3%	0.8%	0.5%	0.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

* As at the 2006 ABS Census.
Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2010)

The results above indicate that there will be a decline in the proportion of Greater Taree working residents employed in agriculture, manufacturing, wholesale trade, financial and insurance services, and education and training. On the other hand, there will be an increase in the proportion of working residents employed in a construction, retail trade, and professional, scientific and technical services.

It should be noted that a decrease in the proportion of working residents in a particular industry does not mean that the number of workers has dropped – it means that the overall growth of the labour force may have outpaced the growth experienced by that particular industry.

The number of jobs located in Brimbin is calculated by applying the above employment trends (proportion of jobs by industry) to the number of full time equivalent workers in Brimbin. Further to this containment rates for the various industries (the number of jobs to working residents in Brimbin) are applied. The results are indicated in the following table.

Forecast Jobs by Industry in Brimbin Based on Job Containment (2016 to 2046)

Industry	Containment Rate	2016	2026	2036	2046
Agriculture, forestry, fishing	100%	17	72	91	88
Mining	100%	1	9	15	21
Manufacturing	100%	47	249	399	478
Electricity, gas, water, waste	100%	6	41	77	107
Construction	100%	48	324	657	909
Wholesale trade	100%	13	62	90	106
Retail trade	55%	40	252	469	639
Accommodation, food	65%	23	135	236	322
Transport, postal, warehousing	100%	20	119	222	315
Information media, telecomm.	100%	4	19	26	26
Financial, insurance	50%	3	17	27	34
Rental, hiring, real estate	50%	4	25	47	65
Professional, scientific, technical	50%	10	69	144	218
Administrative, support	50%	8	61	139	228
Public administration, safety	50%	12	78	158	234
Education, training	65%	24	132	219	268
Health care, social assistance	65%	47	290	535	721
Arts, recreation	50%	4	28	58	93
Other services	65%	11	61	105	138
Inadequately described/Not stated	65%	4	15	17	15
Total	**71%**	**348**	**2,057**	**3,732**	**5,025**

Source: ABS Census Data Time Series Profile (1996 to 2006) and Hill PDA (2010)

The results indicate that by 2046 (around 2 years after full development) there will be around 5,025 jobs located in Brimbin, which represents an overall worker containment rate of 71% (5,025 jobs in Brimbin to 7,209 working residents).

Forecast Demand of Employment Land

The apportionment of forecast jobs to land use zones together with the required floorspace per worker is presented in the following table.

Apportionment of Jobs to Zones and Gross Floor Area Assumptions in Brimbin

Industry	Apportionment to Zones			GFA per worker (sqm)	
	Commercial Centre	Industrial Zone	Total	Commercial Centre	Industrial Zone
Agriculture, forestry, fishing	0%	0%	0%	-	-
Mining	0%	0%	0%	-	-
Manufacturing	0%	100%	100%	85	85
Electricity, gas, water, waste	0%	100%	100%	200	200
Construction	0%	100%	100%	85	85
Wholesale trade	0%	100%	100%	85	85
Retail trade	100%	0%	100%	50	85
Accommodation, food	90%	10%	100%	60	60
Transport, postal, warehousing	0%	100%	100%	200	200
Information media, telecomm.	50%	50%	100%	650	650
Financial, insurance	80%	20%	100%	25	25
Rental, hiring, real estate	80%	20%	100%	25	25
Professional, scientific, technical	50%	50%	100%	25	25
Administrative, support	80%	20%	100%	25	25
Public administration, safety	50%	50%	100%	25	25
Education, training	80%	20%	100%	50	50
Health care, social assistance	80%	20%	100%	50	50
Arts, recreation	80%	20%	100%	50	50
Other services	70%	30%	100%	50	85
Inadequately described/Not stated	50%	50%	100%	50	85

Source: Hill PDA Estimate (2010)

The above assumptions result in the Brimbin release area demanding almost 244,000sqm of industrial zoned floorspace and around 118,500sqm of commercial zoned floorspace by 2046 as indicated in the following table.

Commercial and Industrial Floorspace Demand in Brimbin to 2046 (sqm)

Industry	Commercial Centre Zone				Industrial Zoned			
	2016	2026	2036	2046	2016	2026	2036	2046
Agriculture, forestry, fishing	-	-	-	-	-	-	-	-
Mining	-	-	-	-	-	-	-	-
Manufacturing	-	-	-	-	4,033	21,161	33,908	40,628
Electricity, gas, water, waste	-	-	-	-	1,280	8,121	15,404	21,421
Construction	-	-	-	-	4,043	27,531	55,850	77,225
Wholesale trade	-	-	-	-	1,124	5,276	7,672	8,994
Retail trade	2,022	12,587	23,425	31,963	-	-	-	-
Accommodation, food	1,237	7,291	12,768	17,397	137	810	1,419	1,933
Transport, postal, warehousing	-	-	-	-	3,952	23,720	44,378	63,067
Information media, telecomm.	1,353	6,280	8,518	8,425	1,353	6,280	8,518	8,425
Financial, insurance	69	349	546	688	17	87	136	172

Industry	Commercial Centre Zone				Industrial Zoned			
	2016	2026	2036	2046	2016	2026	2036	2046
Rental, hiring, real estate	81	507	949	1,302	20	127	237	325
Professional, scientific, technical	125	867	1,794	2,722	125	867	1,794	2,722
Administrative, support	162	1,229	2,770	4,562	41	307	693	1,141
Public administration, safety	144	975	1,971	2,922	144	975	1,971	2,922
Education, training	944	5,264	8,775	10,723	236	1,316	2,194	2,681
Health care, social assistance	1,878	11,617	21,411	28,832	470	2,904	5,353	7,208
Arts, recreation	168	1,121	2,307	3,727	42	280	577	932
Other services	383	2,124	3,671	4,819	279	1,547	2,674	3,511
Inadequately described/Not stated	100	371	429	378	170	630	730	642
Total (sqm)	**8,667**	**50,580**	**89,334**	**118,459**	**17,466**	**101,940**	**183,508**	**243,948**

Dividing the resultant floorspace by assumed floorspace ratios (FSRs) provides land area requirements (in hectares). A limitation with this method is the considerable variation in FSR that occurs between areas. Commercial zones in particular can vary from a single storey shopping centre with ample at grade outdoor parking to multi-storey buildings with basement parking.

Most industrial lots are developed at an FSR between 0.5:1 and 0.75:1. Many planning instruments allow 1:1 but the economics of achieving this is difficult due to cost implications. There are some land uses in industrial areas that have a much lower FSR because much of the activity is outdoors including for example: recycling, vehicle hiring yards, storage and wholesale of outdoor landscape, building materials, and so on.

Assuming for Brimbin, a FSR of 0.45:1 in the commercial zone and a FSR of 0.50:1 in the industrial zone, demand for employment land (developable area) is provided in the following table.

Forecast Occupied Employment Land (Developable Area) to 2046

Zone	Commercial Centre	Industrial Zone	Total Demand (ha)
Assumed FSR	0.45	0.5	
2016	1.93	3.49	5.42
2026	11.24	20.39	31.63
2036	19.85	36.7	56.55
2046	26.32	48.79	75.11

The above results show developable area. Generally internal roads can make up as much as 20% of the developable area depending upon urban design. Local roads and other inefficiencies have been assumed at 22.5%. Demand for net employment land is provided in the following table.

Forecast Occupied Employment Land (Net) to 2046

Year	Commercial Centre (ha)	Industrial Zone (ha)	Total Demand (ha)
2016	2.49	4.51	6.99
2026	14.5	26.31	40.81
2036	25.62	47.36	72.97
2046	33.97	62.95	96.92

The above results indicate almost 97ha of employment land is demanded in Brimbin by 2046, of which almost 34ha is located in the commercial centre zone and almost 63ha is located in the industrial zone of the employment lands.

Commercial Centre Demand

The result of Hill PDA's modelling indicates demand for around 34ha of commercial centre zoned land. Whilst the retail demand modelling within this report indicated the Brimbin Local Trade Area will demand around 10ha of retail land to 2044, it should be recognised that the commercial centre zone does not just relate to retail land uses.

The commercial centre zone includes retail, as well as land demand for the likes of professional services, hospitality, education and training, health care and social assistance, recreation and so on (as indicated in Table 39 which outlined the apportionment of jobs to zones).

Industrial Land Demand

Together, demand for industrial (63ha) and bulky goods (say 10ha) in Brimbin results in 73ha (net) of land appropriate for the proposed employment lands precinct in Brimbin to 2044. It is recognised land west of the railway line in the proposed employment lands precinct accounts for approximately 100ha of land, which would be an appropriate first stage of employment lands development for Brimbin.

It is recognised that the 73ha of land demanded is significantly below the 340ha of proposed employment lands as indicated in the Mid North Coast Regional Strategy (2009). The employment lands demand modelling within this report was based on meeting demand for 5,025 jobs in Brimbin to 2046, whilst also recognising Brimbin is the next logical location for employment lands expansion in the Greater Taree LGA. However, this does not preclude employment land from being planned in Brimbin for post 2044.

The utilisation of the remainder of the proposed employment land east of the railway line (around 280ha) will need to be determined and further investigated for a range of land uses (e.g. residential, employment and so on) as and when the market demands.