

APPENDIX F

Industrial Land Analysis

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Executive Summary

Manufacturing, wholesale, and transport logistics are important to the current local economy and are potential leading economic drivers in the MBRC self-containment strategy. Ensuring there is sufficient supply of designated and serviced industrial land available in suitable locations for the medium and longer term is also critical to supporting the steady and continued economic development of SEQ and in seeking to address the imbalance between where people can find affordable housing and where they can find work. Planning for new enterprise and employment areas in MBRC is therefore an important part of Council planning to accommodate growth across MBRC.

The analysis undertaken by Council indicates that the supply of zoned industrial land in the Pine Rivers district can be augmented in the medium term by additional land at West Brendale, Dakabin, and North Lakes which are not currently zoned and Brendale (CSR approved development). Without these new areas being opened up the Pine Rivers industrial land market will start to be affected by supply constraints sometime after 2021. Over the next twenty years, however, MBRC will come to rely increasingly on the availability of industrial land supply in the enterprise and employment areas in the Caboolture district to support continued growth.

This analysis has found that the best opportunities for providing new land for industry in the longer term are in the northern part of MBRC. Within the Caboolture district by increasing employment in the Elimbah East area and bringing forward the commencement of the Caboolture West proposed enterprise and employment area the industrial land supply can be maintained to meet projected demand in the longer term. The choice of Elimbah East and the Caboolture West enterprise and employment area is based on the fact that these areas are in single ownership, are subject to current master planning and may be sufficiently large that they could feasibly contribute to the cost of providing services required to allow development. By contrast the analysis assumes that North East Business Park is 90% built out by 2031 and that land around the Caboolture Aerodrome which is a much smaller area, in multiple ownership and smaller parcels may be slower to develop and planning investigations have not yet commenced.

The Caboolture West Master Plan work being undertaken by MBRC includes provision for an enterprise and employment area in the north east quadrant of the study area in close proximity to the D'Aguilar Highway. The area will serve local needs of the new Caboolture West community by providing local bulky goods and service industrial needs. It will also be an important future enterprise and employment land supply that could help to cater for regional industry needs.

This analysis indicates that the proposed Caboolture West enterprise and employment area has a role to play in:

- supplying a competitive industrial land market;
- helping to provide location choices for a variety of different industry types;
- averting shortfalls in industrial land supply in the MBRC area in the longer term; and
- providing easily accessible important employment opportunities as part of a new master planned community forming part of a future Caboolture City.

1 Introduction

The State Government declared Caboolture West a Master Planned Area (MPA) under the provisions of the Sustainable Planning Act on 17 February 2012. This declaration marked the start of the Council led process of preparing a plan for the Caboolture West area to be included in Council's new planning scheme by 22 November 2015. The SEQ Regional Plan envisages that the identified growth area would help cater for residential and employment growth in the region in the longer term.

Ensuring there is sufficient supply of designated and serviced industrial land available in suitable locations for the medium and longer term is critical to supporting the steady and continued economic development of

Caboolture City, MBRC and SEQ. This paper deals with the role that Caboolture West could play in providing land for business and industry employment associated with the development of a future Caboolture City by providing an analysis on current and future industrial lands in the MBRC region, as well as reviewing the latest industrial supply and demand projections.

A number of strategies and documents have been reviewed in order to better understand industrial growth and development, as well as the industrial supply and demand pressures within the Region, including:

- *NIEIR* Economic Activity and Employment Forecast Paper 2008;ⁱ (Refer Appendix 1)
- *Urbis* CIGA Employment and Economic Report 2008;ⁱⁱ (Refer Appendix 2)
- Queensland Government SEQ Regional Plan 2009;ⁱⁱⁱ
- MBRC Economic Development Strategy 2010;^{iv} (Refer Appendix 3)
- *Economic Associates* Moreton Bay Industrial Land Demand Study 2011;^v
- *OESR* Industrial Reports 2011;^{vi} (Refer Appendix 4)
- *AEC Group* Future Land Demand Study 2012;^{vii} (refer Appendix 5)
- *Informed Decisions* MBRC Economic Profile 2013;^{viii} (Refer Appendix 6)
- MBRC PIP Employment Assumptions (2013); and^{ix}
- Queensland Government South East Queensland Economic Baseline 2013^x

2 Purpose

In 2009 the SEQ Regional Plan designated the Caboolture West area as an Identified Growth Area that subject to further investigation could help accommodate long-term growth. MBRC is now undertaking studies and addressing Urban Footprint principles through its structure planning process for Caboolture West.

It is intended that this report will form part of the planning scheme submission to provide information and analysis of the industrial activities within MBRC area generally. Additionally, it will provide an analysis of the industrial land demand and supply and MBRC growth assumptions that underpin the preparation of the Caboolture West Structure Plan.

3 Background

3.1 SEQ Regional Plan

South East Queensland (SEQ) has a current population of 3.2 million people in 2012.^{xi} The SEQ Regional Plan 2009-2031 states that the Moreton Bay Region will require strong employment growth to prevent a future shortfall in jobs and improve employment diversity. Such opportunities should be strategically located in areas with good motorway, regional arterial, port, airport or rail access and should be secured for business and industry serving the wider region and outside SEQ. Additional lands will also be required to ensure greater sub-regional self-containment of industry and business growth in the longer term. The SEQ Regional Plan recognises a need for employment opportunities in MBRC in locations including:

- North East Business Park;
- Elimbah East Industrial Area;
- Caboolture Airport Enterprise Area;
- Burpengary Enterprise Area;
- Narangba Business park;
- Brendale Industrial Area; and
- Caboolture West Identified Growth Area.

Additionally, the Regional Plan sees a specific and increasingly pressing need to provide sites for regional logistics and operations that will support the rapidly growing population and emerging industries.

When the SEQ Regional Plan was prepared in 2008 the region was expected to grow to 4.4 million population by 2031. The growth projections have consistently been revised upwards. In 2011 the region was expected to reach 4.57 million people by 2031 (medium series).^{xii} The 2013 review of population projections by OESR is expected to revise upwards the 2011 projections for SEQ^{xiii} indicating a possible 4.6 million people in SEQ by 2031. The projected population growth in SEQ (OESR 2011 medium series) accounts for 67% of the projected population growth in Queensland over the next 20 years. The 2013 OESR projections are also expected to revise upwards SEQ's share of Queensland's population growth.

MBRC has traditionally had a low level of job self-containment. MBRC has recognised the close integration of MBRC housing and jobs markets with Brisbane City housing and jobs markets (Appendix 7 of this report provides a brief outline of the Brisbane Economic Plan). The close integration supports productivity gains, economic growth and economies of scale and has underpinned the attractive lifestyle offered by MBRC. However, it also contributes to externalities such as congestion, lost time commuting/time poor households and increasing transport costs which will continue to increase with population growth. As more people move into the region and housing development opportunities close to the City are taken up a significant share of the region's population growth will continue to move into the SEQ growth areas which are over 45 minutes drive time away from the major employment areas in the City.^{xiv} To address the increasing imbalance between where people can find affordable housing and where they can find work MBRC is seeking to increase the level of self-containment of employment opportunities which builds on the strengths and opportunities of the region to create its own economic clusters while also continuing to complement the growth of the City and the broader region.

3.2 MBRC draft Strategic Framework

MBRC's planning for the Caboolture West area is being undertaken as part of the process of preparing a new planning scheme for the Moreton Bay Regional Council area. The Strategic framework seeks to reconcile and give effect to the requirements of the Queensland Government as expressed in State Planning Policies and the SEQ Regional Plan and the planning aspirations of MBRC. This planning process provides a unique opportunity to assess the capacity of the MBRC to accommodate planned urban growth in line with more recent population projections and assess the role that the Caboolture West area could play in accommodating this growth.

The new MBRC planning scheme is being prepared based on the place type approach advocated in the Next Generation Planning Handbook. The draft Strategic Framework proposes a series of 13 place types across MBRC. These place types have been used to describe the planned form and function of each place, and their role in providing for housing, jobs, services and facilities in the foreseeable future. The planned role of each place type to contain new jobs in MBRC in the future is shown in the following Figure 1. Existing and new enterprise and employment areas and activity centres provide the main centres of future employment in MBRC now and into the future. The intensity of jobs in the centres is proposed to be increased in the future as the major centres are developed/redeveloped at higher densities. The intensity of jobs in the enterprise and employment areas is not expected to significantly increase as the areas accommodate large footprint activities requiring land for processing, storage, hard stand areas, heavy vehicle access, and buffering so the focus in these areas is to identify additional land in suitable locations to increase the supply of suitable land.

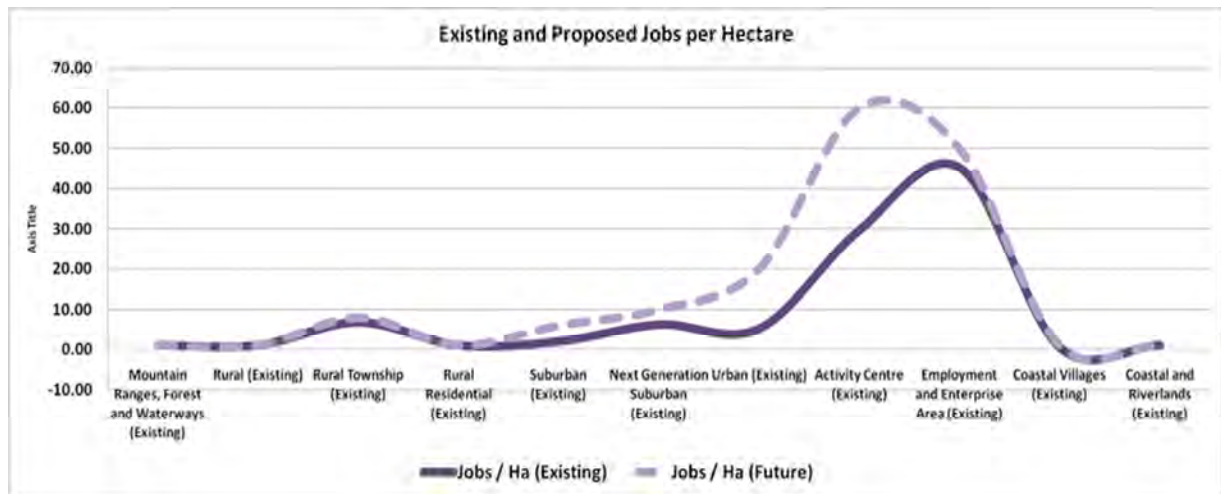


Figure 1 MBRC draft Strategic Framework jobs/ha assumptions by place type^{xv}

MBRC has an on-line economic profile provided by economy.id which describes the MBRC local economy. According to economy.id, in 2011:

- manufacturing^{xvi} provided employment for 8,300 (FTE) people;
- wholesale 3,085 (FTE); and
- transport 3,985 (FTE).

The combined employment in the above categories accounts for almost 17% of full time equivalent employment (FTE) in MBRC in 2011. In recent years according to the ABS Census data, manufacturing employment has actually fallen but the other categories have recorded modest growth.^{xvii} Under the 70% self-containment scenario developed by the AECGroup employment in these categories is required to increase to 26% of total employment (see Appendix 5). This requires a very significant growth in industry employment not just a reversal of trend. In preparing the MBRC PIP assumptions Council officers modified the industrial employment category to achieve a 19.5% share of employment at 2031 based on manufacturing industry growth scenario provided in the Moreton Bay Industrial Land Demand Study (see Section 5). Given the importance of manufacturing, wholesale, and transport logistics to the current local economy and the focus on these activities as potential leading economic drivers^{xviii} in the MBRC self-containment strategy, planning for the enterprise and employment areas (in which these jobs are mainly located) has an important part to play in planning to accommodate growth across MBRC.

The following Figure 2 shows the industry growth sectors identified by the AECGroup in the MBRC Economic Development Strategy Report.^{xix}

Growth Sector	High Value-Adding Activity	Why Moreton Bay?
Building Product Manufacturing	<ul style="list-style-type: none"> Metal product manufacturing (Pneumatic steel, structural steel and architectural aluminium manufacturing, non-ferrous pipe fitting manufacturing, metal coating & finishing, non-ferrous metal container manufacturing, steel pipes and tubes, iron & steel casting) Cement, lime, plaster & concrete manufacturing (Plaster product manufacturing, concrete slurry, concrete pipe and box culvert manufacturing) Glass manufacturing (specialised glass for building industry, medical industry, solar industry) Pre-fabricated building manufacturing (Buildings, garages, sheds, kit homes, waste disposal blocks, etc.) 	<ul style="list-style-type: none"> Local and regional demand for products: Strong population growth has resulted in high demand for residential and non-residential building. As a growing region there is an existing local demand for building products to support this growth. Existing skills base: MB has an existing skilled resident population in the manufacture of building materials. Available industrial land: Compared to Brisbane, MB has significant sized parcels of available demand for residential and commercial development.
Machinery & Equipment Manufacturing	<ul style="list-style-type: none"> Industrial M&E manufacturing (mining equipment, food processing equipment, specialty pumps / compressors / components, other high-tech industrial equipment) Medical device manufacturing (dental equipment, medical examination equipment, medical tools) Professional equipment manufacturing (digital imagery equipment, optical equipment, scientific measurement equipment) Specialty transportation equipment manufacturing (public transportation equipment, security vehicles, military vehicles, mining equipment) Solar manufacturing (PV modules and panels, PV wafer manufacturing, PV cells) 	<ul style="list-style-type: none"> Established business & supply chain: There is an established machinery & equipment manufacturing base in MB with supporting transport, services to transport, wholesale trade and input suppliers to support industry growth and specialisation of technology. Existing skills base: MB has an existing skilled resident population in the manufacture of building materials. Available industrial land: Compared to Brisbane, the MB has significant sized parcels of available demand for residential and commercial development. Proximity to export infrastructure: MB is located in close proximity the major export infrastructure such as Brisbane Port and Airport (domestic & international).
Food & Beverage Manufacturing	<ul style="list-style-type: none"> Baked goods (breads, biscuits, etc.) Processed foods (packaged foods, frozen foods, ingredients, snack foods, etc.) Beverages (bottling, niche beverage, health food drinks). 	<ul style="list-style-type: none"> Population growth: Product demand for food and beverages is linked to population growth. MB has a strong regional population growth and demand for manufacture of food and beverage products. Available industrial land: Compared to Brisbane, MB has significant sized parcels of available demand for residential and commercial development. Established business supply chain: There is an established machinery & equipment manufacturing base in MB with supporting transport, services to transport, wholesale trade and input suppliers to support industry growth and specialisation of technology. Proximity to export infrastructure: MB is located in close proximity the major export infrastructure such as Brisbane Port and Airport (domestic & international).

Table 1 MBRC Industrial Growth Sectors

MBRC has combined consideration of the broad place types (Figure 1); an assessment of regional character; land suitability and capability; and the availability of existing and planned infrastructure to develop a strategy for the region based on the allocation or grouping of place types to form five planning areas as shown in Figure 3 below. The planning areas are:

- o Caboolture City;
- o North Lakes-Redcliffe-Moreton Bay Rail Corridor;
- o Strathpine City;
- o Coastal Villages and Bribie Island; and
- o Rural Areas.

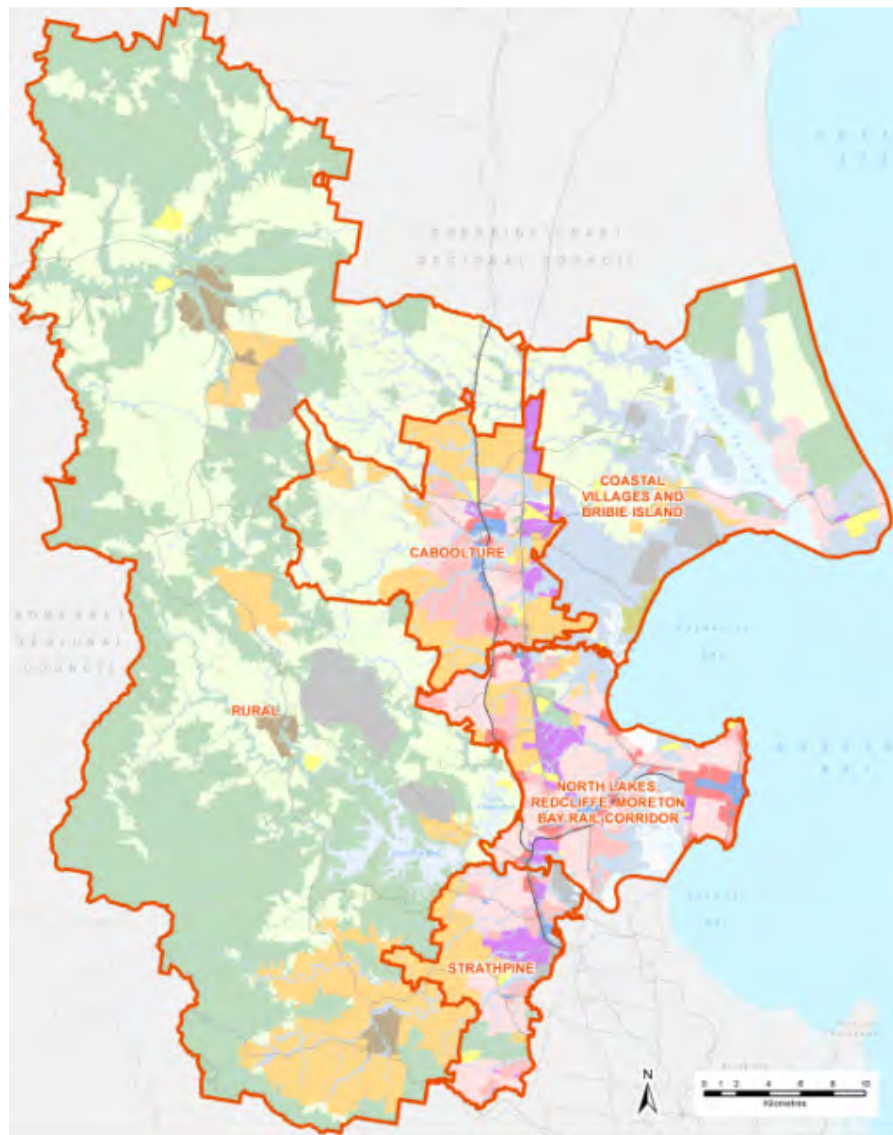


Figure 2 draft Strategic Planning Framework planning areas^{xx}

In structuring the region new major places for enterprise and employment that provide alternative destinations for journey to work for residents of the region have been located alongside the major transport corridors. The Caboolture West area is included in the Caboolture City planning area as a part of the City's accepted catchment. Within the Caboolture West area an opportunity has been identified for an enterprise and

employment area in close proximity to the D'Aguiar Highway which can be provided with direct access to the highway and the Caboolture by-pass (see area 4.5 on Figure 3).

There are 18 enterprise and employment areas listed in Table 2 plus the Principal and Major Activity Centres. Figure 3 shows the location of the enterprise and employment areas. The figure does not include the potential new intermodal freight terminal identified in the Queensland Government Connecting SEQ 2031 strategy.^{xxi} The strategy proposes a location between Caboolture and Beerburrum to service the Moreton Bay and Sunshine Coast areas and freight from northern Queensland but does not show a location. Should this proposal eventuate it would have significant implications for the take up/demand for industrial land in the northern corridor.

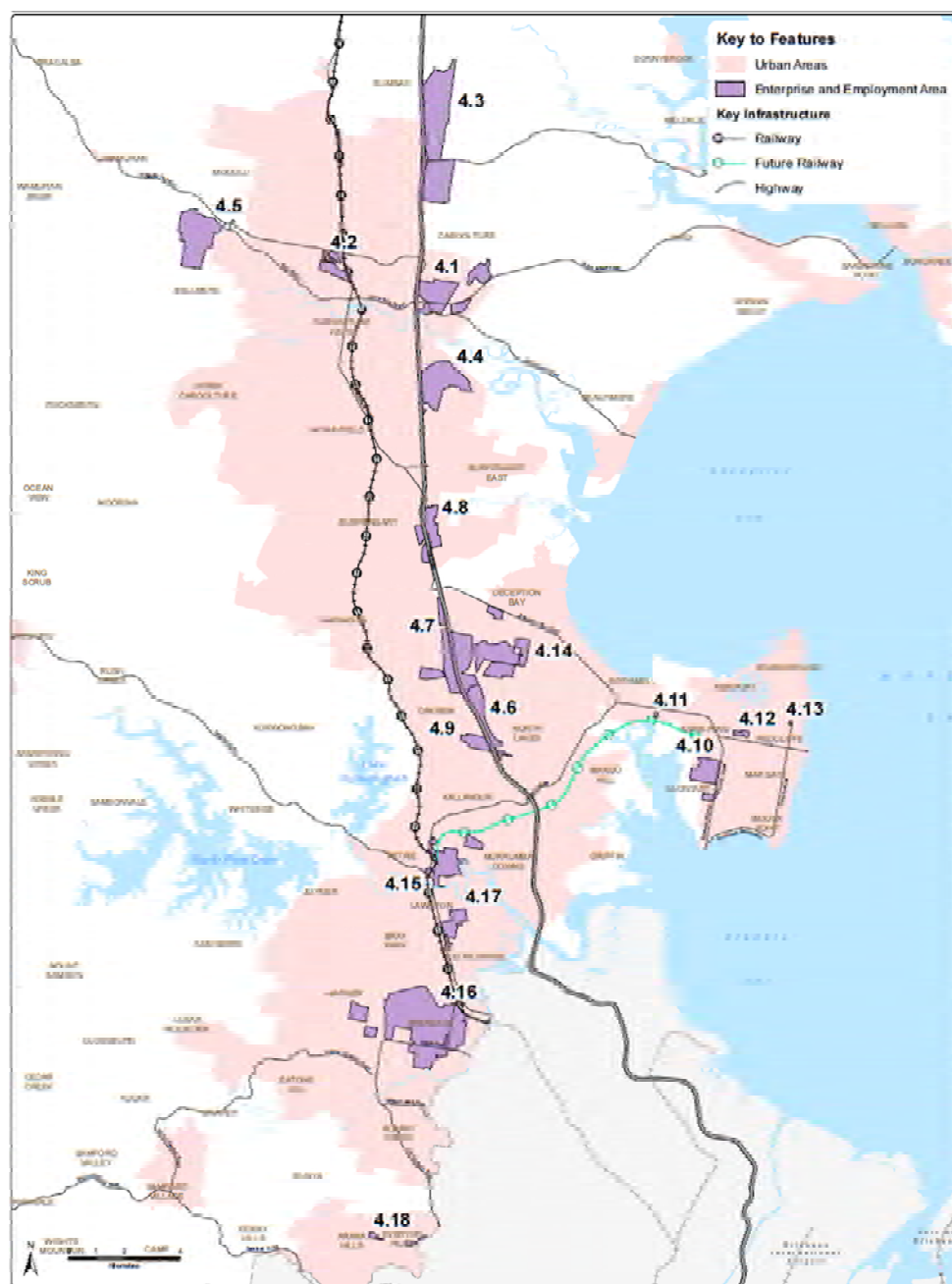


Figure 3 location of Enterprise and Employment Areas

Council's draft PIP industry employment assumptions for the major employment areas are shown in Table 2 below:

Major employment areas	Figure 3 Map ref.	2011	2031
Caboolture City		3,436	9,433
• Aerodrome Caboolture	4.1	1,227	2,019
• Industry Caboolture, Henzell Rd	4.2	1,092	1,438
• Industry Elimbah East	4.3	0	1,488
• Industry North East Business Park	4.4	0	3,063
• Caboolture West	4.5	0	0
• PAC Caboolture		204	251
• PAC Morayfield		913	1,174
North Lakes, Redcliffe MBRL		7,243	11,648
• Industry Boundary Rd, Narangba-North Lakes	4.6	1,314	2,368
• Industry Narangba, Old Gympie Rd	4.7	1,826	2,890
• Industry Burpengary, Bruce Hwy	4.8	104	671
• Industry Dakabin, Kerr Rd West	4.9	0	354
• Industry Clontarf	4.1	1,624	1,823
• Rothwell	4.11	51	51
• Kippa Ring	4.12	457	685
• Redcliffe North	4.13	84	84
• Industry Deception Bay Rd	4.14	5	26
• Industry Petrie	4.15	650	1208
• MAC North Lakes		0	27
• MAC Redcliffe		1128	1462
Strathpine City		8088	11905
• Industry Lawnton, Paisley Drive	4.15	650	650
• Industry Brendale	4.16	6,642	10,410
• Industry The Hills District	4.18	615	615
• MAC Strathpine		181	230
Total		18,767	32,986

Table 2 draft PIP industry employment assumptions

4 MBRC Industry Land Assessment

The following section describes each of the major enterprise and employment areas and their industry typology classification) identified in the Strategic Framework including the proposed enterprise and employment area in Caboolture West.

4.1 Industry Typologies and Locations

Common industrial classifications widely used in Queensland include:

- Special Industry;
- High Impact Industry;
- Medium Impact Industry; and
- Low Impact Industry.

Special Industry and High Impact Industry are sometimes referred to as Heavy Industry, require significant infrastructure including adequate useable land and buffer areas, power, gas, water, roads, etc., and involve uses that may have adverse effects on human and environmental health.

Medium Impact Industry, otherwise known as general industry, covers a broad range of manufacturing industries.

Low Impact Industry is typically small in size and does not require the infrastructural support or the buffers of Special Industry and High Impact Industry.

In SEQ, industry classifications differ amongst Local Government Planning Schemes. However, the Queensland Planning Provisions (QPP) has attempted to standardise industry classifications. Table 3 has been developed to identify the main industrial categories or typologies identified through the course of this report and the specific activity relevant to the industrial category.

Industrial Type	Activity
Low Impact Industry Industrial activities which have negligible impacts on surrounding non-industrial uses.	<ul style="list-style-type: none"> • Service trades i.e. repairing motor vehicles, fitting and turning workshops, assembling wood products, etc. • Warehousing and storage i.e. wholesaling, general non-dangerous material storage. • Mixed industry and business i.e. business parks, commercial/office activities.
Medium Impact Industry Industrial activities that have offsite air, noise and odour emissions. Despite mitigation measures these activities would still have noticeable impacts on non-industrial uses.	<ul style="list-style-type: none"> • Warehousing and storage i.e. large dangerous goods not including the storage of toxic gases • Manufacturing i.e. wooden and laminated product manufacturing (including cabinet making, joining, timber truss making or wood working), spray painting and surface coating. • Transport and logistics facilities i.e. transport depot, distribution centre, contractor's depot and storage yard.
High Impact Industry For industrial activities that have significant offsite impacts on non-industrial uses including air, noise or odour emissions that are not easily controlled or contained.	<ul style="list-style-type: none"> • Warehousing and storage i.e. storage and distribution of dangerous goods not involving manufacturing processes • Manufacturing i.e. abattoirs, concrete batching plant, boiler making and engineering and metal foundry
Special Industry The potential for extreme, adverse impacts on other land uses. This includes the potential for fire, explosion or toxic release.	<ul style="list-style-type: none"> • Manufacturing i.e. tanneries, rendering plants, oil refineries, waste incineration, manufacturing explosives, chemicals, poisons and explosives, and fertilisers involving ammonia, textile manufacturing, including carpet manufacturing, textile bleaching, dyeing or finishing.
Marine Waterfront Industry Waterfront and marine and business industry uses for which location adjoining or near the waterfront is essential.	<ul style="list-style-type: none"> • Waterfront based marine industries including any activity relating to manufacturing, storage, repair, or servicing of vessels and maritime vessels.

Non-industry uses Intended to capture approvals in non-industrial zones where industry is the predominant use approved.	<ul style="list-style-type: none"> Land uses and employment activities (retail) which have located in Enterprise and employment areas over a number of planning scheme reiterations; or Small retail hubs servicing the employment basis of the Enterprise and employment area.
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Table 3 Industry Typology

Table 4 provides a basic land supply analysis for the enterprise and employment areas within the planning areas Caboolture City, North Lakes, Redcliffe MBRL, and Strathpine City. The table excludes existing industrial areas in the Coastal Villages and Bribie Island and Rural planning areas (Figure 2) which have limited remaining zoned land and are intended to service primarily the local needs in each of these areas.

Figure	Enterprise & employment area	Occupied (ha)	Vacant gross developable land (ha) ^{xxii}	Vacant net developable land (ha) ^{xxiii}	Constrained (ha)	Total (ha)	Industry Type (Figure 6)
Caboolture City Planning Area							
4.1	Aerodrome Caboolture	72	57	37.6	149	278	Low to Medium
4.2	Caboolture, Henzell Road.	35	3	2.1	16	54	Low
4.3	Elimbah East	0	292	204	108	400	Low to Medium
4.4	North East Business Park	0	176	123.2	0	176	Low – Medium & Marine
4.5	Caboolture West ^{xxiv}	0	93	74.4	157 ^{xxv}	250	Low-Medium
North Lakes-Redcliffe-MBRL Planning Area							
4.6	Boundary Road, Narangba-North Lakes ^{xxvi}	45	70	49	63	179	Low
4.7	Narangba, Old Gympie Road	166	45	31.5	125	336	Low, Medium to High
4.8	Burpengary, Bruce Highway	43	40	28	8	91	Low
4.9	Dakabin, Kerr Road West	0	36	25.2	4	40	Low
4.10	Clontarf	74	2	2	2	78	Low
4.11	Rothwell	1.3	0.8	0.56	0	2.1	Low
4.12	Kippa-Ring	9.6	0.06	.06	0.88	10.6	Low
4.13	Redcliffe North	1.3	0	0	0	1.3	Low
4.14	Deception Bay Road & Lipscombe Road ^{xxvii}	22	18.5	12.95	19.5	60	Low
4.15	Petrie	58	22	15.4	123	203	Low, Medium
Strathpine City Planning Area							
4.16	Brendale ^{xxviii}	286	239	167	46	571	Low to Medium
4.17	Lawnton, Paisley Drive	42	4	2.8	7.7	53.8	Low
4.18	Hills District	15	0	0	0	15	Low

Table 4 Enterprise and Employment Areas available land^{xxix}

4.2 Caboolture City Planning Area

Council's long term planning aim for the Caboolture City area is a population of 190,000 people and 80,000 jobs. The Caboolture City area includes five major enterprise and employment areas (Table 4) plus some industry employment within the Principal Activity centre. Caboolture City currently provides an estimated 23,000 jobs and is forecast to increase to 51,000 jobs by 2031.

There are a number of enterprise and employment areas within Caboolture City. Collectively these are estimated to provide 14% (2,319) of the industry jobs in the major enterprise and employment areas in the MBRC urban corridor in 2011 and are forecast to increase to 27% (8,008) of industry jobs in 2031. This equates to 42% of industry jobs created in MBRC over the next 20 years in the enterprise and employment areas listed in Table 4.

The enterprise and employment strategy of Council is a long term strategy. It does not stop at 2031. While Caboolture City is, over the next 20 years, expected to increase its share of industry employment the current planning for enterprise and employment areas is laying the foundations for longer term increases in its share beyond 2031 as the available land in Strathpine City and the North Lakes Redcliffe MBRL is all but taken up by industrial development.

4.2.1 Aerodrome Caboolture

Caboolture Aerodrome Industrial Area is a major Enterprise and employment area comprising of 354 businesses. The area is bounded by the Bruce Highway to the west, Caboolture Aerodrome to the north, McNaught Road to the east and Caboolture River and Beachmere Road to the south. The area comprises mostly of Low Impact Industry (service trades and warehousing and storage/wholesaling) as well as a number of Non-Industrial Uses (retail). Additionally, businesses associated with the Caboolture Aerodrome are also located in this area.



Figure 4 Aerodrome Caboolture

4.2.2 Caboolture, Henzell Road

Caboolture Local Industrial Area is a minor Enterprise and employment area located in two sections with the southern section bounded by Toohey Street to the south, Tomlinson Road to the north and railway Parade to the east. The northern section is bounded by Old Gympie Road to the east, the D'Aguilar Highway to the north and Lagoon Creek to the south. There are 133 businesses within the two sections with Non-Industrial (housing and retail) uses accounting for the largest proportion of businesses. Low Impact Industry (service trades and warehousing & storage) accounted for the second highest proportion of businesses, while a single use, large parcel Medium Impact Industry (manufacturing) is also located in the area.



Figure 5 Caboolture Henzell Road

4.2.3 *Elimbah East*

Elimbah East Industrial Area is a major Enterprise and employment area situated along the Bruce Highway north of the Caboolture-Morayfield PAC and Caboolture Aerodrome Industrial Area. The proponents of the area propose a range of Industrial Uses, including Low Impact Industry (MIBA, service trades), Medium Impact Industry (manufacturing, warehousing and transport & logistic facilities) and High Impact Industry (regional freight distribution, large scale heavy logistic). The site is approximately 400 ha with a net developable area of 204 ha.



Figure 6 Elimbah East

4.2.4 North East Business Park

North East Business Park is a major Enterprise and employment area situated directly east of Morayfield on the Bruce Highway, and south of the Caboolture Aerodrome Industrial Area. The area will cater mostly for Low Impact Industry (warehousing & storage/wholesaling and MIBA) and some Non-Industry uses (bulky retail). Some Marine Industry may be located in the area.



Figure 7 North East Business Park

4.2.5 Caboolture West

The Caboolture West Enterprise and employment area is situated close to the D'Aguilar Highway. The proposal includes a range of Low Impact Industry (MIBA, service trades), Medium Impact Industry (manufacturing, warehousing and transport & logistic facilities) and. The site is approximately 250 ha with a net developable area for industry of 74.4 ha.

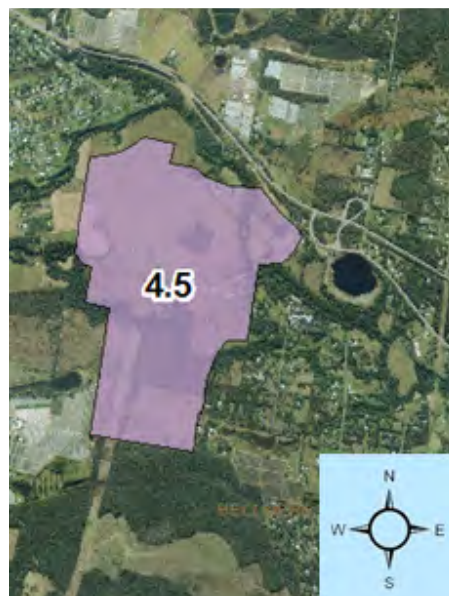


Figure 8 Caboolture West

4.2 North Lakes, Redcliffe, Moreton Bay Rail Link Corridor Planning Area

Council's long term planning aim for the North Lakes Redcliffe MBRL area is a population of 220,000 people. The area includes ten enterprise and employment areas (Table 4) plus some industry employment within the major activity centres. The North Lakes Redcliffe MBRL area currently provides an estimated 45,000 jobs and is forecast to increase to 77,000 jobs by 2031.

The ten enterprise and employment areas are estimated to provide 37.5% (6,115 jobs) of the industry jobs in the major enterprise and employment areas in the MBRC urban corridor in 2011 and are forecast to provide 34% (10,160 jobs) of industry jobs in 2031. This equates to 30% of the industry jobs created in MBRC over the next 20 years in the enterprise and employment areas listed in Table 4.

4.2.1 North Lakes

North Lakes Mixed Industry and Business Area is a major enterprise and employment area located south of Narangba Industry Area, bounded by the Bruce Highway to the west, Boundary Street to the north and the North Lakes residential area to the east. The area has a gross area of 85 ha and suited to accommodate Low Impact Industry (service trades and MIBA). It is unlikely the area will accommodate Medium Impact and High Impact Industry, although it is possible that some alternative Low Impact Industry (warehousing & storage/wholesaling) uses may located within the area, but these are likely to be small scale uses. Additionally, a large proportion of the area may be utilised for office accommodation, given its relative affordability to office accommodation in Brisbane and the ability to provide on-site car-parking for workers.



Figure 9 North Lakes

4.2.2 Narangba

Narangba Industrial Area is a major enterprise and employment area split into three distinct precincts. Precinct 1 contains mostly Low Impact Industry (service trade). Precinct 2 contains Low Impact (warehousing and storage) and Medium Impact (manufacturing and transport & logistic facilities) Industry. Precinct 3 contains High Impact and Special Industry uses which have received considerable attention in recent years due partly to a number of incidents within the industrial area, and residential encroachment. As a result, the capacity for the precinct to continue to accommodate High Impact and Special Industry is limited, and therefore Council is seeking not to locate any new Special Industry within this location.



Figure 10 Narangba

4.2.3 *Burpengary*

Burpengary Industrial Area is a major enterprise and employment area and is situated on adjoining sides of the Bruce Highway in Burpengary. Precinct 1 contains existing Low Impact Industry (service trades) and is located on the east side, and also provides some Non-industry uses (bulky good retailing). Greenfield opportunities exist directly across the Bruce Highway in Precinct 2 with the Motorway Business Park; however, a recent development application lodged with Council indicates that the proponent is proposing residential development over currently approved Low Impact Industry (MIBA).



Figure 11 Burpengary

4.2.4 Dakabin

Dakabin Industrial Area is located in the Pine Rivers District and includes land east of Old Gympie Road adjoining the existing Dakabin refuse disposal/landfill facility. The area is envisioned to cater mostly for low impact industry uses (service trades and storage) and some compatible non-Industrial uses similar to the North lakes mixed business and industry area.



Figure 12 Dakabin

4.2.5 Clontarf

Clontarf Industrial Area is a major Enterprise and employment area and is the most significant industrial precinct in the Redcliffe District, catering for Low Impact Industry (service trades and warehousing and storage/wholesaling) and Non-Industrial Uses (bulky retail) with an estimated 476 businesses within the estate. The area has experienced significant development activity and expansion in the last three to five years, with the majority of development being in industrial modules and office/warehouses. While the area has the potential to provide for a range of industrial supply chain activities, it has little capacity for expansion given the major wetlands/environmental constraints to the west and south and residential development to the north and east.



Figure 13 Clontarf

4.2.6 Rothwell

Rothwell is included as an urban place type in the draft Strategic Framework. Approximately 1.3 ha of land in this location zoned for industry purposes has been developed for predominately commercial uses in 17 tenancies and a fitness club. Approximately .8 ha of vacant low impact industrial land is available in this location.



Figure 14 Rothwell

4.2.7 Kippa Ring

The Kippa-Ring Industrial area has 163 businesses dominated by warehousing, storage and service industry uses. There is only one 600 m2 lot vacant.



Figure 15 Kippa-Ring

4.2.8 Redcliffe North

Redcliffe north has 10 businesses including metal product manufacturing, repairs and maintenance and motor vehicle parts wholesalers. There is no vacant land.



Figure 16 Redcliffe North

4.2.6 Deception Bay

Deception Bay Industrial Area is a minor enterprise and employment area divided in two sections with the southern section lying to the east of Narangba Industrial Area and is generally bounded by Boundary Road to the south and Lipscombe Road to the east. This section comprises mostly of Non-Industrial (MIBA) uses with a small percentage of Low Impact Industry (warehousing & storage) and Medium Impact Industry (manufacturing). The northern section is currently not operating as an industrial area. An amendment made to the Caboolture Shire Plan in 2012 rezoned this area from Rural to Local Industry. The area is yet to develop.



Figure 17 Deception Bay Road and Lipscombe Road

4.2.7 Petrie

Petrie is a major enterprise and employment area split into two distinct precincts. Precinct 1 contains Special Industry (Petrie Paper Mill, Amcord) now closed. Investigations are underway to determine an appropriate alternative use of the land which may include non-industrial uses hence this report does not assume build out of the Paper Mill site for industrial purposes. Surrounding land which includes areas with significant environmental values provides buffer zones from the Special Industry. Precinct 2 contains a number of Low Impact (service trades) along Anzac Avenue as well as some Non-Industrial Uses (retail) along Dohles Rocks Road.

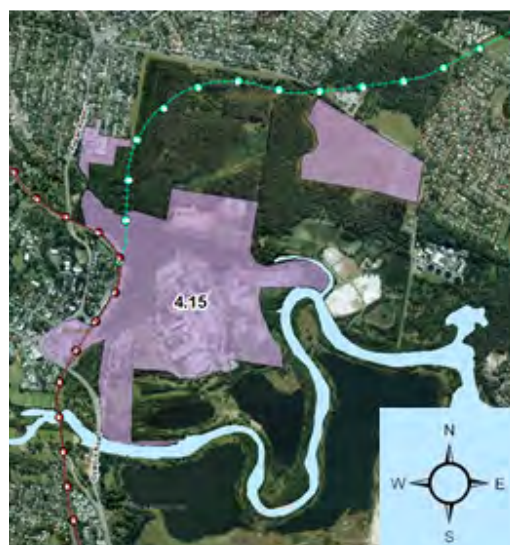


Figure 18 Petrie

4.3 Strathpine Planning Area

Council's long term planning aim for the Strathpine City area is a population of 108,000 people. The area includes three enterprise and employment areas plus some industry employment within the major activity centre. The Strathpine City area currently provides an estimated 24,500 jobs and is forecast to increase to 38,500 jobs by 2031.

The three enterprise and employment areas are estimated to provide 48% (7,907) of the industry jobs in the major enterprise and employment areas in the MBRC urban corridor in 2011 and are forecast to provide 39% (11,675) of industry jobs in 2031. This equates to 28 % of the industry jobs created in MBRC over the next 20 years in the enterprise and employment areas listed in Table 4.

4.3.1 Brendale

Brendale is currently the major enterprise and employment area in MBRC, adjoining the Strathpine MAC and providing the primary location for Low Impact (service trades and warehousing & storage/wholesaling) and Medium Impact Industry (manufacturing and transport & logistics facilities) in the Region. Over half of all vacant and developable land zoned industrial land within Pine Rivers District is within the Brendale Enterprise and employment area. Brendale has approximately 1,071 businesses, making it the largest industrial area within the Region in terms of the number of businesses. Furthermore, the area represents a regional significant business and industry area, being of sufficient size to provide a full spectrum of industrial activities and to accommodate significant sections of industrial supply chains.



Figure 19 Brendale

4.3.3 Lawnton

Lawnton is a minor enterprise and employment area containing approximately 101 businesses comprising mostly Low Impact Industry (service trades and warehousing & storage/wholesaling) and Non-industry uses (retail), but also contains pockets of Medium Impact Industry (manufacturing).



Figure 20 Lawnton

4.3.4 Hills District

Hills District is a minor Enterprise and employment area, comprising of a collection of predominantly Low Impact Industry (service trades and warehousing & storage/wholesaling) scattered across the Hills District.



Figure 21 The Hills District

5 Industrial Land Supply in MBRC

The MBILDS provides a broad analysis of industrial development and growth in MBRC and Outer Northern Brisbane. In 2010 Economic Associates was commissioned by the State Government to investigate the future demand of business and industry for land across MBRC and outer northern Brisbane to facilitate adequate and appropriate industrial land planning to meet the long term growth and development of the Region.

Table 5 shows the vacant industrial land totals (gross ha) identified in the MBILDS.

	Caboolture district	Pine Rivers district	Redcliffe district	Outer northern Brisbane	Total
MBILDS	268	221	16	1.3	506.3

Table 5 MBILDS gross vacant industrial land

This study provided an estimated gross industrial demand for the period 2011 to 2031 shown in Table 6 below.

	Caboolture district	Pine Rivers district	Redcliffe district	Outer northern Brisbane	Total
Large Footprint	82	97	1	22	202
Service Industry	64	65	0	19	148
Warehousing & storage	50	47	0	16	113
Transport uses	69	41	2	8	120
Non-industrial land uses	14	13	0	3	30
Total	279	263	3	68	613
ha/annum	13.95	13.15	0.15	3.4	30.65

Table 6 MBILDS gross industrial land demand

The study also analysed the availability of industrial land and based on an industry area benchmark of 30 employees per hectare calculated an initial land supply deficit of:

- an additional 107 hectares of Industry land not already zoned Industry will be required in the region by 2031;
- shortages in Outer Northern Brisbane (67 ha);
- Pine Rivers District (42 ha);
- Caboolture District (11 ha); and
- modest surplus in Redcliffe District (13 ha).

The results of this initial assessment are shown in Figure 22. The Caboolture District and Pine Rivers District have an adequate supply of industrial land to meet demand until around 2026, while outer northern Brisbane fails to meet demand in the short term.

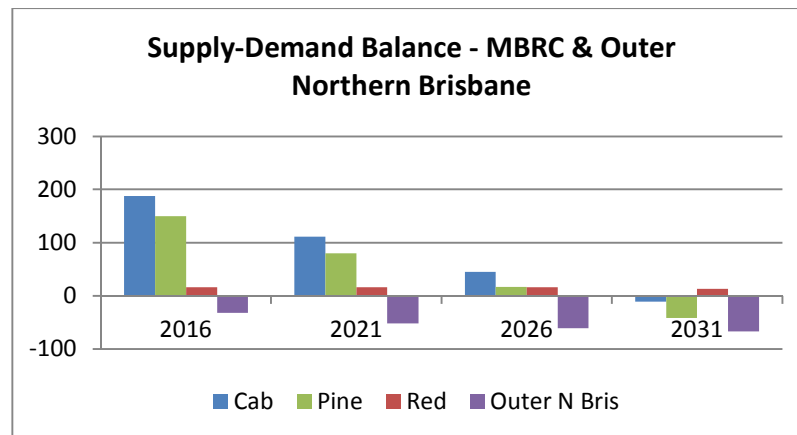


Figure 22 MBILDS supply-demand balance

This initial land supply assessment needs to be revised upwards based on the fact that there is a mismatch between the land that is available and the land that the forecast industry types will require in the future and the demand for land in the outer northern Brisbane area cannot be met from within that area. Assuming Redcliffe District has zero industrial land supply remaining, the report found that an additional 262 gross ha of unconstrained industrial land would need to be identified by 2031 for the Caboolture and Pine Rivers districts, comprising approximately:

- 42 hectares of land within the Pine Rivers District to accommodate a mix of Low Impact (service trades) and Medium Impact Industry (manufacturing and transport logistic facilities);
- 100 hectares of land within the Caboolture District to accommodate Low Impact (warehousing & storage/wholesaling) and Medium Impact Industry (manufacturing and transport logistic facilities); and
- 120 ha of industrial land supply within outer northern Brisbane area for a variety of Low Impact, Medium Impact and High Impact Industry as well as the likely relocation of industrial activity from the Zillmere Industrial Area.

Based on the initial assessment it is estimated that Caboolture district and Pine Rivers district will experience 13.95 ha and 13.15 ha of gross industrial land demand per annum respectively (Table 6). If the unmet demand in Brisbane City is to be met from industrial land supply in MBRC this will increase the rate of demand in MBRC from an overall 27 ha per annum to 31 ha per annum. Assuming this additional demand is split equally between the Pine Rivers district and the Caboolture district this changes the industrial demand from 13.95 ha to 15.8 ha/annum in Caboolture district and 13.5 ha to 15.3 ha/annum in the Pine Rivers district.

Table 7 shows the gross vacant developable land totals identified in the MBILDS plus additional potential gross ha developable industrial land identified by MBRC requiring further planning or subject to current applications.

	Caboolture district (ha)	Pine Rivers district (ha)	Redcliffe district (ha)	Outer northern Brisbane (ha)
MBILDS	268	221	16	1.3
Rothwell			+0.8 less 15.13 ha ^{xxx}	
West Brendale		28		
Balance CSR (Brendale)		51		
Boundary Road North Lakes		33		
Dakabin Kerr Road West		36		
Narangba Industrial Area	9			
Caboolture Aerodrome ^{xxxi}	43			
Deception Bay Road	8			
Elimbah East	292			
Caboolture West	93			

Table 7 additional vacant industrial and potential industrial land (gross ha)

Table 8 shows the revised vacant gross ha land totals after a preliminary assessment of constraints (i.e. they exclude areas subject to flooding and environmental values assessed at about 40% of raw land area).^{xxxii} Further investigations are required to refine the initial constraints assessment.

	Caboolture district (ha)	Pine Rivers district (ha)	Redcliffe district (ha)	Outer northern Brisbane (ha)	Total (ha)
MBILDS	268	221	16	1.3	506
Potential unconstrained industrial land identified by MBRC	425	148	1.8	0	575
Total	693	369	1.8	1.3	1065

Table 8 Revised vacant industrial and potential industrial land totals (gross ha)

The AECGroup advised Council in its Future Land Demand Study that, as a rule of thumb, when an industrial area reaches 65% to 75% capacity further growth slows dramatically. The Pine Rivers district has 221 ha vacant and developable (MBILDS) plus potentially 148 ha subject to the outcome of planning investigations yet to be undertaken/completed. Without the additional investigation areas the supply of industrial land in the Pine Rivers district would reach 75% capacity before 2023 at 13.5 ha per annum, or 2022 at 15.3 ha per annum. With the additional investigation areas the supply of industrial land in the Pine Rivers district would reach 75% capacity before 2031 at the assumed 13.5 ha demand per annum or 2029 at 15.3 ha per annum.

The Caboolture district has 268 ha zoned industrial land (MBILDS) plus potentially 425 ha subject to the outcome of planning investigations currently underway (Deception Bay Road, Elimbah East and Caboolture West). Without the additional investigation areas the supply of industrial land in the Caboolture district would reach 75% capacity before 2026 at 13.95 ha per annum or 2024 at 15.8 ha per annum. With the additional investigation areas the supply of industrial land in the Caboolture district would reach 75% capacity by 2049 at the assumed 13.95 ha/annum, or 2045 at 15.8 ha/annum.

Overall the existing available land and potential additional land subject to investigations including Caboolture West could provide between 34 years (31 ha/annum) and 40 years (27 ha/annum) supply of industrial land.

6 Industry Employment Assumptions 2013

This section provides an overview of MBRC's employment assumptions and how they were achieved. It also provides industrial employment projections over the forecast time period (2011-2031) for the enterprise and employment areas identified in the draft Strategic Framework. Planning assumptions are necessary to inform the preparation of infrastructure network plans and the priority infrastructure plan (PIP). They relate to the type, scale, location and timing of development as envisaged in the planning scheme. The PIP Employment Assumptions for the forecasting of economic growth in MBRC were based on:

- the National Institute of Economic and Industry Research (NIEIR) report commissioned by the Office of Urban Management, and the Council of Mayors (SEQ) to develop employment and economic projections for South East Queensland;
- the Economic Associates Moreton Bay Industrial Land Demand Study commissioned by the Department of Infrastructure and Planning;
- The AEC Group Ltd. Future Land Demand Study commissioned by MBRC ;
- The MBRC GIS analysis of existing land use and land suitability and capability;
- The online economy .id economic profile for MBRC; and
- The draft Strategic Framework.

Using SLA employment forecasts by NIEIR, Council undertook a review at SLA level to reflect the advice provided by Economic Associates and the AECGroup, MBRC Master Planning work program, and development applications/enquiries. Council also undertook a lot level analysis of existing business and industry land use and floor space to verify the existing distribution of employment and the capacity to accommodate the forecast employment. The revised SLA forecasts were then used as the control totals/targets for the lot level distribution of employment at 2011 and 2031.

Table 9 shows the industry employment assumptions in the current draft PIP. These assumptions have regard to the availability of vacant land in existing industrial areas; development applications for industrial development in areas not yet zoned for industry and in which infrastructure is yet to be made available; and areas identified by Council in the draft Strategic Framework as possible new industrial areas requiring investigation. As such the assumptions reflect one possible scenario for how the demand for land for industry purposes might be met in future and are used to inform Council's infrastructure planning.

PIP Industry employment assumptions	2011	2016	2021	2026	2031
Caboolture City	3,436	4,845	5,855	7,576	9,433
• Aerodrome Caboolture	1,227	1,571	1,643	1,763	2,019
• Industry Caboolture, Henzell Rd	1,092	1,187	1,257	1,348	1,438
• Industry Elimbah East	0	0	450	969	1,488
• Industry North East Business Park	0	854	1,154	2,107	3,063
• PAC Caboolture	204	215	227	239	251
• PAC Morayfield	913	1,018	1,124	1,150	1,174
• Caboolture West	0	0	0	0	0
North Lakes Redcliffe MBRL	7,053	8,390	9,880	10,647	11,041
• Industry Boundary Rd, Narangba-North Lakes	1,314	1,556	2,018	2,250	2,368
• Industry Burpengary, Bruce Hwy	104	168	648	664	671
• Industry Clontarf	1,624	1,678	1,697	1,806	1,823
• Rothwell	51	51	51	51	51
• Kippa Ring	457	648	660	672	685
• Redcliffe North	84	84	84	84	84
• Industry Dakabin, Kerr Rd West	0	0	195	354	354
• Industry Deception Bay Rd	5	18	26	26	26
• Industry Narangba, Old Gympie Rd	1,826	2,326	2,547	2,718	2,890
• Industry Petrie	460	495	530	565	600
• MAC North Lakes	0	27	27	27	27
• MAC Redcliffe	1,128	1,339	1,397	1,430	1,462
Strathpine City	8,088	9,575	10,506	11,090	11,905
• Industry Brendale	6,642	8,123	9,034	9,601	10,410
• Industry Lawnton, Paisley Drv	650	650	650	650	650
• Industry The Hills District	615	615	615	615	615
• MAC Strathpine	181	187	207	224	230
Total	18,577	22,810	26,241	29,313	32,379

Table 9 draft PIP industry employment assumptions

Figure 23 shows the land supply modelled in the draft PIP (2011/12) converted to gross ha/annum land assumed developed for industry purposes. The area required to accommodate industry employment was derived from the draft PIP employment assumptions divided by the gross employment density. The gross employment density is based on an assessment of the predominant type of industry likely to be established in each enterprise and employment area (i.e. large footprint industry areas also containing a mix of other industry types 19.5 jobs/ha; service industry areas 22 jobs/ha; warehousing and transport areas also containing a mix of low impact industry types 20.5 jobs/ha). The figure also assumes that 0.5% of the gross industrial land would be used for non-industrial uses based on the incremental gross industrial land estimates in the MBILDS. The dashed orange and red lines are the target ha/annum based on the MBILDS land demand estimates of between 27 and 31 ha/annum gross. The table differentiates between industrial land that is zoned and land identified for industrial purposes but not yet zoned. The graph shows the diminishing contribution of zoned land (blue line) to accommodating new industry jobs as the land supply is taken up, and the increasing contribution/necessity of new planned industrial areas (red line) to accommodating new industry jobs. On the

surface the graph seems to indicate that planned supply is adequate to meet the basic supply identified in the MBILDS.

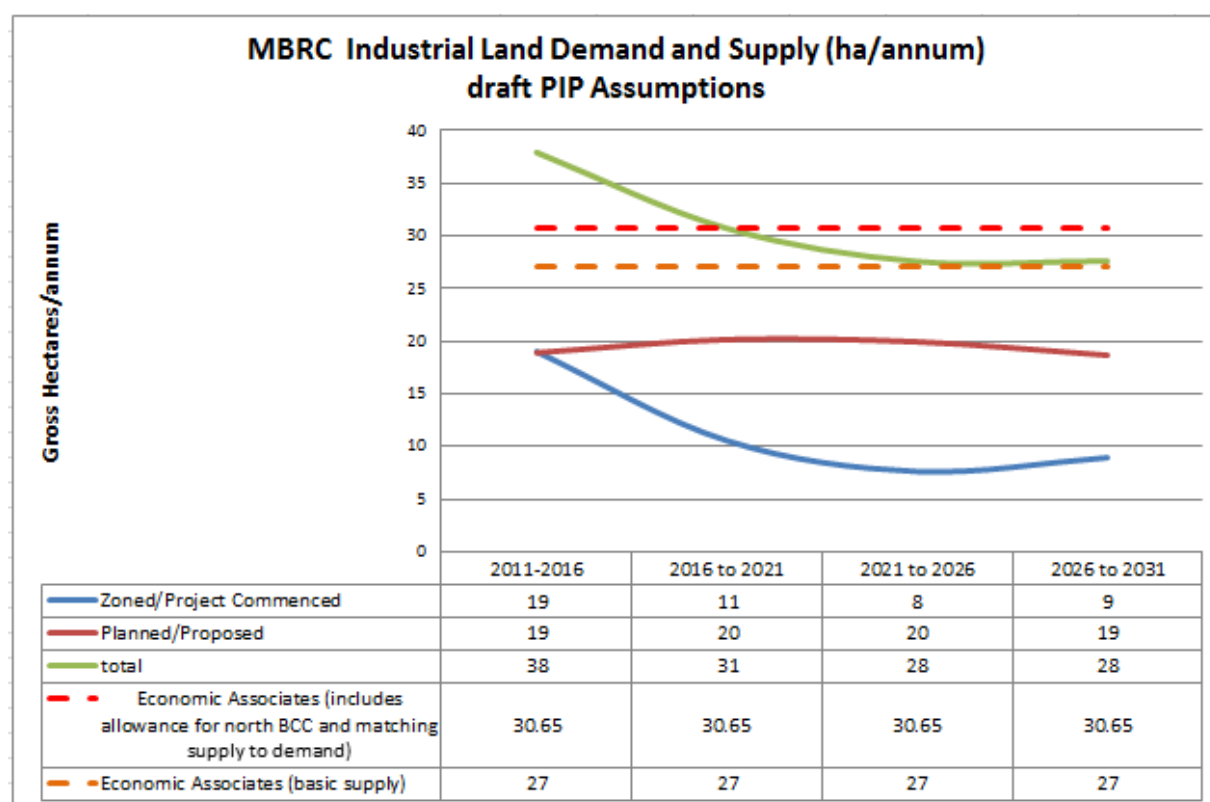


Figure 23 draft PIP industrial land supply assumptions 95% utilisation of industry land

The vacant gross developable lands listed in Table 4 provide an indication of the potential capacity of each of the proposed enterprise and employment areas to accommodate the assumed industry jobs however industrial land is also used for non-industrial purposes. The MBILDS found that existing industrial areas throughout the region included a significant number of non-industrial businesses - (39.8% in the case of Brendale, Everton Hills 29%, Kallangur 41.5%, Bongaree 29%, Caboolture 41%, Deception Bay 90%, Narangba 40%). The infiltration of non-industrial uses into industrial areas is a key issue and needs to be factored in to the assessment of available land for future industrial uses. Figure 24 below includes an assumption that up to 15% of the gross future industrial land supply will be taken up by non-industrial businesses in the enterprise and employment areas and that up to a third of the remnant industrial land remaining in the principal/major activity centres where Council is seeking to increase employment densities will be taken up by non-industrial uses. Comparison of the two Figures 23 and 24 indicates the potential impact of ongoing infiltration of non-industrial uses into industrial areas. In this case in the face of competition between industrial and non-industrial land uses the planned supply is inadequate to meet the basic supply identified in the MBILDS.

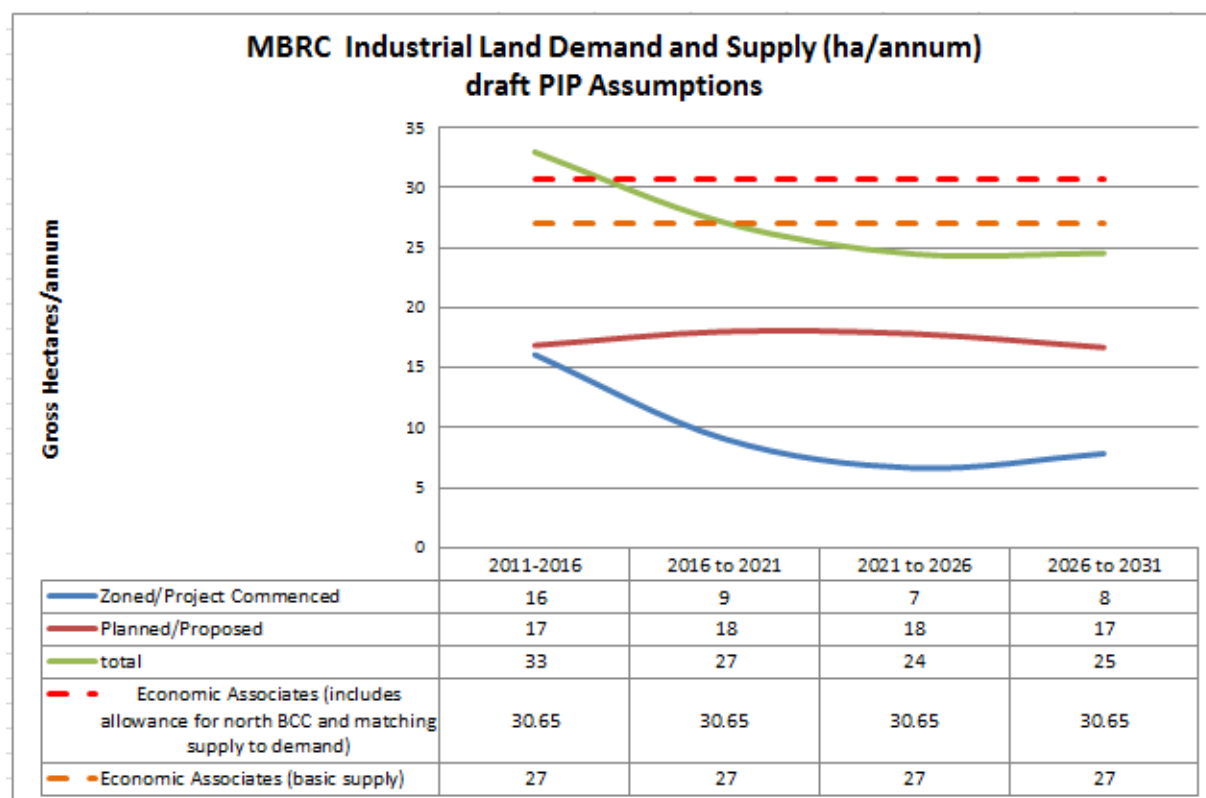


Figure 24 draft PIP industrial land supply assumptions with allowance for non-industrial land uses in industrial areas

Table 10 shows revised industry employment assumptions that have factored in the capacity of enterprise and employment areas to accommodate growth, the limits to that growth, an increased rate of development of Elimbah East and adding in a new enterprise and employment area at Caboolture West. Elimbah East is identified in the SEQ Regional Plan but not yet reflected in the MBRC planning scheme and currently lacks a master plan for provision of services. The planning for Caboolture West has identified an opportunity for a new industrial area adjacent to the D'Aguiar Highway.

	2011	2016	2021	2026	2031	Build out
Caboolture City	3,436	4,806	6,196	8,936	11,669	17,046
• Aerodrome Caboolture	1,227	1,571	1,643	1,763	1,875	2,226
• Industry Caboolture, Henzell Rd	1,092	1,148	1,148	1,148	1,148	1,148
• Industry Elimbah East	0	0	900	1,938	2,976	4,883
• Industry North East Business Park	0	854	1,154	2,107	3,063	3,291
• PAC Caboolture	204	215	227	239	251	1,554
• PAC Morayfield	913	1,018	1,124	1,150	1,174	913
• Caboolture West	0	0	0	591	1182	3,031
North Lakes Redcliffe MBRL	7,053	8,259	9,808	10,400	10,679	11,292
• Industry Boundary Rd, Narangba-North Lakes	1,314	1,556	2,018	2,250	2,368	2,612
• Industry Burpengary, Bruce Hwy	104	168	648	664	671	852
• Industry Clontarf	1,624	1,661	1,661	1,661	1,661	1,661
• Rothwell	51	55	66	66	66	66

	2011	2016	2021	2026	2031	Build out
• Kippa Ring	457	457	457	457	457	458
• Redcliffe North	84	84	84	84	84	84
• Industry Dakabin, Kerr Rd West	0	0	195	354	354	673
• Industry Deception Bay Rd	5	92	178	265	351	351
• Industry Narangba, Old Gympie Rd	1,826	2,326	2,547	2,578	2,578	2,578
• Industry Petrie	460	495	530	565	600	828
• MAC North Lakes	0	27	27	27	27	0
• MAC Redcliffe	1,128	1,339	1,397	1,430	1,462	1,128
Strathpine City	8,088	9,594	10,544	11,146	11,980	12,208
• Industry Brendale	6,642	8,123	9,034	9,601	10,410	10,638
• Industry Lawnton, Paisley Drive	650	669	725	725	725	725
• Industry The Hills District	615	615	615	615	615	615
• MAC Strathpine	181	187	207	224	230	230
Total (total rounded)	18,500	22,600	26,500	30,500	34,300	40,500

Table 10 revised PIP industrial employment assumptions

Figure 25 shows the assumed percentage build out of the enterprise and employment areas at 2031 in the revised PIP assumptions. The green bar shows the extent of land developed at 2011, the red bar shows the assumed additional land area developed by 2021, and the blue bar shows the assumed land developed for industry by 2031. Where there is a gap between the top of the blue bar and the 100% graph line this indicates the remaining land planned to be available for industrial development post 2031. Almost all of the areas with potential for industry development post 2031 are located north of the Pine River.

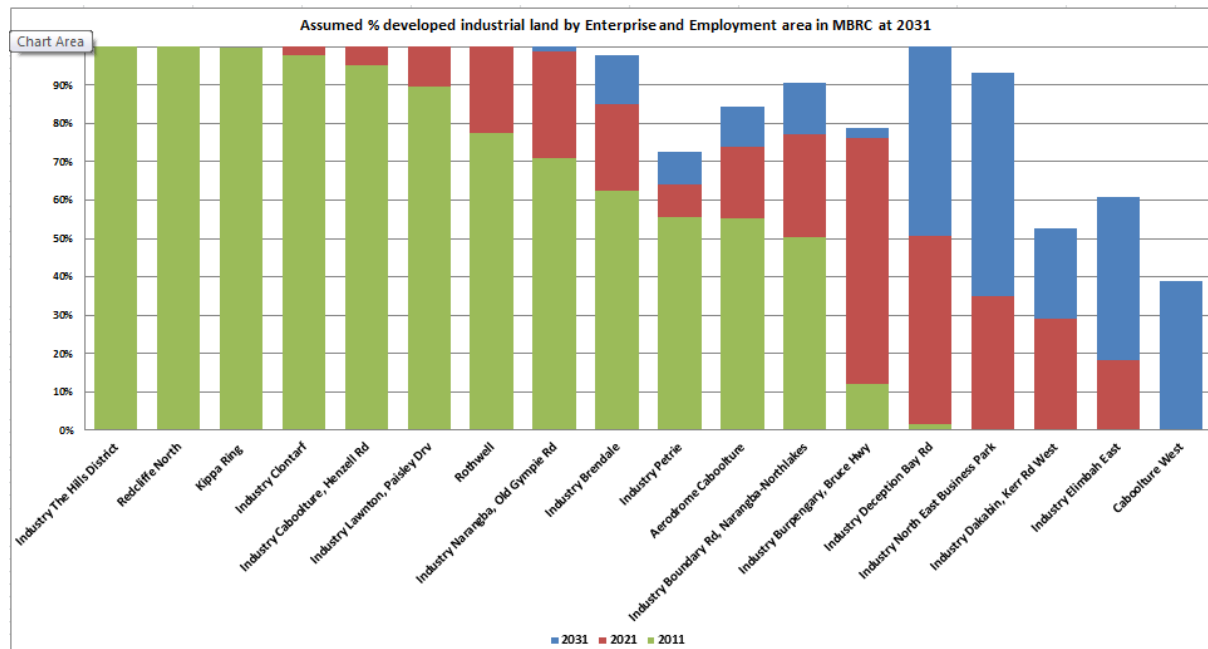


Figure 25 assumed developed industrial land at 2031

Figure 26 shows the land supply modelled in the revised PIP in terms of ha/ annum gross ha of land assumed developed for industry purposes and includes an allowance for use of industrial land for non-industrial purposes as in Figure 24 above. The dashed orange and red lines are the target ha/ annum based on the Economic Associates land demand. In this scenario with increased employment in the Elimbah East area and bringing

forward the commencement of the Caboolture West proposed enterprise and employment area the supply of industrial land increases to within the target range based on the demand calculations by Economic Associates. The choice of Elimbah East and Caboolture West is based on the fact that these areas are in single ownership, are subject to current master planning and may be of sufficiently large scale (Elimbah East 400 ha, Caboolture West 250 ha) that could feasibly contribute to the cost of providing services required to allow development. Land around the Caboolture Aerodrome is in multiple ownership and smaller parcels (54 ha) and planning investigations have not yet commenced.

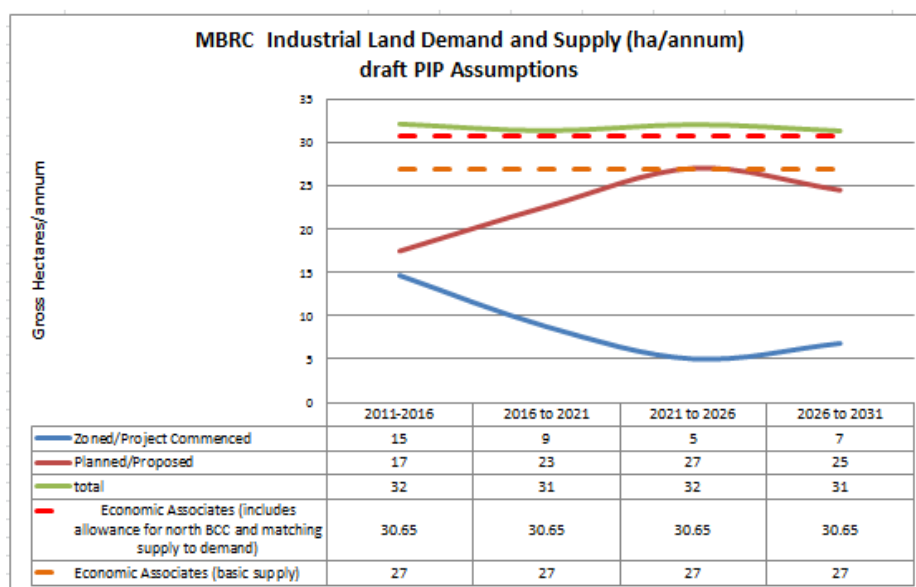


Figure 26 revised PIP land supply assumptions

The analysis undertaken by Council indicates that the supply of zoned industrial land in the Pine Rivers district can be augmented in the medium term by additional land at West Brendale, Dakabin, and North Lakes which are not currently zoned and Brendale (CSR approved development). Without these new areas being opened up the Pine Rivers industrial land market will start to be affected by supply constraints sometime after 2021.

Post 2031 based on the industry employment assumptions in Table 10 there is potentially 370 ha of gross vacant industrial land available in enterprise and employment areas in MBRC, of which:

- 65% is located in Caboolture City;
- 22% in North Lakes, Redcliffe, MBRL; and
- 13% in Strathpine City.

Within Caboolture City post 2031:

- Elimbah east could provide 58% of the gross vacant industrial land (yet to commence);
- North East Business Park 15% (which has only recently commenced development);
- Caboolture West 16% (in the planning stage); and
- Caboolture Aerodrome 10% (identified in the draft Strategic Framework for investigation).

The analysis indicates that in the longer term MBRC will come to rely on the availability of industrial land supply in the enterprise and employment areas in Caboolture City to support continued growth. This analysis indicates that the proposed Caboolture West enterprise and employment area has a role to play in supplying a competitive industrial land market, helping to provide location choices for a variety of different industry types and averting shortfalls in industrial land supply in the MBRC area in the longer term.

7 Regional Industry Employment

Figure 27 shows North Metropolitan Brisbane's (excluding Australia Trade Coast) industrial growth. It shows Outer Northern Brisbane, Strathpine and North Lakes-Redcliffe-MBRL have similar Industry employment in 2011. However, as demand outmatches supply, Outer Northern Brisbane's growth begins to decline while Strathpine's and North Lakes-Redcliffe-MBRL's increases. Caboolture City is the fastest growing in terms of Industry jobs.

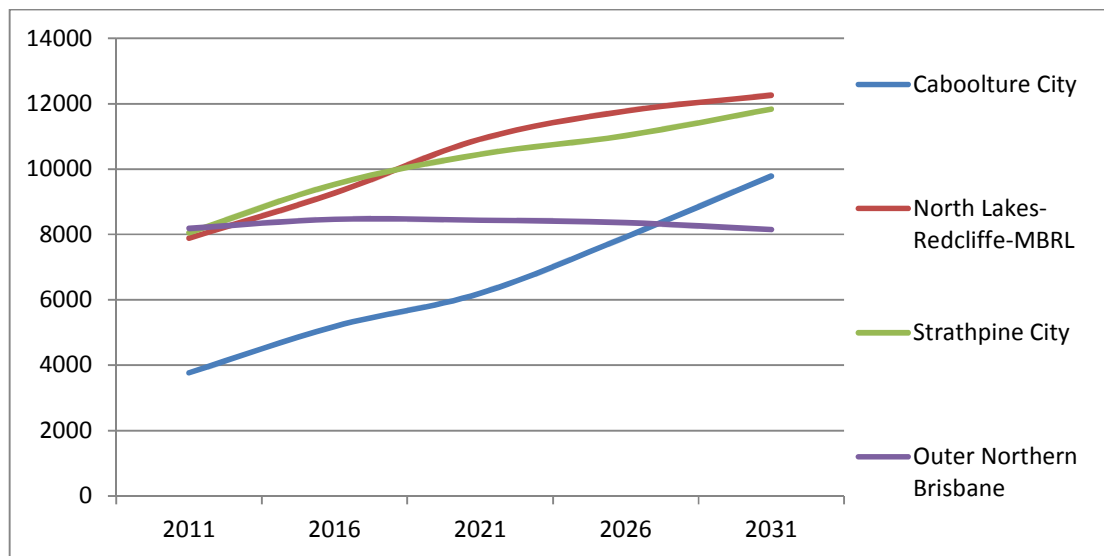


Figure 27 north Brisbane metropolitan growth corridor industry job growth

Figure 28 shows the comparative growth rates of industrial jobs between 2011 and 2031 of MBRC, Brisbane City Council (BCC), Sunshine Coast Regional Council (SCRC) and Ipswich City Council (ICC) based on their current PIP employment assumptions. It indicates that BCC's Industry jobs will experience relatively strong growth over the short term, until it flattens and declines toward the end of the forecasted time period. MBRC's and ICC's Industry employment will grow rapidly, due to their respective large supply of industrial land. ICC's PIP Employment Assumption forecasts 207,608 Industrial jobs in the LGA at 2051.

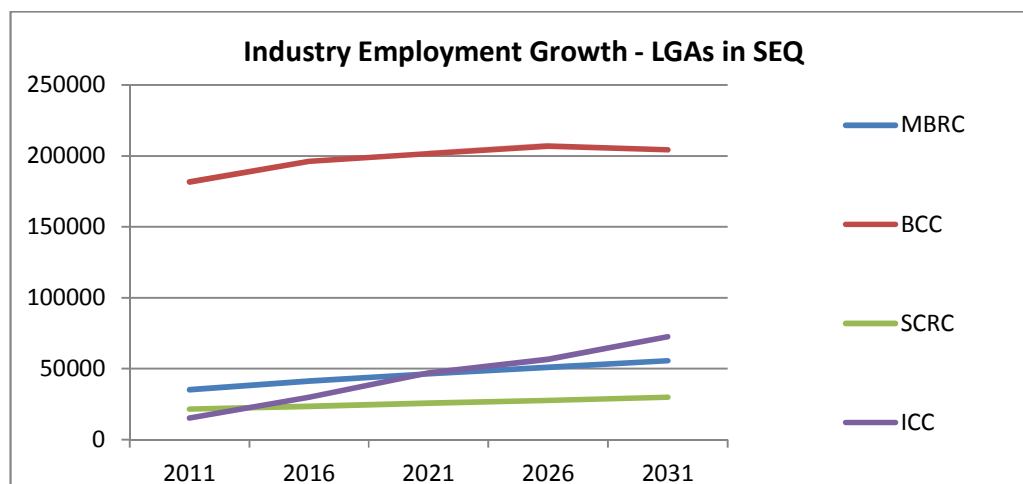


Figure 28 industry employment growth by LGA

8 Caboolture West Enterprise and Employment Area Concept

The Caboolture West Master Plan work being undertaken by MBRC includes provision for an enterprise and employment area in the north east quadrant of the study area in close proximity to the D'Aguilar Highway. The area will serve local needs of the new Caboolture West community by providing local bulky goods and service industrial needs. It will also be an important future enterprise and employment land supply that helps cater for regional industry needs. Figure 29 shows a proof of concept preliminary design of the area.

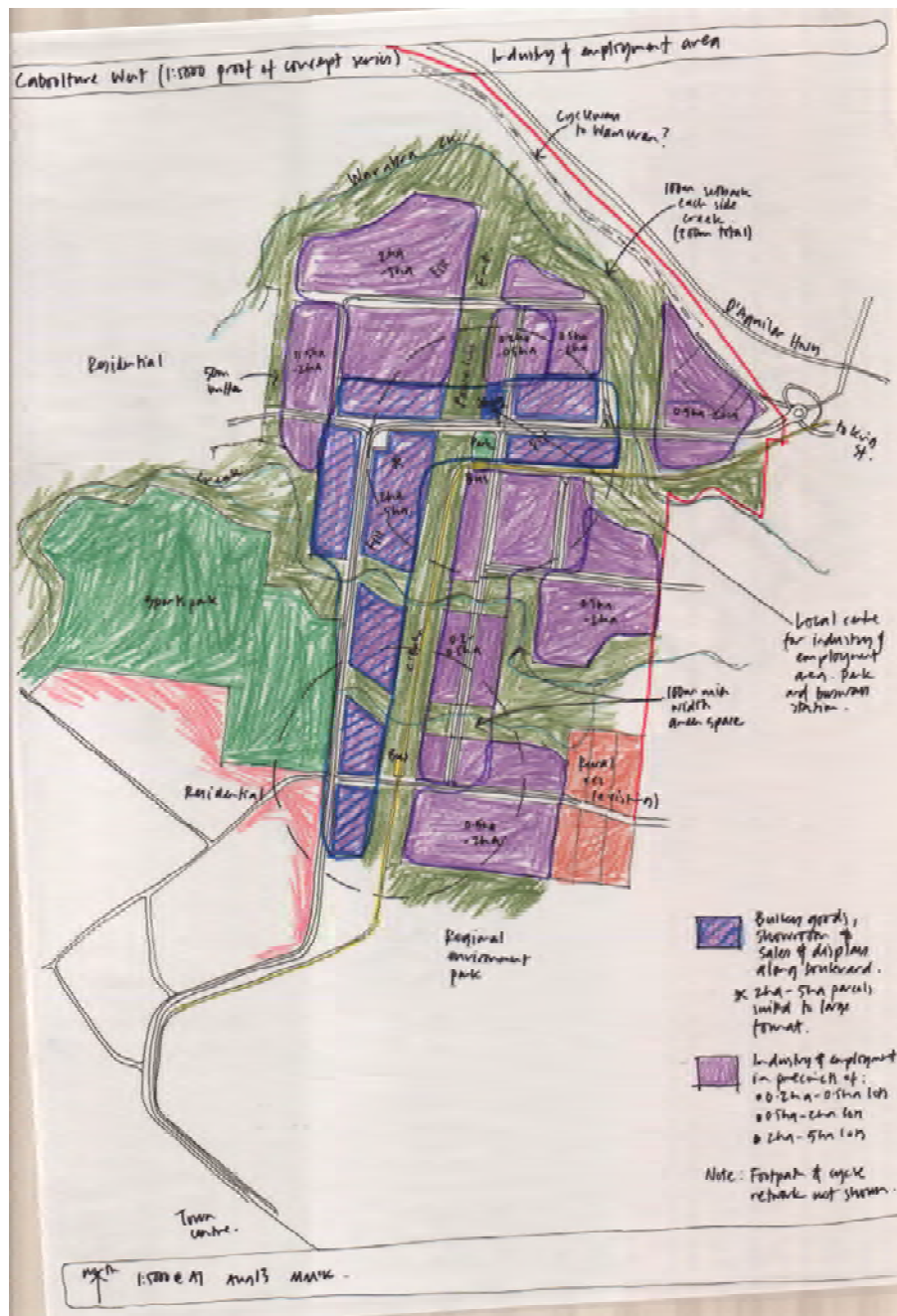


Figure 29 enterprise and employment area development concept Caboolture West

The design concept features:

- The gross area (all land) for this precinct is 250ha with a developable site area of 130 ha;
- Access to the D'Aguilar Highway is via a new interchange and boulevard that crosses Wararba Creek. The interchange marks the start of a major boulevard that traverses the Caboolture West site and connects to the town centre to the south. The boulevard is also proposed to provide a C-Bahn rapid bus connection to Caboolture City centre and as such provides a 10 minute public transport connection between the Caboolture City Centre, and stations in the Caboolture West town centre and the enterprise and employment area;
- The enterprise and employment area includes provision for bulky goods, showroom, sales & display businesses along the industry boulevard;
- Industry lots are proposed in three precincts, based on size ranging from 2000m² to 5ha with two thirds of the lots being small to reflect the main focus in the area on low impact service industry, warehouse and storage, transport with some provision for general industry uses possibly/ideally associated with the agricultural production, processing, distribution supply chain.

	Site Area Ha	Net developable area (excludes local access roads)	Jobs
Bulky goods, showroom, sales & display	37.5	32	2300
Industry and business 0.2ha-0.5ha precincts	19.7	17	650
Industry and business 0.5ha-2ha precincts	50	43	1630
Industry and business 2ha-5ha precincts	23	20	750
Total	130	111	5350

Table 11 Caboolture West enterprise and employment area employment assumptions

- The area divided into flood free development precincts by green infrastructure elements;
- Industry is buffered from residential development to the west by commercial development;

Appendix 1 - NIEIR 2008/9

The Economic Activity and Employment Forecasts: 2006-2026, prepared by the National Institute of Economic and Industry Research (NIEIR), was released in 2008 after the Office of Urban Management (OUM) and SEQ Council of Mayors established a joint project to develop population, employment and economic forecasts covering SEQ. The core objective of the study was to develop a set of employment and economic activity forecasts for SEQ.

Total employment in SEQ is forecast to grow from 1,299,000 in 2006 to 2,085,923 in 2026. The largest employment growth in SEQ is Health and Community Services, with 128,182 new jobs created over the 20 years to 2026 (Figure A1.1). This is followed by Property and Business Services (119,774 jobs, of which 113,107 are in Business Services), Retail (88,651 jobs), Education (81,223 jobs) and Cultural and Recreational (51,411 jobs). Industrial employment, such as Manufacturing, will grow by 38,573 jobs while Wholesale Trade will grow by 26,974 jobs between 2006 and 2026. Additionally, the highest percentage increase in employment over the 20 years is forecast for Ipswich with total employment expected to grow by 164 per cent.

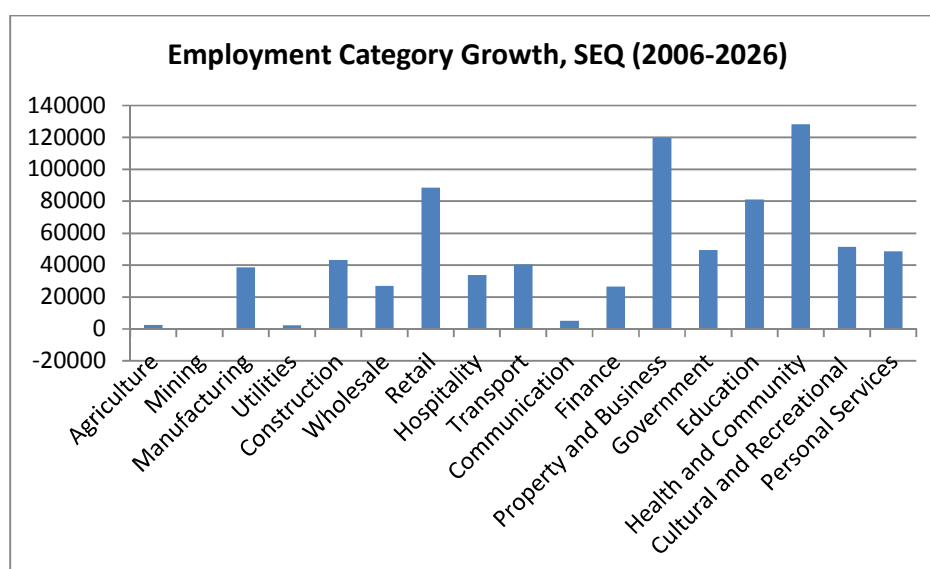


Figure A1.1 – Employment growth SEQ 2006-2026

The forecasts suggest that the SEQ economy has the potential to continue to outpace most other Australian regions over the next 20 years. However, the report recognises that industrial land zoning must be adequate to give employers confidence that they can expand efficiently over the longer term horizon. Also, nodes of industrial land zoning must be efficient in terms of the following:

- allowing industry clusters to develop to world best practice;
- allowing the efficient connection of employment to where residents live;
- providing efficient access to world markets, that is, ports, airports, etc.; and
- providing strong intra-region connectivity between key employment nodes in the metro region.

The report concludes by suggesting the relatively high effective unemployment rate of some sub-regions requires a strategy which combines reducing travel times to the major employment nodes and accelerating employment growth in nearby industrial and commercial precincts.

Appendix 2 CIGA Economic and Employment Study 2009

As part of the Caboolture West submission to the SEQ Regional Plan, an Economic Development and Employment Study was prepared by Urbis on behalf of the CIA Landowners Group. The report provides a broad overview of potential employment in an ultimate Caboolture West build out scenario. The goals of the report are:

- to identify the role that the CIA can play in contributing to economic development and employment for MBRC; and
- to identify an economic development strategy which is practically implementable, and which leverages the natural competitive advantages of Caboolture and Brisbane in a regional and global context.

The report includes insight into the recent developments in Caboolture District's industry activity, as well as a review of previous work conducted by Prosperous Places^{xxxiii} which determined that an overall need of 611 ha of appropriately zoned industrial land in the Caboolture District to meet forecasted demand. This equates to approximately 30 ha of industrial land per annum within the district.

Caboolture District provides fewer jobs than it has workers which indicate the area is a net exporter of labour. With this in mind, it is obvious that there will be significant shortfalls across numerous industries with regards to the number of workers to the number of opportunities in a given industry. In relation to industrial employment, shortfalls in the Caboolture District are shown in Table A2.1.

Industrial Type	Employment Type	Industry of Employment – Resident Jobs	Industry of Employment – Provided Jobs	Surplus / Shortfall	Provision Rate
Medium and High Impact Industry	Manufacturing	6,869	3,175	-3,694	46%
Low Impact Industry	Wholesale Trade	2,291	1,154	-1,137	50%
Low and Medium Impact Industry	Transport, postal and warehousing	3,452	1,379	-2,073	40%

Table A2.1 – Provision rate for industrial employment in Caboolture District

The report further identifies three sectors of opportunity that warrant the greatest focus for economic development in the CIA, including agribusiness and manufacturing (the third being tourism). These target sectors are identified such that there is an opportunity to increase regional export opportunities based upon the assets, strengths and gaps of the region. Such sectors include:

- Construction – manufacturing, products and services;
- Agribusiness – leveraging nearby strawberry and pineapple productions, and potentially providing services to Kilcoy agricultural industries;
- Value adding and advanced manufacturing – manufacturing is envisaged to provide services to both construction and agribusiness and potentially metal manufacturing; and
- Transport and logistics – this sector's involvement is expected to involve the movement of freight, construction and agribusiness sectors, both within and outside Caboolture.

The report concludes with discussion in relation to direct employment within the CIA, indicating that industrial employment will supply 154 ha of industrial land and employ 7,009 people at build out of Caboolture West. This equates to nearly half (48%) of the jobs located in Caboolture West being industry related, and ultimately would require nearly two-thirds of the employment land in Caboolture West. It should be noted that the methodology/calculations used in achieving these figures is not provided in the report.

Appendix 3 Economic Development Strategy

MBRC developed the Economic Development Strategy (ESD) to provide long-term direction and ensure a sustainable and prosperous future for its residents. It delivers a Vision for MBRC's economy, policy statement, economic framework structure, implementation plan, and recommended economic development management and resource plans to match the implementation plan.

The report recognises specific opportunities for growth in the Region. These opportunities are knowledge-based, innovative growth, which requires skilled workers and can contribute significant value to the regional economy. Growth opportunities are listed in Table A3.1.

Growth Sector	High Value-Adding Activity	Why Moreton Bay?
Building Product Manufacturing	<ul style="list-style-type: none"> • Metal product manufacturing • Cement, lime, plaster and concrete manufacturing • Pre-fabricated building manufacturing 	<ul style="list-style-type: none"> • Local and regional demand for product • Existing skills base • Available industrial land
Machinery and Equipment Manufacturing	<ul style="list-style-type: none"> • Industrial M&E manufacturing • Medical device manufacturing • Professional equipment manufacturing • Specialty transportation equipment manufacturing • Solar manufacturing 	<ul style="list-style-type: none"> • Established business and supply chain • Existing skills base • Available industrial land • Proximity to export infrastructure
Food and beverage manufacturing	<ul style="list-style-type: none"> • Baked goods • Processed foods • Beverage 	<ul style="list-style-type: none"> • Population growth • Available industrial land • Established business and supply chain • Proximity to export infrastructure
Professional services	<ul style="list-style-type: none"> • Professional services • Back office/processing centres • Business customer service centres • Training centres 	<ul style="list-style-type: none"> • Accessibility of skilled workers • Availability and affordability of commercial space • Significant amount of property development and land release
Transport and logistics	<ul style="list-style-type: none"> • Distribution centres • Logistics operations 	<ul style="list-style-type: none"> • Workforce • Land • Proximity and accessibility

Table A3.1

The Region traditionally has a strong manufacturing, construction and associated supply chain base. The future of the region will rely upon building the capability of these sectors and diversification through innovative activity to create clusters of high value adding and knowledge-based industry.

Appendix 4 OESR – SEQ Industrial Land Monitoring Program 2011

This section provides data from the South East Queensland Industrial Land Monitoring Program, including the State's industrial land supply and forecasted demand in SEQ and MBRC. Comparisons are made between SEQ Councils in regards to existing industrial land supply and potential industrial land supply (investigation areas). The industrial land development activity profile for the SEQ ILMP provides a comprehensive summary of industrial land development and building activity indicators for South East Queensland. Topics covered include industrial land supply, uncompleted lots (approvals, operational works and plan certifications), lot registrations, vacant land and building sales, MCUs, and industrial building activity.

The industrial land supply in SEQ as at December 2011 was 8,160 ha, with a further potential land supply of 5,012 ha in 'industry investigation areas'. Scenic Rim Regional Council had the highest amount of industrial land (1,604 ha) followed by Toowoomba study area, Ipswich City and Brisbane City, collectively contributing 68 per cent of the SEQ industrial land supply. Figure A4.1 shows the estimated industrial land supply per LGA in SEQ as well as the industrial investigation area 'supply'. (It should be noted that Figure A4.1 is not inconsistent with the findings of the MBILDS but does not reflect the estimates of land supply identified by MBRC in this report.) It demonstrates that Ipswich LGA has a potential 2,870 ha of industrial investigation area, making it the largest supplier of potential industrial land in SEQ.

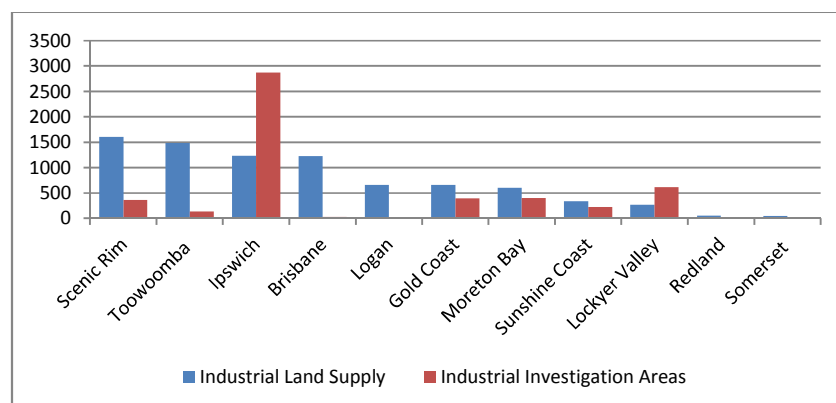


Figure A4.1 – Industrial Land Supply and Industrial Investigation Area 'Supply' (LGAs in SEQ)

The estimated consumption of industrial land for SEQ was 50 ha for the six months to December 2011 based on building approvals. While Figure A4.2 shows average annual estimated industrial land consumption for SEQ (based on building approvals) was 99 ha from 2006 to December 2011. According to the Future Land Demand Study, this is the industrial growth rate MBRC needs to attain in order to achieve a 70% employment self-containment rate by 2031. This should be compared to the industrial land demand identified in the MBILDS which is for a future demand of approximately 31 ha per annum.

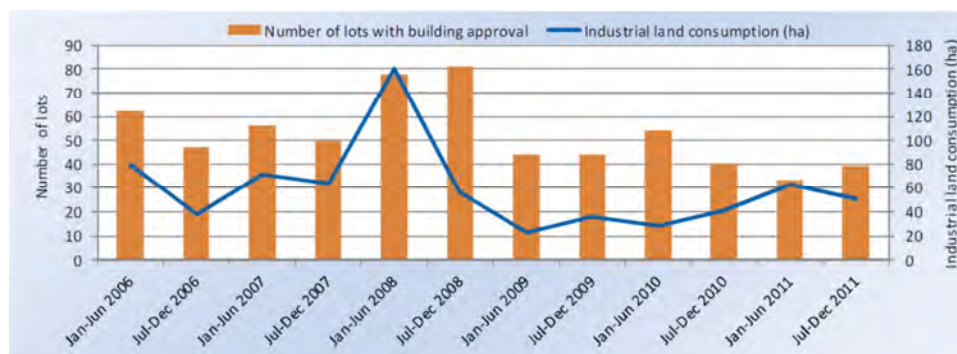


Figure A4.2 – Industrial land consumption based on building approvals over \$0.5 million, SEQ 2006 to December 2011

In MBRC, there was an estimated 599 ha of industrial land supply in MBRC as at December 2011 accounting for approximately seven per cent of the total industrial land supply for SEQ (Figure A4.3). A further 397 ha were identified as 'industry investigation areas'.

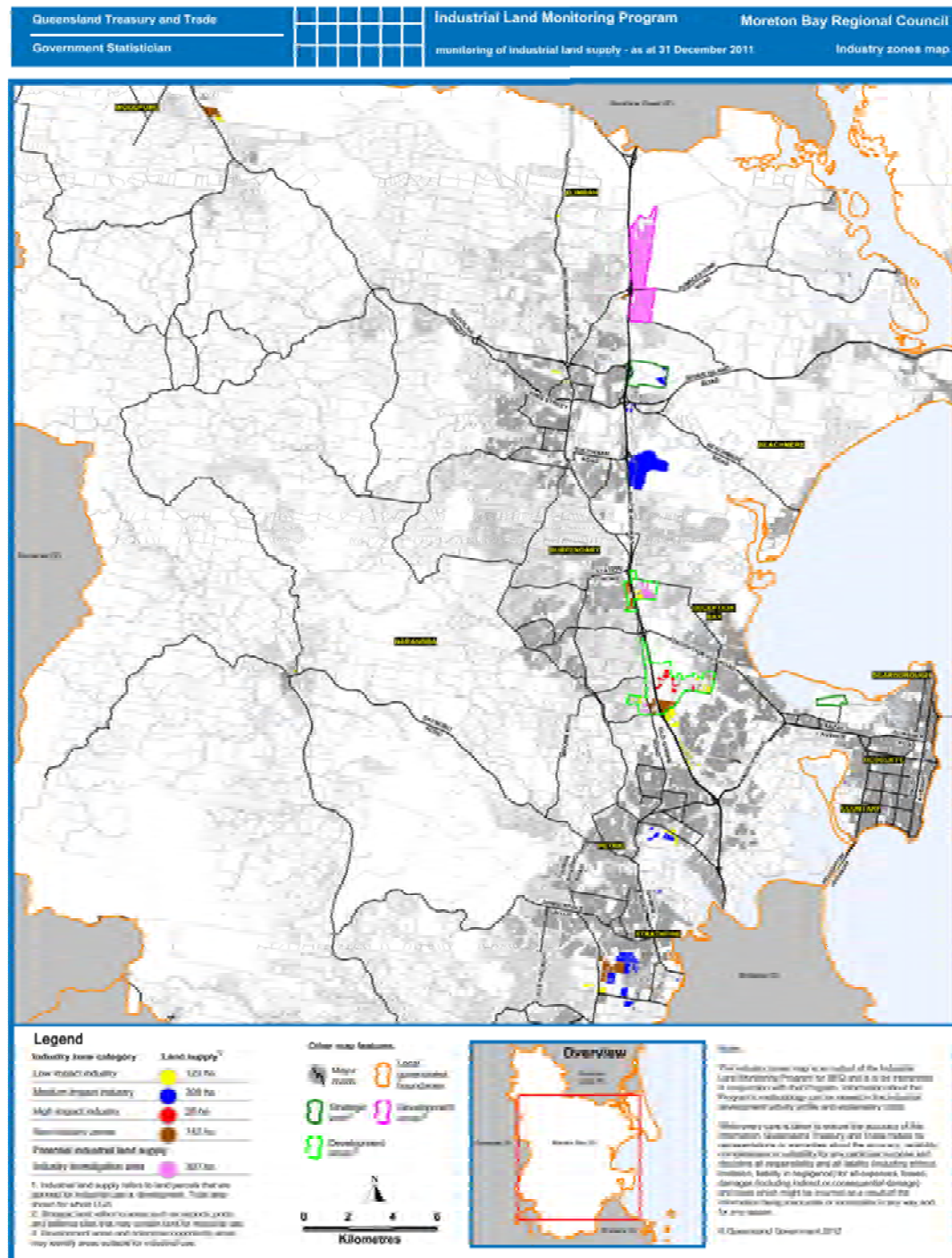


Figure A4.3 – Industry Zones Map (MBRC) as of 31 December 2011

Average annual consumption of industrial land based on building approvals over the six years to December 2011 was 8 ha per annum, whereas estimated consumption of industrial land during the six months to December 2011 was 5 ha.

Appendix 5 AECGroup – Future Land Demand Study (FLDS) 2011

AECGroup was engaged by MBRC in 2011 to identify what the economy and subsequent land use requirements in the region that may be needed as a result of a 70% self-containment employment rate. This followed Council's adoption of an Economic Development Strategy, which contained an ambitious goal of 70% self-containment in the region by 2031. The findings of this report in relation to Industry land requirements were modelled to understand the land implications of a 70% employment self-containment rate for industrial land.

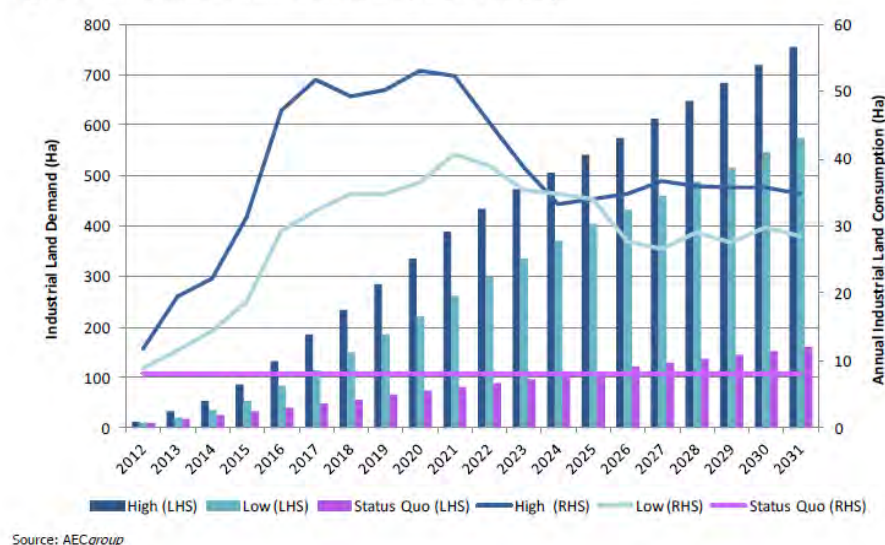
Estimates of land demand in MBRC over the coming 20 years vary greatly between each of the employment self-containment rate scenarios. However, the key finding from the report is that the total quantum of land supply in 2031 is expected to be sufficient to meet demand. However, the location and characteristics of the land supply will be an important factor in the take up of land over the coming 20 years.

Consumption of land is expected to be strong over the forecast horizon, assuming land is available in appropriate locations and at attractive market rates. Under a 70% employment self-containment scenario, land consumption is expected to occur at a rate of 99 ha per annum (see Appendix 4).^{xxxiv} This pace is significantly higher than the average 8 ha per annum recorded in MBRC between 2006 and 2010. By comparison, the Status Quo scenario has assumed an overall decline in industrial land consumption of 2.7 ha per annum.

MBRC Future Land Demand Study
Final Report



Figure ES. 6: Future Industrial Land Consumption, MBRC (ha)



Source: AECgroup

Figure A5.1

Figure A5.1 points to demand for industrial land in 2011 to be approximately 1,000 ha while the land audit has identified 1,260 ha of occupied industrial land. This discrepancy is explained through the need for buffer zones (i.e. at the Petrie Paper Mill and other large industrial operations) and the infiltration of bulky goods retailing into industrial areas. Assuming that all new demand for industrial land will need to take place on current vacant and future additional supply, demand for land under a 70% containment rate signals demand for a further 1,980 ha of land by 2031, creating a shortfall of 346 ha. Up to the 60% employment self-containment scenario, existing and future industrial land supply stocks are less than demand. Beyond this scenario, demand exceeds existing land supplies.

Appendix 6 MBRC Economic Profile 2011/12

The Moreton Bay Region's (MBR) economic profile presents information derived from sources of information (ABS) as well as NIEIR.

- 399,406 people resided within MBRC at June 2012
- 195,011 MBRC residents employed at June 2011
 - Of the 195,011 MBRC residents employed, 92,479 FTE residents worked within MBRC;
 - $92,478 \text{ FTE} / 195,011 = 47\%$ employment self-containment rate.
- this proportion has decreased since 2006.
- MBRC's Gross Regional Product was \$11.1 billion in 2012, growing 3.9% since 2011.
- Retail trade is the largest employer, generating 16,632 local jobs (15.7%) in 2011/12, and the sector grew from 2006/07. Construction is the second biggest employer, generating 13,686 FTE jobs in 2011/12, also growing from 2006/07.
- In the 2013 March quarter, the unemployment rate in MBR was 5.9%.
- The value of building approvals in MBR was \$868 million in the 2012/13 financial year, which was 5.27% of the total value in Queensland.
- In 2012, there were 26,681 businesses in the Region, the key sectors occupying industrial land in the Region in 2012 were:
 - 1,506 Manufacturing businesses accounting for 5.6% of total businesses;
 - 1,967 Transport, Postal and Warehousing businesses accounting for 7.4% of total businesses;
 - 932 Wholesale Trade businesses accounting for 5.6% of total businesses;

Manufacturing and Transport, Postal and Warehousing experienced declines in the number of businesses in Region between 2009 and 2012. In 2012, there were 132 less Manufacturing businesses and 410 less Transport, Postal and Warehousing businesses in the Region compared to 2009. Wholesale Trade grew by 11 new businesses over the time period in the Region.

Appendix 7 - Brisbane Economic Plan

The Brisbane Economic Development Plan 2012-2031 sets out the priorities and actions required to support metropolitan Brisbane's economic development to 2031. Employment forecasts indicate that metropolitan Brisbane will grow by 343,000 jobs by 2021 and a further 100,000 jobs by 2031, to reach a total employment of around 1.5 million by 2031. This growth will contribute to a projected doubling of Brisbane's economic value between 2011 and 2031. Roughly two-thirds of the new jobs will be located in the Brisbane LGA with a high proportion in managerial and professional occupations. Most of the employment growth will be located in key economic areas such as the Brisbane inner city, industrial areas within the region and in major activity centres in Brisbane, Logan, Moreton, Ipswich and Redlands. Furthermore, most growth in industry is expected to occur in the Australia Trade Coast and nearby suburbs in the north, with a second major industrial area to the southwest of the city.

Figure 1 shows that within Brisbane's LGA most new jobs will be in business and professional services, health and education. Growing demand by the resource industries gives rise to strong growth in the business and professional services industries. This is also reflected in occupation demand forecasts where the highest growth in occupations will be for managerial and professional workers.

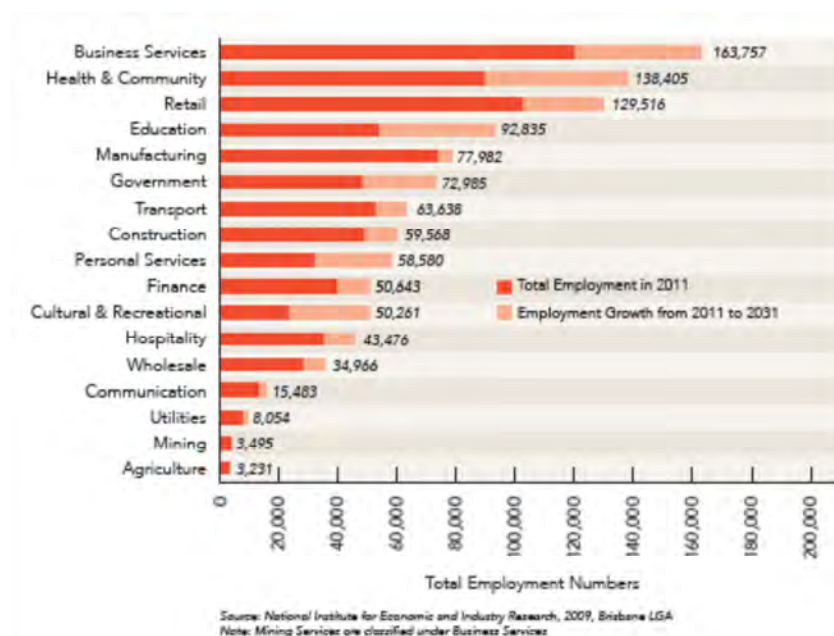


Figure A7.1— Employment by industry Brisbane LGA, 2011-2031

End notes

ⁱ **NIEIR Economic Activity and Employment Forecasts: 2006-2026, 2008.** Prepared for the South East Queensland Council of Mayors and Office of Urban Development. These economic activity and employment forecasts were prepared in 2006-07, based on an explicit, middle-of-the-road economic scenario in which South East Queensland (SEQ) was embedded in the Queensland, Australian and world economies. The study included detailed modelling of the relationship between workplaces and residential areas in SEQ. Demographic projections for residential areas prepared by the Planning Information Forecasting Unit (PIFU) were an important input to the study, as was local area planning information collected from the Queensland government and from each member council of the SEQ Council of Mayors. The study forecast an employment increase in MBRC from 82,000 jobs in 2006, to 111,500 jobs in 2016 to 127,601 jobs in 2026. The study also forecast over 360,000 additional jobs in Brisbane City by 2026 compared to only an additional 45,300 jobs in MBRC. In hindsight the NIEIR forecast underestimated the employment growth in MBRC.

ⁱⁱ **Urbis CIA Economic Development and Employment Study 2008.** This is a report prepared for the Caboolture Investigation Area Landowners Group. The report identified five sectors of the economy on which to base planning for the CIA: Agribusiness; Wood Products / Construction; Energy and Environment; Resource, Metal and Advanced Manufacturing; and Tourism plus population driven services. The report also identified three strategies for economic development; job self-containment, centre hierarchy and industry clusters. Based on achieving a resident population of 60,000 people the strategy identified the provision of 28,200 jobs in the Caboolture district of which 17,300 jobs could be provided on site in Caboolture West.

ⁱⁱⁱ **Queensland Government SEQ Regional Plan 2009.** Based on the NIEIR 2008 report the SEQ Regional Plan identifies sufficient land to accommodate a projected population of 4.4 million people and their employment and economic development needs up to 2031 in a more compact urban form. Business and industry employment in Moreton Bay will be contained predominately within Caboolture, Morayfield, Burpengary, Narangba, Strathpine, Burpengary, Narangba, Strathpine, Brendale, Lawnton, Petrie, North Lakes, Rothwell and Clontarf. Elimbah East will be a light industry area that benefits from direct access to the Bruce Highway. Any urban development in Elimbah East will be subject to infrastructure and servicing requirements. Subject to further investigation, land in the Caboolture West Identified Growth Area may also help accommodate long term employment and enterprise growth. The SEQ Regional Plan is based on projections of population and forecasts of jobs that underestimate growth in MBRC.

^{iv} **AECGroup Economic Development Strategy Report 2010.** The MBRC Economic Development Strategy provides a specific economic vision for the future and strategic direction for economic development activities to achieve this vision over the next 15 years. The Economic Development Strategy strives to achieve the ambitious target of 70% employment self-containment by 2031. As self-containment is the ratio between workers who live and work in a region to the total resident workforce, the goal is to have 70% of the Moreton Bay region's resident workforce working in the Moreton Bay region, rather than travelling elsewhere for employment. While this target is beyond the intended life of this project, this strategy will help move the Moreton Bay region towards achieving this long-term, aspirational target. Key directives of the strategy are: 1) To assist local companies to grow and prosper; 2). To promote the Moreton Bay region as a business destination and to proactively recruit new businesses, investment and jobs; 3) To increase the level of skills and capabilities in the region; and 4) . To advocate for local businesses.

^v **Economic Associates Moreton Bay Industrial Land Demand Study 2011.** This study was initiated by the Department of Infrastructure and Planning as part of the Departments ongoing industrial land planning and development program. The study found that there was a need for 285 ha of unconstrained industrial land within MBRC over the next 20 years comprising 100 ha of land in the Caboolture District (large footprint, general industry, major warehouses, transport and logistics depots), 42 ha of land in the Pine Rivers District (service industry and general industry) and another 120 ha driven by industrial land demand in outer northern Brisbane for which there is no planning provision by BCC for general industry, large footprint and higher impact uses.

^{vi} **Queensland Government Government Statistician Industry Land Development Activity profile, South East Queensland 2011** <http://www.oesr.qld.gov.au/products/profiles/indus-land-devel-activity-profile-seq/index.php>

The industrial land development activity profile provides a comprehensive summary of recent industrial land development and lot activity indicators for the local government areas covered by the South East Queensland Regional Plan 2009–2031. Topics covered include industrial land supply, uncompleted lots (approvals, operational works and plan certifications), lot registrations, vacant land and building sales, material change of use development approvals, and industrial building activity.

^{vii} **AEC Group Future Land Demand Study 2012.** AECgroup was engaged by Moreton Bay Regional Council to identify the economic development and subsequent land use requirements in the region needed as a result of a 70% self-containment rate. The 70% employment self-containment scenario requires the MBRC region to almost double its annual jobs increase (to 4,774 per annum), facilitate more than double the amount of total jobs existing in the region in 2009 by 2031, and there is a need for a new planning scheme to supply sufficient land to accommodate future jobs growth to reach this goal.

^{viii} **Economy.id** <http://economy.id.com.au/moreton-bay-2013>. Is an online economic profile, snapshot of MBRC. The information presented is derived from official sources of information (Australian Bureau of Statistics) as well as Australia's leading economic modellers, NIEIR. Current estimate of employment in MBRC in 2012 is 114,000 total jobs determined by NIEIR 2013. The economic profile records that based on ABS Census data MBRC had 42% of working residents employed locally and this proportion has decreased since 2006. The 42% self-containment rate is based on ABS Census data which reported 174,489 employed residents and 73,400 people employed in the city. There is a known undercount in the ABS Census. Statistics modelled by NIEIR correct for the known undercount of jobs recorded in the Census and provide a more accurate and up to date measure of the total number of people employed in the Moreton Bay Region. The estimates from NIEIR will generally be higher than the Census figures because they adjust for: Persons missed by the Census; Persons who didn't state their workforce status or place of work; Persons who reported no fixed place of work; Persons whose place of work was not a valid address which could be coded by the ABS. <http://economy.id.com.au/moreton-bay/employment-by-industry>. Using NIEIR figures the self-containment ratio is 47% derived from total employed residents in 2011 of 195,011 and 92,479 (FTE) people working in MBRC Compared to 50% in 2006 based on 158,628 employed residents and 79,996 (FTE) people working in MBRC.

<http://economy.id.com.au/moreton-bay/employed-residents> & <http://economy.id.com.au/moreton-bay/employment-by-industry-fte>.

^{ix} **MBRC PIP Assumptions 2013.** These assumptions are based on the draft Strategic Framework and 70% employment scenario for MBRC. The assumptions include 106,000 jobs in MBRC in 2011 increasing to 126,800 jobs in 2016 and 165,000 jobs by 2026, and 182,000 jobs by 2031.

^x **Queensland Government South East Queensland Economic Baseline 2013.** The overall purpose of this document is to provide a detailed economic baseline of South East Queensland that highlights the contemporary economic conditions in the region, as well as longer-term historical trends and patterns in key indicators to address future policy and planning needs. A particular focus of the document will also be on examining several key trends and drivers in the SEQ region, including analysing where and in what industries the employment growth has occurred since 2006 (and in relation to the current South East Queensland Regional Plan). The baseline reports that Moreton Bay has total employment based on place of work, of just under 115,000 persons in 2011 accounting for around 7% of total employment in SEQ and 5% of employment in Queensland. Traditionally, the LGA's economy has been characterised as having a fairly diverse industrial structure, although Moreton Bay is more recognised for its appealing lifestyle factors. Moreton Bay economy's largest industries in terms of employment are retail trade, health care and social assistance, manufacturing and education and training. It should also be noted that although these industries contribute the largest shares to overall employment in the LGA, the share of total employment has only increased for health care and social assistance and education and training over the five-year examined period. The changing industrial structure throughout the Moreton Bay economy highlights the major trends in job opportunities from 2006 through 2011, with the small changes in employment share for the majority of industries suggesting a fairly stable industrial structure. Industries that experienced a noticeable increase in growth in the previous five years included electricity, gas, water and waste services, health care and social assistance and professional, scientific and technical services. Employment in the agriculture, forestry and fishing industry, manufacturing, information media and telecommunications and rental hiring and real estate services fell. Moreton Bay had a self-containment ratio in 2011 of less than 45%. There are almost as many people who live in Moreton Bay and work in Brisbane as there are people who live and work in Moreton Bay.

^{xi} Queensland Government Queensland Treasury and Trade, Regional Profiles Summary – South East Queensland, 2013.

^{xii} **Queensland Government Government Statistician Projected population by local government Area,** Queensland, 2011 to 2031 (medium series),

^{xiii} Recent advice from OESR regarding the 2013 population projections for the Brisbane Greater Capital City Statistical area indicates that the 2031 population is expected to be revised upwards by 200,000 from the current 2,945,300 to 3,147,000 people. Overseas migration and increased rates of natural increase are driving this increased population growth.

^{xiv} **M Burke, J Dodson, B Gleeson Griffith University Employment decentralisation in South East Queensland: Scoping the transport impacts. 2010** Brisbane is highly centralised by Australian comparative levels. White collar employment in Brisbane is extremely concentrated in the CBD and its frame. There are many reasons for this ‘hyper-centralisation’, including the accessibility provided by the radial road and public transport system, planning and investment at state and local government levels and restriction of commercial office opportunities elsewhere. Though Brisbane is not completely mono-centric, none of its suburban centres contain more than 15,000 jobs. Suburban office parks are relatively small and few in number compared with many US cities. And decentralisation, Hyper-centralisation creates travel demands that have strong temporal and tidal characteristics, leading to long commutes, congestion on roads and public transport, and under-utilisation of road network capacity in the contra-peak radial direction.

^{xv} The diagram omits reference to the extractive industry and environmental area place types in which residential development is not proposed.

^{xvi} Manufacturing includes food products, beverage and tobacco, textile, leather, clothing, footwear, wood products, paper products, printing, petroleum products, chemical manufacturing, non-metallic mineral products metal products, transport equipment, machinery and equipment, furniture and other manufacturing.

^{xvii} Queensland Government SEQ Economic Baseline 2013. P.71.

^{xviii} Leading economic drivers are the industries that are either expected to be a focus for economic growth in the region or that are drivers of growth in other industries. In the MBRC model developed by the AECGroup, these industries are those which were identified as key opportunities in the 2010 Economic Development Strategy. According to the MBRC Economic development Strategy Report by the AECGroup the specific growth opportunities identified for the Moreton Bay region have been based on the detailed research and analysis of the social, economic, business and industry drivers and confirmed through consultation with local businesses and partners. These opportunities are meant to drive economic growth and development across the region and represent industry opportunities that contribute high value-adding, knowledge-driven jobs to the region. Additionally, growth in these sectors will stimulate other parts of the economy and encourage further job growth. For example, if the opportunities in advanced manufacturing can be realised, then these companies will require greater services (from the local region) and employ more people. The additional services will mean more activity for other local businesses and the greater number of jobs means that there is more disposable income to be spent at cafes, restaurants, retail outlets and other services in the local economy. AECGroup provides these opportunities in order to give detailed and clear direction to the economic development efforts in the region. These opportunities are real and can deliver real growth. At the same time, economic growth can come from other areas and these options should not be excluded. In fact, market conditions can change quickly and the MBRC should reconsider these opportunities on an on-going basis. By focusing efforts on these opportunities that can drive economic growth in the region, the Moreton Bay region will receive the greatest amount of benefit from economic development. The opportunities for growth generate valuable, full-time employment for local residents and will contribute to achieving the vision of the Economic Development Strategy.

^{xix} AECGroup Economic Development Strategy Report 2010. P. 63.

^{xx} Source MBRC draft Strategic Framework 2012

^{xxi} Queensland Government Connecting SEQ 2031. An Integrated Regional Transport Plan for South East Queensland 2011. Connecting SEQ 2031 has been developed as the guiding transport planning and policy document to support the desired regional outcomes of the SEQ Regional Plan. In doing so, the plan adopts an integrated approach that considers land use planning and the various modes of the land transport system that move people and goods.

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- ^{xxii} Includes land required for local access roads and parkland but excludes major environmental and flooding constraints
- ^{xxiii} Excludes land required for local access roads and parkland assumed to 30% of the gross area.
- ^{xxiv} The enterprise and employment area proposal at Caboolture West includes an area identified for bulky goods, showroom, sales and display which has been excluded from the industrial land analysis.
- ^{xxv} Included in the estimate of constraints is the area proposed for non-industrial uses in Figure 36.
- ^{xxvi} Includes additional land outside the Mango Hill Infrastructure DCP zoned Future Urban with frontage to Boundary Road.
- ^{xxvii} Includes an additional area of land on Deception bay road rezoned from Rural Residential to low impact industry subsequent to the MBILDS being completed.
- ^{xxviii} Includes the balance of the CSR land at Brendale not included in the MBILDS as it was extractive industry at the time the study was done but has now been approved for industrial development, and includes land on Kremzow Road west of Old North Road and formerly used for sandblasting and general fill extraction owned by Mordar Pty. Ltd.
- ^{xxix} Figure 7 derived from GIS analysis by MBRC.
- ^{xxx} The MBILDS identified 15.13 ha of vacant land at Rothwell. The MBRC Council has approved a retirement village on 7.57 ha south of Buchanan Street and the draft planning scheme proposes that 6.84 ha north of Buchanan Road be developed for urban non-industrial purposes. This reduces the area of vacant industrial land available in Redcliffe from 16 ha to 2.05 ha.
- ^{xxxi} Includes 30 ha area to the east of the Caboolture Aerodrome and 7 ha south of the Caboolture-Bribie Island Road.
- ^{xxxii} Preliminary constraints analysis: Pine Rivers district - West Brendale 12%; Balance CSR 22%; Dakabin 10%; Boundary Road 30%; Caboolture district – Narangba (Saltwater Circuit) 10%, Deception Bay Road 50%; Caboolture Aerodrome 33%, Elimbah East 27%; Caboolture West 63%. Redcliffe District – Rothwell 0%
- ^{xxxiii} Derek Kemp Places for Business and Industry, Industry and Employment Lands Project Report 2007 prepared for Caboolture Shire Council.
- ^{xxxiv} The Queensland Government Industrial Land Monitoring Program estimates that the annual demand for industrial land in SEQ is 99 ha per annum between 2006 and 2011.