Urban Development Program

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

Disclaimer

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1. South-east sub-region overview

The South-east sub-region consists of the City of Armadale, City of Gosnells and the Shire of Serpentine-Jarrahdale. The majority of residents live in the northern part of the sub-region in the Armadale and Gosnells local government authorities. Although Serpentine-Jarrahdale has a much lower population (home to just 9.3 per cent of the sub-region's residents), it has one of the highest population growth rates in the State (6.6 per cent per annum between 2006 and 2011).

The sub-region is framed by the Darling Escarpment and Canning River, offering a semi-rural lifestyle within reach of the city. There are very large stocks of undeveloped, zoned land in the South-east, including some of the most affordable real estate in the metropolitan area, making the area popular with young families. Consequently the South-east sub-region has a significantly higher proportion of residents under 19 years old than the overall Perth and Peel metropolitan area.

Although the sub-region's population has grown steadily there has not been a corresponding increase in employment opportunities, resulting in an employment self-sufficiency rate of just 46 per cent. This is reflected in the figures for non-residential construction, where the south-east lags behind Perth's other sub-regions. The average annual income and employment rate (particularly in Gosnells and Armadale) are among the lowest in Perth. Encouraging investment, likely to create employment opportunities, is one of the most important challenges facing the sub-region.

With approximately 196,000 residents in 2011 (Table 1), the South-east is the least populated of Perth's sub-regions. Population growth is expected to slow over the sub-region as a whole; however, Serpentine-Jarrahdale's high population growth is predicted to continue at more than five per cent per annum over the next 10 years.

The South-east sub-region has 3,800 hectares of undeveloped land that is zoned urban or urban deferred under the Metropolitan Region Scheme (MRS). Urban development consumed an average of 129 hectares of land per year between 2003 and 2008 for uses such as suburban feeder roads, neighbourhood parks, community or recreation facilities, local shops and petrol stations, as well as for new dwellings (Table 2).

In addition to undeveloped land, the sub-region has a significant stock of land (1,800 hectares) zoned for urban development under the MRS which is developed at very low densities. Over time, some of this land will be further subdivided for higher density urban development.

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		
Armadale	2,400	230	20,169	52,732	25,045	65,281	4.0	8
Gosnells	4,000	410	35,284	95,746	40,344	112,244	2.6	10
Serpentine - Jarrahdale	330	130	4,594	13,354	6,436	18,474	6.6	7
Total	**7,900**	**770**	**60,047**	**161,832**	**71,825**	**195,999**	**3.4**	**9**

Sources: Western Australian Planning Commission, 2011, Urban Growth Monitor. Australian Bureau of Statistics, 2006 & 2011, Census of Population and Housing, Regional Population Growth, Australia: 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 annual population growth 2011-2021 (median) (%)
Armadale	1,100	420	54	2.8
Gosnells	1,200	370	74	1.6
Serpentine-Jarrahdale	1,600	1,000	23	5.4
Total	**3,800**	**1,800**	**151**	**n/a**

Sources: 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. Figures may not sum due to rounding.

1.1 Key issues for planning and development

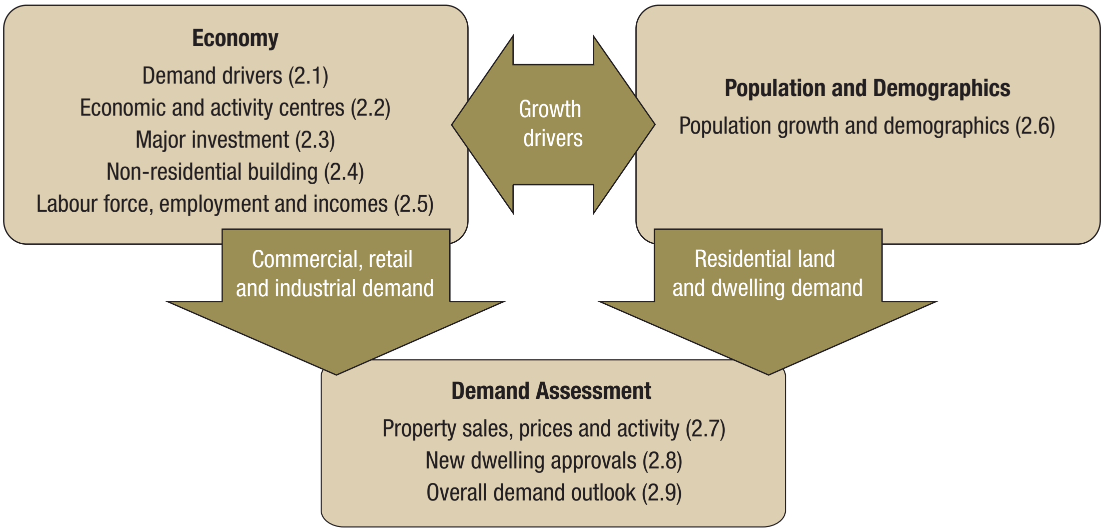
State and local government agencies have identified a number of key short and long-term planning and development issues in the South-east sub-region, which include:

- *Directions 2031 and Beyond* and the draft *Outer Metropolitan and Peel Urban Growth Strategy*, which outline future planning for each sub-region:
  - increasing densities in outer areas to around 22 dwellings per net hectare of land; and
  - commencement of Mundijong Whitby District Structure Plan and Byford Town Centre local structure plan;
- Infrastructure planning, which includes:
  - improving east-west transport linkages;
  - south passenger rail extension;
  - freight rail realignment;
  - Tonkin Highway extension; and
  - Investigation and amendments relating to a number of industrial sites including Cardup and West-Mundijong.
- Structure planning for Oakford Village, a future urban-rural economic development area.
- Fragmented land ownership and development staging of small land parcels.
- Sand for fill – low lying areas such as the South-east region require large amounts of sand, and resources are mainly located north of the city (around Gnangara) and further south (Myalup and Lake Clifton). Sand supply is one of the most significant issues for the sub-region, with major implications for urban water management.
- Changes to current water management and building construction techniques need to be considered, such as:
  - using demonstration projects to advise industry groups (Housing Industry Association, Urban Development Institute of Australia (UDIA), builders, developers and governments etc.) of appropriate development methods;
  - local government authorities and Department of Water should develop agreed strategies before engaging developers;
  - implementing measures to deliver preferable housing densities (e.g. smaller footprint, greater height or more grouped dwellings);
  - government incentives to encourage innovative new types of development;
  - identifying suitable processes to achieve desired outcomes;
  - mapping out and documenting an agreed process with all stakeholders;
- Suitable buffers around extractive industries, particularly hard rock quarries, close to residential areas.
- Titanium zircon deposits in the Mundijong-Whitby development area already have mining leases. Opportunity costs are associated with not mining or limiting mining activity. The Department of Mines and Petroleum is promoting a joint approach for a structured and staged development of the area (600–700 hectares). Policy guidelines for stamp duty or a royalties system can be put in place to involve developers and the Department in mining the area prior to the commencement of residential development.

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

Demand for new housing in the South-east sub-region in the last 10 years has been highest in the City of Gosnells, the most populous local government authority in the sub-region and nearest to central Perth. Successful developments in areas such as Canning Vale and Huntingdale have carried the urban front south-east. This trend is likely to continue, as developments at Southern River and Forrestdale drive the urban extent further south into the City of Armadale.

Housing affordability is a key driver of demand in the South-east sub-region. As at June 2012, the sub-region had the lowest median prices for houses or units of any sub-region. Cheap prices, coupled with proximity to the CBD and access to good public transport, have made the northern areas of the sub-region very attractive, particularly to first-home buyers.

Proximity to the Perth Hills, farmland and bush mean the sub-region is also increasingly popular with people seeking a rural or semi-rural lifestyle. This is evidenced by the high number of approvals for special rural and special residential subdivisions in the sub-region and high population growth in the Shire of Serpentine-Jarrahdale.

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 Armadale as a strategic metropolitan centre and Maddington as a secondary centre.
- In addition to its commercial function, Armadale also provides a range of facilities and services, including local government administration offices, government and institutional facilities, major transport infrastructure, regionally significant open spaces and recreational areas, and a cultural and heritage precinct.
- Maddington is the sub-region's secondary centre, containing major residential, commercial and industrial zones as well as retaining links to the area's agricultural past.
- Armadale, Forrestdale, Kelmscott and Maddington-Kenwick are strategic industrial centres in the sub-region, with 662 hectares of industrial zoned land (6.5 per cent of total industrial zoned land in the metropolitan area).

2.3 Major investment

This section covers major projects in the South-east 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 capital works projects

- $23.2 million on various development works through the Metropolitan Redevelopment Authority and $1.5 million on the Armadale-Kelmscott Hospital development. Upgrades and investment to health facilities may increase demand for land and housing in the South-east sub-region.
- $18.8 million to complete accommodation works at Banksia Hill Detention Centre.

Major local government capital works projects

- $5.8 million for Piara Waters oval and pavilion development – construction of Australian Rules football, soccer and cricket pitches and pavilion overlooking the playing area (City of Armadale).

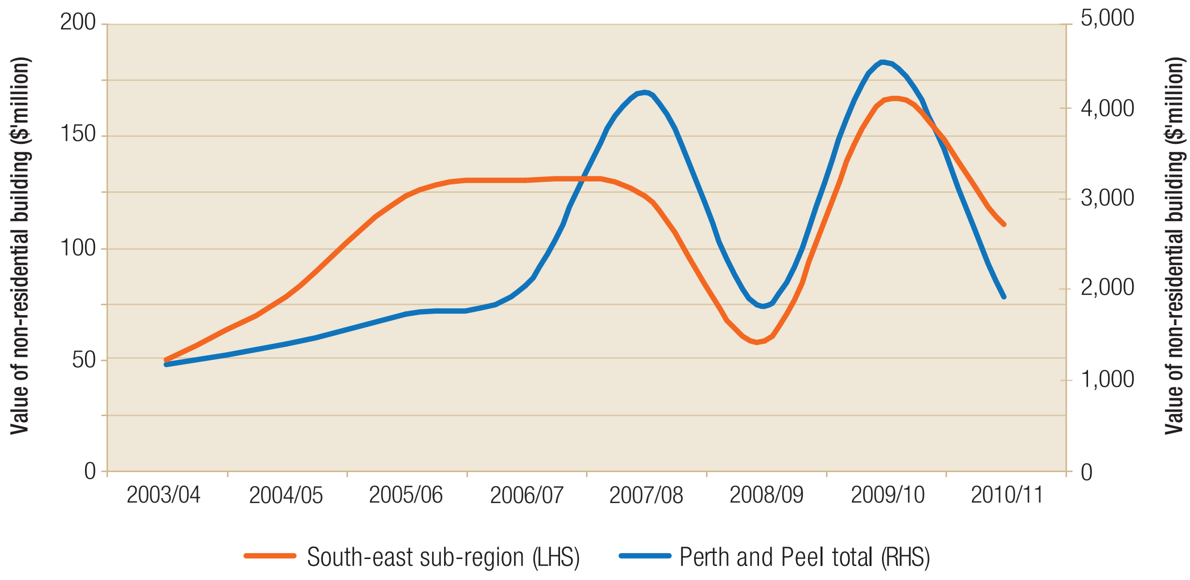
2.4 Non-residential building

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-east sub-region was $108 million in 2010/11 (Figure 2). This was the lowest value for non-residential construction (after Peel) of any sub-region – representing approximately six per cent of the total value of non-residential building in the Perth and Peel regions for that period.

Figure 2 shows that after a strong, but short post-global financial crisis recovery in 2009/10, non-residential construction spending has declined. However, the reduction in the South-east sub-region has not been as sharp as in many other areas.

Figure 2: Total value of non-residential building



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

2.5 Labour force, employment and incomes

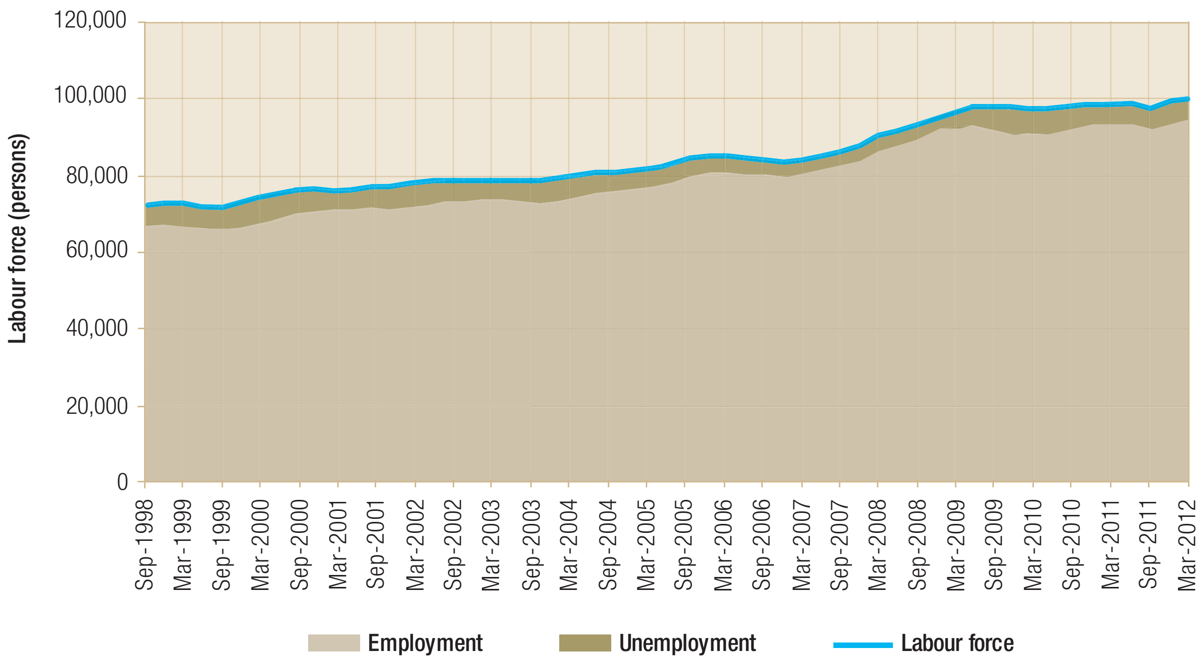
2.5.1 Employment growth and unemployment

Key labour force statistics for the South-east sub-region as at March 2012[1]

- Main employment industry sectors are manufacturing, retail, health care and social services;
- Serpentine-Jarrahdale has a significantly higher percentage of population employed in agriculture and construction, which reflects the Shire's rural characteristics;
- The estimated labour force was 100,406, with 94,973 employed and 5,433 unemployed people (Figure 3). In March 2011, the rate was 5.2 per cent, with 5,136 people unemployed (Figure 4);
- Unemployment rate in the City of Armadale was 6.9 per cent or 2,196 people, compared with 4.2 per cent for the Perth metropolitan area. In March 2011, the rate was 6.6 per cent, or 2,057 people unemployed;
- Unemployment rate in the City of Gosnells was five per cent, or 2,982 people. This has increased from March 2011, when the rate was 4.8 per cent, or 2,851 people unemployed;
- Unemployment rate for the Shire of Serpentine-Jarrahdale was three per cent, or 255 people. This has increased from the March 2011 rate of 2.7 per cent, with 228 people unemployed.

Note that some of the data points for the unemployment rate in Serpentine-Jarrahdale have been deliberately excluded from Figure 4 due to issues with data quality and availability for those time periods.

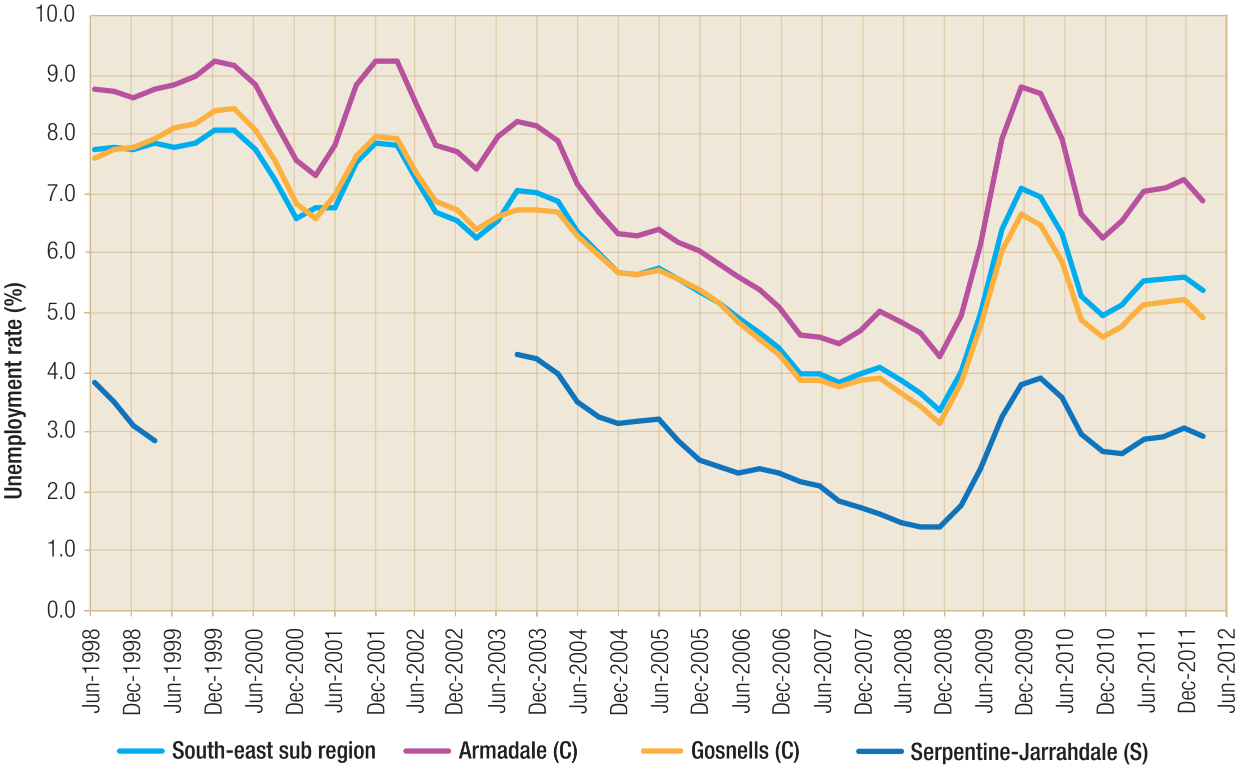
Figure 3: Labour force



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

[1] Department of Education, Employment and Workplace Relations (DEEWR), Small Area Labour Market data, March Quarter 2012.

Figure 4: Unemployment rates



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

Note: Data unavailable for Serpentine-Jarrahdale 1999-2003.

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.

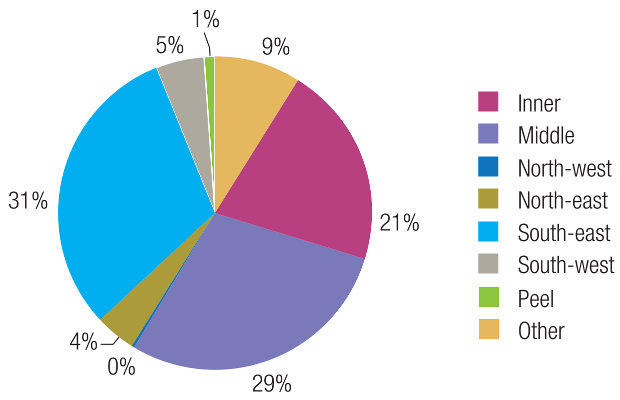
Employment self-sufficiency is a measure of the proportion of the resident workforce who could potentially find employment within their local area. It is expressed as a percentage of the number of jobs in a sub-region relative to the resident workforce of that sub-region.

The South-east sub-region has a poor level of employment self-sufficiency, at just 46 per cent (46 jobs for every hundred workers). As at the 2006 census the sub-region had a resident workforce of 77,000 employees (10 per cent of the total for the Perth and Peel metropolitan area) and 35,000 jobs (5 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 31,000 additional jobs in the sub-region by 2031.

Employment self-containment is a measure of the proportion of a resident labour force that is employed in the local area. The South-east sub-region has a lower proportion of its resident labour force (31 per cent) employed within the sub-region than any other (Figure 5).

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



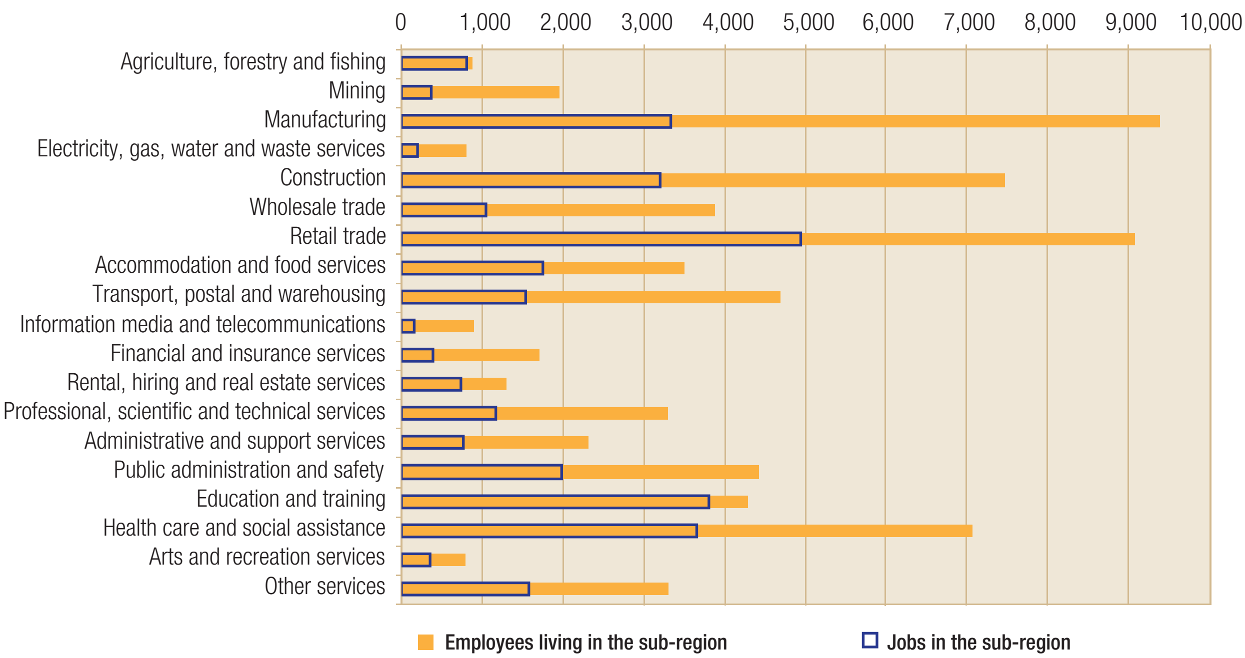
Source: Australian Bureau of Statistics, 2008, Census of Population and Housing, 2006.

Employment opportunities in the South-east sub-region are limited. The main employment nodes are dispersed along Albany Highway at Maddington, Gosnells, Kelmscott and Armadale (Map 2). Approximately 50 per cent of the sub-region's labour force works in the Central sub-region. The City of Canning hosts more workers from the South-east sub-region than any local government area outside that sub-region.

Most of the workers from other parts of the metropolitan area, who are employed in the South-east sub-region, come from neighbouring local government areas such as Canning, Kalamunda and Cockburn.

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 available within the sub-region. As illustrated in Figure 6, there is a shortage of jobs, relative to the resident labour force across all industry sectors in the South-east sub-region.

Figure 6: Employees and jobs by industry



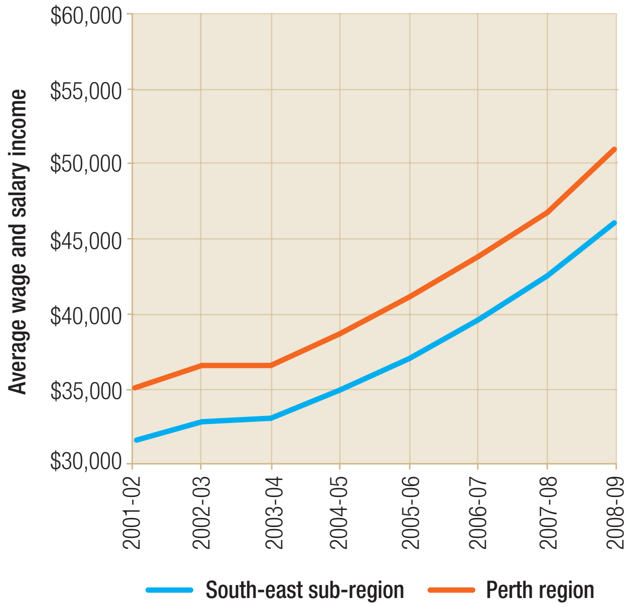
Source: Australian Bureau of Statistics, 2008, Census of Population and Housing, 2006.

2.5.3 Wages and salaries

Residents of all three local government authorities in the South-east sub-region had lower average wage and salary incomes than the Perth metropolitan average during the 2008/09 financial year. Notably, residents of Serpentine-Jarrahdale had a significantly higher average income than their neighbours in Gosnells and Armadale (Table 3). The average annual income growth between 2001/02 and 2008/09 in the sub-region was 5.6 per cent which was marginally higher than the growth across the Perth metropolitan region at 5.5 per cent.

The trend in average wage and salary income for the south-east sub-region has been similar to that of the Perth metropolitan region (Figure 7).

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 in the South-east sub-region

Area	Median income 2008/09 ($ p.a.)	Average income 2008/09 ($ p.a.)	Average annual income growth 2001/02 to 2008/09
City of Armadale	40,181	45,484	5.6%
City of Gosnells	40,930	45,879	5.6%
Shire of Serpentine-Jarrahdale	42,062	50,453	5.6%
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%**

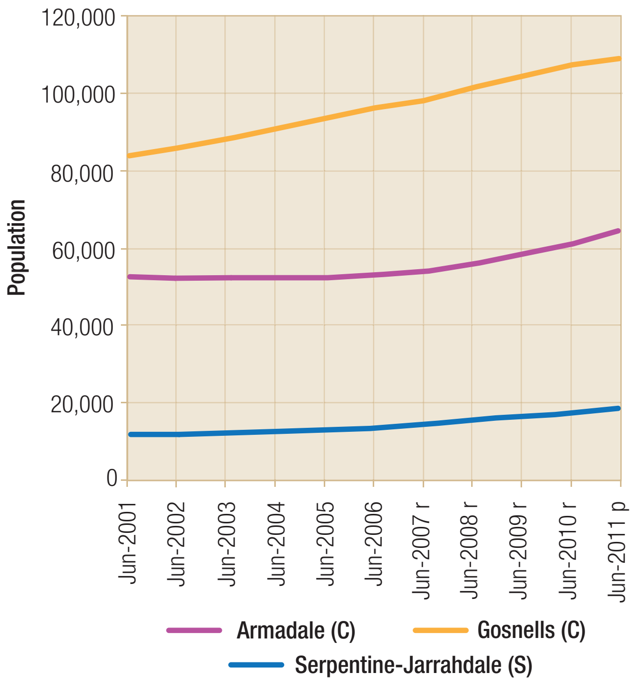
Source: Australian Bureau of Statistics, 2011, Wage and Salary Earner Statistics for Small Areas, Time Series, 2001/02, 2003/04 to 2008/09, Cat. No. 5673.0.

2.6 Population growth and demographics

The South-east sub-region had an estimated resident population of 195,999 as at June 2011, made up of 112,244 residents in the City of Gosnells, 65,281 in the City of Armadale and 18,474 in the Shire of Serpentine-Jarrahdale (Figure 8).

The City of Gosnells has had the steadiest population growth rate over the past decade, increasing by between two and three per cent annually. In contrast, the City of Armadale went from a status of zero population growth in the early 2000s to growth of over five per cent per annum by June 2011. Serpentine-Jarrahdale experienced a population 'boom' from 2006/07 to 2008/09 and in 2010/2011, with growth between six and seven per cent per annum (Figure 9).

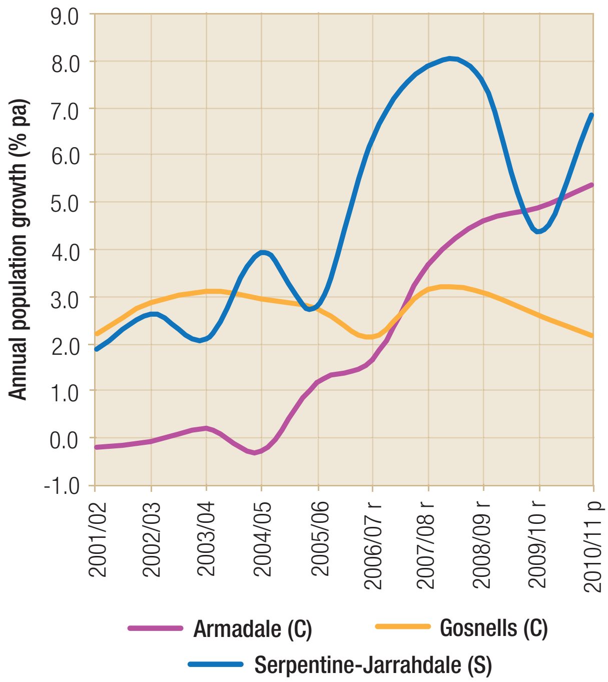
Figure 8: Estimated resident population, 2001 to 2011



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

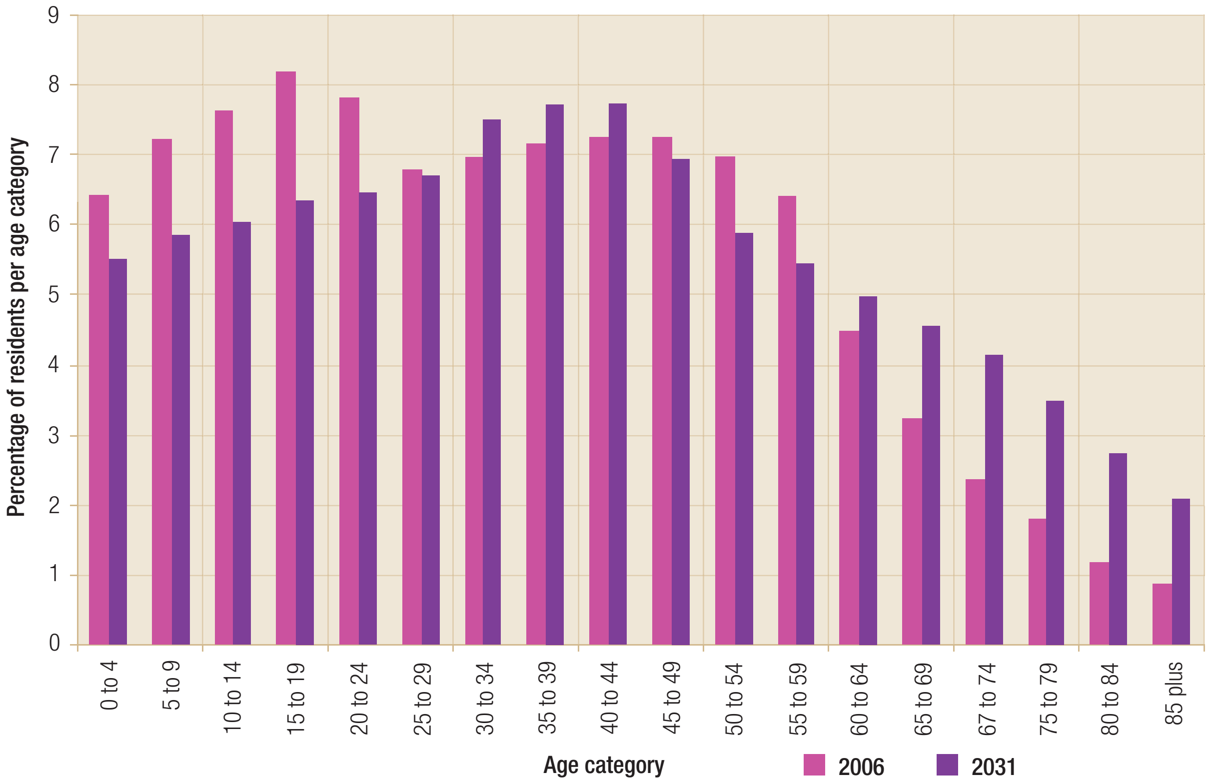


Notes: r – revised, p - preliminary

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

The South-east sub-region's popularity with young families is represented in Figure 10, which illustrates the high proportion of residents less than 20 years of age. This is expected to decline significantly by 2031 as the population profile of the entire metropolitan area ages.

Figure 10: Projected age profile (2006 and 2031)



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

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

- The sub-region comprises a higher proportion of young families compared to the the Perth metropolitan area as a whole, with higher proportions of the population aged under 15 years.[2]
- The Shire of Serpentine-Jarrahdale exhibits higher proportions of its population aged under 15 years and in the 30-64 years age range, and a far lower proportion of young adults aged between 15 and 30 years old.[3]
- Newer areas have a higher proportion of people aged 0 to 19 years and 35 to 49 years old, suggesting young families are attracted to the area by affordable house and land packages on the urban fringe.[4]
- All local government authorities report slightly lower proportions of aged residents than the rest of the Perth metropolitan area.[5]

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

[3] Draft *Outer Metropolitan Perth and Peel Sub-Regional Strategy*

[4] BIS Shrapnel – *The Outlook for Residential Land in Perth 2010–2015*

[5] Draft *Outer Metropolitan Perth and Peel Sub-Regional Strategy*

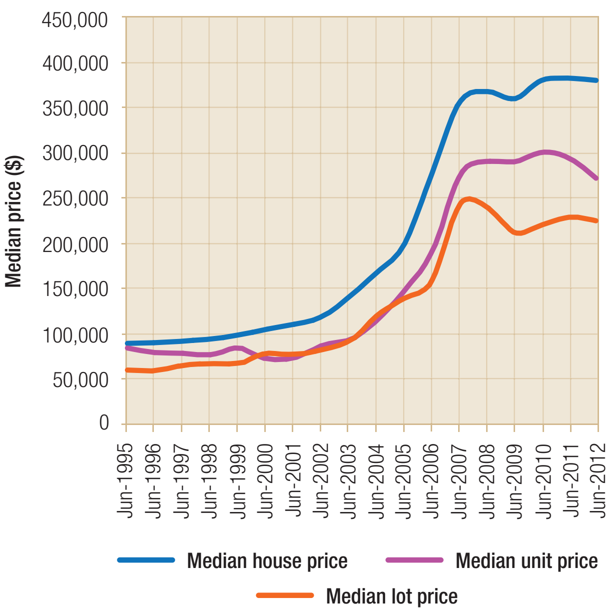
2.7 Property sales, prices and activity

Long-term trends in sales activity and prices indicate demand for real estate and reflect the 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-east sub-region has increased from $89,500 to $380,000 (Figure 11). During the same period median unit prices increased from $84,500 to $270,750 (having peaked in 2010 at $300,000) and median lot prices increased from $ 59,000 to $225,000 (having peaked at $ 242,000 in 2007).

Figure 11: Median house, unit and lot prices



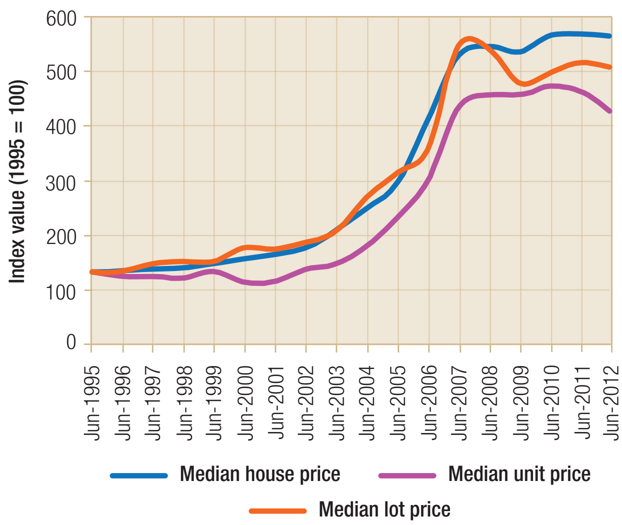
Source: Real Estate Institute of Western Australia.

2.7.2 Indices of median house, unit and lot prices

Indices of median house, unit and lot prices (Figure 12) show the relative increase in median prices since 1995. Throughout the time series, median unit prices have increased at a lower rate than houses or lots.

The sub-region has benefited from median land prices that are lower than other sub-regions.[6] Demand for housing was also strong in 2009/10, driven by the increase in first-home buyers taking advantage of the First Home Owners Grant boost.

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



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

[6] BIS Shrapnel - *The Outlook for Residential Land in Perth and Peel 2010-2015*

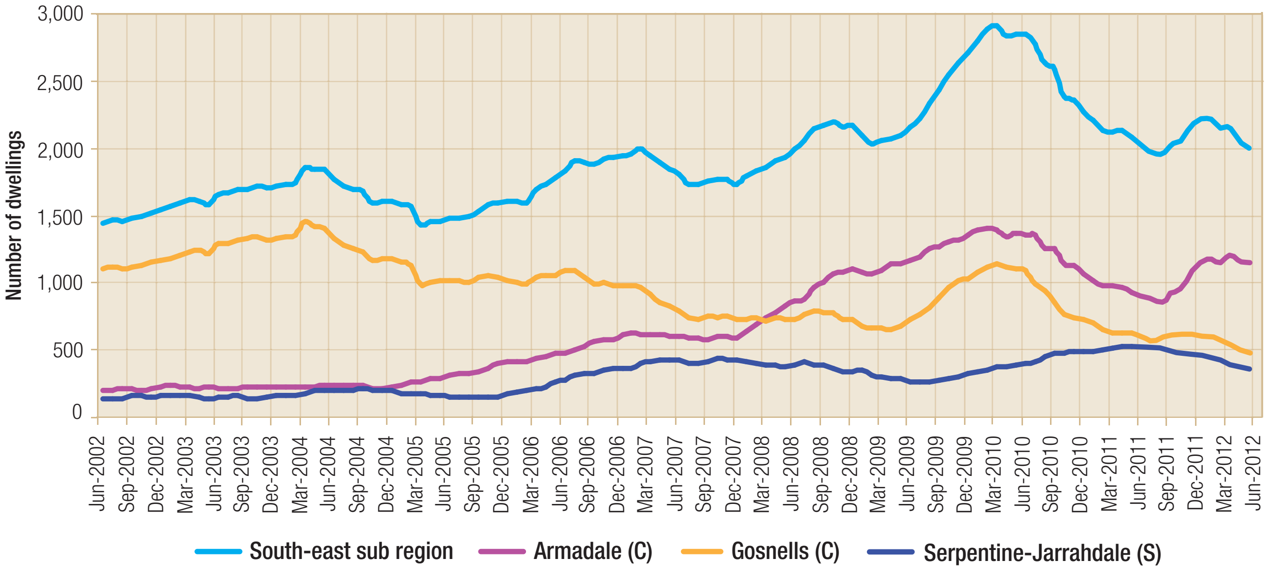
2.8 New dwelling approvals

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.

2.8.1 New dwelling approvals (houses only)

The trend for the South-east sub-region is for increasing numbers of new house approvals, which had been growing with reasonable consistency to June 2010 but has since declined - particularly in Gosnells and Armadale (Figure 13). During the last decade most dwelling approvals for new houses in the sub-region have been in the City of Gosnells; however, since 2008 more approvals have been granted in the City of Armadale.

Figure 13: New house approvals (annualised monthly data)



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

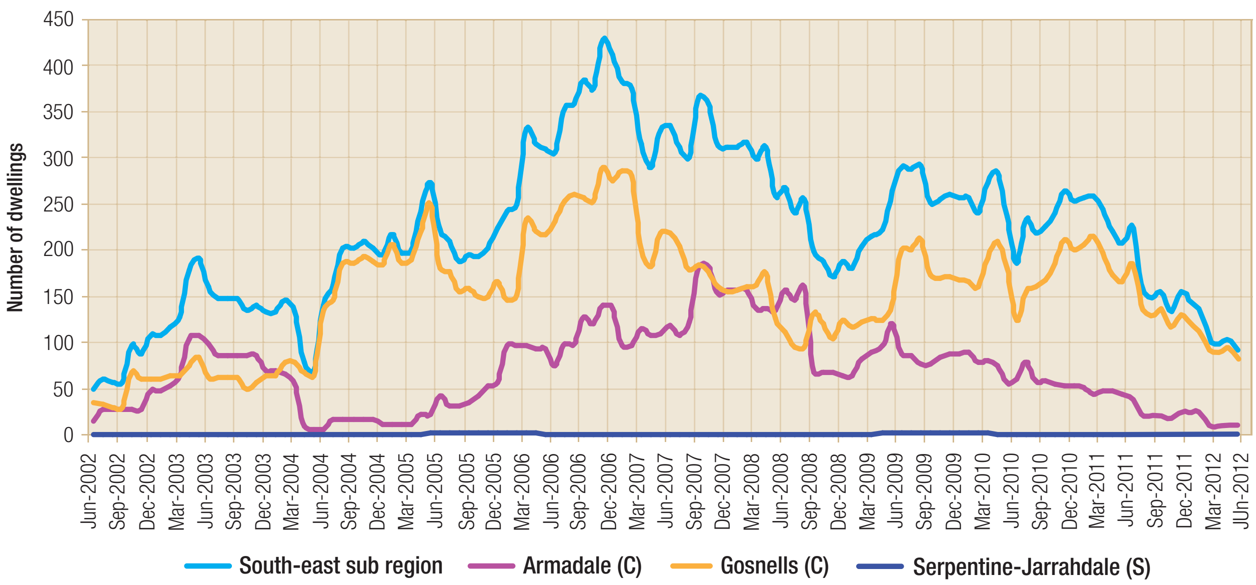
2.8.2 New dwelling approvals (other than houses)

Statistics for dwelling approvals other than houses (e.g. flats, villas and apartments) show a small but significant level of other dwelling activity has emerged in the South-east sub-region over the last decade (Figure 14). Unlike building approvals for houses, most other dwellings in the South-east sub-region are still approved in the City of Gosnells, which did not experience a marked decline in other dwelling building activity after the onset of the global financial crisis, although levels have declined significantly more recently.

2.9 Overall demand outlook

- The South-east sub-region property market is likely to remain one of the most affordable in Perth, continuing to drive demand for land and housing in the short and medium-terms.
- Increased investment in Armadale and the industrial areas of the sub-region will help increase employment and increase attractiveness of the sub-region for further residential development.
- Overseas immigration is the biggest contributor to population growth in Western Australia, and the sub-region's housing affordability is likely to attract a significant proportion of new immigrants. The short-term outlook for immigration is moderate and depends largely on economic growth (particularly in the mining sector) and government policy.
- Retaining the integrity of the sub-region's character, particularly its links to rural surrounds and history, will continue to make it an attractive place to live, sustaining demand.

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

Although the South-east sub-region contains very large stocks of undeveloped land zoned for urban development, levels of subdivision activity and land consumption have been relatively low. Consequently the South-east sub-region has a greater estimated temporal supply of land than any other sub-region.

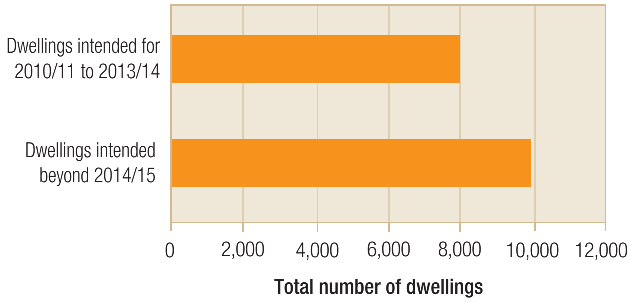
The Residential Developers' Land and Dwellings Intentions Survey 2009/10 includes projects of five or more residential lots or dwellings. Survey respondents identified 57 projects in the South-east sub-region, expected to yield a total of 8,003 dwellings (single lots plus group dwellings) in the four years from 2010/11 to 2013/14 (Figure 15). Sites yielding another 9,917 dwellings were identified for development in the long-term (2014/15 and beyond).

Developers' intentions are generally quite optimistic, with lot production forecasts usually higher than actual outputs. The Developers' Intentions Survey results indicated that annual lot production could reach nearly 2,500 by 2012/13 (Table 4). During the property boom 2,000-2,500 lots were created annually in the sub-region and it is probable that demand would need to return to similar levels for the developer's expectations to be fulfilled.

3.1.1 Average dwelling yield

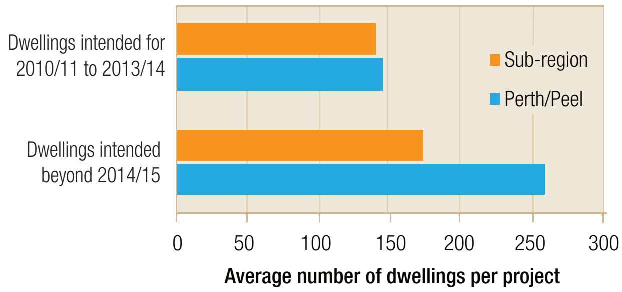
An average residential development project in the South-east sub-region had an estimated yield 140 dwellings in 2010/11 to 2013/14, compared to the Perth-Peel average of 144 dwellings per project. In the long-term (2014/15 and beyond), the average dwelling yield was calculated at 174 dwellings per project (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
Gosnells	210	200	150	150	0	2,985
Armadale	895	1,326	963	2,795	1,586	3,587
Serpentine-Jarrahdale	965	945	1,044	3,102	800	1,615
South-east sub-region	**2,070**	**2,471**	**2,157**	**6,047**	**2,386**	**8,187**

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

Note: Dwelling development 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 400 hectares of urban expansion areas (development anticipated by 2015) but no urban investigation areas (development anticipated 2015-2020) in the South-east sub-region. It is estimated that urban expansion areas in the sub-region, coupled with undeveloped zoned land, will yield between 62,000 and 87,000 dwellings.

There are several major urban expansion areas in the South-east sub-region, including the Southern River-Forrestdale District Structure Plan – an area that may ultimately support 56,000 people. The Metropolitan Redevelopment Authority is planning projects around Armadale and the Wungong Urban Water area, that aim to produce a broad variety of housing typology and a 330 hectare business park.

In the Shire of Serpentine-Jarrahdale, the towns of Mundijong and Byford face significant development pressure and are likely to grow in the medium-term.

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 two region scheme amendments in progress in the sub-region affecting 33 hectares in Kelmscott (City of Armadale) and 34 hectares in Southern River (City of Gosnells).

In the Residential Developers' Land and Dwelling Intentions Survey 2009/10, three projects were identified as needing local scheme amendments, while no projects needed a region scheme amendment (Table 5). The majority of projects proposed in the 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 20134/15 and beyond
Region scheme amendment (rezoning) required	–	–	–
Local planning scheme amendment (rezoning) required	3	186	44
No scheme amendment (rezoning) required	54	7,817	9,873

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-east sub-region contains 12,750 hectares of land zoned urban and 1,330 hectares zoned urban deferred under the Metropolitan Region Scheme. Of this, 6,040 hectares (43 per cent) is either undeveloped, or developed at very low density. This constitutes approximately 23 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-east sub-region. 'Committed for other purposes' refers to land that is zoned for purposes other than residential, under local planning schemes.

At the present rate of land consumption (see section 3.7.3), existing stocks of zoned land are potentially sufficient to meet demand for approximately 61 years. As at December 31 2010, there were 6,440 green title and 140 strata lots with conditional approval in non-urbanised areas of the South-east sub-region.

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	1,800	2,920	880	450	6,050
Committed for other purposes	20	210	50	90	370
Potentially available for development	**1,770**	**2,710**	**830**	**360**	**5,680**

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

Note: Figures may not sum due to rounding.

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-east 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.

3.3.3 Structure plans

As at August 2012 there were seven structure plans being considered for endorsement by the WAPC and 14 being considered for adoption by local government in the South-east sub-region.

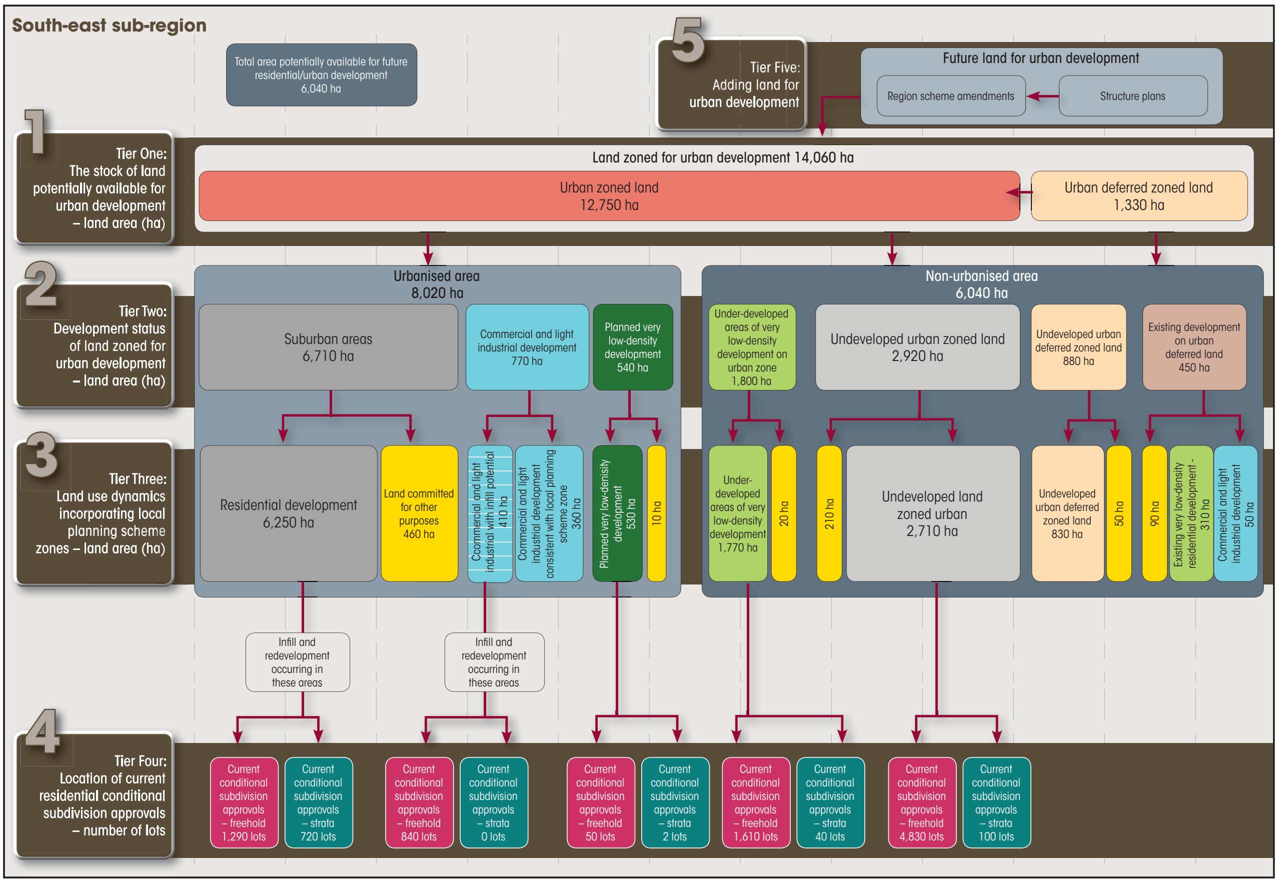
Structure planning in the South-east sub-region is dominated by the Southern River/Forrestdale/Brookdale/Wungong District Structure Plan. This structure plan covers an area of 6394 hectares and is intended to yield at least 22,650 dwellings and support a population of 29,200 residents by 2026 and 56,350 residents when fully developed. This district structure plan also encompasses the Metropolitan Redevelopment Authority controlled land and the Wungong Urban Water Master Plan.

The Mundijong-Whitby District Structure Plan may yield over 11,000 dwellings and up to 40,000 residents. Local structure planning for the area has commenced; however, development is considerably constrained by the presence of titanium zircon deposits, a lack of available fill, and fragmented land ownership.

Planning on the Byford Town Centre Local Structure Plan is progressing and is set to support the proposed southern extension of the rail line to Byford. Current plans intend to support approximately 800 dwellings by 2031 and envisage an ultimate population of 38,000.

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-east 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.

Figure 17: Urban Growth Monitor land supply assessment



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

3.3.4 Planning issues

Developers have identified a number of areas that have planning issues including district and local level planning concerns (Figure 18). For most of the affected projects, developers indicated they expected these constraints to be addressed by the end of 2010/11.

In particular, developers expressed concerns about the time taken at both State and local government level to adopt or endorse structure plans. In one case, the local authority asked for a change to a structure plan it had already adopted; in another, the developer cited delays in finalising structure planning caused by State Government policy, constraining development.

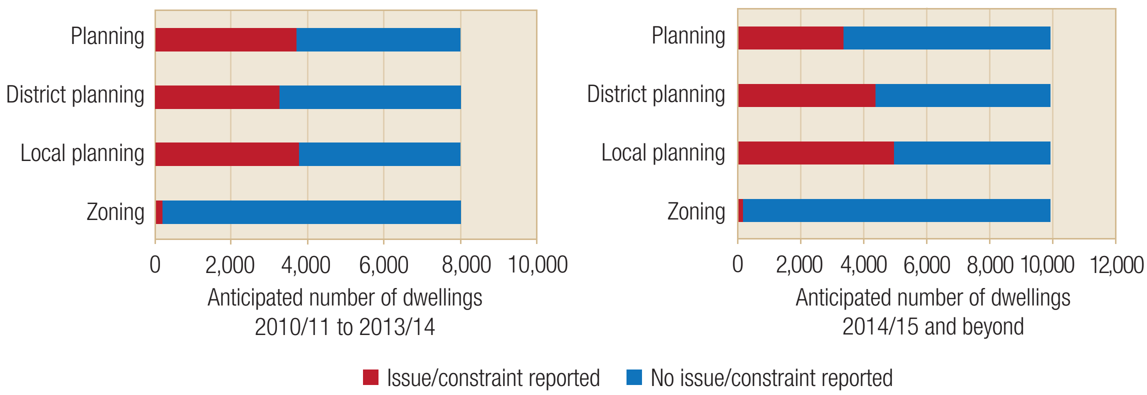
A few responses noted that amendments to structure plans requested by authorities were very time-consuming to address.

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

3.4 Subdivision

Although subdivision activity in the South-east sub-region is not particularly high there is a large stock of conditionally approved residential lots, with only the North-west sub-region having more (as at December 31 2011) (Table 7). Most residential subdivision activity in the sub-region occurs in the Gosnells and Armadale local government areas, in which more than 80 per cent of applications and final approvals in the sub-region were granted in the 12 months to December 2011.

Figure 18: Developers' planning issues (survey responses)



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

Table 7: Subdivision approvals

Land use	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
Residential	4,738	1,891	3,826	10,439	3,003	1,635
Special residential and special rural	155	43	153	415	49	86

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

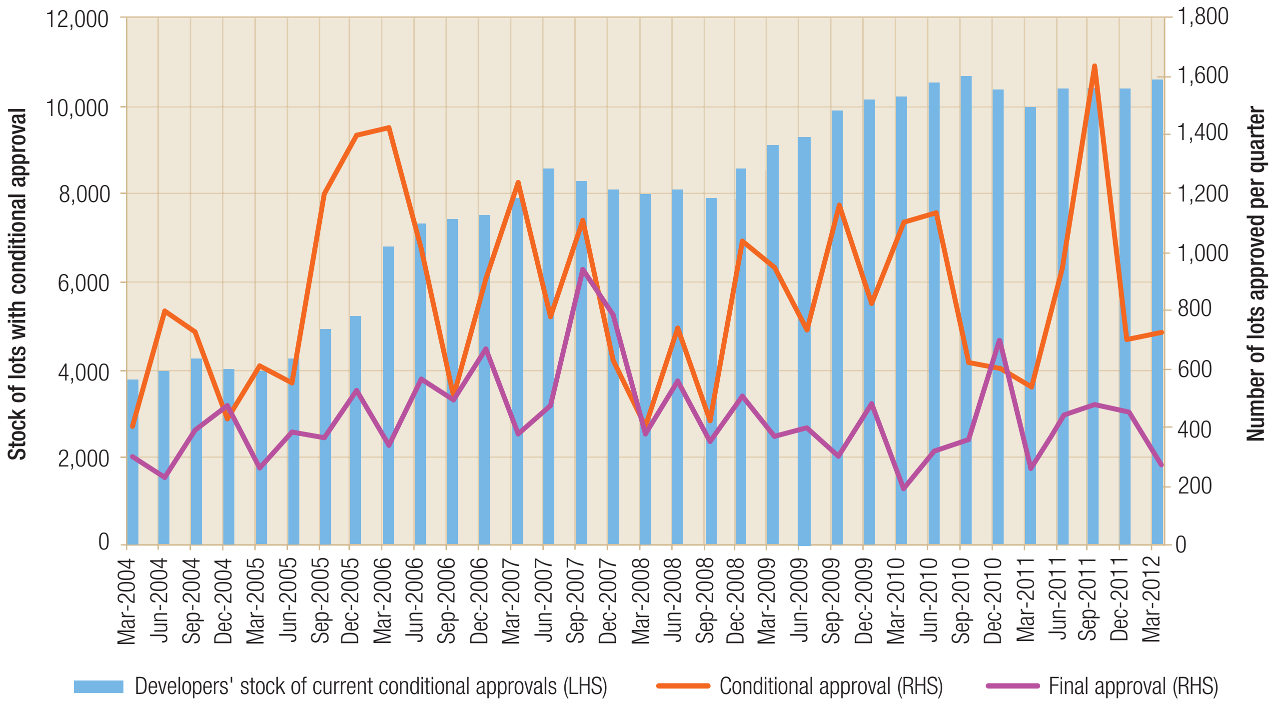
[1] Refers to conditionally approved lots where a servicing agreement (agreement to construct) has been signed between the Water Corporation and the developer. These are termed lots on non-cleared agreements. Data not available for 31 December 2011.

There is currently a stock of 10,439 residential lots with current conditional approval, representing 20 per cent of all residential current conditional approvals in Perth and Peel. The South-east sub-region has the greatest number of active special residential and special rural approvals, with 36 per cent of the total for the Perth and Peel region.

The residential lot balance in the South-east sub-region has increased consistently over the time period, with 10,439 lots recorded as at 31 December 2011 (Figure 19). This reflects continuing disparity between the number of conditional approvals granted and the number that progress to final approval. Since March 2004, the sub-region has experienced the lowest rate of conditional approvals progressing to final approval in the Perth metropolitan area, with only approximately 53 per cent of conditional approvals coming to fruition.

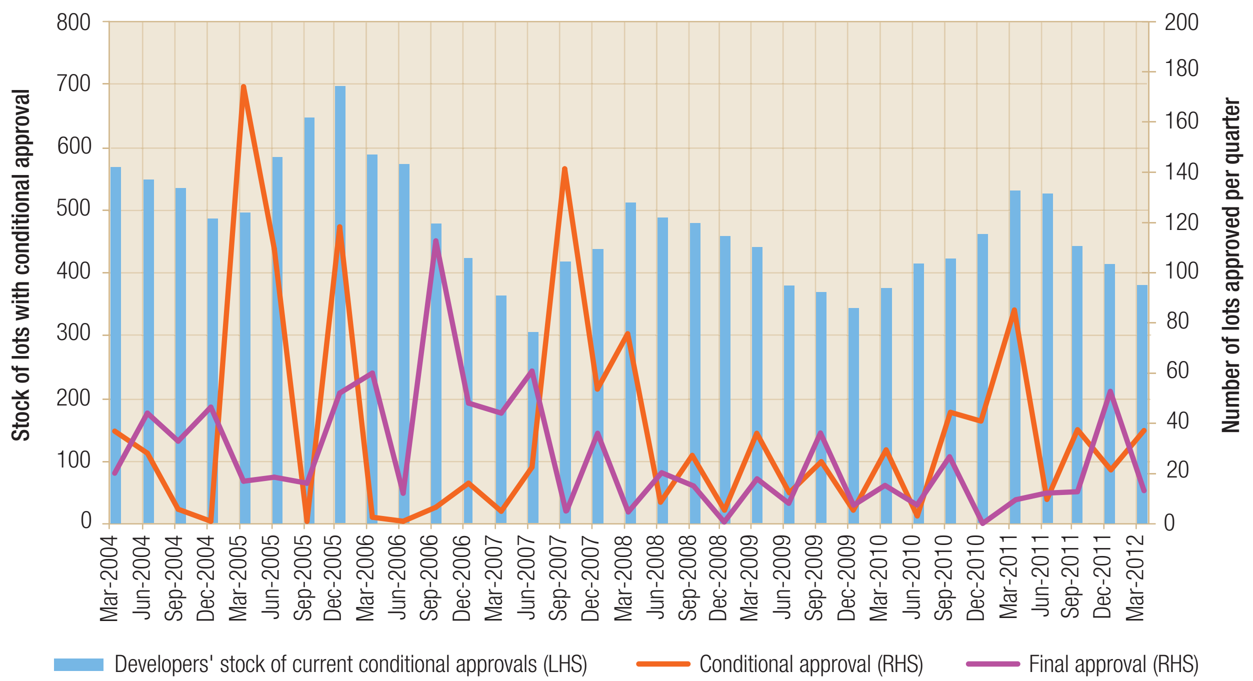
The rural character of the area encourages special rural and special residential development. Consequently, special rural and special residential subdivision activity is high in the South-east sub-region, with the greatest number of final approvals in the 12 months to December 2011. The sub-region also has the highest conversion rate (approximately 71 per cent) for this type of subdivision in the Perth-Peel metropolitan area (Figure 20). The developers' stock of lots has fluctuated between 300 and 700 since the beginning of 2004, reflecting the high conversion rate of special rural/residential lots in the sub-region.

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.

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-east sub-region had most difficulty meeting subdivision conditions imposed by local government and the Environmental Protection Authority.

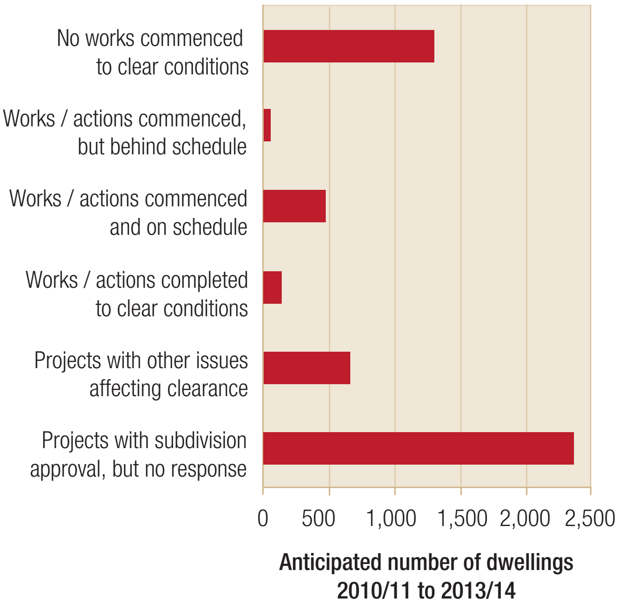
3.5 Development

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

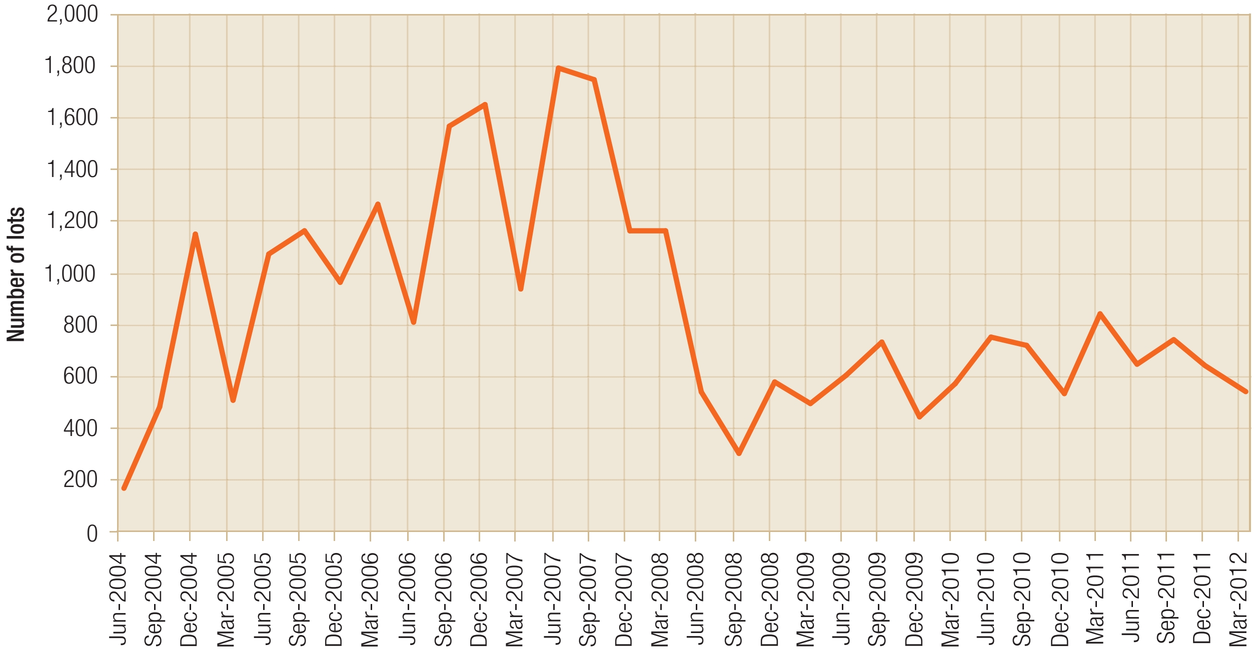
Figure 22 illustrates the number of lots under construction in the South-east sub-region, from analysis by the Urban Development Institute of Australia (UDIA). It is expected that these lots will be released to the market within one year. It shows that there has been a substantial reduction, from the high numbers of lots under construction in 2007 and early 2008.

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



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

Figure 22: Lots under construction (UDIA member developers)



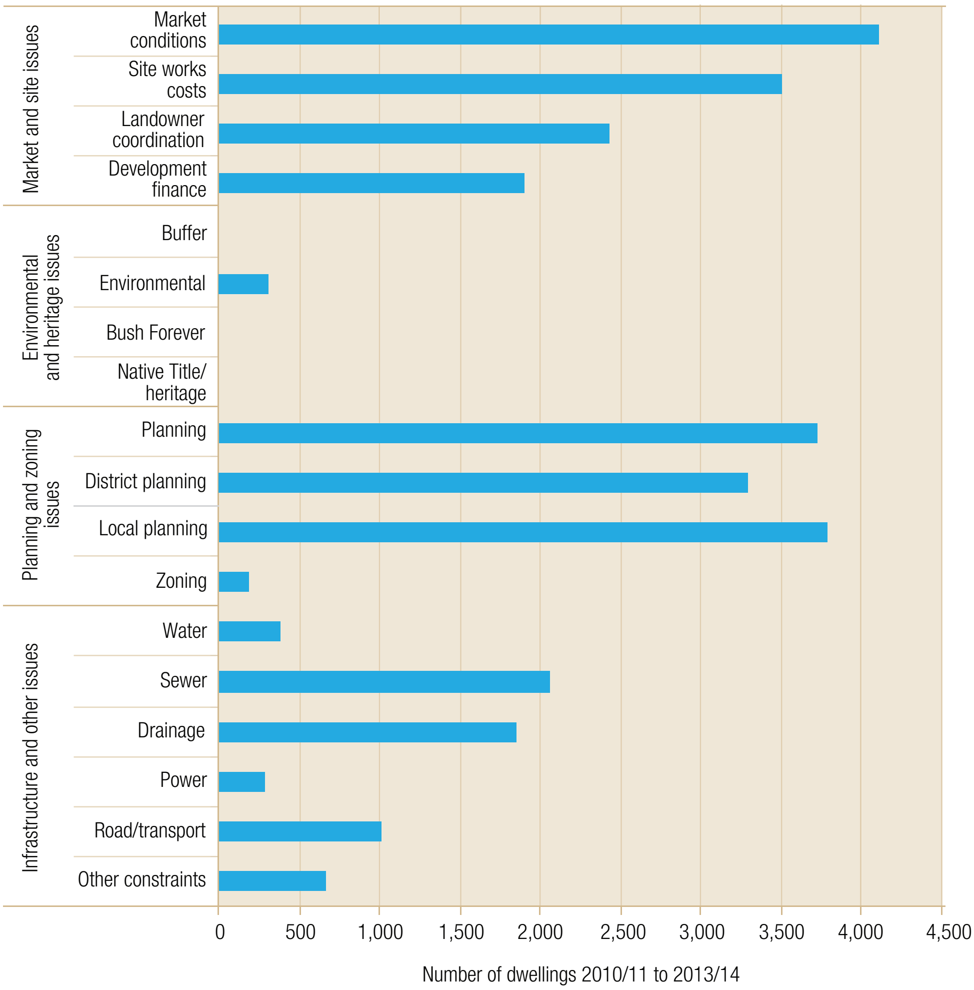
Source: Urban Development Institute of Australia, 2012, Urban Development Index.

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

Major issues with the development of additional dwelling sites as identified by land developers are shown in Figure 23. This indicates that market and site issues, and planning constraints are major concerns, as are planning constraints at both district and local structure planning levels.

Infrastructure concerns were mainly sewer and drainage issues; road issues were also a factor.

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



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

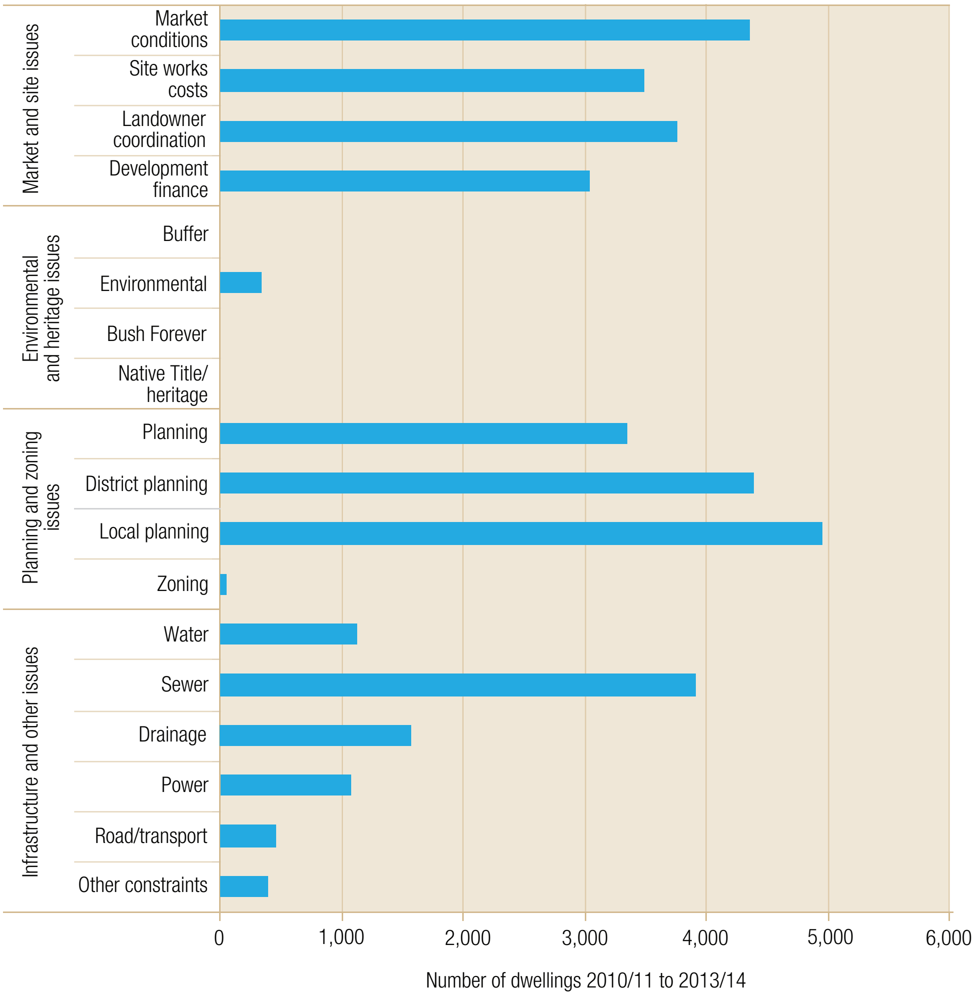
3.5.3 Long-term development issues (2014/15 and beyond)

Developers identified that market and site issues, structure planning and sewerage infrastructure issues are major constraints to development in the South-east sub-region in the long-term (2014/15 and beyond) (Figure 24).

Market and site issues covered a range of concerns, including market demand, site development costs, coordinating with landowners (both within and surrounding the development area) and obtaining development finance.

Sewerage infrastructure is a significant concern to developers in the long-term, with respondents suggesting supply of nearly 4,000 lots could be so affected.

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



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

3.5.4 Environmental issues affecting development

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

- Protection and integration of remnant vegetation and wetlands, including buffer and interface requirements.
- Protection of flora and fauna including the implications of state and commonwealth legislation.
- Protection of public drinking water sources and watercourses.
- Urban water management challenges including:
  - flood management;
  - water quality; and
  - recharge flows and wetland management;
- Sediment control.
- Management of existing land uses and buffers (e.g. poultry farms, kennel zones, quarries).
- Mosquito and midge management.
- Waste disposal issues, including allocation of appropriate land and buffers and the provision of nodes for waste transfer.
- Noise and vibration issues related to transport routes, including road extensions (South West and Tonkin Highways) and rail (with possible rail extension).
- Funding difficulty for investigative work, as many small private landowners are involved with appropriate cost recovery and development contribution schemes.

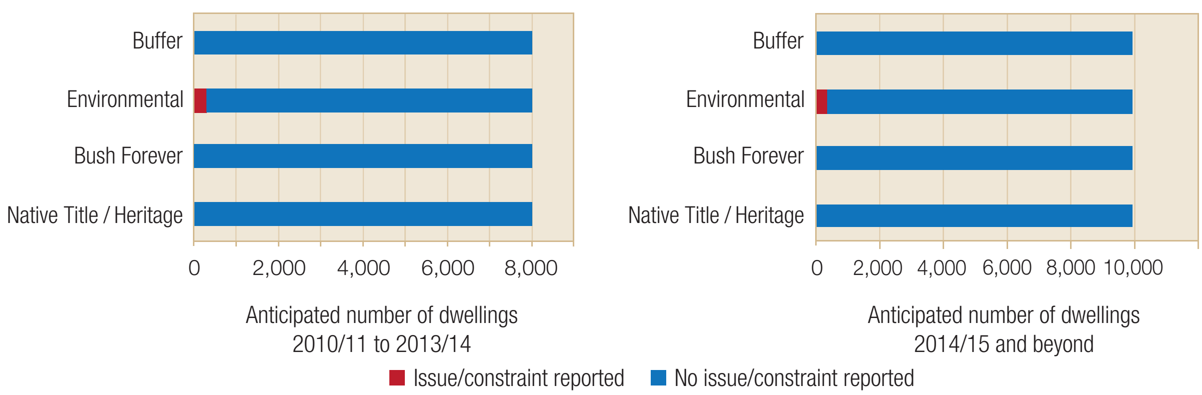
Government environmental management priorities for the sub-region include:

- Completing urban water management plans before subdivision will avoid rework, especially during subdivision;
- Environmental issues being addressed during the structure planning stage of development. In some circumstances, when issues arise later (e.g. after subdivision application), it is costly and time consuming to re-design projects in order to meet environmental standards. Such issues are currently managed by land tenure rather than region, which are problematic, as effectively addressing environmental concerns generally requires a broad, integrated approach;
- Using the Environmental Biodiversity Conservation Act 1999 resolve issues on existing zoned land under conservation agreements or similar restrictions; and
- Working with Department of Water to establish a risk-based approach to water management.

3.5.5 Environmental issues (survey responses)

Developers identified eight small projects with environmental issues that constrain the development of around 308 dwellings in the short-term (2010/11 to 2013/14) and 350 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).

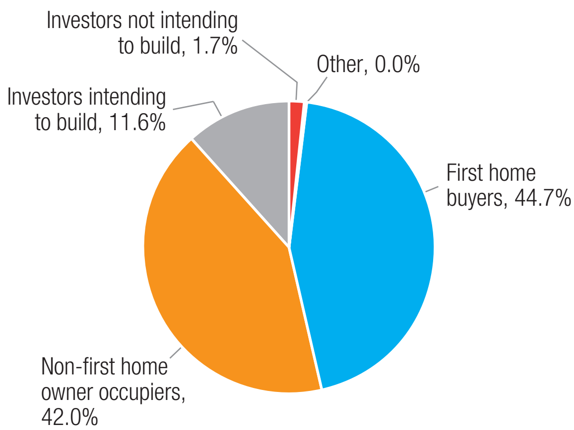
3.5.6 Market segment of dwellings for development

Developers of 37 projects in the South-east corridor, yielding 5,580 dwellings in the short-term (2010/11 to 2013/14) and 6,476 dwellings in the long-term (2014/15 and beyond), provided information on their expected target market segment (Figure 26).

Land developments in the South-east sub-region are targeted primarily at first-home buyers (44.7 per cent), non-first home owner-occupiers (42.0 per cent) and investors intending to build (11.6 per cent). Investors not intending to build include speculators who purchase land intending to re-sell the lots at a higher price. Generally, few developers target this market segment.

Developers in the South-east sub-region who responded to the Survey indicated a high level of concern about market conditions. This is potentially due to the high percentage of developments targeted at first home owners, who generally have lower incomes and are therefore more reliant on favourable interest rates and incentives to purchase property.

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	2,495	2,345	646	94	-
Dwellings 2014/15 and beyond	2,672	3,040	689	75	-

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

Notes: 'Other' includes aged-care facilities.

3.5.7 Market and site issues affecting development

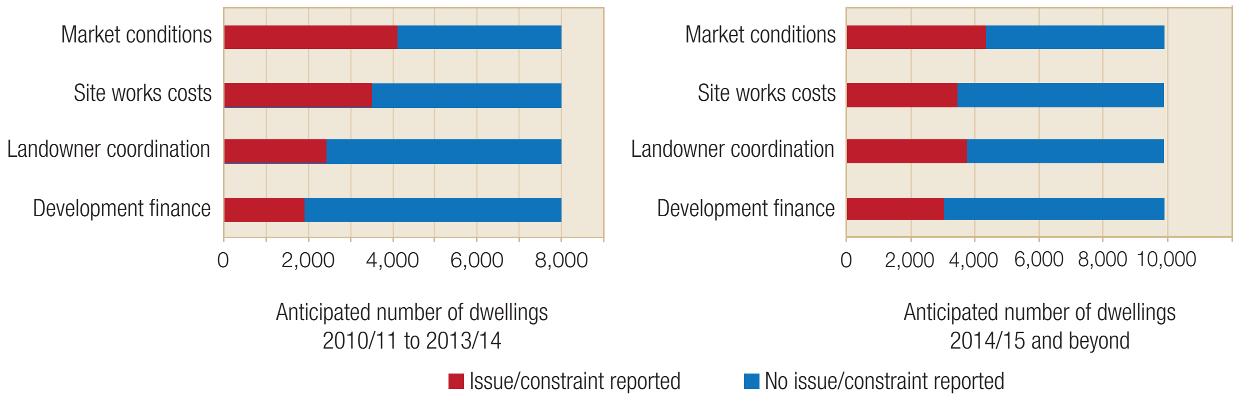
Developers expressed concerns about market conditions in regard to 22 development projects, yielding 4,104 dwellings from 2010/11 to 2013/14 and 4,358 dwellings long-term (2014/15 and beyond) (Figure 27). This is relatively high in comparison to other sub-regions.

Developers identified 14 projects where site works costs were a constraint – these projects were anticipated to yield 3,498 dwellings in 2010/11 to 2013/14 and another 3,485 dwellings long-term (2014/15 and beyond).

Landowner coordination constraints affected nine projects in the sub-region, with an anticipated yield of 2,424 dwellings in 2010/11 to 2013/14 and another 3,755 dwellings in 2014/15 and beyond. Most of these concerns expected to be resolved in the short-term.

While only seven developments identified development finance as a constraint, these were relatively large projects with a total dwelling yield of 1,900 from 2010/11 to 2013/14 and 3,042 dwellings in the long-term (2014/15 and beyond).

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).

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 data for lots available on the market (Figure 28) shows that developers are currently maintaining supply of around 300-400 lots. The data illustrates how volatile lot availability is in a thriving economy where lots are produced and purchased relatively quickly.

3.6.2 Vacant lots with estate agents

In general, major land developers do not list their lots with real estate agents but sell them direct to the public. Therefore, the number of lots listed with licensed real estate agents provides an additional stock of serviced 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).

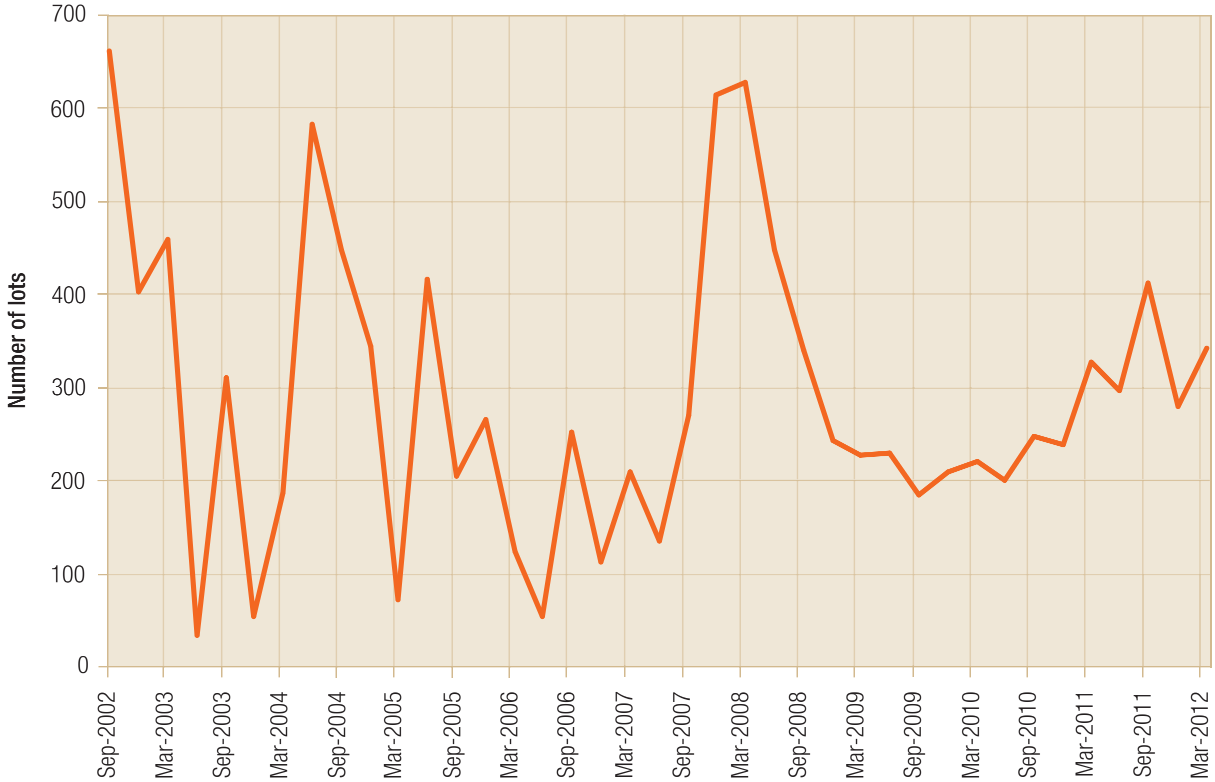
REIWA data show the stock of lots listed for sale in the South-east sub-region has been on a general upward trend since early 2009. In March 2012, real estate agents had almost three times as many lots on the market as developers in the sub-region. This contrasts with conditions in 2008, when developers had more lots available.

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:

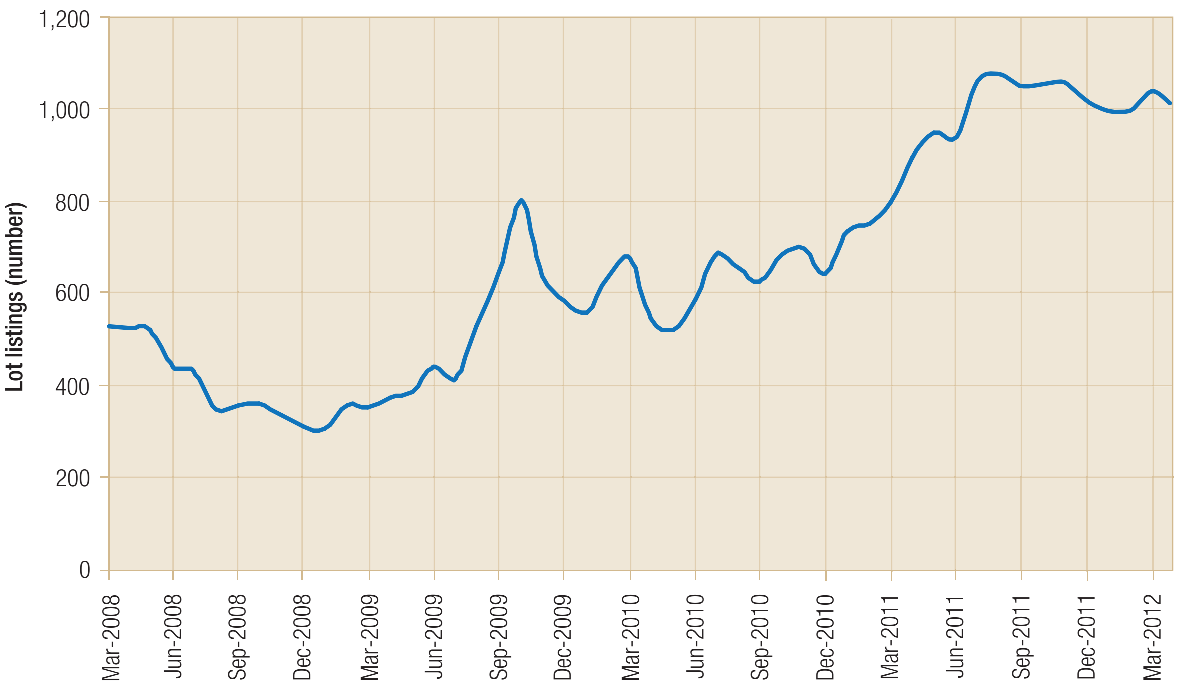
- clearance delays (on subdivision conditions);
- issue of title; and
- marketing issues.

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



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

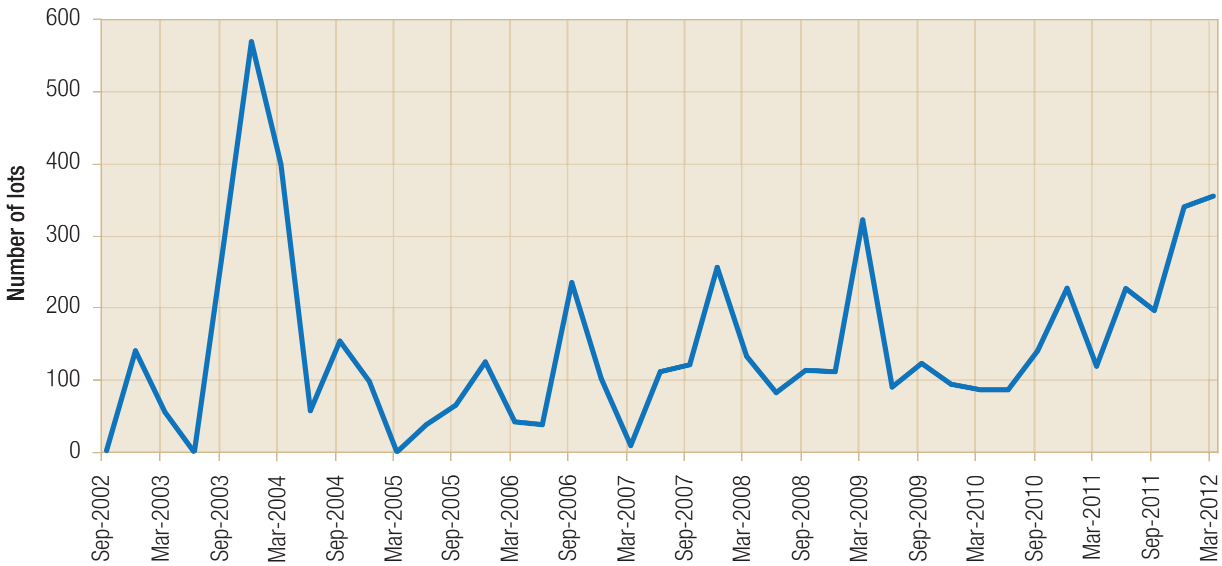
Figure 29: Vacant lots listed for sale with real estate agents



Source: Real Estate Institute of Western Australia.

Figure 30 indicates that lots not listed for sale in the South-east sub-region has fluctuated considerably since 2002. Sharp peaks in Figure 30 indicate that issues preventing the release of lots for sale were resolved fairly quickly, allowing the lots to be put on sale without lengthy delays. Since June 2007 however, there has consistently been a significant number of lots withheld from sale.

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

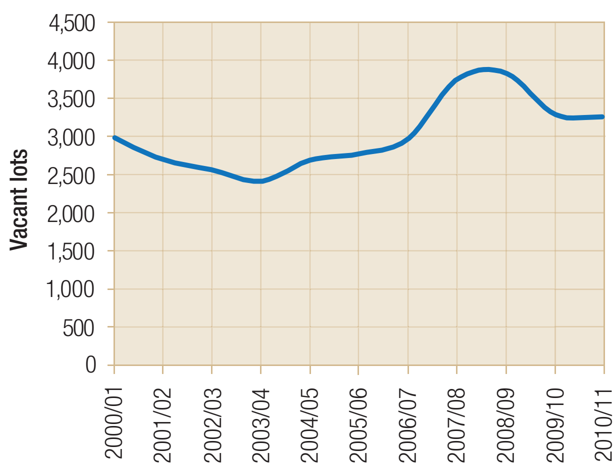


Source: Urban Development Institute of Australia, 2012, Urban Development Index.

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 3,249 vacant, serviced lots in the South-east sub-region, which constitutes approximately 10 per cent of the total for the Perth and Peel metropolitan area. Figure 31 shows that the stock of vacant lots reached a low of 2,405 in 2003/04, which was the lowest of any sub-region at that time. Although stocks have since increased significantly, there are still far fewer serviced vacant lots in the South-east than in any of the coastal sub-regions.

Figure 31: Stock of vacant serviced lots



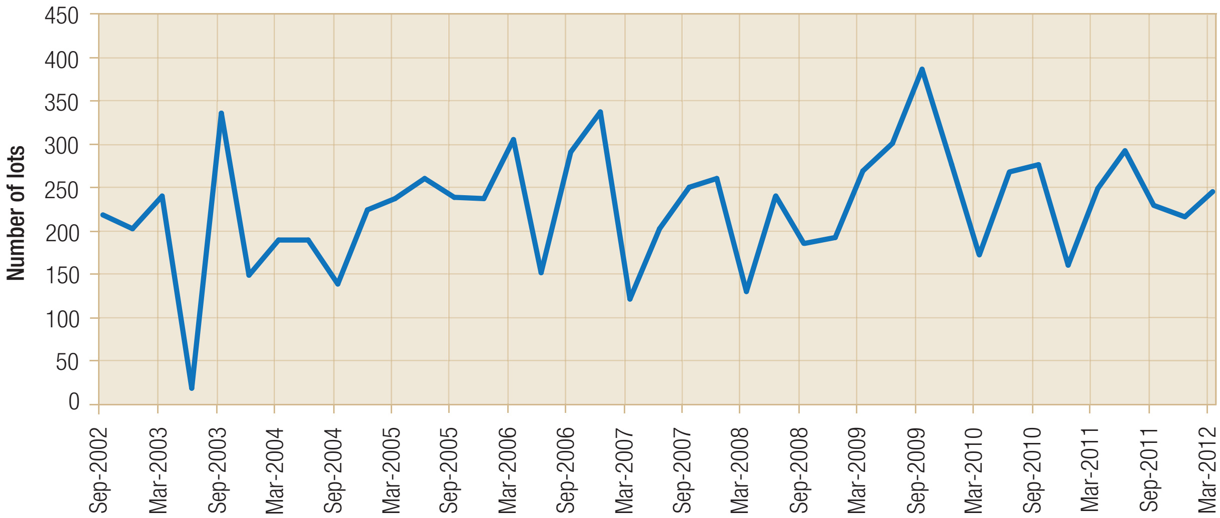
Source: Water Corporation, 2012.

3.6.5 Lots sold

The number of lots sold (including lots pre-sold prior to development or issue of titles) is illustrated in Figure 32. This indicates significant volatility in sales from one quarter to the next. The low numbers of lots sold in mid-2003 coincide with high sales figures in other outer sub-regions during the same period, suggesting greater lot availability outside the South-east sub-region.

Lots sold by smaller developers (comprising less than half of the total land development market) have not been shown in the Urban Development Index.

Figure 32: Lots sold (UDIA member developers)



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

3.7 Building development

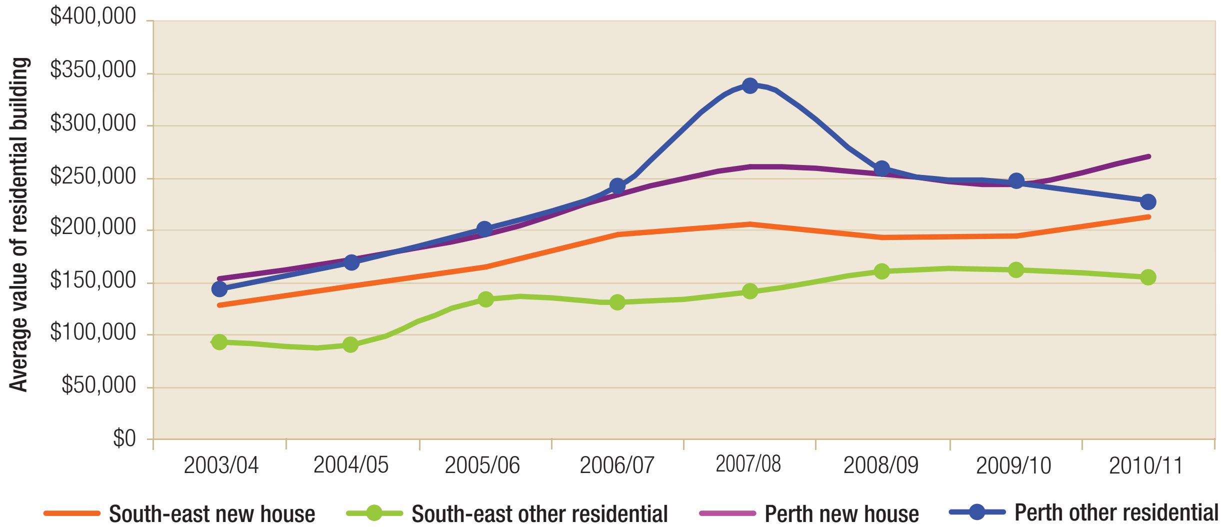
The economic value of residential lots, even when serviced with infrastructure, is not actually realised until they are improved with buildings. Dwelling construction marks the final phase of the residential development process, enabling land to be used for its proposed purpose. Building approval is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

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-east sub-region compared to the Perth metropolitan region.

The value of new dwellings in the South-east sub-region is generally lower than elsewhere in the Perth and Peel metropolitan area.

Figure 33: Average value of residential building

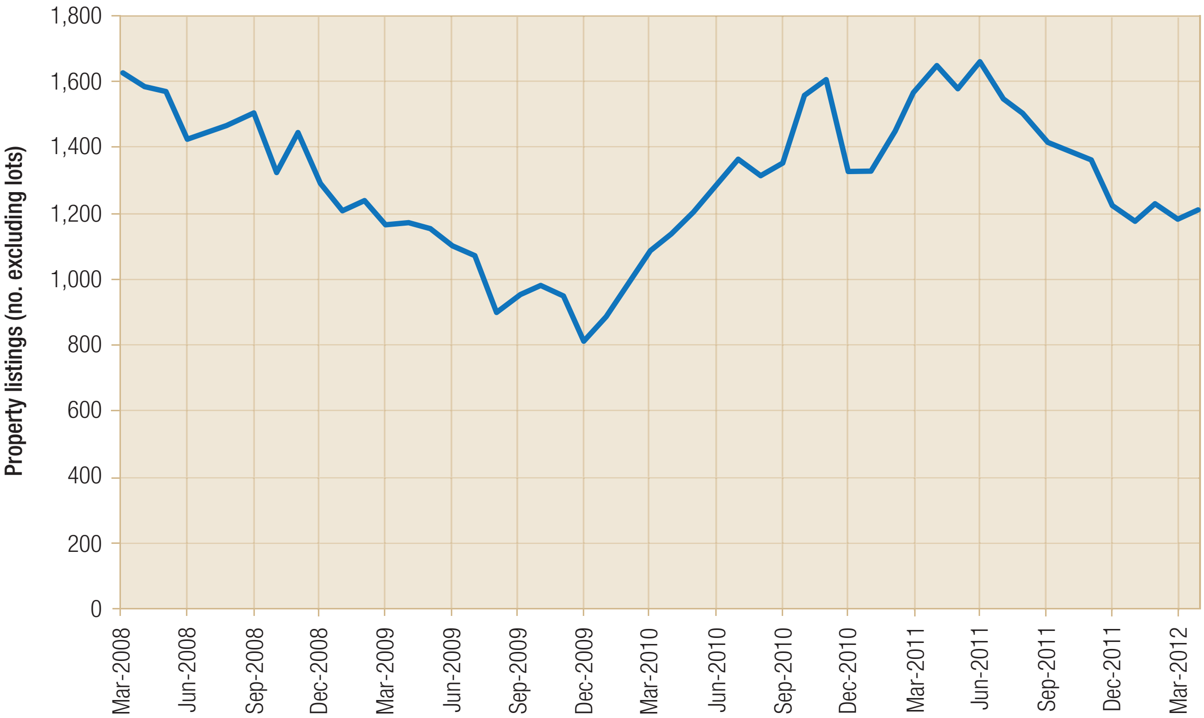


Source: Australian Bureau of Statistics, 2011, Building Approvals, Australia, Cat. No. 8731.0.

3.7.2 Stock of dwellings available to the market

Figure 34 illustrates a consistent decrease in the number of properties listed for sale with real estate agents between March 2008 and December 2009, when the number of properties available roughly halved. Since December 2009 dwelling listings markedly increased before declining once again from June 2011 onwards.

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



Source: Real Estate Institute of Western Australia.

3.7.3 Land consumption and density

Between 1991 and 2008, an average of 99 hectares of land per year has been consumed by urban development in the South-east region (Table 9, Figure 35). If this trend continues for the next 30 years, 2,970 hectares of land will be required to meet demand, leaving the sub-region with a surplus of 2,430 hectares of zoned land in 2041. Annual consumption has increased substantially over the period 2006 to 2008.

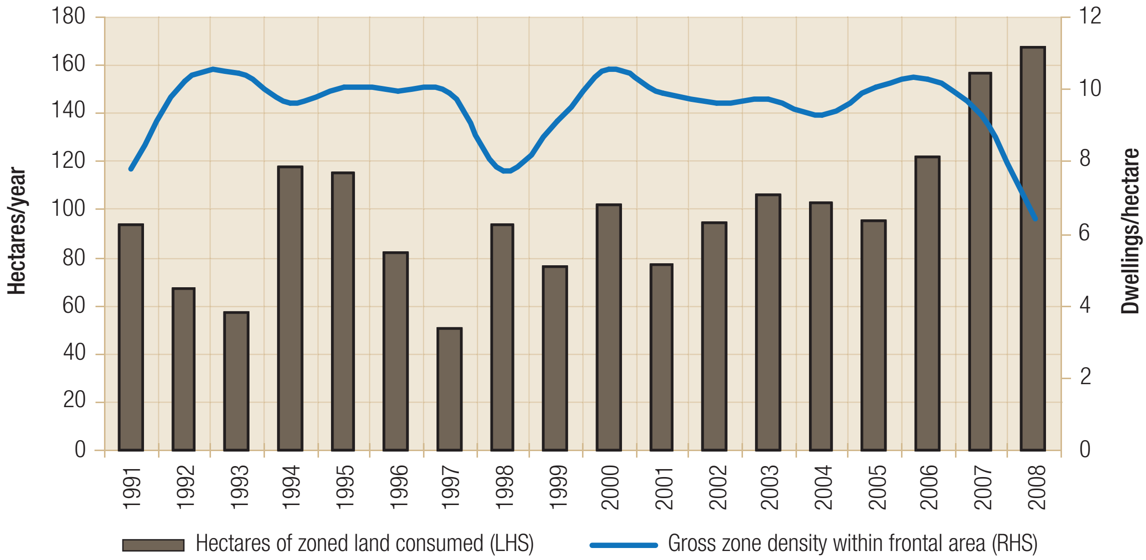
Table 9: Land consumption for urban development and dwelling density

Land consumption	Hectares per year
18 year average (1991-2008)	99
5 year average (2004-2008)	129
2 year average (2007-2008)	162

Dwelling density	Dwellings per zoned hectare
Average 1991-2008	9.30
Minimum over period	6.43
Maximum over period	10.54

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

Figure 35: Land consumption and density



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

3.8 Infill development and redevelopment

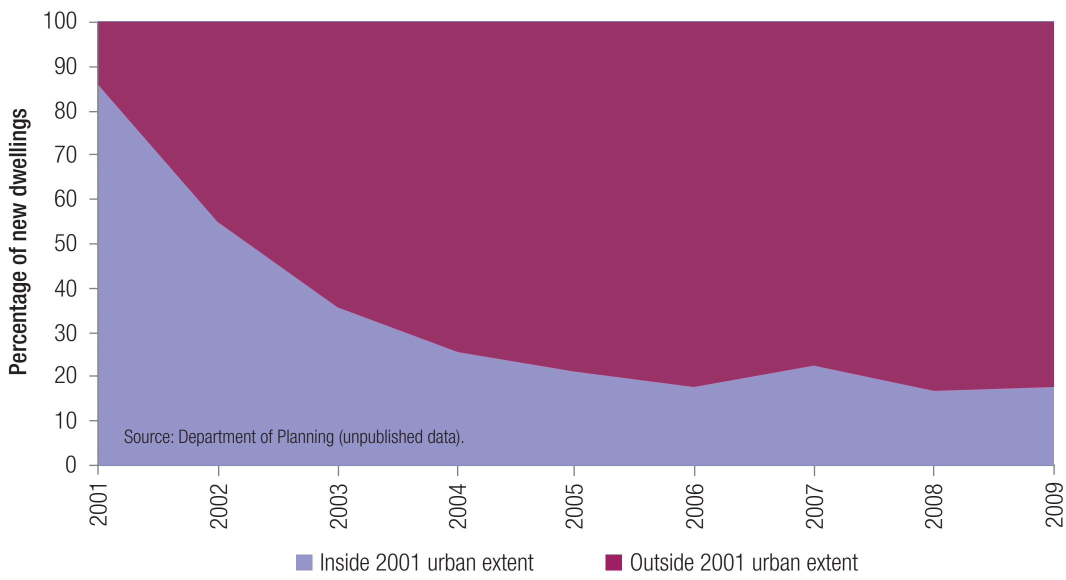
Most urban development in the South-east sub-region over the past decade has sought to exploit greenfield sites between Armadale and Perth due the affordability of the land and proximity to the city. The Armadale Redevelopment Authority was established in 2001 to reinvigorate the Armadale CBD and Kelmscott town centre and to generate investment and employment opportunities. Part of their strategy has been to create housing diversity and intensification in the area and a business park to improve the sub-region's poor employment self-sufficiency.

Figure 36 illustrates the proportion of new dwellings that were constructed within the urban extent of the sub-region as at 2001.

It shows that prior to 2001, there were few developments beyond the urban front ('leap frog' development) and after 2001 there has been very little development inside the 2001 urban extent (infill). This suggests that frontal development is the prevailing pattern of urban growth in the South-east sub-region.

The rate of infill development reached a low of 16.9 per cent in 2008 and then increased slightly as homes in the area begin to age and are replaced. In all outer sub-regions, the 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 2011 urban extent



Source: Department of Planning (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-east sub-region for 2011. Although all conditional and final approvals granted in 2011 were in either Armadale or Gosnells, applications were lodged for more commercial lots in the Shire of Serpentine-Jarrahdale than either of the other LGAs during the year.

There is limited amount of commercial subdivision activity in the South-east sub-region with just eight conditional approvals granted in the 12 months to December 2011 (Figure 37). From January 2004 to December 2011 just 85 commercial lots were granted final approval which is lowest of any sub-region other than Peel.

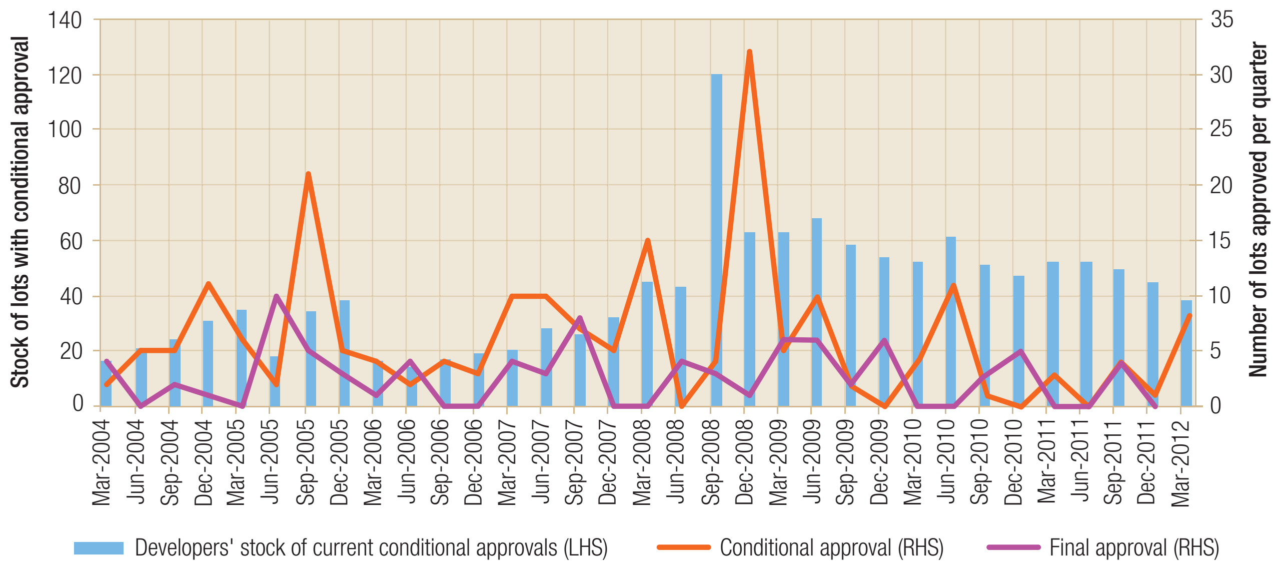
Table 10: Commercial subdivision approvals

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
Armadale	11	5	3	25	6	1
Gosnells	10	6	5	20	2	3
Serpentine-Jarrahdale	18	20	0	0	0	0
South-east sub-region	**39**	**31**	**8**	**45**	**8**	**4**

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 suggests the South-east sub-region attracts relatively little investment in the commercial sector, with the lowest levels of investment in commercial construction projects of any sub-region other than Peel. The estimated total value of commercial sector construction in the South-east sub-region constitutes approximately two per cent of the total for this type of development in the Perth and Peel metropolitan region. Areas within the sub-region attracting most commercial sector investment are Byford, Canning Vale, Beckenham, Armadale and Forrestdale (Map 1).

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

4.2 Industrial development

Table 12 provides a breakdown of industrial zoned land in the MRS for the three local government authorities in the South-east sub-region. It shows that the City of Armadale has the majority of zoned industrial land in the sub-region.

The existing Maddington-Kenwick and Forrestdale regional industrial areas will be progressively developed to cater for a range of manufacturing, processing, warehousing and bulk goods handling activities. These centres are well connected to intermodal freight facilities at the Welshpool-Kewdale industrial centre and will benefit from potential synergies with major export-oriented industrial centres such as Kwinana and Latitude 32 in the South-west sub-region.

Table 11: Major commercial projects

Project	Suburb	Description	Completion
Davis Road-Streich Avenue mixed use development	Kelmscott	Mixed use development including 7 commercial units	2009
Ranford Road-Wright Road Village Centre	Forrestdale	Super market/commercial centre development	2010
Haynes Shopping Centre	Armadale	Development to include a supermarket and 10 specialty stores	2012
Harrisdale Shopping Centre	Harrisdale	New shopping centre	2012

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

Table 12: Industrial zoned land (Metropolitan Region Scheme) in the South-east 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 (%)
662.2	Armadale	436.4	65.8
	Gosnells	226.8	34.2
	Serpentine-Jarrahdale	0	0

Source: Department of Planning internal database (2012).

Investigations are underway to examine suitability of intermodal freight terminals at various strategic locations throughout the Perth and Peel regions. West Mundijong in the South-east sub-region is being considered, given its proximity to a rail and primary road system intersection.

Table 13 provides a breakdown of vacant and developed land for industrial complexes in the South-east 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.

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.

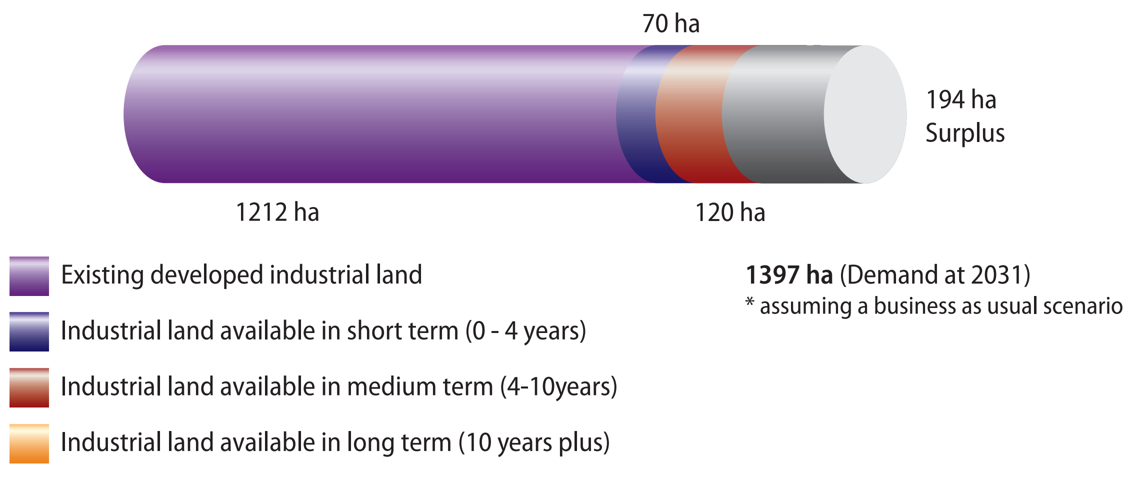
Based on a forecast demand for the South-east sub-region of 1,397 hectares by 2031, and based on existing data on available potential supply, the sub-region will have a surplus of 194 hectares of industrial land by 2031. Note that this excludes any of the 37 potential sites identified in the *Economic and Employment Lands Strategy: non-heavy industrial* report. If no more industrial land is released to the market, this sub-region should have ample zoned land to meet demand to 2031.

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

Complex	Developed (ha)	Vacant (ha)	Total (ha)	Percentage vacant
Armadale	53	7	60	11.7
Forrestdale	0	97	97	100.0
Kelmscott	47	9	56	16.1
Maddington	163	40	203	19.7
Ranford	9	180	189	95.2
Total	**272**	**333**	**605**	**55.0**

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

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



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

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

The South-east sub-region saw a significant increase in industrial lot balance in March 2008 (Figure 39), due to a large subdivision approval to develop the Forrestdale industrial area. Commercial conditional approvals were also high in December 2008, due to the Forrestdale expansion. As at December 2011, the South-east sub-region had the largest stock of conditionally approved industrial lots of any sub-region.

Analysis of development applications and approvals indicates that the South-east sub-region currently draws little investment in industrial sector construction projects relative to other sub-regions. The estimated value of industrial sector construction in the South-east sub-region constitutes only about two per cent of the total for such projects in the metropolitan area. Most industrial sector projects in the sub-region are developed in the City of Gosnells at Canning Vale, Kenwick or Maddington (Map 1).

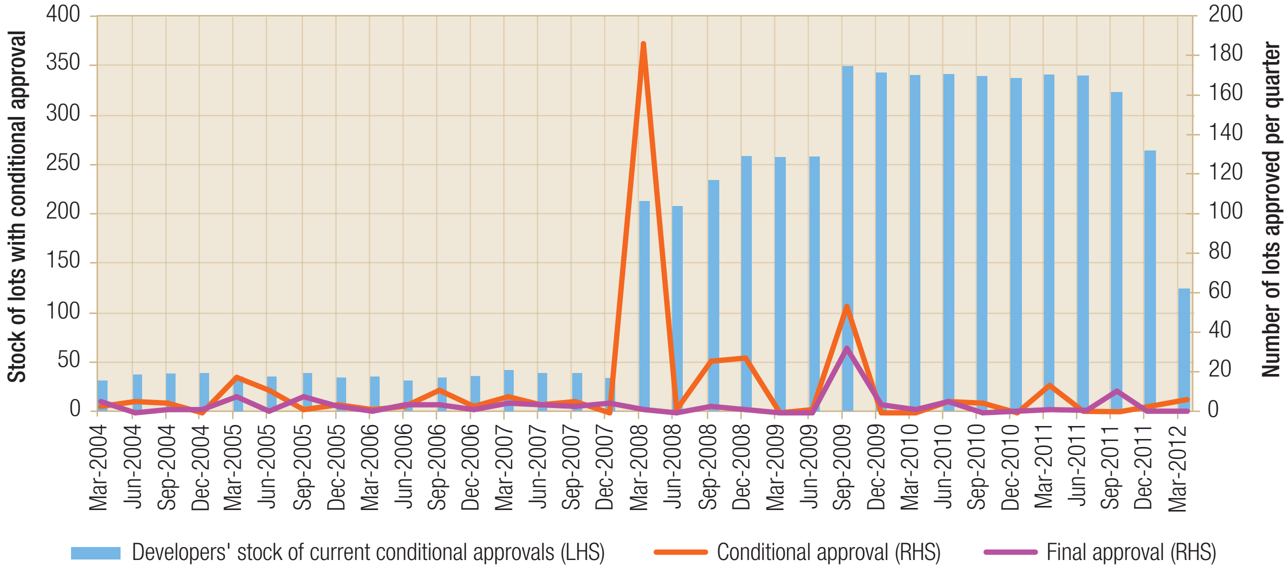
Table 14: Industrial subdivision approvals

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
Armadale	23	33	0	234	9	1
Gosnells	4	0	18	31	17	13
Serpentine-Jarrahdale	0	47	0	0	0	0
South-east sub-region	**27**	**80**	**18**	**265**	**26**	**14**

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.

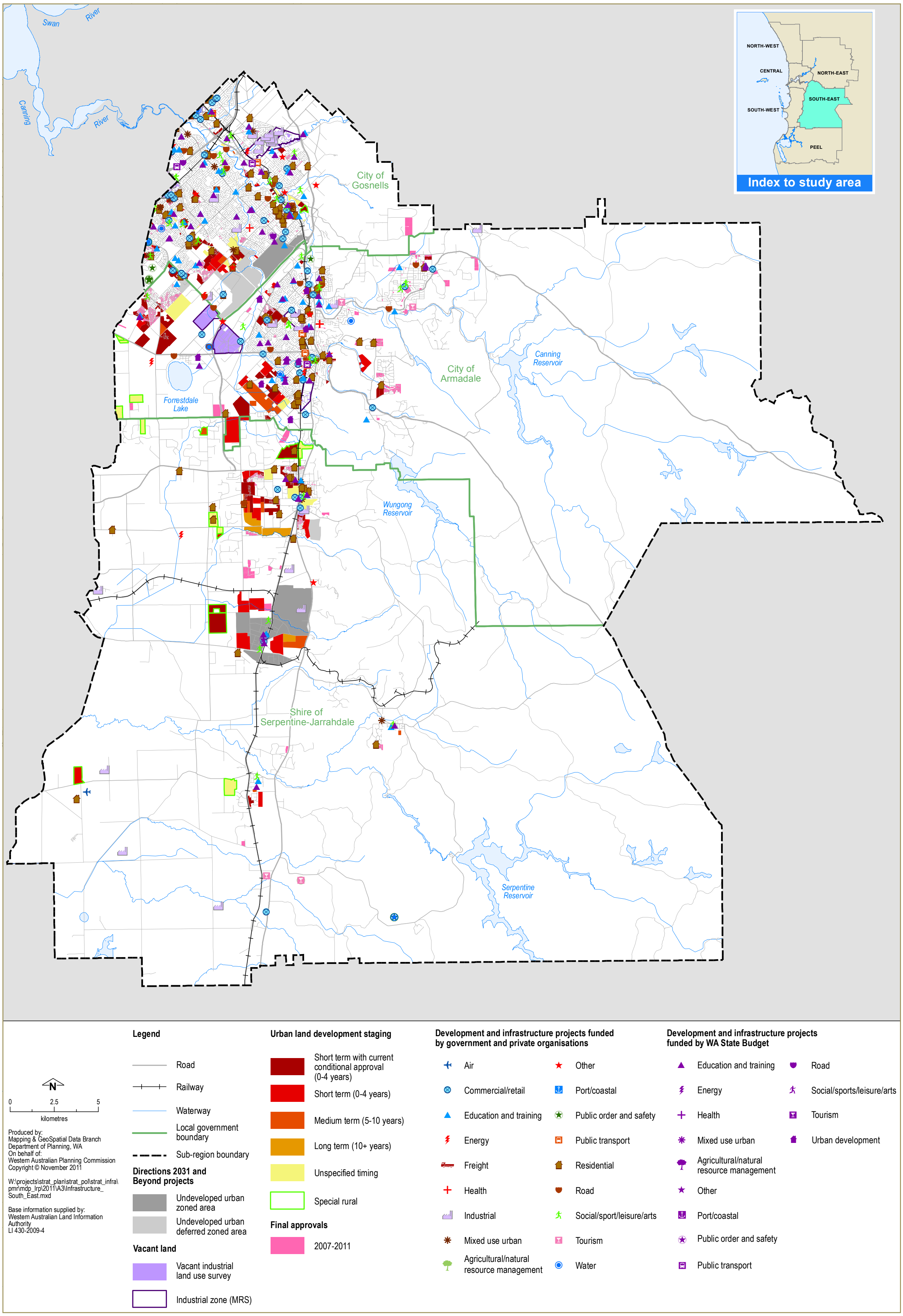
Major industrial structure plans for the South-east sub-region

- Forrestdale Business Park structure plan; and
- Cardup Business (Industrial) Park structure plan (preliminary for internal comment).

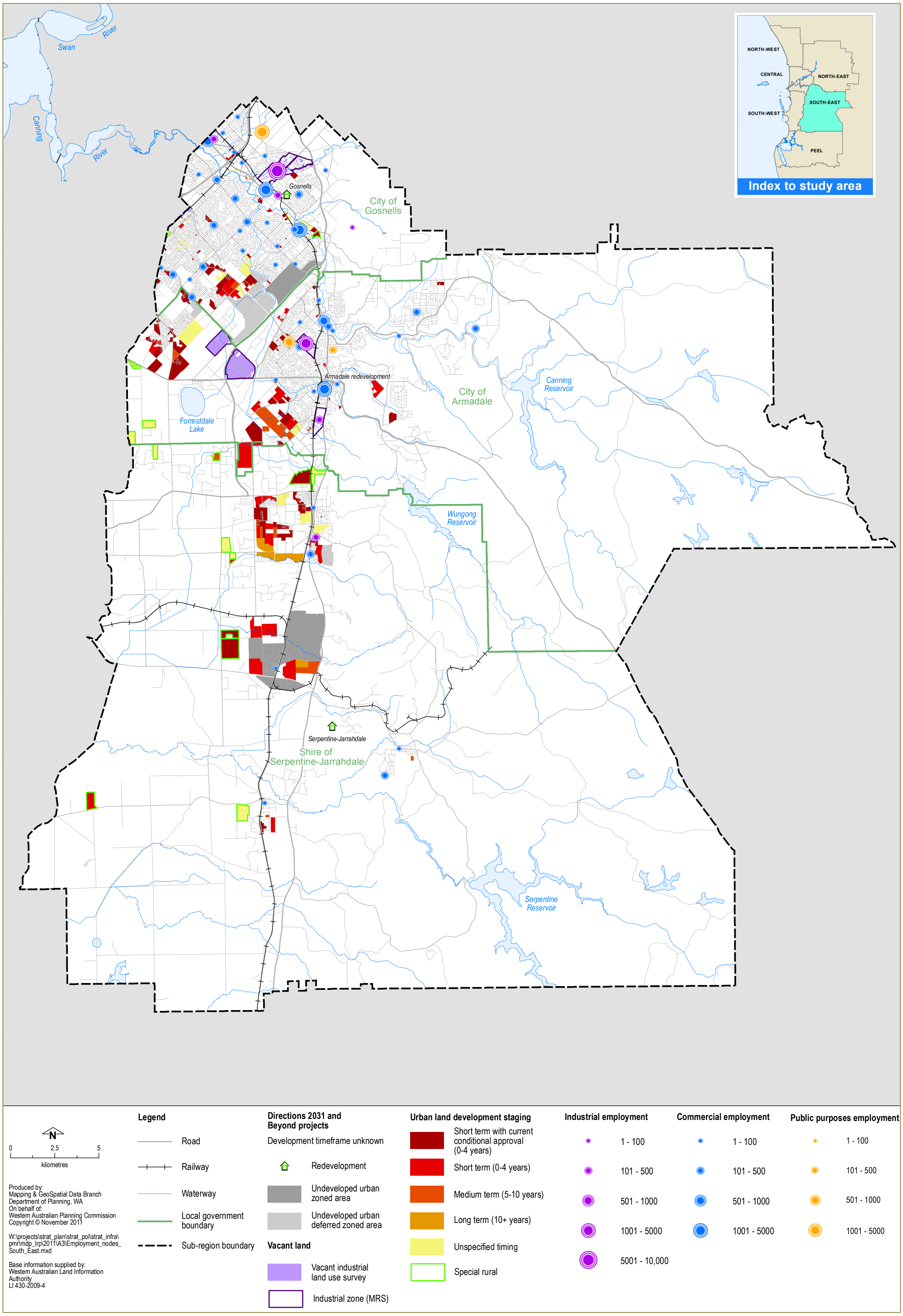
Major industrial projects of the South-east sub-region include:[8]

- Maddington-Kenwick Strategic Employment Area (MKSEA);
- Hopeland Poultry Farm (Hopeland); and
- Colmax glass recycling facility (Kenwick).

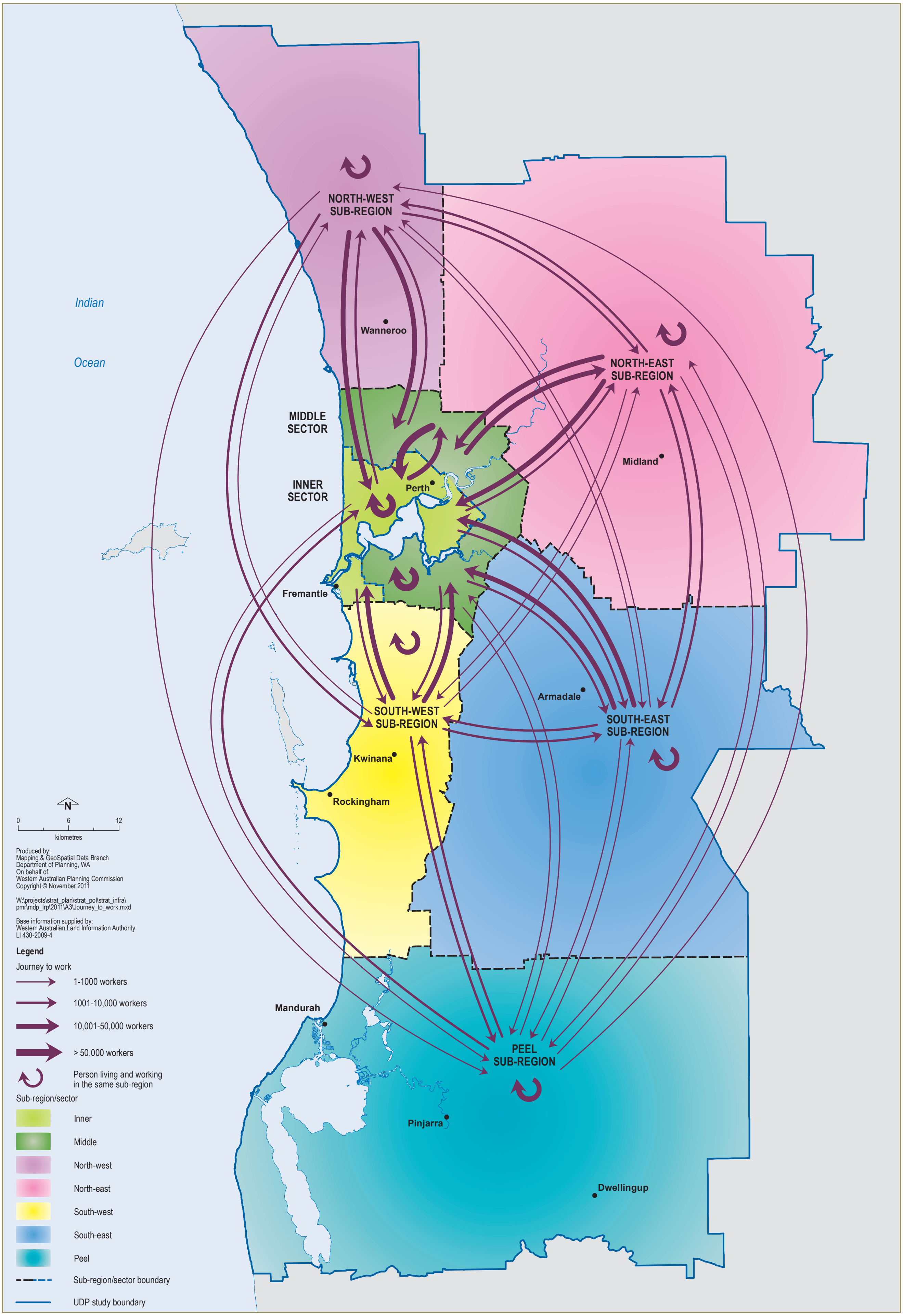
[8] Department of Planning analysis.



Map 1: Infrastructure - South-east sub-region



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



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