

## THE SOUTH WEST CORRIDOR IN 2020

### **South West Corridor Scenario for 2020 from 2009**

*Strong urban growth from Karnup to Cockburn Central along the Southern Suburbs rail alignment*

*Extensive commercial development, urban renewal and urban growth between Jandakot and Cockburn Coast*

*A cluster of medical, health, laboratory and research services around Murdoch Activity Centre*

*A defence precinct at Rockingham*

*High technology public transport linkages between Fremantle and Murdoch, Fremantle and Cockburn Central, Rockingham and Fremantle and Cockburn Central to Armadale*

*A new port at Kwinana and a new intermodal transport terminal at Latitude 32*

*An extra 92,000 residents*

*50,000 new dwellings with many being prefabricated and prewired*

*47,000 jobs created*

*High amenity transit orientated development at Murdoch, Cockburn Central, Cockburn Coast, Rockingham, Wellard, Bull Creek and Canning Bridge*

*Kwinana Freeway between Leach Highway and Kwinana carrying more than 90,000 vehicles a day*



### **Artists impression of Fiona Stanley Hospital**

From [http://www.fionastanley.health.wa.gov.au/planning/design\\_exterior\\_2.cfm](http://www.fionastanley.health.wa.gov.au/planning/design_exterior_2.cfm)

### **Introduction**

It is dangerous to attempt to predict the future by simply projecting past trends. Predictions made during strong economic growth tend to overestimate future growth. Conversely predictions made as the economy slows are likely to be conservative. Forecasting is better made by a group of well informed individuals with diverse views, knowledge and experiences..."the wisdom of crowds"... able to freely discuss what may be the significant elements that will shape the future.

The past should help inform what is possible into the future particularly where development brings new dimensions to the economy. There are also demographic, environment and policy trends that are useful to consider in planning for the future.

It is clear that there will be significant infrastructure investment in the South West Corridor in the next decade which in turn should provide opportunities for strong economic growth.

The South West Corridor has diversified with the development of the Australian Marine Complex and with the expansion of high technology businesses but is still exposed to commodity prices and the value of the Australian dollar. Iron ore, gold, oil and gas are the main commodities exported from Western Australia.

A reduction in the price and demand for commodities will see emphasis on regional manufacturing and production being in the lower quartile of the cost curve. Western Australian activities are generally highly productive and as was the case with Alcoa's recent restructuring there may be less impact on Western Australia. There will be areas impacted by low commodity prices such as the recent closure of the Ravensthorpe Nickel Mine and Plant by BHP Billiton. The region contains a significant number of fly-in fly-out workers and a reduction of activity in the Pilbara, Kimberley and the Goldfields could increase local unemployment.

**Table 1**  
**WESTERN AUSTRALIA**

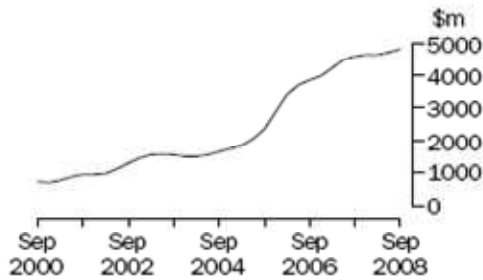
IMPORTS AND EXPORTS		
	2005-06	2006-07
	\$m	\$m
Imports	19 095	22 125
Exports	47 939	60 509
Imports from:		
Japan	2 087	2 601
Singapore	2 788	2 441
United States of America	2 112	2 214
United Kingdom	694	1 853
China	1 177	1 491
Exports to:		
China	9 837	13 781
Japan	10 964	12 015
India	3 108	5 672
Korea, Republic of	4 138	5 013
United Kingdom	3 373	2 822
Major commodities exported:		
Iron ore	12 719	15 351
Gold bullion	7 159	10 431
Petroleum and petroleum products	5 877	7 484
Natural and manufactured gas	4 762	4 709
Wheat	1 614	1 696
Wool	492	517

Source ABS Western Australia at a Glance 2008

The growth of the South West Corridor has been dramatic over the past decade driven by the strong Western Australian economy and the demand for commodities flowing from the state's linkages with the growing economies of India and China. The South West Corridor contributes over \$20 billion to the \$140 billion Western Australian economy.

The expansion of the resources economy has seen Western Australia take a significant share of the national investment in construction work and see a doubling of expenditure from 2004 to 2008 (see Figure 1 and Table 2).

**Figure 1**  
**VALUE OF ENGINEERING WORK DONE WESTERN AUSTRALIA**  
 ABS 8762.0 Released January 14, 2009



The trend estimate for the value of work done rose by 2.1% in the September quarter and is now showing 19 quarters of growth.

Western Australia's economy moves in cycles but has had over 50 years of trend growth with significant commodity investment and expansion of world scale manufacturing capability. More than one dollar in every seven earned in Western Australia is earned within the South West Corridor.



**Artists impression of Cockburn Central**

From: [http://www.landcorp.com.au/portal/page?\\_pageid=611,722338&\\_dad=portal&\\_schema=PORTAL](http://www.landcorp.com.au/portal/page?_pageid=611,722338&_dad=portal&_schema=PORTAL)

Examples of new developments in Western Australia impacting on the South West Corridor are Refined Oil (BP Refinery 50s), Mineral Sands (Kwinana, South West and Wheatbelt 60s), Iron ore (Pilbara 60s), Alumina (Kwinana 60s), Alumina (Pinjarra, Wagerup 70s), Nickel (70s), Alumina (Worsley 80s) LNG (Pilbara 80s), Shipbuilding (Henderson 90s), Iron ore (Mid West 00s), Sub Sea Technology (00s) and HiSmelt (00s).

The next decade is likely to produce biotechnology advances, tidal power, hydrogen technology, wave power, geothermal energy and deep ocean technology. This region is impacted through fabrication, supply of services and supply of consumables for these sectors. The next decade will also see strong growth of activity centres such as Cockburn Central and expansion of the defence sector.

Western Australia is a strong export economy. Its major general purpose port is Fremantle which has seen a dramatic growth in the handling of containerised freight. Although the recent global financial crisis will cause a short term slow down in activity, significant growth is expected to 2020 (see Figure 2).

**Table 2**  
**CONSTRUCTION WORK DONE IN AUSTRALIA**  
**ABS 8755.0 Released November 26 2008**

Quarter	Value of Engineering Construction Done \$000 original Western Australia	Value of All Construction Done \$000 original Western Australia	Value of All Construction Done \$000 original Australia	WA to Australia All Done %
Dec-2004	1 484 400	3 532 766	23 289 576	15.17%
Mar-2005	1 663 662	3 715 403	21 691 467	17.13%
Jun-2005	1 681 455	3 748 020	25 256 390	14.84%
Sep-2005	2 032 646	4 226 780	25 862 661	16.34%
Dec-2005	2 760 711	5 105 182	26 940 333	18.95%
Mar-2006	2 666 858	4 874 077	24 739 461	19.70%
Jun-2006	4 030 034	6 486 602	29 230 884	22.12%
Sep-2006	3 250 094	5 529 419	28 510 116	19.39%
Dec-2006	4 350 817	6 580 362	30 906 019	21.29%
Mar-2007	4 084 792	6 177 900	29 184 398	21.17%
Jun-2007	4 541 396	6 814 038	32 136 357	21.20%
Sep-2007	4 849 794	7 177 849	32 645 127	21.99%
Dec-2007	4 854 314	7 041 115	33 736 106	20.87%
Mar-2008	4 985 989	7 046 616	32 693 981	21.55%
Jun-2008	4 86 9083	6 993 232	36 870 567	18.97%
Sep-2008	5 497 906	7 551 732	38 107 047	19.82%

As at September 2008 there was \$9 267 million of building works in the pipeline in Western Australia representing 18.27% of the \$50 721 million of building works in the pipeline in Australia

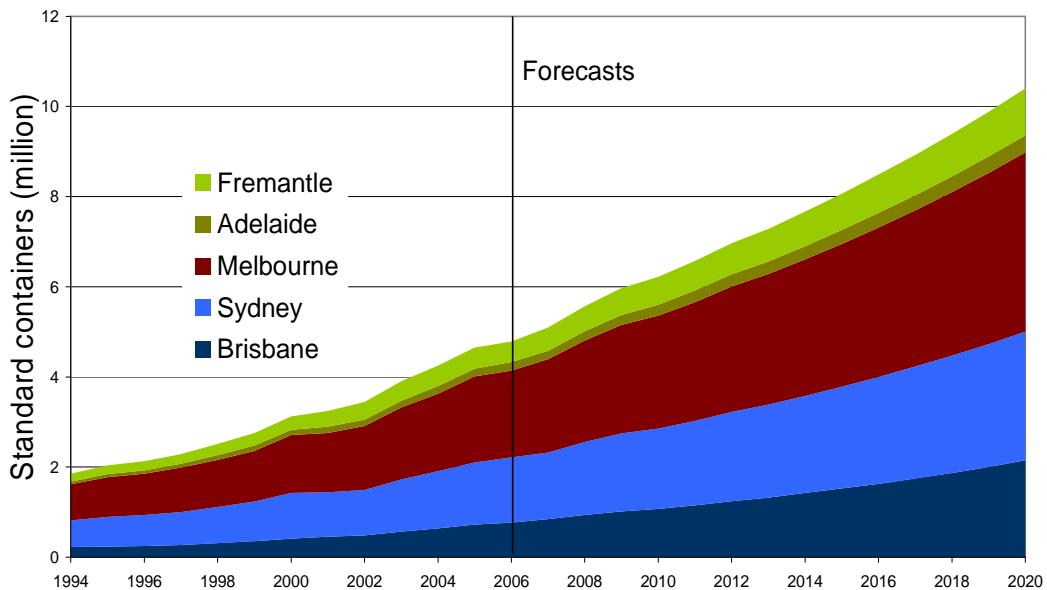
### What can we expect?

If a similar group gathered 15 years ago they would have likely predicted more leisure, paperless offices, the decline of commodity based economies like Western Australia and the growth of knowledge and finance based economies such as Sydney.

They would have likely correctly predicted an explosion in computing, the expansion of the population of Perth and the emergence of China and India.

Figure 2

## Containerised trade for major ports



Source BITRE

The future is volatile and this is well illustrated by interstate migration to Western Australia over the past 15 years and South West Corridor regional unemployment (see Tables 3 and 4). Migration to Western Australia can be strong even when unemployment is high such as in the 1994 to 1998 period.

There are some aspects of 2020 that are highly likely such as significant investment in infrastructure, high defence expenditure, higher energy costs and the need for a new port at Kwinana.

The draft State Infrastructure Strategy predicts expenditure of between \$6 to \$8 billion a year on infrastructure.

The past five years have had historically low unemployment driven by strong urban and commercial development, the expansion of activity in the Kwinana Industrial Area, the development of the Australian Marine Complex, expansion of defence activity, growth in the service sector and through providing support for the expansion of the resources sector.

**Table 3**  
**Interstate Migration to Western Australia**

Year	1993	1994	1995	1996	1997
Net Migration	-152	+3 825	+ 5 101	+ 4 066	+4 660

Year	1998	1999	2000	2001	2002
Net Migration	+3 227	+296	-2 187	-3 110	-3 582

Year	2003	2004	2005	2006	2007
Net Migration	-1 972	+2 095	+2 241	+3 933	+4 410

Year Range	1993 to 1997	1998 to 2002	2003 to 2007	1993 to 2007
Annual Average Net Interstate Migration	+3 500	-1 071	+ 2 141	+1 523

Source ABS 3101.0 and ABS 3412.0

**Table 4**  
**SOUTH WEST CORRIDOR UNEMPLOYMENT DATA 1989 to 2008**  
**FROM ABS 6291.0.55.001 Released January 22, 2009**

YEAR	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>UNEMPLOYMENT AS AT DECEMBER 31</b>	7.8%	9.3%	12.0%	14.3%	12.3%	8.4%	7.8%	6.7%	6.5%	7.7%
<b>PEAK UNEMPLOYMENT IN THE YEAR</b>	7.9%	10.9%	12.9%	14.3%	13.2%	13.3%	11.3%	9.4%	8.9%	8.5%
<b>PERIOD PEAK</b>				14.3%						

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>UNEMPLOYMENT AS AT DECEMBER 31</b>	5.8%	6.4%	7.3%	6.3%	6.3%	3.3%	3.9%	3.1%	4.3%	2.9%
<b>PEAK UNEMPLOYMENT IN THE YEAR</b>	9.0%	8.2%	8.2%	9.3%	8.0%	6.4%	6.0%	4.2%	4.3%	5.3%
<b>PERIOD PEAK</b>				9.3%						

### **Employment Growth Centres**

Most employment growth in an economy comes from an expansion of existing businesses and activities. The South West Corridor is well placed for strong employment growth stimulated by investment in the following areas:

- Kwinana Industrial Area and Kwinana Port
- Australian Marine Complex
- Rockingham – Garden Island
- Latitude 32
- Jandakot City
- Cockburn Coast
- Cockburn Central
- Murdoch Activity Centre
- Eastern Residential Intensification Concept

The growth of the Gosnells-Mundijong corridor will also provide a stimulus to employment within the region with improved transport links to activity centres such as Cockburn Central.

It is expected that 47,000 jobs will be created within the region by 2020 and that the regional population will grow by 92,000 people (see Table 5). Overseas migration is expected to continue to provide fifty per cent of the population growth. The 2006 Census showed that 31.5% of the regional residents were born overseas.

**Table 5**  
**Population and Workforce**

<b>LGA</b>	<b>ABS 2007 prelim</b>	<b>2020 Estimate</b>	<b>Increase 2007 to 2020</b>	<b>Workforce September 2008</b>	<b>Workforce Estimate 2020</b>
Cockburn	80 921	114 000	33 079	44 978	61 000
East Fremantle	7 079	7 200	121	4 634	4 700
Fremantle	26 777	29 000	2 223	16 098	17 000
Kwinana	25 109	39 500	14 391	11 761	19 300
Melville	99 713	104 000	4 287	62 034	64 000
Rockingham	91 702	130 000	38 298	42 158	63 000
Region	331 301 2.7% annual growth	423 700	92 399	181 663	229 000

Source: Adjusted from Western Australian Planning Commission Western Australia Tomorrow 2005 and ABS 3218.0 released March 31, 2008

### **Environmental Scenario**

The South West Corridor is vulnerable to climate change. Cockburn Sound is the most intensively used embayment in Western Australia and contains hundreds of billions of dollars of investment within a few metres of sea level.

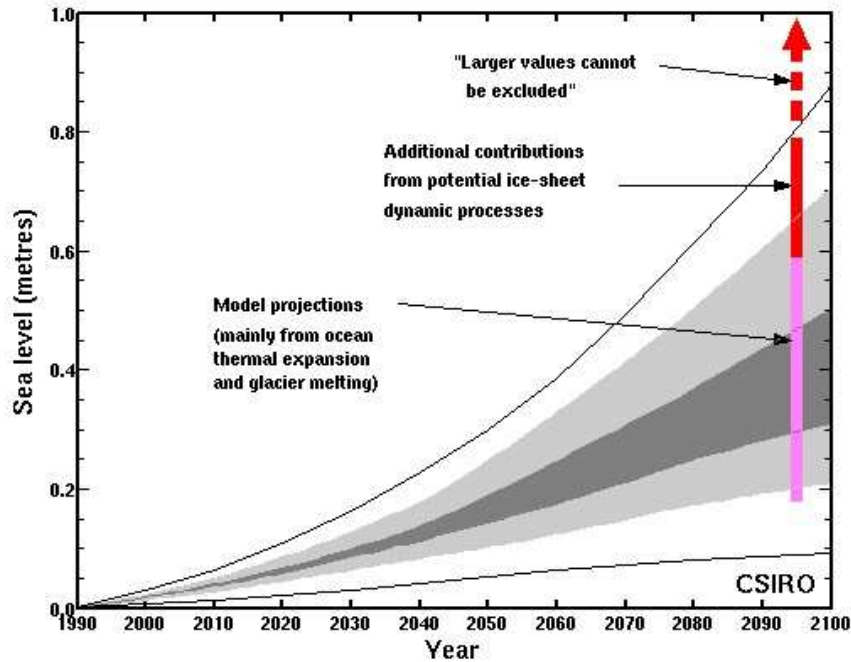
The most severe weather events arise from the north-west and Rockingham in particular would be impacted by storm surge augmented by sea level rise due to the shape of the embayment. The impacts could include:

- Coastal erosion in soft coast areas
- Localised flooding as gravity drainage systems fail
- Threats to near coastal infrastructure and development
- Need to upgrade groynes and sea wall protection in port and marine complexes
- Near coastal wetlands could also be impacted by saline intrusion
- Loss of useable groundwater supplies from saline intrusion
- Accelerated degradation of sub surface infrastructure

The region has also experienced irregular mini-tornados. The frequency and intensity of these events may also increase with the tendency for more severe weather events arising from climate change.

There is significant debate about modelling of climate change impacts and the extent of possible sea level rise. The projection by CSIRO at Figure 3 is considered to be conservative.

**Figure 3**  
**CSIRO Predictions of Sea Level Rise**



Sea Levels in Australia from [http://www.cmar.csiro.au/sealevel/sl\\_proj\\_21st.html](http://www.cmar.csiro.au/sealevel/sl_proj_21st.html)

Climate change and peak oil are also driving changes in planning and energy policy and are likely to see increased costs of energy and investment in public transport. Transit Orientated Developments are also emerging a planning response to climate change and peak oil.

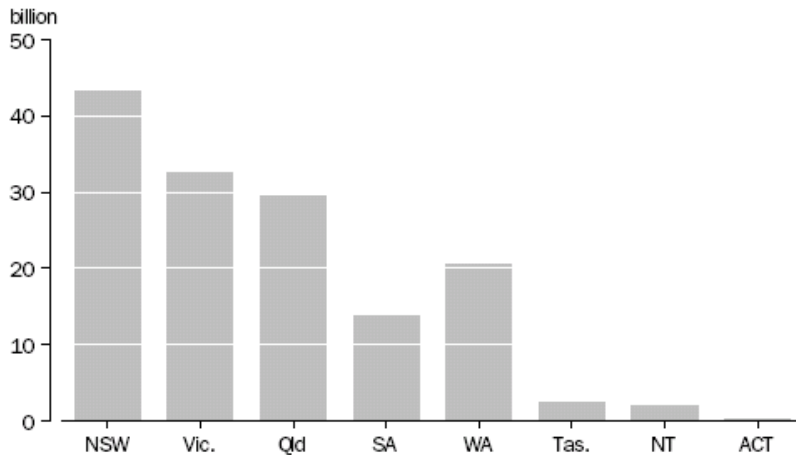
The South West Corridor is heavily car dependent and despite the recent \$1.8 billion investment in heavy rail that created the Southern Suburbs Rail there is a need for much greater investment in new public transport technology. The Southern Suburbs Rail has station spacing averaging 7 kilometres and by 2020 there should be another three rail stations constructed between Cockburn Central and Mandurah.

The opportunity exists with the development of Cockburn Coast, the Murdoch Activity Centre and Cockburn Central to develop a light rail network within the region linking to Fremantle and Rockingham. New transport technology should also provide linkages to the poorly served industrial and commercial areas within the region.

It is expected that there will be a strong push for working locally and for a greater proportion of freight to be placed on rail. Western Australia had 21,092 billion tonne kilometres travelled by articulated trucks in 2007 representing 14.7% of the Australian total (see Figure 4).

**Figure 4**

TOTAL TONNE-KILOMETRES TRAVELLED BY ARTICULATED TRUCKS,  
State of operation—Year ended 31 October 2007



Source ABS 9208.0 released August 28, 2008

The development of an inter modal transport hub at Latitude 32 will be pivotal in increasing the proportion of containers handled by rail.

### **Port Options**

Both Fremantle Ports and James Point Pty Ltd are promoting new port options for Kwinana. A new port needs to be built by 2017 to cater for the growth of the Western Australian economy.

The location of all these proposals is south of Henderson near Anketell Road shown in purple on Figure 5.

All port options adjoin Latitude 32 which is shown in light blue on Figure 5. The recommended option in the GHD Meyrick Study for an Intermodal Freight Hub is shown at Figure 6.

The James Point Pty Ltd proposal adjoins the BP Refinery and the Kwinana Bulk Terminal as shown in Figure 7.

The Fremantle Ports Options include an offshore option (see Figure 8) and a land backed option (see Figure 9). Each of these options replicate the existing capacity of the Inner Harbour at Fremantle. It is expected that a decision on which option and the way in which that option is to proceed will be made by the Western Australian Government in May 2009.

## **Projects and Infrastructure Scenario**

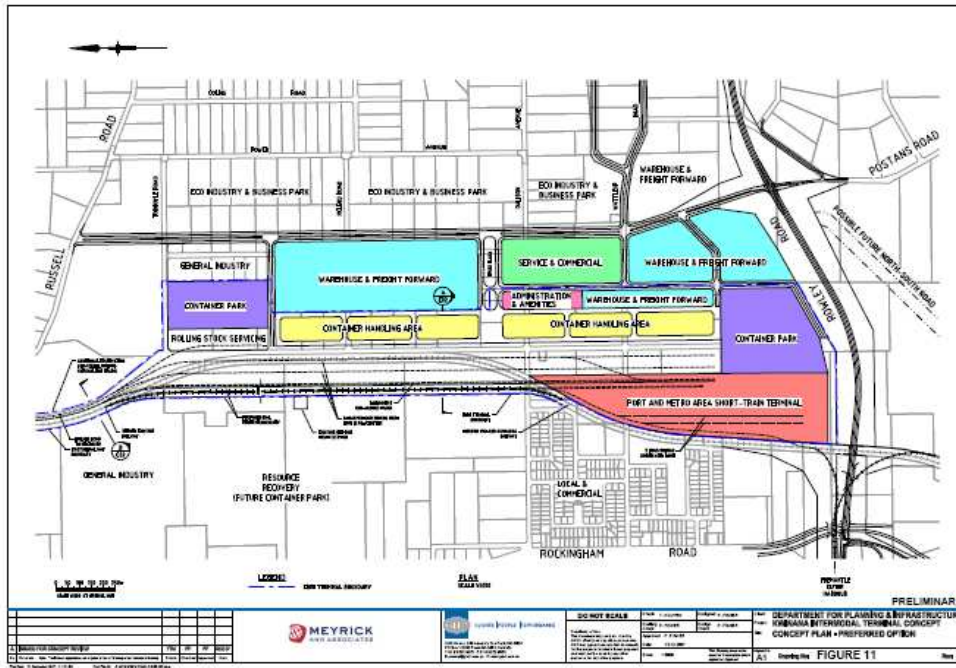
There are over \$20 billion of committed projects, planned projects and infrastructure investments within the South West Corridor. 2020 should see the following activities completed:

- \$1.8 billion Fiona Stanley Hospital (December 2013)
- \$60 million Australian Marine Complex Floating Dock (2009)
- \$114 million upgrade to Australian Marine Complex CUF (2009)
- \$1 billion Jandakot City
- \$154 million Department of Agriculture and Food Offices to Murdoch
- \$1.5 billion Cockburn Coast  
Cockburn Central Development  
Murdoch Activity Centre and Main Street Link to Murdoch University
- \$1.3 billion Latitude 32 Industrial, Transport and Business Park
- \$5.8 billion Eastern Residential Intensification Concept  
Intermodal Transport Hub at Latitude 32
- \$700 million spent on the Perth Urban Freight Corridor under AusLink 2 and 3
- Roe Highway Extension to Stock Road
- Mundijong Road Link from Perth Bunbury Highway to Rockingham
- New Southern Suburbs Rail Station between Cockburn Central and Kwinana
- Two New Southern Suburbs Rail Stations between Warnbro Central and Mandurah
- New Kwinana Port or Ports \$500 million to \$1.3 billion
- Kwinana \$100 million expansion of mineral sands processing
- \$1 billion industrial expansion Kwinana Industrial Area
- Kwinana Freeway six lanes from Leach Highway to Cockburn Central
- Tonkin Highway extended to Mundijong
- Jarrahdale bypass from Albany Highway to Mundijong
- Anketell Road from Rockingham Road to Tonkin Highway
- Rowley Road from Rockingham Road to Thomas Road/Tonkin Highway
- South Corridor Coastal Tourist Drive
- Dual carriageway from Cockburn Central to Armadale
- \$200 million ING Fremantle Waterfront Development
- \$50 million Relocated Garden Island Causeway with increased Waterway
- \$500 million Cape Peron Tourist Precinct
- Construction of replacement for the Collins Class Submarine begins
- Expansion of the Stirling Naval Base
- Commencement of Keralup-Furnissdale \$12 billion urban development
- Development of Transit Oriented Developments at Rockingham, Wellard, Canning Bridge and Bull Creek
- Continuing investment in coastal defence works as storm surge and sea levels increase

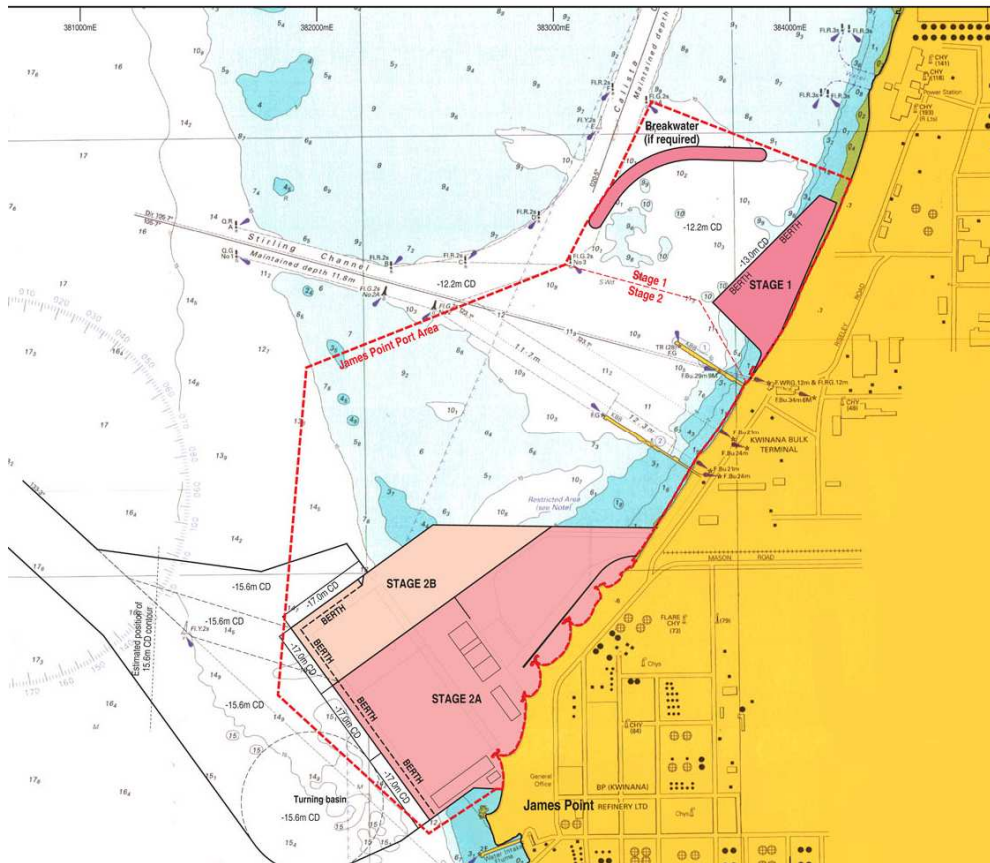
It is expected that by 2020 that there will be over 500,000 aircraft movements at Jandakot Airport and that there will be over 1 million container movements through the Fremantle/Kwinana ports.



**Figure 6**  
**Option 5 for an Intermodal Freight Terminal at Latitude 32**



**Figure 7**  
**James Point Pty Ltd Port Proposal**



**Figure 8**  
**Fremantle Ports Offshore Option**



**Figure 9**  
**Fremantle Ports Landbacked Option**

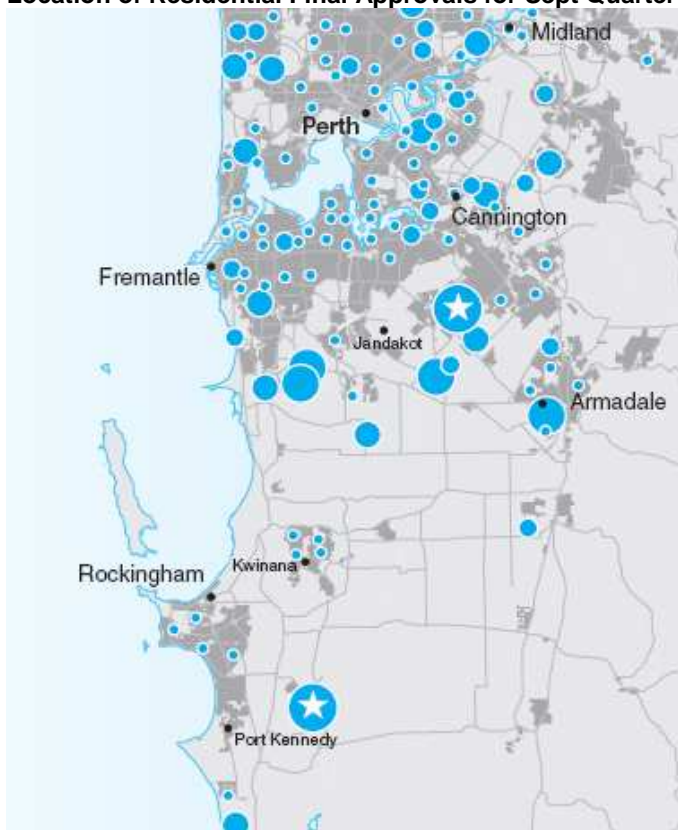


**Appendix 1  
SOUTH WEST CORRIDOR  
RESIDENTIAL LAND FINAL APPROVALS TO THE END OF EACH FINANCIAL YEAR**

LGA	2003/04	2004/05	2005/06	2006/07	2007/08	September Quarter 2008
Cockburn	1 177	1 262	1 539	1 339	1 433	238
East Fremantle	52	42	41	20	24	7
Fremantle	194	130	136	180	151	38
Kwinana	301	533	518	625	211	14
Melville	364	492	323	309	298	60
Rockingham	2 117	1 938	1 703	1 325	894	361
<b>Total Region</b>	<b>4 205</b>	<b>4 397</b>	<b>4 260</b>	<b>3 798</b>	<b>3 011</b>	<b>718</b>
Total Perth Metropolitan Area	13 049	13 726	14 605	13 463	11 629	2 145
Percentage Region to Perth	32.2%	32.0%	29.2%	28.2%	25.9%	33.47%

Source: Western Australian Planning Commission State Lot Activity to September 30 2008

**Location of Residential Final Approvals for Sept Quarter 2008**



Stars indicate top localities for Final Lot Approvals  
Two out of three are in or adjoining the South West Corridor

## Appendix 2

### SOUTH WEST CORRIDOR LABOUR INFORMATION AVAILABLE AT JANUARY 2009

#### Area Profile

- Working Age Population (15-64) : 218 900
- Employment Rate (15-64) : 80.7%
- Unemployment Rate : 2.4%
- Participation Rate : 68.9%
- Teenage Full-Time UE Rate (15-19) : 16.9%
- Teenage Full-Time UE to Population Ratio : 4.8%

Area Profile Source: ABS *Labour Force Survey*. Data are three month averages to October 2008 except for the teenage full-time unemployment rate and teenage full-time unemployment to population ratio which are 12 month averages to October 2008.

#### Civilian Population by Age Group (15+), October 2008

Age Group	Persons
15 - 24	42523
25 - 34	42365
35 - 44	55323
45 - 54	39448
55 - 64	39246
65 and over	50756

ABS Labour Force Survey, three month average data.

#### Civilian Population by Labour Force Status (15+), October 2008

Labour Force Status	Persons
Employed Full-Time	124023
Employed Part-Time	57318
Unemployed Full-Time	2795
Unemployed Part-Time	1680
Not in the Labour Force	83845

Chart Source: ABS Labour Force Survey, three month average data.

Appendix 2 (continued)

**Duration of Unemployment, August 2008**

<b>Unemployment Duration</b>	<b>Population</b>
<b>Under 13 weeks</b>	4279
<b>13 to under 26 weeks</b>	1178
<b>26 to under 52 weeks</b>	568
<b>52 weeks and over</b>	107

Chart Source: ABS Labour Force Survey.

**Employment by Industry, August 2008**

<b>Industry</b>	<b>Persons Employed</b>
<b>Agriculture, Forestry and Fishing</b>	902
<b>Mining</b>	7506
<b>Manufacturing</b>	15874
<b>Electricity, Gas and Water Supply</b>	3196
<b>Construction</b>	18683
<b>Wholesale Trade</b>	5810
<b>Retail Trade</b>	25889
<b>Accommodation, Cafes and Restaurants</b>	8367
<b>Transport and Storage</b>	8023
<b>Communication Services</b>	2780
<b>Finance and Insurance</b>	4649
<b>Property and Business Services</b>	22961
<b>Government Administration and Defence</b>	7398
<b>Education</b>	14969
<b>Health and Community Services</b>	17660
<b>Cultural and Recreational Services</b>	4325
<b>Personal and Other Services</b>	6837

Chart Source: ABS Labour Force Survey, four quarter average data.

**Appendix 2 (continued)**  
**SOUTH METROPOLITAN REGION**  
**LABOUR MARKET INFORMATION**

**Department of Education, Employment and Workplace Relations**  
**September Quarter 2008 Smoothed**

LGA	Unemployment (Unemployment Rate %)					Labour Force
	September 2007	December 2007	March 2008	June 2008	September 2008	September 2008
Cockburn	1 228 (2.8%)	1 332 (3.0%)	1 440 (3.3%)	1 523 (3.4%)	1 551 (3.4%)	44 978
East Fremantle	73 (1.6%)	82 (1.8%)	88 (1.9%)	91 (2.0%)	90 (1.9%)	4 634
Fremantle	696 (4.3%)	750 (4.6%)	812 (5.0%)	866 (5.3%)	877 (5.4%)	16 098
Kwinana	705 (6.2%)	790 (6.9%)	843 (7.3%)	886 (7.6%)	874 (7.4%)	11 761
Melville	911 (1.5%)	974 (1.6%)	1 043 (1.7%)	1 105 (1.8%)	1 131 (1.8%)	62 034
Rockingham	1 777 (4.3%)	1 939 (4.7%)	2 090 (5.0%)	2 223 (5.3%)	2 307 (5.5%)	42 158
South Metropolitan Total	5 390 (3.0%)	5 867 (3.3%)	6 316 (3.5%)	6 694 (3.7%)	6 830 (3.8%)	181 663
Metropolitan Perth Total	25 700 (3.1%)	26 300 (3.1%)	26 800 (3.1%)	26 900 (3.1%)	26 500 (3.0%)	871 500
Western Australia Total	36 400 (3.2%)	36 900 (3.2%)	37 600 (3.3%)	38 300 (3.3%)	37 400 (3.2%)	1 174 100

Source: [www.workplace.gov.au](http://www.workplace.gov.au) Australian Regional Labour Markets September 2008 released 17 December 2008

**Appendix 3**  
**SOUTH WEST CORRIDOR BUSINESS AND INCOME**

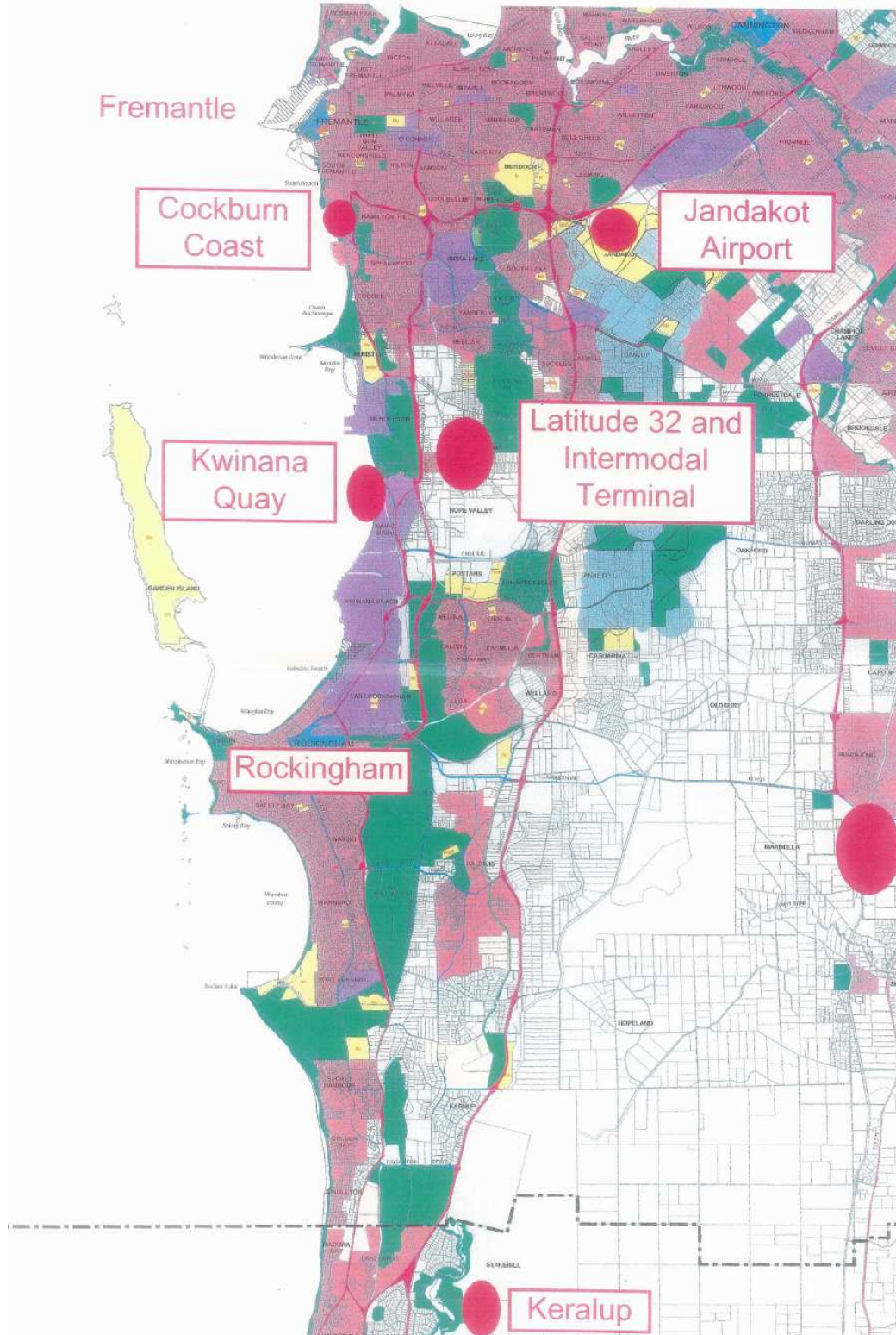
**COUNTS OF AUSTRALIAN BUSINESSES**  
**ABS 8165.0 Released December 21, 2007**

LGA	Number of Businesses by Employment Size					
	Nil	1 - 4	5 - 19	20 - 49	50 plus	Total
Cockburn	3 720	1 284	546	168	87	5 805
East Fremantle	480	192	63	18	3	756
Fremantle	2 313	1 074	663	141	78	4 269
Kwinana	876	246	123	51	9	1 305
Melville	5 784	2 358	927	222	93	9 384
Rockingham	3 030	1 083	474	90	39	4 716
Total South West Corridor	16 203	6 237	2 796	690	309	26 235

**ESTIMATES OF PERSONAL INCOME 2005/06**  
**ABS 6524.0.55.002 Released December 17, 2008**

LGA	WAGE AND SALARY INCOME \$000	OWN BUSINESS INCOME \$000	INVESTMENT INCOME \$000	SUPER-ANNUATION AND ANNUITY INCOME \$000	OTHER INCOME \$000	TOTAL INCOME FROM ALL SOURCES EXCLUDING GOVERNMENT PENSIONS \$000
Cockburn	1 438 746	142 932	101 807	23 413	11 073	1 717 973
East Fremantle	154 615	19 536	38 730	6 247	2 380	221 510
Fremantle	499 538	62 714	83 338	16 836	7 115	669 543
Kwinana	367 270	28 761	10 771	4 748	2 224	413 775
Melville	1 957 469	204 869	429 552	104 654	42 524	2 739 069
Rockingham	1 528 368	124 151	65 075	42 504	18 433	1 778 532
South West Region	5 946 007	582 965	729 275	198 405	83 750	7 540 405
Western Australia	36 749 012	4 139 399	4 643 791	1 099 438	522 241	47 153 882

**Appendix 4  
SOUTH WEST CORRIDOR MAJOR DEVELOPMENT AREAS**



**WESTERN AUSTRALIAN MERCHANDISE EXPORTS**

	Quarter to	Quarter to	Quarter to October 2008 on	
	October 2007	October 2008	Quarter to October 2007	
	Value	Value	Change	
	\$ Million	\$ Million	\$ Million	%
<b>By Destination</b>				
Singapore	488	892	404	83
Indonesia	372	402	31	8
Malaysia	163	240	77	47
Thailand	402	821	419	104
Philippines	178	157	-21	-12
<b>South East Asia</b>	<b>1,602</b>	<b>439</b>	<b>-1,163</b>	<b>-73</b>
South Korea	1,494	2,532	1,038	69
China	3,374	6,705	3,331	99
Taiwan	245	553	308	126
Hong Kong	63	81	18	29
<b>North East Asia</b>	<b>5,333</b>	<b>10,139</b>	<b>4,806</b>	<b>90</b>
<b>India</b>	<b>987</b>	<b>1,781</b>	<b>794</b>	<b>80</b>
Japan	2,957	5,031	2,074	70
USA	362	607	245	68
UK	1,285	1,283	-2	0
Germany	52	169	117	226
Canada	109	76	-34	-31
France	57	79	21	38
Italy	71	22	-49	-69
<b>G8 Countries (excluding Russia)</b>	<b>4,894</b>	<b>12,273</b>	<b>7,379</b>	<b>151</b>
<b>All Destinations</b>	<b>15,357</b>	<b>24,105</b>	<b>8,748</b>	<b>57</b>
<b>By Commodity</b>				
Gold*	2,821	3,962	1,142	40
Iron Ore	4,087	9,867	5,780	141
ETMs	601	596	-6	-1
Wheat	317	645	328	104
Petroleum	2,290	3,037	747	33
LNG	1,054	1,791	737	70
Nickel	448	627	179	40
Wool	58	60	2	3
Crustaceans	17	39	21	120
Live Animals	101	139	38	38
Confidential Items (including Alumina)	2,219	1,787	-433	-20
<b>All Commodities</b>	<b>15,357</b>	<b>24,105</b>	<b>8,748</b>	<b>57</b>

Note: All figures are in nominal original terms. Figures may not add due to rounding. Elaborately Transformed Manufacture's (ETMs) include mineral manufactures and metals, chemicals and other semi-manufactures and engineering products.

\*See footnote on gold earlier in Note for further information