



Perth & Peel
Development Outlook 2011/12:
South-west Sub-regional Profile

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Contents

1	South-west sub-region overview	1		
1.1	Key issues for planning and development	2		
2	Demand assessment	3		
2.1	Demand drivers	3		
2.2	Economic and activity centres	3		
2.3	Major investment	4		
2.4	Non-residential building	4		
2.5	Labour force, employment and incomes	4		
2.5.1	Employment growth and unemployment	4		
2.5.2	Employment self-sufficiency and self-containment	6		
2.5.3	Wages and salaries	8		
2.6	Population growth and demographics	8		
2.7	Property sales, prices and activity	10		
2.7.1	Median house, unit and lot prices	10		
2.7.2	Indices of median house, unit and lot prices	11		
2.8	New dwelling approvals	11		
2.8.1	New dwelling approvals (houses only)	11		
2.8.2	New dwelling approvals (other than houses)	12		
2.9	Overall demand outlook	12		
3	Residential land supply	13		
3.1	Overview	13		
3.1.1	Average dwelling yield	13		
3.2	Urban expansion and investigation areas	14		
3.3	Planning and zoning	14		
3.3.1	Land being rezoned to urban or urban deferred	14		
3.3.2	Zoned land	14		
3.3.3	Structure plans	16		
3.3.4	Planning issues	16		
3.4	Subdivision	17		
3.4.1	Clearance of subdivision conditions	18		
3.5	Development	19		
3.5.1	Lots under construction	19		
3.5.2	Short-term development issues 2010/11 to 2013/14	20		
3.5.3	Long-term development issues (2014/15 and beyond)	21		
3.5.4	Environmental issues affecting development	21		
3.5.5	Environmental issues (survey responses)	22		
3.5.6	Market segment of dwellings for development	23		
3.5.7	Market and site issues affecting development	24		
3.6	Vacant lots	24		
3.6.1	Stock of developed lots available to the market	24		
3.6.2	Vacant lots with estate agents	24		
3.6.3	Lots not available to the market	26		
3.6.4	Stock of properties available	26		
3.6.5	Lots sold	27		
3.7	Building development	27		
3.7.1	Average value of new dwellings constructed	28		
3.7.2	Stock of dwellings available to the market	29		
3.7.3	Land consumption and density	29		
3.8	Infill development and redevelopment	30		
4	Industrial and commercial land demand and supply	31		
4.1	Commercial development	31		
4.2	Industrial development	33		
Table 1:	Key urban statistics – historical	1		
Table 2:	Key urban statistics – outlook	1		
Table 3:	Wage and salary earners	8		
Table 4:	Intended dwelling development (survey responses)	13		
Table 5:	Intended developments requiring scheme amendments (survey responses)	14		
Table 6:	Land available for future development	15		
Table 7:	Subdivision approvals	17		
Table 8:	Target market segments (survey responses)	23		
Table 9:	Land consumption for urban development and dwelling density	29		
Table 10:	Commercial subdivision approvals	31		
Table 11:	Major commercial projects	32		
Table 12:	Industrial zoned land (Metropolitan Region Scheme) in the South-west sub-region	33		
Table 13:	Industrial complexes in the South-west sub-region	33		
Table 14:	Industrial subdivision approvals	34		

Figure 1: Demand assessment for land and dwellings	3	Figure 33: Average value of residential buildings	28
Figure 2: Total value of non-residential building	5	Figure 34: Properties (excluding vacant lots) listed for sale with real estate agents	28
Figure 3: Labour force	5	Figure 35: Land consumption and density	29
Figure 4: Unemployment rates	6	Figure 36: Cumulative percentage of new dwellings relative to 2001 urban extent	30
Figure 5: South-west sub-region resident labour force - place of work	7	Figure 37: Commercial subdivision approvals	31
Figure 6: Employees and jobs by industry	7	Figure 38: Current industrial zoned land supply: South-west sub-region	34
Figure 7: Trend of average wage and salary incomes	8	Figure 39: Industrial subdivision approvals	35
Figure 8: Estimated resident population, 2001 to 2011	9		
Figure 9: Annual population growth, 2001/02 to 2010/11	9	Map 1: Infrastructure: South-west sub-region	36
Figure 10: Projected age profile (2006 and 2031)	10	Map 2: Employment nodes: South-west sub-region	37
Figure 11: Median house, unit and lot prices	10	Map 3: Journey to work: Perth metropolitan region and Peel sub-region	38
Figure 12: Indices of median house, unit and lot prices	11		
Figure 13: New house approvals (annualised monthly data)	11		
Figure 14: New other dwelling approvals (annualised monthly data)	12		
Figure 15: Dwelling yield from residential development projects (survey responses)	13		
Figure 16: Average dwelling yield from residential development projects (survey responses)	13		
Figure 17: Urban Growth Monitor land supply assessment	15		
Figure 18: Developers' planning issues (survey responses)	16		
Figure 19: Residential subdivision approvals	17		
Figure 20: Special residential and special rural sub-division approvals	18		
Figure 21: Progress to clear subdivision conditions (survey responses)	18		
Figure 22: Lots under construction (UDIA member developers)	19		
Figure 23: Major short-term development issues (survey responses)	20		
Figure 24: Major long-term development issues (survey responses)	21		
Figure 25: Developer's environmental and heritage issues (survey responses)	22		
Figure 26: Market segment of dwellings for development 2010/11 to 2013/14 (survey responses)	23		
Figure 27: Market and site issues affecting development (survey responses)	24		
Figure 28: Residential lots on market (UDIA member developers)	25		
Figure 29: Vacant lots listed for sale with real estate agents	25		
Figure 30: Lots not on market (UDIA member developers)	26		
Figure 31: Stock of vacant serviced lots	26		
Figure 32: Lots sold (UDIA member developers)	27		



1. South-west sub-region overview

The South-west sub-region comprises the Cockburn, Kwinana and Rockingham local government areas. Housing prices are not particularly low in the sub-region, but they are generally lower than comparable coastal properties in the Central and North-west sub-regions. The area's popularity has also been enhanced by recent improvements to transport links with the Perth CBD via the Mandurah railway and Kwinana Freeway. Large stocks of undeveloped, zoned land near the freeway and rail line mean continuing population growth in the sub-region is likely to continue for some time.

The South-west sub-region is Perth's industrial hub, with large areas of land, particularly along the coast north of Rockingham, dedicated to various forms of industry. Despite the success of the sub-region's industrial areas, the South-west sub-region has the highest unemployment rate of any of Perth's sub-regions and employment self-sufficiency is a modest 67 per cent. Investment in the sub-region's industrial sector is increasing employment opportunities and this will be critical in forging a more self-sufficient employment structure for the future.

Managing the area's industrial, residential and environmental needs is problematic. Residential developments encroaching on the Kwinana industrial area are restricted by the Kwinana air quality buffer, designed to protect residents from harmful or

unpleasant industrial emissions and environmentally sensitive wetlands in the sub-region are increasingly affected by the area's expanding urban front. Balancing residential and industrial growth with natural conservation is a major challenge facing future development in the South-west sub-region.

Population in the sub-region has grown at over three per cent annually for the last five years (Table 1) – the highest of any Perth sub-region. With large stocks of zoned land, growth is expected to continue, with a predicted annual rate of nearly three per cent over the next 10 years.

As at December 31 2010, the South-west sub-region has 3460 hectares of undeveloped land zoned urban or urban deferred under the Metropolitan Region Scheme (MRS) (Table 2). Urban development, including land uses such as suburban feeder roads, neighbourhood parks, community and recreation facilities, local shops and petrol stations and new dwellings consumed an annual average of 267 hectares of urban land from 2003 to 2008 ('boom' years for land development).

In addition to undeveloped land, there are 670 hectares of land zoned urban in the MRS currently developed at very low densities. Over time, some of this land may be further subdivided for residential use.

Table 1: Key urban statistics – historical

Local government authority	Suburban area (ha)	Commercial and light industrial area (ha)	2006 data		2011 data		Average annual population growth rate (2006 to 2011) (%)	Average frontal development density dwellings per zoned ha (1991–2008)
			Dwellings	Estimated resident population	Dwellings	Estimated resident population		
Cockburn	3,500	320	29,645	78,478	35,617	95,316	3.7	10
Kwinana	1,100	120	9,384	24,186	11,486	30,671	4.7	10
Rockingham	4,300	430	34,947	87,756	42,420	109,101	4.2	9
Total	8,900	770	73,946	190,420	89,523	235,088	4.1	10

Sources: Western Australian Planning Commission, 2011, Urban Growth Monitor. Australian Bureau of Statistics, 2006 & 2011, Census of Population and Housing. Regional Population Growth, Cat. No. 3218.0.

Note: Land areas under 1,000 hectares are rounded to the nearest ten. Land areas over 1,000 hectares are rounded to the nearest 100. Dwelling figures include unoccupied dwellings.

Table 2: Key urban statistics – outlook

Local government authority	Undeveloped urban and urban deferred land area (ha)	Under-developed areas of urban zone (ha)	Average land consumption rate (ha per year) (2003–2010)	Forecast population growth 2011–2021 (median) (%)
Cockburn	790	380	102	2.3
Kwinana	1,100	170	37	3.6
Rockingham	1,600	120	132	3.3
Total	3,500	670	271	n/a

Source: Western Australian Planning Commission, 2011, Urban Growth Monitor. Western Australian Planning Commission, 2012, Western Australia Tomorrow.

Note: Land areas under 1,000 hectares are rounded to the nearest ten. Land areas over 1,000 hectares are rounded to the nearest 100.

1.1 Key issues for planning and development

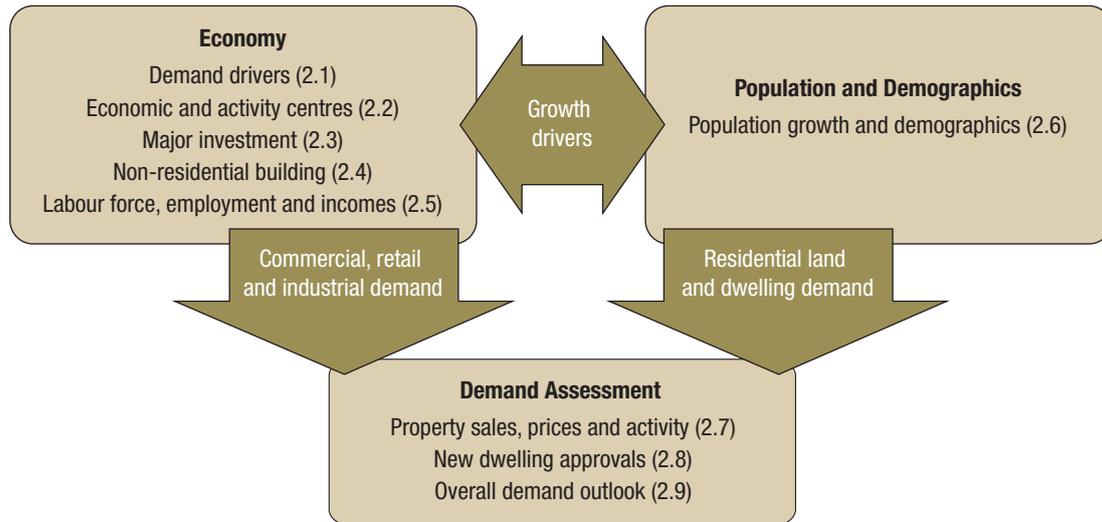
State and local government agencies have identified a number of short and long-term key planning and development issues in the South-west sub-region, which include:

- Preparation of the Southern Metropolitan and Peel Sub-regional Structure Plan;
- Coordination and alignment of sub-regional, district, and local planning initiatives;
- Metropolitan Region Scheme and Town Planning Scheme amendments;
- The need for ongoing coordination of, and alignment between, land use and transportation planning;
- The identification and development of additional land for urban expansion purposes which satisfies the range of suitability and feasibility criteria;
- The achievement of density targets set out in Directions 2031;
- General infrastructure coordination, including priorities for future infrastructure development;
- Increase in traffic on the road network, resulting in congestion at peak times at places such as Cockburn Central;
- Urban encroachment on other land uses – rural, extractive, industrial;
- Fragmented land ownership hindering development;
- Planning and protecting the Western Trade Coast (WTC) as Perth's primary strategic industrial area;
- Outer harbour project;
- The importance of delivering on key projects in collaboration with key stakeholders and project partners, e.g. Keralup, Karnup TOD and Cockburn Central;
- Planning, infrastructure and development assessments for Keralup;
- The planning and development of Karnup TOD to ensure that a variety of land uses are accommodated;
- Finalising the determination of the Kwinana Industrial Buffer and resolving outstanding issues at specific locations, such as Mandogalup and Lake Coogee;
- Development impacts on regional infrastructure that cannot be easily funded or controlled, e.g. Cockburn Coast, new controlled access highway, light rail and Western Trade Coast;
- Titanium zircon (mineral sands) east of Keralup and mining opportunities as precursors to residential development; and
- Availability of sand for fill purposes and other construction requirements. If current development trends continue to deplete local sand and limestone stocks, these products will need to be imported from other areas.

2. Demand assessment

Economic conditions and population growth are inter-related and together, they create demand for land and dwellings. This section is structured as shown in Figure 1.

Figure 1: Demand assessment for land and dwellings



2.1 Demand drivers

The South-west sub-region's position as Perth's industrial hub has long influenced residential land demand in the area, providing a major source of employment, but also reducing the area's appeal as a coastal lifestyle destination. This could explain why housing is typically cheaper than in coastal developments in the North-west and Central sub-regions. Many people seeking a coastal lifestyle (particularly retirees) see the South-west sub-region as an affordable alternative.

Demand in the sub-region has increased markedly since 2000, with improvements to the Kwinana Freeway and construction of the Mandurah railway. These developments have helped shift much of the sub-region's population growth away from traditional population centres (e.g. Spearwood and Rockingham) near the coast, to areas further inland, with good access to the South-west transport corridor.

Expansion of industrial areas in the sub-region has created a significant number of jobs, particularly in manufacturing. Further investment in these areas, development of Latitude 32 and the anticipated construction of Fremantle outer harbour, will stimulate demand and drive economic and employment growth for the next decade.

2.2 Economic and activity centres

- Activity centres are areas of economic activity and are defined in a hierarchical framework under *State Planning Policy 4.2: Activity Centres for Perth and Peel*. This policy and *Directions 2031 and Beyond*, identify Rockingham as a strategic metropolitan centre for the South-west sub-region.
- *Directions 2031 and Beyond* also identifies Kwinana and Cockburn Central as secondary centres and Jandakot Airport as a specialised centre.
- The total area of Metropolitan Region Scheme zoned land in this sub-region is 52,700 hectares, of which 3,400 hectares is zoned industrial (six per cent), representing 33 per cent of the metropolitan total of industrial zoned land.
- The Western Trade Coast strategic industrial area will continue to be a major focus of metropolitan and State industrial activity, with a focus on heavy manufacturing, processing, fabrication and export. It comprises the Kwinana Industrial Core, Latitude 32, the Rockingham Industry Zone, as well as the Australian Marine Complex precinct at Henderson.

2.3 Major investment

This section covers major projects in the South-west sub-region financed by government and the private sector. Such investment can stimulate demand for additional land and dwellings in the area. Projects for additional residential, industrial or commercial development are covered in later sections.

Major State Government investment

- \$146.09 million on upgrading and building new schools.
- \$10.2 million to redevelop the Challenger Institute of Technology Rockingham Campus. Investment in education facilities in a sub-region can lead to increased demand for land and housing as people choose to live closer to these facilities.
- \$6 million for planning, investigation and design for the extension of Roe Highway from Kwinana Freeway to Stock Road. This will increase accessibility in the South-west sub-region and lead to increased demand for land and housing.

Major local government investment

- \$20 million for Lark Hill Regional Sports and Recreation Complex ('Sportsplex', City of Rockingham).
- \$22 million for Kwinana Town Centre Community Resource Knowledge Building (Town of Kwinana).

2.4 Non-residential building

Non-residential building includes commercial, retail, industrial and community facilities. This primarily represents investment (public and private) in activity centres and employment areas within the sub-region. Non-residential building can therefore be used to gauge investor confidence in an area functioning as a vibrant or lucrative economic system rather than merely a place to live, with work and recreation pursued elsewhere.

The value of non-residential building in the South-west sub-region was \$291 million in 2010/11, which represented approximately 15 per cent of the total value of non-residential building in the Perth and Peel regions for the period (Figure 2).

Figure 2 shows that the construction trend in the South-west sub-region has, unlike other sub-regions, been relatively steady since 2008/09.

2.5 Labour force, employment and incomes

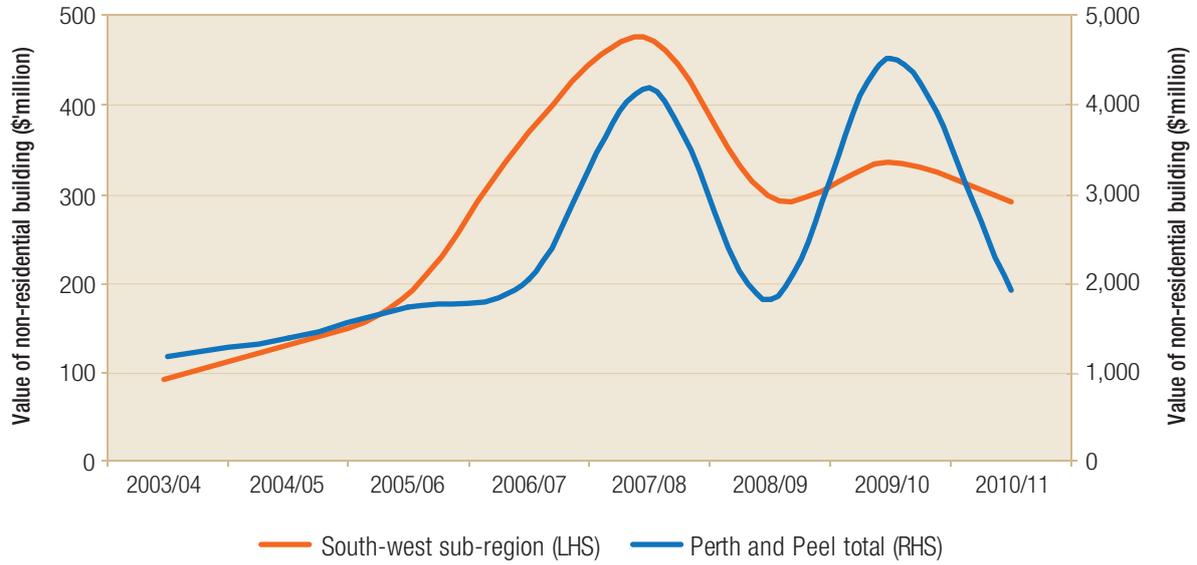
2.5.1 Employment growth and unemployment

Key employment statistics for the South-west sub-region as at March 2012¹

- Main employment industry sectors in the South-west sub-region are manufacturing, retail trade, construction and healthcare.
- The estimated labour force was 118,116, comprising 110,005 employed and 7,161 unemployed people (Figure 3). The sub-region shows an expanding labour force due to increases in both, employed and unemployed people in the three local government areas.
- The unemployment rate in the City of Cockburn was 4.5 per cent or 2,344 people, compared to 4.2 per cent for the Perth Metropolitan region. In March 2011, the rate was 4.7 per cent or 2,381 people unemployed (Figure 4).

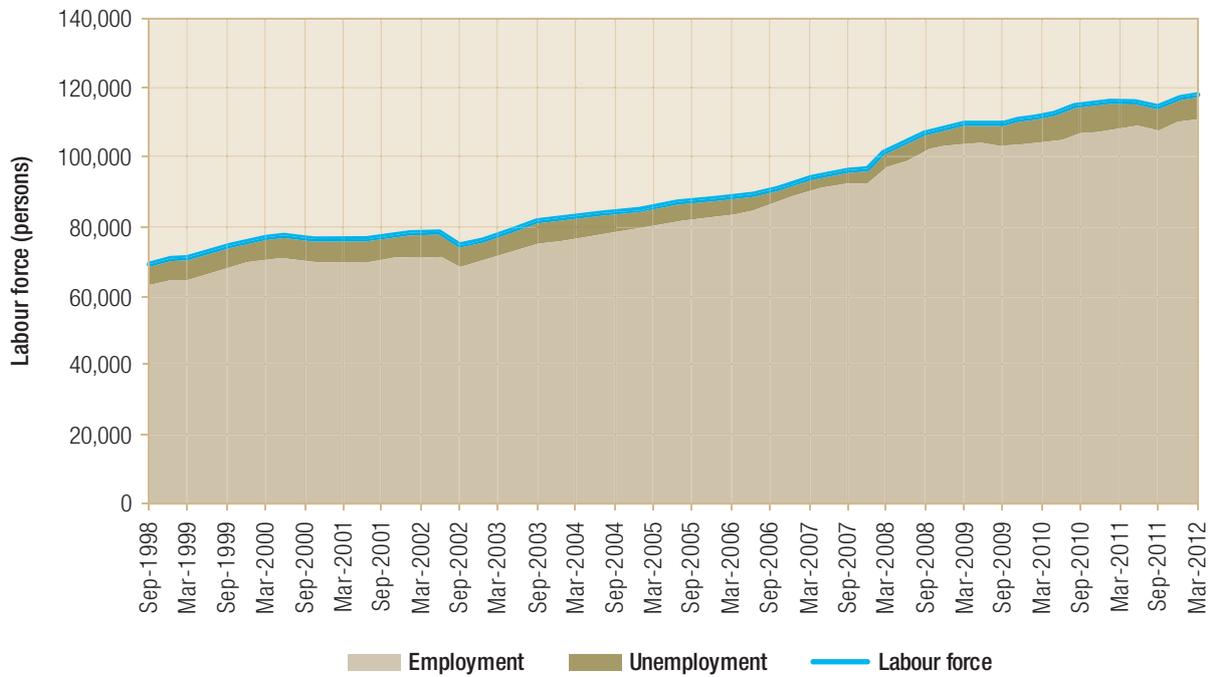
¹ Department of Education, Employment and Workplace Relations, Small Area Labour Market data, March Quarter 2010.

Figure 2: Total value of non-residential building



Source: Australian Bureau of Statistics, 2011, Building Approvals, Australia, Cat. No. 8731.0.

Figure 3: Labour force



Source: Department of Education, Employment and Workplace Relations, 2012, Small Area Labour Market Data.

- The unemployment rate in the City of Rockingham was 6.6 per cent or 3,478 people. In March 2011, the rate was also 6.6 per cent, or 3,388 people unemployed.
- The unemployment rate for the Town of Kwinana was 9.9 per cent or 1,342 people unemployed. In March 2011, the rate was ten per cent, or 1,328 people unemployed.

2.5.2 Employment self-sufficiency and self-containment

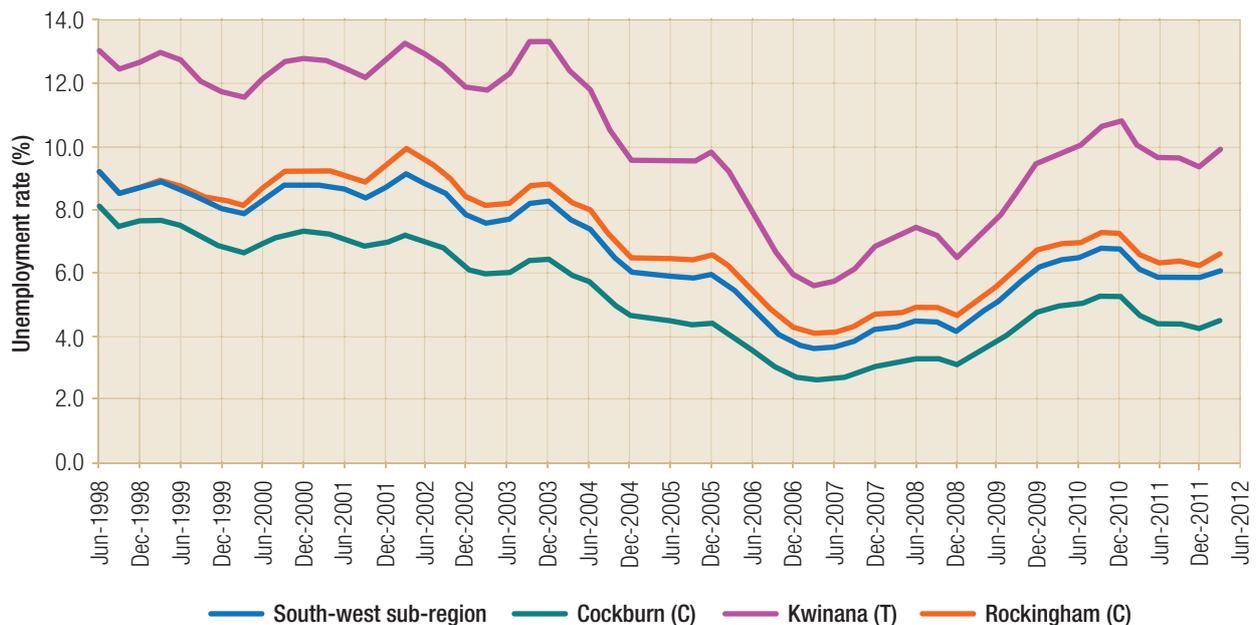
One of the key objectives of *Directions 2031 and Beyond* is to improve the relationship between where people live and where they work, to reduce commuting time and cost, and the associated impact on transport systems and the environment.

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

The South-west sub-region has a reasonable level of employment self-sufficiency, at 67 per cent (67 jobs for every hundred workers). As at the 2006 census the sub-region had a resident workforce of 86,000 employees (11 per cent of the total for the Perth and Peel metropolitan area) and 58,000 jobs (8 per cent of the total for the Perth and Peel metropolitan area).

Achieving the *Directions 2031 and Beyond* targets for employment self-sufficiency in the sub-region will require the creation of approximately 41,000 additional jobs by 2031.

Figure 4: Unemployment rates



Source: Department of Education, Employment and Workplace Relations, 2012, Small Area Labour Market Data.

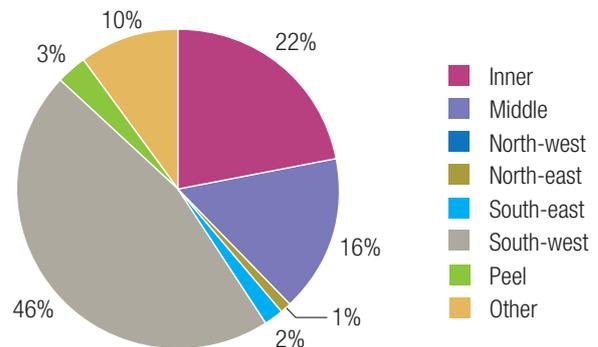
Employment self-containment is a measure of the proportion of a resident labour force that is employed in the local area. The South-west sub-region has a solid level of employment self-containment with just under half (46 per cent) of the resident labour force employed within the sub-region (Figure 5).

A high level of employment self-containment is dependent on a strong positive correlation between the skill sets of the local resident workforce and the types of employment opportunity within the sub-region. As illustrated in Figure 6, there is a shortage of jobs relative to the number of employees across most industry sectors. There is one exception to this – the electricity, gas, water and waste services sector. The largest employment sector in the sub-region (manufacturing), has almost 100 per cent employment self-sufficiency, which contributes to the sub-region’s healthy level of employment self-containment.

The South-west sub-region contains some of the largest industrial areas in the metropolitan region which provide numerous employment opportunities. The largest commercial employment nodes are located in Rockingham, Kwinana and Spearwood (Map 2). The majority of residents of the sub-region who commute to other sub-regions for employment, travel to the Central sub-region. The City of Fremantle hosts more employees from the South-west sub-region than any local government area outside the South-west sub-region.

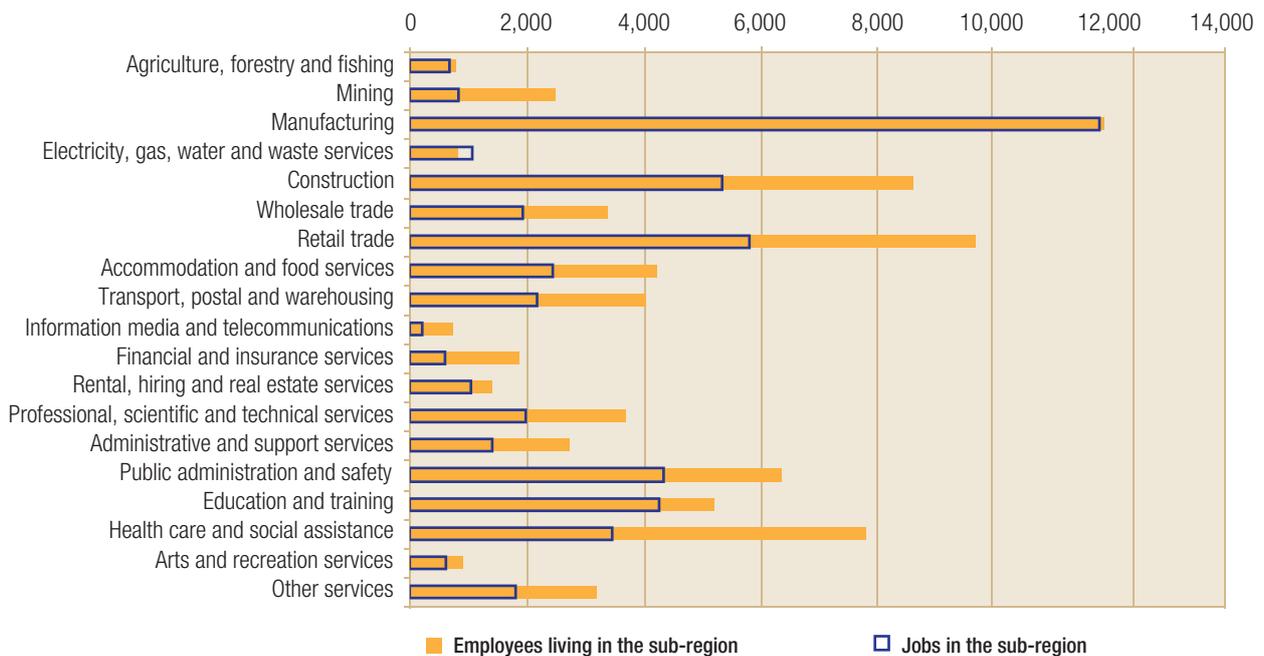
Of the workers from other parts of the metropolitan area, who are employed in the South-west sub-region, most come from neighbouring local government areas to the north, such as Melville, Gosnells and Canning (Map 3).

Figure 5: South-west sub-region resident labour force - place of work



Source: Australian Bureau of Statistics, 2008, Census of Population and Housing 2006.

Figure 6: Employees and jobs by industry



Source: Australian Bureau of Statistics Census of Population and Housing 2006.

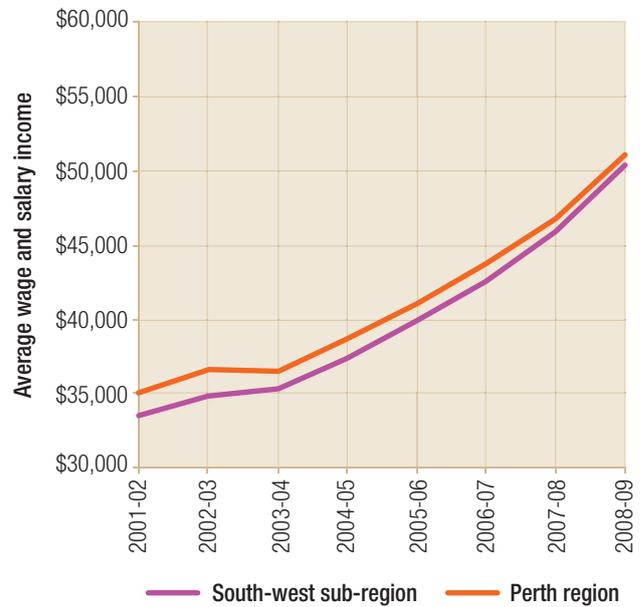
2.5.3 Wages and salaries

The average income for residents in the Cockburn local government authority was \$50,153 in 2008/09 – slightly lower than the Perth metropolitan average. Wage and salary earners in Kwinana averaged an income of \$47,226 in 2008/09, and average income for City of Rockingham workers was \$51,552, which was marginally higher than the Perth metropolitan average. Average annual income growth in all three local government areas between 2001/02 and 2008/09 was greater than that for the Perth metropolitan region (Table 3).

Over most of the past decade, the average wage and salary income growth of residents of the South-west sub-region has been slightly higher than that for Perth. This has gradually reduced the gap between average incomes in the sub-region and the average for the Perth metropolitan region (Figure 7).

Median household income in new growth areas of the South-west sub-region is significantly higher (27 per cent) than median household income across all households in the sub-region. This suggests that strong wage growth may be due to more affluent people moving to the area, rather than major income increases for existing residents.

Figure 7: Trend of average wage and salary incomes



Source: Australian Bureau of Statistics, 2011, Wage and Salary Earner Statistics for Small Areas, Time Series, 2001/02, 2002/03 & 2003/04 to 2008/09, Cat. No. 5673.0.

Table 3: Wage and salary earners

Area	Median income 2008/09 (\$ p.a.)	Average income 2008/09 (\$ p.a.)	Average growth 2001/02 to 2008/09 (% p.a.)
City of Cockburn	43,275	50,153	6.1%
Town of Kwinana	42,391	47,226	6.0%
City of Rockingham	43,506	51,552	5.9%
Perth metropolitan region	41,847	51,125	5.5%
Peel sub-region (Mandurah and Murray local govt. authorities)	38,554	49,268	5.5%
Western Australia	41,180	50,438	5.5%

Source: Australian Bureau of Statistics, 2011, Wage and Salary Earner Statistics for Small Areas, Time-Series, 2001/02, 2003/04 to 2008/09, Cat. No. 5673.0

2.6 Population growth and demographics

The South-west sub-region's estimated resident population was 235,088 in June 2011, comprising 109,101 residents in the City of Rockingham, 95,316 in the City of Cockburn and 30,671 in the Town of Kwinana (Table 1 and Figure 8).

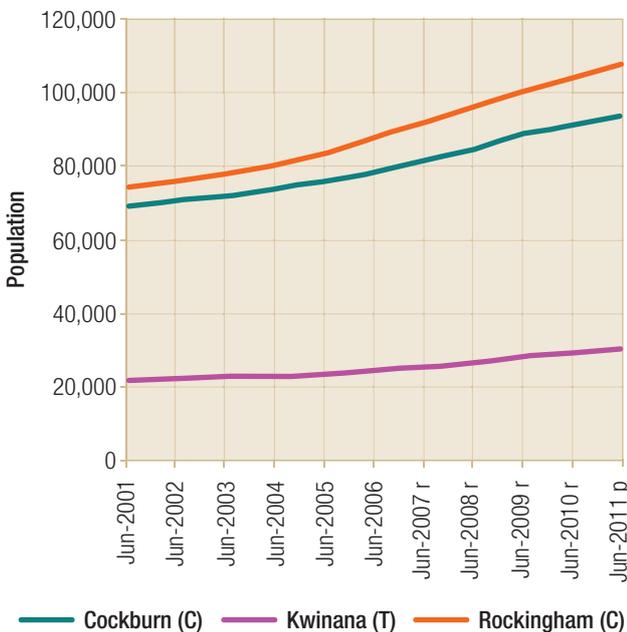
Annual rates of population growth show a marked population rise in the sub-region since 2005. However, population growth has since slowed significantly, particularly in the City of Cockburn (Figure 9).

Population projections indicate the sub-region's high proportion of young families is likely to decline as the population ages as a whole (Figure 10). The age profile forecast suggests the South-west sub-region will have a significantly smaller percentage of residents less than 25 years of age by 2031.

Key population and demographic statistics for the South-west sub-region

- There is a high proportion of young families (children under 15 years and parents aged 25–40 years) compared to the rest of the Perth metropolitan area².
- Growth areas have a higher proportion of people aged 0–19 years and 20–34 years relative to the sub-region as a whole, suggesting younger families with children are a major part of the new home market³.
- There is a lower proportion of adults aged 40–65 years than in the rest of the metropolitan area⁴.
- Similar to the other outer metropolitan sub-regions, the south-west sub-region appears to have lower proportions of young adults, indicating that many in this age group live outside the sub-region.

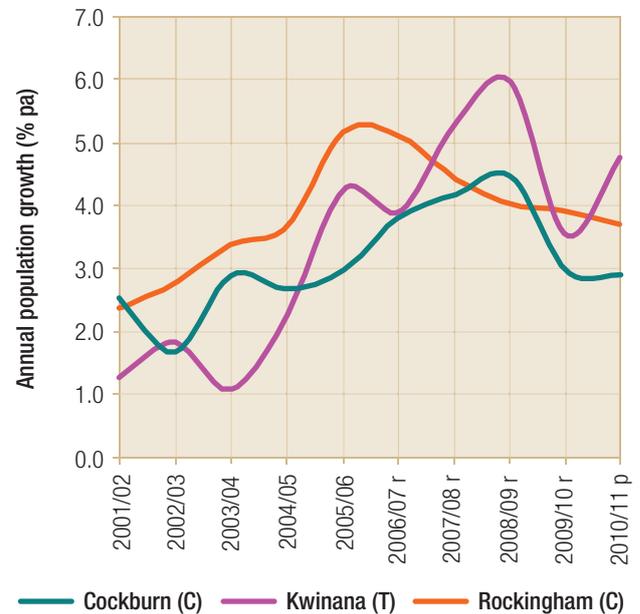
Figure 8: Estimated resident population, 2001 to 2011



Notes: r – revised, p – preliminary

Source: Australian Bureau of Statistics, 2012, Regional Population Growth, Australia, Cat. No. 3218.0.

Figure 9: Annual population growth, 2001/02 to 2010/11



Notes: r – revised, p – preliminary

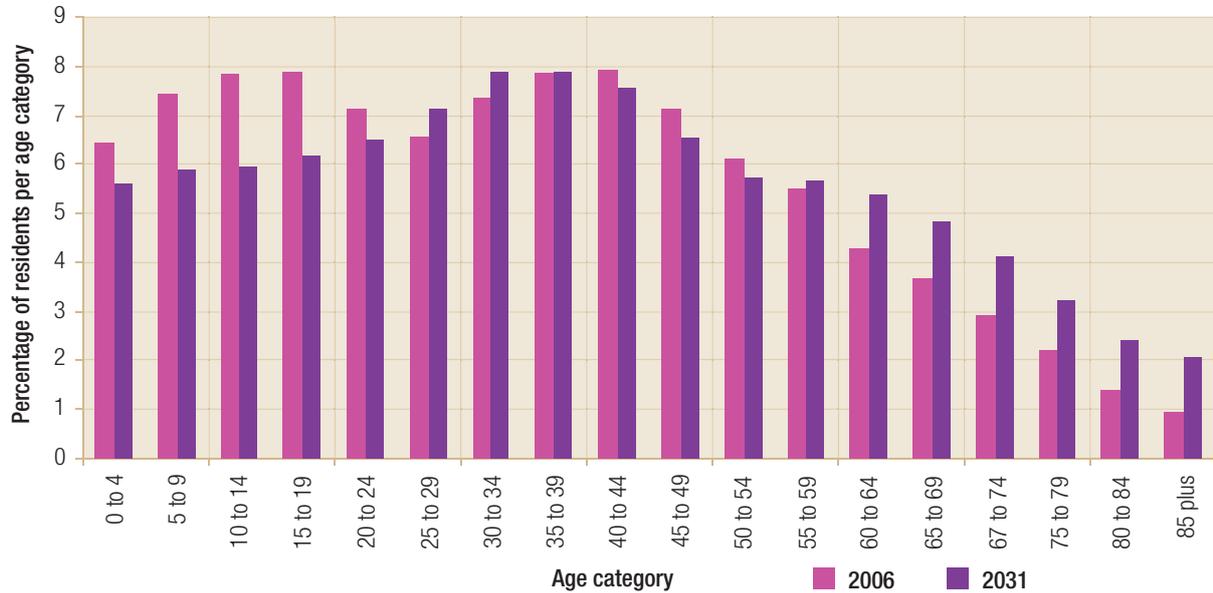
Source: Australian Bureau of Statistics, 2012, Regional Population Growth, Australia, Cat. No. 3218.0.

² Draft *Outer Metropolitan Perth and Peel Sub-Regional Strategy*.

³ BIS Shrapnel – *The Outlook for Residential Land in Perth 2010–2015*.

⁴ Draft *Outer Metropolitan Perth and Peel Sub-Regional Strategy*.

Figure 10: Projected age profile (2006 and 2031)



Source: Western Australian Planning Commission (2005), *Western Australia Tomorrow*.

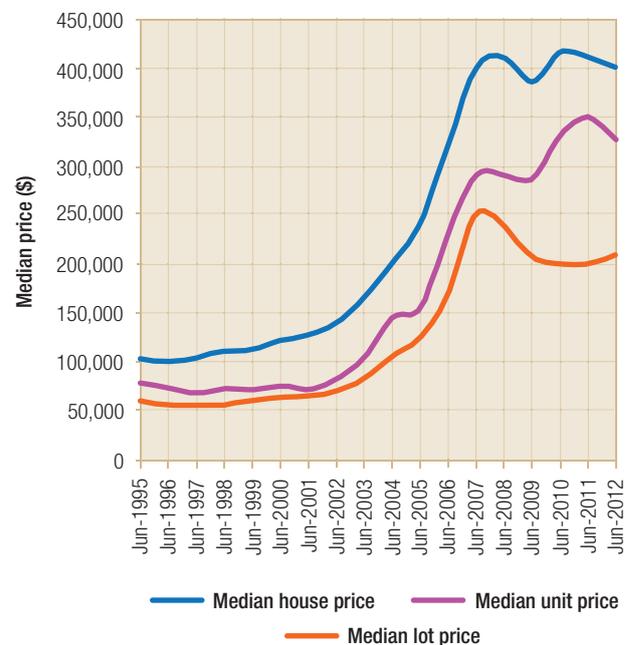
2.7 Property sales, prices and activity

Long-term trends in sales activity and prices indicate demand for real estate, and reflect fundamentals of population growth, household formation, rising incomes and employment growth.

2.7.1 Median house, unit and lot prices

Over the past 17 years, the median house price in the South-west sub-region has increased from \$103,000 to \$400,000 (peaking at \$415,000 in 2010) (Figure 11). During the same period, median prices of units increased from \$77,500 to \$326,000 and lots from \$59,000 to \$209,000 (peaking at \$250,000 in 2007).

Figure 11: Median house, unit and lot prices



Source: Real Estate Institute of Western Australia.

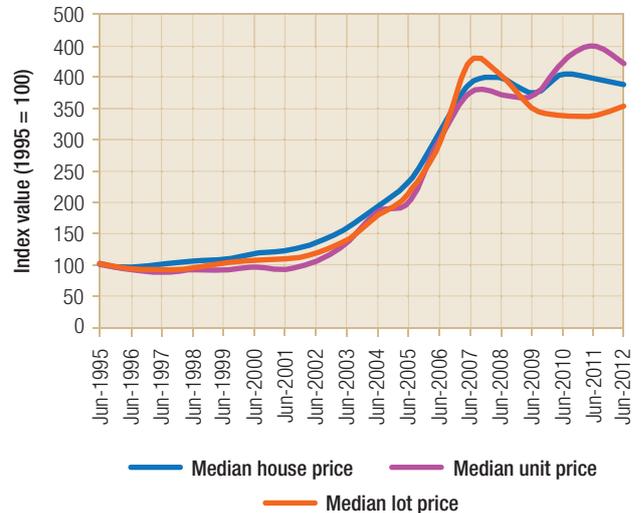
2.7.2 Indices of median house, unit and lot prices

Prices of houses, units and lots increased at remarkably similar rates in the South-west sub-region between June 1995 and mid-2007. Since then, lot prices have decreased significantly while house prices have been relatively stable and unit prices have increased (Figure 12).

2.8 New dwelling approvals

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

Figure 12: Indices of median house, unit and lot prices

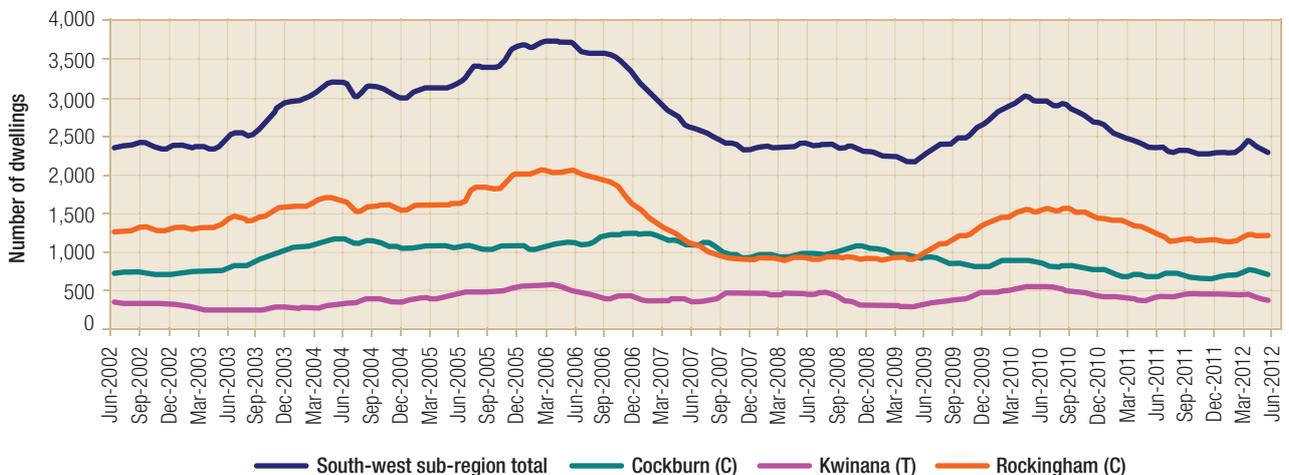


Source: Department of Planning and Real Estate Institute of Western Australia.

2.8.1 New dwelling approvals (houses only)

The trend for the South-west sub-region indicates an increase in new house approvals in the 12 months to June 2010 followed by a decline in house building activity (Figure 13). This increase was mainly due to a rise in house approvals in the City of Rockingham. Approvals in the Town of Kwinana and City of Cockburn have been relatively stable over a number of years.

Figure 13: New house approvals (annualised monthly data)



Source: Australian Bureau of Statistics, 2012, Building Approvals, Australia, Cat. No 8731.0.

2.8.2 New dwelling approvals (other than houses)

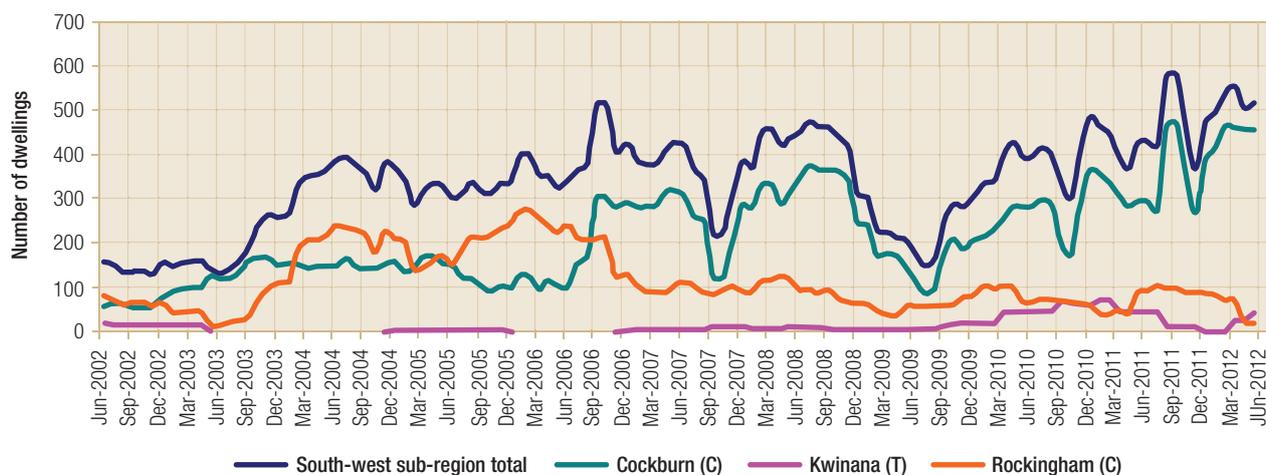
Figure 14 shows that approvals for dwellings other than houses (e.g. flats, villas and apartments) have increased during the past decade.

The City of Rockingham experienced relatively high levels of other dwelling development activity from 2004 to the end of 2006. Since 2006 the majority of other dwelling approvals in the sub-region have been in the City of Cockburn. Unlike most of the metropolitan area the South-west sub-region has not experienced a significant decline in other dwelling building approvals in the year to May 2012.

2.9 Overall demand outlook

- Development of major infrastructure planned for the South-west sub-region will lead to an increased demand for land and housing.
- Proximity to the coast and relative affordability will continue to drive demand for land and housing in the sub-region.
- As more employment opportunities are created, demand for land and housing will increase as new workers in the area seek residences near their place of work.
- Commercial investment in Rockingham and the Kwinana town centre redevelopment are likely to reinvigorate demand in these older areas. Projects like Port Coogee and Cockburn Coast will create demand from a more affluent market segment in the north of the sub-region.
- Further investment in the Rockingham strategic metropolitan centre will boost its role in servicing the sub-region for higher level services, and offer a higher level of urban amenity and lifestyle. This is likely to increase the appeal of the sub-region to potential business investors and future residents.
- Additional train stations planned for the Perth to Mandurah Rail line will further stimulate residential demand along the south-west transport corridor.

Figure 14: New other dwelling approvals (annualised monthly data)



Source: Australian Bureau of Statistics, 2012, Building Approvals, Australia, Cat. No 8731.0.

3. Residential land supply

3.1 Overview

Land consumption rates in the Perth and Peel metropolitan area over the last ten years have been highest in the South-west and North-west sub-regions. The South-west sub-region has significantly smaller stocks of land zoned for urban development than the North-west and consequently has the shortest temporal supply of land zoned for urban development than any other outer sub-region.

There are several large urban expansion and investigation areas in the South-west sub-region and consequently the area will continue to supply much of the land for Perth's longer term urban growth. This is reflected in the intentions of major land developers, who anticipate residential development on a very large scale in the sub-region from 2014/15 onward.

The Residential Developers' Land and Dwellings Intentions Survey 2009/10 includes projects of five or more residential lots or dwellings. Survey respondents identified 79 projects in the South-west sub-region, expected to yield a total of 10,257 dwellings

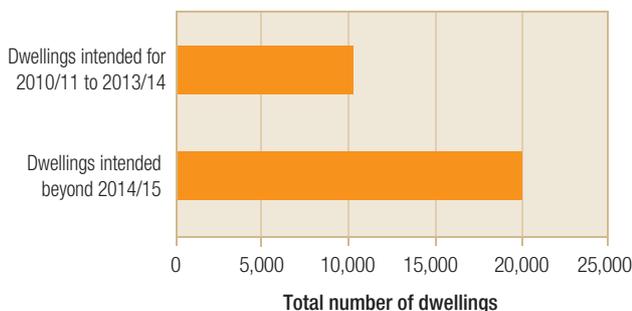
(single lots plus group dwellings) in the four years from 2010/11 to 2013/14 (Figure 15). Another 20,196 dwellings were identified for development long-term (2014/15 and beyond).

The Developers' Intentions Survey results indicated that lot production may increase in the South-west sub-region over the next few years (subject to demand). A significant number of developments have uncertain timeframes, reflecting turbulent market conditions (Table 4).

3.1.1 Average dwelling yield

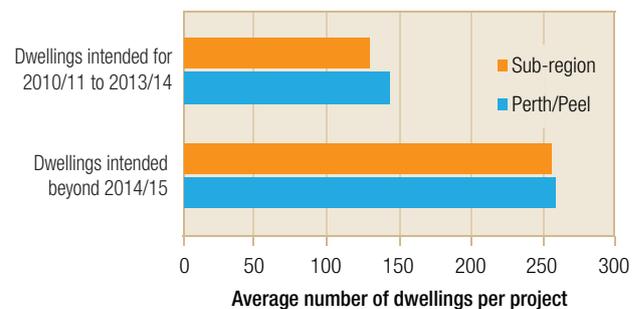
An average residential development project in the South-west sub-region will yield 130 dwellings in 2010/11 to 2013/14 compared to the Perth and Peel average of 144 dwellings per project. The average dwelling yield per project long-term (2014/15 and beyond) is much larger at 256 dwellings per project (Figure 16).

Figure 15: Dwelling yield from residential development projects (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Figure 16: Average dwelling yield from residential development projects (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Table 4: Intended dwelling development (survey responses)

Local government	2011/12	2012/13	2013/14	2014/15 – 2018/19	2019/2020+	Unknown year
Cockburn	675	703	255	603	0	7,199
Kwinana	584	503	692	2,756	1,760	230
Rockingham	1,086	1,082	1,150	4,684	6,720	5,744
South-west sub-region	2,345	2,288	2,097	8,043	8,480	13,173

Source: Residential Developers' Land and Dwellings Intentions Survey 2009/10.

Note: Dwelling development 2010/11, 2011/12, 2012/13 and 2013/14 include single lot production only.

3.2 Urban expansion and investigation areas

The initial stage of urban growth often involves the identification of lands suitable for future development, in strategic government planning policies.

The draft *Outer Metropolitan Perth and Peel Sub-regional Strategy* identifies 1,000 hectares of urban expansion areas (development anticipated by 2015) and 3,100 hectares of urban investigation areas (development anticipated by 2020) in the South-west sub-region. It is estimated that existing urban expansion and investigation areas in the sub-region, coupled with undeveloped zoned land, will yield between 87,000 and 120,000 dwellings.

The South-west sub-region contains large tracts of urban expansion areas, most in close proximity to the Kwinana Freeway or Mandurah Railway. Several urban expansion areas indicated in the draft urban expansion plan are constrained as a result of the review of the Kwinana Air Quality Buffer and the need to protect the Jandakot water mound.

3.3 Planning and zoning

Once a parcel of land has been identified as a suitable growth area planning schemes and structure plans are created or altered to guide development. This promotes coordinated, appropriate development, with zoning and structure planning providing parameters for development within a prescribed area.

3.3.1 Land being rezoned to urban or urban deferred

The 'upzoning' of land to urban, under the relevant region scheme, represents a significant progression toward urban growth, as it removes the primary statutory constraint to an area's development. As at July 2011, there were three region scheme amendments in progress affecting 102 hectares at Cockburn Coast (City of Cockburn), seven hectares at Wandi (Town of Kwinana) and 82 hectares at Wellard (Town of Kwinana).

In the Residential Developers' Land and Dwellings Intentions Survey 2009/10, four projects required region scheme amendments in the Metropolitan Region Scheme and six projects required local scheme amendments (Table 5). Most projects proposed in the South-west sub-region do not require rezoning to proceed.

Table 5: Intended developments requiring scheme amendments (survey responses)

	No. of projects	Dwellings affected 2010/11 to 2013/14	Dwellings affected 2014/15 and beyond
Region scheme amendment (rezoning) required	4	832	885
Local planning scheme amendment (rezoning) required	6	532	670
No scheme amendment (rezoning) required	72	9,163	19,311

Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Note: Some projects will require both a region and a local scheme amendment (rezoning).

3.3.2 Zoned land

The South-west sub-region contains 12,790 hectares of land zoned urban and 1,950 hectares zoned urban deferred under the *Metropolitan Region Scheme*. Of this, 4,840 hectares (33 per cent) is either undeveloped, or developed at very low density. This constitutes approximately 18 per cent of the total stock of available zoned land in the Perth and Peel metropolitan area.

Table 6 describes the make up of the undeveloped and under-developed land zoned for development in the South-west sub-region. 'Committed for other purposes' refers to land that is likely to be zoned for purposes other than residential, under local planning schemes.

Based on land consumption trends over the past 20 years (see section 3.7.3), existing stocks of zoned land are potentially sufficient to meet demand for approximately 24 years. As at December 31 2010, there were 6,160 green title and 229 strata lots with conditional approval in the non-urbanised areas of the South-west sub-region.

The *Urban Growth Monitor* (UGM) tracks and models zoned land supply and land consumed by development for the Perth metropolitan, Peel and Greater Bunbury regions. The assessment of land supply in the South-west sub-region from the UGM is shown in Figure 17. The UGM breaks down the zoned land into

tiers showing the number of hectares of land in each category. The full report from the *Urban Growth Monitor 2011* is available from the WAPC website www.planning.wa.gov.au.

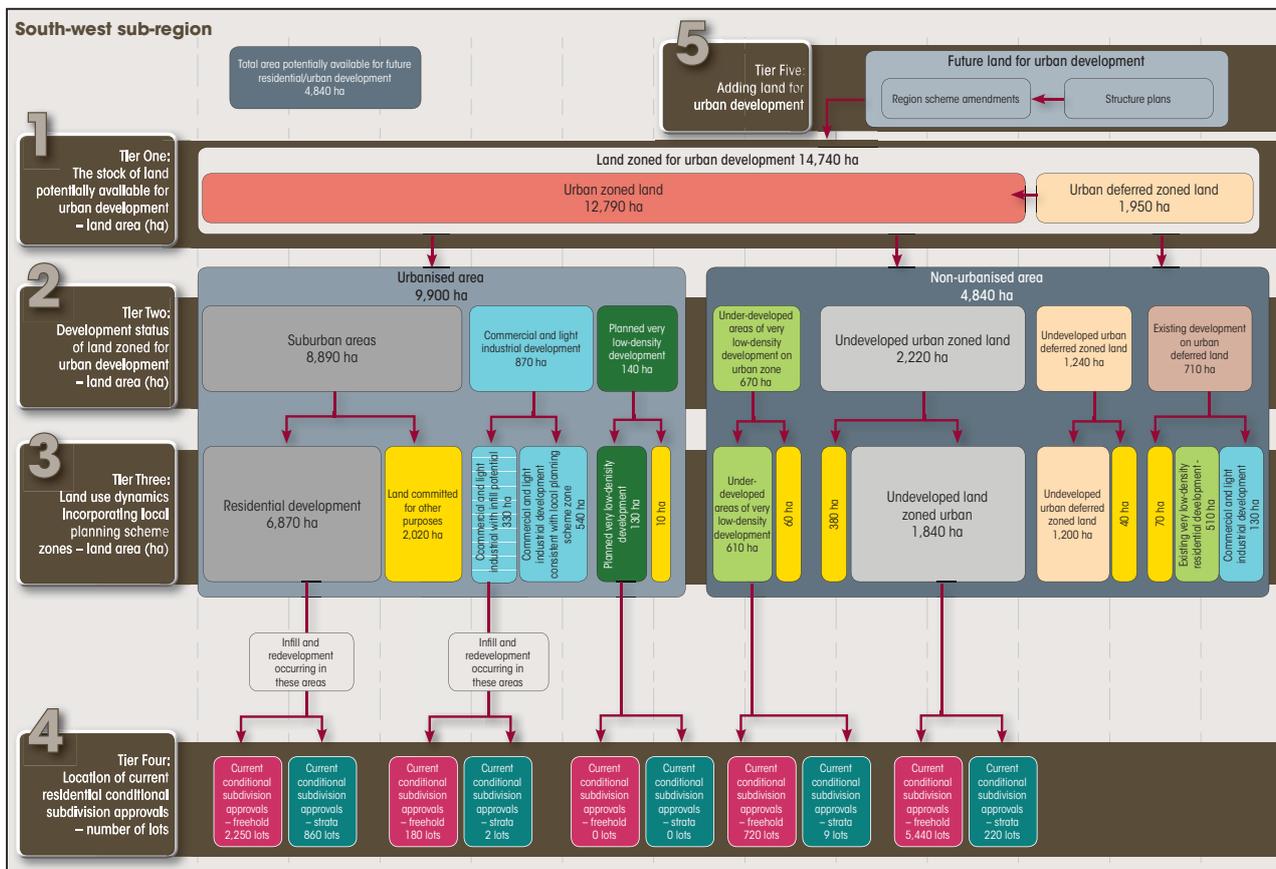
Table 6: Land available for future development

	Under developed areas of very low density development (ha)	Undeveloped urban zoned land (ha)	Undeveloped urban deferred zoned land (ha)	Existing development on urban deferred land (ha)	Total (ha)
Total	670	2,220	1,240	710	4,840
Committed for other purposes	60	380	40	70	550
Potentially available for development	610	1,840	1,200	640	4,290

Source: Western Australian Planning Commission (2011), Urban Growth Monitor.

Note: Numbers may not sum due to rounding.

Figure 17: Urban Growth Monitor land supply assessment



Source: Western Australian Planning Commission (2011), Urban Growth Monitor.

3.3.3 Structure plans

As at August 2012 there were 23 structure plans being considered for endorsement by the WAPC and 35 being considered for adoption by local government in the South-west sub-region.

With the completion of the Perth–Mandurah railway and Perth–Bunbury highway in recent years, we have seen an increase in structure planning and land release in the sub-region. Large amounts of structure planned areas are constrained by water protection issues and air quality buffers, which must be resolved before development can proceed.

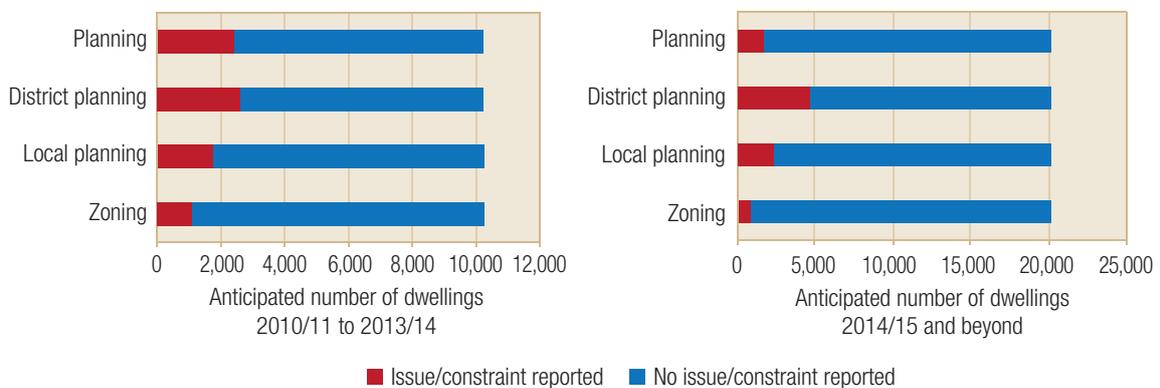
Work is currently underway to establish a sub-region-wide structure plan to guide future planning and development. More detailed information on structure plan activity in the South-west sub-region is available through the Urban Development Program’s District and Local level Planning Area maps and tables, available from the WAPC website at www.planning.wa.gov.au/udp.

3.3.4 Planning issues

Developers have identified a number of areas with planning issues, including district and local level planning concerns (Figure 18). Planning issues will affect delivery of around one-quarter of dwellings in the short-term (to 2013/14).

Note that the term ‘developers’ includes all developers including private, State or local government authorities.

Figure 18: Developers’ planning issues (survey responses)



Source: Department of Planning, Residential Developers’ Land and Dwellings Intentions Survey 2009/10 (unpublished data).

3.4 Subdivision

The South-west sub-region is currently experiencing the highest rates of subdivision activity outside the South-west sub-region. Within the sub-region, the City of Rockingham has the highest levels of residential subdivision activity with more than half of all conditional and final approvals.

Although there has been limited interest in special rural and special residential development since the beginning of the decade, there remains a significant stock of conditionally approved lots (Table 7).

The South-west sub-region is one of the most active development areas in the metropolitan region with high levels of subdivision activity throughout the last seven years (Figure 19). Between January 2004 and December 2011, the South-west sub region consistently had a large stock of conditionally approved lots, ranging from 8,000 to 12,000.

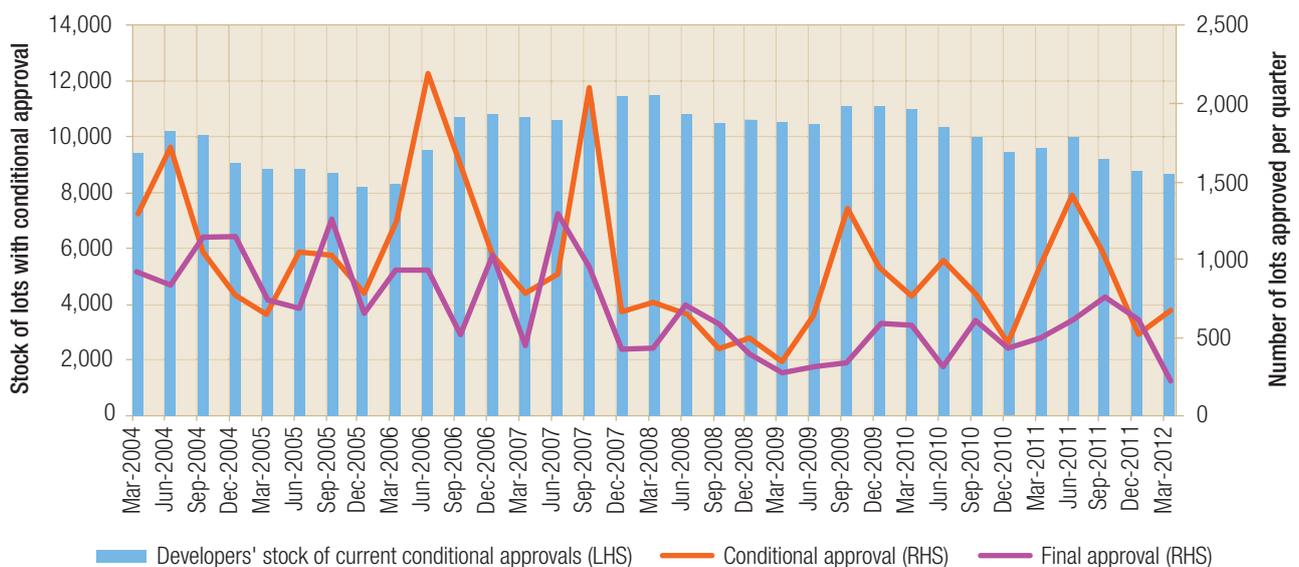
Table 7: Subdivision approvals

Land use	Applications received	Applications pending	Conditional approvals granted	Current conditional approvals	Active conditional approvals ¹	Final approvals
	(1 Jan 2011 - 31 Dec 2011)	(as at 31 Dec 2011)	(1 Jan 2011 - 31 Dec 2011)	(as at 31 Dec 2011)	(as at 31 Jan 2012)	(1 Jan 2011 - 31 Dec 2011)
	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Lots
Residential	3,812	1,686	3,966	8,837	1,699	2,532
Special residential and special rural	92	127	10	93	28	18

Source: Department of Planning (2012), Water Corporation (2012).

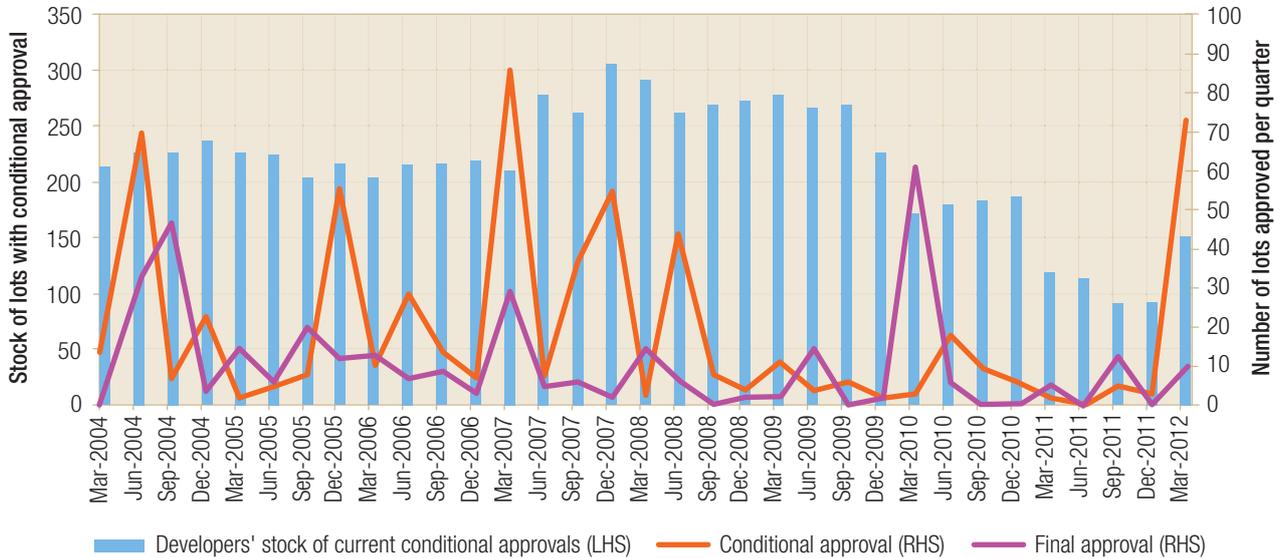
¹ Refers to conditionally approved lots where a servicing agreement (agreement to construct) has been signed between the Water Corporation and the developer. These are termed lots on non-cleared agreements. Data not available for 31 December 2011.

Figure 19: Residential subdivision approvals



Source: Western Australian Planning Commission 2012, State Lot Activity.

Figure 20: Special residential and special rural subdivision approvals



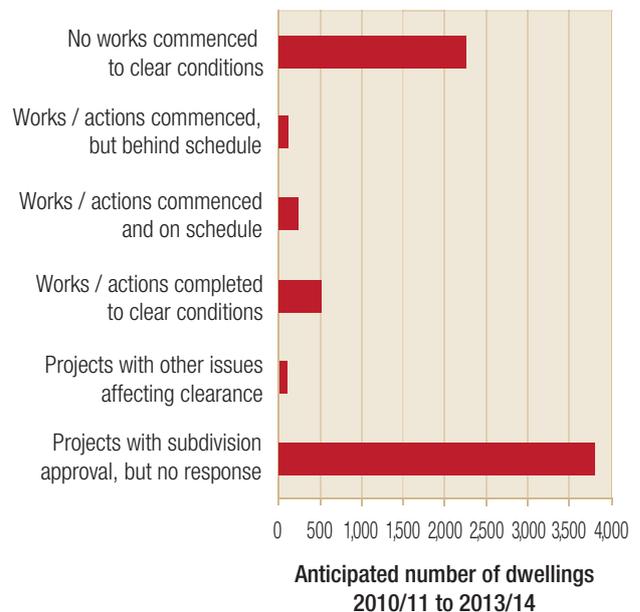
Source: Western Australian Planning Commission 2012, State Lot Activity.

Special rural and special residential subdivision activity in the South-west sub-region has declined significantly over the three years to December 2011. Improved transport links to central Perth have contributed to a growing urbanisation of the sub-region which perhaps detracts from the appeal of developing special rural/special residential lots. In the 12 months to December 2011 there were only 19 applications for this type of subdivision in the sub-region (Figure 20).

3.4.1 Clearance of subdivision conditions

Respondents in the Developers Intentions' Survey assessed progress of their projects with regard to headway in obtaining clearances to subdivision conditions (Figure 21). Developers in the South-west sub-region had most difficulty meeting conditions imposed by local government, the Water Corporation and Western Power.

Figure 21: Progress to clear subdivision conditions (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

3.5 Development

Once approval has been granted to develop a piece of land for residential purposes, a significant amount of land and infrastructure development is still required to prepare each lot for sale.

3.5.1 Lots under construction

Figure 22 shows lots under construction in the South-west sub-region from analysis by the Urban Development Institute of Australia (UDIA). It is expected that these lots will be released to the market within 12 months. It shows that construction activity in the sub-region has declined over the past year, following a more significant decline in activity from 2005 to 2008.

Figure 22: Lots under construction (UDIA member developers)

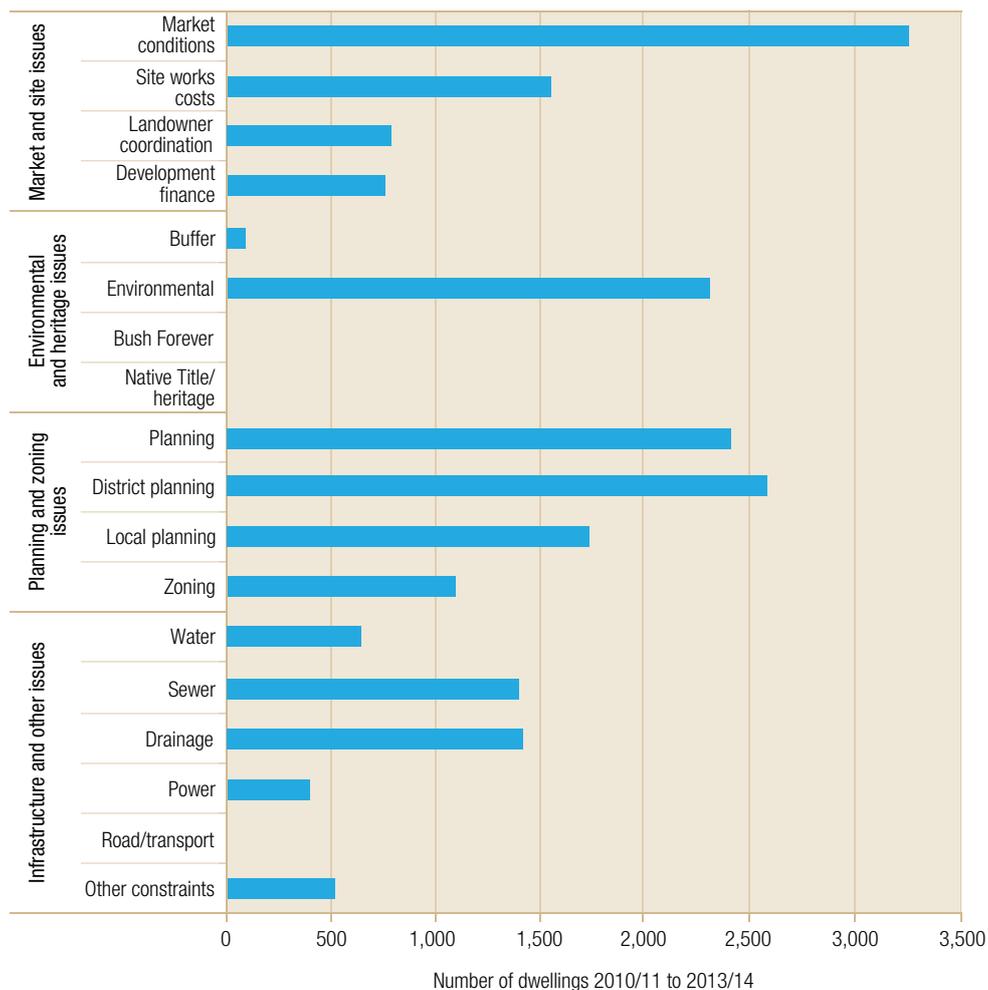


Source: Urban Development Institute of Australia, 2012, Urban Development Index.

3.5.2 Short-term development issues 2010/11 to 2013/14

Major issues with development of additional dwelling sites identified by land developers are shown in Figure 23. Market conditions were the most significant factor constraining dwelling development over the short-term, with developers indicating this may restrict development of over 3,000 dwellings. Planning issues were a significant concern, particularly in relation to district planning. Environmental issues were also considered a significant constraint, potentially affecting the production of over 2,000 dwellings.

Figure 23: Major short-term development issues (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

3.5.3 Long-term development issues (2014/15 and beyond)

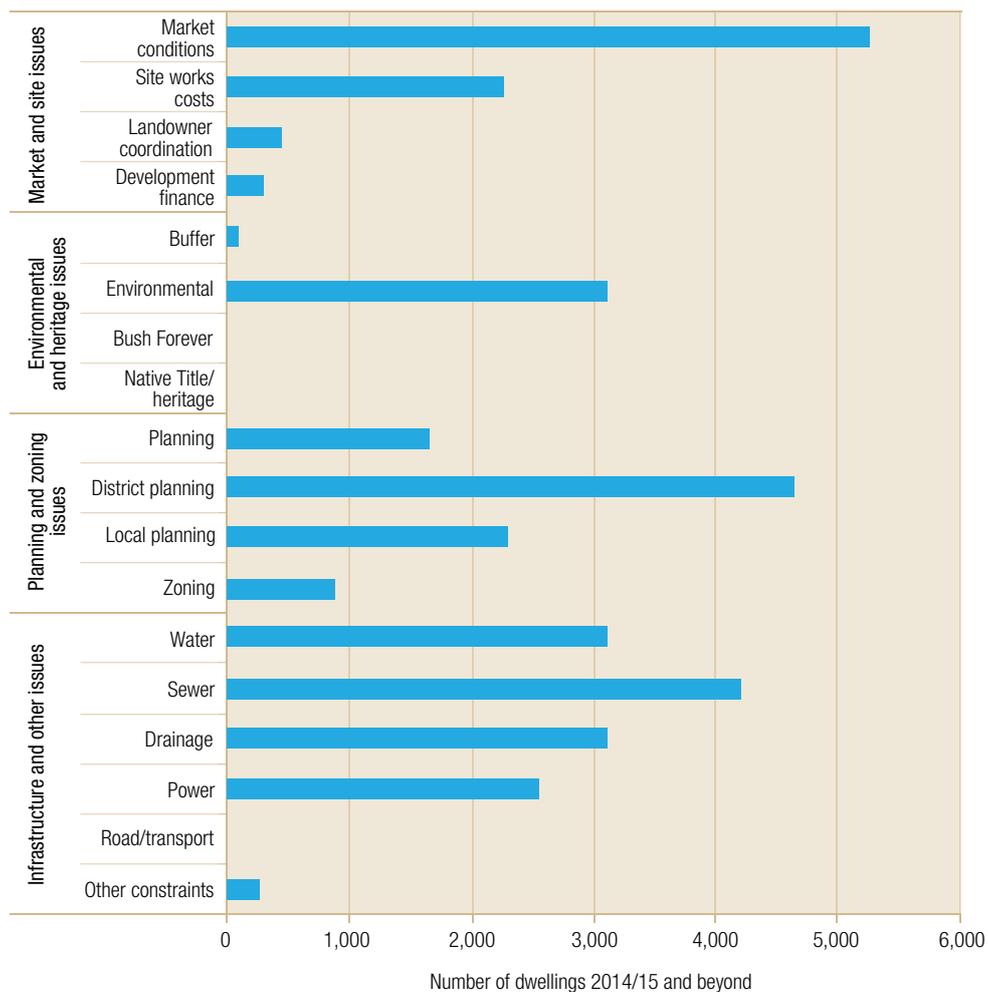
Constraints identified by developers for long-term projects are similar to short-term development issues in the South-west sub-region. Infrastructure constraints, however, become more significant in projects due for completion in the longer term (Figure 24).

3.5.4 Environmental issues affecting development

Significant environmental issues affecting development in the South-west sub-region include:

- Urban water management, including:
 - groundwater management and urban water management at structure plan level with development contributions schemes (cost coordination) (e.g. Sixty Eight Road to Paganoni Road) and timing implications, especially where zonings are likely to become urban;

Figure 24: Major long-term development issues (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

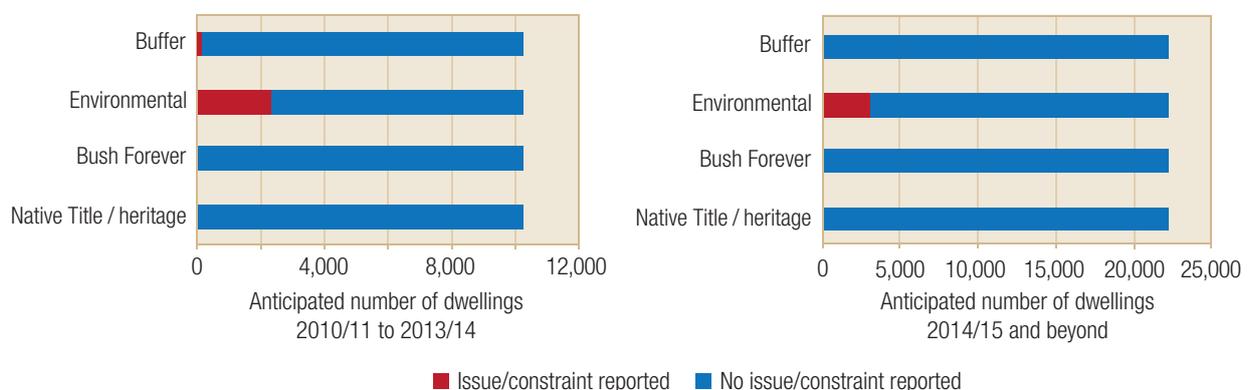
- Jandakot Groundwater Mound review – a priority to investigate land use intensification;
- water management planning for Keralup;
- clarifying management and accountability for wetland buffers;
- management of potential mosquito and midge problems surrounding wetlands;
- regional water management plans may require significant preparation;
- monitoring requirements are often unfunded; and
- water source protection, including Jandakot Ground Water Mound constraints.
- Managing remnant vegetation and associated fauna especially around north Baldivis. Current threshold of one hectare for clearing.
- Protection of habitats for threatened fauna, such as Carnaby's Black Cockatoo, the Graceful Sun Moth, tortoises and bandicoots.
- Buffer impacts to environmentally sensitive and specific land uses.

- Noise from future road or rail network expansion or changes.
- Coastal issues – sea level rise with some vulnerable areas in this sub-region.
- State Environmental Policy for Cockburn Sound and its potential impact limiting future residential development that falls within its coverage unless it is well managed – particularly nutrient management.
- Impacts of harbour developments or expansion.
- Subdivision approvals with requirements for multiple management plans and expansive conditions of approval are becoming more problematic.
- Air quality control buffers – form and extent of buffers can change over time as new information becomes available.
- Different views by agencies on economic impacts – environmental considerations need more balanced outcomes within strong legislative contexts.

3.5.5 Environmental issues (survey responses)

Developers identified 16 projects with environmental issues constraining development of 2,305 dwellings in the short-term (2010/11 to 2013/14), and 3,104 dwellings in the long-term (2014/15 and beyond) (Figure 25).

Figure 25: Developer's environmental and heritage issues (survey responses)



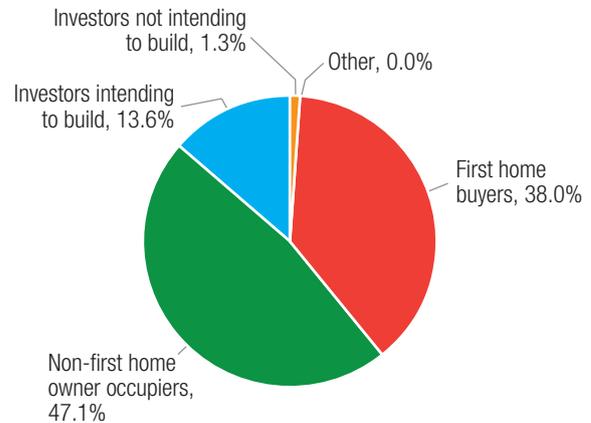
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

3.5.6 Market segment of dwellings for development

Developers of 36 projects in the South-west sub-region yielding 4,613 dwellings in the short-term (2010/11 to 2013/14) and 3,446 dwellings in the long-term (2014/15 and beyond) provided information on their expected target market segments (Figure 26, Table 8).

These developments are predominantly targeted at non-first home owner-occupiers (47.1 per cent of all dwellings), first home buyers (38 per cent) and investors intending to build (13.6 per cent). Investors not intending to build include speculators who intend re-selling lots at a higher price; very few developers target this market segment.

Figure 26: Market segment of dwellings for development 2010/11 to 2013/14 (survey responses)



Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Table 8: Target market segments (survey responses)

	First home buyers	Non-first home owner occupiers	Investors intending to build	Investors not intending to build	Other
Dwellings 2010/11 to 2013/14	1,753	2,174	627	59	0
Dwellings 2014/15 and beyond	1,886	1,056	432	73	0

Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Notes: 'Other' includes aged-care facilities.

3.5.7 Market and site issues affecting development

Developers expressed concerns about market conditions with regard to 24 development projects, yielding 3,246 dwellings from 2010/11 to 2013/14 and 5,258 dwellings long-term (2014/15 and beyond) (Figure 27). This is relatively high in comparison to other sub-regions.

Developers identified seven projects where site works costs were a constraint. These projects were anticipated to yield a total of 1,548 dwellings in 2010/11 to 2013/14 and another 2,267 dwellings long-term.

Six projects were affected by landowner coordination constraints, with an anticipated yield of 786 dwellings in 2010/11 to 2013/14 and another 453 dwellings long-term (2014/15 and beyond).

Six developments identified development finance as a constraint, with a total yield of 762 dwellings in 2010/11 to 2013/14 and 304 dwellings long-term.

3.6 Vacant lots

It is once vacant lots are created and serviced, that land generally becomes available to the public. Most new homes in Western Australia are sold as vacant lots, on which the purchaser will select a construction company to build a new dwelling. Consequently the availability of vacant lots is perhaps the most important indicator of short-term dwelling supply.

3.6.1 Stock of developed lots available to the market

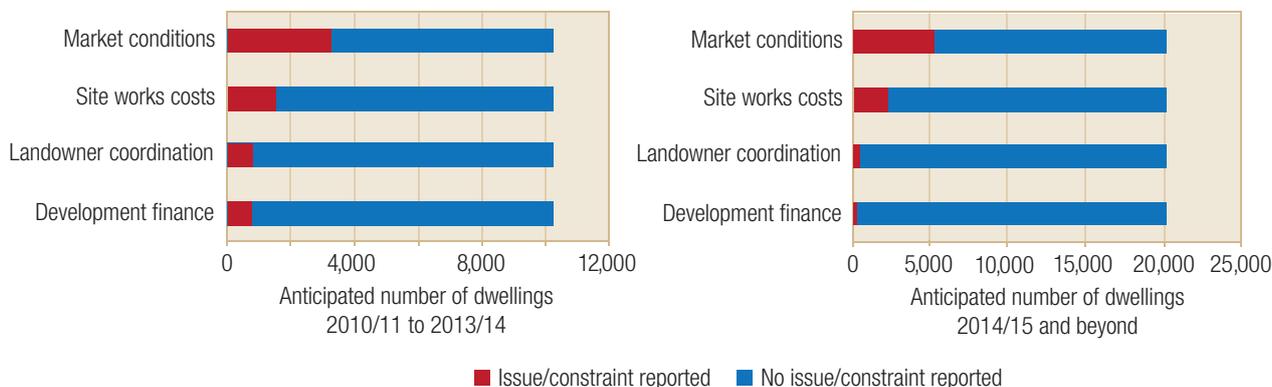
Time-series quarterly data for lots on the market is shown in Figure 28. This shows the low number of lots available from late 2005 to mid-2006 in the sub-region. Since 2007, developers have consistently maintained a much larger stock of lots available to the public, suggesting that lot supply has been adequately meeting demand in the South-west sub-region over the past four to five years.

3.6.2 Vacant lots with estate agents

Major land developers do not generally list their lots with real estate agents, but sell them direct to the public. Lots listed with licensed agents therefore provide an additional stock of developed lots available to the public. The Real Estate Institute of Western Australia (REIWA) has tracked the listings of vacant lots listed for sale since March 2008 (Figure 29).

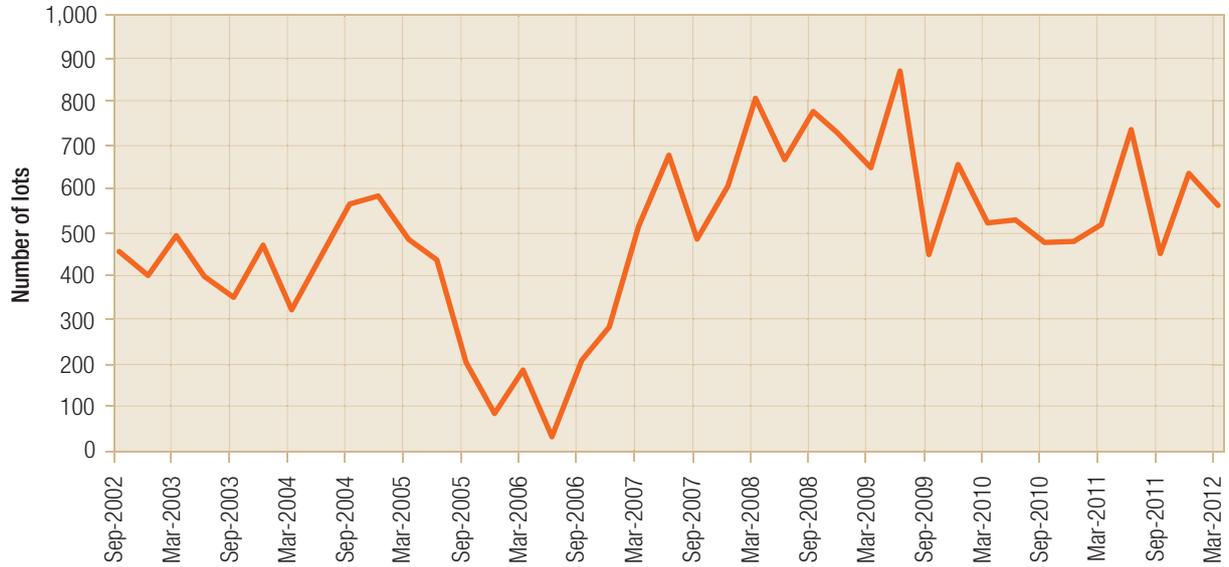
REIWA data show that the stock of lots listed for sale almost doubled between December 2009 and June 2011 before falling more recently.

Figure 27: Market and site issues affecting development (survey responses)



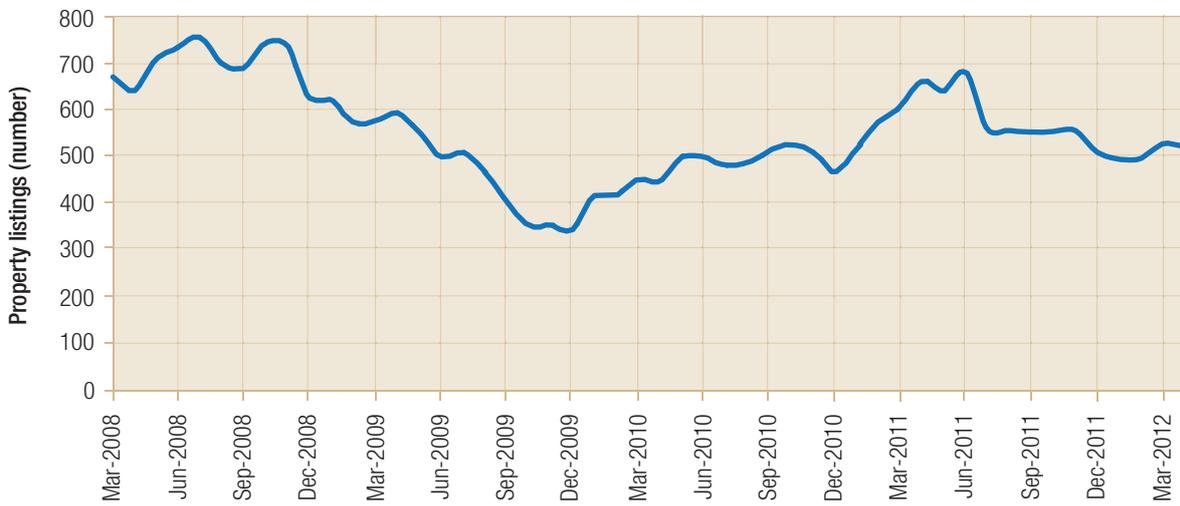
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

Figure 28: Residential lots on market (UDIA member developers)



Source: Urban Development Institute of Australia, 2012, Urban Development Index.

Figure 29: Vacant lots listed for sale with real estate agents



Source: Real Estate Institute of Western Australia.

3.6.3 Lots not available to the market

The Urban Development Institute of Australia also collects information from developers on the number of lots that have reached practical completion that are not being made available for sale for various reasons, including:

- clearance delays (on subdivision conditions);
- issue of title; and
- marketing issues.

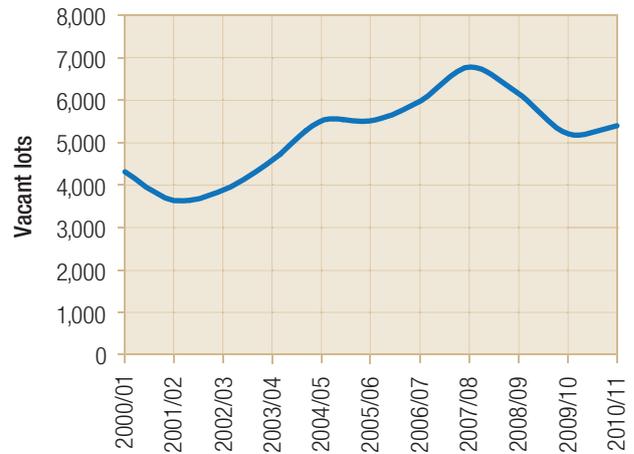
Figure 30 indicates that the number of lots not listed for sale in the South-west sub-region has fluctuated considerably since 2002; however, since 2004 the general trend has been for fewer completed lots to be withheld from the market.

3.6.4 Stock of properties available

In addition to vacant lots available for sale or recently created, there is generally a stock of vacant lots in urban areas that are latent for some reason. The Water Corporation tracks the number of vacant lots with water services. As at June 2011 there were 5,417 vacant, serviced lots in the South-west sub-region, which

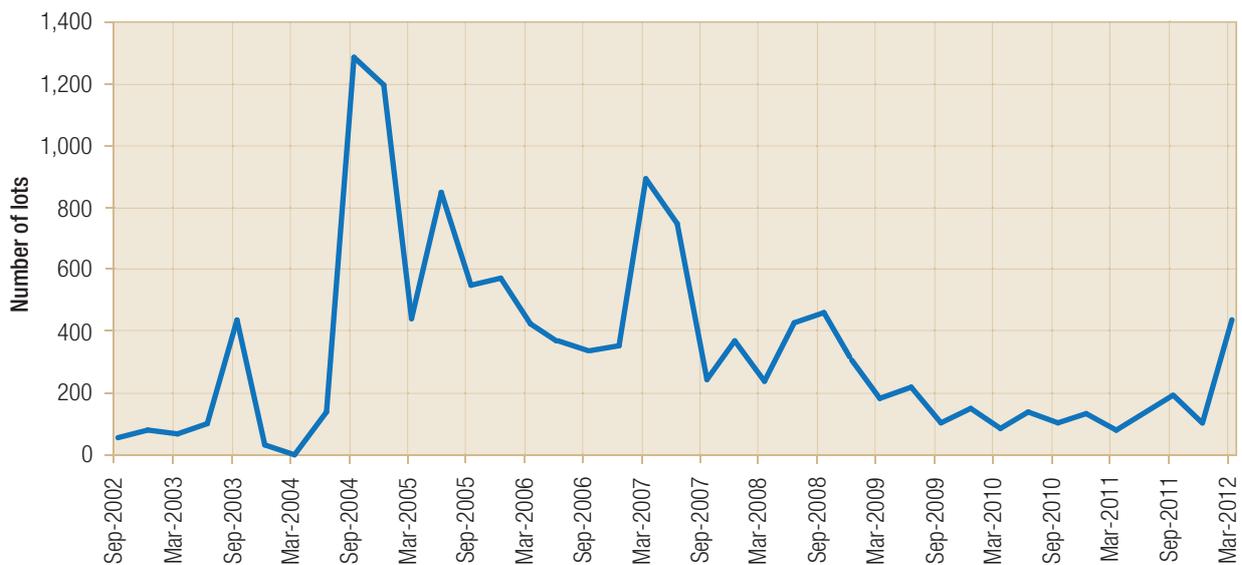
constitutes approximately 17 per cent of the total for the Perth and Peel metropolitan area. As illustrated in Figure 31 the stock of serviced vacant lots reached a peak of 6,796 in 2007/08. In the subsequent three years however, the stock of vacant, serviced lots in the sub-region was reduced by almost 1,400 lots.

Figure 31: Stock of vacant serviced lots



Source: Water Corporation, 2012.

Figure 30: Lots not on market (UDIA member developers)



Source: Urban Development Institute of Australia, 2012, Urban Development Index.

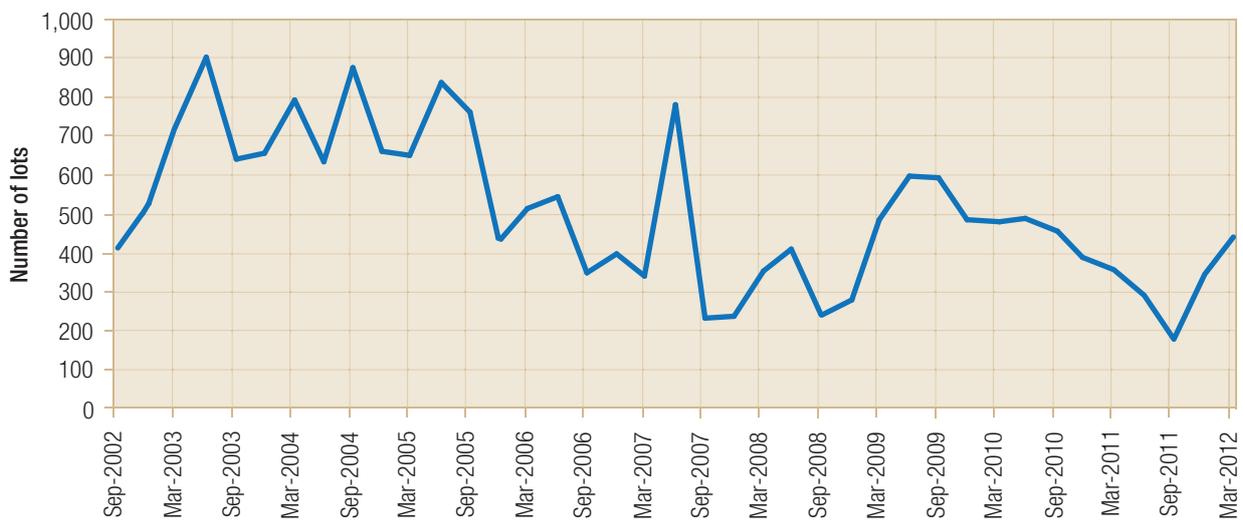
3.6.5 Lots sold

The number of lots sold (including lots sold prior to development or issue of title) is indicated in Figure 32. This shows a relatively high number of sales from around 2003 to September 2005, possibly in anticipation of the Perth to Mandurah rail development. While other sub-regions had peak sales during 2006, sales in the South-west sub-region were low relative to previous years. Although fewer lots were being sold, developers in the South-west sub-region still ran short of developed lots available to the market in mid 2006 (Figure 28).

3.7 Building development

The economic value of residential lots, even when serviced with infrastructure, is not actually realised until they are improved with buildings. Dwelling construction marks the final phase of the residential development process, enabling land to be used for its proposed purpose. Building approval is generally granted at the local government level and is discussed in section 2.8, as it is also a leading indicator of demand.

Figure 32: Lots sold (UDIA member developers)



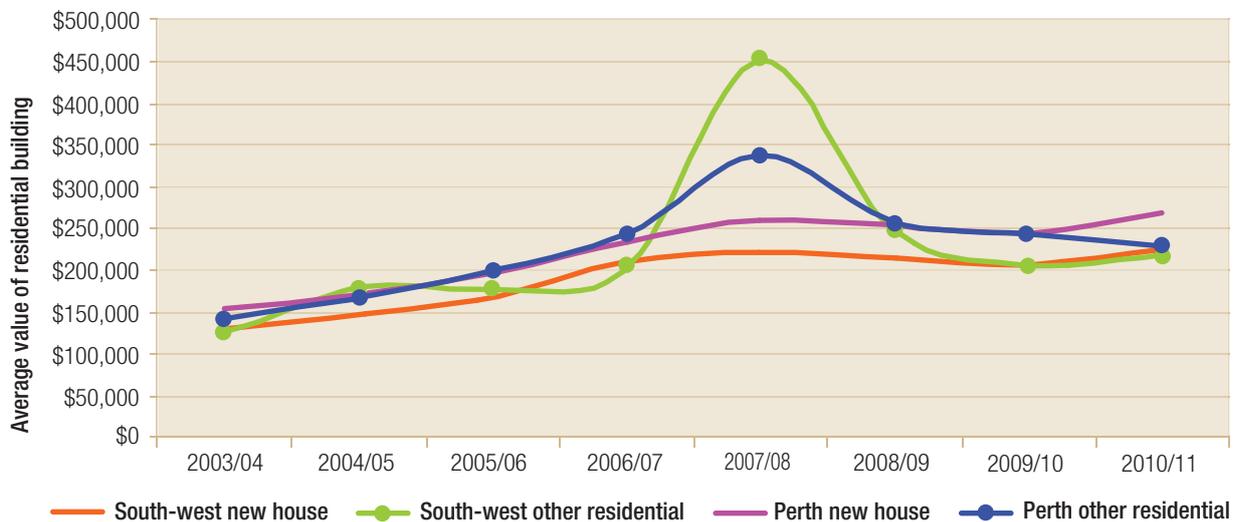
Source: Urban Development Institute of Australia, 2012, Urban Development Index.

3.7.1 Average value of new dwellings constructed

The trend in the average value of new houses and new other residential dwellings is a good indicator of the investment by individuals and building developers respectively. Figure 33 shows the trend since 2003/04 for the South-west sub-region compared to the Perth metropolitan region.

The most distinct departure from metropolitan regional trends since 2003/04 was in 2007/08, when the average construction cost of other dwellings in the South-west sub-region rose sharply. This was due to an increase in the number of premium apartments constructed in the area during that time.

Figure 33: Average value of residential building



Source: Australian Bureau of Statistics, 2011, Building Approvals, Australia, Cat. No 8731.0.

Figure 34: Properties (excluding vacant lots) listed for sale with real estate agents



Source: Real Estate Institute of Western Australia.

3.7.2 Stock of dwellings available to the market

Figure 34 illustrates a decline in property listings in the South-west sub-region shortly after the onset of the global financial crisis. Listings reached a low in early 2010 at just under 1,500 dwellings, but the decline was not as marked as in other sub-regions.

3.7.3 Land consumption and density

Between 1991 and 2008, an average of 201 hectares of land per year has been consumed by urban development in the South-west sub-region (Table 9, Figure 35). If this trend continues over the next 30 years, 6,030 hectares of land will be required to meet demand, requiring an additional 2,130 hectares to be zoned for development by 2041.

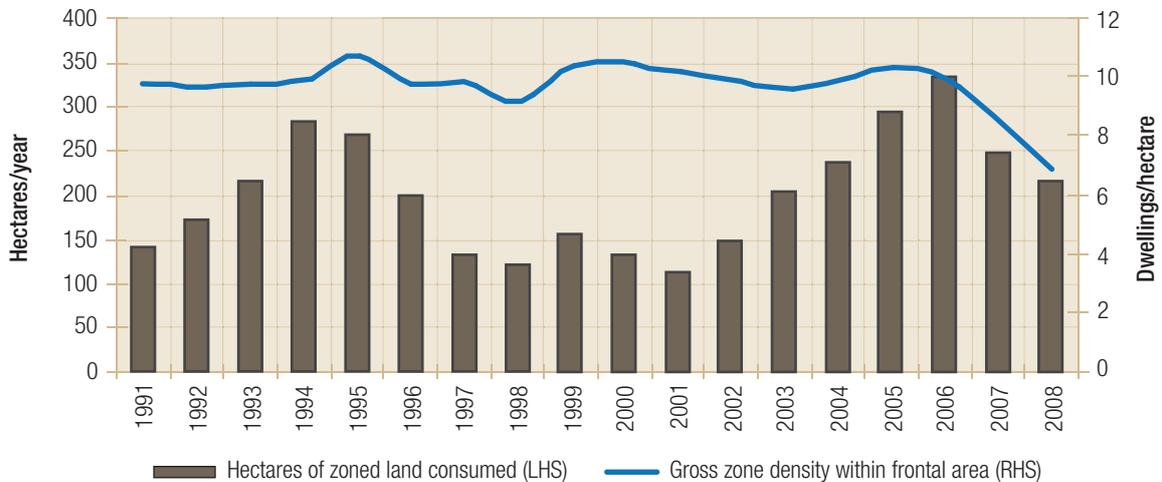
Table 9: Land consumption for urban development and dwelling density

Land consumption	Hectares per year
18 year average (1991-2008)	201
5 year average (2004-2008)	266
2 year average (2007-2008)	232

Dwelling density	Dwellings per zoned hectare
Average 1991-2008	9.72
Minimum over period	6.92
Maximum over period	10.73

Source: Western Australian Planning Commission (2011), Urban Growth Monitor (unpublished data).

Figure 35: Land consumption and density



Source: Western Australian Planning Commission (2011), Urban Growth Monitor (unpublished data).

3.8 Infill development and redevelopment

The vast majority of new residential development in the South-west sub-region is carried out on greenfield sites on the fringe of existing urban areas. In the City of Cockburn however, there are two major infill projects.

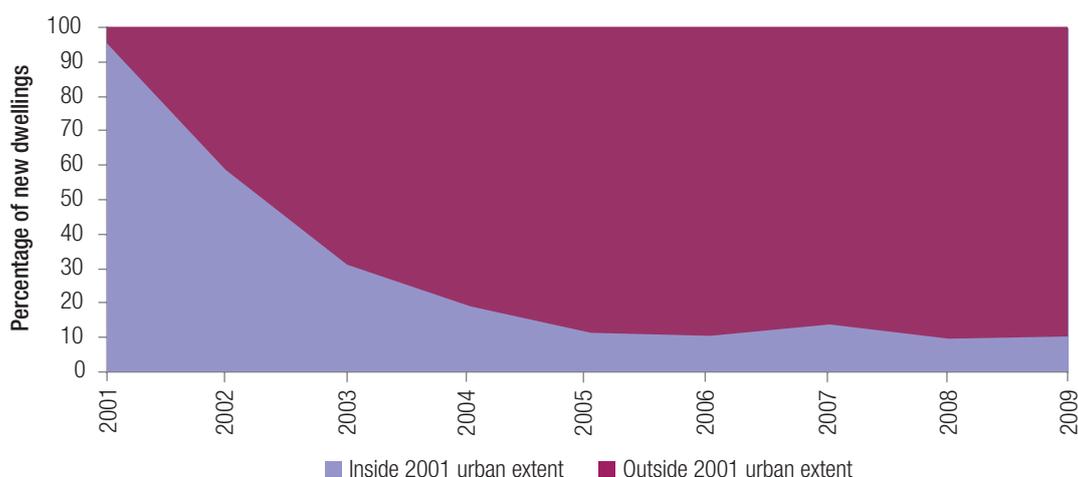
Port Coogee involves a major redevelopment of former industrial land into a marina-based residential community. When completed, the project is expected to accommodate a population of more than 5,000 residents.

Cockburn Coast is a 120 hectare site which provides an opportunity to develop a community of over 10,000 people. This project is situated on former industrial land around the disused South Fremantle power station and requires substantial ground remediation before construction can commence.

Figure 36 shows the proportion of new dwellings constructed within the urban extent of the South-west sub-region as at 2001. It shows that the number of dwellings constructed inside the 2001 urban extent decreased sharply for 3-4 years after 2001; suggesting that frontal development is the prevailing pattern of urban growth in the sub-region.

The rate of infill development reached a low of 10.5 percent in 2006 and then increased slightly as homes in the area began to age and were replaced. In all outer sub-regions, rate of infill development stabilises at between 10 and 20 per cent, demonstrating that even in established suburbs there is a continual process of renewal.

Figure 36: Cumulative percentage of new dwellings relative to 2001 urban extent



Source: Department of Planning, Urban Growth Monitor (unpublished data).

4 Industrial and commercial land demand and supply

4.1 Commercial development

Table 10 provides statistics for commercial subdivision approvals in the South-west sub-region for 2011. The sub-region had the most conditional approvals for commercial lots outside the Central sub-region.

There is a high level of commercial subdivision activity in the South-west sub-region which has the largest stock of conditionally approved lots (as at December 2011) and the most commercial subdivision activity, in the 12 months to December 2011, outside the Central sub-region (Figure 37). Conditional approvals were granted for numerous commercial lots in 2008 and 2009 which, as at December 2011 had not yet progressed to final approval.

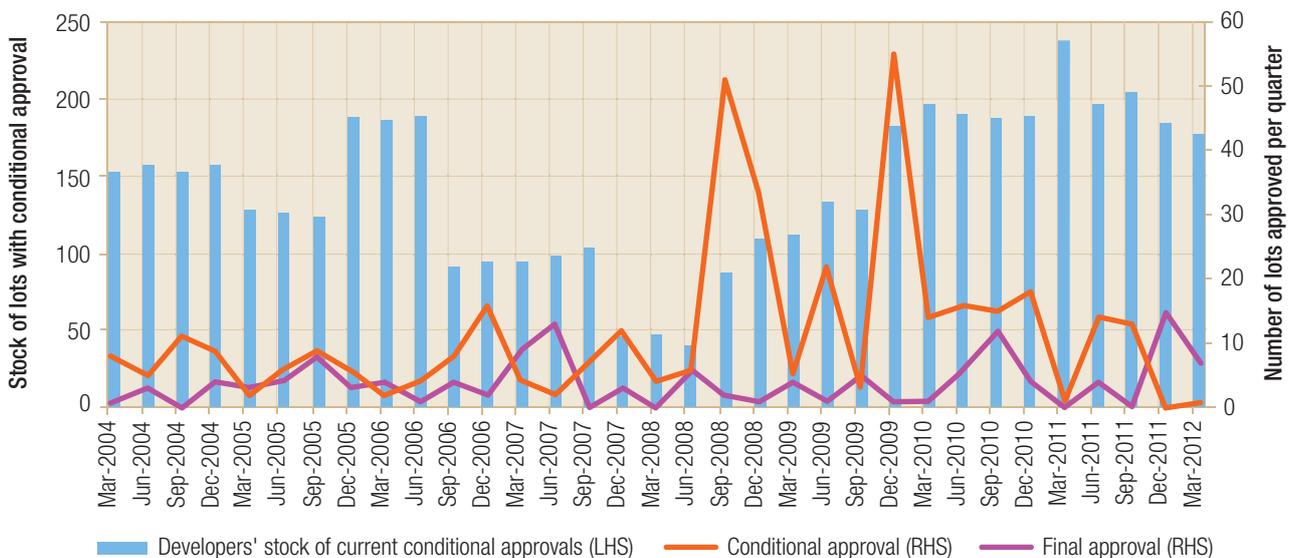
Table 10: Commercial subdivision approvals

Local government authority	Applications received	Applications pending	Conditional approvals granted	Current conditional approvals	Active conditional approvals ¹	Final approvals
	(1 Jan 2011 - 31 Dec 2011)	(as at 31 Dec 2011)	(1 Jan 2011 - 31 Dec 2011)	(as at 31 Dec 2011)	(as at 31 Jan 2012)	(1 Jan 2011 - 31 Dec 2011)
	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Lots
Cockburn	34	9	13	52	3	2
Kwinana	2	0	0	24	0	12
Rockingham	4	0	15	108	16	5
South-west sub-region	40	9	28	184	19	19

Source: Department of Planning (2012), Water Corporation (2012).

¹ Refers 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. Data not available for 31 December 2011.

Figure 37: Commercial subdivision approvals



Source: Western Australian Planning Commission 2012, State Lot Activity.

Analysis of development applications and approvals for commercial projects indicates that the sub-region is drawing strong investment in commercial construction projects, largely from the private sector. The estimated total value of commercial sector construction in the South-west sub-region constitutes approximately four per cent of the total for this type of development in the Perth and Peel metropolitan region.

Rockingham, the largest urban centre in the sub-region, remains the focal point for investment in commercial sector construction projects. Jandakot and Kwinana also saw strong interest in commercial sector investment (Map 1). Growth in private sector investment in Kwinana has been supported by a major town centre revitalisation project, an initiative of the Town of Kwinana.

Baldivis has experienced major investment in residential and infrastructure projects but has not seen a corresponding increase in commercial developments.

Table 11 provides a list of major commercial sector construction projects of the South-west sub-region.

Table 11: Major commercial projects

Project	Suburb	Description	Completion
Harvest Lakes village centre	Atwell	2.7 ha mixed use site containing a variety of residential and retail projects	2008
Rockingham City shopping centre	Rockingham	Additional 9,019 m ² of retail space	2009
Meve Estate shopping precinct	Cockburn	New shopping centre at Meve Estate	2009
Linkage Avenue Cockburn central mixed use development	Cockburn	6,050 m ² of commercial space and retail space including 2,850 m ² of strata-titled office and library space	2012
Meares Avenue mixed use development	Kwinana	Mixed use development including 16 commercial tenancies	2012
Kwinana hub shopping centre redevelopment	Kwinana	Major redevelopment and expansion of shopping centre	2013
Cockburn Coast district structure plan	Coogee	Large mixed use development proposed for site of old Cockburn power station	2018

Source: Department of Planning analysis (data not verified).

4.2 Industrial development

The South-west sub-region accommodates the largest percentage of total industrial zoned land within the Perth and Peel regions, with the Kwinana Industrial Area and the Australian Marine Complex being key contributors. Table 12 illustrates the amount of zoned land in the sub-region's three local government authorities.

The Western Trade Coast strategic industrial area will continue to be a major centre of metropolitan and State industrial activity, with a focus on heavy manufacturing, processing, fabrication and export. The area will provide a significant amount of industrial land to meet short, medium and long-term market demand in

metropolitan Perth, and will generate significant employment opportunities for the sub-region. The planned outer harbour in Cockburn Sound will provide a regional hub for continued growth of both national and international trade.

Plans for a new governance model to develop the Western Trade Coast and utilise its employment potential are underway.

Table 13 provides a breakdown of vacant and developed land for industrial complexes in the South-west sub-region, as reported in the Department of Planning's 2008 Land Use and Employment Survey. Note that survey complexes are identified based on the zoning of the land at the time of the survey; however, activities occurring on inappropriately zoned land may also be included if discovered during the data collection process.

Table 12: Industrial zoned land (Metropolitan Region Scheme) in the South-west sub-region

Industrial zoned land* (ha) as at July 2012	Local government authority	Industrial zoned land (ha) as at July 2012	Percentage of sub-region total
3,388.3	Cockburn	1,063.6	31.4
	Kwinana	1,361.1	40.2
	Rockingham	963.6	28.4

Source: Department of Planning internal database (2012).

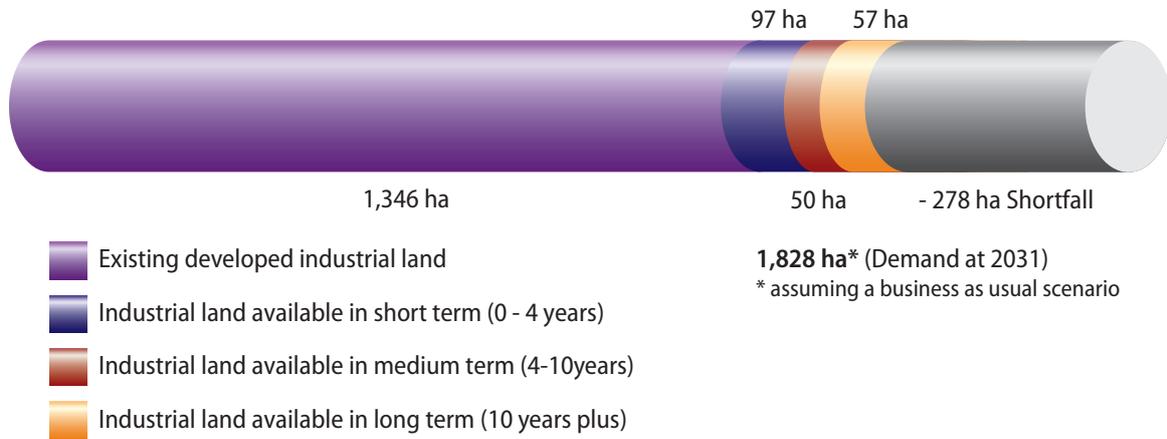
* Also includes land zoned special industrial.

Table 13: Industrial complexes in the South-west sub-region

Complex	Developed (ha)	Vacant (ha)	Total (ha)	Percentage vacant
Bibra Lake	336	140	476	29.4
East Rockingham	266	311	577	53.9
Henderson	182	95	277	34.3
Jandakot – east	74	45	119	37.8
Jandakot – west	26	22	48	45.8
Kwinana Beach	587	187	774	24.2
Naval Base	146	127	273	46.5
Robbs	22	59	81	72.8
Warnbro	28	92	120	76.7
Total	1,667	1,078	2,745	39.3

Source: Department of Planning internal database – Land use survey preliminary statistics (2010).

Figure 38: Current industrial zoned land supply: South-west sub-region



Source: Economic and Employment Lands Strategy: non-heavy industrial, Perth metropolitan and Peel regions, Department of Planning (2012).

Industrial land supply in this sub-region to 2031 is shown in Figure 38. This is based on a forecast model prepared in 2010 as part of the Economic and Employment Lands Strategy: non-heavy industrial report.

Based on a forecast demand for the South-west sub-region of 1,828 hectares by 2031, and existing data on potential supply, the sub-region will encounter a deficit of 278 hectares if no additional land is released to the market by 2031. Note that this excludes any of the 37 potential sites identified in the Economic and Employment Lands Strategy: non-heavy industrial report.

There is a reasonable amount of land identified for future industrial purposes; however some of it may only be available in the long-term. Other land identified is constrained by

environmental conditions which need to be resolved prior to release of land. Future supply is heavily reliant on the effective capacity of Latitude 32 and the ability of LandCorp to facilitate release of land to the market.

The overflow port proposed at Kwinana and the intermodal facility at Latitude 32 will result in a major influx of activity for transport logistics and distribution industries in the Perth southern metropolitan and Peel regions. It is also likely to result in an increased demand for land that is well located and serviced to cater for these land use activities.

Table 14 provides statistics for industrial subdivision approvals in the South-west sub-region for 2011.

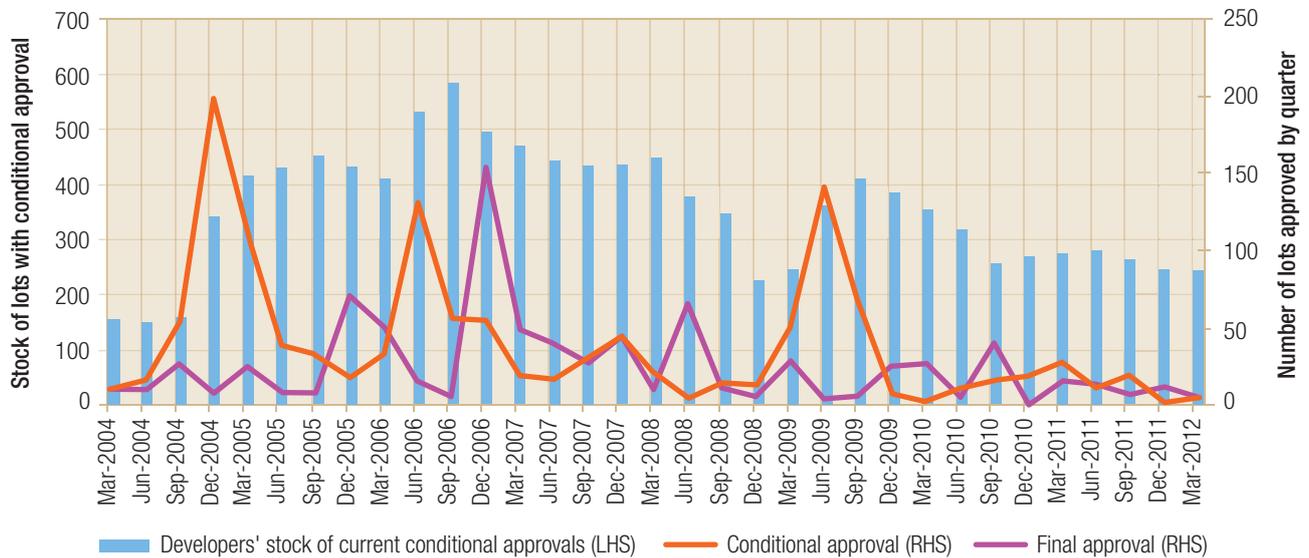
Table 14: Industrial subdivision approvals

Local government authority	Applications received (1 Jan 2011 - 31 Dec 2011)	Applications pending (as at 31 Dec 2011)	Conditional approvals granted (1 Jan 2011 - 31 Dec 2011)	Current conditional approvals (as at 31 Dec 2011)	Active conditional approvals ¹ (as at 31 Jan 2012)	Final approvals (1 Jan 2011 - 31 Dec 2011)
	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Proposed lots	Lots
Cockburn	23	1	49	179	36	44
Kwinana	6	0	10	53	12	2
Rockingham	0	0	2	16	0	3
South-west sub-region	29	1	61	248	48	49

Source: Department of Planning (2012), Water Corporation (2012).

¹ Refers 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. Data not available for 31 December 2011.

Figure 39: Industrial subdivision approvals



Source: Western Australian Planning Commission 2012, State Lot Activity.

This sub-region has the greatest number of industrial final approvals in Perth and Peel with 49 lots (38 per cent of the metropolitan Perth-Peel total) approved in the 12 months to December 2011. It has high levels of industrial subdivision activity compared to other sub-regions due to large industrial areas at Bibra Lake, Kwinana and Naval Base (Figure 39). A large stock of conditionally approved industrial lots has been maintained since mid 2004, averaging over 360 lots.

Analysis of development applications and approvals for industrial projects indicates strong enthusiasm for industrial sector construction projects in the South-west sub-region. The estimated value of recent and planned industrial sector construction in the South-west sub-region constitutes almost half of the total for such projects in the metropolitan area (Map 1). Buoyed by development of the Australian Marine Complex in Henderson, with funding from State government and private enterprise, the South-west sub-region remains the industrial hub of the metropolitan area.

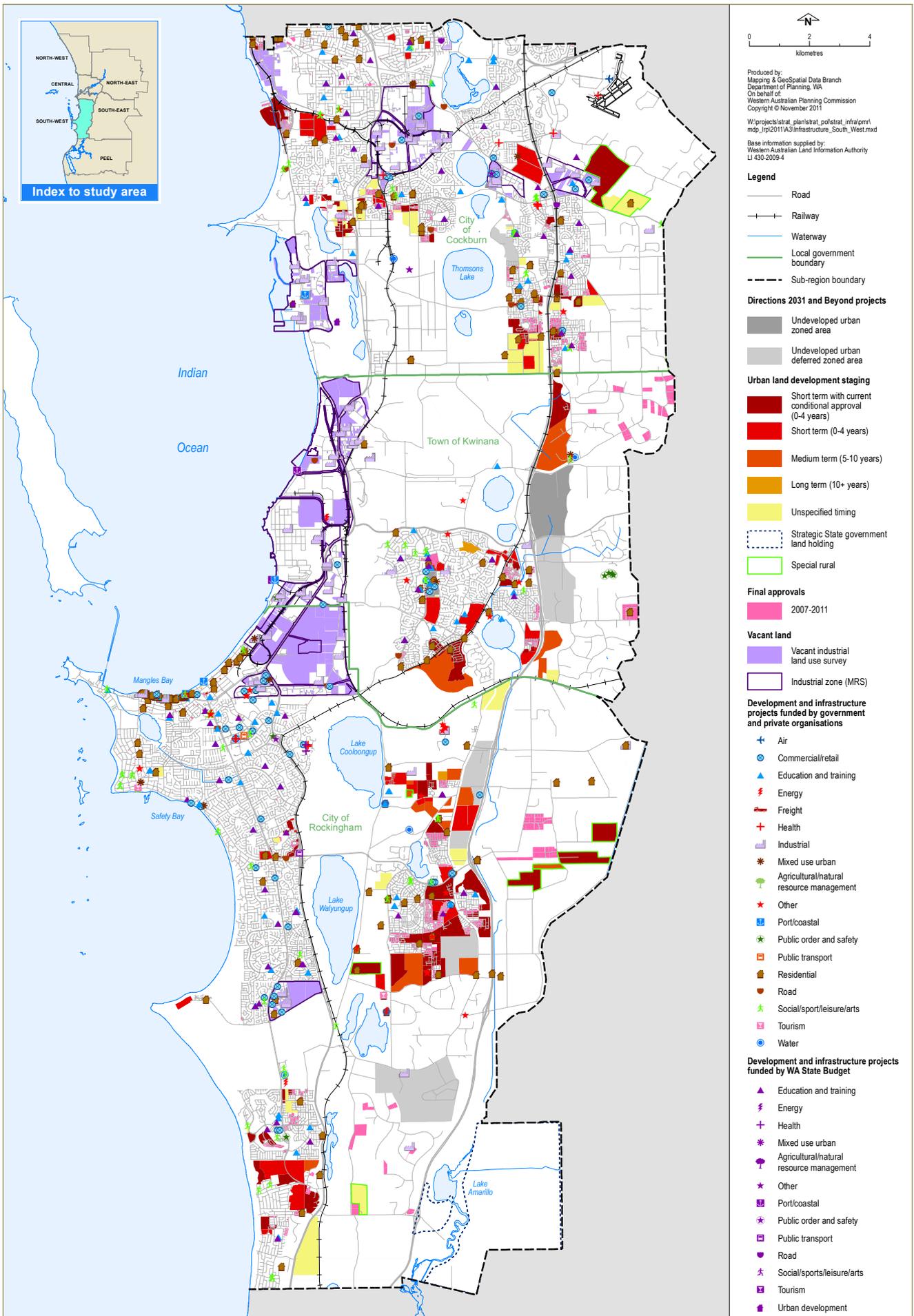
Major industrial structure plans for the South-west sub-region

- Latitude 32 Stages 1 to 10; including the planned Kwinana intermodal terminal (district structure plan was released in 2010).
- Solomon Road development area (local government).
- East Rockingham Industrial Park Strategic Development Plan (local government).

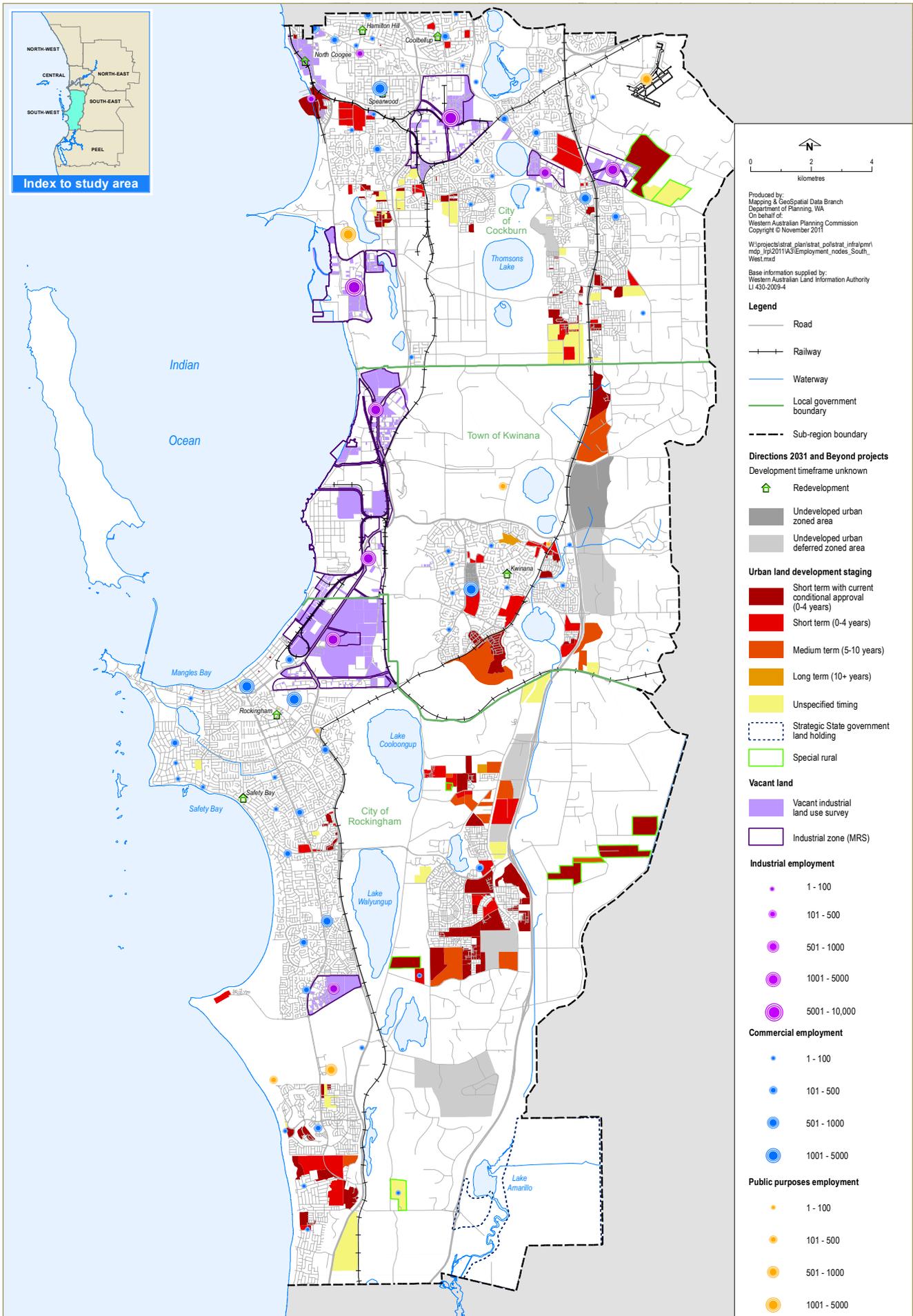
Major industrial projects of the South-west sub-region include:⁴

- Expansion of the industrial areas at Jandakot Airport through the release of the Jandakot Airport Master Plan (2009).
- Australian Marine Complex – ship loader and shipbuilding facilities (Henderson).
- Alcoa refineries – Kwinana residue project (Hope Valley).
- Johnson Road 23 lot industrial subdivision (Bertram).

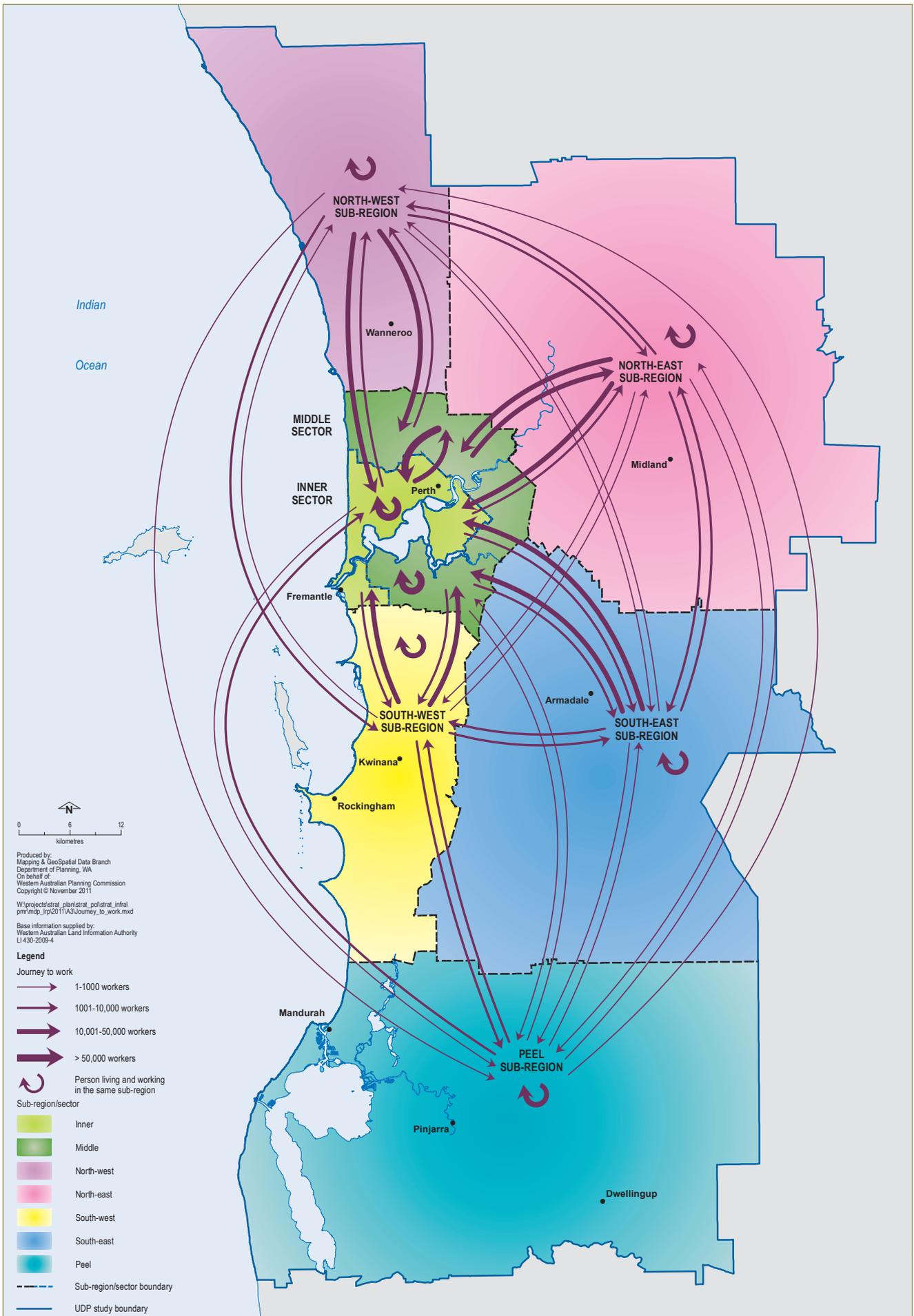
⁴Department of Planning analysis.



Map 1: Infrastructure - South-west sub-region



Map 2: Employment nodes - South-west sub-region



Map 3: Journey to work - Perth metropolitan region and Peel sub-region