South West

Greater Bunbury

Regional HotSpots Land Supply Update

January 2015

Department of **Planning**

Western Australian Planning Commission

Greater Bunbury

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Urban Development Program

Department of Planning

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1 Overview

1.1 Executive Summary

The Greater Bunbury sub-region consists of four local government areas: the City of Bunbury and the Shires of Capel, Dardanup and Harvey. As at June 2013, the estimated resident population of the sub-region was 89,785 people, most of whom live within a reasonably contiguous urban/semi urban area that stretches from Leschenault in the north, to Dalyellup in the south and Eaton in the east. At the 2011 Census, the Australian Bureau of Statistics (ABS) reported that roughly 80 per cent of the sub-region's population resided within this area, which constitutes approximately 7.7 per cent of the total Greater Bunbury sub-region land area.

Population growth in the Greater Bunbury sub-region over the past decade has been slightly higher than the rate for Western Australia as a whole, increasing at an average of 3.1 per cent per annum (compared to 2.6 per cent for the State). Most of this growth has occurred in the Shires of Capel, Dardanup and Harvey, on the fringe of the sub-region's main urban area.

During Western Australia's 'housing boom' there was a marked increase in demand for land and housing in the Greater Bunbury sub-region. The median price of residential lots and houses more than doubled in the four year period to 2007.

Population growth during this time was high, with the sub-region's resident population increasing by approximately four per cent per annum in the two years to June 2006. Increasing property prices and strong population growth prompted a pronounced rise in land development during this period, with 1,825 residential lots granted conditional approval in 2006, compared to 921 lots in 2003.

Analysis of subdivision data indicates that there was an over-supply of residential lots during this period, relative to population growth. In the two years to June 2007 applications were lodged to create 4,381 residential lots, while the estimated resident population increased by 3,990 persons over the same period.

This period of heightened supply caused an increase in the number of residential lots available in the sub-region, which dampened land and housing price growth. With larger numbers of lots on the market and the global economy faltering in 2008, confidence in the local property market was weakened. Consequently, the median house sales price flattened, the median residential lot sales prices decreased by 18 per cent over a two year period and land development activity decreased substantially. In 2010 final approval was granted to create just 447 residential lots in the sub-region compared to 1,880 lots in 2006.

Notwithstanding this decline in lot production, population growth remained solid (approximately 3.1 per cent per annum in the five years to 2013), with additional residents largely accommodated in areas developed during the boom. Recent indicators suggest that development activity is beginning to increase again, as stocks of serviced land are progressively depleted through population growth. In the year to March 2014, both subdivision applications and dwelling approvals were up significantly on the previous 12 months (150 per cent and 26 per cent respectively).

The establishment of the *Greater Bunbury Region Scheme* in 2007 resulted in large tracts of land being identified for urban development, with substantial areas zoned as urban or urban deferred under the scheme. Consequently, analysis shows that the existing stocks of urban and urban deferred land in the Greater Bunbury Region Scheme area are sufficient to support growth in the sub-region well into the long-term. Existing stocks could theoretically accommodate the *Greater Bunbury Strategy 2013* population target of 150,000 residents, subject to a minimal increase to greenfield housing density or the rate of infill development.

In addition to the stocks of urban and urban deferred zoned land in the sub-region, an urban expansion area has been identified to accommodate additional growth to the east of Eaton. It is anticipated that this site will be capable of accommodating a future population of approximately 70,000 residents. These substantial stocks of land, identified for future urban development, ensure a comfortable land supply for the future.

The large stocks of land zoned for future development do not mean that there will be no need for rezoning in the short/medium-term. Rezoning can be used to achieve a variety of planning outcomes, including the promotion of sustainable and transport oriented developments and the acceleration of development in targeted growth areas. Consolidating growth around existing urbanised areas will support the values and aims underpinned by the *Greater Bunbury Strategy 2013* including:

- A robust and sustainable economy;
- An efficient way to provide economic and social infrastructure;
- A broader range of housing options;
- The conservation of Greater Bunbury's natural and cultural heritage, and environmental values;
- Improvements in public transport, walking and bicycle use;
- The protection of agricultural land for its economic, landscape, tourism and social values; and
- Community identity, particularly for the hinterland towns.

The Greater Bunbury sub-region is generally well serviced with infrastructure and future servicing is unlikely to present a substantial constraint to future urban growth. Decisions regarding infrastructure provision in a growing urban environment must be made in the context of the expanding urban front and increasing density within that front. Likewise, urban growth must seek to maximise utilisation of existing and planned infrastructure to promote efficient residential and industrial development. A coordinated approach to urban growth and infrastructure provision will be critical as Bunbury transitions to a larger city.

One of the key challenges with regard to achieving the population target of 150,000 residents will be the generation of sufficient employment to support such a population. Although the overall workforce has grown, the rate of unemployment in the Greater Bunbury sub-region has doubled in the five years to December 2013 (from 2.9 to 5.8 per cent) and is now significantly higher than the rate for Western Australia as a whole.

The Greater Bunbury sub-region has numerous competitive advantages with regard to economic development (with potential flow-on effects for employment generation), including a large and diverse labour pool; capacity for extensive population growth with affordable housing; access to a deep water port and freight network; and high quality local natural resources. Prospects have recently received an additional boost through the international trade agreement with Japan, which may create opportunities to develop markets for various value adding agri-industries and local produce. The identification of suitable, employment generating lands to foster such enterprise and the continued promotion of local industries will be vital in driving continued economic and population growth in the sub-region.

1.2 Regional HotSpots and the Urban Development Program

The Regional HotSpots series assess land for future residential, industrial and commercial uses and identify the planning and infrastructure requirements needed to meet demand across selected regional centres in Western Australia. The series has been prepared by the Department of Planning (DoP), for the Western Australian Planning Commission (WAPC).

Key aspects of these reports are:

- A description of demand drivers specific to each regional centre including an assessment of the major economic factors that influence employment and population growth – and therefore the demand for land and housing;
- An assessment of zoned land supply for residential, commercial, industrial and tourism uses;
- Detailed infrastructure assessments coordinated with land development; and
- Infrastructure mapping indicating sites, buffer areas and corridors required for existing and future infrastructure.

The Regional HotSpots have been prepared as part of the DoP's Urban Development Program (UDP) and are the result of consultation with a number of stakeholders, including local governments and servicing authorities.

Recent editions of the Regional HotSpots publication can be accessed online at the Department of Planning website.

1.3 Greater Bunbury historical context

Located 160 km south of Perth, Bunbury is Western Australia's largest regional urban centre. The area around Bunbury has been home to the Noongar Aboriginal people for tens of thousands of years. Many of them still reside in the area. At the 2011 Census approximately 2,000 residents in the Greater Bunbury sub-region stated that they were Aboriginal.

European settlement in Bunbury did not take root at the first attempt. After receiving favourable reports of the area, Western Australian Governor James Stirling established a military station to support an anticipated settlement. The station was disbanded after six months however, when no settlers made the leap of faith to move to the little known corner of the colony.

Despite the initial 'false start' Governor Stirling still had ambitions for the site and in 1836, when Lieutenant Henry William St. Pierre Bunbury travelled through the area on his way from Pinjarra to Vasse, Stirling renamed the site in honour of the explorer.

With a natural harbour and an overland route established, plans were drawn up to found a town in 1836. In 1838 a sizeable farm was established on land granted to James Stirling and from there the town of Bunbury began to develop. By 1841 a population of 400 settlers had made Bunbury home, finding employment in agriculture or whaling.

Although initial growth was slow, Bunbury's important role in the broader South West region began to crystallise with the development of the town's port. As early as 1841 a storm lantern was erected as a beacon to guide ships into the safety of Bunbury's harbour and in 1864 the Bunbury Jetty was constructed using convict labour. In addition to servicing the whaling industry, the port was also used to import various food products, clothing and farm equipment, and to export sandalwood (Western Australia's most lucrative export commodity prior to the gold rush) and jarrah timbers.

In 1893 the town's significance to the South West region was further enhanced with the completion of the Perth-Bunbury railway, which prompted an increase in development activity in the town. By the turn of the century Bunbury's population had grown to approximately 3,000. The development of the railway not only improved trade links with the Colony's capital, but also opened the town up to tourism. Many miners who had prospered in the Kalgoorlie goldfields spent their vacations by the sea and various hotels and guest houses emerged in Bunbury to cater for this market.

In the late 1800's various towns in the Bunbury sub-region including Capel, Harvey and Dardanup began to grow, largely to support the area's fledgling agricultural sector. By the turn of the century several roads boards (a precursor to local governments) had been established in the area to help guide development.

As land around Bunbury was increasingly developed for agriculture in the early 1900's and other commodities were discovered, Bunbury Port was used to export a broader variety of goods including wool, wheat, timber, coal and eventually minerals. In 1937 the first of the iconic wheat silos were constructed to store grain for export. Although none are still used for their original purpose, several have been retained and converted into luxury apartments overlooking the harbour.

The growth in trade activity led to a new level of prosperity in Bunbury. By 1957 the population of the town had grown to approximately 10,800, making it the largest town in the South West region by a sizeable margin.

The increasing prevalence of private motor vehicles in the 1950s and 1960s served to enhance Bunbury's role as a major regional centre. Residents from surrounding farming areas such as Harvey, Donnybrook, Collie and Capel were able to readily access services and facilities in Bunbury – a trend that continues today.

In October 1979 Bunbury was proclaimed Western Australia's first city outside the Perth metropolitan area. By this time Bunbury boasted a TAFE facility, regional hospital, speedway and television network (GWN). During the 1980s further growth was spurred by two city centre projects, unprecedented in scale – the Lord Forrest Hotel (Bunbury's first 'luxury' resort) and the Bunbury Tower (a ten storey commercial building).

Outside the CBD, Bunbury's suburbs were also growing – expanding into neighbouring local government areas in places such as Gelorup (Shire of Capel), Eaton (Shire of Dardanup) and Australind (Shire of Harvey). During the housing boom of the early 2000s subdivision and dwelling approvals doubled in the Greater Bunbury area in just two years. Such was the encroachment of Greater Bunbury into the surrounding jurisdictions that it was deemed necessary to coordinate urban growth across the City of Bunbury and adjacent LGAs.

In 2007 legislation was passed creating the *Greater Bunbury Region Scheme*, giving the WAPC similar statutory control over the Greater Bunbury area as in the Perth metropolitan and Peel regions. The region scheme area included the City of Bunbury as well as the three adjacent LGAs – the Shires of Capel, Dardanup and Harvey.

As Greater Bunbury continues to develop as a regional centre it will be critical to manage growth effectively. The *Greater Bunbury Strategy 2013* outlines the plan for Greater Bunbury to grow into a liveable, prosperous, accessible, sustainable and responsible city of 150,000 residents. This report outlines key growth indicators in the sub-region and discusses the infrastructure and land supply requirements needed to achieve the outcomes described in the *Greater Bunbury Strategy 2013*.

2 Economic outlook

Key Points

- There is substantial potential for increased economic development in the Greater Bunbury sub-region. With a large, broadly skilled workforce; ample residential land to enable further population growth; a modern port and freight infrastructure; and affordable housing, the sub-region is able to foster a diverse range of industries.
- The identification of suitable stocks of industrial land to promote investment and employment opportunities in the Greater Bunbury sub-region will be critical if the sub-region is to realise its potential for economic development.
- Bunbury is the highest order centre and largest regional city in Western Australia outside of the Perth metropolitan and Peel regions.
- Bunbury functions as the commercial and administrative hub of the broader South West region. Continued population growth in Greater Bunbury - and the broader South West region - is likely to generate opportunities for further commercial and retail development.
- Agriculture is a long established industry in the sub-region and the sector has seen consistent growth over the past decade. Prospects for the industry are positive, particularly given the recent trade agreement with Japan.
- The tourism industry has a long history in Bunbury. Although the city's reputation as a holiday destination may have waned, enthusiasm for reinvigorating the sector seems likely to encourage further investment.
- Alumina is the main export from Bunbury Port. The recent expansion at Worsley Alumina and uncertainty over the global market for the product mean further expansion is unlikely in the short-term; however, post-expansion production is at record high levels.
- Although coal is not mined in the Greater Bunbury sub-region, it is an important part of the local economy due to the mines in nearby Collie. A recent $500 million proposal to export 12 million tonnes of coal per annum from Bunbury Port has been granted environmental approval with the first exports anticipated in 2017.
- The expansion of Bunbury Port facilities and improvements to the land freight network in the area will improve opportunities for trade based industries in the sub-region.

Economic outlook

State Outlook

The economic outlook for Western Australia is for continued, but contracted, growth due largely to a reduction in resource sector investment, as the industry moves from an expansion to an operational phase. This is reflected in the components of the Gross State Product (Table 1).

Regional Outlook

Greater Bunbury is the most populous area of Western Australia's South West region. The South West economy is the most diversified of Western Australia's nine non-metropolitan regions, with strong mining, manufacturing, construction, agriculture and retail sectors. There is also a strong small business and retail sector, with over 1,000 independent businesses operating in the region.

The South West region has benefitted from strong and sustained economic growth over the past decade. The region's gross regional product in 2011/12 was estimated at $15.05 billion, having increased by an average of more than 10 per cent per annum over the past five years. The South West now accounts for approximately 6.6 per cent of WA's Gross State Product.

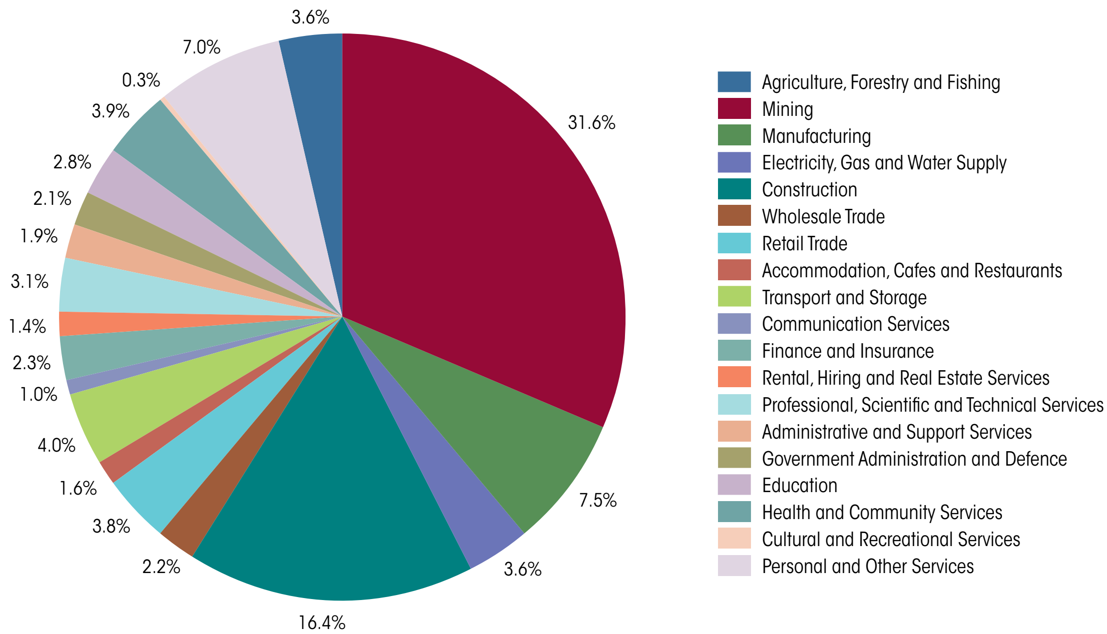
The current competitive advantages of the South West region are diverse: a large labour pool (relatively highly skilled); access to Bunbury Port (bulk commodities and general cargo, and potential for containerisation); access to Bunbury Airport; and high quality natural resources (minerals, agri-food and fibre, plantation timber and power/energy sources). However, continued competitive advantage will only be achieved into the future with effective, integrated, regional economic development policies and a suitable supply of employment generating lands.

Table 1: Key economic forecasts and parameters - Western Australia (Western Australia Government)

Average annual growth	2012/13 actual %	2013/14 estimated actual %	2014/15 budget estimate %	2015/16 forward estimate %	2016/17 forward estimate %	2017/18 forward estimate %
Gross State Product growth (GSP)	5.1	3.75	**2.75**	3.0	4.25	5.0
State final demand growth	5.0	0.25	**0.0**	0.75	1.5	2.0
Household consumption growth	3.9	3.0	**3.25**	3.5	3.75	3.75
Business investment growth	8.3	-7.5	**-8.5**	-6.0	-3.75	-1.25
Dwelling investment growth	-1.8	14.0	**7.0**	3.75	2.0	1.5
Government investment growth	2.0	3.75	**-0.75**	0.5	1.5	1.0
Population growth	3.5	2.6	**2.1**	2.1	2.1	2.1
Employment growth	3.5	1.5	**1.5**	1.75	1.75	2.0
Unemployment rate	4.4	5.0	**5.5**	5.25	5.0	4.75
Consumer Price Index growth (CPI)	2.3	3.0	**2.75**	2.5	2.5	2.5
Wage Price Index growth	4.0	3.25	**3.25**	3.5	3.5	3.75
Median house price	7.1	6.6	**2.5**	1.4	0.8	1.5
Crude oil price ($US per barrel)	92.2	108.9	**104.1**	99.7	96.6	94.5
Exchange rate US / A (cents)	102.7	91.5	**90.6**	88.3	86.4	84.9
Iron ore price ($US/tonne) (FOB)	121.1	114.4	**111.3**	109.6	107.1	104.7

Source: WA State Government Budget Papers 2014/15 Economic and Fiscal Outlook Budget Paper

Figure 1: Industry breakdown in the South West region



Source: South West Development Commission Annual Report 2012/13

The long-term industry future may lie less in extractive industries (and related primary processing sector which has large land and power requirements) and more with knowledge-based, innovative and technology industries. Such industries have the capacity to add value to locally sourced resources and produce.

Figure 1 shows the industry breakdown for the South West region, with mining being the largest component at 31.6 per cent.

Mining and mineral processing

Mining and mineral processing constitute approximately 23 per cent of economic production in the South West region ($1.9 billion per annum), with the main commodity being bauxite/alumina. Bauxite is mined to the north-east of Bunbury and transported to the Worsley refinery in the Shire of Collie where it is used to produce alumina. From Worsley the alumina is transferred to the Bunbury Port, which exports approximately 21 per cent of the world's alumina.

The most substantial resource sector project completed in recent years was the $3.4 billion Worsley Alumina expansion. Completed in 2013, the project required a construction workforce of some 8,000 and increased the production capacity of the facility from 3.5 mtpa to 4.6 mtpa, making the Worsley refinery one of the largest in the world.[1]

Kemerton Industrial Park, located 17 km north of Bunbury, is the main strategic industrial area in the South West region and the nearest regional heavy industrial site to Perth. It is designed to supplement the Kwinana Industrial Area. The park comprises 7,543 ha of land and accommodates a silicon smelter, a titanium dioxide plant, a chlor-alkali plant, two peak load power stations and a wastewater treatment plant.

[1] National Resources review (11 September 2012) http://nationalresourcesreview.com.au/2012/09/worsley-project-close-to-completion/

Under the *Heavy Use Industrial Land Strategy*, co-ordinated through the Department of State Development, the State Government is progressing an expansion of the Kemerton Industrial Park towards project ready status by undertaking environmental, heritage and planning approvals for the estate. Work towards progressing approvals commenced in 2009 and is anticipated to be completed by 2014/15, by which time the structure plan and zoning adjustments will also have been completed.

Mining mineral sands and silica is a key industry to the sub-region. In 2013, 460,000 tonnes of mineral sands and 235,000 tonnes of silica sands were exported from Bunbury Port.[2] Ore located in the Shires of Harvey, Dardanup and Capel is processed within the sub-region prior to export.[3]

Simcoa Operations Pty Ltd announced in 2009 its decision to expand the company's 32,000 tpa capacity silicon metal plant at Kemerton. The first stage expansion was completed in 2012, increasing capacity to 48,000 tpa and a second stage expansion is currently under consideration to increase plant capacity to 64,000 tpa. Estimated expenditure is $100 million with 120 jobs created during the construction phase and 40 during the operational phase.

Perdaman Chemical and Fertilisers Pty Ltd are developing a $3.5 billion coal to urea plant at the new Shotts Industrial Park near Collie. Around 2.7 Mtpa of coal will be used to produce approximately 2 Mtpa of urea, primarily for export. The urea will be transported to Bunbury Port by rail. The company has received environmental and other approvals from both the Western Australian and Commonwealth governments. Employment will be generated for 2,000 workers during construction and 200 during operation.[4]

[2] South West Development Commission (2014) http://www.swdc.wa.gov.au/information-centre/statistics/port-trade.aspx

[3] Dardanup - mininglink.com.au/mine/dardanupdoral

Gwindinup - mininglink.com.au/mine/gwindinup-north

Capel - www.miningoilgas.com.au/index.php/products/a-z?sobi2Task=sobi2Details&catid=7&sobi2Id=425

[4] Department of Mines and Petroleum (2013) Prospect Magazine December 2013

Manufacturing and construction

Manufacturing employs approximately 14 per cent of the work force in the sub-region, contributing 7.4 per cent of the gross regional product. Products manufactured in the sub-region are typically linked to local primary industries (e.g. manufacturing parts for mineral refineries or value adding to locally produced food and timber products). Forestry products are exported through Bunbury Port, with $73 million worth of timber produced in the South West region in 2012.

A large proportion of the Greater Bunbury workforce is employed in the construction sector. At the 2011 Census, 13.5 per cent of the workforce stated that they worked in construction compared to 10.2 per cent for Western Australia as a whole. In addition to those involved in residential construction a substantial construction workforce has been involved in the development of various resource sector and manufacturing projects.

Agriculture

Agriculture has long been a major component of the economy of the Greater Bunbury sub-region and it is still one of the area's major industries, particularly in the Shires of Capel, Dardanup and Harvey.

The Department of Agriculture, Fisheries and Forestry (DAFF) categorises areas of Australia into regions for analysis. The 'Bunbury region' (as defined by DAFF) includes 13 local government areas including the City of Bunbury and the Shires of Capel, Dardanup and Harvey.

Total agricultural production in the Bunbury sub-region for 2010/11 (most recent data available) was $630 million, making up 12 per cent of the total for Western Australia. The major components of agricultural production in the sub-region were milk ($137.4 million), vegetables ($133 million) and cattle ($99 million). The long-term trend has seen an increase in the value of regional agricultural production of approximately 23 per cent over the past decade.[5]

[5] Department of Agriculture, Fisheries and Forestry Agriculture (2013) *Fisheries and Forestry in the Bunbury region of Western Australia, 2013*

While the agricultural sector remains strong in the Greater Bunbury sub-region there has been limited commercial interest in funding any major expansion projects. There have recently been investigations into expanding the sub-region's dairy industry to supply powdered milk to China; however, enthusiasm for the project appears to have waned for the time being.[6]

Prospects for the agricultural industry were given a boost recently when the Japan-Australia Economic Partnership Agreement was signed in July 2014. The agreement removes or reduces tariffs on various Australian exports to Japan, including beef, dairy and vegetables, all of which are produced in the Greater Bunbury sub-region.

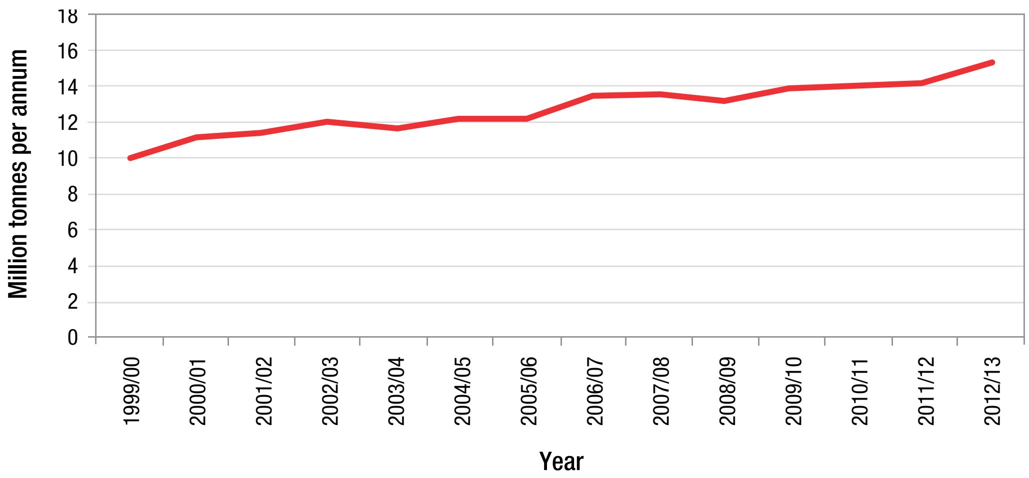
State agencies have also been working together to identify an agrifoods precinct in the region, which could further enhance the sector.

Tourism

In the three years to December 2013 the Greater Bunbury sub-region received an average of 418,300 visitors (overnight visitors) who stayed in the sub-region for an average of 3.6 nights. Of these, 94 per cent were domestic visitors with the remaining six per cent being international visitors.[7]

Although there are numerous attractions in the Greater Bunbury sub-region, the area is often over-shadowed as a tourist destination by towns further south such as Busselton, Dunsborough and Margaret River. The South West region as a whole received 2.1 million visitors in 2013, with a total estimated visitor spend of $1.1 billion in the 2012/13 financial year.[8] Increasing the profile of Bunbury and surrounds as a major South West tourist destination has the potential to substantially expand the industry in the Greater Bunbury sub-region.

Figure 2: Bunbury Port – total cargo throughput (2000-2013 financial years)



Source: Bunbury Port Authority (2013)

[6] Bunbury Mail (2013) *Plan to use Bunbury farms to produce milk powder for China* – July 10 2013

[7] TourismWA (2014) *Overnight Visitor Fact Sheet, Bunbury - Years Ending December 2011, 2012 & 2013*. Bunbury region (as defined by Tourism WA) includes Waroona and Collie SA2s

[8] TourismWA (2014) *Overnight Visitor Fact Sheet, Australia's South West - Years Ending December 2011, 2012 & 2013*

Port Statistics

The Bunbury Port is the major commercial deep-water port for the South West region. Bunbury Port has seven deep water berths and achieved a throughput of 15.3 million tonnes for the year ended 30 June 2013, of which exports were 89 per cent of the total trade. The major commodity exported through the port is alumina, accounting for 78 per cent of exports. Woodchips accounted for 11 per cent of exports, and mineral sands three per cent.

Figure 2 shows that trade through the port has increased steadily over the past 13 years.

The outlook for growth in trade levels is positive, with throughput forecast to double to 30 million tonnes per annum by 2030. The Worsley Alumina expansion will increase the amount of alumina exported through the port and increase imports. Much of the future trade growth is likely to be due to the introduction of new export commodities, particularly coal from the Collie Basin and urea from the Shotts Industrial Estate.[9]

In June 2014 Environment Minister Albert Jacob approved a proposal by Lanco Resources to export up to 12 million tonnes per annum of coal from Bunbury Port. Construction of the new facility, worth an estimated $500 million, will begin in mid-2015 and exports are likely to commence in 2017.[10]

Strategic, integrated land-use and transport planning decisions are being made to unlock port capacity constraints, including plans to increase berth capacity and enhance handling facilities. The Bunbury Port Authority is also proposing the diversion of the Preston River to further maximise its port lands as well as the potential introduction of a container facility at the port.[11]

With a sound primary industry base, high quality freight facilities (as well as planned improvements), a diverse workforce and capacity for substantial population growth, prospects for economic development in Greater Bunbury are very positive. There is also substantial potential to develop value adding industries in the sub-region, which would further expand the sub-region's already diverse economy.

[9] Department of Transport (2013) *Western Australian Regional Freight Transport Network Plan*

[10] ABC website (2013) *Minister Approves $500m coal export facility at Bunbury Port*. Retrieved: 1 July 2014. http://www.abc.net.au/news/2014-06-26/green-light-for-500m-bunbury-port-coal-export-facility/5553418

[11] Department of Transport (2013) *Western Australian Regional Freight Transport Network Plan*

3 Employment and wages

Key Points

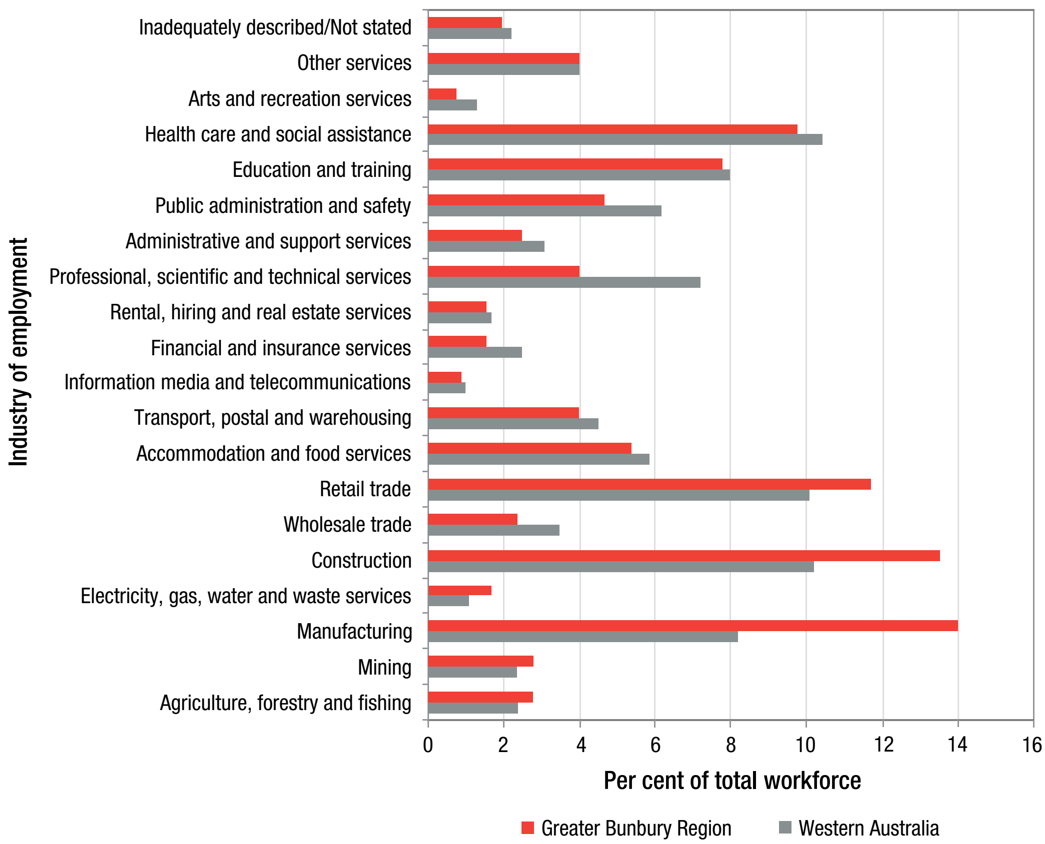
- Greater Bunbury has a broad economic base which is reflected in the diversity of employment type in the sub-region.
- Manufacturing and construction account for 28 per cent of all employment in the Greater Bunbury sub-region, which is a substantially higher proportion of the workforce than those industry sectors account for across the state.
- The sub-region has a strong retail workforce due to Bunbury's role as the commercial hub of the broader South West region.
- There is a significantly smaller proportion of the workforce employed in the professionals, scientific and technical services category than across Western Australia as a whole. To a lesser degree this is also evident in the public administration and safety sectors.
- The sub-region has a high proportion of workers employed in the agriculture, forestry and fishing sector in comparison to the State. This reflects the strong agricultural sector associated with the fertile farmland on the Swan Coastal Plain around Harvey, Dardanup and Capel.
- The City of Bunbury is the main employment hub in the Greater Bunbury sub-region. At the 2011 Census, approximately two thirds of all fixed place employment positions within the Greater Bunbury sub-region were located in the LGA.
- In addition to workers residing in the LGA, the City of Bunbury was also the place of employment for many workers from surrounding LGAs. At the 2011 Census, more than 1,000 people stating that they travelled to work in Bunbury from the Shire of Donnybrook-Balingup or the City of Busselton.
- Although numerous jobs have been created in the sub-region in recent years, employment growth has not kept pace with the rate of population growth. Consequently the unemployment rate for the sub-region has increased from 2.8 per cent in March 2008 to 5.8 per cent in December 2014. The LGA with the highest rate of unemployment in the sub-region throughout that period has been the City of Bunbury which, as at December 2014, had an unemployment rate of 7.1 per cent.

3.1 Industry of employment

Industry of employment data – based on place of usual residence – collected from the 2011 Census is shown in Figure 3. The data show that the industry of employment profile of the sub-region is reasonably similar to that of Western Australia as a whole. There are; however, several notable departures from state-wide trends including:

- A high proportion of workers employed in manufacturing and construction sectors (almost 28 per cent combined);
- a relatively low proportion of people employed in the professional, scientific and technical services sector; and
- a slightly higher proportion of the workforce employed in the retail sector - due to Bunbury's role as a commercial hub for the broader South West region.

Figure 3: Industry of employment – Greater Bunbury sub-region and Western Australia



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

3.2 Income distribution

Based on data collected in the 2011 Census, the median weekly household income for the Greater Bunbury sub-region was $1,433, which is similar to the Western Australian average of $1,415. Within the Greater Bunbury sub-region, the median weekly household income (by LGA) varied from $1,139 in the City of Bunbury to $1,628 in the Shire of Capel. Such variations can be attributed to a number of factors including industry of employment, proximity to key employment areas (such as Collie), prevalence of fly-in fly-out work arrangements, household structure and the spatial distribution of affordable housing.

Compared with Western Australia, the Greater Bunbury sub-region has a relatively high number of residents on gross incomes between $200 and $500 per week. This may be attributable to the high proportion of retail workers (Figure 3), many of whom work part time.

Income distribution for the Greater Bunbury sub-region and Western Australia is shown in Figure 4.

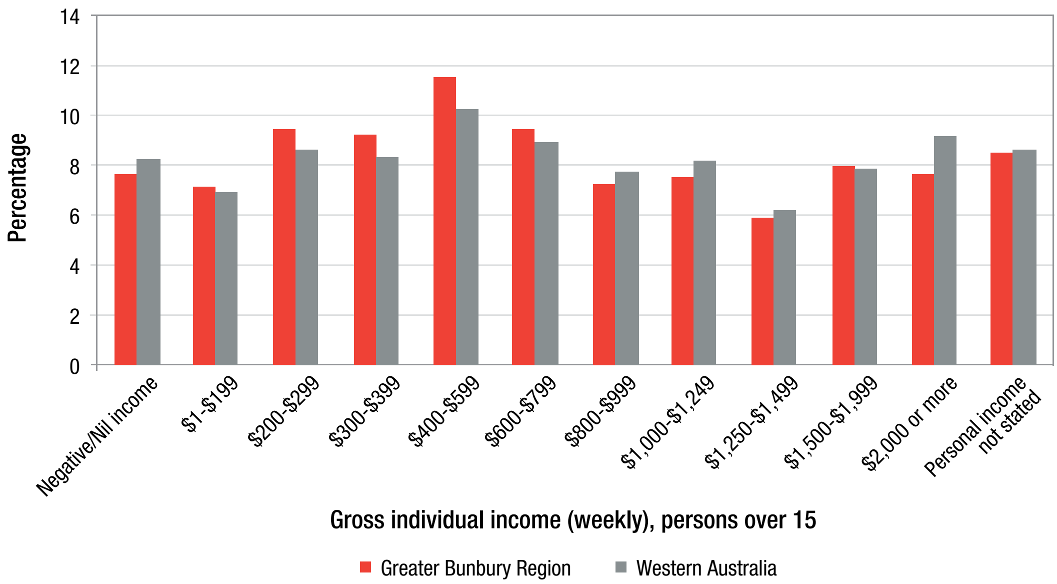
3.3 Working patterns

Employment self-sufficiency and self-containment

Employment self-sufficiency is a measure of the proportion of the resident labour force who could potentially find employment within their local area. It is expressed as a percentage of the number of jobs in a local government, relative to the resident labour force of that local government.

Data from the 2011 Census illustrates the importance of the City of Bunbury as an employment centre for the sub-region. At the 2011 Census approximately two thirds of all fixed place employment in the Greater Bunbury sub-region was located in the City of Bunbury (Table 2). Bunbury was also a common employment destination for people residing in nearby LGAs, with approximately 600 residents from the City of Busselton and 440 residents from the Shire of Donnybrook-Balingup travelling to Bunbury for employment. Bunbury's importance as a sub-regional employment node is reflected in its high employment self-sufficiency rate (134 per cent) which is comparable to that of the Central sub-region of Perth.

Figure 4: Income distribution – Greater Bunbury sub-region and Western Australia



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

Outside the City of Bunbury, most employment in the sub-region was located in the Shire of Harvey, largely due to the employment opportunities available at the Kemerton Industrial Area to the north of Australind. Another key employment node in the area is located in Collie where many people are employed at major power plants and coal mines. At the 2011 Census approximately 3,000 Greater Bunbury residents stated that they worked in the Shire of Collie.

Employment self-containment is a measure of the proportion of a resident labour force that is employed in the local area. At the 2011 Census the City of Bunbury had a highly self-contained employment structure; 62 per cent of the resident workforce was employed within the LGA. The Shires of Capel and Dardanup had particularly low rates of employment self-containment, with just 19 per cent and 18 per cent respectively of the resident workforce employed within each LGA (Table 3).

Employment

The working patterns of the Greater Bunbury sub-region are similar to those of the broader Western Australian community (Figure 5). This is largely due the diverse employment opportunities available.

The proportion of employees working one to 34 hours is slightly high in comparison to the rest of Western Australia, which may be due to the large proportion of the workforce employed in the retail sector, where there are typically more opportunities for part-time work.

The largest proportion of employees in the Greater Bunbury sub-region work 49 hours or more per week. This is due (in part) to the large construction and manufacturing workforce in the sub-region, who often work longer hours, particularly where they are linked to mining operations.

Table 2: Employment self-sufficiency and self-containment – Greater Bunbury sub-region

Average annual growth	Bunbury (C)	Capel (S)	Dardanup (S)	Harvey (S)
Employment self-sufficiency	134%	32%	40%	47%
Employment self-containment	62%	19%	18%	32%

Source: Australian Bureau of Statistics (2013) retrieved using ABS Table builder: 'Place of work' and 'Place of usual residence' at the 2011 Census - City of Bunbury, Shire of Capel, Shire of Dardanup and Shire of Harvey

Note: These figures do not include unemployed members of the workforce.

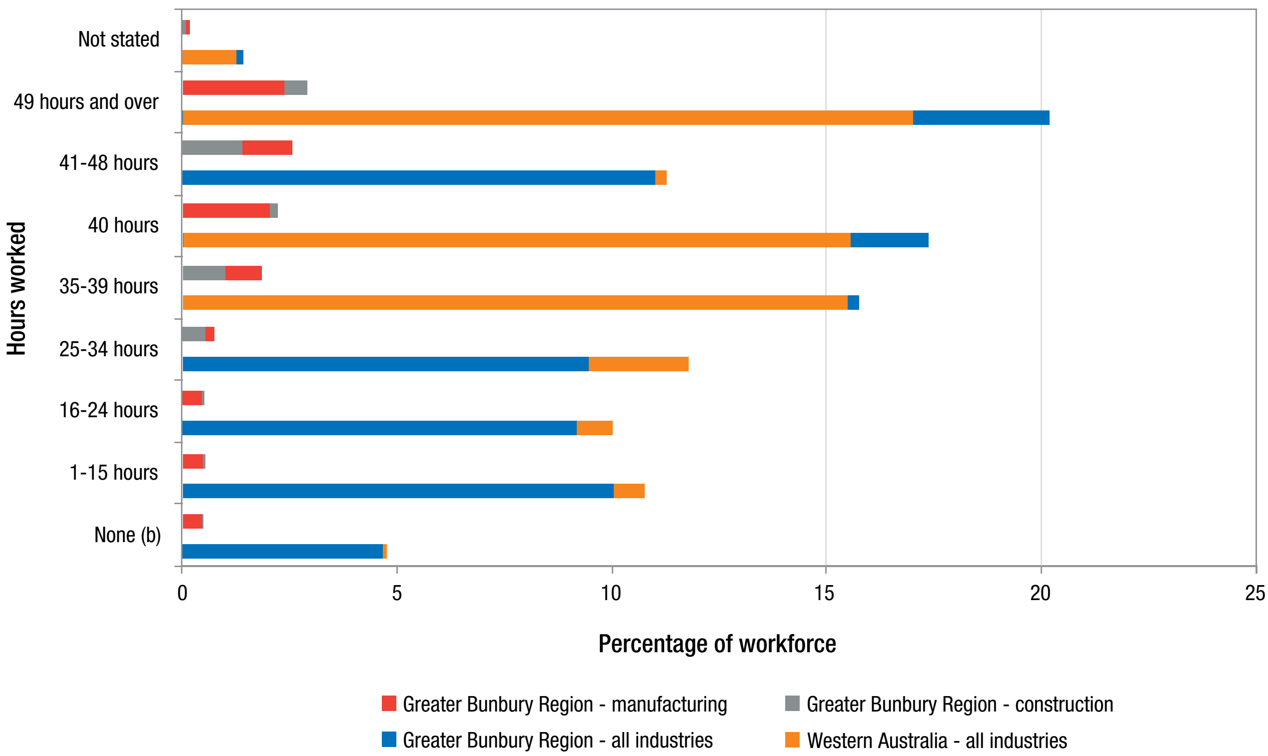
Table 3: Journey to work patterns – Greater Bunbury sub-region

		Destination (place of employment)					
		Bunbury (C)	Capel (S)	Dardanup (S)	Harvey (S)	Other	Total
Origin (place of residence)	Bunbury (C)	9,066	367	543	585	4,139	14,700
	Capel (S)	3,042	1,338	215	190	2,091	6,876
	Dardanup (S)	2,580	110	1,101	428	1,885	6,104
	Harvey (S)	3,386	102	429	3,555	3,471	10,943
	Other	1,661	266	138	418		2,483
	Total	19,735	2,183	2,426	5,176	11,586	

Source: Australian Bureau of Statistics (2013) retrieved using ABS Table builder: 'Place of work' and 'Place of usual residence' at the 2011 Census - City of Bunbury, Shire of Capel, Shire of Dardanup and Shire of Harvey

Note: These figures do not include unemployed members of the workforce.

Figure 5: Working patterns by industry – Greater Bunbury sub-region and Western Australia (2011 Census)



Source: Australian Bureau of Statistics (2012) *Catalogue 2006.0 2011 Census of Population and Housing, Working Population Profile*

3.4 Labour force

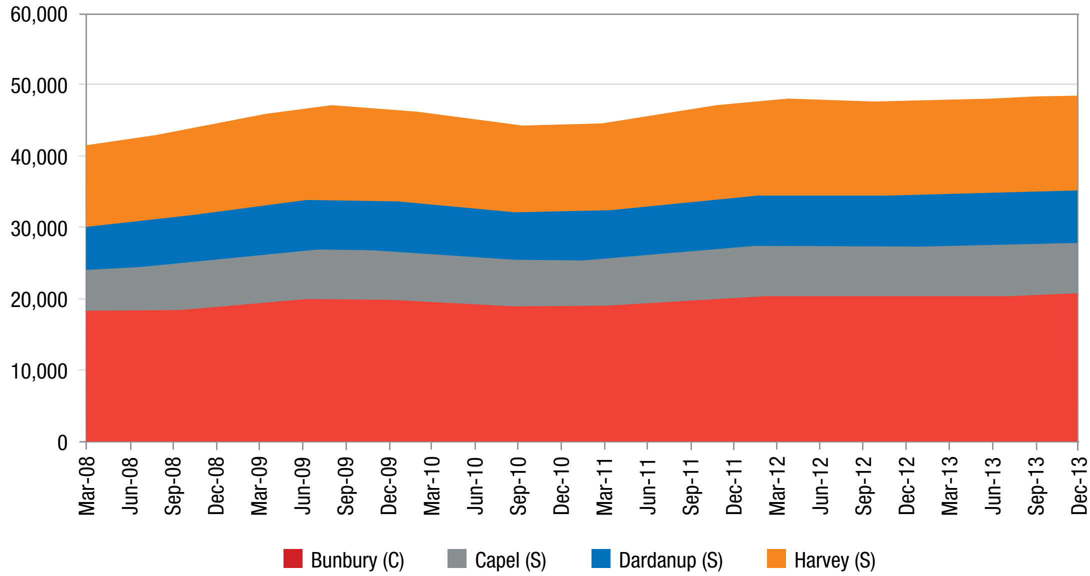
The Greater Bunbury sub-region labour force increased by approximately 12 per cent between March 2008 and December 2013 (Figure 6), which is slightly lower than the rate of population growth over that period.

Labour market data from the Department of Employment indicate that, as at May 2014, Western Australia had an unemployment rate of 5.0 per cent – substantially lower than the national rate of 5.8 per cent. The rate of unemployment in Greater Bunbury at December 2013 (most recent data available) was 5.8 per cent. Although this rate is in line with the national average it should be noted that the unemployment rate has been increasing in recent years - doubling in the five years to December 2013 (Figure 7). The LGA with the highest unemployment rate in the sub-region throughout that period has been the City of Bunbury.

The precise cause of the increased unemployment rate is unclear. This may be due to slowed state-wide economic growth or local economic conditions. In recent years the rate of jobs growth in the Greater Bunbury sub-region has, at times, failed to keep pace with population growth.

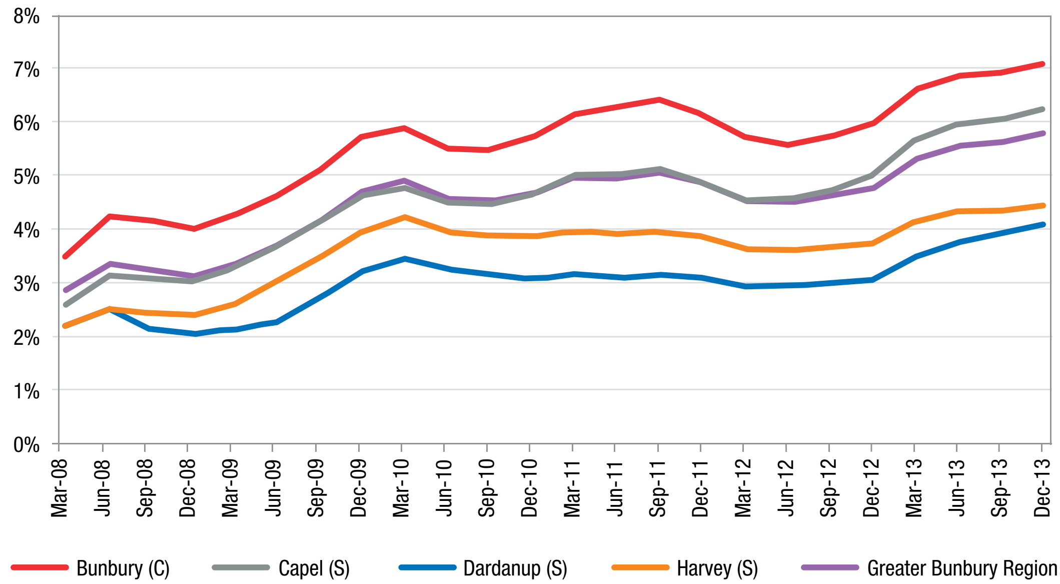
The proportion of full-time and part-time workers has remained relatively stable since 2006, with 59.5 per cent of workers employed full-time and 28.7 per cent employed part-time at the 2011 Census.

Figure 6: Labour force by local government area – Greater Bunbury sub-region



Source: Department of Employment (2013) Small Area Labour Markets

Figure 7: Unemployment rate by local government area – Greater Bunbury sub-region



Source: Department of Employment (2013) Small Area Labour Markets

4 Population and demography

Key Points

- Most of the population of the Greater Bunbury sub-region live within a reasonably contiguous urban/semi urban area that stretches from Leschenault in the north to Dalyellup in the south and Eaton in the east. At the 2011 Census the ABS reported that roughly 80 per cent of the sub-region's population resided within the Bunbury 'significant urban area', which incorporates these suburbs. The Bunbury 'significant urban area' constitutes approximately 7.7 per cent of the total Greater Bunbury sub-region land area.
- Outside of this urban area there are numerous smaller towns in the sub-region including:
  - Harvey (population 3,300);
  - Capel (population 2,200);
  - Binningup (population 1,000);
  - Boyanup (population 1,300);
  - Burekup (population 500);
  - Dardanup (population 450);
  - Myalup (population 100);
  - Peppermint Grove Beach (population 400); and
  - Yarloop (population 500).

  Source: WAPC (2014) *South West Planning and Infrastructure Framework*
- The *Greater Bunbury Strategy 2013* has identified a population target of 150,000 residents in the sub-region.
- Department of Planning population projections suggest that population growth in the Greater Bunbury sub-region will remain strong, but moderate, in line with the rest of Western Australia
- The average rate of population growth in the Greater Bunbury sub-region (3.1 per cent per annum) has over the past five years been in line with the rest of the State (3.0 per cent per annum).
- Growth has been highest, both as a rate and in raw numbers, in the Shire of Capel, which recorded an annual average population increase of 7.5 per cent in the 10 years to 2013. This is largely due to the development of Dalyellup, which was established in 1999 and recorded a population of more than 7,000 at the 2011 Census.
- Population growth has also been high in other urban expansion areas near Eaton and Australind.
- Population growth has been slowest in the City of Bunbury (where there are more limited stocks of land available for greenfield housing development), which recorded a population increase of one per cent per annum in the 10 years to 2013.
- The demographic makeup of the Greater Bunbury sub-region does not differ substantially from the rest of the State. Perhaps the most significant departure from State trends is the proportion of young adults residing in the town, which is considerably lower than the State average. While this trend is typical of many regional towns, Bunbury's status as Western Australia's second city could lend itself to attracting and retaining young adults, particularly as a university campus is located in the city.

4.1 Estimated resident population

As at June 2013, the estimated resident population of the Greater Bunbury sub-region was approximately 90,000. The City of Bunbury was the most populous LGA in the sub-region with an estimated 33,623 residents.

Although the City of Bunbury is the most populous LGA in the Greater Bunbury sub-region, its share of the total sub-regional population has steadily decreased over the past decade (Figure 8). The Shires of Capel, Dardanup and Harvey have all experienced higher rates of growth than Bunbury, which, as at June 2013, had a resident population constituting 37 per cent of the sub-regional total (down from 47 per cent in 2001).

Table 4: Estimated resident population – Greater Bunbury sub-region

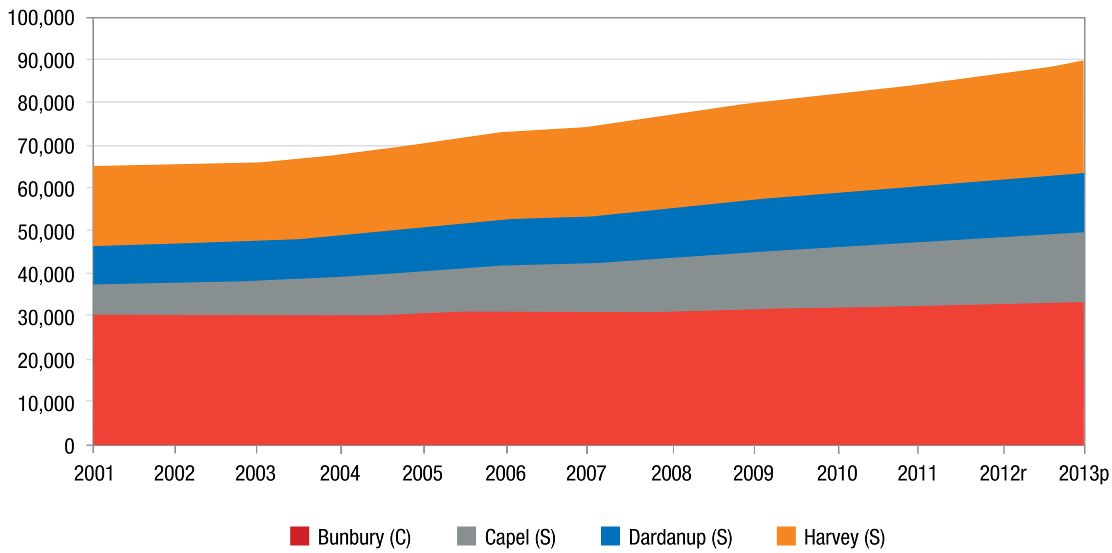
Local Government Area	2003 no.	2004 no.	2005 no.	2006 no.	2007 no.	2008 no.	2009 no.	2010 no.	2011 no.	2012r no.	2013p no.
Bunbury (C)	30,382	30,611	31,035	31,450	31,152	31,473	31,993	32,257	32,580	33,126	33,623
Capel (S)	8,005	8,902	9,733	10,666	11,330	12,256	13,274	14,192	15,059	15,734	16,447
Dardanup (S)	9,415	9,640	10,219	10,837	11,147	11,648	12,144	12,531	12,852	13,329	13,791
Harvey (S)	18,351	18,754	19,565	20,450	20,913	21,819	22,624	23,230	23,878	24,916	25,924
Greater Bunbury total	**66,153**	**67,907**	**70,552**	**73,403**	**74,542**	**77,196**	**80,035**	**82,210**	**84,369**	**87,105**	**89,785**

Source: Australian Bureau of Statistics (2013) *Catalogue 3218.0 Regional Population Growth, Australia, 2012*

r – revised

p – preliminary

Figure 8: Estimated resident population – Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2013) *Catalogue 3218.0 Regional Population Growth, Australia, 2012*

The Shire of Capel experienced the highest rate of population growth in the 10 years to 2013, largely due to urban expansion around Dalyellup, in the north of the Shire, which recorded more than double the number of residents at the 2011 Census than in 2006. The Shire of Harvey (geographically the largest LGA in the sub-region) also experienced a high rate of population growth over the decade to 2013. Most of this growth occurred in the southern part of the Shire in and around Australind, where approximately half of the LGA's population reside.

The rate of population growth in the Greater Bunbury sub-region has generally been higher than for Western Australia as a whole, over the decade to June 2013 (Figure 9). In 2005/06 the Bunbury statistical district (incorporating the broader Bunbury urban area) was the fastest growing regional city in Australia.[12]

4.2 Population structure

The data depicted in Figure 10 and Figure 11 show the age and sex structure of the Greater Bunbury sub-region and of Western Australia. Perhaps the most significant difference between the two is the lower proportion of young adults in the Greater Bunbury sub-region.

While this trend is common to many regional towns, Bunbury is considered a major urban centre and as such it may be expected that a substantial number of young adults would, either stay in the town or move there from surrounding areas once they have completed school. Bunbury has an advantage over other regional centres in this regard as it accommodates Western Australia's only non-metropolitan university campus.

The number of individuals aged over 65 in the sub-region increased by 23 per cent over the five years to 2011, which is significantly higher than the State rate (17 per cent). The proportion of residents aged over 65 is expected to increase in the future which has ramifications for the provision of services and infrastructure including housing.

Table 5: Estimated resident population – Greater Bunbury sub-region

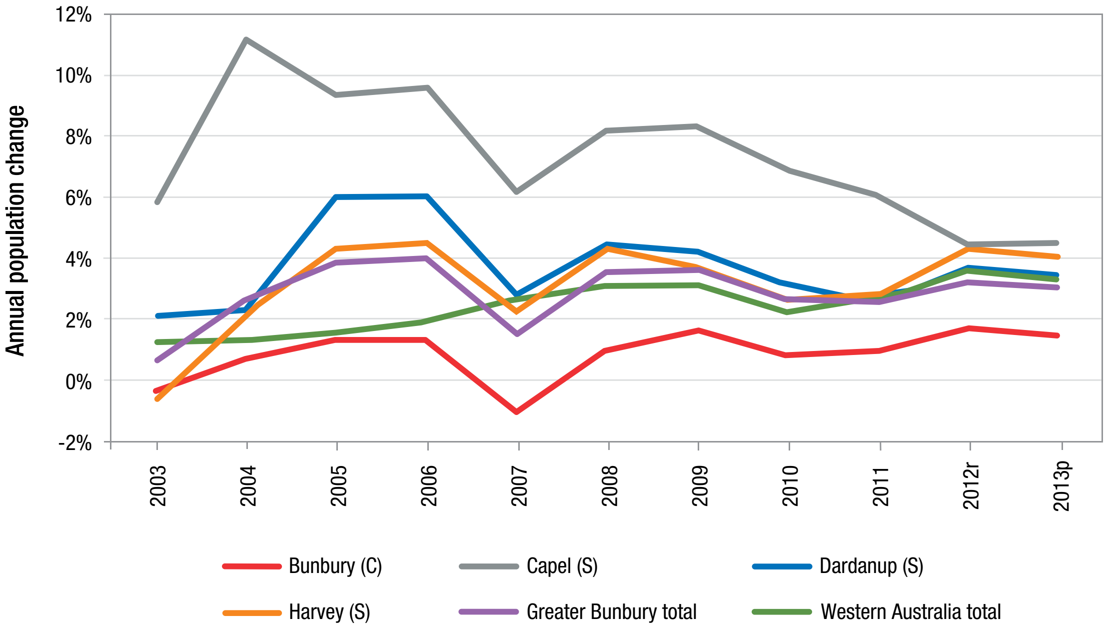
Local Government Area	2008-2013p growth		2003-2013p growth		Area	Population density 2013
	Average Annual %	Number (total)	Average Annual %	Number (total)	Km^2	$Persons/km^2$
Bunbury (C)	1.3%	2,150	1.0%	3,241	65	515.4
Capel (S)	6.1%	4,191	7.5%	8,442	558	29.5
Dardanup (S)	3.4%	2,143	3.9%	4,376	526	26.2
Harvey (S)	3.5%	4,105	3.5%	7,573	1,728	15.0
Greater Bunbury total	**3.1%**	**12,589**	**3.1%**	**23,632**	**2,877**	**31.2**
Western Australia total	**3.0%**	**347,621**	**2.6%**	**566,580**	**2,526,574**	**1.0**

Source: Australian Bureau of Statistics (2013) *Catalogue 3218.0 Sub-regional Population Growth, Australia, 2012*

p – preliminary

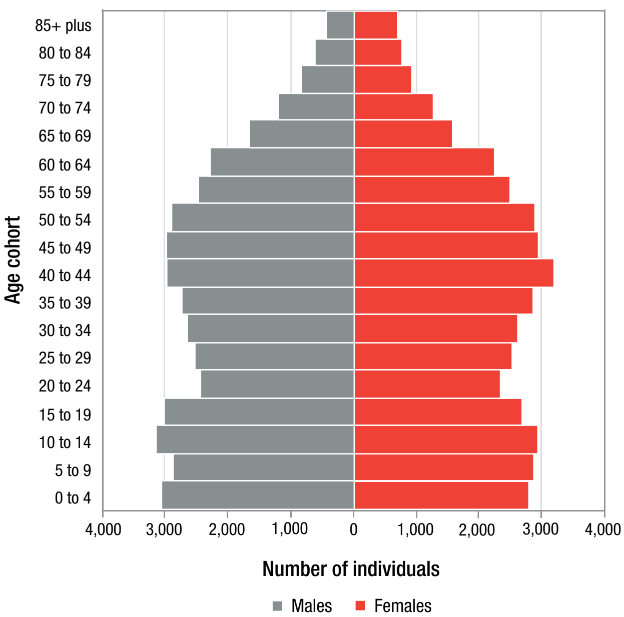
[12] Australian Bureau of Statistics (2007) *Catalogue 3218.0*

Figure 9: Estimated resident population growth rates – Greater Bunbury sub-region



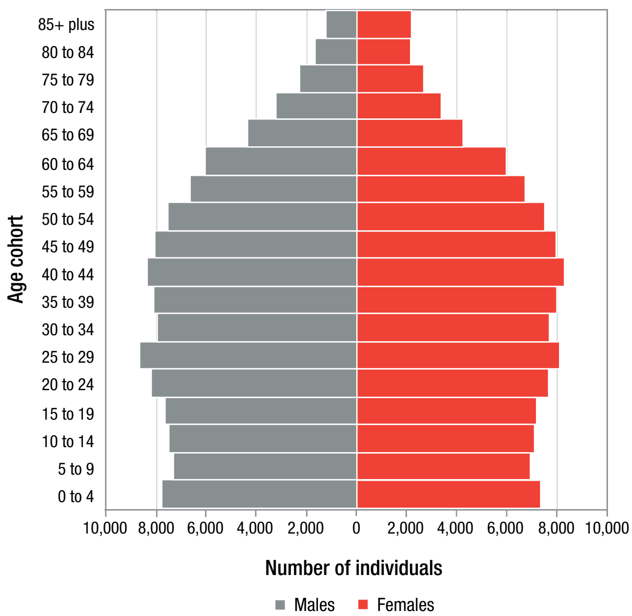
Source: Australian Bureau of Statistics (2013) *Catalogue 3218.0 Sub-regional Population Growth, Australia, 2012*

Figure 10: Age sex profile – Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

Figure 11: Age sex profile – Western Australia



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

4.3 Population projections

WA Tomorrow forecasts, released in 2012, are prepared using 10,000 different permutations that emulate the variability in population change shown in historical data. Each permutation shows possible growth or decline in a population, based on five variables (birth rate, death rate, net interstate migration, net intrastate migration and net overseas migration) that occur to varying degrees in each simulation.

Updated *WA Tomorrow* projections will be released in early 2015.

The range of *WA Tomorrow* forecasts are divided into five 'bands', based on the projected rate of population change produced by each simulation. Each band includes one fifth of the permutations, with Band A representing the lowest quintile of projected population growth, Band C the median and Band E the highest. The *WA Tomorrow* documents publish the median value of each quintile to provide five forecasts for each geography.

Based on the Band C projections, the Greater Bunbury sub-region is likely to experience a greater rate of population growth than Western Australia as a whole to 2026 (Table 6). Growth of this nature will require careful planning and infrastructure investment to ensure that it unfolds in an efficient and positive fashion. Forecast growth should be achieved through a mixture of urban consolidation and the development of 'greenfield' sites.

4.4 Population stability

Data comparing population stability in Greater Bunbury and Western Australia is depicted in Figures 12 and 13. They show that the level of population stability (or population churn) in the Greater Bunbury sub-region is very similar to levels across the Western Australian population as a whole.

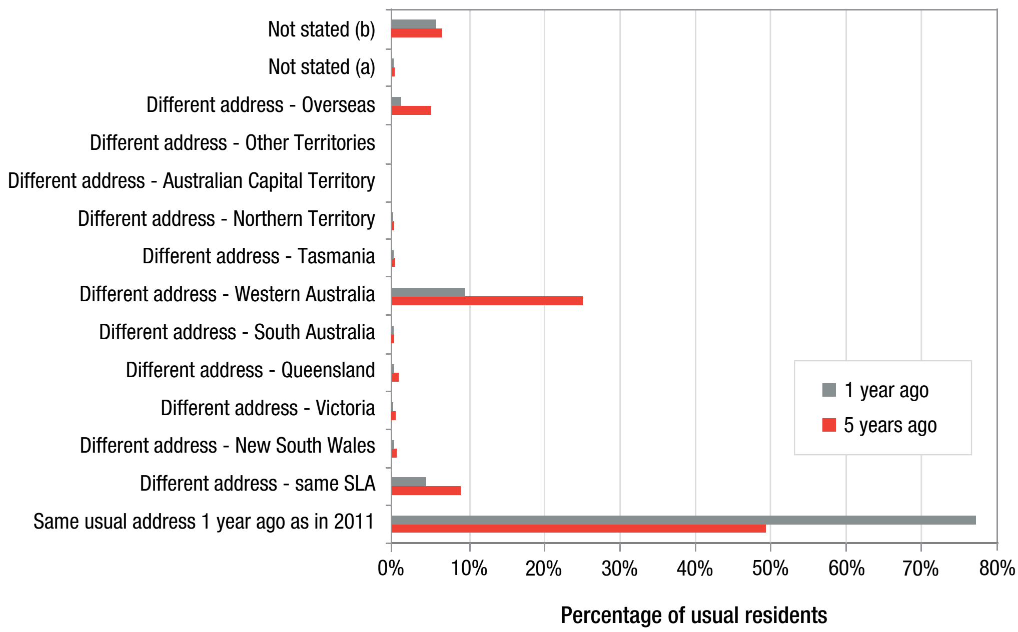
Table 6: WAPC population projections – Greater Bunbury sub-region and Western Australia

Local government authority	Estimated resident population 2012	Projected population 2016	Projected population 2021	Projected population 2026	Forecast average annual growth 2011 - 2016	Forecast average annual growth 2016 - 2021	Forecast average annual growth 2021 - 2026
Bunbury (C)	33,237	36,200	37,700	39,100	1.0%	0.8%	0.7%
Capel (S)	15,549	18,000	21,800	25,900	5.0%	4.2%	3.8%
Dardanup (S)	13,250	16,600	19,800	23,000	4.2%	3.8%	3.2%
Harvey (S)	24,879	27,300	30,900	34,400	2.8%	2.6%	2.3%
Greater Bunbury total	**86,915**	**98,100**	**110,200**	**122,400**	**2.7%**	**2.5%**	**2.2%**
Western Australia total	**2,432,706**	**2,612,300**	**2,834,000**	**3,060,500**	**2.1%**	**1.7%**	**1.6%**

Source: Western Australian Planning Commission (2012) *Western Australia Tomorrow*

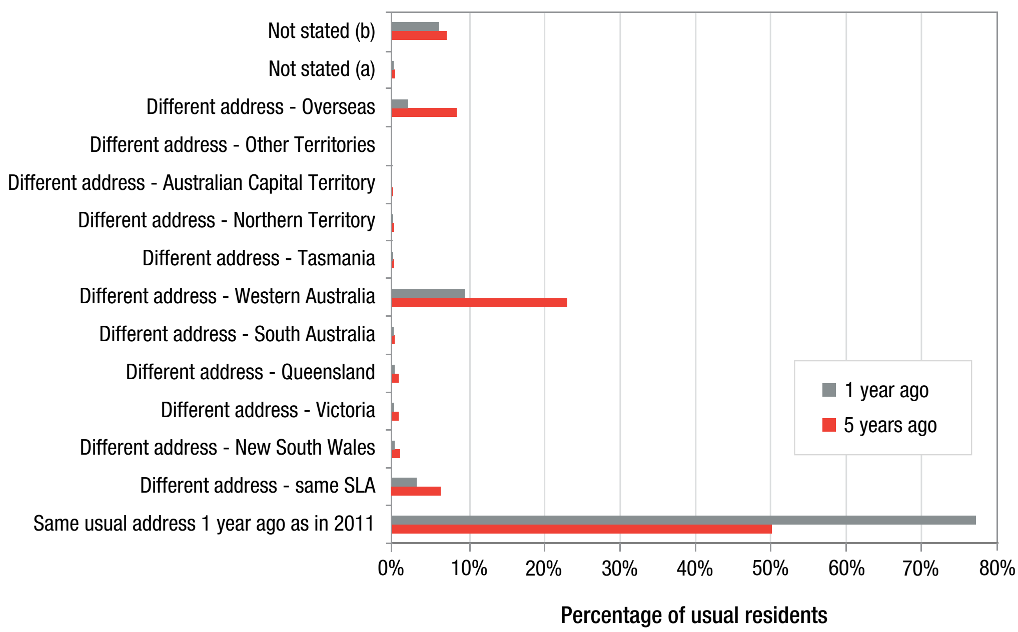
Note: Updated WA Tomorrow projections will be released in late 2014

Flgure 12: Place of usual resident 1 and 5 years ago – Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

Flgure 13: Place of usual residence 1 and 5 years ago – Western Australia



Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

4.5 Household formation

At the 2011 Census the majority (74.9 per cent) of occupied private dwellings in the Greater Bunbury sub-region were family households, compared to 72.2 per cent for Western Australia (Table 7). There were a marginally lower proportion of group households in the Greater Bunbury sub-region than in Western Australia. It is probable that this trend may, in part, be due to the low proportion of young adults residing in the sub-region.

Perhaps the most significant change to household formation trends in recent years is the increasing number of 'couple families without children'. The proportion of occupied households containing a 'couple family without children' at the 2011 Census was approximately 33 per cent; up from 23 per cent in 2006.

At the 2011 Census, 22 per cent of occupied private dwellings were single person households, yet only 11 per cent of dwellings had fewer than three bedrooms. Of the single person households in the sub-region, 65 per cent per cent were dwellings with three or more bedrooms. 43 per cent of two person households were dwellings with four or more bedrooms. This suggests that a greater variety of housing stock (in particular an increased proportion of smaller dwellings), may promote more efficient use of residential land in the Greater Bunbury sub-region.

Table 7: Household types – Greater Bunbury sub-region

Household type	Family household type	Number of households	% of total households
Family households	Couple families with children	8,896	30.2
	Couple families without children	9,661	32.8
	One parent families	3,311	11.2
	Other families	208	0.7
	Total family households	**22,076**	**74.9**
Lone person households		6,527	22.1
Group households		897	3.0
Total households		**29,500**	**100.0**

Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

5 Land and housing demand

Key Points

- Strong population growth, a sound economic base and Bunbury's role as the commercial hub of the broader South West region have driven demand for land and housing in the Greater Bunbury sub-region since 2000.
- During the housing boom the perceived demand for residential land was extremely high, triggering a surge in the planning and development of residential land. Demand declined in the wake of the global financial crisis (as it did elsewhere in the State) but not before large stocks of land were progressed for residential development.
- While population growth in the sub-region has remained robust, since the global financial crisis, growth has, to a large extent, been accommodated by land already in the development pipeline. As such, the demand for additional land and housing has been relatively low since the global financial crisis.
- This is reflected by several key indicators which suggest that demand for *additional* residential land and housing in the Greater Bunbury sub-region is currently significantly lower than it was prior to the global financial crisis.
  - After a period of rapid growth during the housing boom, median house and unit prices have been flat for the last six years.
  - Median lot prices have increased since a sharp post Global Financial Crisis (GFC) decline, but have still not returned to the levels experienced during the housing boom.
  - The number of applications for residential subdivisions has dropped substantially over the past decade, which is indicative of the lack of confidence, on the part of developers, in demand over a one to four year time frame.
  - Dwelling approvals have been significantly fewer over the past couple of years than the long-term average. In 2013, 769 dwellings were approved in the Greater Bunbury sub-region compared to an average of 1,095 dwellings per year in the ten years to December 2013.
- Although evidence suggests that demand for housing is low relative to long-term trends, recent data show signs of recovery in the housing market. In the year to March 2014 both subdivision applications and dwelling approvals were up significantly on the previous 12 months (150 per cent and 26 per cent respectively).

5.1 Demand for residential land and housing overview

Population growth is the fundamental driver of demand for residential land and housing. Over the past decade the rate of population growth in the Greater Bunbury sub-region has been higher than the rate for Western Australia and considerably higher than the national rate. Population forecasts indicate that growth is likely to remain robust in the Greater Bunbury sub-region over the next decade. The recently completed *Greater Bunbury Strategy 2013* caters for population growth in the sub-region to 150,000.

During the housing boom, prior to the GFC, the supply of residential land and lots in the Greater Bunbury area exceeded demand by a substantial measure (discussed further in Section 6). Since the GFC in 2008, growth in the housing sector has slowed considerably with a consequent limited demand in the sub-region for the construction of *additional* residential lots in the short-term.

Within the Greater Bunbury sub-region demand for residential land varies considerably. High demand areas tend to be those with high amenity and/or close proximity to employment nodes – particularly the Bunbury central business district.

5.2 Applications for residential subdivision

Subdivision applications provide an indication of the level of confidence that developers have in future demand for residential land (over a 12 month to four-year time frame). Figure 14 illustrates the decline in demand. During 2004 applications were lodged to create 3,192 residential lots in the Greater Bunbury sub-region. In 2013 applications were lodged to create just 1,364 lots.

The data for subdivision applications suggests:

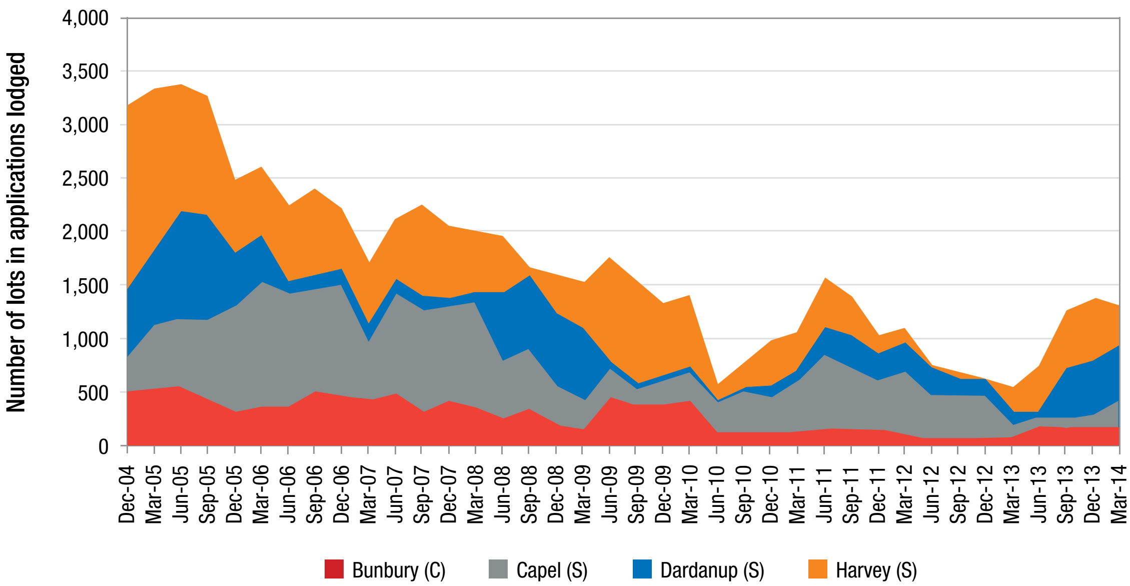
1) That demand for (or perhaps capacity/willingness to purchase) residential lots has declined significantly since the housing boom; and
2) that developers may have collectively over-estimated demand for residential lots during the housing boom, creating a surplus, which is still being consumed during the recent period of reduced lot production.

Residential subdivision activity is discussed further in Section 6.2 of this document.

5.3 Land sales

Real Estate Institute of Western Australia (REIWA) data for land sales in the Greater Bunbury sub-region to 2006/07 illustrate the surging demand for residential lots in the area during the housing boom. The median lot price in the sub-region increased by 164 per cent in the four years to 2007. In 2007 however, there was a substantial drop in demand, causing lot sales to decline abruptly and median lot price to fall. The global financial crisis of 2008 compounded this reduction in demand, slowing any return to growth. Median residential lot prices have still not returned to 2007 levels (Figure 15).

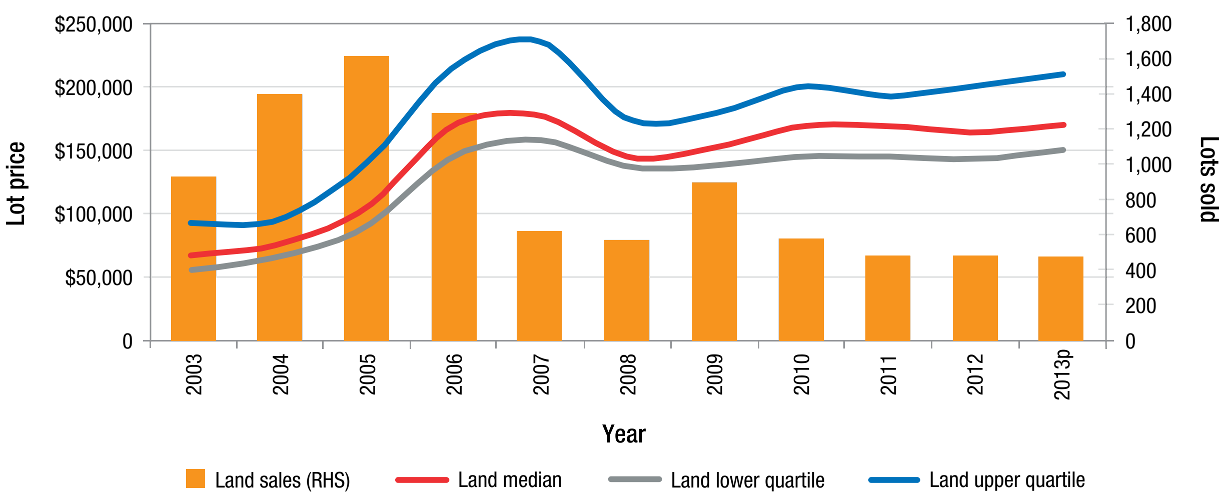
Figure 14: Residential subdivision applications lodged – Greater Bunbury sub-region



Source: Western Australian Planning Commission (2014)

Note: Data shown is annualised.

Figure 15: Residential lot sales and median price - Greater Bunbury sub-region



Source: REIWA (2014) unpublished data

p – preliminary

5.4 House and unit sales

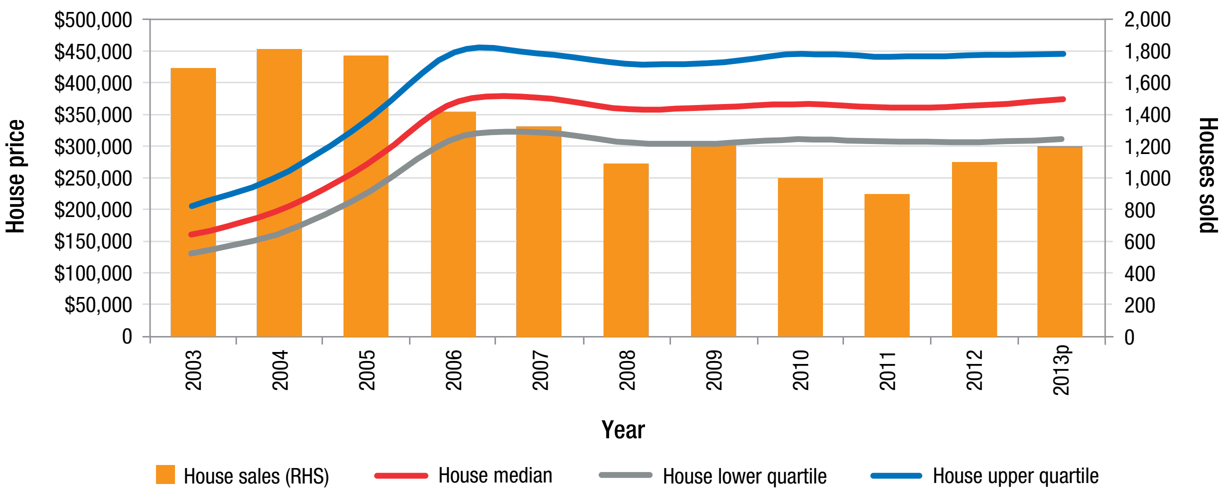
Like residential lots, the Greater Bunbury median house price increased enormously (by 136 per cent) in the four years to 2007. By 2007 however, sales activity had already declined markedly; a trend which continued with sales activity reaching a low of just 895 houses sold in 2011 (down from 1,809 in 2004).

The reduction in median sales price was not as pronounced for houses as it was for lots. Instead, for houses a flattening of the median price is apparent; fluctuating by only approximately five per cent in the five years to 2013 (Figure 16).

This may, in part, be due to reluctance, on the part of owners to sell property for a lesser amount than they purchased it. Unlike lots, a house can generate income as a rental property, which can mitigate the urgency of sale in a depressed market. This is reflected in Census data on the proportion of rental properties in the sub-region either side of the boom. In 2006, 26 per cent of occupied private dwellings were rentals and at the 2011 Census the proportion of rentals had increased to 29 per cent.

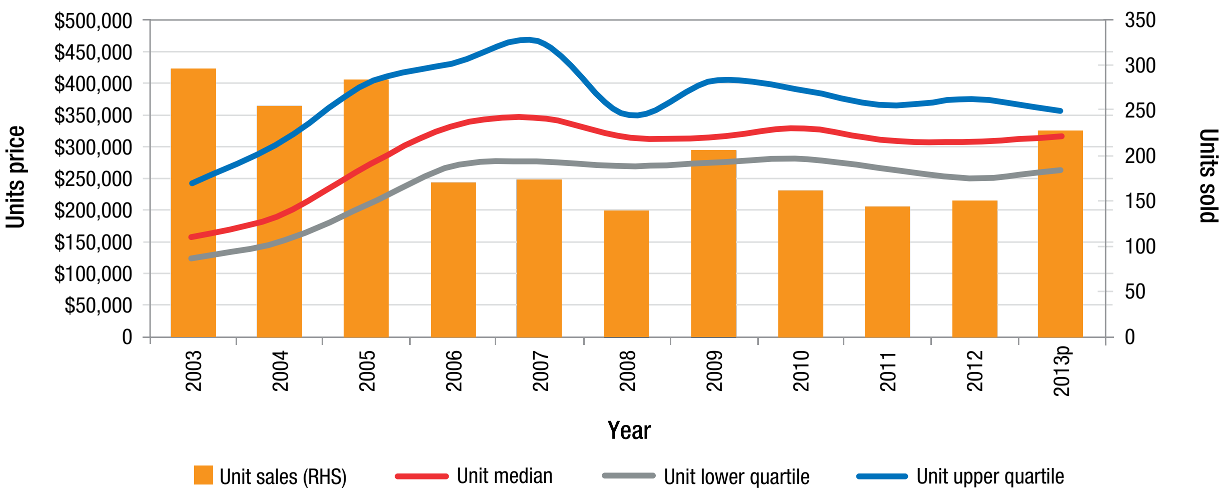
Units and apartments make up a small proportion of the Greater Bunbury housing market, with an average of 200 units per annum sold during the time seies depicted in Figure 17. During this period, the vast majority of unit sales were near the Bunbury CBD in Bunbury, South Bunbury, Carey Park and East Bunbury. There were; however, also a significant amount of unit sales in Eaton and Australind.

Figure 16: House sales and median price - Greater Bunbury sub-region



Source: REIWA (2014 unpublished data
p – preliminary

Figure 17: Unit sales and median price - Greater Bunbury sub-region



Source: REIWA (2014) unpublished data
p – preliminary

5.5 Dwelling approvals

Dwelling approvals are a key short-term demand indicator, representing either owner-occupier demand or investor confidence. As most dwelling approvals proceed to construction and eventually completion, they also provide a leading indicator of short-term dwelling supply.

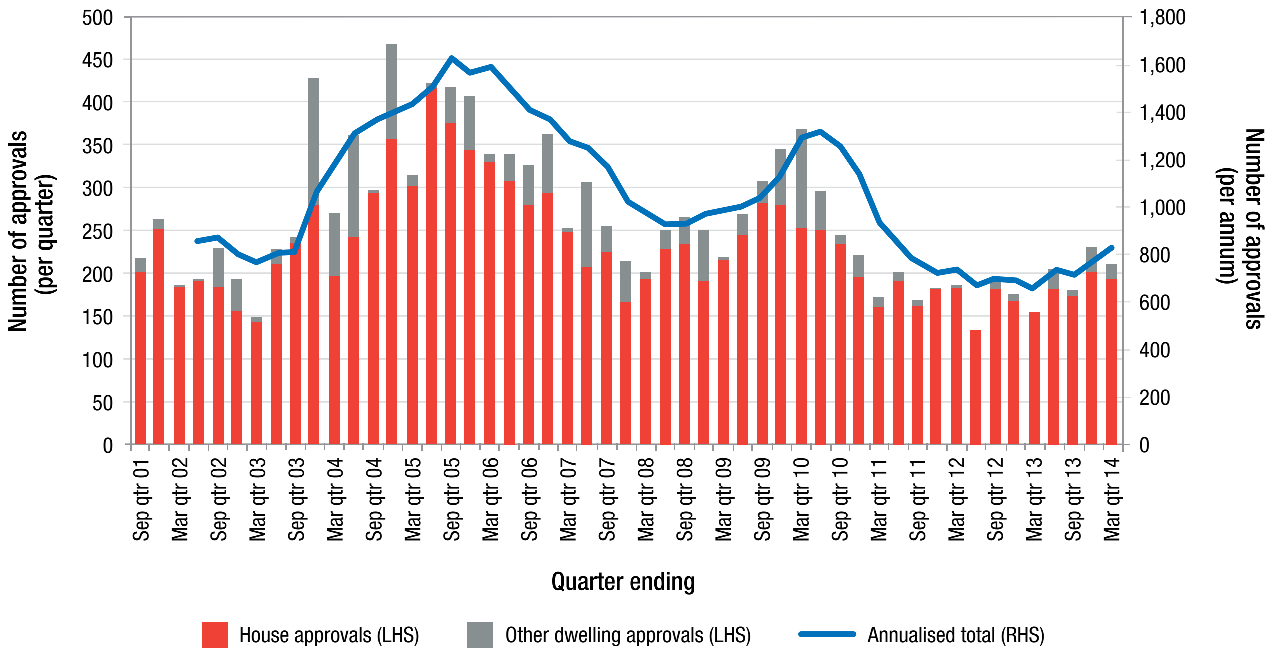
Like many other urban areas of the State, the Greater Bunbury sub-region experienced a pronounced increase in dwelling approvals during the housing 'boom' of the mid 2000s. During this period there was substantial urban expansion in the sub-region - particularly to the east of the Leschenault Inlet, in the Shire of Harvey and to the south of Bunbury at Dalyellup in the Shire of Capel. There was also a large number of other dwellings approved; 955 such dwellings were approved in the sub-region from 2003 to 2007, 76 per cent of which were in the City of Bunbury.

Dwelling approvals decreased substantially after the on-set of the global financial crisis and recent activity remains well below the long-term average. The resurgence in dwelling approvals evident in 2009/10 is primarily due to the increase in First Home Owners Grants during that time.

The recent decline in dwelling approvals is particularly pronounced for other dwellings, with only 57 such dwellings approved for development in the two years to June 2013 (Figure 18).

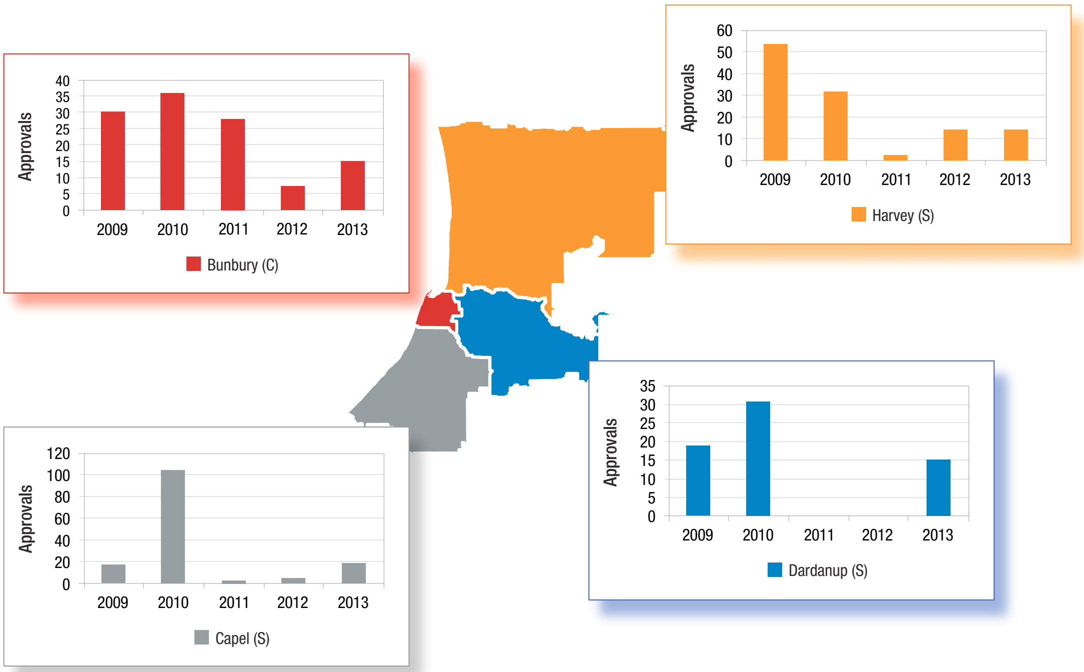
In the 2012/13 financial year there were more dwellings approved (both detached and other dwellings) in the Shire of Harvey than in the other LGAs in the sub-region (Figure 19 and Figure 20).

Figure 18: Residential building approvals 2001 to 2013 – Greater Bunbury sub-region



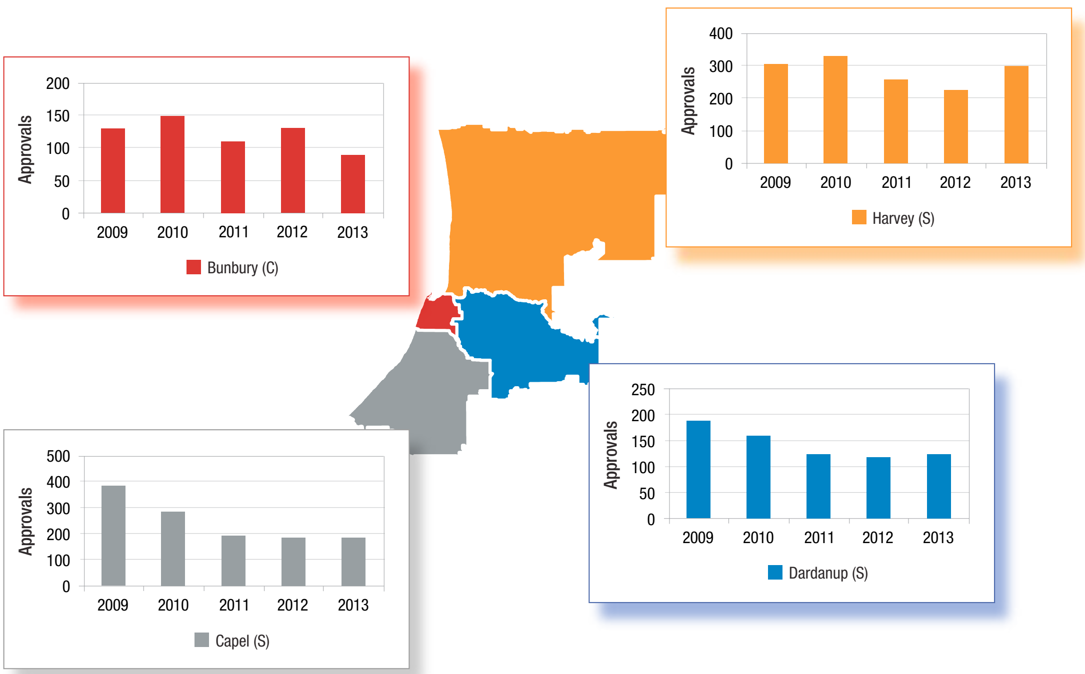
Source: Australian Bureau of Statistics (2013) *Catalogue 8731.0 Building approvals*

Figure 19: Dwelling building approvals (other residential) – Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2013) *Catalogue 8731.0 Building approvals*

Figure 20: Dwelling building approvals (houses) – Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2013) *Catalogue 8731.0 Building approvals*

5.6 Demand for industrial land

Many factors influence demand for industrial land, and quantifying this demand is a complex process. The demand for industrial land generally derives from local, national or international demand for goods and services, with value adding to both locally generated products and products generated in other regions. The *Industrial Land Needs Study* identified industrial land supply and demand cycles as having three main drivers, summarised as follows:

Population and settlement growth

- Increased population growth and labour force participation rates lead to increased demand for industrial land.

Economic growth and decline cycles

- High levels of economic growth and productivity will result in an increased demand for land for industrial activity. This is evident in the Greater Bunbury sub-region, with the contribution of the mining industry (particularly in nearby Collie) to the economy of the sub-region.
- The cyclical nature of economic growth can make short-term predictions difficult, therefore long-term predictions generally provide a more accurate reflection of demand.
- A sufficient industrial 'land bank' should be identified to create flexible market choice, respond to short-term hyper growth situations and for emerging and inward investment opportunities.

Location criteria and market preferences

- Industries will seek sites with sufficient amenity and location advantage in order to perform their activity in a competitive way (for example proximity to services, proximity to transport such as roads and ports, protected and buffered sites and sites where industry is able to expand).
- When land is in short or limited supply, industries may be forced to delay or limit expansion plans, seek alternative sites (interstate or overseas) or cease trade altogether. Industry may also experience increased levels of competition from alternative land uses, particularly retail and commercial uses.

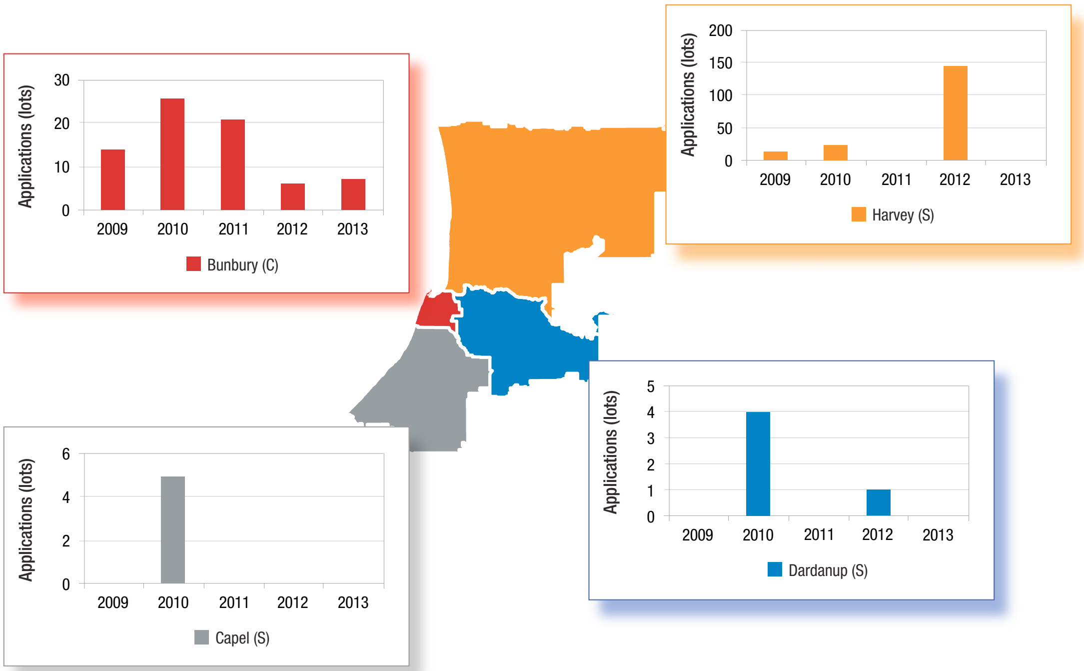
Short-term demand for general and light industrial land is comfortably being met by existing industrial areas. The Kemerton Industrial Park is classed as a 'heavy industry' park of State significance. There is a slow uptake on 'general and light industry' land with a large amount of land in the Picton and Australind areas that is yet to be developed. It is anticipated however, that demand may grow in the medium/long-term as the sub-region's population increases. The vast majority of industrial subdivision activity for the past five years has been in the City of Bunbury and the Shire of Harvey (Figure 21).

The South West region is very different in terms of economic drivers and employment to the Perth metropolitan and Peel regions. The industrial land-use mix and proportion of industrial land per capita are much higher and have greater importance within the Greater Bunbury sub-region for economic sustainability.

Economic growth in the sub-region is likely to come from the continued development of existing sectors such as regional mining and processing, energy, agriculture and food production, port-related activities, and transportation and distribution. The development of related businesses, which spin-off from these sectors, will also contribute to the economic growth of the sub-region over time.

As industrial areas are further developed there will be increased opportunities in the sub-region for industry clustering and supply chain linkages, particularly given the planned improvements to the freight transport network in the sub-region (Section 7).

Figure 21: Applications for industrial subdivision lodged - Greater Bunbury sub-region



Source:Western Australian Planning Commission (2014)

5.7 Demand for commercial land and retail floor space

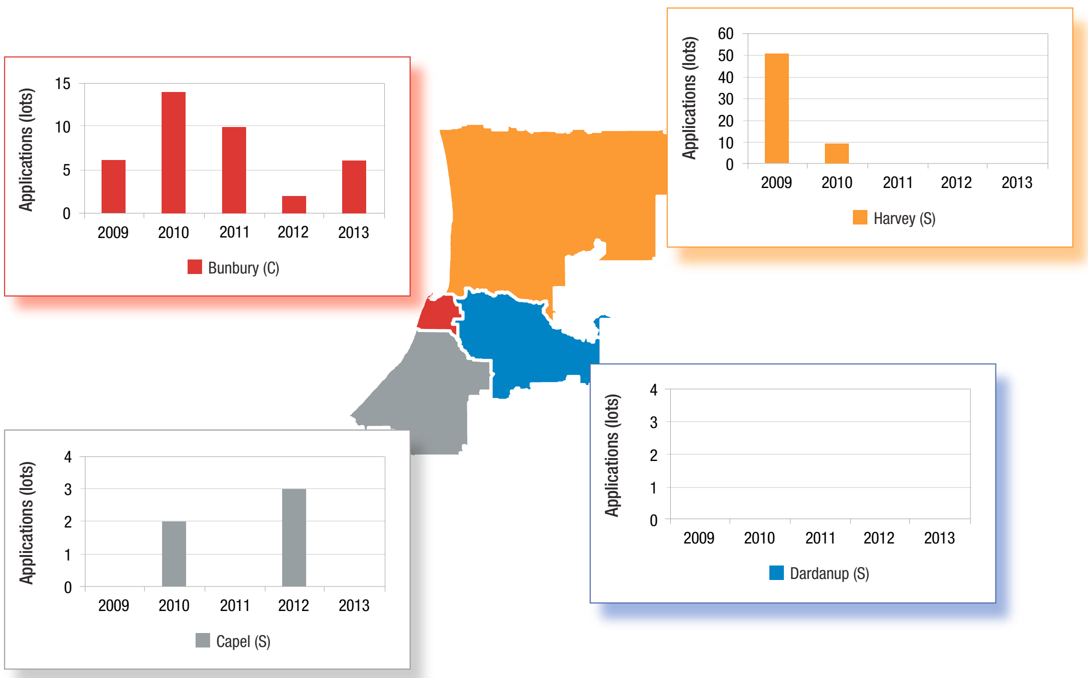
Bunbury is the main urban centre for the South West region and as such, provides a high level of commercial, retail and administrative services. The Bunbury CBD is the main commercial hub of the sub-region, with complementary shopping and activity centres located elsewhere in Bunbury, Australind and Eaton. An additional activity centre is planned for Dalyellup.

There is currently a high level of demand for commercial and retail floor space, with few premises currently available for lease. Rental costs are typically highest in the Bunbury CBD where there is a high turnover rate of businesses. Demand for retail floor space is highest in the major shopping centres; particularly Centrepoint (Bunbury), Bunbury Forum, Australind and Eaton, where lease opportunities are often difficult to obtain. However, this may change with the expansion at Eaton Fair, due for completion by November 2014.

Commercial subdivision applications reflect Bunbury's role as the commercial and retail hub of the sub-region, with applications lodged in each of the five years to December 2013. Applications were also lodged to create 51 commercial lots in the Shire of Harvey for a district centre development in Australind (Figure 22).

Data collected by the Water Corporation on the number of applications for commercial building connections indicate an average of 40 applications were received per year for the Greater Bunbury sub-region between 2008/09 and 2013/14. Of these, approximately 70 per cent of applications were for premises within the City of Bunbury, predominatly in and around the central business district. Applications for commercial building connections peaked in 2009/10 at 58 applications, with a low of 27 reached in 2011/12 (Figure 23).

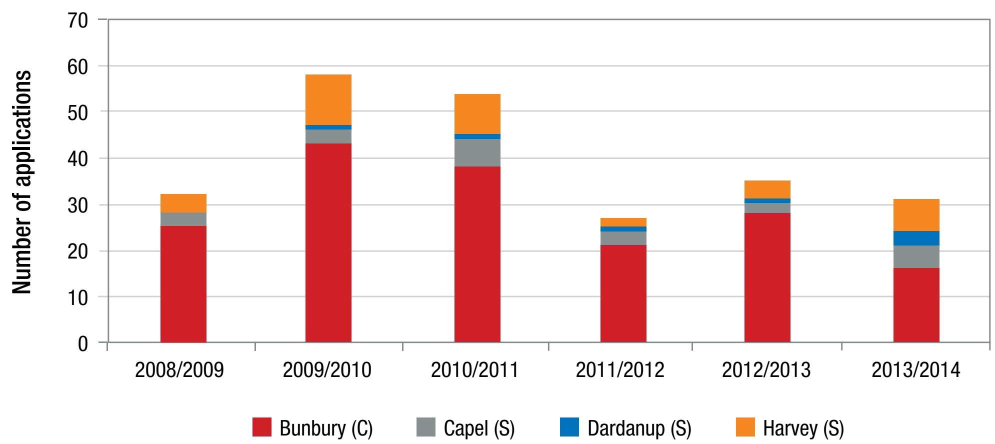
Figure 22: Applications for commercial subdivision lodged - Greater Bunbury sub-region



Source: Western Australian Planning Commission (2014)

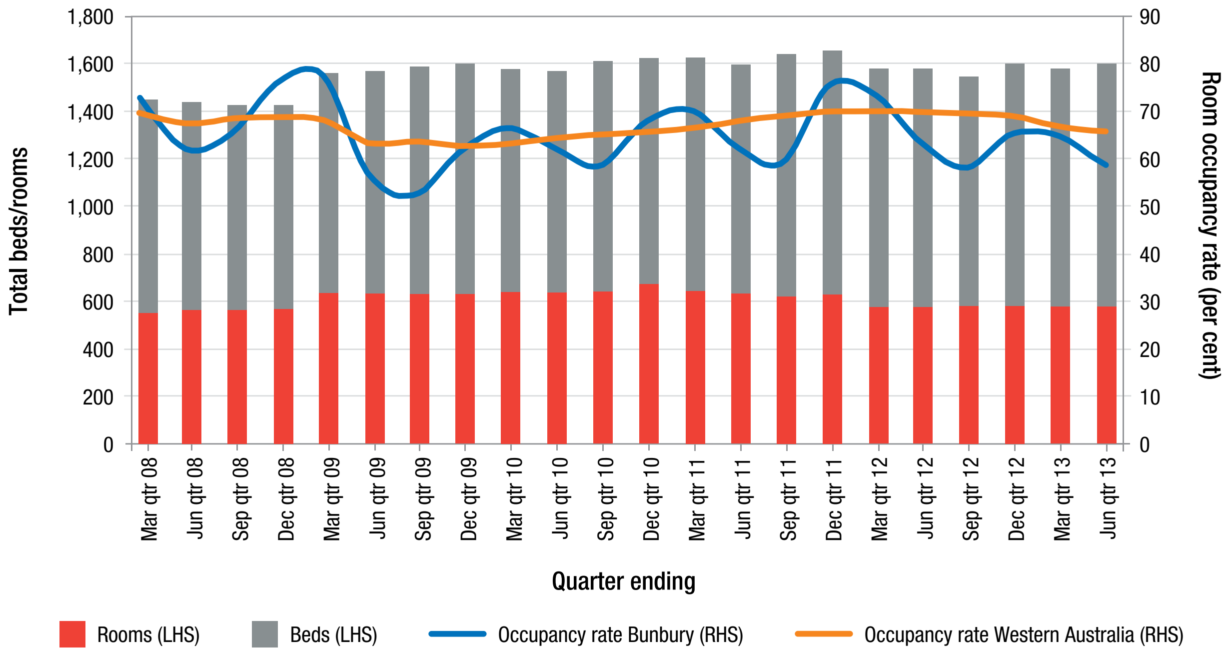
Note: No applications for Dardanup

Figure 23: Applications for commercial building approval – Water Corporation



Source: Water Corporation (2014) unpublished data

Figure 24: Tourist accommodation – City of Bunbury



Source: ABS (2014) *Catalogue 8635.5.55.002*

5.8 Demand for tourist accommodation

ABS data indicates that, as at June 2013, there were 12 tourist accommodation facilities (including hotels, motels and serviced apartments) with 15 rooms or more in the Greater Bunbury sub-region. 10 of these were located in Bunbury, one in Eaton and one in Harvey.

Aggregated data for the hotels located in Bunbury shows a similar degree of demand in the city to the rest of the State (based on occupancy/vacancy rates). There is however, a greater degree of variation in demand for tourist accommodation in Bunbury with occupancy rates highest during the warmer months of the year (Figure 24).

A report prepared for the City of Bunbury in 2006 described high levels of demand for tourist accommodation in Bunbury, with accommodation bookings regularly in short supply during peak times. The report predicted growth in the tourism sector and following its release, three major tourism projects were approved for development. Currently one of these developments has been completed (Mantra Hotel) and one is under construction (Seaview apartments development).

Although there are numerous attractions in the Greater Bunbury sub-region, the area is often over-shadowed as a tourist destination by towns further south, such as Busselton, Dunsborough and Margaret River. Future levels of demand for tourist accommodation will depend - to some extent - on the degree to which Bunbury is able to capitalise on the appeal of the broader South West Region.

In addition to land based tourism, people arriving by ship may play a more significant role in the future, as the cruise ship industry is Australia's fastest growing tourism sector. The *Western Australian Cruise Shipping Strategic Plan* stated that Bunbury recorded $600,000 in total expenditure from the industry in 2011-12, providing $200,000 in wages and adding $300,000 in value to the local economy. The Plan also noted that these figures were significantly lower than the previous financial year and lower than the anticipated figures for 2012-2013.

A notable trend in the Greater Bunbury sub-region in recent years has been the decline in caravan and camping facilities. This has mainly been driven by the development of more expensive short stay options. The popular Binningup Caravan Park was closed to make way for short stay units. However it has reopened as a caravan park in the short term and its long term future remains unclear. The Punchbowl Caravan Park in Bunbury has been closed for many years and is likely to be developed for residential and short stay units. Pressure on caravan parks has not only been felt in Greater Bunbury, but also the wider South West region.

6 Land and housing supply

Key Points

- Land supply in the Greater Bunbury sub-region is governed by the local planning schemes of the four local governments in the sub-region as well as the *Greater Bunbury Region Scheme*, which spans the entire area.
- Recent Department of Planning analysis using the Integrated Regional Information System (IRIS) database indicates that, as at December 2013, approximately 73 per cent of the total land zoned for residential purposes (6,875 of 9,514 ha) was developed.
- Under the *Greater Bunbury Region Scheme*, which has much broader land use categories than local planning schemes, only 58 per cent (5,210 of 8,920 ha) of the land zoned for development was urbanised.
- Although there are several old (by Western Australian standards) settlements in the Greater Bunbury sub-region, most of the urbanised area in the sub-region has been developed in the past 25 years. There is substantial variation in the age of dwelling stock with a much higher proportion of older dwellings in longer established areas (particularly Bunbury) than in the surrounding suburbs.
- There is a substantial volume of residential land in the supply pipeline in the Greater Bunbury sub-region, with very large tracts of undeveloped urban and urban deferred zoned land.
- During the housing boom the perceived level of demand for residential land and housing was extremely high which led to an oversupply of residential lots during that time. The supply of new residential lots in the sub-region has since contracted substantially due to the large stock of vacant lots and conditionally approved lots in the development pipeline.
- As lots produced during the housing boom are gradually consumed (by dwelling construction) and property prices recover from their post-bubble stagnation it is possible that subdivision activity may increase.
- Analysis using the IRIS database indicates that approximately 76 per cent of land zoned for commercial and retail purposes under the relevant local planning schemes is developed.
- If recent land consumption trends were to continue, the existing stocks of urban and urban deferred zoned land in the *Greater Bunbury Region Scheme* could theoretically support urban growth for 50 years.
- Achieving the *Greater Bunbury Strategy 2013* population target (of 150,000 residents) can be achieved within the existing stock of non-urbanised urban and urban deferred zoned land in the sub-region if greenfield areas are developed at a marginally higher density (6.4 dwellings per gross urban zoned ha) than existing urban areas (6.0 dwellings per gross urban zoned ha).
- If greenfield development were to increase to 26 dwellings per gross urban zoned hectare (in line with metropolitan growth targets) and the rate of infill were to increase to 15-20 per cent existing stocks of urban and urban deferred land in the Greater Bunbury sub-region could theoretically accommodate a population of 250,000.
- The large stocks of land zoned for urban development and expanses of rural land in the Greater Bunbury sub-region mean that land supply/urban expansion should be staged in a fashion that ensures efficient use of existing and planned infrastructure and positive planning outcomes.
- It is important that industrial lands be identified, establishing a suitable land bank to encourage economic development in the Greater Bunbury sub-region. Industrial land stocks should also be monitored to ensure an adequate supply.

6.1 Planning context

State and regional planning

State Planning Strategy (2014)

The *State Planning Strategy*, released in 2014, provides an overarching strategic guide for land use planning across Western Australia. The aim of the document is to provide a sound basis for the integration and coordination of State, regional and local jurisdictions.

Among the strategies discussed are: provision of key infrastructure to enable continued growth in the resource sector; economic diversification; conservation and improving connectivity within, and to, the sub-region.

State planning policies

State planning policies are prepared and adopted by the WAPC under statutory procedures set out in part 3 of the *Planning and Development Act 2005*. These policies are concerned with broad planning controls and can be made for matters which may be the subject of a local planning scheme or which relate to a specific region or area of the State. Examples include state policies for coastal planning; rural land use planning; and residential design codes (R-Codes). The WAPC and local governments must have due regard for the provisions of the state planning policies when preparing and amending local planning schemes and when making decisions on planning matters. Further information can be accessed at the Department of Planning's website, www.planning.wa.gov.au.

South West Planning and Infrastructure Framework

The *South West Planning and Infrastructure Framework* is a broad planning document that seeks to guide the future development of the South West region (including the Greater Bunbury sub-region) over the next 20 years.

The Framework addresses the scale and distribution of future population growth and housing development and identifies strategies for dealing with economic growth, environmental issues, transport, water resources, agriculture, tourism and the emerging impacts of climate change. Importantly it also provides an infrastructure component that identifies the sub-region's priorities in providing both social and economic infrastructure to support a growing population.

The Framework divides the South West into three sub-regions: the Warren-Blackwood; Leeuwin-Naturaliste; and the Bunbury-Wellington. The Bunbury-Wellington sub-region is relevant to this document and outlines the key infrastructure priorities.

The Framework supersedes the *South West Framework* endorsed in 2009.

Greater Bunbury Region Scheme

Region planning schemes provide a statutory mechanism to assist strategic planning, coordinate the provision of major infrastructure and set aside areas for regional open space and other community purposes.

The WAPC prepares region schemes for the effective planning and coordination of land use and development. There are three region schemes in operation in Western Australia: the *Metropolitan Region Scheme*; *Peel Region Scheme*; and *Greater Bunbury Region Scheme*.

The *Greater Bunbury Region Scheme* area covers the City of Bunbury and the Shires of Harvey, Dardanup and Capel.

Greater Bunbury Strategy (2013)

The *Greater Bunbury Strategy* (2013) addresses the growth of the Greater Bunbury sub-region to accommodate a population of 150,000 residents.

To achieve this target, the Greater Bunbury Structure Plan was prepared to identify new growth areas for the short, medium and long-term, whilst also encouraging infill consolidation to ensure a compact and well-connected urban form. The Structure Plan will be used to inform the *Greater Bunbury Region Scheme* and in particular areas required as 'urban deferred' in the future.

The *Greater Bunbury Strategy* (2013) supersedes the relevant sections of the *Bunbury-Wellington Region Plan* (1995).

Bunbury-Wellington Region Plan (1995)

The purpose of the *Bunbury-Wellington Region Plan* is to provide a decision making framework to allow for the decentralisation of urban and industrial growth outside of the Perth metropolitan area.

The key objectives of the plan are to:

- ensure intra and inter-generational equity in relation to the use of natural resources;
- facilitate the efficient allocation and use of resources;
- create certainty for investors in the economic and social development of the sub-region; provide regional guidance for all involved in the use of land which balances economic, social and environmental considerations;
- help reduce the ad hoc and duplicated decision-making and activity by co-ordinating action by Government agencies, private sector organisations and community groups;
- assist in the ongoing formulation of policy on land use and development at different levels of government; and
- assist local government in preparing and implementing local strategies, schemes, other local planning and development matters, and provide for the preservation, and reservation of land for public purposes.

The plan also includes the Greater Bunbury Structure Plan which outlines new growth areas in the Greater Bunbury urban area. A large number of these areas have already been developed and therefore in many cases the plan has fulfilled its objectives. The recently completed *Greater Bunbury Strategy*, as previously described, supersedes the relevant sections of the *Bunbury-Wellington Region Plan* including the Greater Bunbury Structure Plan.

Better Urban Water Management (2008)

Better Urban Water Management (BUWM) provides guidance on the implementation of *State Planning Policy 2.9 Water Resources* and has been adopted as the state policy approach in integrating land and water planning and working towards water sensitive urban design. This approach was collaboratively developed by the former Department of Planning and Infrastructure, Department of Water, the Western Australian Local Government Association and the Australian Government Department of Environment, Water, Heritage and the Arts.

BUWM is designed to facilitate better management and use of water resources by ensuring an appropriate level of consideration is given to the total water cycle at each stage of the planning system. The document intends to assist regional, district and local land use planning, as well as the various subdivision phases of the planning process. The document is to be used by all stakeholders and decision-makers and has state-wide application for new urban, commercial, industrial and rural-residential developments.

Local planning

Local planning schemes set out the way land is to be used and developed for a wide variety of land uses and activities. They also ensure the long-term built form aspirations for localities are achieved through the expansion, revitalisation and protection of land use assets such as industrial, employment based land, waterfront areas and residential lands.

City of Bunbury

The City of Bunbury's *Local Planning Scheme 7* was gazetted on the 13 December 2002. It identifies the following objectives:

- to assist the effective implementation of regional plans and policies including the *State Planning Strategy*, *Bunbury-Wellington Region Plan* and *Industry 2030*;
- to ensure there is a sufficient supply of serviced and suitable land for housing, employment, commercial activities, community facilities, recreation and open space;
- to promote highly accessible:
  - residential areas to employment centres, commercial areas, education facilities and entertainment areas; and
  - industrial areas - to sources of labour, power and materials;
- to promote and assist Bunbury's future growth as a regional centre of character which offers an attractive and unique lifestyle enhanced by economic growth and opportunities;
- to provide for lifestyle and housing choice, and variety in neighbourhoods with a community identity and high levels of amenity; and
- to generally implement and reflect the objectives, strategies and recommendations of the Bunbury Planning Strategy.

The City of Bunbury completed an Activities Centres Policy in 2010, which sets out the city's broad vision for strengthening the provision of retail, mixed use/specialist retail/civic/entertainment and cultural services. The redevelopment of the Marlston Hill/Koombana Bay waterfront by LandCorp will enhance the prominence of the Bunbury CBD and waterfront areas.

The city is currently in the process of completing a Local Planning Strategy to inform its planning for the next 10-20 years.

Shire of Dardanup

The Shire of Dardanup Local Planning Scheme covers the settlement areas of:

- Dardanup
- Eaton
- Picton
- Burekup

The Shire's Town Planning Scheme No. 3 (currently under review) was gazetted on the 16 March 1979 and identifies the following objectives for the Shire:

- to consolidate the urban areas of Dardanup, Burekup and Eaton and to control the building on those areas of new structures between or adjacent to existing buildings;
- to provide for the development of that part of the Picton Industrial Complex that lies within the scheme area;
- to make provision for the development of small holding areas to meet the needs of the district;
- to plan for the development of a major road and trunk services network, generally in accordance with the Bunbury sub-regional plan prepared by the Bunbury Regional Planning Committee; and
- to protect areas of significant agricultural value, particularly those in irrigation districts, from conflicting land uses.

Separate townsite expansion strategies were adopted for Burekup and Dardanup in 2009. A draft local planning strategy currently under development was advertised for public comment in 2013.

The Shire is experiencing significant demand for urban expansion associated with population and regional employment growth. This is likely to be stimulated with the Bunbury Port expansion. A new scheme and local planning strategy will identify further areas for urban expansion as well as improve guidance and decision-making on land use and rezoning proposals for the next 10 to 20 years.

Shire of Harvey

The Shire of Harvey Local Planning Scheme covers the settlement areas of:

- Harvey
- Brunswick
- Australind
- Yarloop

The Shire is formulating a local planning strategy to consolidate compatible land uses and identify future expansion areas to facilitate planning for the next 10 to 20 years. In particular, the strategy will focus on the Australind Foreshore, Ridley Place Redevelopment area.

Shire of Harvey Town Planning Scheme No. 1

The Shire's Town Planning Scheme No. 1 was gazetted on the 12 November 1996 and identifies the following objectives for the Shire:

- to encourage and control the continued orderly development of land within the Shire in a manner that enhances the quality of life of the Shire community;
- to ensure that the existing standard of roads, water supply, effluent disposal, electricity supply and other community services are sufficient for the additional demands proposed development would create;
- to promote economic development and tourism within the Shire and increase local employment opportunities;
- to provide opportunities for a wide range of lifestyles, providing areas for urban and rural living;
- to retain the pre-eminence of agriculture, and restrict development that detracts from the potential of significant agricultural land;
- to preserve and enhance places of natural beauty, particularly along the coast, the rivers and inlets and the scarp, and
- to preserve historic buildings and objects of historical and scientific interest.

Shire of Capel

The Shire of Capel Local Planning Scheme covers the settlement areas of:

- Capel
- Boyanup
- Dalyellup

Shire of Capel Local Planning Strategy

The Shire is due to prepare a local planning strategy to consolidate compatible land uses and identify future expansion areas to facilitate planning for the next 10 to 20 year period. The Dalyellup residential estate is covered by a structure plan which provides for significant urban expansion. The Shire has also completed a townsite strategy for the expansion of Capel and Boyanup.

Shire of Capel Town Planning Scheme 7

The Shire's Town Planning Scheme No. 7 was gazetted on the 17 March 1998 and identifies the following objectives for the Shire:

- to direct and control the development of the scheme area in such a way as shall promote and safeguard the health, safety, economic and general welfare of its inhabitants and shall conserve the natural values of the district;
- to reserve land required for public purposes;
- to control the use of land by allocating zones to land within the scheme area for the various purposes described in the scheme;
- to provide standards to secure and maintain the orderly and properly planned development of land within the scheme area; and
- to make provision for other matters authorised by the enabling Act.

6.2 Residential

Zoned land supply

Region scheme supply

The Department of Planning's *Urban Growth Monitor* reports on several key stages of land supply and lot availability, however, its primary focus is the availability of land zoned for urban development (land zoned urban and urban deferred). A tiered land supply assessment model is used for the *Urban Growth Monitor* to provide detailed analysis on the amount of land zoned urban or urban deferred within the Metropolitan, Peel and Greater Bunbury region schemes.

The *Urban Growth Monitor 2014* showed that, as at December 2012, there were approximately 3,720 hectares of non-urbanised land zoned for urban development (urban and urban deferred zoned land) in the Greater Bunbury Region Scheme (GBRS) area.

The most populous LGA in the sub-region, the City of Bunbury has the highest proportion of urbanised land of the four LGAs in the sub-region. Consequently there are limited stocks of undeveloped land zoned for future residential development. There is no urban deferred zoned land in the City of Bunbury and only 250 hectares of undeveloped urban zoned land that is not committed for non-residential uses.

Although the Shire of Harvey has fewer residents than the City of Bunbury, the *Urban Growth Monitor 2014* showed that it has more urbanised land; the majority of which is located in the south of the LGA in the Australind area. Harvey also has the largest stocks of non-urbanised land zoned for residential development with roughly half of the total GBRS stock of undeveloped 'urban' zoned land located in the Shire. While much of this stock is located around the fringe of Australind, there are also significant stocks in, or adjacent to, other towns in the Shire.

There is also a large amount of non-urbanised land zoned for future development in the Shire of Capel. Unlike the Shire of Harvey however, most of this stock is zoned as 'urban deferred' and is therefore likely to be developed over a longer time-frame. Approximately 78 per cent of the total stock of 'urban deferred' zoned land in the GBRS is located in the Shire of Capel.

The Shire of Dardanup has the smallest amount of urbanised land and the smallest stock of non-urbanised land zoned for future development in the GBRS. There is; however, a site identified near Eaton, in the west of the Shire, which is being considered for rezoning under the GBRS over the next five to 10 years. Rezoning this site is subject to the preparation of a suitable district structure plan; however, it is anticipated that (should development proceed) the area may eventually accommodate approximately 70,000 residents.

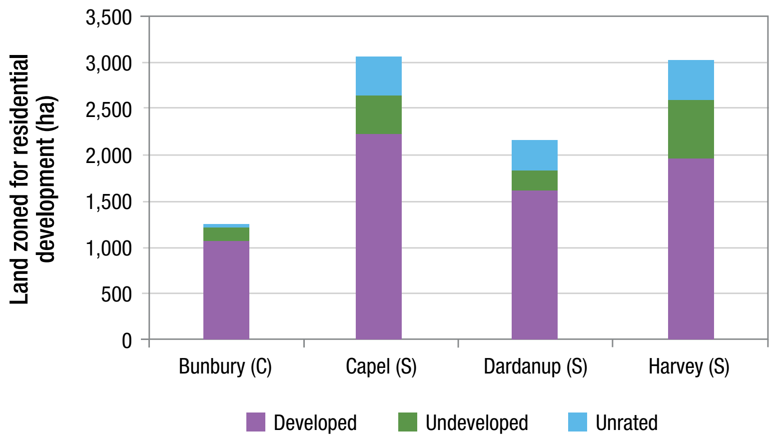
Table 8: Stocks of land zoned for development and development status

	Total stock of land zoned for development (ha)	Urban zoned (ha)	Urban- deferred zoned (ha)	Urbanised (ha)	Non-urbanised (ha)
Bunbury (C)	2,330	2,330	0	1,740	590
Capel (S)	2,400	1,740	670	1,040	1,360
Dardanup (S)	860	780	80	510	340
Harvey (S)	3,330	3,210	110	1,910	1,420
Total - Greater Bunbury sub-region	**8,920**	**8,060**	**860**	**5,210**	**3,720**

Source: Department of Planning (2013) *Urban Growth Monitor 2013*

Note: Numbers may not sum due to rounding

Figure 25: Residential land supply assessment – Greater Bunbury sub-region



Source: Department of Planning (2014) *IRIS*

Local planning scheme supply

A land supply assessment based on the local planning schemes which cover the Greater Bunbury sub-region indicates that a total of approximately 9,510 ha of land is currently zoned for residential use. Based on property information from Landgate's property valuation database, approximately 72 per cent (6,875 ha) is considered to be developed (contains property information) and 15 per cent (1,390 ha) is classified as vacant. The remaining 13 per cent (1,250 ha) of land is contained within lots for which there is no property record (unrated). For the purposes of assessing available land supply, the majority of these unknown lots can also be considered as developed.

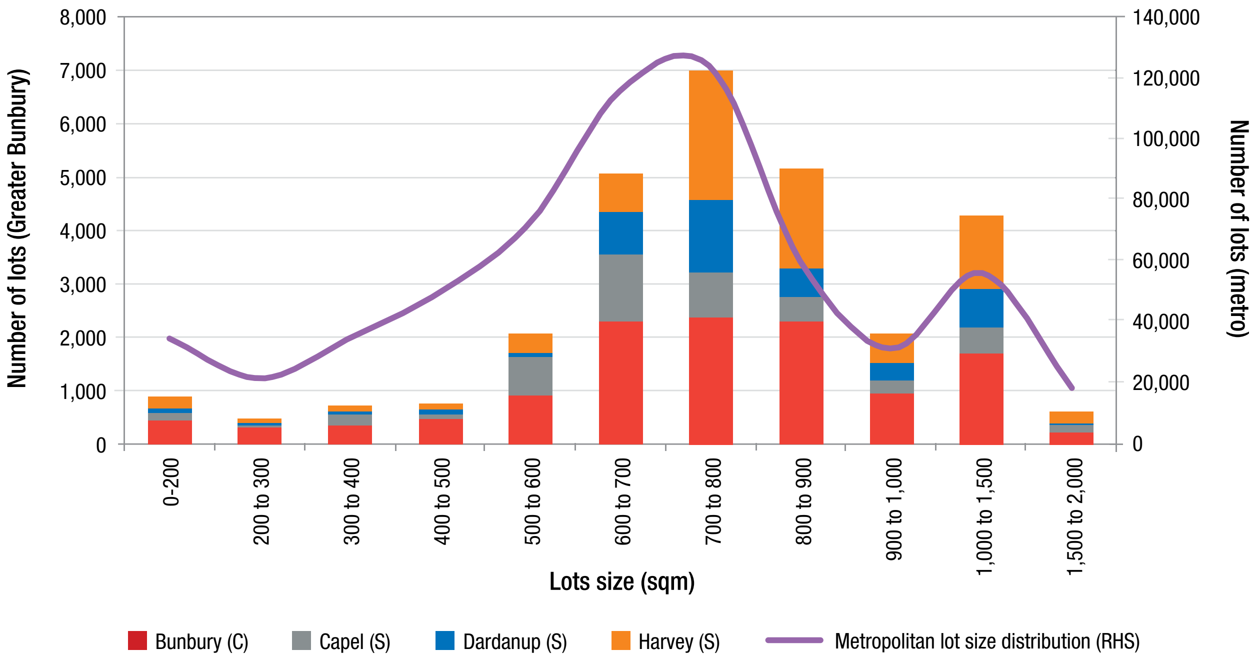
Existing stock of residential lots

Existing residential lots in the Greater Bunbury sub-region are typically larger than lots in the Perth metropolitan area (Figure 26). Only 15 per cent of lots in residential areas are smaller than 600 m^2 in area.

The fact that residential lots in the Greater Bunbury sub-region are generally larger than those in Perth is perhaps unsurprising given that there is generally less development pressure in smaller towns and cities. The lot size distribution outside the City of Bunbury is generally even more skewed toward 'larger' lots, with only seven per cent of lots in Dardanup and 10 per cent of lots in Harvey smaller than 600 m^2. There are however, 20 per cent of residential lots in Capel smaller than 600 m^2 (with a large proportion of lots in the 500 to 600 m^2 cohort) many of which are located in newly developed residential areas in Dalyellup.

Often residential lots are not developed to the maximum density permitted under the local planning scheme. The Department of Planning's Integrated Land Information Database (ILID) compares density outcomes with those prescribed by the R-codes under local planning schemes.

Figure 26: Lot size distribution - Greater Bunbury and the Perth Metropolitan area



Source: Valuer General's Office (2013)

Tables 9, 10, 11 and 12 compare the actual lot and dwelling density of each LGA, with the maximum allowable lot/dwelling yield possible, based on local R-Code zonings. It must be noted that retrospectively achieving the maximum dwelling density would be essentially unachievable due to the scale of redevelopment required. However, in each of the four local government areas, the actual number of dwellings is substantially smaller than the maximum theoretical yield, suggesting that infill development may be possible across much of the sub-region's urbanised area.

Table 9: Integrated land information database outputs – City of Bunbury

R-Code	Number of lots	Number of residential dwellings	Lot potential (high)	Lot porential (low)
R2.5	3	3	4	4
R5	52	52	63	63
R12.5	1	3	2	2
R15	458	431	1,320	1,320
R15/40	187	221	465	106
R20	6,253	6,220	7,978	7,978
R20/30	3,419	4,168	8,293	4,646
R20/40	1,209	1,579	4,364	1,696
R20/60	30	32	124	41
R30	25	69	239	239
R40	54	101	181	181
R40/60	146	199	583	445
R40/80	107	120	671	361
R60	250	322	830	830
R60/100	84	123	346	184
R-AC2	5	7	-	-
R-AC3	4	6	-	-
Bunbury Total	**12,287**	**13,656**	**25,463**	**18,096**

Source: Department of Planning (2013) *Integrated Land Information Database*
Note: Additional dwelling potential refers to existing developed lots and is based on current R-Codes and lot size

Table 10: Integrated land information database outputs – Shire of Capel

R-Code	Number of lots	Number of residential dwellings	Lot potential (high)	Lot porential (low)
R2.5	878	746	865	865
R5/10	5	-	7	2
R10/15	855	715	2,488	1,542
R12.5	477	311	484	484
R20	116	53	281	281
R25	2	1	4	4
R30	88	85	515	515
R40	22	18	101	101
Capel Total	**2,443**	**1,929**	**4,745**	**3,794**

Source: Department of Planning (2013) *Integrated Land Information Database*
Note: Additional dwelling potential refers to existing developed lots and is based on current R-Codes and lot size

Table 11: Integrated land information database outputs – Shire of Dardanup

R-Code	Number of lots	Number of residential dwellings	Lot potential (high)	Lot porential (low)
R10	64	54	67	67
R12.5	1,683	1,650	1,566	1,566
R12.5/30	172	177	440	170
R12.5/40	149	151	558	137
R15	981	920	1,359	1,359
R20	555	514	649	649
R30	245	295	725	725
R40	11	18	172	172
Dardanup Total	**3,860**	**3,779**	**5,536**	**4,845**

Source: Department of Planning (2013) *Integrated Land Information Database*

Note: Additional dwelling potential refers to existing developed lots and is based on current R-Codes and lot size

Table 12: Integrated land information database outputs – Shire of Harvey

R-Code	Number of lots	Number of residential dwellings	Lot potential (high)	Lot porential (low)
R5	1	4	21	21
R5/15	95	62	530	146
R10	3	1	50	50
R15	73	56	70	70
R15/30	2	1	305	137
R15/30/50	7,316	6,218	46,713	11,703
R20	23	23	68	68
R30	33	26	83	83
Harvey Total	**7,546**	**6,391**	**47,840**	**12,278**

Source: Department of Planning (2013) *Integrated Land Information Database*

Note: Additional dwelling potential refers to existing developed lots and is based on current R-Codes and lot size

Existing dwelling stock

Approximately 87 per cent of all occupied dwellings in the Greater Bunbury sub-region recorded in the 2011 Census were separate houses (Table 13), which is a significantly higher proportion than across Western Australia as a whole. This can be attributed to the majority of development being undertaken on greenfield sites with very few strata lots. The housing stock is generally of double brick or brick veneer construction, with older areas also containing fibro or timber clad dwellings.

An estimated four per cent of occupied private dwellings in the Greater Bunbury sub-region are State housing. This housing stock ranges in age from around the 1980s to the present. Many dwellings previously owned by the Department of Housing in areas such as Carey Park has been sold off, with most new State housing dwellings constructed in greenfield development areas such as Dalyellup.

Table 13: Dwelling structure – Greater Bunbury sub-region

Dwelling type	Number of dwellings	Per cent of total occupied private dwellings		
		Greater Bunbury	Greater Perth	Western Australia
Total private dwellings (including unoccupied private dwellings)	**33,164**	**N/A**	**N/A**	**N/A**
Occupied private dwellings	**29,194**	**N/A**	**N/A**	**N/A**
Separate house	25,524	87.4	80.4	80.9
Semi-detached, row or terrace house, townhouse	2,220	5.0	10.6	10.4
Flat, unit or apartment	1,047	3.6	7.9	7.5
Other dwellings	387	1.3	0.9	1.1

Source: Australian Bureau of Statistics (2012) *Catalogue 2001.0 2011 Census of Population and Housing, Basic Community Profile*

Note: Numbers may not sum to 100 as some dwelling types were not stated

Figure 27 shows the age of the existing dwelling stock across the Greater Bunbury sub-region. The figure reflects the increasing development activity across the Bunbury sub-region during the last two/three decades. Almost sixty per cent of the existing stock of dwellings was constructed after 1990.

When the age of dwelling stock is broken down by local government, substantial variation is evident between each of the local government authorities. For example, approximately 57 per cent of the City of Bunbury's dwelling stock, but only 14 per cent of the Shire of Capel's dwelling stock was constructed prior to 1990 (Figure 28).

Subdivision activity and vacant residential lots

Data depicting subdivision activity from 2004 to March 2014 in the Greater Bunbury sub-region is shown in Figures 29 and Figure 30. The most prominent feature of these figures is the spike in conditional approvals in 2005 and 2006 and corresponding spike in final approvals in 2006 and 2007. This surge in lot supply reflects the high level of perceived demand for residential lots during that time.

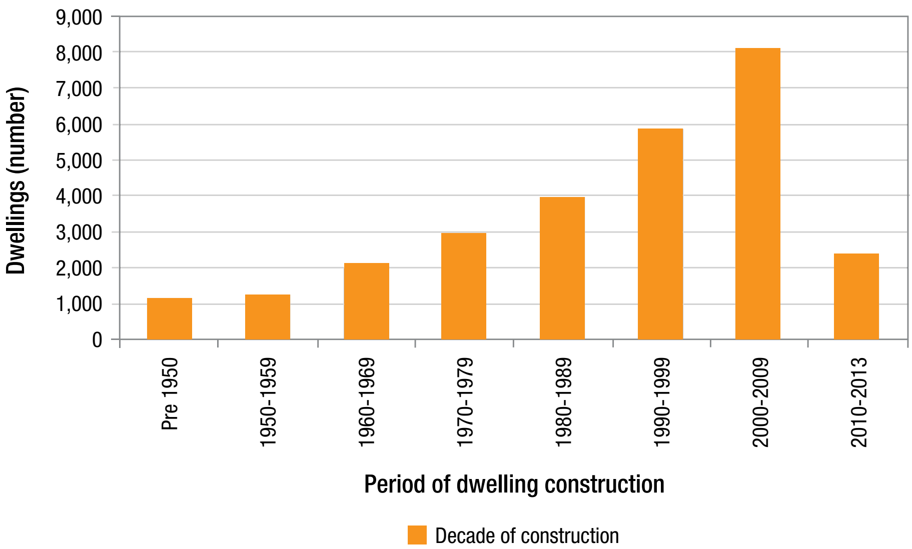
According to the ABS estimated resident population statistics, the population of the Greater Bunbury sub-region increased by 3,990 residents from June 2005 to June 2007. During this time subdivision approval was granted for 3,097 lots or approximately three new residential lots for every four additional residents.

This over supply of lots greatly increased the stock of vacant lots in the sub-region (Figure 30). Data from the Valuer General's Office indicates that there were approximately 1,600 more vacant residential lots in the Greater Bunbury sub-region after the housing boom (as at 2008) than before the boom in 2004.

Many of the lots developed during this time remain vacant. Currently almost 60 per cent of vacant residential lots in the Greater Bunbury sub-region are more than five years old. However, since 2008 the stock of lots in the sub-region has been steadily depleted as consumption has exceeded the supply of new lots.

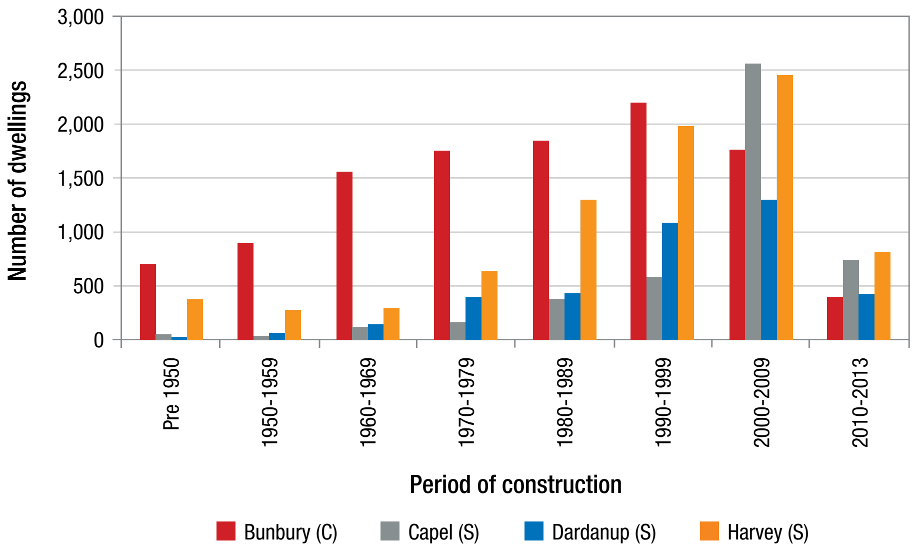
The stock of vacant lots provides an indication of how many homes could potentially be added to the dwelling stock in the short-term. It is important to maintain a suitable stock of serviced vacant lots to meet short-term demand. In 2013 there were 2,408 vacant residential lots in the Greater Bunbury sub-region (constituting approximately eight per cent of the total stock of lots).

Figure 27: Age of dwelling stock - Greater Bunbury sub-region



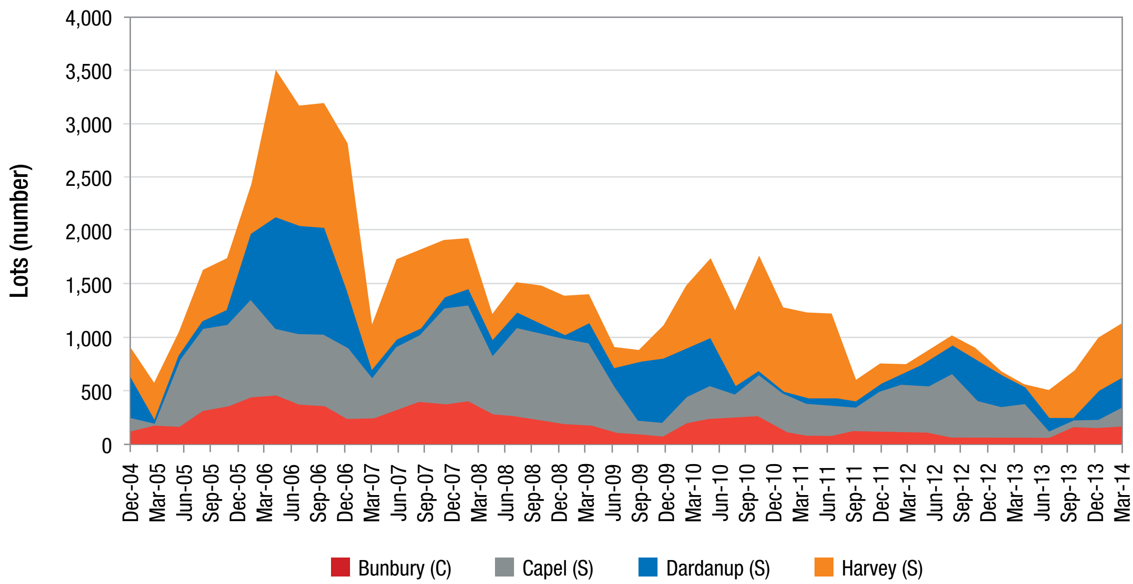
Source: Valuer General's Office (2013); WAPC (2014) ILID

Figure 28: Age of dwelling stock by local government authority



Source: Valuer General's Office (2013); WAPC (2014) ILID

Figure 29: Residential lots granted conditional approval



Source: Western Australian Planning Commission (2014)

Note: Subdivision volumes shown are annualised quartely data

The decline in vacant lots depicted in Figure 30 is not only attributable to an increase in consumption relative to supply. Recent development trends have also contributed to the reduction in the stock of 'build ready' vacant lots. Traditionally, lots are progressed to final approval, title is issued and then the lot becomes available to the public. Increasingly however, developers are moving to a 'just in time' model of lot production, where lots are developed in smaller numbers and pre-sold prior to final subdivision approval. Consequently there are fewer vacant titled lots available for sale, which diminishes the over all stock of vacant lots at any given time.

Stock of conditionally approved residential lots

The stock of conditionally approved lots is a key residential land supply indicator as it represents the volume of lots that could theoretically reach the market in a zero to four year time frame. Given the large number of vacant lots and declining number of subdivision applications it is perhaps unsurprising that the volume of conditionally approved lots has been steadily declining since 2008. At 31 March 2008 there were 5,153 conditionally approved lots in the sub-region; at the end of March 2014 there were just 3,221 – representing a decline of approximately 37 per cent (Figure 31).

Residential land release summary

Short-term residential land release in the Greater Bunbury sub-region is predominantly driven by large scale greenfield developments to the south (Dalyellup) and to the north-east (Australind, Eaton and Millbridge) of Bunbury. There are large tracts of land in these areas covered by endorsed structure plans with numerous conditionally approved lots. Land (or more specifically lot) release in these areas is demand driven with developers progressing lots to final approval in limited numbers to match market conditions.

Other sites with endorsed structure plans, such as Treendale South, are entirely inactive, with developers/landowners presumably waiting for active projects to be fully developed to avoid an excess of lots on the market.

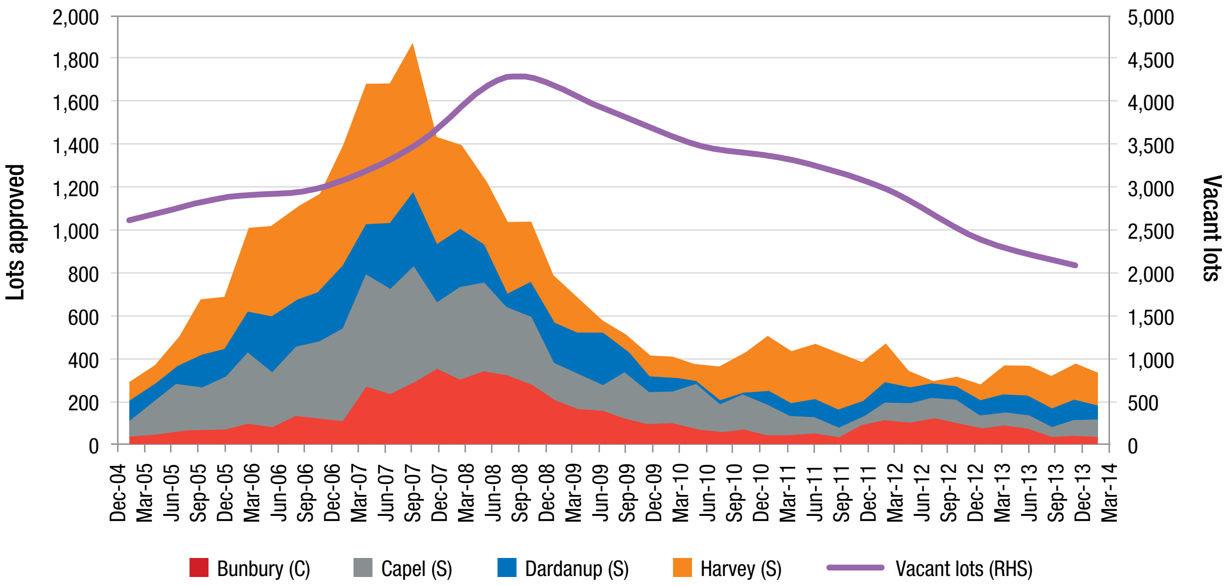
Table 14 shows areas of undeveloped urban zoned land in the *Greater Bunbury Region Scheme* area over which structure plans have been endorsed. Planning requirements for these sites have therefore been progressed significantly, which means that, subject to market conditions, development may occur in the short to medium-term.

Table 14: Urban zoned land with endorsed structure plan

Location	Area (ha)	Lot Yield (at various densities per endorsed structure plan)
Australind (Clifton Close, Kingston)	29.0	382
Treendale (District Centre, Treendale Farm, Treendale South)	39.7	1,543
Roelands	7.2	11
Eaton (Eaton Fair, Garden of Eaton, Parkridge)	47.7	1,147
Dardanup (Roseland)	43.9	707
Glen Iris (including Moorlands)	49.7	1,260
Bunbury (Old Bunbury Regional Hospital, Bunbury South)	37.2	406
Boyanup (Boyanup townsite)	228.1	2,985
Capel (Capel townsite, Wellington)	132.2	1,050
Dalyellup (Dalyellup Beach, Dalyellup District Centre, Dalyellup East)	91.2	1,788
TOTAL	**705.9**	**11,279**

Source: Department of Planning analysis

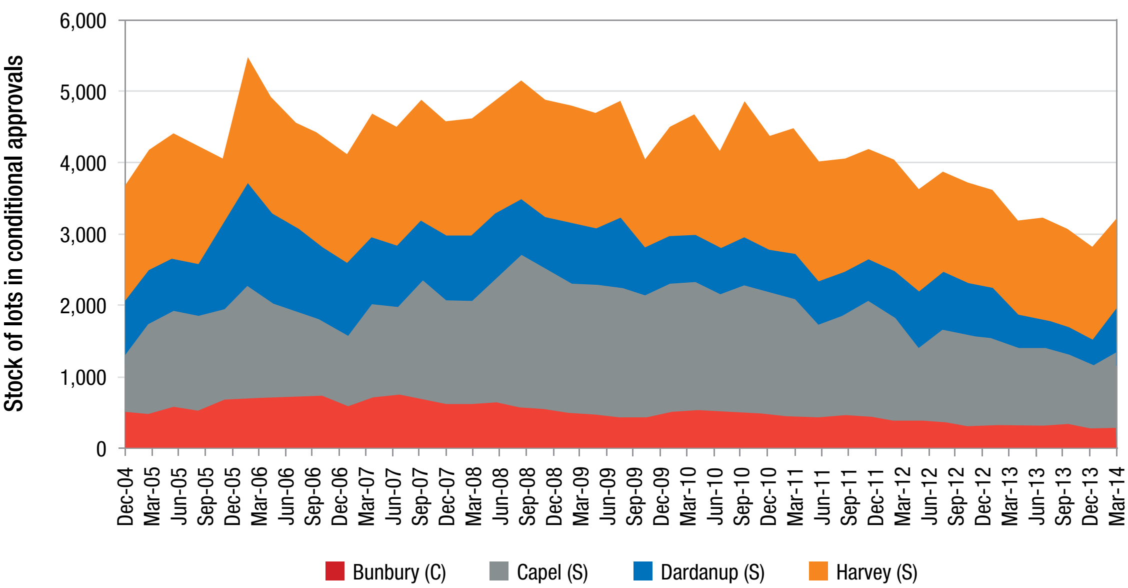
Figure 30: Residential lots granted final approval and stock of vacant residential lots



Source: Western Australian Planning Commission and Valuer General's Office (2014)

Note: Subdivision volumes shown are annualised quartely data

Figure 31: Stock of residential lots with conditional approval



Source: Western Australian Planning Commission (2014)

Areas that have undergone strategic planning but have not yet been rezoned to urban under the *Greater Bunbury Region Scheme* may also be developed in the medium term. Data in Table 15 details the area of undeveloped 'Urban Deferred' zoned land in the *Greater Bunbury Region Scheme* deemed suitable for residential development as per townsite strategies or other strategic planning documents. Dwelling construction on these sites is unlikely to occur within a 10-year time-frame.

Long-term growth will be catered for in the proposed expansion area to the east of Eaton. Although planning for this development is still in its early stages the area is expected to accommodate up to 70,000 new residents when fully completed.

Development Outlook

Appendix B and Maps 11-14b (rear of document) show possible development projects identified in the Greater Bunbury sub-region over a 20-year time frame. The projects described are selected based on the Department of Planning's Urban Land Development Outlook.

The Urban Land Development Outlook (ULDO) is based on a comprehensive assessment of future land supply at all stages of the planning, zoning, approval, development and redevelopment pipeline.

ULDO is an output of a development database which tracks:

- scheme amendments;
- developer intentions;
- subdivision applications/approvals (Western Australian Planning Commission);
- local government development applications/approvals; and
- structure planning in progress.

A summary of the dwelling yields from projects identified in the Greater Bunbury sub-region is shown in Table 16.

The estimated 11,760 dwellings that the identified projects are anticipated to yield is substantially fewer than the 122,680 dwellings estimated to be required to accommodate 150,000 residents in the sub-region. However, smaller developments are not included in the ULDO, nor are much longer-term prospects for which there has, as yet, been no indication of intent to develop.

Adequacy of residential land supply

In the short-term, the supply of residential lots in the Greater Bunbury sub-region is more than adequate to meet anticipated demand.

Due to the large amount of land in the development pipeline, the release of residential lots is essentially demand driven, with lots released to the market in small numbers to avoid market saturation and unnecessarily high upfront costs for developers.

In addition to the potential short-term supply of residential lots there is also a substantial stock of appropriately zoned land with endorsed structure plans that can be released to the market in the medium-term. Department of Planning analysis indicates that the potential lot yield of urban zoned land with endorsed structure plans is more than 11,000 which is approximately five years supply at the current rate of final subdivision approval.

In some areas extensive planning has not translated into actual development. Endorsed structure plans such as East Boyanup and Goodwood Estate are essentially inactive, emphasising the demand driven nature of development in the sub-region. Other sites in higher demand areas, such as Treendale South are likely to be progressed once active projects in the area are completed.

As discussed in section 6.2 there are substantial stocks of undeveloped land zoned 'urban' or 'urban deferred' under the *Greater Bunbury Region Scheme*. This stock of land has the capacity to facilitate urban growth in the sub-region well into the long-term.

Land consumption

The rate of land consumption in the Greater Bunbury sub-region has varied substantially over the past decade; peaking in 2006 and 2007 when approximately 250 hectares of greenfield land were consumed by built form (Figure 32). Over the ten years to December 2012 an average of 75 hectares of land in the Greater Bunbury sub-region was consumed by built form. If consumption were to continue at this rate (since 2008 the rate has been significantly lower than this) it would take approximately 50 years to consume the total stock of non-urbanised land zoned for development under the Greater Bunbury Region Scheme.

When the future development site located to the east of Eaton is also considered in long-term land supply scenarios it is evident that the stock of residential land identified through the zoning and strategic planning process is very large relative to anticipated population growth in the sub-region.

ABS projections regarding future household size can be used to approximate the dwelling density required to accommodate a population of 150,000 within the existing undeveloped urban and urban deferred zoned land in the Greater Bunbury sub-region.

The existing dwelling density in urbanised areas of the Greater Bunbury sub-region is approximately six dwellings per residential hectare (which includes the higher density areas close to the Bunbury CBD).

If a future household size of 2.48 persons per dwellings is assumed, and the net rate of infill were to remain at approximately six per cent, residential greenfield development would need to be undertaken at a rate of 6.4 dwellings per gross urban zoned hectare to accommodate 150,000 residents within areas already zoned for development.

Table 15: Urban Deferred zoned land with strategic planning

Location	Area (ha)	Lot yield (at a density of 20 units per ha or 500 m^2 per lot)	Lot yield (as per townsite strategy/ structure plan)
Capel	322	-	1,977
Boyanup	193	-	1,401
Dalyellup	77	992	-
Dardanup	43	-	610
Australind	11	-	151
Harvey	51	785	-
Burekup	28	-	450
TOTAL	**725**	**1,777**	**4,589**

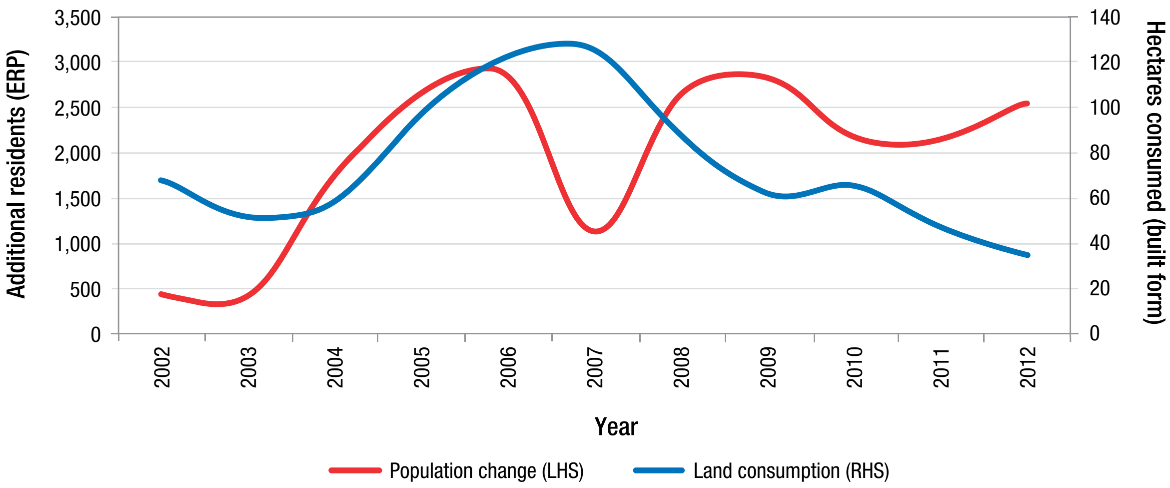
Source: Department of Planning analysis

Table 16: Greater Bunbury project summaries

Location	Short-term (0-5 years)	Medium-term (6-10 years)	Long-term (10+ years)	Total
Bunbury (C)	455	156	2,156	2,767
Capel (S)	316	936	2,555	3,807
Dardanup (S)	969	738	108	1,815
Harvey (S)	643	1,879	546	3,068
Grand Total	**2,383**	**3,709**	**5,365**	**11,457**

Source: Department of Planning analysis

Figure 32: Population growth and land consumption (built form) - Greater Bunbury sub-region



Source: Australian Bureau of Statistics (2013) *Catalogue 3218.0* and Department of Planning analysis

To add context to the required greenfield dwelling density, it should be noted that greenfield development in Perth/Peel is traditionally undertaken at a density of approximately ten dwellings per gross urban zoned hectare and the target for such development is 26 dwellings per gross urban zoned hectare. If the remaining stocks of urban and urban deferred land were to be developed at this rate and the net rate of infill were to increase to 12 per cent, a population of 246,000 residents could be accommodated.

Although increasing greenfield dwelling density to a rate comparable with the Perth metropolitan area is unlikely in the near future, the above scenarios illustrate the capacity of existing stocks of zoned land to support population growth in the sub-region for some time. This enables selective rezoning in the future, helping implement existing strategies and policies, particularly given the identification of the urban expansion area to the east of Eaton.

Infill and greenfield development

New dwellings can broadly be categorised into greenfield development, where dwellings are constructed on undeveloped (or non-urbanised) land and infill development. This is where dwellings are constructed in developed (or urbanised) areas.

Gauging levels of infill development can be challenging due to the ambiguity regarding what constitutes developed and undeveloped land. To measure infill the Department of Planning has developed a model which flags new dwellings as being infill development if they are constructed in urbanised areas that meet specific density criteria. A description of the Greater Bunbury infill model methods can be found in Appendix A of this document.

The infill model used for Greater Bunbury is similar to the one used for the Perth and Peel area in the *Urban Growth Monitor 2014*. Areas which met the density criteria, but were outside the City of Bunbury (of which there were few), were not counted as 'infill areas' in the Greater Bunbury infill model due to the less contiguous nature of the urban form in these areas and very limited demolition/regeneration activity.

Table 17: Infill and greenfield development in the Greater Bunbury sub-region

Local Government Area	Infill/Greenfield	Residential dwellings built in 2011	Residential dwellings built in 2012
Bunbury (C)	Greenfield	54	43
	Infill	95	72
Capel (S)	Greenfield	208	189
Dardanup (S)	Greenfield	134	96
Harvey (S)	Greenfield	266	214
Grand Total		**757**	**614**

Source: Department of Planning analysis

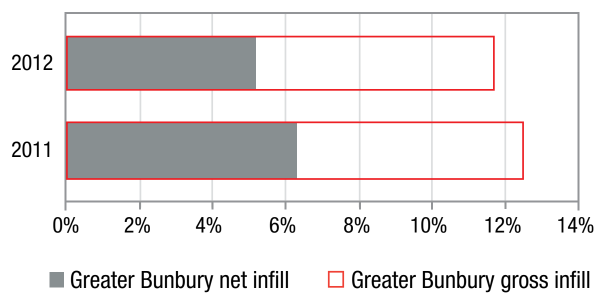
Based on this methodology, 72 of 614 new dwellings (12 per cent) in the Greater Bunbury sub-region constructed in 2012 were infill development (Table 17). This level of infill development is comparable with some of the outer sub-regions of the Perth Metropolitan area.

Demolitions play an important role in infill development. Land made available through urban regeneration can be used for newer dwellings and mixed use projects. **The net infill** rate, which allows for the loss of dwellings through demolitions, provides a more accurate indication of additions to the dwelling stock than the **gross infill** rate, which refers to the number of dwellings constructed within infill areas regardless of the number of dwellings removed from the stock through demolition activity.

When demolition activity is included in infill calculations the net rate of infill for 2011 and 2012 is approximately six per cent. Figure 33 shows the net and gross infill rates for the Greater Bunbury sub-region.

The rate of infill fluctuates from year to year which can be attributed to the ongoing churn of the housing stock, the impacts of major infill projects, as well as external factors such as economic activity, interest rates and access to finance. Consequently, the infill rate needs to be viewed over a number of years to determine trends and, as such, the Department of Planning will continue to monitor infill development.

Figure 33: Greater Bunbury infill rates (2011 and 2012)



Source: Department of Planning analysis

Lots and dwellings on the market

The supply of lots and dwellings to the market represents the final stage of the land and dwelling supply pipeline. As discussed previously in this section of the document, heightened supply during the housing boom created a surplus of land and lots in the sub-region. The recent decline in residential development has been due - to a large degree - to the capacity of the market to draw on lots and dwellings created during the housing boom to meet demand. Figure 34 illustrates the decline in REIWA agent lot listings as the stock of lots and dwellings developed during the boom is depleted. There has also been a decline in the number of dwellings on the market; however, this trend has reversed in the year to March 2014, which may be a result of the recent slight increase in the median house price in the sub-region.

6.3 Industrial

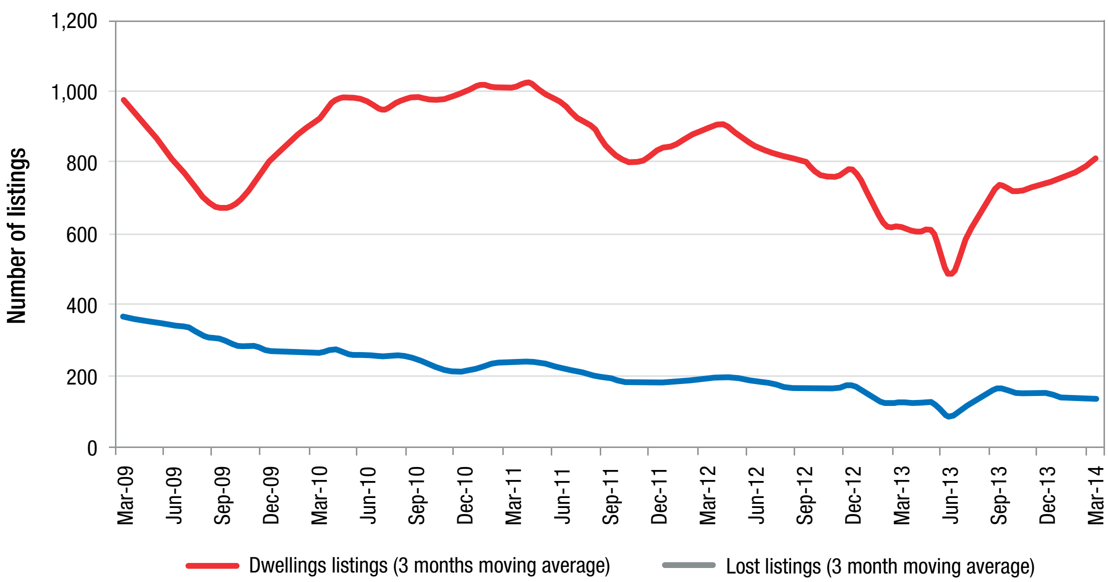
Subdivision activity

Figure 35 and Figure 36 show the number of conditional and final subdivision approvals for industrial lots over the past five years. Figure 35 shows that, during various periods through the time series, there has been significant intent from developers (and conditional approval from the WAPC and referral agencies) to supply industrial lots. However, as Figure 36 shows, few conditional approvals have progressed to final approval and title.

The stark difference in the number of conditional and final approvals suggests that, while there is a substantial degree of perceived demand, market conditions or perhaps infrastructure provision costs are limiting the supply of titled industrial lots.

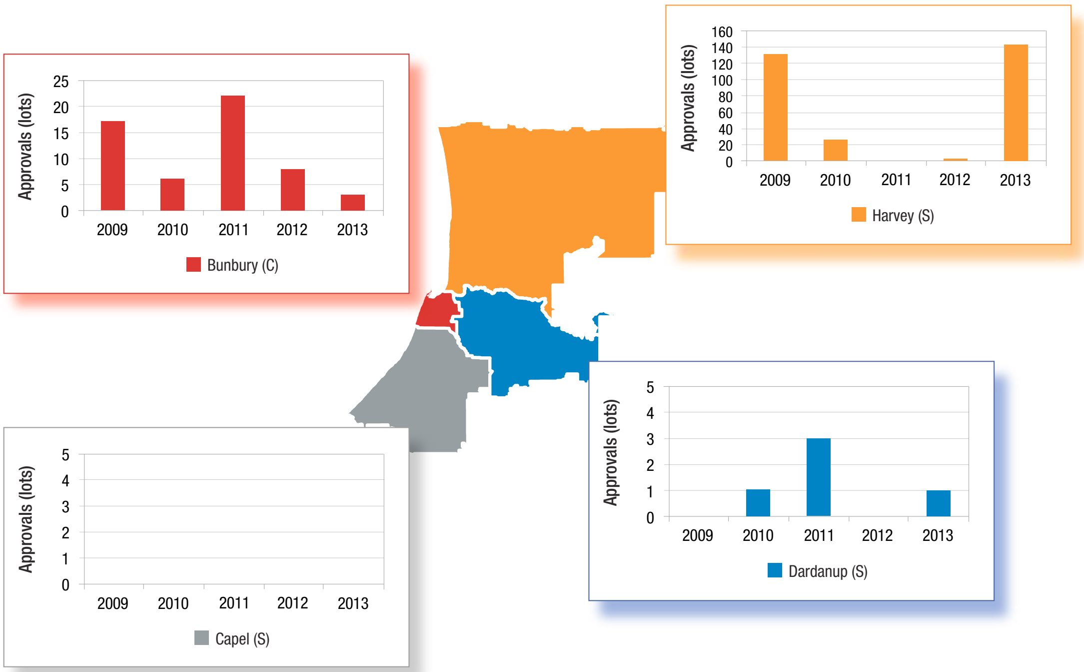
Most industrial subdivision activity in the sub-region has been in the City of Bunbury, although only a small proportion of conditionally approved lots have progressed to title. The Shire of Dardanup is the only LGA in the sub-region where the majority of industrial lots granted conditional approval since 2000 have progressed to final approval. The majority of these lots were created in Picton East.

Figure 34: Residential lot and dwelling listings for REIWA agents - Greater Bunbury sub-region



Source: REIWA (2013) unpublished data

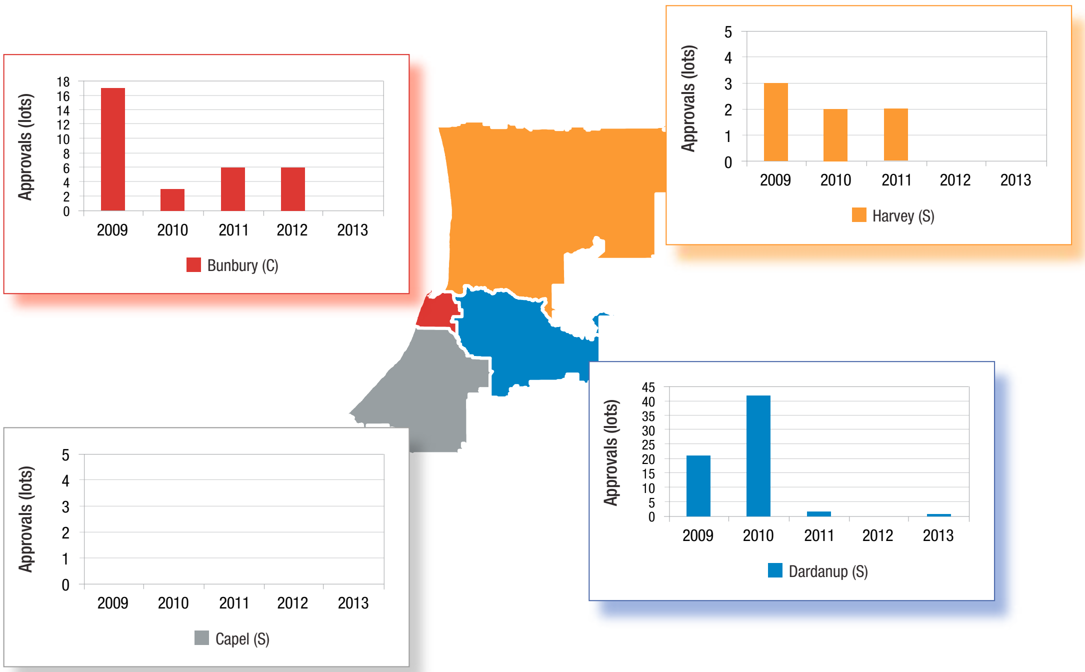
Figure 35: Conditional industrial subdivision approvals - Greater Bunbury



Source: Western Australian Planning Commission (2013) internal database

Note: No lots were approved in Capel

Figure 36: Final industrial subdivision approvals - Greater Bunbury



Source: Western Australian Planning Commission (2013) internal database

Note: No lots were approved in Capel

Zoned land supply

A land supply assessment based on the local planning schemes which cover the Greater Bunbury sub-region indicates that a total of approximately 6,270 ha of land is currently zoned for industrial use. Based on property information from Landgate's property valuation database, around 50 per cent is considered to be developed (contains property information) and 19 per cent is undeveloped (Figure 37). The remaining 31 per cent of land is contained within lots for which there is no vacant land or premises valuation record (unrated). This may include State or local government owned lots or premises exempt from rates, Crown allotments, common property within lots on survey, newly created lots on survey, land otherwise exempt from rates and some public roads which are zoned for the primary land use under the local planning scheme. This classification may include a mix of both developed and undeveloped lots. For the purposes of assessing future land supply, unrated lots are considered to be developed.

There are a range of lot sizes on land zoned for industrial purposes in the Greater Bunbury sub-region, with a large number of lots sized between 2,000 and 5,000 m^2 (Figure 38).

Industrial land release summary

The WAPC has recognised the Kemerton Industrial Park as one of the State's strategic industrial areas, providing a location for heavy industry to provide downstream processing and value-adding to the sub-region's extensive primary resources, for export or domestic markets. The site is in close proximity to available road, power and high pressure gas pipeline access, and has the required buffers in place.

The Waterloo site has the potential for transport, logistics, general industry and agri-food processing. There are potential synergies between the Waterloo site and Bunbury Port.

Possibility exists to extend the existing North Capel site. The existing North Capel industrial area has good access to road, rail, power, high pressure gas pipeline, and a sizeable locally resident workforce. It is considered that the site has good prospects as a special industry estate.

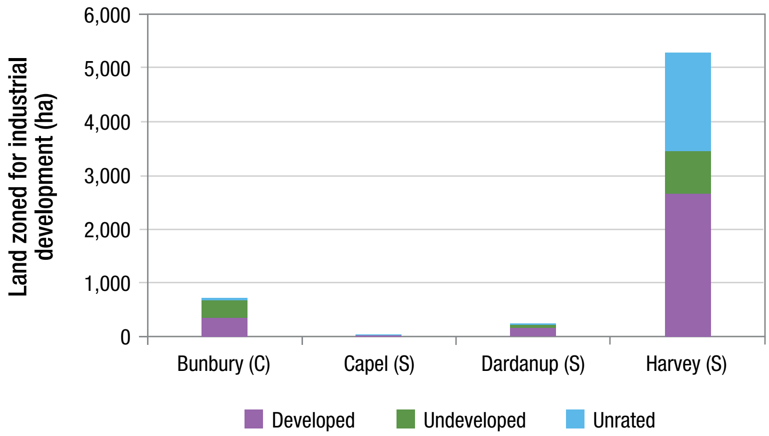
The *Greater Bunbury Strategy* has also identified planned additional areas to accommodate general industry in the Preston Industrial Park. There appears to be demand for properties in the Park; however, the proposed expansion site has significant constraints which require further investigation and negotiation in order to determine its development potential.

Adequacy of supply

Existing stocks of industrial land in the Greater Bunbury sub-region appear suitable to meet short-term demand, particularly in respect to general and light industrial land. Land for heavy industry is more limited. Proper forward planning and Government intervention are needed to ensure adequate supply within an appropriate timeframe.

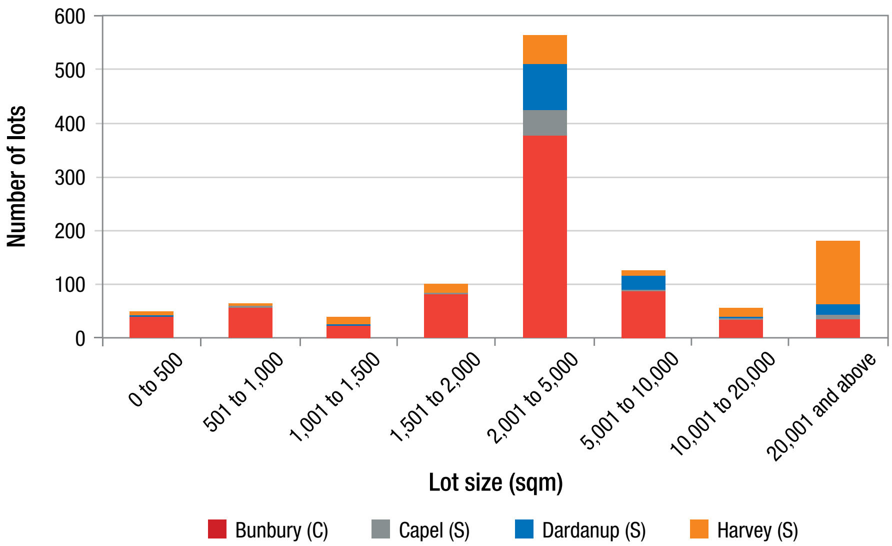
The population of the Greater Bunbury sub-region has been increasing consistently over the past decade and there is ample land zoned for residential development to support substantial population growth. The rate of unemployment in the sub-region has increased from 2.8 to 5.8 per cent in the five years to December 2013 which helps illustrate the importance of the provision of sufficient employment generating land. Moving forward, it is critical to identify and maintain a suitable stock of land for future industrial development in the sub-region.

Figure 37: Industrial land supply assessment – Greater Bunbury sub-region



Source: Department of Planning (2014) IRIS

Figure 38: Industrial land supply lot size – Greater Bunbury sub-region



Source: Department of Planning (2014) IRIS

6.4 Commercial/retail

Subdivision activity

Figures 39 and 40 show data for conditional and final commercial subdivision activity in the Greater Bunbury sub-region. The figures reflect Bunbury's importance as the commercial/retail hub of the broader South West region – 67 per cent of commercial conditional approvals and 76 per cent of final approvals were located within the City of Bunbury. In the 2012/13 financial year however, most commercial lots to be granted conditional approval were located in the Shire of Harvey, with eight lots approved in Australind.

Although there has been very little commercial subdivision activity in the Shire of Capel, an activity centre is planned for the suburb of Dalyellup, where a substantial retail/commercial development is planned. Construction work began on a shopping centre at the site in April 2014, with a supermarket set to open in mid-2015.[13]

In many ways subdivision activity is less critical to commercial development than it is to industrial or residential projects. Often, larger commercial developments, in particular shopping centres, are developed on a single large lot. For example, the Treendale Shopping Centre in Australind – of which Stage 1 has recently been completed – contains a supermarket and 27 specialty shops, all located on a single lot.[14]

Other commercial areas undergoing expansion in the Greater Bunbury sub-region include the Eaton Fair Shopping Centre and Bunbury Forum, where the first stage of a substantial redevelopment project has recently been completed.

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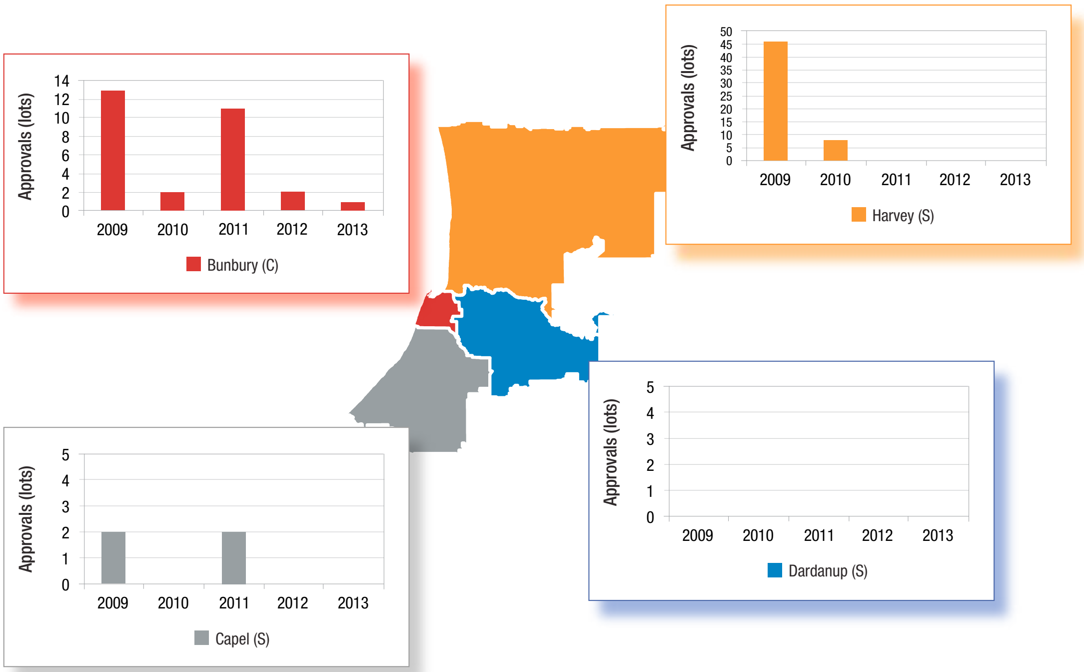
[13] Bunbury Herald (2014) *Site Works Begin for Dalyellup Woolworths* – 1 April 2014

[14] Treendale Estate web page (2010) http://www.treendale.com.au

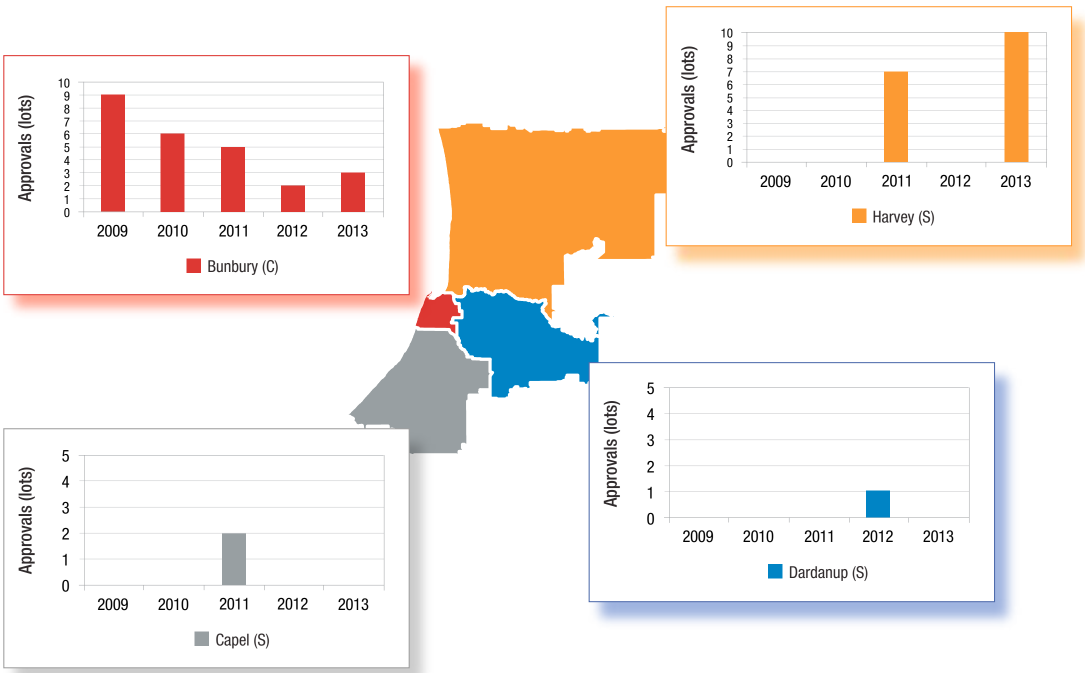
Figure 39: Conditional commercial subdivision approvals – Greater Bunbury



Source: Western Australian Planning Commission (2013) internal database

Note: No lots were approved in Dardanup

Figure 40: Final commercial subdivision approvals – Greater Bunbury



Source: Western Australian Planning Commission (2013) internal database

Zoned land supply

A land supply assessment using the IRIS database indicates that a total of approximately 9,510 ha of land is currently zoned for commercial use. Based on information from Landgate's property valuation database, approximately 76 per cent (263 ha) is considered to be developed (contains property information) and 14 per cent (31 ha) is classified as vacant (Figure 41). The remaining 10 per cent (11 ha) of land is contained within lots for which there is no property record (unrated). For the purposes of assessing available land supply, the majority of these unrated lots can also be considered as developed.

There is a broad range of lot sizes on land zoned for commercial purposes in the Greater Bunbury sub-region, particularly in the City of Bunbury (Figure 42).

Commercial land release summary

There are several key sites in the Greater Bunbury sub-region able to provide land for commercial development in the short/medium-term.

- Stage 1 of Eaton Fair Shopping Centre was constructed to service the area's growing population. The approved structure plan for the site shows considerable further planned development, including additional specialty stores, an additional supermarket, a discount department store and a town square. The $65 million second stage of the project is planned to open in late 2014.[15]
- Like Eaton Fair, the Treendale Shopping Centre is being rolled out in stages, with timing contingent on levels of demand. Stage one of the project is complete, however, the project thus far has consumed only approximately one quarter of the 'district centre' site, leaving considerable scope for further commercial development.
- Several hectares of land have been allocated for the Dalyellup District Centre in the Dalyellup East Local Structure Plan, much of which will be used for commercial purposes. Although residential development in the suburb is well established, commercial development in the district has been very limited. Construction of the Dalyellup Woolworths – the first major commercial development in the area – began in April 2014 with opening anticipated in mid-2015.
- The site of the former Punchbowl Caravan Park has been rezoned 'special use', with the intention of facilitating some kind of mixed use development, however, there has been little interest from the private sector in developing the site, which has been vacant for more than a decade.
- The site of the former St John of God Hospital has been vacant since the hospital was demolished in 2011, after the building had been empty for more than 12 years. Located in the Bunbury CBD, the site has been rezoned as special use and preliminary planning has commenced to develop a mixed use project on the site, however, there are currently no definitive plans to commence development.
- LandCorp's Bunbury waterfront project has a substantial commercial component with the structure plan describing a residential and office space, supported by a variety of commercial, retail and entertainment enterprises. Construction on the first stage one of the project – Koombana North – has commenced. The following site – Marlston North – will be developed at a later stage with residential, commercial and tourism components.

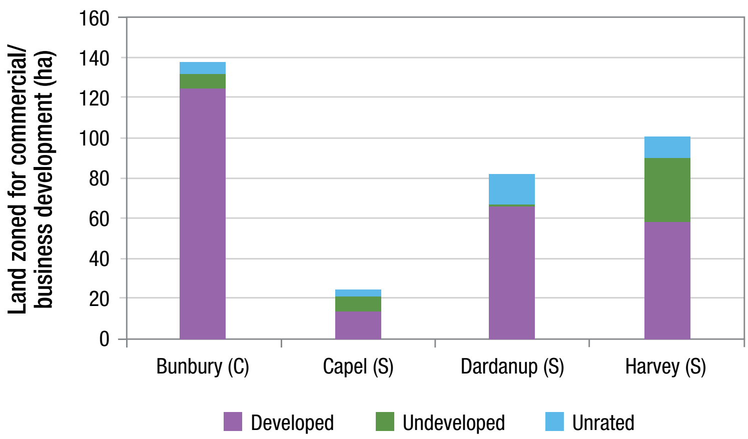
Adequacy of supply

There is sufficient stock of land identified for various commercial purposes in the Greater Bunbury sub-region to meet anticipated levels of growth in the medium-term. There are three major shopping centre sites in or near the high growth areas of the sub-region (Dalyellup, Treendale and Eaton Fair), each with substantial capacity for expansion.

Within central Bunbury – the commercial hub of the sub-region – there is capacity within several proposed mixed use developments to add to the over-all stock of commercial/retail floor space as demand for commercial/retail property increases with the growing population.

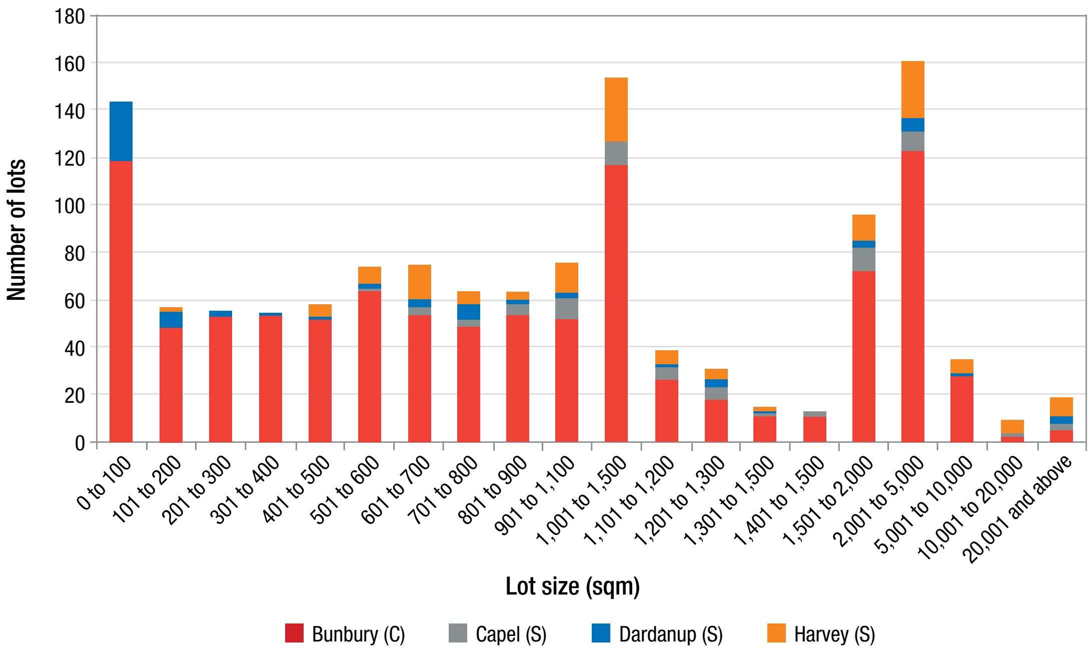
[15] Eaton Fair web site (2014) http://www.eatonfair.com.au/

Figure 41: Commercial land supply assessment – Greater Bunbury sub-region



Source: Department of Planning (2014) IRIS

Figure 42: Commercial land supply lot size – Greater Bunbury sub-region



Source: Department of Planning (2014) IRIS

Longer-term it will be important to identify land for commercial purposes at the structure planning stage of development to ensure there are appropriate sites allocated for local and neighbourhood centres as the sub-region's population moves toward (and beyond) 150,000 residents. Planning for projects such as the proposed expansion area to the east of Eaton will require the identification of suitable commercial/retail land to ensure that community expectations are fulfilled.

6.5 Tourism

Tourism land release summary

There are no projects identified in the Greater Bunbury Urban Land Development Outlook that have a land use specifically for tourism. There are; however proposed projects with a tourism component, or that are likely to benefit the tourism industry in the sub-region, which include:

- Stage 2B of LandCorp's Marlston North Project is proposed to include mixed use, tourism and residential components; and
- The Planning Group WA has recently prepared a plan for the area along the coast, approximately 400 metres west of the CBD. Under the mixed use proposal, hotels of up to five storeys would be allowed in some areas and buildings of up to three storeys would be permitted in the remainder of the site.[16]

Adequacy of supply

The adequacy of supply of tourist accommodation in Bunbury is difficult to gauge. While hotel occupancy rates are comparable to the broader Western Australian figures, Bunbury and surrounds are yet to capitalise upon the tourism industry in the same way as towns further south such as Busselton and Margaret River.

Bunbury is the only large town/city in the Greater Bunbury sub-region located adjacent to the beach but it has long had a reputation as a functional regional hub, rather than a sea-side holiday destination. In recent decades, however, this image has changed with the development of the area around Marlston Hill transforming an eyesore in the heart of the city into one of the sub-region's most appealing urban settings. This transformation is likely to continue as the area around the CBD is further developed.

There is significant potential to enhance Bunbury's appeal as a tourist destination which will increase demand for tourism facilities. Sufficient stocks of land should be identified to ensure that a shortage of tourist accommodation and attractions does not hinder Bunbury's opportunity to capitalise on its role as the major centre in the South West region and tourist destination in its own right.

[16] ABC (2014) http://www.abc.net.au/news/2014-07-10/rezoning-paves-way-for-beacfront-tourism-hub/5587732

7 Infrastructure

Key Points

Water and Wastewater

- There are two licenced water providers in the Greater Bunbury sub-region; Aqwest and the Water Corporation. Broadly speaking, Aqwest services the City of Bunbury and the Water Corporation services the other three LGAs. Map 9 illustrates the extent of Aqwest's service provision area.
- Western Australia's second desalination plant – the Binningup Seawater Desalination Plant is located at Binningup in the north of the Greater Bunbury sub-region. Only the northern portions (the northern half of the Shire of Harvey) of the Greater Bunbury sub-region receive water from the Plant, which predominantly supplies the Integrated Water Supply Scheme, which services Perth/Peel and the Goldfields.
- Elsewhere, potable water is sourced from groundwater aquifers. Outside the Bunbury-Australind-Dalyellup-Eaton urbanised area most small towns in the sub-region have independent water supply schemes.
- The vast majority of premises in the Greater Bunbury sub-region are serviced by a deep sewerage system; however, areas remain – particularly in the smaller towns and rural areas – which still have onsite effluent disposal systems.
- Wastewater from Australind is treated at Kemerton Wastewater Treatment Plant (WWTP) which is likely to reach capacity within the next couple of years. To allow continued growth, the Water Corporation will divert additional wastewater to the Bunbury WWTP No.1. in Dalyellup.
- Most of the urban development areas in the Greater Bunbury sub-region are serviced by the Water Corporation, who have developed forward works programs to help facilitate urban growth in a timely manner. It should be noted that Aqwest is also a registered water service provider and currently services most of the City of Bunbury municipal area. It has the potential to expand its business into other areas in Greater Bunbury. Major Water Corporation projects in the Greater Bunbury sub-region are shown on Maps 7-10.

Power

- Electricity in the Greater Bunbury sub-region is supplied through the South West Interconnected System, which is operated by Western Power.
- The Greater Bunbury sub-region forms part of the 'South Country Region' section of the SWIS, for which power is predominantly supplied from coal-fired stations at Muja and Collie.
- There are large reserves of coal located to the east of Bunbury, near Collie.
- Key projects enabling urban growth include the Picton and Bunbury Harbour substations, where an additional transformer will be installed at each location.
- As existing substations near capacity an additional substation will need to be developed at Dalyellup.

Transport

- The Bunbury Outer Ring Road (see Map 6) will substantially reduce traffic through the city, allowing people travelling further south to bypass Bunbury. The first stage of this road is now completed.
- Construction of the Port Access Road has commenced and will limit the frequency with which heavy vehicles use local roads and reduce transport costs and timeframes.
- The Bunbury Port Authority has produced the Bunbury Port Inner Harbour Structure Plan which represents the port's future development over the next 20 years.

  Key features of the structure plan include:

  – A planned expansion from seven berths to 15 berths;

  – A significant expansion of the Inner Harbour Basin;

  – The diversion of the Preston River to allow for significant land-backed expansion; and

  – Extensive new road and rail construction to service new and existing berths.

Education

- Several schools have commenced operations in the Greater Bunbury sub-region during the past decade; all of which are located in expansion areas around Australind, Dalyellup and Eaton.
- Western Australia's only major non metropolitan university campus – Edith Cowan, South West Campus – is located in Bunbury, forming part of an educational precinct which also includes the South West Regional College of TAFE and the Bunbury Health Campus (See Map 2).

Health

- Major health services for the South West region are located in Bunbury. Key facilities including the Bunbury Regional Hospital, St John of God Hospital and the Bunbury Health Campus are clustered just off Bussell Highway, near Edith Cowan University (See Map 2).

7.1 Water

The Greater Bunbury sub-region draws on groundwater and surface water reserves to provide the area with water for potable, agricultural and industrial uses. The catchment areas are divided into sub-areas which are managed by the Department of Water through allocation plans. The sub-areas which cover the Greater Bunbury Area include Kemerton groundwater, South West groundwater and Lower Collie surface water.

The potable and industrial water supply comes from the groundwater aquifers including the Superficial Aquifer, the Leederville Aquifer, the Yarragadee Aquifer and the Cattamarra Coal Measures, which form part of the Kemerton and South West groundwater allocation plans.

Water for agricultural uses comes from surface water which is captured by the river and reservoir system. Water is either taken direct or stored in onsite dams from the rivers including the Brunswick, Wellesley, lower Collie, Augustus and Lunenburg rivers, the Henty and Flaherty brooks and Millers Creek. Water for the Collie and Harvey Irrigation Districts is provided from the Wellington and Harvey Reservoirs.

The public water reserve has the following capacity for future growth:

– 4.7 GL in the Bunbury Groundwater Area – Yarragadee South;

– 100 ML in the Bunbury Groundwater Area – Dardanup – Leederville;

– 3 GL in the South West Coastal Groundwater Area – Kemerton North – Leederville; and

– 955 ML of surface water allocation.

It should be noted that these figures indicate water that is not yet allocated through a licence agreement and does not include capacity which water providers may still have within existing licence allocations.

There are two service providers operating within the Greater Bunbury Area: Aqwest, which services most of the City of Bunbury area; and the Water Corporation which services all other areas of the sub-region. Map 9 illustrates the extent of Aqwest's service provision area.

The Binningup Seawater Desalination Plant, completed in 2012, is capable of producing 100 billion litres of drinking water per year; however, almost all of the water produced at the plant is piped north, into the Integrated Water Supply Scheme which services areas around Harvey as well as Perth/Peel and the Goldfields.

Future requirements and planning

As the Water Corporation services the urban expansion areas of the Greater Bunbury sub-region many of the key projects supporting growth are likely be largely under taken by them, rather than Aqwest. A coordinated approach to future urban development and water infrastructure supply is critical to achieve efficient growth.

The following upgrades and new infrastructure have been identified by the Water Corporation to service the Greater Bunbury sub-region over the next 20-25 years. The timeframes and costings of projects will vary, depending on demand and market conditions.

- Upgrading of pressure mains in Leisure Drive and Ditchingham Place to maintain public open spaces for Kinston and Treendale estates.
- The installation of an additional 15ML water tank at Eastwell Road to cater for population growth in Australind.
- The installation of an additional town water scheme (TWS) bore at Peppermint Grove Beach to provide capacity for growth.
- The installation of an additional TWS Bore into the Yarragadee to allow growth in the Australind scheme.
- The upgrading of the Dalyellup TWS distribution mains to provide increased capacity for growth to achieve required level of service.
- The upgrading of the Dalyellup water treatment plant to meet additional growth demands. This is estimated to be constructed in 2023 by the Water Corporation at a cost of $13.4 million.
- The installation of a 1 ML tank and pump station at Myalup to increase storage capacity to meet required level of service.
- The upgrading of the Australind TWS water treatment plant in Picton to meet the growth demands in the Australind Scheme.
- In addition to the future requirements listed above there are various major works required to facilitate urban growth toward a population of 150,000 that will be considered for development as the population increases. Key water infrastructure projects are shown on Maps 7-10.
- The proposed future development area east of Eaton will be a major expansion area requiring a substantial water supply, likely to be provided by either the Water Corporation or Aqwest. Both providers have indicated that they can service the projected 70,000 people this area will accommodate.

7.2 Wastewater

The Water Corporation is responsible for the provision of waste-water services across the Greater Bunbury sub-region. The main Greater Bunbury urban area, including residential, commercial and industrial zoned land, is serviced by a deep sewerage system. There are some isolated pockets that have not yet been connected to this system which are currently utilising onsite effluent disposal systems. There are two main wastewater treatment plants that service this area being Bunbury Waste Water Treatment Plant (WWTP) No. 1 and Kemerton WWTP.

Key features of the Greater Bunbury waste water scheme are shown in Maps 7 and 8.

Through the process of identifying new growth areas, it was made clear by the Water Corporation, that multiple fronts of development would not be sustainable in the short/medium-term, based on the initial headworks costs and ongoing upgrades. Future development will therefore need to be undertaken in a logical, staged approach that best utilises existing infrastructure.

Waste-water from the City of Bunbury urban area and the suburb of Dalyellup is treated at the Bunbury WWTP No. 1 located adjacent to the coast near Dalyellup. The wastewater from this WWTP is treated and pumped into the ocean via an outfall pipe. There is currently no wastewater re-use from this facility.

Waste-water from the suburbs of Australind and Eaton, and the Kemerton industrial Park is treated at the Kemerton WWTP. The wastewater from this WWTP is treated and disposed of through the irrigation of an onsite woodlot. The projected flows to the Kemerton WWTP indicate that it is likely to exceed the environmental licence conditions in terms of nutrient and hydraulic loading within the next two years.

To allow further investigation of possible upgrading options the Water Corporation will divert some of the wastewater flow to the Bunbury WWTP No. 1. It is expected that this project will be completed later in 2014.

The towns of Capel, Dardanup, Burekup, Brunswick Junction, Harvey, Binningup and Boyanup are serviced by a deep sewerage system, albeit with numerous pockets that are currently connected to on-site effluent disposal system. This has an impact on the amount of urban consolidation and in some cases urban expansion that can be undertaken in these towns.

Capel, Dardanup, Burekup, Brunswick Junction, Harvey and Binningup are serviced by individual WWTP's located in close proximity to the townsites. The town of Boyanup currently shares a WWTP with Donnybrook. All WWTPs servicing the sub-region are able to meet current demand and have sufficient capacity for short-term growth.

Future requirements and planning

The following upgrades and new infrastructure have been identified by the Water Corporation to service the Greater Bunbury sub-region over the next 20-25 years. The timeframes and costings of projects will vary, depending on demand and market conditions.

- Upgrade of wastewater pumping stations at Parade Road Bunbury and Ince Road Glen Iris to allow for future growth in each catchment. Importantly, the Bunbury upgrade will accommodate the capacity to transfer wastewater for future growth in the Bunbury Sewer District.
- The upgrade of Binningup WWTP will be required to provide sufficient wastewater treatment capacity to service growth.
- Duplication of the pressure main from Parade Road to Bunbury WWTP No. 1 will be required to service the future growth of Bunbury past 2019.
- New pump stations in the Australind Sewer District to accommodate growth in Treendale and Treendale South.
- New pump stations in the Bunbury Sewer District to service growth in the College Grove area and Glen Iris area, and to provide sufficient wastewater transfer capacity for the Davenport Industrial Area.

- A new pump station in the Dalyellup Sewer District will be required to service the staged development of this estate.
- The upgrade of the Donnybrook WWTP will be required to provide sufficient treatment and disposal capacity for growth in the Boyanup and Donnybrook townsites.
- The upgrade of the Kemerton WWTP to 7.2 ML/d to meet growth demands in Australind and Eaton.
- The upgrade of the Bunbury WWTP No. 1 will be required to provide sufficient wastewater treatment capacity to service growth beyond 2025.
- Upgrade to the Brittain Road wastewater pump station to allow for future growth in the catchment beyond 2025.
- In addition to the projects identified above it has also been flagged that the introduction of an infill sewer program would benefit growth outside of the main urbanised area. Such a program would remove a key constraint to development in smaller towns, enabling increased densities around town centres.
- The identification of the new growth area to the east of Eaton in the *Greater Bunbury Strategy* will require major upgrades to the existing sewerage system. Although being located adjacent to Eaton, this area would more readily fall into the catchment of the Bunbury WWTP No. 1 given that it has sufficient planned capacity and provides a more secure treated wastewater disposal.
- Future wastewater planning for this area (east of Eaton) will need to establish a separate sewer district and consider a standalone solution, with its own transfer pump station and a separate major pressure main discharging wastewater to the Bunbury WWTP No. 1 in the longer term.

Drainage

The provision and ongoing maintenance of drainage infrastructure in many cases is the responsibility of the local authority. Generally, drainage in new urban areas is provided by the developer at the subdivision stage. The cost of upgrading drainage infrastructure is a major issue from a local government perspective.

The Greater Bunbury sub-region has a number of drainage issues relating to its proximity to the coast, various river systems and to its soil types - particularly around the inland townsites. As such, drainage systems are under pressure to cope with severe weather events or persistent rainfall. This is particularly evident around areas of East Bunbury (near the inlet) and around inland towns such as Harvey and Brunswick.

In addition to the river and creek systems, the Greater Bunbury sub-region has two major manmade drainage systems being the Five Mile Brook and the Harvey River diversion drain. These both provide outfall into the ocean and help to protect Bunbury and the Harvey townsite.

The *Better Urban Water Management 2008* document is used to manage water resource issues in an urban development context. As such, all new developments are required to comply with this document, which includes the preparation of district and local level water management strategies and urban water management plans which are implemented through provision for subdivision and development. These plans include key drainage infrastructure.

Future requirements and planning

The Department of Water has advised that all existing urban stormwater management systems should be retrofitted to meet contemporary water sensitive urban design principles. This is mainly relevant in older suburbs, particularly where infill development is being undertaken to ensure that the increased stormwater load can be catered for.

District and local level water management strategies will be required for the proposed urban area east of Eaton in the short to medium-term, before development can proceed.

7.3 Power

The Greater Bunbury sub-region forms part of the South West Interconnected System (SWIS) which covers the south-west corner of Western Australia, from Kalbarri in the north, to Kalgoorlie in the east and Albany in the south. The SWIS is an isolated fully self-contained system and the electricity needs of the consumers must be therefore delivered through the SWIS without any outside support or backup.

The SWIS is divided into five main regions being the North Country region, East Country region, East Goldfields region, Metro region and South Country region which the Greater Bunbury region forms part of. Power generation from this region is predominately coal based, from Muja A, B, C and D, Collie A, Worsley, Wagarup and Kemerton power stations. Alternative power generation feeds into the grid from the Albany Wind Farm and Wellington Dam.

There are currently three main terminal/substations that operate in the Greater Bunbury sub-region being Bunbury Harbour, Picton Terminal and Kemerton Terminal. There are also a number of smaller substations. It is anticipated that an additional four substations will be required to accommodate future growth. In addition, the existing Picton, Bunbury Harbour and Capel substations will be required to be upgraded. A number of new transmission lines and upgrades to existing transmission lines will also be required.

The proposed new urban expansion area east of Eaton can initially be accommodated within the existing network with a new substation already planned for the area to accommodate industrial and residential growth.

Future requirements and planning

Substantial works will be required to the electricity network to enable growth in the Greater Bunbury sub-region. Key power projects are shown on Maps 3 and 4. The timeframes and costings of projects will vary, depending on demand and market conditions.

Key projects identified by Western Power over the next 25 years include:

0-10 year time frame

- Rebuild the 132 kV transmission line (PIC-PNJ/BSN 81) from single circuit to double circuit.
- Rebuild the 330 kV transmission line (PIC-MRR 81) to allow for the installation of a higher capacity conductor.
- Expansion of the Picton and Bunbury Harbour Substations to allow for the installation of an additional transformer at each location. These upgrades are primarily being pursued to defer the installation of the new substation in Dalyellup.
- Replace/rebuild the existing 66 kV transmission line (PIC-CAP 72) to increase capacity to 132 kV along current corridor.
- Construction of a new substation in Dalyellup, including a new double circuit 132 kV transmission line from Dalyellup to Picton. This option will likely be deferred to 11-25 years and replaced with the upgrading of existing substations to allow for the investigation into alternative sites given the current constraints with the proposed site and corridor.
- New 132 kV double circuit transmission line cut-in from PIC-CAP 72 line to Westralia Sands Substation north of Capel.
- The expansion of the Capel Substation to allow for the new and upgraded transmission lines listed above.

11-25 year time frame

- New zone substation at Treasure Road including double circuit 132 kV transmission line cut-ins from the KEM-MRR 81 line.
- New zone substation in the Australind, Eaton or Preston Park vicinity to mitigate capacity issues with the Bunbury Harbour and Picton substations.
- New double circuit 330 kV transmission line from Waterloo Terminal to MU-KEM 91 line. An alternative would be to rebuild the 132 kV transmission line (PIC-PNJ/BSN 81) to 330 kV capacity and establish a short distance cut-in line into Kemerton.
- New Waterloo terminal including multiple transmission and distribution line entries will be required.
- Replace/rebuild existing 66 kV transmission line (PIC-CAP/WSD 7) to 132 kV capacity. The existing corridor should be used where possible.
- Establish Bunbury Harbour to Picton double circuit 132 kV transmission lines. One option is to rebuild existing transmission line MU-BUH 81 and create a portion of new corridor into Picton.

7.4 Transport

Roads

The Greater Bunbury sub-region has two main northern road corridors connecting it to Perth and further north, being the Perth – Bunbury Highway and the South Western Highway. Similarly, there are two main road corridors connecting the sub-region to the south, being the South Western Highway and Bussell Highway. Currently these main road connections all terminate in Bunbury, making the road system extremely busy during peak times. Recent upgrades such as the Eelup Roundabout have been undertaken to improve this traffic congestion.

The Bunbury Outer Ring Road will remove through traffic from the city, allowing traffic to bypass Bunbury and continue south. The first stage of this road has been developed; however, it will be a number of years before the remaining stages are completed.

Bunbury Port is located in close proximity to the Bunbury city centre which creates significant challenges in minimising the degree to which heavy vehicles use local roads. To limit the frequency of this occurrence, construction of the Port Access Road has commenced. The road will allow direct access to the port from existing freight corridors and from industrial areas to the city's east. The sections of the project already completed have reduced the number of trucks using roads more appropriate for general traffic.

In addition to the Port Access Road, construction was recently completed on a new road train assembly area in Picton.

The $6.5 million project was jointly funded through the Federal ($5.2 million) and State ($1.3 million) Governments. The project will allow road trains of up to 36.5 metres to be assembled and broken down just outside the City of Bunbury, improving road freight efficiency through the sub-region.[17]

[17] Department of Premier and Cabinet (2014) Joint Statement – Achieving road freight efficiencies for Bunbury

Two other significant road upgrades include improvements to South Western Highway between Waroona and Bunbury and adding a second lane to Bussell Highway from Capel to Ludlow. The South Western Highway upgrade involves improving the highway surface and adding additional overtaking lanes to improve safety and transport efficiency.

Rail

The Greater Bunbury sub-region has two lines which currently operate for both freight and passenger traffic. One line runs from Collie to the Bunbury Port and also connects with the northern link that runs from the Bunbury Port through to Perth. The northern link is also used for passenger services with the Australind operating twice daily between Perth and Bunbury (Wallaston Station). There is also a southern line which is currently not in use.

A number of upgrades are proposed to these lines to ensure that increased demand and traffic through the Ports in Bunbury and Kwinana can be accommodated. These include:

- Upgrading the northern line from a 21 tonne per axle load capacity to 23-25 tonne per axle load capacity;
- A crossing loop extension program is required between Brunswick Junction and Pinjarra;
- The Collie line will require duplication from Brunswick Junction to Ewington Junction; and
- The 'Roads to Export' report recommends that the line from Brunswick Junction to the Bunbury Port is also duplicated.

In the longer-term, passenger rail services need to be upgraded. It is proposed that the fast rail line be extended through to Bunbury as an alternative to the Australind service. The corridor alignment will need to be secured in the short to medium-term in conjunction with future road planning.

Bus services

There are currently three bus companies servicing the Greater Bunbury region.

- TransBunbury (formerly Bunbury City Transit), which operates services through the main urban area of the region, between the outer suburbs and the Bunbury city centre;
- South West Coach lines, which operates regional services to Collie, Donnybrook and Manjimup; and
- TransWA, which connects to a much broader bus network spanning an area from Esperance in the south east to Meekatharra and Kalbarri in the north.

Port

Bunbury Port is critical to the sub-region's economy and is the export port of the South West sub-region for bulk product. Total trade through the port in 2012/13 was 15 million tonnes, representing a seven per cent increase from 2011/12[18]. Commodities include alumina, mineral sands, silica sands, caustic soda, wood chips and general cargo.

Bunbury Port consists of the inner harbour and outer harbour. The inner harbour accommodates five berths and associated storage and loading infrastructure. The outer harbour consists of two berths and a number of storage and loading facilities. Growth in export industries, particularly mining and agriculture will be strong drivers of port activities with future expansion of the Bunbury Port undertaken in accordance with the *Inner Harbour Structure Plan* (2009).

Airport

The Greater Bunbury sub-region is serviced by the Bunbury Airport which is owned and managed by the City of Bunbury and includes training, private aviation, emergency response and commercial aviation[19]. Plans to expand Busselton Regional Airport[20] to accommodate larger aircraft and operate as a second international and domestic airport to Perth will likely create opportunities for the development of logistics and secondary activities at Bunbury Regional Airport (and potentially also Manjimup Airport).

The Bunbury Airport will require future upgrades to the runway surface and width and accommodate additional hanger space. This is dependent on access to adjoining land to accommodate the expansion of functions.

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[18] Bunbury Port Authority (2013) Annual Report

[19] City of Bunbury (2014) http://www.bunbury.wa.gov.au/pages/airport.aspx

[20] City of Busselton (2014) http://www.busselton.wa.gov.au

Future requirements and planning

Roads

The "Roads to Export" document prepared by the South West Development Commission outlines a number of road projects that are integral to the upgrading of the Bunbury Port in the future. These projects include completion of the Bunbury Outer Ring Road, completion of the Port Access Road and upgrade to the link between Bunbury Port and Coalfields Highway. The timing of these projects is dependent on progress of the port redevelopment. The Bunbury Outer Ring Road component of the broader development is anticipated to cost an estimated $900 million.

In addition to the projects discussed in the 'Roads to Export' document a number of grade separations will be required as a result of the duplication of the rail line into the port. These will be important in maintaining traffic flow along key road linkages around Brunswick, Burekup, Roelands, Picton and Bunbury. The document also flags upgrading Coalfields Highway as a key objective to improve the linkage between Collie and Bunbury – particularly the port. No funding has been allocated to this part of the project however, with the project anticipated to cost approximately $30 million.

Other major road works projects proposed for the Greater Bunbury sub-region include:

- The upgrading of South Western Highway from Harvey to Bunbury, including the construction of additional overtaking lanes and improvements to the Waterloo Road intersection. The estimated cost of these works is $24 million;
- The construction of a bridge across the Collie River, connecting Millbridge with Treendale;
- The upgrading of Raymond Road between Australind and Roelands (likely to cost between $5 million to $10 million);
- The creation of a bypass around Boyanup to reduce heavy traffic volumes through the townsite;
- The duplication of Koombana Drive between Blair Street and Austral Parade (estimated cost of $5 million to $10 million);
- The upgrading of South West Highway from Harvey to Waroona, including the provision of overtaking lanes (estimated cost $20 million to $50 million); and
- The upgrading of Bussell Highway from Capel to Ludlow by providing dual lanes in both directions. The estimated cost of these works is $11 million.

Rail

Various improvements to the freight rail network around Bunbury will be required to enhance links between industry source points and Bunbury Port. Key components of the 'Roads to Export' strategy include the duplication of the rail line from Brunswick to the Bunbury Port, the duplication of the rail line from Brunswick Junction to Ewington Junction in Collie and the construction of a spur line into Kemerton Industrial Park (see Map 6).

There are also plans to enhance the capacity of the Bunbury to Kwinana freight rail line, including crossing loop extension program to Pinjarra and increasing the axle load capacity form 21 tonnes to 23-25 tonnes.

While no major improvements are planned for the sub-region's passenger rail service in the short-term, fast rail services between Perth and Bunbury may be viable in the longer-term. This will require that a corridor between the two cities for such a service is identified and secured in advance.

The Koombana North Structure Plan has identified a site for a possible future passenger rail station directly south of Koombana Bay, next to the Central Business District (See Map 5).

Longer-term the fast rail service may be extended to Busselton. Although sufficient demand to warrant development is unlikely in the next 40 years – the early identification of a corridor for such a service will make the project less problematic if it is to proceed.

Port

Bunbury Port is currently operating at close to capacity and significant upgrades will be required to accommodate the anticipated increase in throughput.

There are four main components to the planned upgrade to Bunbury Port:

1. Berth 14 Development:
   Construction of a new berth in the Inner Harbour for the export of coal and other compatible products. This will be a user pays facility.

2. Preston River Relocation:
   Relocation of Preston River identified in the *Bunbury Port Inner Harbour Structure Plan* - Sept 2009, final engineering design works allow the Bunbury Port Authority to source funding for relocation project. Funding of $3 million has been allocated for the design and approval process associated with the realignment. The actual cost of the realignment will be determined by the initial phase.

3. Urea Storage/ Loading Facility:
   Construction of a new urea storage facility behind Berth 5 and new ship loading facilities on Berth 5 for the export of urea by Perdaman Chemicals & Fertilisers. This will be a user pays facility.

4. Berth 3:
   Berth 3 is currently a dolphin berth with a fixed ship loader servicing a single user. The project would involve landbacking the berth, the purchase and installation of a mobile ship loader and the construction of a waste-water management system on Berth 5. The cost of all the components of this project is estimated at $160 million.

   The Port upgrades are directly linked to other projects outlined in the 'Roads to Export' document and will therefore need to be delivered through a coordinated approach to developing the broader regional transport network.

   In addition to the planned expansion of the Port's freight capacity there has also been proposals to upgrade cruise ship facilities at the Port to allow for the accommodation of mega cruise ships at the facility. The Western Australian Cruise Shipping Strategic Plan 2010-2010 identifies Bunbury as a 'tier two' (of three tiers) cruise destination, based on destination appeal and suitability of infrastructure.

Airport

There are several upgrades planned to improve the functionality of Bunbury Airport for local users and to expand pilot and flight training capacity, which include:

- Improvements to power, water and wastewater services to the airport;
- Provision of telephone and broadband services;
- Increase parking capacity for itinerate and general users;
- Upgrade runway lighting and construction of a new terminal; and
- Plan for and service land for an additional 27 aircraft hangers. This may include the use of the adjoining reserve which is currently home to the rifle range. Progress is underway for this facility to be relocated to a central shooting facility.

Bus services

The *Initial Review of Public Transport Requirements for Greater Bunbury*, undertaken by Parsons Brinckerhoff for the Department of Planning in 2011, found that the urban form of Greater Bunbury was not conducive to efficient public transport networks, largely due to the sparsely populated nature of the region's main urban area.

As the population of the sub-region increases, an effective suburban public transport network will become increasingly important to reduce congestion and reliance on the private car. The delivery of such a network will require upgrades to the provision of services over time, but will also benefit greatly from a more compact urban form that utilises existing and planned infrastructure networks.

7.5 Education

The Greater Bunbury sub-region has the greatest concentration of educational facilities in the South West. There are 27 dedicated primary schools (17 public and 10 private), nine dedicated high schools (eight public and one private), six kindergarten to year 12 schools (all private), three education support centres, one university and one institute of technology.

Recent education developments in the Greater Bunbury sub-region include:

- Treendale Primary School opened earlier this year, taking students from kindergarten to year six;

- Construction of Stage 2 - Dalyellup College is underway with a new design and technology, and maths and science, buildings recently completed, with a third building completed for the second term of 2014; and
- The South West Automotive Centre opened in 2014 at the South West Institute of Technology. The $16 million facility provides specialist training in automotive trades.

Future requirements and planning

The Department of Education is responsible for the planning of new public schools to cater for population growth and local demographic trends. There are currently three primary school sites identified through the structure planning process that are yet to be constructed. There is also currently one private high school under construction which is anticipated to be opened in 2015.

A new South West Health Academy has been proposed for development near the existing hospital and university. It is estimated that the facility will cost between $20 million and $50 million and no funding has been allocated for the project as yet. It is anticipated that the facility will one day train students in the areas of health and community services.

There may also be opportunities for an additional university campus and institute of technology in the Greater Bunbury sub-region. These projects are long-term propositions that will be considered in the future and determined through consultation with the Department of Education, local government and the Department of Planning.

7.6 Health

The South West Health Campus - located in Bunbury - services the broader South West region. The facility provides public and private care, an emergency department, dental services and mental health services. Since its establishment in 1999 the hospital has undergone a number of expansions with the most recent being completed in early 2013.

The Greater Bunbury sub-region also has 11 child health centres that are located in the Bunbury urban area as well as the major towns of Harvey, Brunswick, Dardanup, Boyanup and Capel.

Future requirements and planning

The South West Health Campus will be required to continually upgrade to provide services that are not currently available in the South West sub-region including intensive care unit and rehabilitation facilities.

Given Western Australia's ageing population, upgrades may be required to facilities and services at the health campus, to ensure that older residents have access to appropriate accommodation and care within the community.

Given the anticipated population growth of the Greater Bunbury sub-region it is anticipated that an additional hospital may be required in the long-term. The proposed growth area east of Eaton has sufficient land for this purpose and any associated facilities and services if required.

7.7 Police, justice and emergency services

There are four police stations located in the Greater Bunbury sub-region located in Bunbury, Australind, Harvey and Yarloop. The Bunbury and Harvey stations are manned 24 hours a day, the Australind station is manned during the day and the Yarloop station is manned on set days.

There is one career fire station in the Greater Bunbury sub-region located in Bunbury. In addition there are Volunteer Fire and Rescue Brigades located in Bunbury, Eaton, Brunswick, Harvey, Dardanup, Boyanup, Capel, Elgin, Gelorup, Peppermint Grove Beach, Myalup, Binningup and Yarloop. The State Emergency Service has branches located in Bunbury, Australind and Harvey.

Similar to fire services, St John Ambulance Australia operates one career station in the Greater Bunbury sub-region located in Bunbury. This station is complimented by various volunteer stations located in Bunbury, Australind, Harvey, Capel, Boyanup and Brunswick to provide a service to the sub-region.

The Bunbury Courthouse is located on Stephen Street, Bunbury and provides services to the surrounding sub-region.

Future requirements and planning

It is the intention of the Department of Emergency Services to rationalise the existing stations across all emergency service organisations to provide co-located emergency hubs. The proposed urban expansion area to the east of Eaton has an identified emergency services hub to cater for the future needs of the sub-region.

7.8 Waste management

Waste management in the Greater Bunbury sub-region is predominately undertaken at the sub-regional landfill site located at Lot 45 Stanley Road, Wellesley in the Shire of Harvey.[21] The *Revised Facility Management Plan* prepared by the Bunbury Harvey Regional Council in 2010 identified an estimated 11 years of landfill capacity.[22] Although measures are in place to improve the efficiency of the landfill site and increase participation in recycling activities, an alternative site will need to be identified to cater for the waste management of the Greater Bunbury sub-region. The Shire of Harvey is also serviced by a landfill sites located on Richardson Road, Harvey.[23]

The Shires of Dardanup and Capel no longer have operating landfill components and only operate transfer stations for dumping waste which is later transferred to an appropriate facility. Both transfer stations are located at the old landfill sites on Banksia Road and Range Road respectively.

Future requirements and planning

The four local governments in the Greater Bunbury sub-region are currently investigating the option of creating a new sub-regional council which incorporates all the local governments. Part of this process will also require the identification of a new sub-regional landfill site.

[21] Bunbury- Harvey Regional Council (2014) http://www.bhrc.wa.gov.au/

[22] Bunbury- Harvey Regional Council (2010) *Stanley Road Waste Management Facility Revised Facility Management Plan*

[23] Shire of Harvey (2014) http://www.harvey.wa.gov.au/services/health-services/refuse-and-recycling/landfill-sites

7.9 Basic raw materials

The location of Basic Raw Material deposits within the Greater Bunbury sub-region is identified through the *Basic Raw Materials Demand and Supply Study for the Busselton-Bunbury sub-region*. The results of the study indicate there are sufficient supplies of basic raw materials to meet future demand within the sub-region; however, it important to protect the identified sites from encroachment from incompatible land uses and to ensure that resources are fully consumed before sites are decommissioned.[24]

[24] WAPC (2012) *Basic Raw Materials, Demand and Supply Study for the Bunbury-Busselton Region*

8 Glossary

Crown land

Alienated land is land held in freehold.

Crown land is defined as all land, not being alienated land, within the limits of the State of Western Australia that form the airspace, seabed and subsoil of marine waters and coastal waters as defined under the Commonwealth's Coastal Waters (State Powers) Act 1980. Crown land is referred to as State land in Western Australia.

Freehold land is land held in fee simple, whether absolute, conditional or otherwise, of that land.

Notice of intention to take is a notice issued under section 170 of the Land Administration Act 1997 and served on a landowner and any person affected by land the subject of a proposed public work. The notice provides interest holders with the opportunity to formally object to the taking of the land for the public work.

Tenure means the manner of possessing or holding Crown land for a specific purpose or purposes, for example: reserve tenure, road tenure.

Unallocated Crown land (formerly know as vacant Crown land) is Crown land that is not subject to any interest (other than Native Title interests under *the Native Title Act 1993*) and which is not reserved or declared or otherwise dedicated under the *Land Administration Act 1997* or any other Act.

Population

Estimated resident population (ERP) – Available for local government areas only, this figure represents the number of people counted in an area on 30 June. It is calculated by:

- adding the people who were temporarily absent from the area on census night;
- subtracting the overseas visitors counted in the area on census night;
- augmenting the figure for estimated net undercount in the census;
- adjusting for difference between census night and 30 June; and
- updating each year using administrative data from a variety of sources.

ERPs are the official population figures for Australia. They are widely used as a basis for Government decision-making, including the allocation of seats in federal parliament and distribution of Commonwealth grants.

Net undercount – Immediately following the census, the Australian Bureau of Statistics (ABS) conducts a post-enumeration survey in randomly selected households to get a picture of the net undercount. This factors in the human error associated with collection of census data. Factors contributing to undercount include geographic location, ethnicity, people travelling, errors with the census form, confidentiality. People may also be counted more than once if they were away from home on census night, but were included on the census form at their usual residence. In the 2006 census the estimated net undercount in WA was 3.2 per cent. This figure was 4.4 per cent for the balance of Western Australia, and 2.7 per cent for Perth.

Place of enumeration – this count includes every person who spent census night in Australia based on where they were on census night. The figure includes residents, tourists, visitors and service populations. This data is available for towns, localities and postcode areas.

Place of usual residence – the number of people who state an area on the basis of where they usually live, rather than where they were on census night. This can be a subjective measure as it depends where people consider their home to be. This data is available for towns, localities and postcode areas.

Subdivision approvals

Conditional approval is granted by the Western Australian Planning Commission (WAPC) for subdivision to begin subject to certain conditions being met. The approval is preceded by an assessment of the proposed subdivision plan by statutory referral agencies, including servicing authorities. On receipt of conditional approval, the proponent may commence subdivision development in accordance with the conditions of approval. A conditional approval remains valid for three years where five lots or less are approved and for four years where six lots or more are approved.

Current valid conditional approvals refer to those conditional approvals that are still valid but have not yet been issued with final approval. In general, these are approvals for which construction/servicing has not yet commenced or is currently under way (see active conditional approvals).

Active conditional approvals refer to conditionally approved lots where a servicing agreement (agreement to construct) has been signed between the Water Corporation and the developer. These are termed lots on non-cleared agreements.

Inactive conditional approvals are where conditional approval has been granted and the approval is still valid, but where a servicing agreement (agreement to construct) has not been signed between the Water Corporation and the developer.

Lapsed conditional approvals are those where the approval has expired and the conditions have not been met.

Final approval is the WAPC endorsement of the proponent's submitted plan/diagram(s) of survey describing the now complete subdivision; constructed in accordance with the conditions set down in the conditional approval. Final approvals are then registered with the Office of Titles where certificates of titles for the newly created lots can be issued.

Developers lodged application – subdivision application and its accompanying lots received by the WAPC for subdivision approval.

Application under assessment – is the number of applications and accompanying lots awaiting decision for subdivision. Statistics include deferred applications.

Planning

Local planning schemes are detailed planning schemes developed by local governments to identify the range of permitted land uses within specified locations. Within the Metropolitan Region Scheme and Peel Region Scheme areas, local planning schemes must be consistent with the provisions identified within the relevant Region scheme.

Local planning strategy contains the strategic plan and policy context of a local planning scheme. The strategy sets out the general aims, intentions and desired outcomes for long-term growth and change, having regard to social, economic and environmental factors. An assessment of the capacity of infrastructure such as water, sewerage, electricity and roads is also usually considered in a local planning strategy. Residential densities and commercial centres may also be identified.

A **scheme amendment** is the process of changing zones or reservations from one use to another. The amendment process requires proposed amendments to be advertised for wider community and government comment. The amendment process is regulated by the **Planning and Development Act 2005, *allowing for*** extensive community consultation to review the proposal before a final decision is made.

Structure plan refers to a document including spatial plans that details the proposed layout of a future development area. The preparation of a structure plan is one of the first steps in progressing proposals for the development of new areas. In addition to illustrating details such as road configuration and the location of retail and community facilities such as shops, schools and public open space, a structure plan can also show details such as housing density, land use classifications and buffer zones. Structure plans highlight opportunities and constraints in an area, and can provide the basis for amendments to local planning schemes. Structure plans can generally be categorised as either region, district or local structure plans.

Rural residential – subdivision on land zoned rural residential, special rural, rural living, or rural smallholding; irrespective of lot size.

Special residential – refers to special residential subdivision on special residential zoned land; irrespective of lot size.

Building approvals

A **house** is a detached building primarily used for long-term residential purposes. It consists of one dwelling unit. For instance, detached 'granny flats' and detached dwelling units (for example, caretaker's residences) associated with a non-residential building are defined as houses. Also includes 'cottages', 'bungalows' and rectories.

Other dwellings include all dwellings other than houses. They can be created by: the creation of new other residential buildings (for example, flats); additions/alteration work to an existing residential building; either new or alteration/addition work on a non-residential building; conversion of a non-residential building to a residential building creating more than one dwelling unit.

Dwelling commencements – a dwelling unit is a self-contained suite of rooms, including cooking and bathing facilities and intended for long-term residential use. Units (whether self-contained or not) within buildings offering institutional care, such as hospitals, or temporary accommodation, such as motels, hostels and holiday apartments, are not defined as dwelling units. A building is commenced when the first physical building activity has been performed on site in the form of materials fixed in place and/or labour expended (this includes site preparation but excludes delivery of building materials, the drawing of plans and specifications, and the construction of non-building infrastructures, such as roads).

Other

Vacant lots refer to those lots that are undeveloped (ie have no premises constructed on the lot) and that are located on residential or special zones as designated under the various local planning schemes in Western Australia. The base information is provided by the Valuer General's Office.

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10 Websites and resources

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www.abs.gov.au

Bunbury Harvey Regional Council
www.bhrc.wa.gov.au

City of Bunbury
www.bunbury.wa.gov.au

Department of Agriculture, Fisheries and Forestry Agriculture
www.daff.gov.au

Department of Education
http://www.education.wa.edu.au/home/detcms/portal

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www.employment.gov.au

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www.dmp.wa.gov.au

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www.magistratescourt.wa.gov.au

Main Roads
www.mainroads.wa.gov.au

Real Estate Institute of Western Australia
www.reiwa.com.au

Shire of Capel
www.capel.gov.au

Shire of Dardanup
www.dardanup.wa.gov.au

Shire of Harvey
www.harvey.wa.gov.au

South West Development Commission
www.swdc.wa.gov.au

St John Ambulance
http://www.stjohnambulance.com.au

Tourism Western Australia
www.tourism.wa.gov.au

Valuer General's Office
(functions of the Valuer General are now incorporated within Landgate)
https://www.landgate.wa.gov.au/corporate.nsf/web/Valuer+General+Services

Water Corporation
www.watercorporation.com.au

Western Australian Planning Commission and Department of Planning
www.planning.wa.gov.au

Western Australian Police
www.police.wa.gov.au

11 Acronyms and Abbreviations

ABS	Australian Bureau of Statistics
CBD	Central Business District
DAFF	Department of Agriculture, Forestry and Fisheries
DoH	Department of Housing
DoP	Department of Planning
DoT	Department of Transport
DSD	Department of State Development
ERP	estimated resident population
GBRS	Greater Bunbury Region Scheme
GFC	Global Financial Crisis
GL	gigalitre
ha	hectare
km	kilometre
kV	kilovolt
ILID	Integrated Land Information Database
IRIS	Integrated Regional Information System
LGA	Local Government Authority
ML	megalitre
ML/d	megalitres per day
Mt	million tonnes or mega tonnes (106 tonnes)
Mt/a	million tonnes or mega tonnes per annum
MW	megawatt
R-Codes	Residential design codes
SWIS	South West Interconnected System
t	tonne
TAFE	Training and Further Education
UDP	Urban Development Program
ULDO	Urban Land Development Outlook
WA	Western Australia
WAPC	Western Australian Planning Commission
WWTP	wastewater treatment plant