



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

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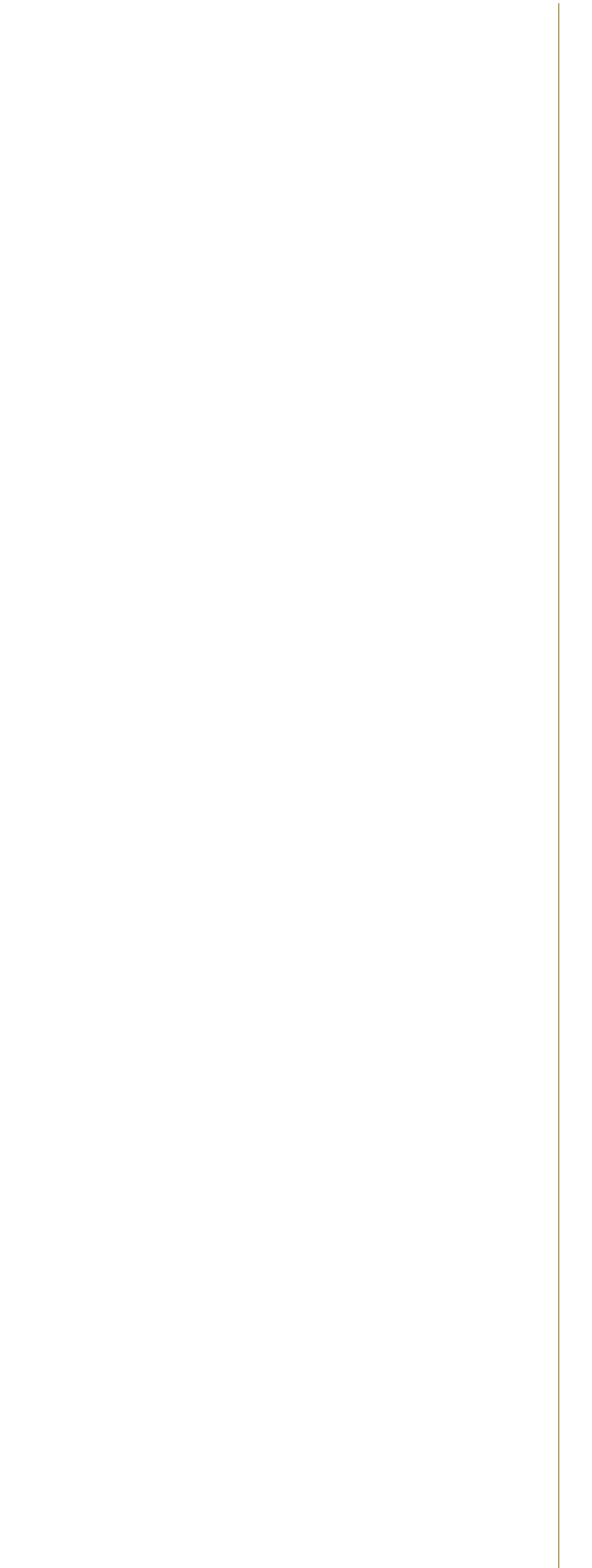
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1. Peel sub-region overview

The Peel sub-region, for the purposes of this document, refers to the City of Mandurah and the Shire of Murray. The majority of residents live in the north-west of the sub-region around Mandurah and the northern shores of Peel Inlet. Although famous for its coastal lifestyle, much of the sub-region (particularly in the Shire of Murray) is essentially rural, with land mainly taken up by agricultural uses and native bushland.

Mandurah is the strategic centre of the Peel sub-region and the largest urban centre. Its proximity to Perth, the ocean, Peel Inlet and rural areas have made the region one of the fastest growing areas of the State. Rapid urban growth has meant that natural or agricultural areas have ceded to development around the Peel and Harvey Inlets, which has been a source of contention for some years.

The Peel sub-region has long appealed to retirees seeking a coastal lifestyle near Perth. As the population ages, demand for land in the Mandurah area is unlikely to abate. Recent improvements to the Kwinana Freeway and the Mandurah railway have improved connectivity to Perth. This has also helped make the northern Peel sub-region attractive to a younger demographic as employment opportunities around Perth become more accessible.

With fewer than 90,000 residents, Peel is the least populated of the metropolitan sub-regions. However, it has a higher population growth rate, with an annual average increase of 4.3 per cent per annum between 2006 and 2011 (Table 1).

The Peel sub-region has 2,830 hectares of undeveloped or under developed land zoned for urban development – land that has been zoned as urban or urban deferred under the Peel Region Scheme. Urban expansion, including land for suburban feeder roads, neighbourhood parks, community and recreation facilities, local shops and petrol stations and new dwellings, has consumed an annual average of 132 hectares per year to accommodate urban growth between 2003 and 2010 (Table 2).

In addition to undeveloped land, the sub-region has a stock of 200 hectares of land zoned for urban development in the Peel Region Scheme (PRS), but 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		
Mandurah	3,800	430	28,033	59,288	35,372	73,605	4.6	8
Murray	660	120	5,600	12,629	6,743	14,700	4.1	6
Total	4,500	550	33,633	71,917	41,845	88,305	4.3	8

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 population growth 2011–2021 (median) (%)
Mandurah	1,200	70	114	3.8
Murray	1,400	120	18	4.3
Total	2,600	200	132	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

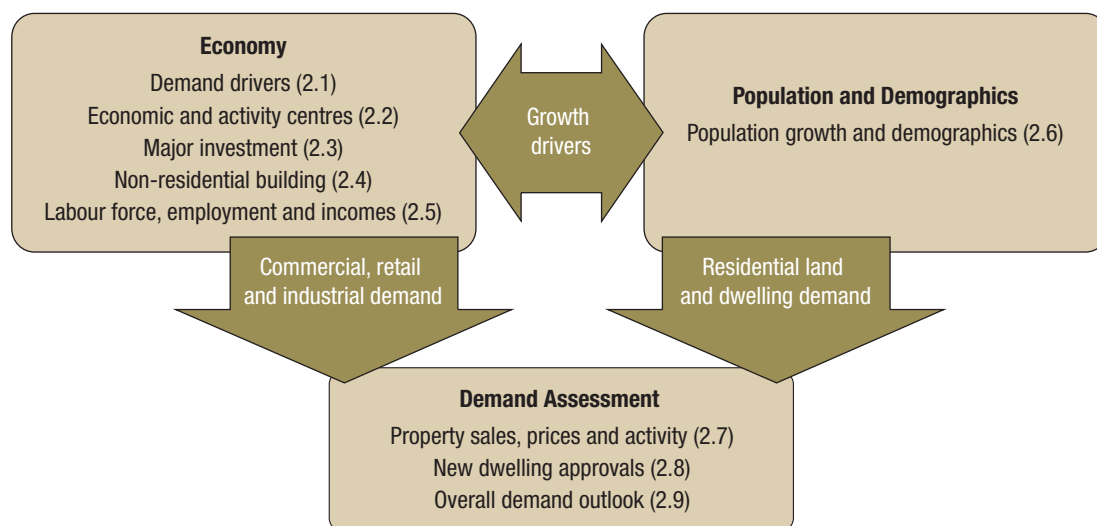
State and local government agencies have identified a number of key short and long-term planning and development issues in the Peel sub-region, which include:

- The preparation of a sub-regional structure plan that takes into account current planning information and would provide a basis for future amendments to the Peel Region Scheme;
- Having suitable mechanisms to effectively implement structure planning proposals;
- Indication of clear staging of development as part of the sub-regional structure plan so as to ensure timely delivery of infrastructure;
- The identification of key sites and corridors for future infrastructure in the sub-regional structure plan; and
- Protection of important basic raw materials and mineral resource areas, and where possible facilitate the development of resources areas following extraction of the resource.

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 majority of Peel residents live in the north-west of the sub-region around Mandurah and Pinjarra. Mandurah has traditionally been a popular coastal lifestyle destination, particularly with retirees. Its success as a tourist destination has increased employment opportunity, which in turn bolsters demand for residential land.

Although traditionally viewed as a holiday town, Mandurah is becoming increasingly integrated with Perth, due to population growth (in Perth and Peel) and improved transport connections. It is now easier to live in Peel and commute to central Perth for work or study, which means population growth in the sub-region is no longer as restricted by the need to create new employment opportunities.

Industrial land around Pinjarra (in the Shire of Murray) provides employment for a large number of workers in the area, supporting the sub-region's strong level of employment self-sufficiency (Figure 6). The Shire also offers opportunities for rural and semi-rural living in various areas, including along the Murray

River and around the State forest on the Darling Scarp. There is high demand for riverside living, particularly around Yunderup and Ravenswood, which has helped make Murray one of the fastest growing local governments in the State.

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 Mandurah as a strategic metropolitan centre.
- Mandurah provides retail, community and health services, and professional and business services for a large catchment population.
- Pinjarra is recognised in *Directions 2031 and Beyond* as a secondary centre for the Peel sub-region.

- The Oakley strategic industrial centre, outside Pinjarra, supports significant industrial activity within the sub-region, bolstering the area's employment self-sufficiency rate. The centre generates substantial export revenue for the sub-region and offers opportunities for a number of support industries to operate in the area.

2.3 Major investment

This section covers major projects in the Peel 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

- \$6 million for construction of the Meadow Springs Primary School and \$5 million for additions and improvements to Marri Grove Primary School and the Pinjarra Early Childhood Centre.
- \$3.1 million for completion of upgrades to Water Corporation's monitoring and control systems in Mandurah.

Major local government investment

- \$10 million for the new Mandurah City Library, due for completion in 2017.
- \$5.4 million for the Murray Aquatic Centre - completed mid-2011. The project involved constructing a modern aquatic centre adjoining the existing recreation centre.

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 completed in the Peel sub-region was \$40 million in 2010/11, which is the lowest level recorded in nearly a decade. This represented just two per cent of the total value of non-residential building in the Perth and Peel regions.

Figure 2 shows that the construction cycles in Peel have been generally similar to the overall cycles for the combined Perth and Peel regions.

2.5 Labour force, employment and incomes

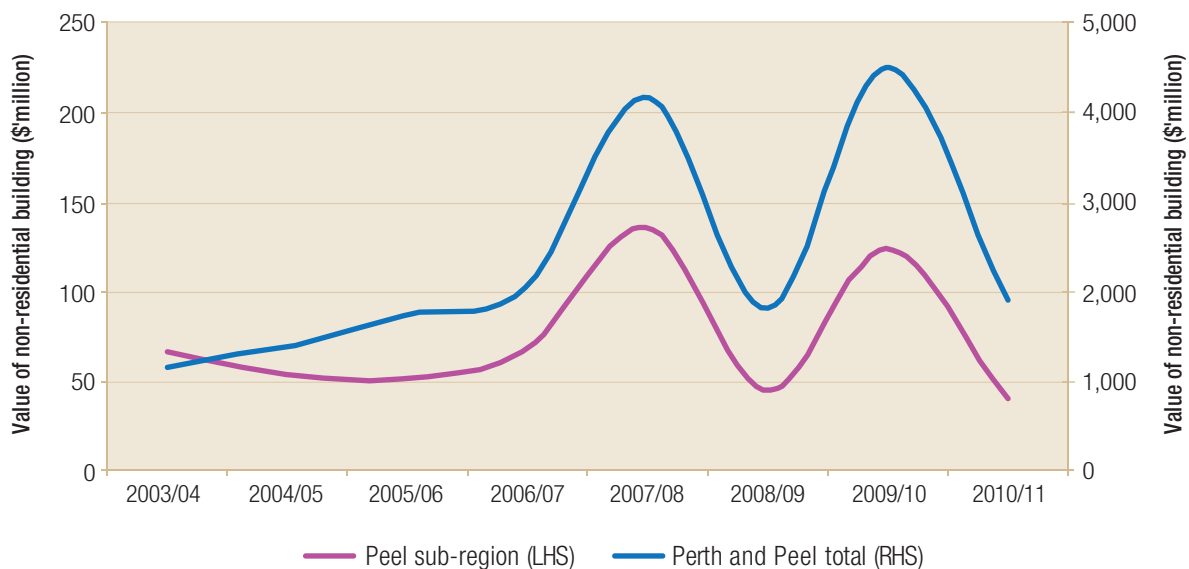
2.5.1 Employment growth and unemployment

Key labour force statistics for the Peel sub-region as at March 2012¹

- Main employment industry sectors in the Peel sub-region are manufacturing, retail trade and construction. The Shire of Murray is largely rural and has a significant proportion of the workforce involved in agriculture, forestry and fisheries.
- The estimated labour force was 39,886, with 37,377 employed and 2,489 unemployed people (Figure 3).
- The unemployment rate for the sub-region was 6.2 per cent. In March 2011, the rate was 6.8 per cent (Figure 4).
- Unemployment rate in the City of Mandurah was 6.4 per cent or 1,968 people, compared to 4.2 per cent for the Perth metropolitan region. In March 2011, the rate was 6.8 per cent, or 2,034 people unemployed.

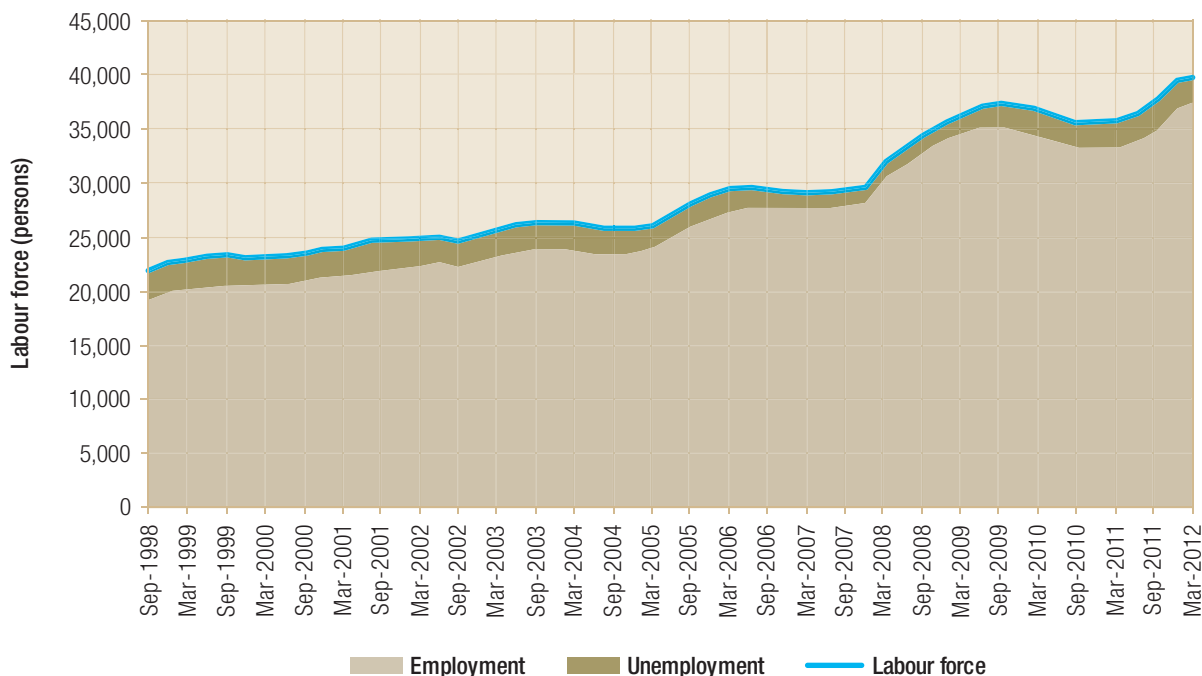
¹ Department of Education, Employment and Workplace Relations, Small Area Labour Market data, March Quarter 2012.

Figure 2: Total value of non-residential building



Source: Australian Bureau of Statistics, 2012, 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.

- Unemployment rate in the Shire of Murray was 6.2 per cent, or 413 people. In March 2011, the rate was 6.2 per cent, or 400 people unemployed.

2.5.2 Employment self-sufficiency and self-containment

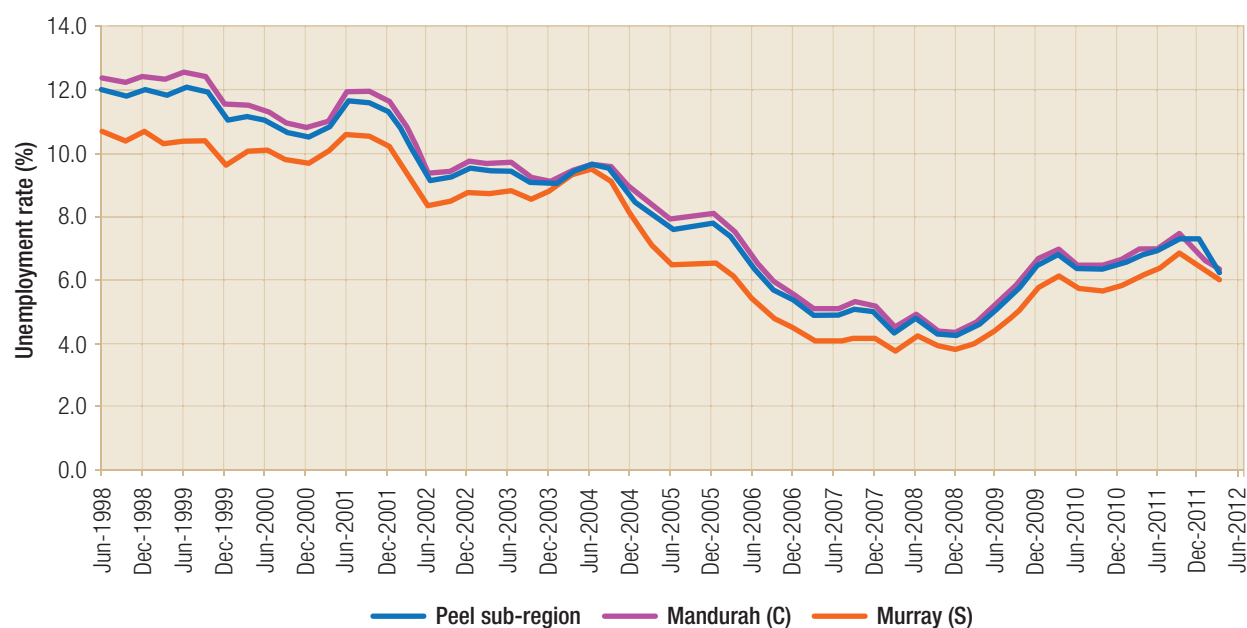
One of the key objectives of *Directions 2031 and Beyond* is to improve the relationship between where people live and where they work, to reduce commuting time and cost, and the associated impact on transport systems and the environment.

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 Peel sub-region has a high level of employment self-sufficiency, at 80 per cent (80 jobs for every hundred workers). As at the 2006 Census, the sub-region had a resident workforce of 27,000 employees (four per cent of the total for the Perth and Peel metropolitan area) and 22,000 jobs (three 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 Peel region (includes Waroona LGA) will require the creation of approximately 23,000 additional jobs by 2031.

Figure 4: Unemployment rates



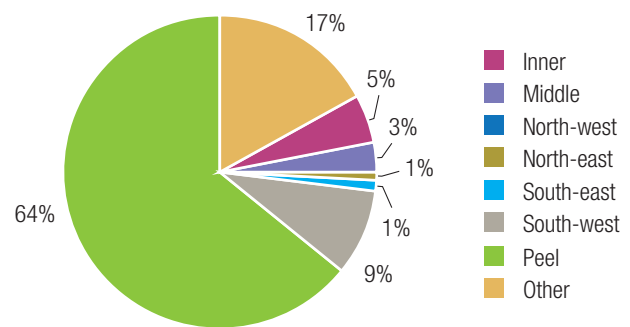
Source: Department of Education, Employment and Workplace Relations, 2012, Small Area Labour Market data.

Employment self-containment is a measure of the proportion of a resident labour force that is employed in the local area. Peel has the highest employment self-containment of any outer sub-region. Approximately 64 per cent of the sub-region's resident labour force is employed within the Peel sub-region (Figure 7).

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, the Peel sub-region has almost 100 per cent employment self-sufficiency across several sectors, which enables a high level of employment self-containment.

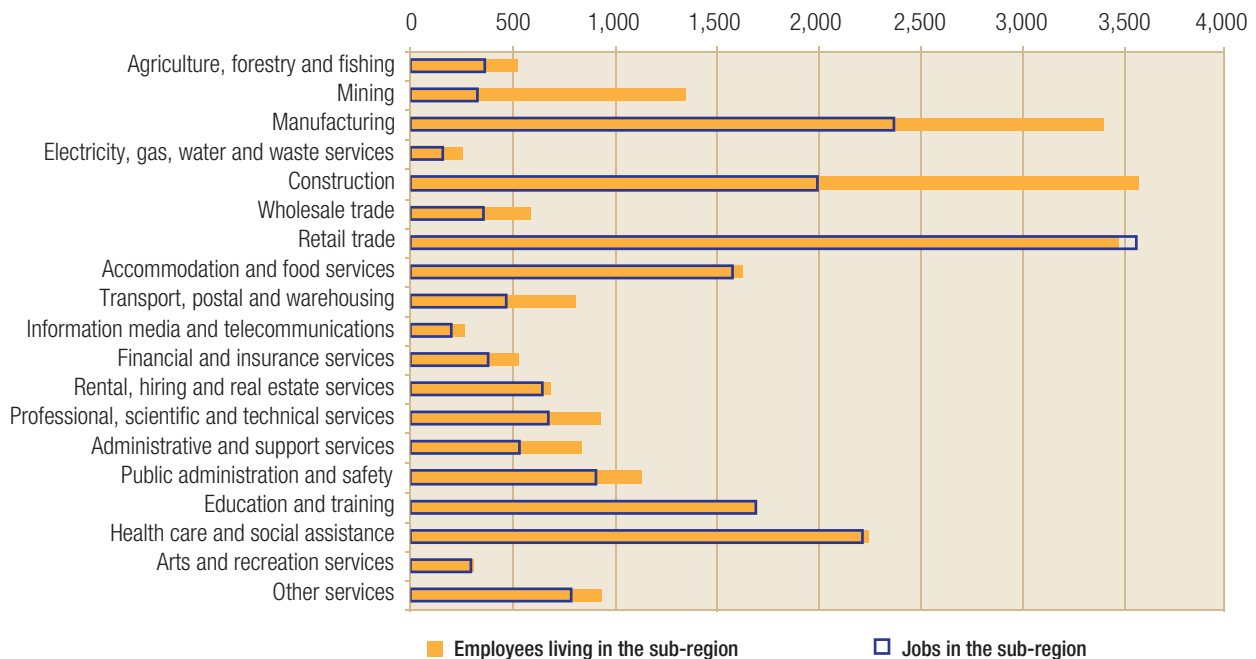
Most of the employment opportunities in the Peel sub-region are located near Mandurah; however there are also a large number of employees based at the Oakley industrial area – east of Pinjarra (Map 2). Only eight per cent of the labour force commutes to the Central sub-region. The majority of the workers (63 per cent) from other parts of the metropolitan area, who are employed in the Peel sub-region, reside in the City of Rockingham (Map 3).

Figure 5: Peel 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



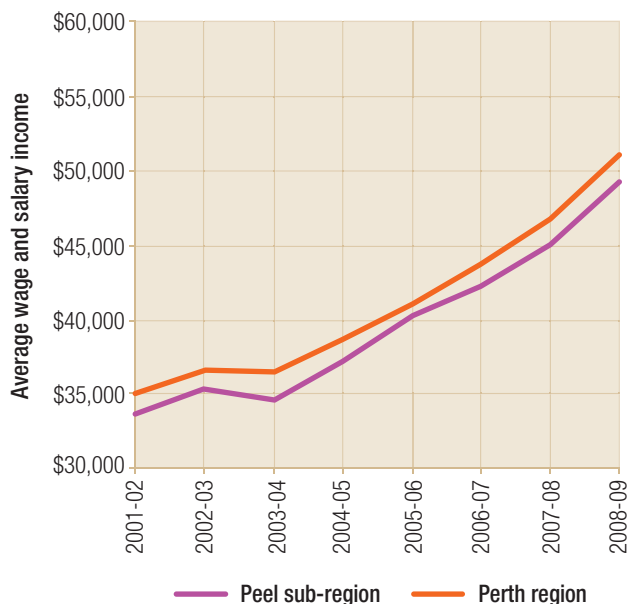
Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

2.5.3 Wages and salaries

In the 2008/09 financial year, the average income for residents in the City of Mandurah was \$44,914, which was slightly lower than the Perth metropolitan region average. For residents of Murray, the average income was \$35,936 in 2008/09, which was much lower than the Perth average, and the lowest of any metropolitan local government authority (Table 3).

Average annual income growth in both Mandurah and Murray between 2001/02 and 2008/09 was similar to that of Perth over the same period (Table 3). After several years of limited growth (and even decline) early last decade, incomes increased rapidly from 2003/04 onwards (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

Area	Median income 2008/09 (\$ p.a.)	Average income 2008/09 (\$ p.a.)	Average growth 2001/02 to 2008/09 (% p.a.)
City of Mandurah	38,562	49,221	5.5%
Shire of Murray	38,659	49,490	5.6%
Peel sub-region (Mandurah and Murray local govt. authorities)	38,554	49,268	5.5%
Perth metropolitan region	41,847	51,125	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.

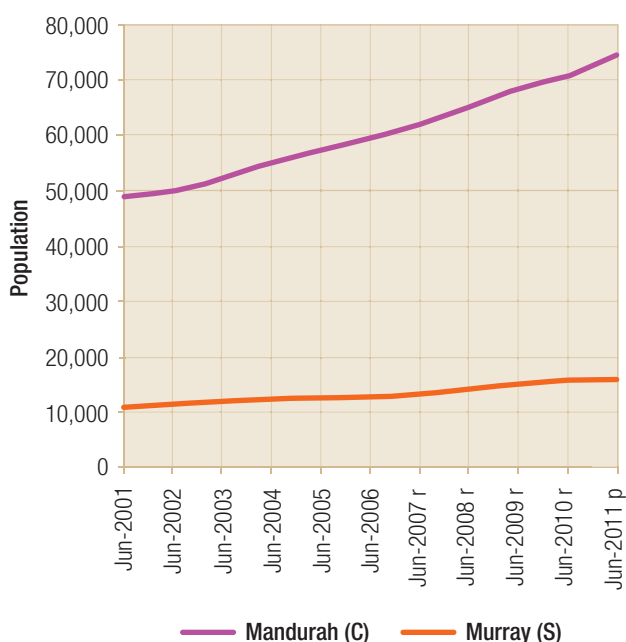
2.6 Population growth and demographics

The Peel sub-region had an estimated resident population of 88,305 as at June 2011, comprising 73,605 residents in the City of Mandurah and 14,700 residents in the Shire of Murray (Table 1 and Figure 8).

Since 2000 there have been two prominent spurts in population growth in the Peel sub-region, the first in 2003/04 (principally in the City of Mandurah) and the second from 2007 to 2009 (in both Mandurah and Murray). Population growth has rebounded higher in 2011 for the City of Mandurah (Figure 9). As Murray has a relatively small population, growth rates are typically more volatile than Mandurah's. Population growth in the short-term is likely to remain moderate given low building approvals in the sub-region.

The Peel sub-region's population has a significant proportion of young families as shown by the age profile in Figure 10. Population growth in Peel is likely to remain strong in the medium to long-term, and as Figure 10 suggests, the area is likely to remain popular with families as well as retirees. The 2031 age profile shows three distinct peaks representing the 5-19, 40-49 and 60-74 age brackets.

Figure 8: Estimated resident population, 2001 to 2011



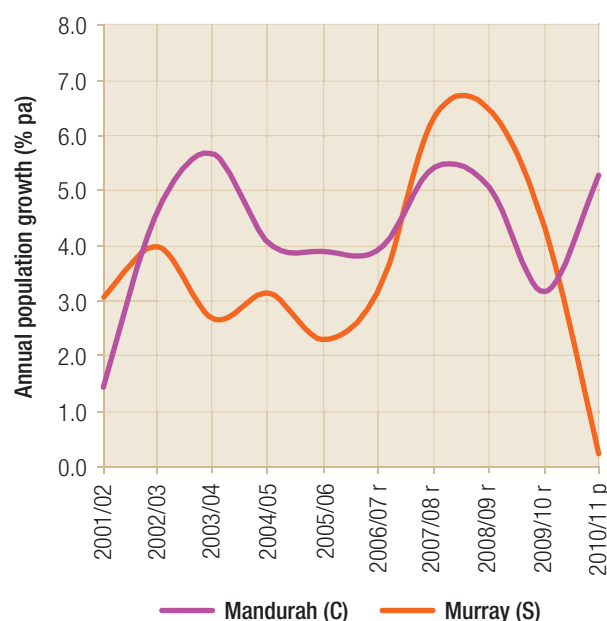
Notes: r – revised, p – preliminary

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

Key population and demographic statistics for the Peel sub-region

- The sub-region deviates significantly from other outer metropolitan sub-regions in that there are a significantly lower proportion of residents aged between 15 and 40².
- Reflecting its status as a preferred retirement destination, a far greater proportion of its residents are aged over 55 years when compared to other outer metropolitan sub-regions³.
- Both the City of Mandurah and Shire of Murray have experienced relatively high growth rates over the period 2006 – 2011. This is expected to continue, with average annual growth rates around 4 per cent forecast over the period 2011 – 2021.

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



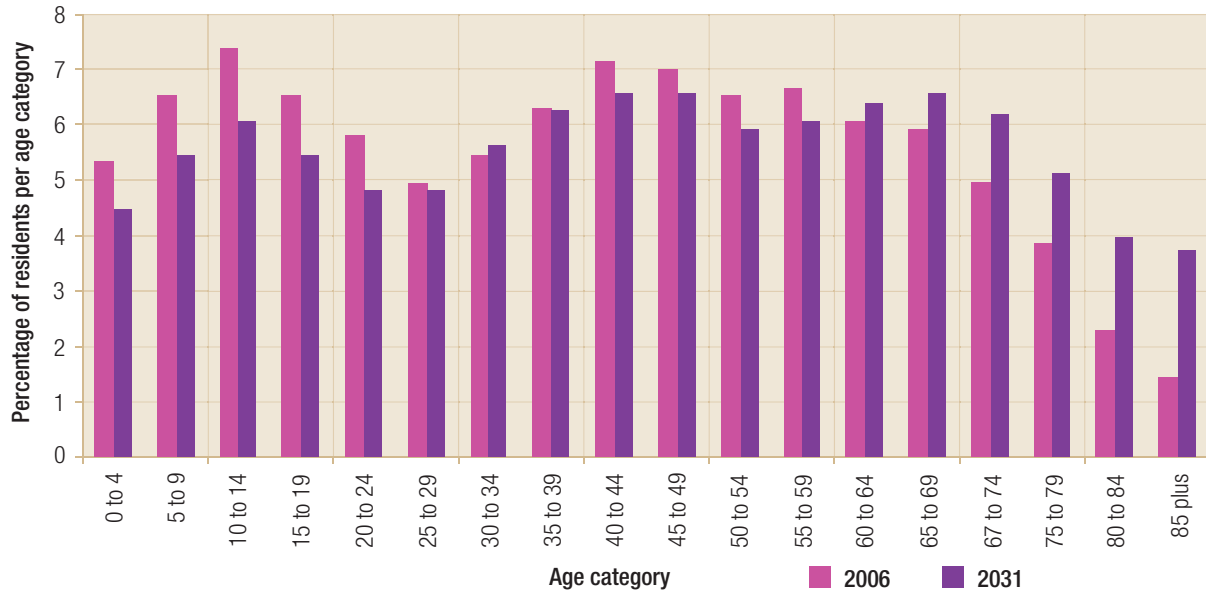
Notes: r – revised, p – preliminary

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 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*.

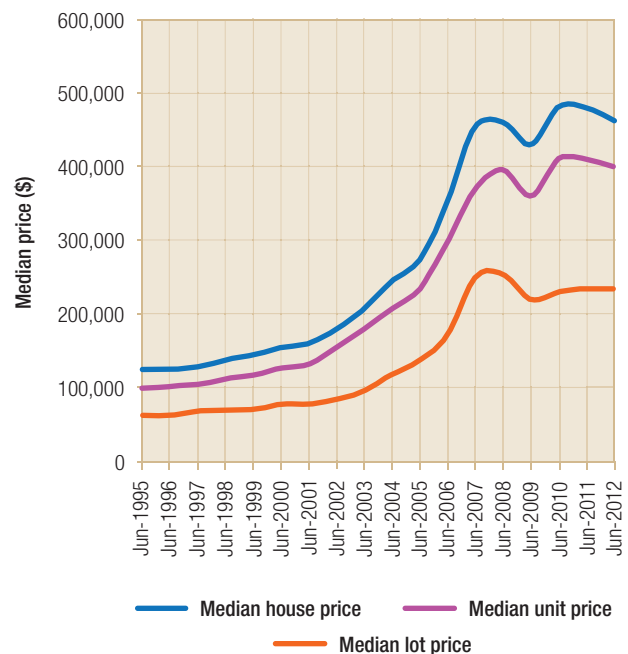
2.7 Property sales, prices and activity

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 Peel sub-region has increased from \$125,000 to \$462,000 (Figure 11). Over the same period, median prices of units increased from \$99,500 to \$400,000 and lots from \$63,000 to \$234,000. Like other sub-regions in the Perth and Peel regional area prices have been relatively flat since 2007.

Figure 11: Median house, unit and lot prices



Source: Real Estate Institute of Western Australia.

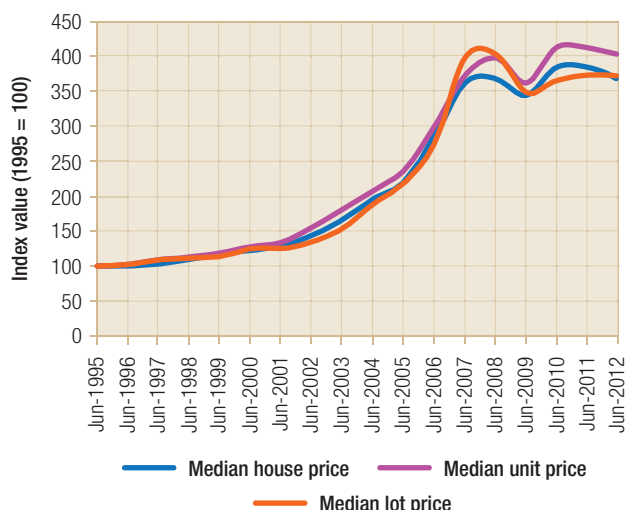
2.7.2 Indices of median house, unit and lot prices

Indices of median house, unit and lot prices (Figure 12) show relative increases since 1995. Lot value increased at a higher rate than houses or units, peaking in 2007. A fall in median prices brought the lot index back into line with house and unit indices by 2009.

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 additions to the dwelling supply.

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

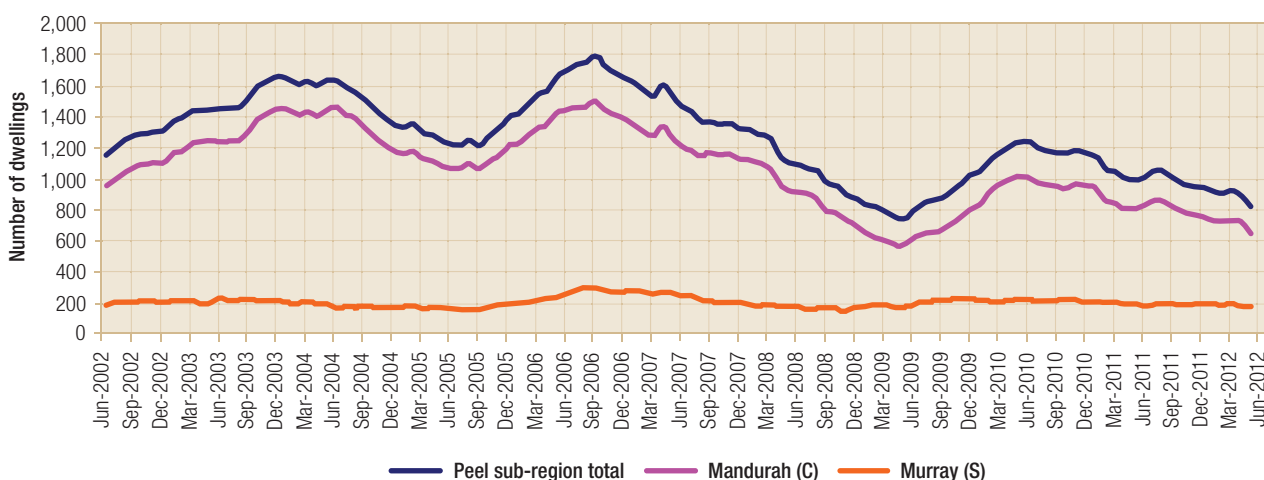


Source: Department of Planning and Real Estate Institute of Western Australia.

2.8.1 New dwelling approvals (houses only)

Figure 13 illustrates a reasonably consistent number of house approvals throughout the time period in the Shire of Murray and a more variable rate of house approvals in the City of Mandurah. Since June 2010 the number of house approvals in the Peel sub-region has been declining.

Figure 13: New house approvals (annualised monthly data)



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

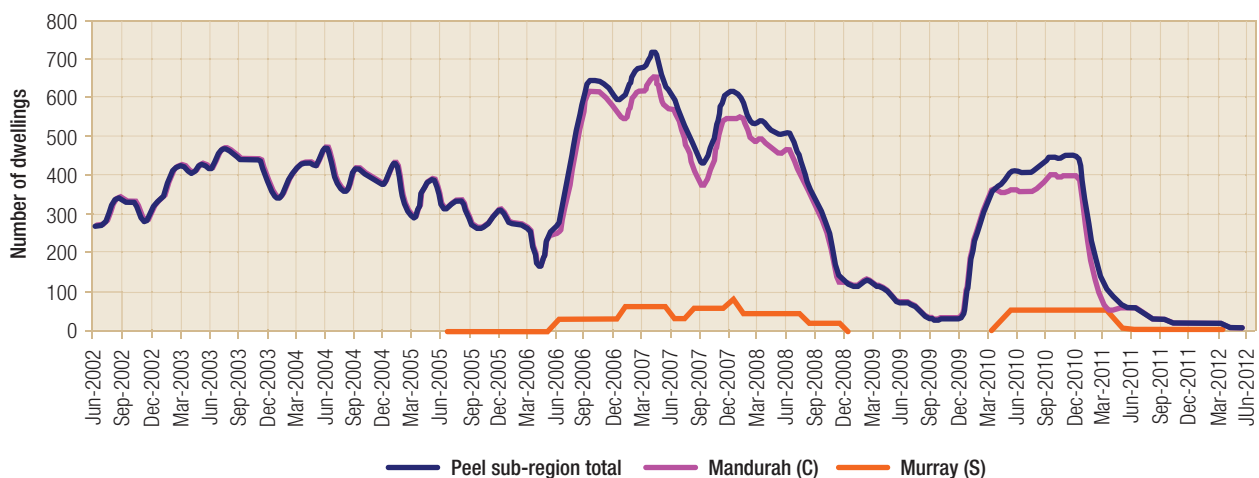
2.8.2 New dwelling approvals (other than houses)

Statistics for dwelling approvals other than houses (e.g. flats, villas and apartments) show significant variations in building approvals from mid-2006 to May 2012 (Figure 14). Levels of dwelling development in Peel, particularly for other dwellings, are heavily influenced by market conditions.

2.9 Overall demand outlook

- Population growth eased considerably in the Peel sub-region since the peak growth years of 2007/08 and 2008/09. Short-term growth is likely to remain flat, given the contracting labour market.
- Mandurah's growth as a tourist destination will continue to create employment opportunities in related industries.
- Overseas immigration is the biggest contributor to population growth in Western Australia, and the Peel sub-region's coastal lifestyle and affordable housing will likely attract a significant proportion of new immigrants. The short-term immigration outlook is moderate and depends largely on economic growth (particularly in the mining sector) and government policy.
- Peel's industrial areas offer a broad variety of employment opportunities in the sub-region. Consolidation of existing operations and the creation of new industrial projects will boost demand for some time.
- The Nambeelup industrial area, located just outside Mandurah city centre, has become increasingly important to the region, and its establishment is a priority for this sub-region. Work has begun to prepare a district structure plan for the Nambeelup core industrial area and its outer extent.

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



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

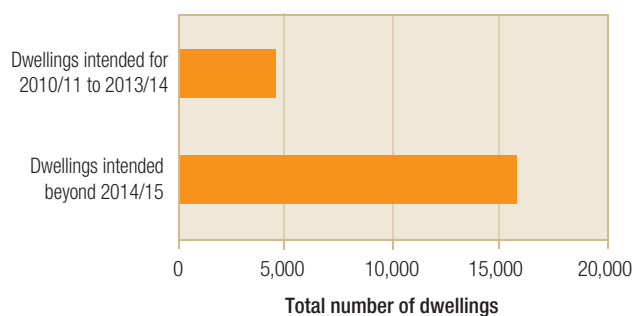
3. Residential land supply

3.1 Overview

The long-term outlook for residential dwelling supply is for high levels of urban growth. Although it has a significantly lower population than any of the other metropolitan sub-regions, Peel contains large stocks of undeveloped zoned land as well as significant urban expansion and investigation areas. Despite this, several indicators suggest that development in the sub-region is more reliant on favourable market conditions than areas closer to central Perth and this may dampen short-term growth.

The Residential Developers' Land and Dwellings Intentions Survey 2009/10 includes projects of five or more residential lots or dwellings. Survey respondents identified 25 projects in the Peel sub-region, expected to yield a total of 4,570 dwellings (single lots plus group dwellings) in the four years from 2010/11 to 2013/14 (Figure 15). Another 15,808 dwellings were identified for development longer-term.

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



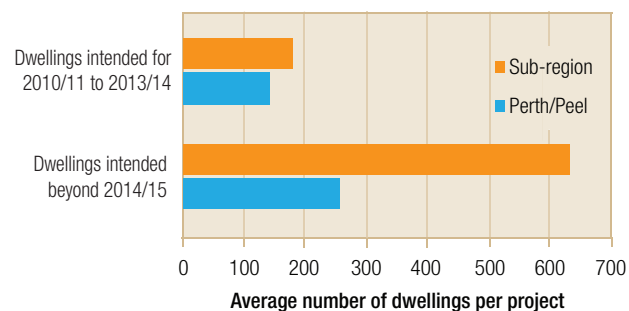
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

The Developers' Intentions Survey results suggest that residential development will increase to levels similar to those experienced before the global financial crisis within a few years (Table 4). The high proportion of future subdivisions, with an unknown development timeframe, in the Peel sub-region reflects uncertain market demand.

3.1.1 Average dwelling yield

An average residential development project in the Peel sub-region will yield 183 dwellings in 2010/11 to 2013/14 compared to the average across Perth and Peel of 144 dwellings per project. Average dwelling yield per project in the long-term (2014/15 and beyond) is significantly greater at 632 dwellings per project (Figure 16). The high number of dwellings per project after 2013/14 is indicative of a number of large greenfield landholdings available for development in the Peel sub-region.

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
Mandurah	762	660	608	2,046	0	3,284
Murray	140	150	140	5,366	7,350	7,117
Peel sub-region	902	810	748	7,412	7,350	10,401

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

Note: Dwelling development 2011/12, 2012/13 and 2013/14 includes single lots 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. Consequently, the long-term outlook for dwelling supply is shaped by growth strategies as well as the intent of developers, who provide capital and carry out the construction required for urban growth.

The draft *Outer Metropolitan Perth and Peel Sub-regional Strategy* identifies 400 hectares of urban expansion areas (development anticipated by 2015) and 2,400 hectares of urban investigation areas (development anticipated by 2020) in the Peel sub-region. It is estimated that existing urban expansion and investigation areas in the sub-region, coupled with undeveloped zoned land, will yield between 64,000 and 86,000 dwellings.

The majority of urban investigation and expansion areas in the Peel sub-region are either located between Mandurah and Pinjarra or in the sub-region's far north. The largest urban investigation area is Keralup, which could potentially yield over 20,000 dwellings. Other areas expected to experience substantial urban growth in the sub-region include Furnissdale, Ravenswood and Pinjarra.

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 schemes and structure plans providing parameters for development within their prescribed areas.

3.3.1 Land being rezoned to urban or urban deferred

The 'upzoning' of land, 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 affecting 88 hectares in North Yunderup (Shire of Murray) and five hectares in Mandurah (City of Mandurah).

In the Residential Developers' Land and Dwellings Intentions Survey, 2009/10 Developers' Intentions Survey one project was identified as needing a scheme amendment (Table 5). The vast 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 2014/15 and beyond
Region scheme amendment (rezoning) required	1	—	3,050
Local planning scheme amendment (rezoning) required	1	—	3,050
No scheme amendment (rezoning) required	23	4,570	12,758

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 Peel sub-region contains 8,000 hectares of land zoned urban and 160 hectares zoned urban deferred under the *Peel Region Scheme*. Of this, 2,830 hectares (32 per cent) is either undeveloped, or developed at very low density. This constitutes approximately 12 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 Peel sub-region. 'Committed for other purposes' refers to land that is 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 28 years. As at December 31 2010, there were 3,070 green title and 70 strata lots with conditional approval in the non-urbanised areas of the Peel sub-region (Figure 18).

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 Peel 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.

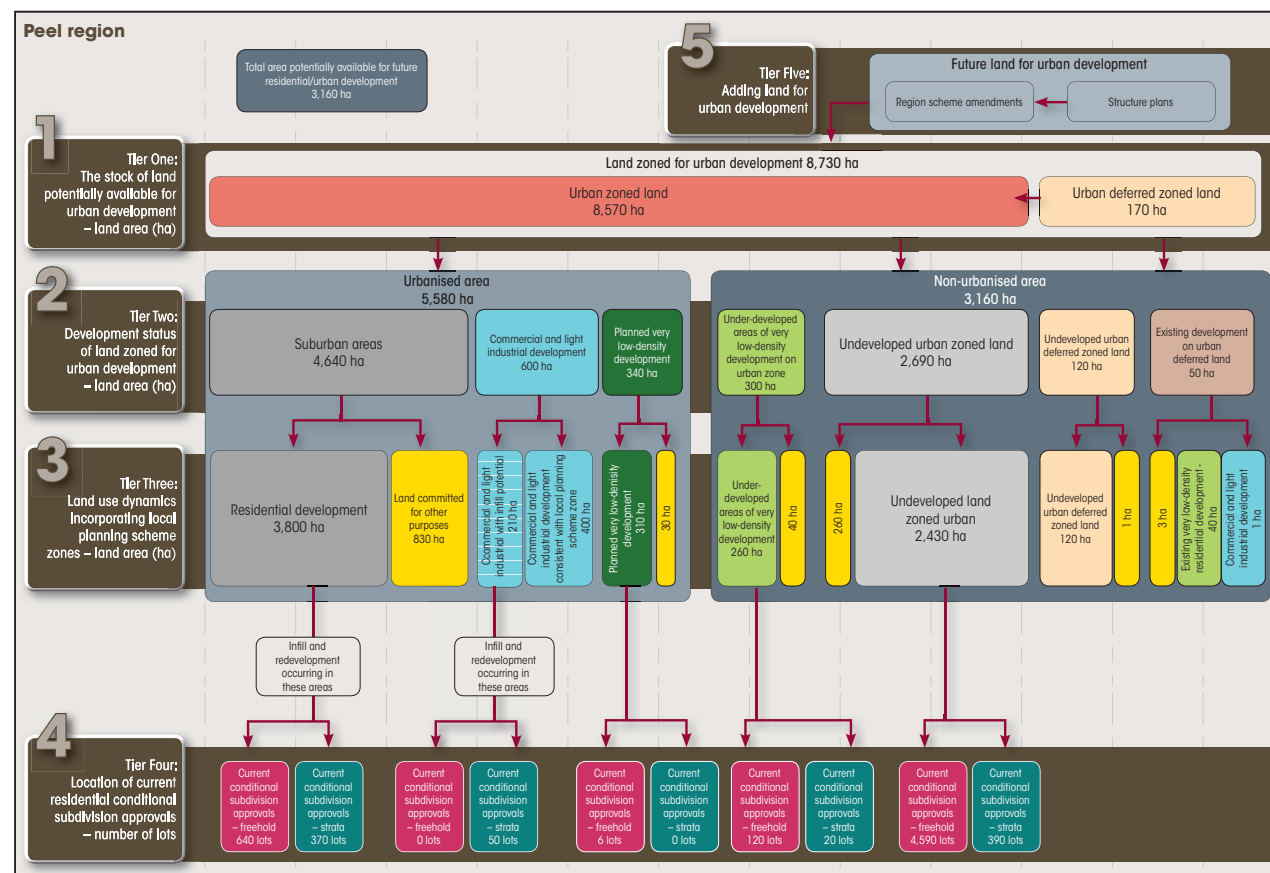
Table 6: Land available for future development (Peel sub-region)

	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	200	2,470	120	50	2,840
Committed for other purposes	30	200	0	0	230
Potentially available for development	160	2,270	120	40	2,610

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

Note: Figures may not sum due to rounding.

Figure 17: Urban Growth Monitor land supply assessment - Peel region (includes Waroona)



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

3.3.3 Structure plans

Work is currently underway on the preparation of a sub-regional structure plan for the southern metropolitan area and Peel sub-region. This structure plan is referred to as the South Metropolitan Peel Structure Plan (SMPSP). A draft of the SMPSP is currently expected to be released for public comment mid 2013. The SMPSP will provide the required guidance for future amendment proposals to the Peel Region Scheme.

Since December 2011 the WAPC has endorsed the following strategic planning documents for the Shire of Murray:

- North Dandalup Townsite Structure Plan
- Dwellingup Structure Plan
- Nambeelup - North Dandalup Local Rural Strategy
- Hills Landscape Precinct Plan

In addition to the above, since 1 July 2011 the WAPC has approved eight local structure plans or outline development plans for particular areas or landholdings within the City of Mandurah and Shire of Murray.

As at 22 August 2012, there were two structure plans or planning precinct plans that are currently being assessed prior to being presented to the WAPC for determination.

3.3.4 Planning issues

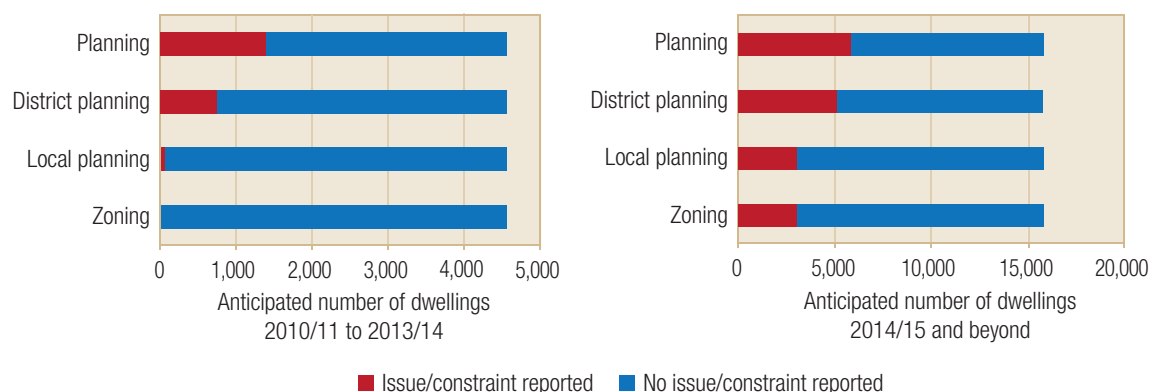
Developers identified six projects with overall planning constraints that needed to be resolved to develop 1,400 dwellings in the short-term (2010/11 to 2013/14) and 5,844 dwellings in the long-term (2014/15 and beyond) (Figure 18). Developers anticipated that these issues would be resolved for four of these project areas by the end of 2010/11. For the other two projects the resolution timeframe of the planning issues was uncertain, but these projects are not anticipated to release any dwelling sites before the end of 2013/14.

District planning issues affect three development projects with an anticipated yield of 740 dwellings between 2010/11 and 2013/14, and another 5,160 dwellings long-term (2014/15 and beyond).

Local planning issues also affect two projects, with a minimal yield in the short-term of 76 dwellings and 3,050 dwellings long-term.

Zoning issues affect one project with no yield in the short-term and a yield of 3,050 dwellings in the long-term.

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 Peel sub-region is one of the fastest growing areas of the city and this is reflected in the high levels of subdivision activity relative to population (Table 7). Although the Shire of Murray has grown quickly in recent years, most of the residential subdivision activity in the 12 months to December 2011 occurred in the City of Mandurah, where 94 per cent of final approvals and 99 per cent of conditional approvals in the sub-region were granted.

Final approvals were granted for only 10 special rural and special residential lots in the 2011 calendar year. There was, however, an application proposing 152 lots received in the March 2011 quarter, in the Shire of Murray.

Erratic conditional approval figures suggest a changeable market in the Peel sub-region, as developers speculatively seek conditional approval but do not necessarily continue with development (Figure 19). From January 2004 to December 2011, approximately 55 per cent of conditional residential approvals progressed to final approval. This represents an improvement on the long-term conversion rate for the sub-region, where typically only one in three conditional approvals progress to final approval stage.

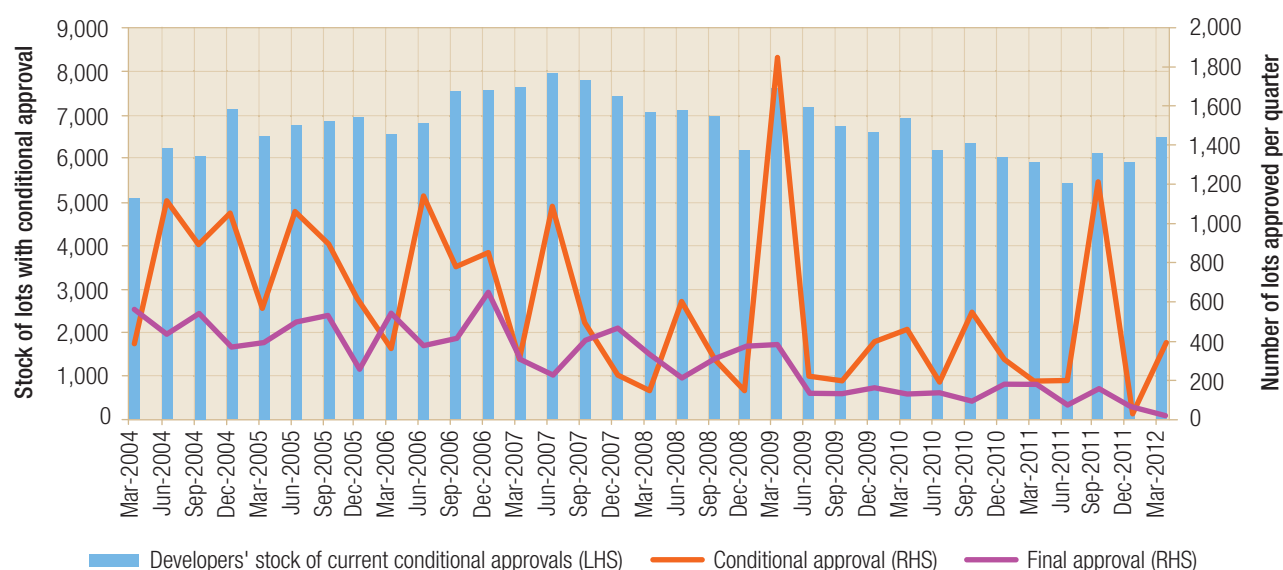
Table 7: Subdivision approvals

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	1,632	332	1,631	5,923	460	489
Special residential and special rural	24	61	146	464	47	10

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

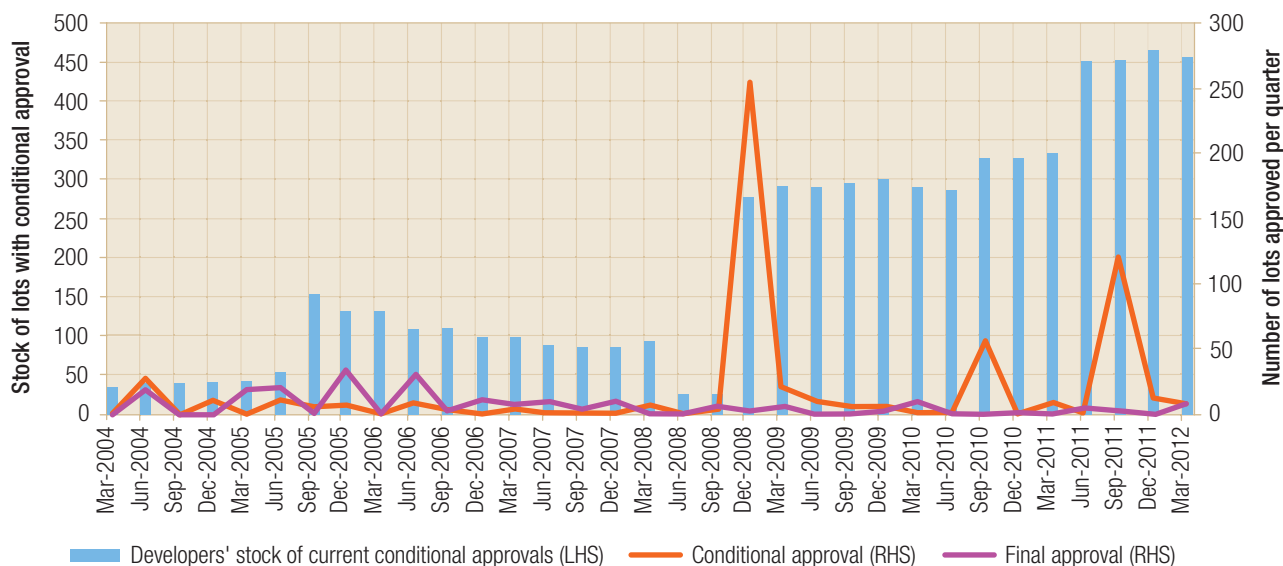
¹ Refers to conditionally approved lots where a servicing agreement (agreement to construct) has been signed between the Water Corporation and the developer. These are termed lots on non-cleared agreements. Data not available for 31 December 2011.

Figure 19: Residential subdivision approvals



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

Figure 20: Special residential and special rural subdivision approvals



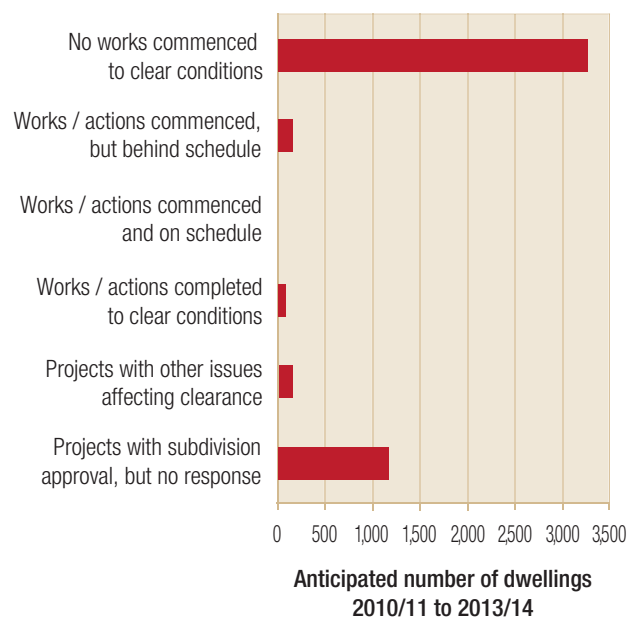
Source: Western Australian Planning Commission 2012, State Lot Activity.

Since March 2004, there has been a significant stock of special rural and special residential lots with conditional approval. Activity for this subdivision category peaked in the December 2008 quarter, with conditional approvals granted for 254 lots. However, the conversion rate for this land use remains low, with approximately 43 per cent of conditional approvals progressing to final approval between January 2004 and March 2012 (Figure 20). Consequently, relatively few special rural and special residential lots reach final approval, with just ten lots coming to fruition in the 12 months to December 2011.

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). In those cases where developers were having trouble meeting subdivision conditions in the Peel sub-region, the most common issues were with the local government and the Department of Sustainability, Environment, Water, Population and Communities.

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



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

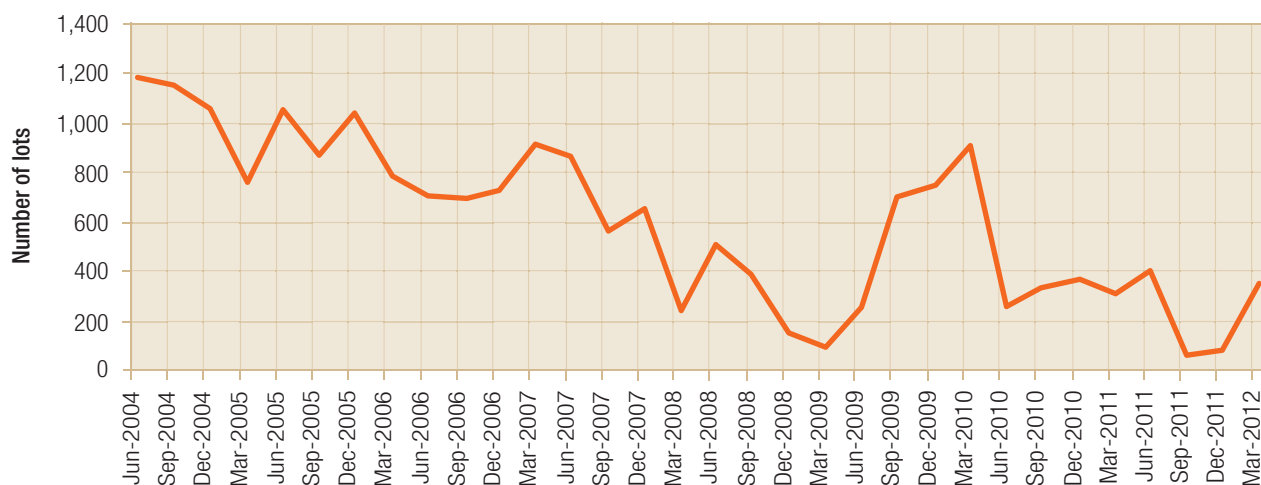
3.5 Development

The construction of residential lots can be hindered by various development constraints. Consequently, an adequate supply of lots is reliant on identifying and resolving issues that may slow or diminish lot production.

3.5.1 Lots under construction

Figure 22 illustrates lots under construction in the Peel 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. Although there were large numbers of lots under construction in late 2009 and early 2010 the graph shows a definite decline in the level of new lot production in the Peel sub-region, not dissimilar to the decline in final subdivision approvals over the same period.

Figure 22: Lots under construction (UDIA member developers)



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

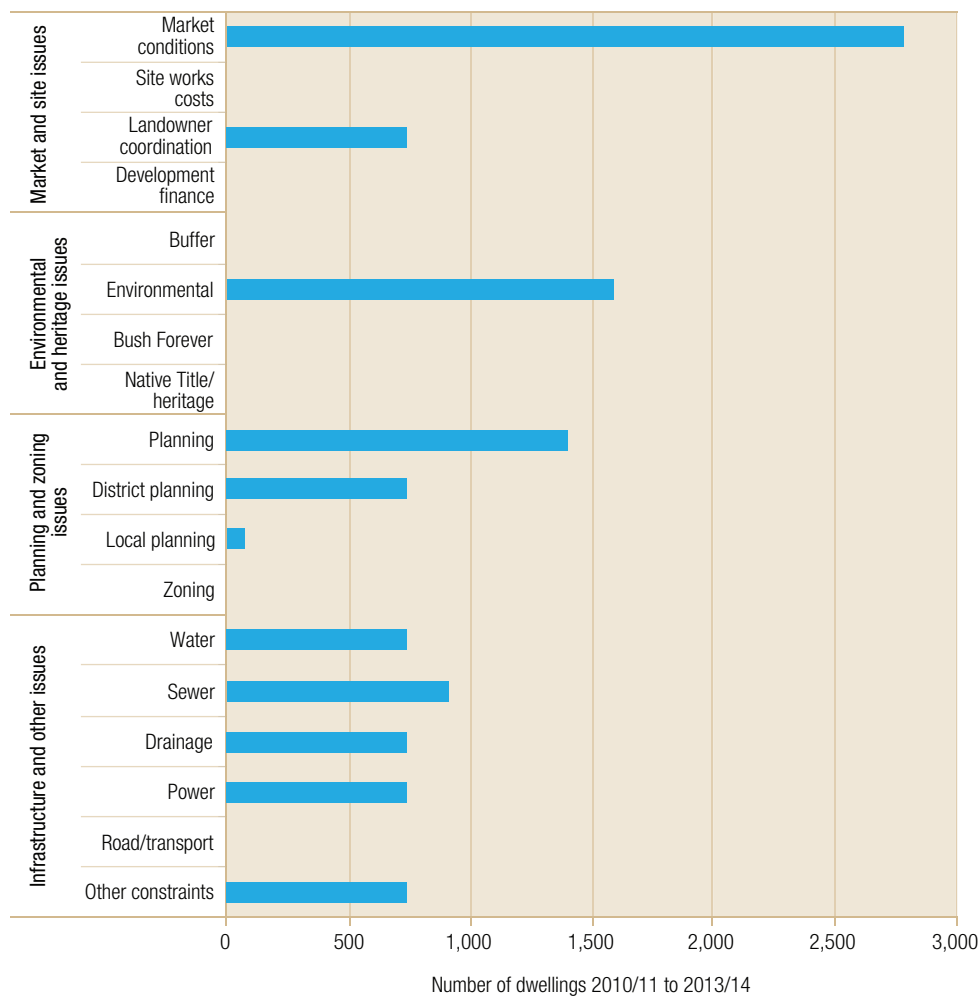
3.5.2 Short-term development issues 2010/11 to 2013/14

Major development issues identified by land developers are shown in Figure 23. This indicates that concern about market conditions affects the greatest number of dwelling sites in the short-term to 2013/14. This constraint affects 14 separate development projects, which will yield an expected 2,787 dwellings between 2010/11 and 2013/14.

Environmental issues affect four projects expected to yield 1,586 dwellings in the short-term, while planning issues constrain six projects yielding 1,400 dwellings.

Utility infrastructure and servicing issues are also a constraint to four projects intended for short-term development.

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)

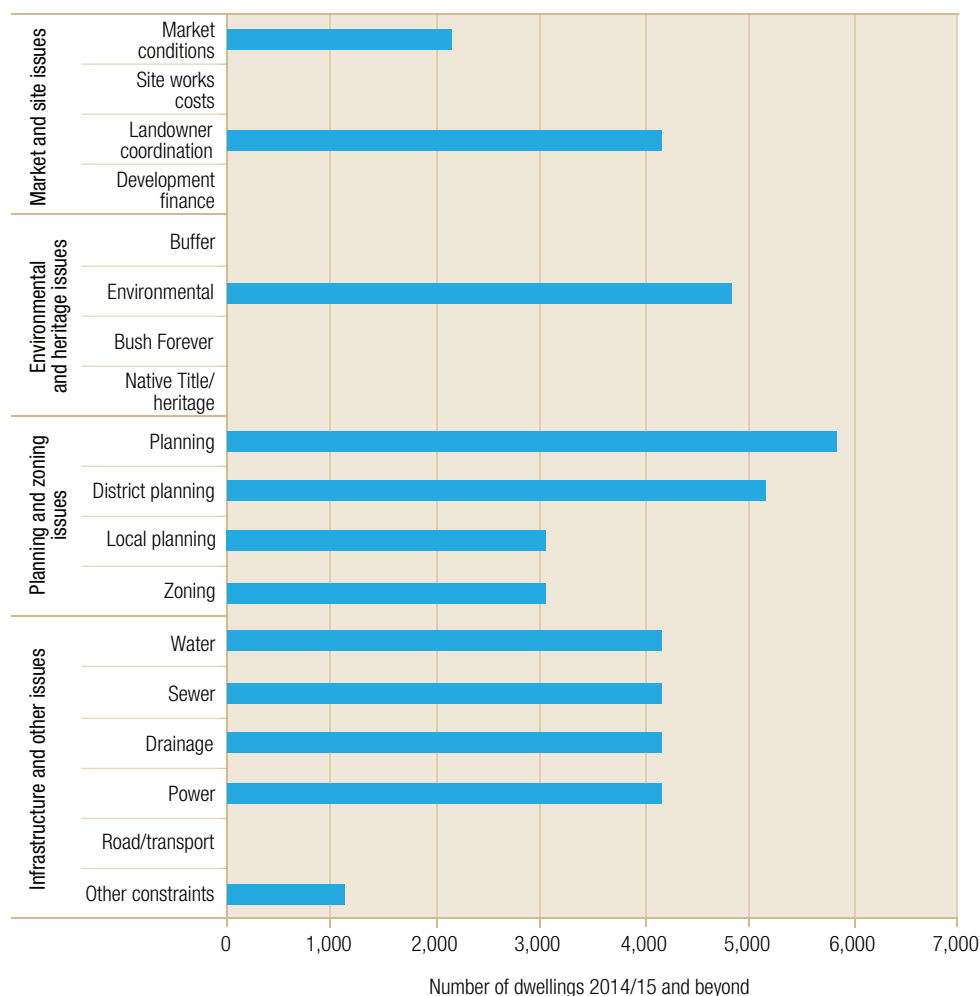
Constraints to projects intended for development in the long-term are more dependent on resolution of planning and infrastructure constraints. Environmental issues and landowner coordination are also significant factors (Figure 24).

3.5.4 Environmental issues affecting development

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

- Urban water management, which has three main elements:
 1. flood management and potential impacts resulting from rising sea levels;
 2. groundwater quality; and
 3. recharge flows and decreased flows in the Murray River.

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



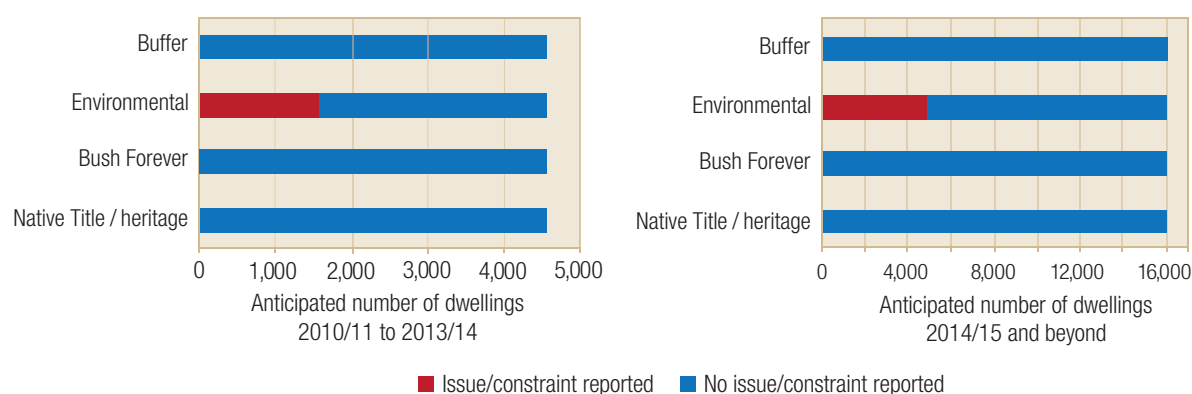
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

- Many of the potential future development sites within the Peel sub-region are low-lying, therefore, significant fill will be required which can be difficult to source and expensive to haul long distances.
- Effective management of nutrients, particularly the need to limit the flow of nutrients into rivers and waterways within the Peel region.
- Mosquito and midge management around waterways, wetlands and the Peel estuary.
- Issues related to the protection of the breeding, nesting and feeding areas for the Carnaby's Black Cockatoo.

3.5.5 Environmental issues (survey responses)

Developers identified four large projects with environmental issues that have a combined yield of 1,586 dwellings in the short-term (2010/11 to 2013/14) and 4,844 dwellings long-term (2014/15 and beyond) (see Figure 25). Developers expected that for two of these projects, the environmental issues would be resolved quickly, while resolution timeframe for the other two projects was uncertain.

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



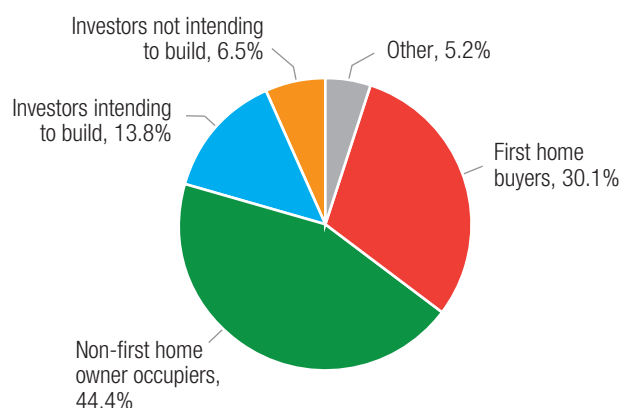
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

3.5.6 Market segment of dwellings for development

Developers of 25 projects in the Peel sub-region yielding 4,570 dwellings in the short-term (2010/11 to 2013/14) and 15,808 dwellings in the longer-term provided information on their expected target market segments (Figure 26) as part of the Developers' Intentions Survey.

Land developments in the Peel sub-region are targeted primarily at non-first home owner-occupiers (44.4 per cent), first home buyers (30.1 per cent) and investors intending to build (13.8 per cent). Investors not intending to build include speculators who purchase land intending to re-sell the lots at higher price. Generally, few developers target this market segment; however the response from the Developers' Intentions Survey indicated that this segment of the market is greater in Peel than in any other sub-region. The 'other' category includes aged-care developments.

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	561	827	258	121	97
Dwellings 2014/15 and beyond	1,264	1,446	388	375	13

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

Note: 'Other' includes aged-care facilities.

3.5.7 Market and site issues affecting development

Developers of 14 projects expressed concern about market issues; however, most of these issues were expected to be resolved by the end of 2010/11. These projects will yield 2,787 dwellings in the short-term (2010/11 to 2013/14), and 2,147 dwellings in the long-term (2014/15 and beyond).

Landowner coordination issues affect two large projects with an anticipated yield of 740 dwellings between 2010/11 and 2013/14, and another 4,160 dwellings long-term (Figure 27).

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

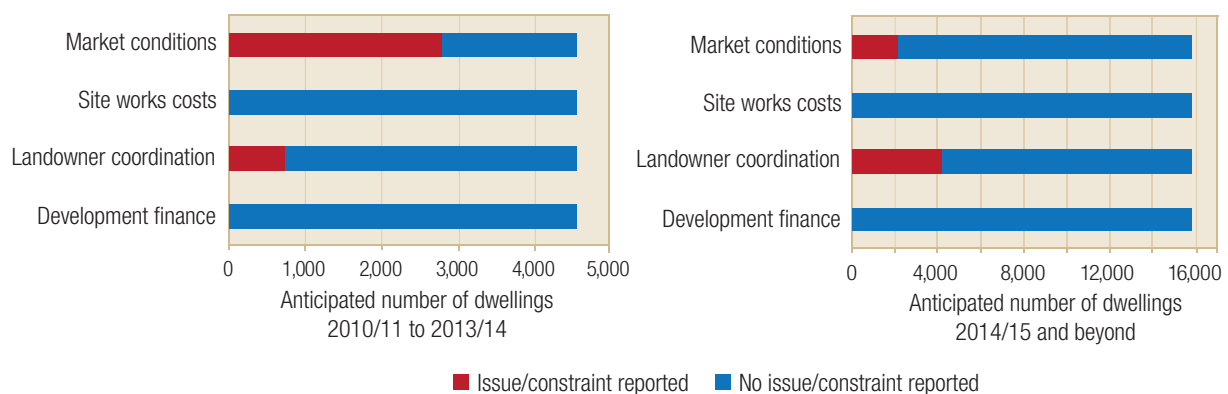
Time-series data for the number of lots on the market is shown in Figure 28. It shows a period between late 2005 and early 2008 with low numbers of new lots available to the public in the Peel sub-region. This is likely to be a result of supply constraints during a period of high demand.

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 listings of vacant lots for sale since March 2008 (Figure 29).

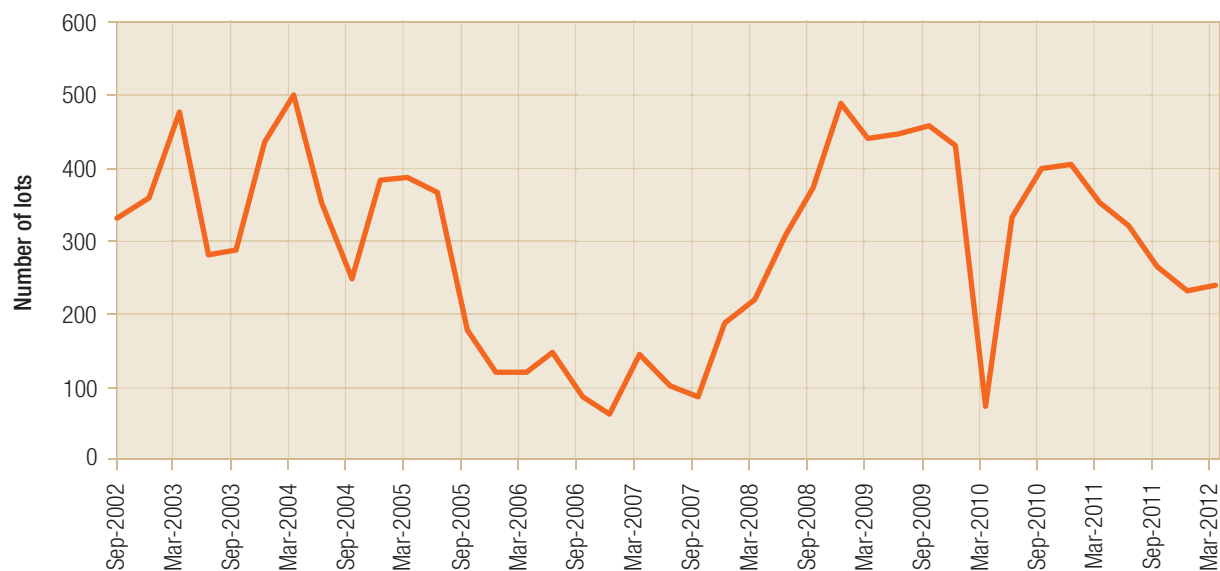
REIWA data show the stock of lots listed for sale in the Peel sub-region has been relatively steady, especially when compared to the number of lots available from major land developers (Figure 28).

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



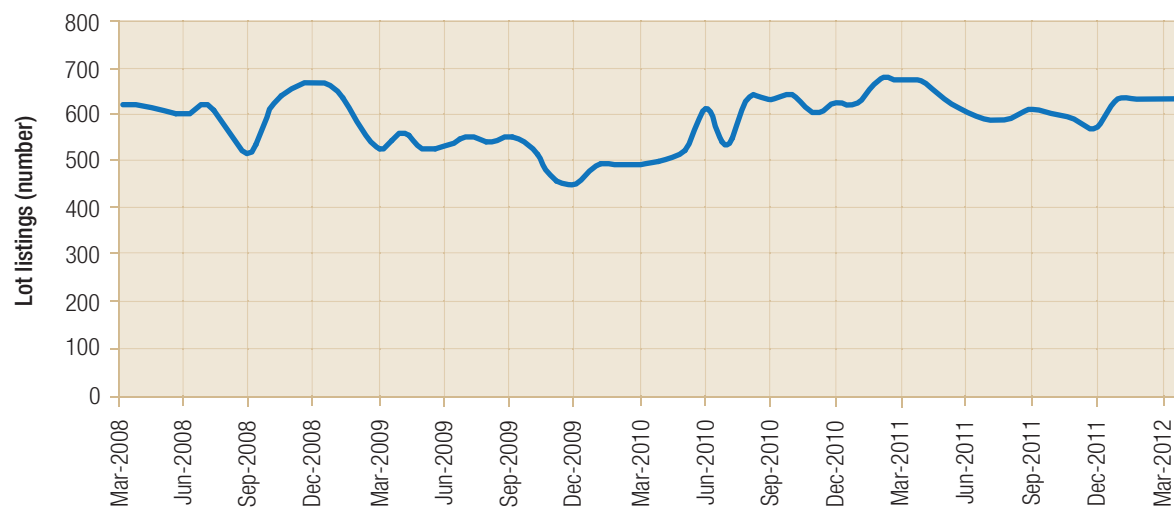
Source: Department of Planning, Residential Developers' Land and Dwellings Intentions Survey 2009/10 (unpublished data).

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 for lots that have reached practical completion, but not listed for sale. This may be due to reasons such as:

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

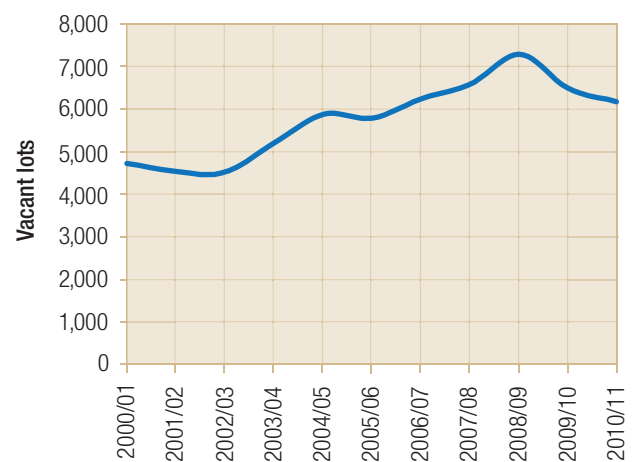
In June 2009, over 1,400 lots were being withheld from sale, which is the highest total for any sub-region during the time-series; however three months later, issues were resolved and the lots were made available to the public (Figure 30).

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 6,152 vacant, serviced lots in the Peel sub-region, which

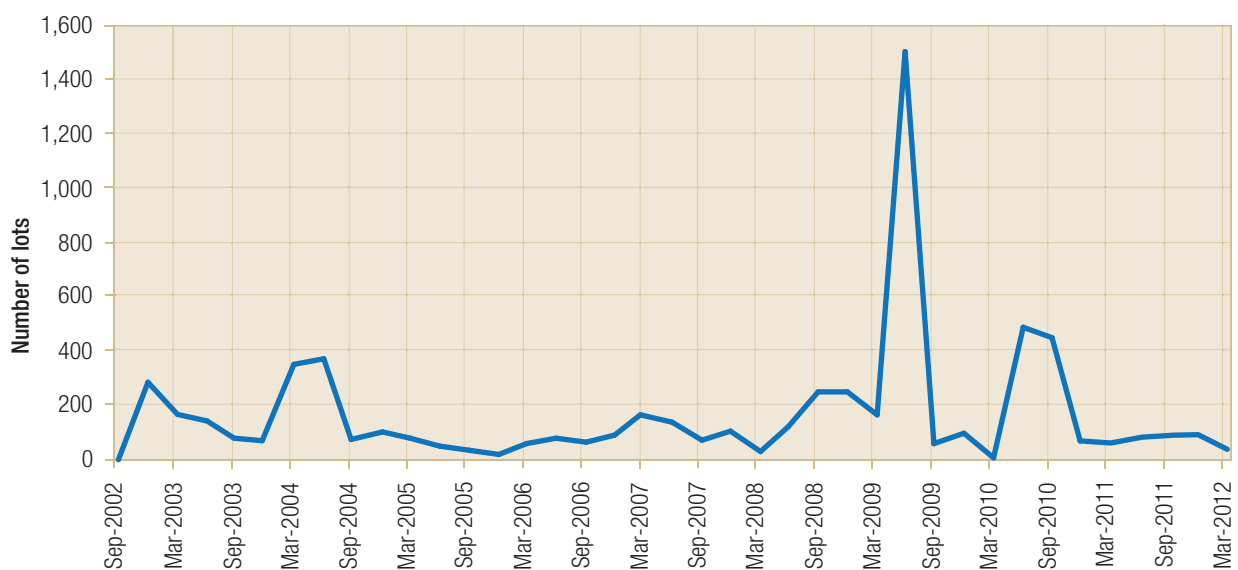
constitutes approximately 19 per cent of the total for the Perth and Peel metropolitan area. This is the largest stock of vacant serviced lots of any of the outer sub-regions. Figure 31 shows a general increase in the overall stock of vacant lots in the sub-region with an increase of 1,441 lots between 2000/01 and 2010/11.

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 presold prior to development or issue of titles) is indicated in Figure 32. The figure shows a general decline in sales from a high in 2003 followed by a brief recovery; however lot sales in the Peel sub-region remain significantly lower than pre-2007 levels.

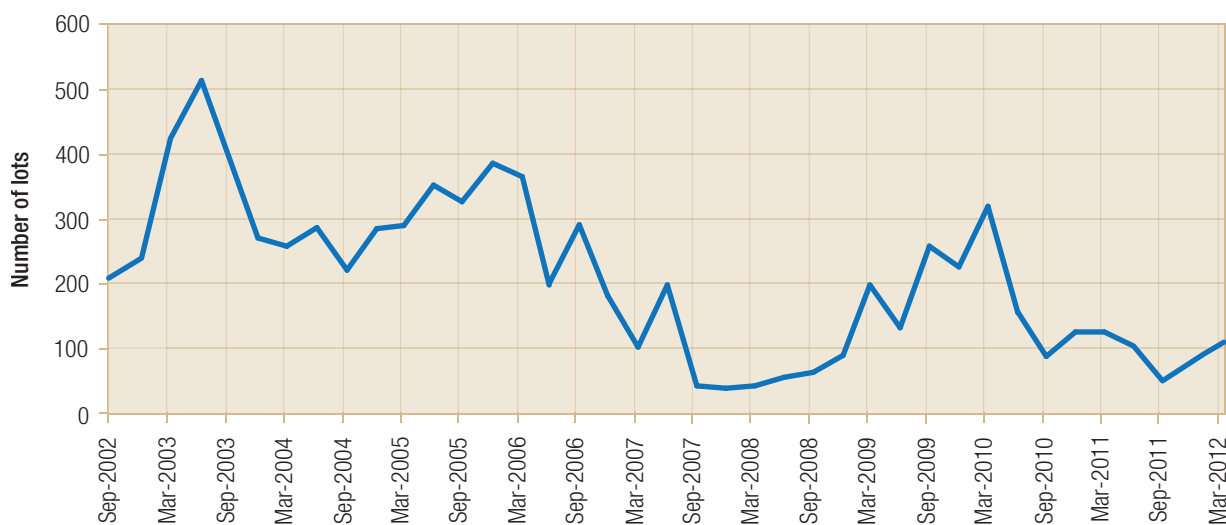
Notably, developers in Peel have indicated that market conditions are a major issue when trying to determine the timing of development in the sub-region.

Lots sold by smaller developers (comprising less than half of all land developers) are not shown in the 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 is also a leading indicator of demand.

Figure 32: Lots sold (UDIA member developers)



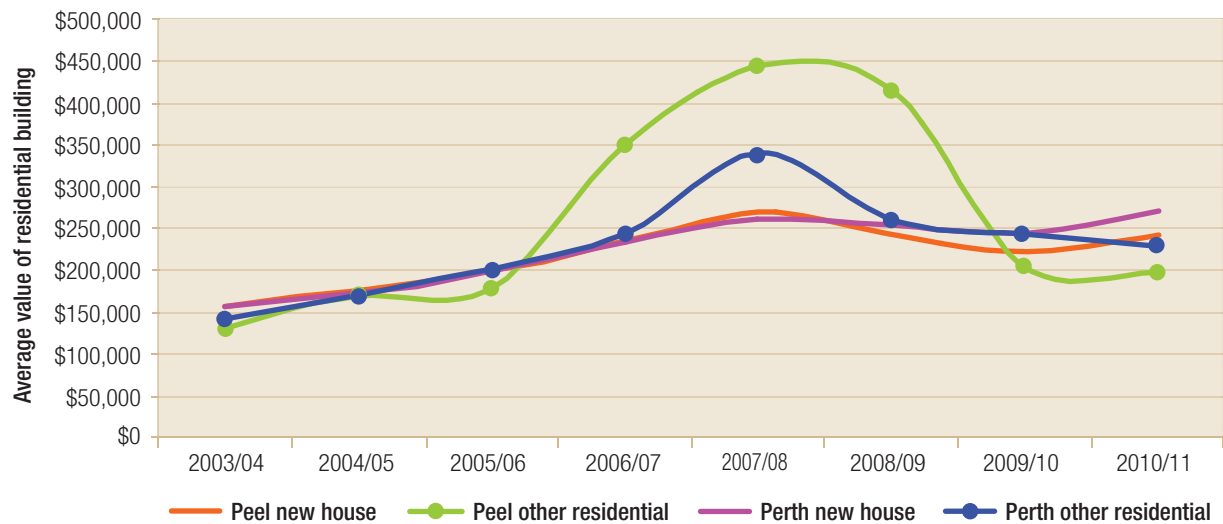
Source: Urban Development Institute of Australia, 2012, Urban Development Index.

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 Peel sub-region compared to the Perth metropolitan region.

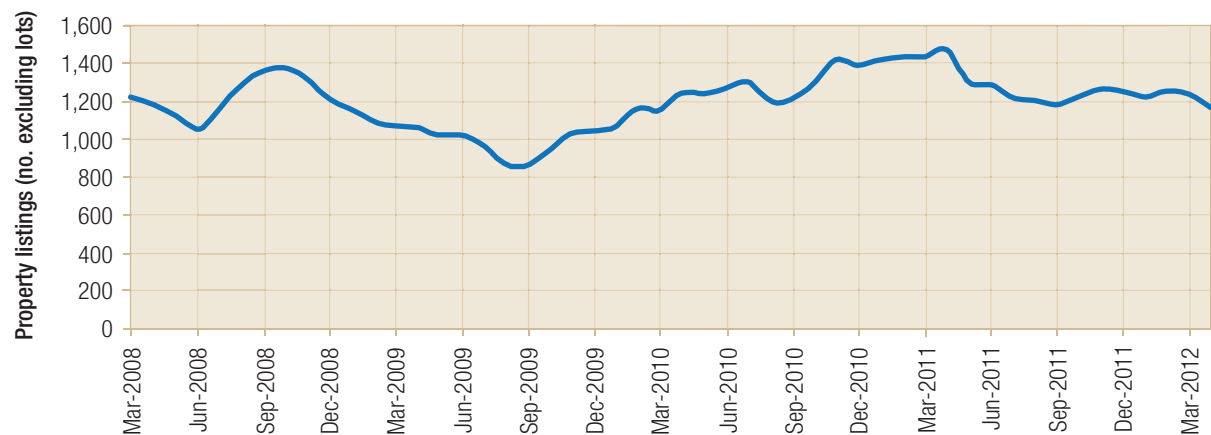
The construction of premium apartments between 2006/07 and 2008/09 is the most distinct departure from the trend over that period and it was particularly strong in the Peel sub-region.

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 Peel sub-region shortly after the onset of the global financial crisis. Listings reached a low in early 2010, at just under 900 dwellings, but decline was not as marked in Peel as in other sub-regions. Listings have since returned to levels similar to those experienced before the downturn.

3.7.3 Land consumption and density

Since 1991, an average of 101 hectares of land per year has been consumed by urban development in the Peel sub-region (Table 9 and Figure 35). If this trend continues for the next 30 years, 3,030 hectares of land will be required to meet demand, requiring an additional 230 hectares to be zoned for development by 2041.

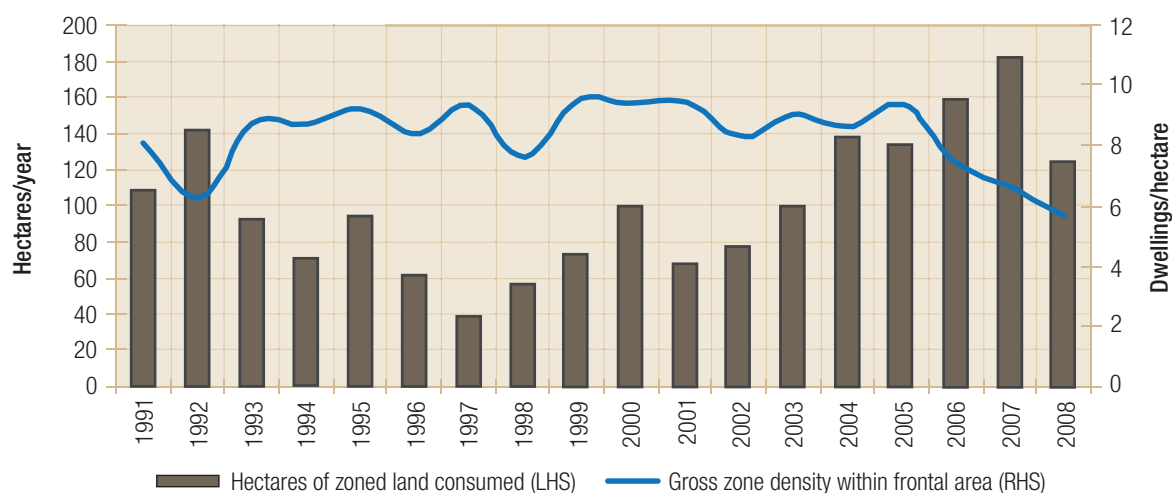
Table 9: Land consumption for urban development and dwelling density

Land consumption	Hectares per year
18 year average (1991-2008)	101
5 year average (2004-2008)	148
2 year average (2007-2008)	154

Dwelling density	Dwellings per zoned hectare
Average 1991-2008	8.09
Minimum over period	5.61
Maximum over period	9.52

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

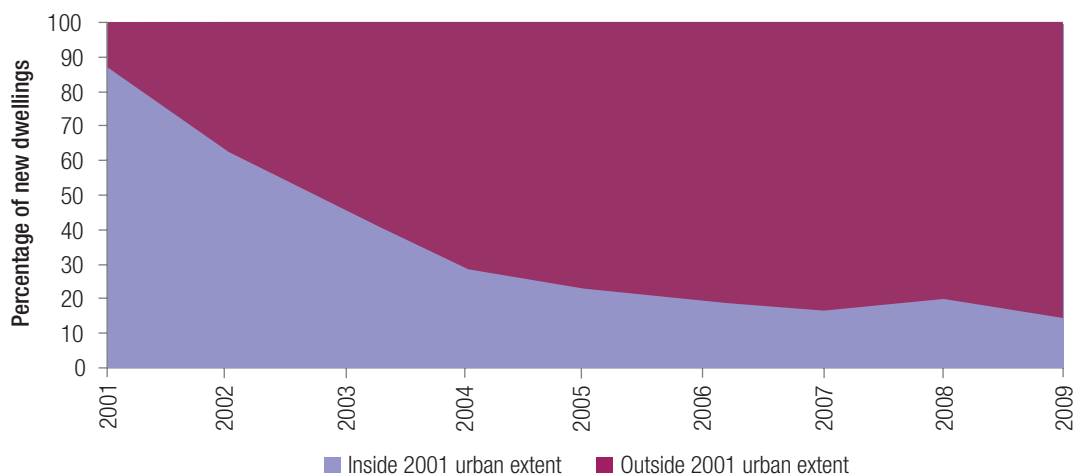
As dwelling stocks age or demand increases sufficiently, the redevelopment of existing urban areas becomes increasingly appealing to developers.

The Peel sub-region is predominantly rural. Although the vast majority of development occurs on greenfield sites, there is some urban consolidation in central Mandurah, the sub-region's primary urban centre. The Inner Mandurah Precinct Plan proposes a significant infill and redevelopment project, and increased residential density and diversity in the city centre.

Figure 36 shows the proportion of new dwellings constructed within the urban extent of the 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 in the Peel sub-region reached a low of 14.4 per cent in 2009. 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 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 Peel sub-region for 2011. There were seven final approvals for commercial lots issued in the 12 months to December 2011.

Commercial subdivision activity was limited in Peel during 2011; however, the sub-region has a significant stock of current conditional approvals compared to the number of final approvals issued. This suggests that developers in the sub-region are obtaining conditional approval for commercial subdivisions but delay progressing the lots to final approval, until market conditions are favourable.

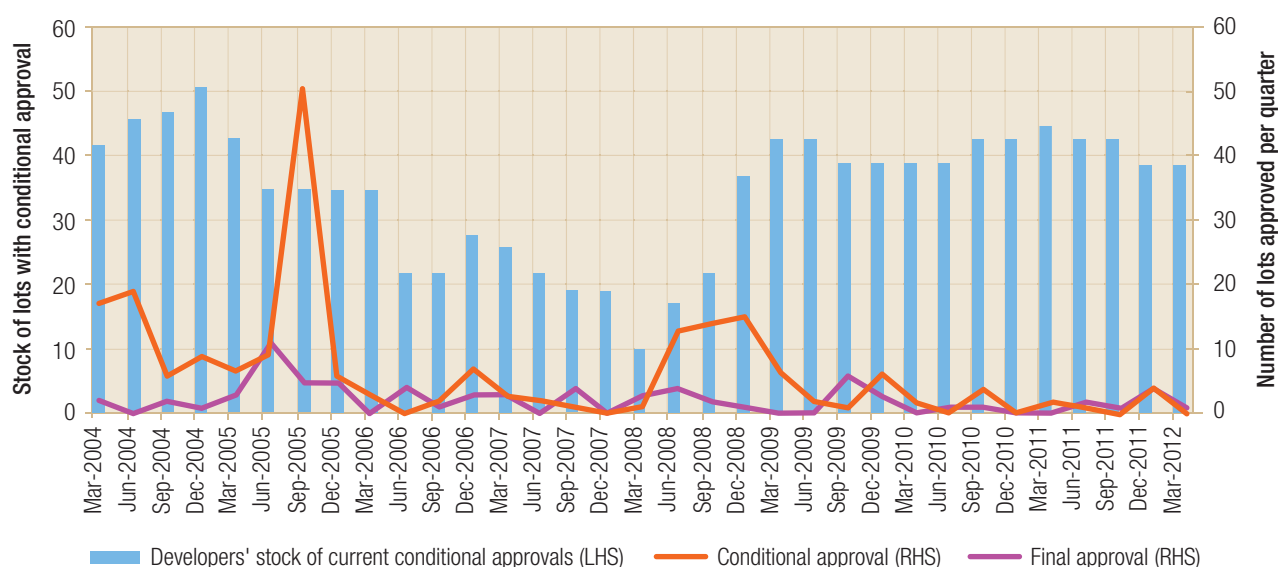
Table 10: Commercial subdivision approvals

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
Mandurah	2	0	5	30	2	3
Murray	3	0	2	9	0	4
Peel sub-region	5	0	7	39	2	7

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 that there are three main centres in the Peel sub-region attracting interest from investors in the commercial sector at present – Greenfields, Halls Head and Mandurah (See Map 1). Although other areas of the Peel sub-region are attracting significant investment in residential and infrastructure projects, there has not been a corresponding increase in commercial investment.

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

Table 11: Major commercial projects

Project	Suburb	Description	Completion
Halls Head District Shopping Centre	Halls Head	Extensions to shopping centre comprising 10,910 m ² of retail space	2009
Lido mixed use development	Mandurah	Retail/tourism mixed use development	2010
Peelwood Parade Seascapes Shopping Centre	Mandurah	Shopping centre	2013
Mandurah Junction	Mandurah	Large mixed use development at Mandurah train station	2015

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

4.2 Industrial development

The Peel sub-region has significant stocks of industrial land, particularly given its small resident population. Table 12 illustrates the amount of zoned land in the City of Mandurah and Shire of Murray.

Table 13 provides a breakdown of vacant and developed land for industrial complexes in the Peel 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 Peel sub-region of 910 hectares by 2031, and based on existing data on potential supply, the sub-region will encounter a deficit of 544 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.

Table 12: Industrial zoned land (Peel Region Scheme) in the Peel 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
1,818.7	Mandurah	85.4	4.7
	Murray	1,733.3	95.3

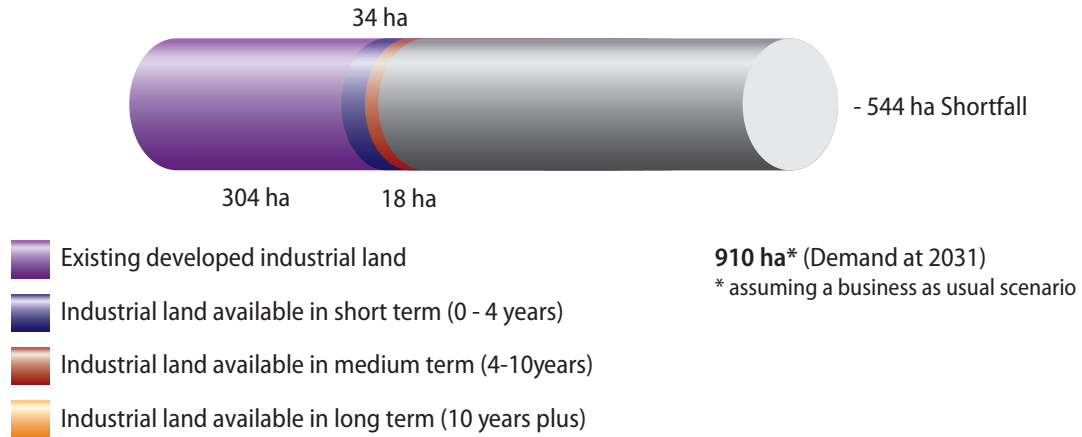
Source: Department of Planning internal database (2012).

Table 13: Industrial complexes in the Peel sub-region

Complex	Developed (ha)	Vacant (ha)	Total (ha)	Percentage vacant
Gordon Road	43	4	47	8.5
Park Road	19.5	1.5	21	7.1
Lakes Road	0	172	172	100.0
Pinjarra Industrial	32	151	183	82.5
Napier Road	36	67	103	65.0
Alcoa Pinjarra	1,293	0	1,293	0
Total	1,423.5	395.5	1,819	21.7

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

Figure 38: Current industrial zoned land supply: Peel sub-region



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

It is expected that, with current proposals to release industrial land, sufficient stocks should become available to satisfy demand in the Peel sub-region for the next 20 years. However, provision of sufficient industrial land will depend on arrangements being made to provide suitable service infrastructure for priority industrial areas, such as Nambeelup.

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

The Peel sub-region saw a significant increase in the industrial lot balance in June 2006, due to a large subdivision being approved, enabling the development of the Pinjarra industrial area (Figure 39). Since then there has been limited industrial subdivision activity in the sub-region. In the 12 months to December 2011 applications were received to subdivide 16 industrial lots and just three final approvals were issued.

Analysis of development applications and approvals indicates that the Peel sub-region has a relatively small number of industrial projects under construction. There were a series of approvals granted for industrial construction projects in Greenfields (City

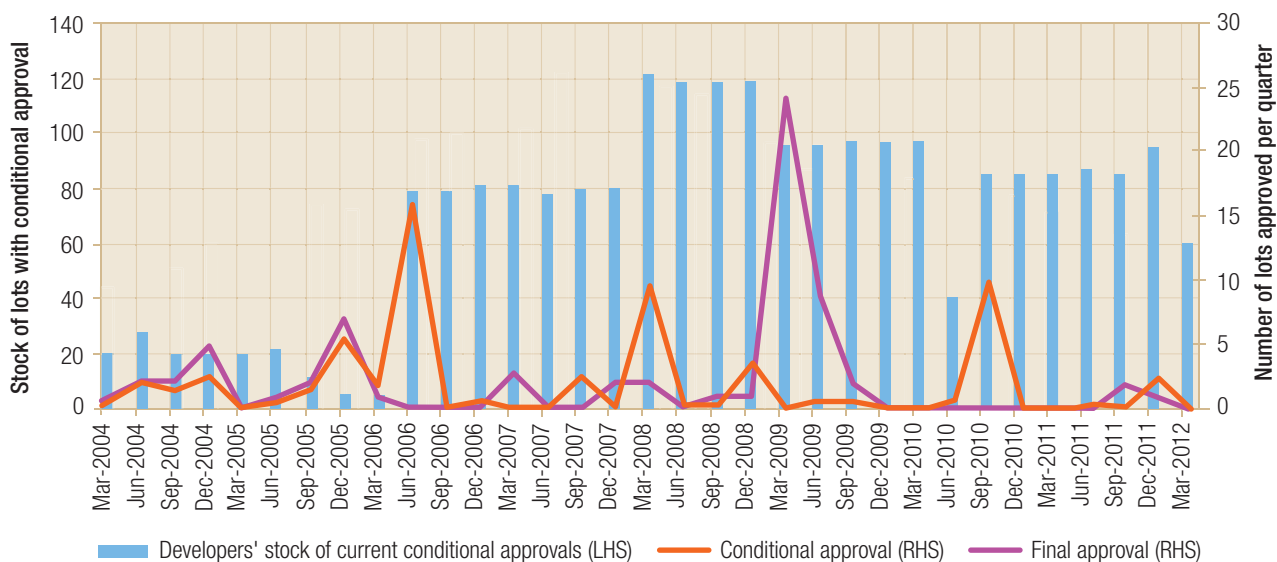
Table 14: Industrial subdivision approvals

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
Mandurah	10	0	10	9	0	1
Murray	6	0	5	86	0	2
Peel sub-region	16	0	15	95	0	3

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.

of Mandurah) for construction in 2010 and 2011. In the Shire of Murray there are several recent and planned projects around Pinjarra (Map 1) with large projects being undertaken by Alcoa.

Buoyed by development around Pinjarra, the estimated value of recent and planned industrial sector construction in the Peel sub-region constitutes approximately 13 per cent of the total for such projects in the metropolitan area.

Major industrial structure plans in the Peel sub-region

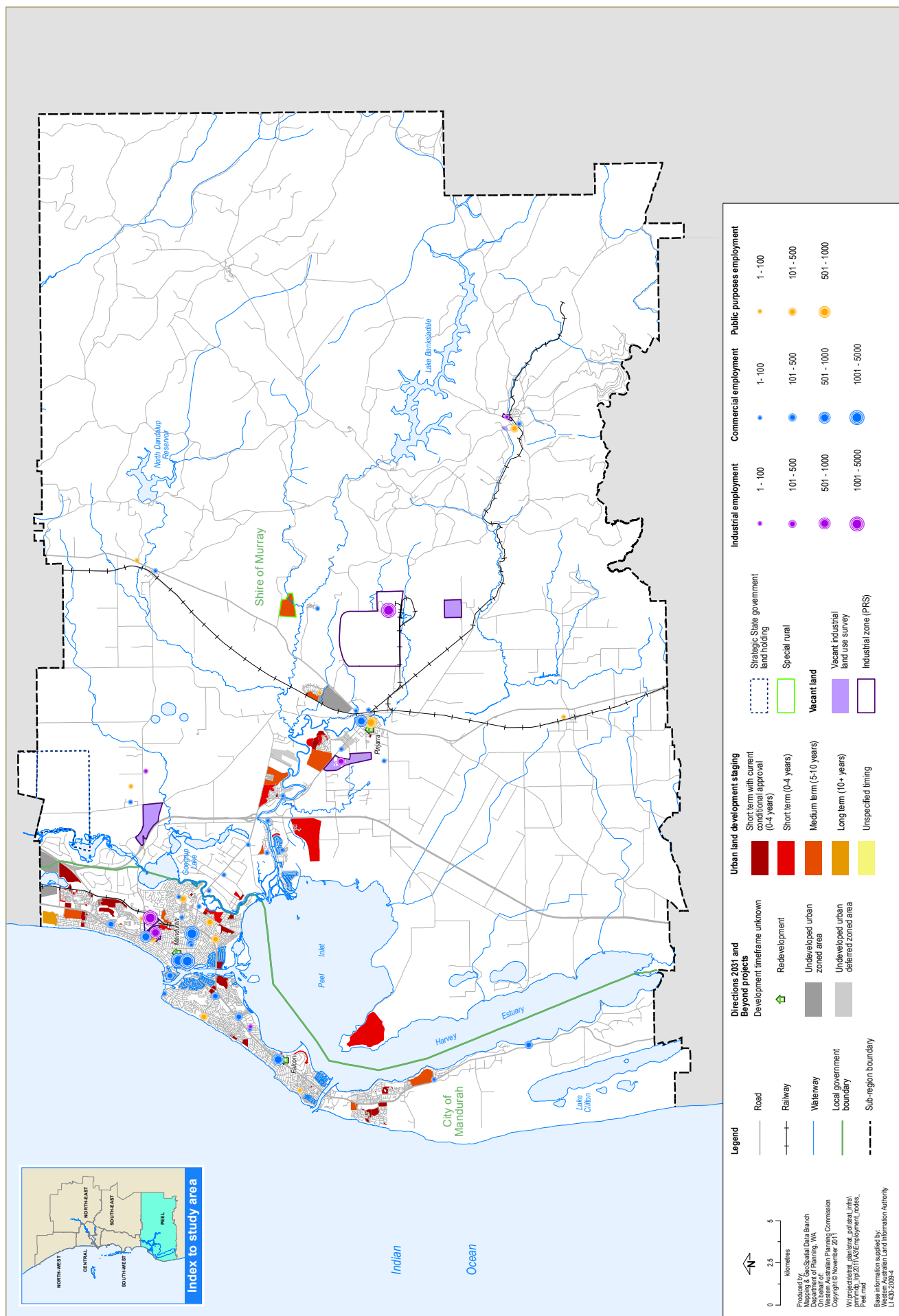
- Nambeelup Industrial Concept Plan (Draft) (preliminary for internal comment).
- Lot 530 Lakes Road Nambeelup Outline Development Plan (approved by WAPC).
- Pinjarra Quadrant Enterprise Park (approved by WAPC).
- Gordon Road Structure Plan.
- Parklands West Structure Plan (approved by WAPC).

Major industrial projects of the Peel sub-region include:⁴

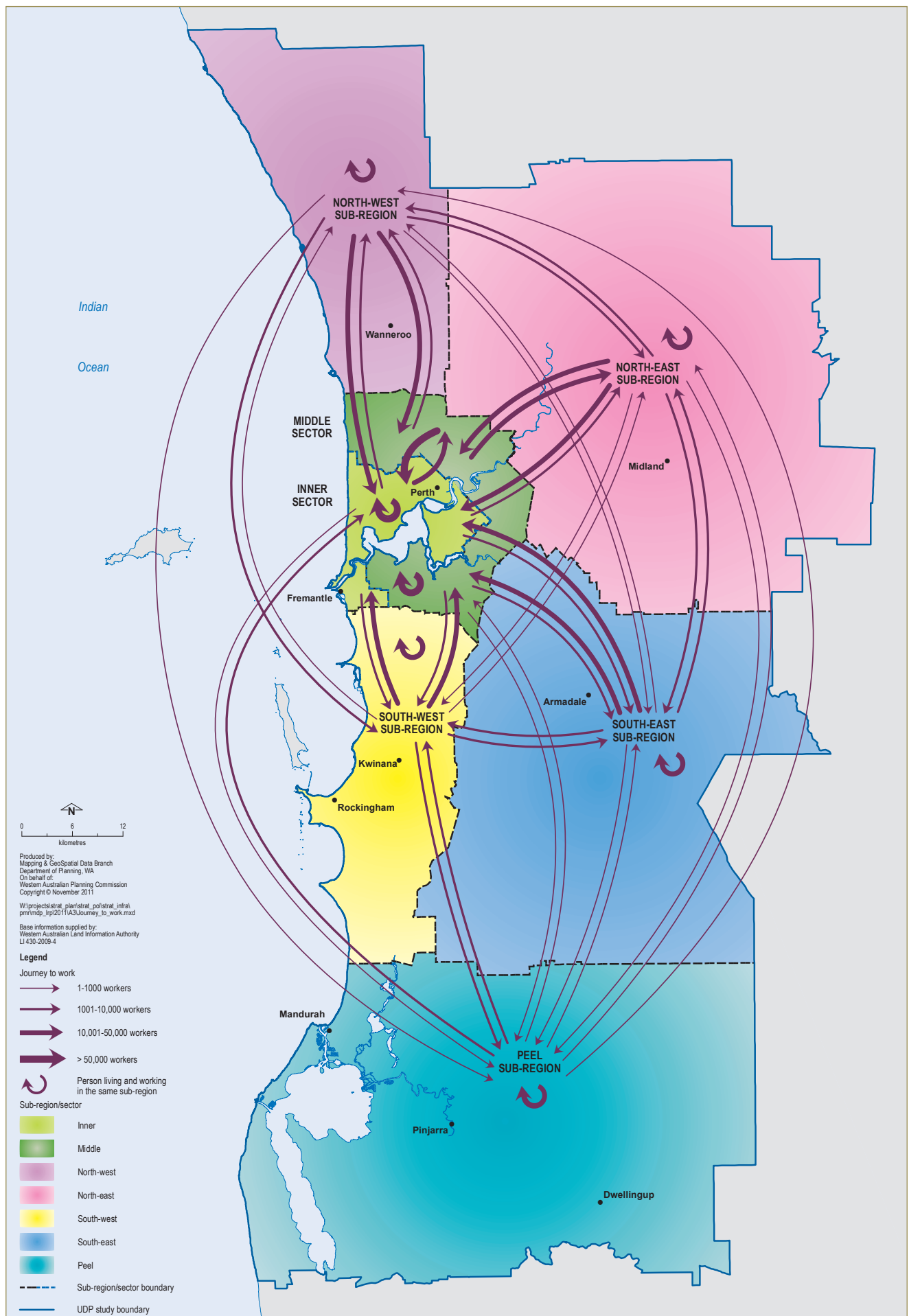
- Landcorp's light industrial area expansion (Pinjarra).
- Munday Avenue factory and warehouse (Pinjarra).
- Old Coast Road limestone quarry (Herron).
- Old Coast Road factory and warehouse (Falcon).

⁴Department of Planning analysis.





Map 2: Employment nodes - Peel sub-region



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