East Kimberley @ 25K

Shire of Wyndham East Kimberley

November 2013

SHIRE of WYNDHAM EAST KIMBERLEY

ROYALTIES FOR REGIONS

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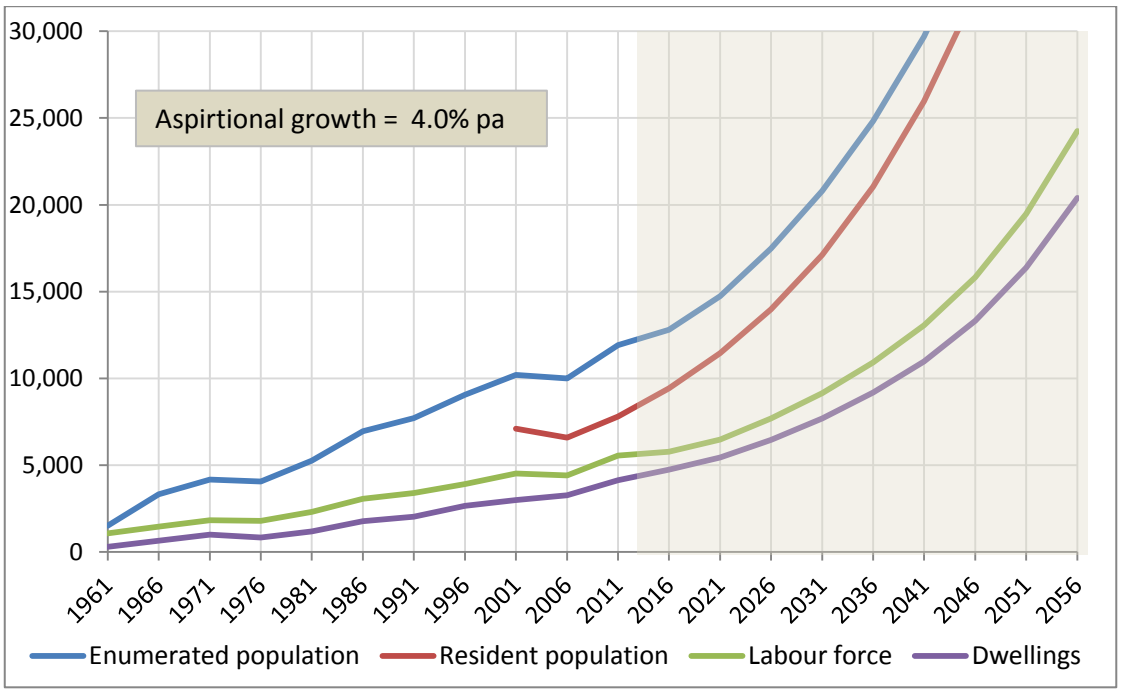
Executive Summary

EK@25 outlines a growth pathway for the Shire of Wyndham–East Kimberley to reach a population of 25,000 people.

The aspiration for the Shire is for future population growth at around 4.0 per cent per annum which will take the Shire to a population of 25,000 residents by 2041. This growth is based on an aspiration of 5.0 per cent growth per annum, for Kununurra and 2.2 per cent growth for Wyndham and the rest of the Shire.

Taking the non-residents into account (FIFO workers, tourists/visitors), then the Shire will reach that population nearly five years earlier. In terms of infrastructure planning, the additional non-resident people will need some level of service (utilities, accommodation, health, retail, etc) so they make up an important component of the total population.

Historical and aspirational growth for the Shire of Wyndham-East Kimberley



Some of the key conclusions from this study are:

Growth barriers

The major barriers to growth of Wyndham-East Kimberley are:

- Centralised State Government decision and policy making is not always relevant to regional centres;
- Red and green tape and conflicting rules and policies that are a disincentive to development / investment;
- Geography – the "tyranny of distance" and distance to key markets;
- the costs associated with regional isolation (transport, freight);
- Regional funding;
- Law and order, welfare dependency, social dysfunction and petty crime in the town centre;
- Land availability, including the high cost to develop, Native Title constraints, red tape and existing land uses (resistance to change);
- Housing affordability, availability and match to consumer demand;
- Limited education services - particularly the quality of secondary and tertiary education;
- Absence of economic opportunity that provides commercial return on investment;
- Seasonality of tourism, construction window and population;
- High cost of living (including housing options);
- High transport costs, including:
  - Goods and the need to freight many regular items from Perth;
  - Passenger transport (airfare and petrol costs);
- Small population size means a lack of services; and
- Community culture, including a resistance to change and a "WA-centric mentality".

Growth accelerators

The following priorities are the keys to unlocking the growth potential of Wyndham-East Kimberley:

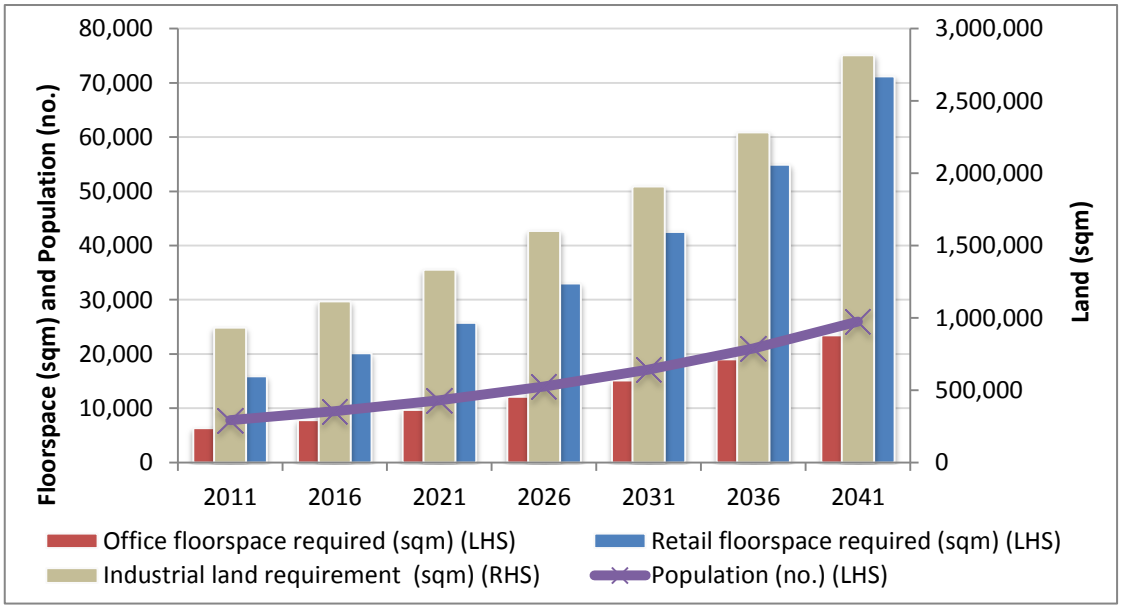
- Improving transport links, including:

    - Extending the airport runway to take larger and fully-loaded aircraft;
    - Increasing competition for air travel to reduce airfares;
    - Encouraging more direct flights to other Australian cities;
- Developing relationships and links with NT and northern partners;
- Diversion road network to increase accessibility;
- Restructuring and developing educational opportunities;
- Employment and engagement of the broader community, including improving youth employment prospects;
- Reforming welfare to manage social challenges;
- Developing a research and development centre of excellence in key local areas:
    - Aquaculture;
    - Agriculture; and
    - Pastoral.
- Making land available (all types) including resolution of land tenure;
- Attracting and retaining private investment and in particular, large-scale foreign investment;
- Resolving Native Title resolution - especially in the Northern Territory to open up the next stage of the Ord irrigation area;
- Increasing education retention levels and outcomes for the Indigenous community
- Developing skill base in the local community and then retaining and growing that capacity over time;
- Marketing, utilising and further enhancing the water assets of the area. This includes planning for the expansion of the Argyle water resources; and
- Getting community buy-in for change and growth.

In order to increase the population base, additional employment land will be needed in order to expand the employment base. The actual land requirements will depend on the amount and type of industry attraction and the degree of value-adding that is done within the local area as opposed to exporting raw materials.

The following figure illustrates the employment land requirements that will enable Wyndham-East Kimberley to grow to a population of 25,000 people by 2041.

Employment land requirements to service population growth through to 25,000



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Section 1: Introduction

Process

The scope of works for this project involves ten major components:

1. *Project inception* including confirming the project program (including meeting and workshop dates), client handover of relevant information/research and confirmation of the stakeholder group;
2. *Establish* a stakeholder group consisting of those organisations that have the capacity to shape the growth of Wyndham–East Kimberley;
3. *Analyse* population demographics and review current assumptions related to growth;
4. *Profile* the local economy identifying the main economic drivers (current and potential) and how these are likely to impact on strategic planning elements including future land uses.
5. *Conduct and facilitate* a stakeholder forum;
6. *Identify* growth pressures the Shire is or will experience and develop alternative future growth patterns and forecasts;
7. *Develop* robust, plausible and transparent high, medium and low growth scenarios;
8. *Identify* infrastructure required to enable/meet the growth scenarios including basic civil engineering infrastructure capacity, community facilities and amenities;
9. *Develop* a program for delivery for each growth scenario based on identified cause-and-effect "demand triggers" and "tipping points" to allow the lead time necessary to meet the demand on the predicted growth curve; and
10. Present a report encompassing all parts of the project to the stakeholder group and Council.

Detailed methodology

1. Project inception

The project inception confirmed:

- Project program including preferred dates/times for:
  - stakeholder forum(s);
  - fortnightly project management meetings;
  - draft and final reports; and
  - presentation to Council.
- Handover of all relevant background information held by the Shire of Wyndham – East Kimberley; and
- Stakeholder group and the form and responsibility for initial communication with stakeholders (ie. letter, phone call, email).

2. Establishment of a stakeholder group

Engagement with stakeholders included key organisations that have the influence to shape economy of Wyndham–East Kimberley, as well as the infrastructure agencies that will respond to the growth pressures and provide services and facilities within the region.

Engagement involved initial teleconference discussions with all of the key stakeholders and principal infrastructure providers. This will be followed by an invitation to one (or both) of two forums – one in Kununurra and one in Perth.

Key stakeholders	
Shire of Wyndham–East Kimberley	Department of State Development
Regional Development Australia – Kimberley	Department of Commerce
Kimberley Development Commission	Department of Planning
Landcorp	Department for Regional Development
Department of Housing	

Infrastructure stakeholders		
Water Corporation	Department of Transport	Department of Health
Main Roads	Department of Water	WA Police Service
Horizon Power	Department of Agriculture and Food WA	Department of Lands
Department of Education	Department of Training and Workforce Development	Department of Corrective Services

3. Analysis of population demographics and review current assumptions related to growth.

This component addressed:

- Demographic profiles (time-series Census data) of the Shire's:
    - residents (place of usual residence); and
    - workers (place of employment);
- Population projections by age and sex, including an assessment of people of working age as well as the 'dependency ratios' of non-working age residents (ie. children and seniors) to those of working age;
- Household projections by type of household (ie. family, group or sole household).
- Dwelling occupancy ratios.
- Dwelling demand projections.
- Socio-economic profile of the Shire's residents including level of education, industry of employment, etc.; and
- Relative socio-economic indices for the Shire in comparison to other regional areas, incorporating maps.

4. Profile of the local economy identifying the main economic drivers (current and potential) and how these are likely to impact on strategic planning elements including future land uses.

<u>Economic activity</u>

- Time-series analysis of the historical context, current composition and dynamics of the regional economy ($ value of gross regional product, exports, State/national context of each economic and employment sector);

- Distribution of current activity per economic sector;
- Growth trends per economic sector (including associated $, employment);
- Known proposed economic activity / projects, including:
    - Project likelihood
    - Prerequisites and dependencies (particularly infrastructure and other projects);
    - Estimated construction and operational work forces (including direct and indirect employment).

<u>Labour force and employment</u>

- Labour force and employment trends;
- Composition of current workforce (per economic and employment sector, respective incomes);
- Distribution and density of current workforce per employment sector;
- Growth trends per employment sector;
- Source/location of workforce (including issues such as workers' accommodation/ housing requirements; and local residents versus fly-in fly-out/drive-in drive-out);
- Unemployment/underemployment trends across the region.

<u>Employment lands</u>

- An audit of current and proposed employment lands, including both urban and rural areas, including consideration of:
    - Land use by industry and zone;
    - Site coverage;
    - Existing capacity under existing planning controls;
    - Vacant land/floor space; and
    - Employment density.

5. Stakeholder forums

MacroPlan Dimasi conducted two half-day forums with key stakeholders and infrastructure agencies – one in Kununurra and one in Perth.

Prior to the forums, a brief information package was provided to participants addressing:

- Background summary (including brief executive summaries of the demographic and economic profiles);

- Objectives and desired outcomes from the forums. The primary objective will be to capture each stakeholder's position on the four key issues (list below) and to arrive at an agreed (or at least a consensus) position on an infrastructure delivery program;
- A statement of the key issues that need to be addressed to cater for a population of 25,000 in East Kimberley (EK@25):
    - Growth pressures, constraints and opportunities;
    - Growth scenarios including the different assumptions underlying low, medium and high growth outcomes;
    - Infrastructure required to service each of the growth scenarios; and
    - Factors affecting the delivery program including demand triggers/tipping points and infrastructure lead times.

Information from the participants was captured in an outcomes report, available to stakeholders. This included an invitation to provide additional relevant information or to follow-up important issues raised in the forums.
This component of the project informed the remaining sections of the project.

6. Identify growth pressures the Shire is or will experience and develop alternative future growth patterns and forecasts

This component of work incorporated the pressures and constraints identified in the stakeholder forums and provide more detailed assessment of :

- Current and potential constraints or 'gaps' hampering economic and employment growth or development;
- Potential growth of existing industries;
- New industries and opportunities, taking into account the region's competitive advantages;
- Constraints to the development of current and proposed employment lands;
- Forecast future trends, including associated:
    - Implications for the take up of employments lands;
    - Indicative employment implications with respect to forecast population growth, including accommodation/housing requirements for permanent and temporary workers;
    - Translation of economic benefits and consequential employment at a local level (through multipliers etc);

- Where employment is likely to be generated, with respect to economic and employment sectors, geographic/spatial distribution; and
- Potential sources of future workers.

7. Develop plausible and transparent high, medium and low growth scenarios.

The stakeholder forums were used to get an agreed (or consensus) set of assumptions for the various growth scenarios. MacroPlan Dimasi will then:

- Build on the previous work to provide an assessment of collective impacts of various projects to develop low, medium and high growth scenarios;
- Forecast organic growth (ie. population based growth) as well as transformational growth (ie. major new projects);
- Document all assumptions and methodology used to develop the scenarios.

8. Identify infrastructure required to enable/meet the growth scenarios including basic civil engineering infrastructure capacity, community facilities and amenities.

The information from the forums was supplemented by structured requests to infrastructure stakeholders. This included:

- At a high level, determine the infrastructure capacities and constraints to assess:
  - Potential for take-up of underutilised capacity; and
  - Infrastructure constraints to growth.
- Assess the supporting/enabling infrastructure (hard and soft) that is required to support major new projects;
- Assess the infrastructure 'stepping points' to determine where major upgrades will be required to increase capacity; and
- Establish a community facility needs assessment based on thresholds.

9. Develop a program for delivery for each growth scenario based on identified cause-and-effect "demand triggers" and "tipping points" to allow the lead time necessary to meet the demand on the predicted growth curve.

MacroPlan Dimasi prepared an infrastructure delivery program that consolidated all of the previous work including the low, medium and high growth scenarios in order to:

- Identify the lead time required for major infrastructure to be provided and commissioned;
- Plot out the demand trigger points that will require either:
    - Incremental upgrades to infrastructure; or
    - Major replacement or duplication of infrastructure.
- Provide a program for each of the growth scenarios to meet the growth demands.

Statistical information sources

The following sources of data were used as part of this analysis:

- Australian Bureau of Statistics (ABS) – Census of Population and Housing, 1961 to 2011 for various geographies (including Statistical Area 1, Statistical Area 2, local government areas and aggregations of these areas). This also included customised Census data using ABS Table Builder;
- Cordell - development projects and private investment;
- Department of Planning (WA), DevNet, various datasets;
- Department of Planning (WA), Land Use and Employment Survey, 1990, 1993, 1997, 2002 & 2008;
- MacroPlan Dimasi – various proprietary datasets including small area population projections and retail expenditure forecasts.
- MarketInfo – historical retail expenditure data;
- Regional Australia – Insight, benchmark ratings
- RP Data – sales volumes and prices for land and improved properties;
- Tourism Research Australia – visitor numbers and expenditure statistics

Section 2: Population demographics and growth

Overview

The Shire of Wyndham-East Kimberley area has historically been sparsely settled. From the turn of the century this has been a predominantly pastoral hinterland with a very limited number of towns.

Over recent decades the introduction of irrigated agriculture and mining has brought with it a more intensified use of land and consequent increases in population focused mainly on Kununurra.

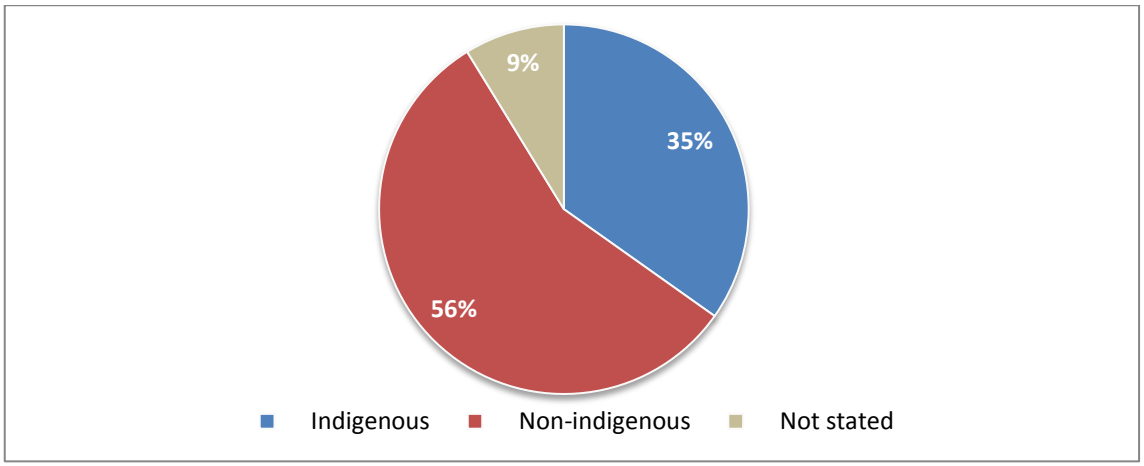
The Estimated Resident Population (ERP) of the Shire of Wyndham East Kimberley (the Shire) in 2011 was 8,371. It currently has 0.5 per cent of the State's population and 2.1 per cent of regional Western Australia's population. From 2006 to 2011, there was an average annual growth rate of 3.7 per cent in the Kimberley, making it the second fastest growing region in the State.

Demographic profiles

The Shire is the third largest population centre in the Kimberley being home to 22.4 per cent of the population. An estimated 40.0 per cent of the population in the Kimberley are Indigenous Australians (Census 2011). Within the Shire, Indigenous Australians comprise 34.8 per cent of the population, although these estimates may be conservative. This proportion is significantly higher than the state wide representation of 3.1 per cent.

Indigenous Australians provide stability to the labour force in the Shire as they tend to be less transient than the non-Indigenous population. During the peak tourism period employment prospects attract non-Indigenous workers from other regions and states, altering the population mix for the duration of the season.

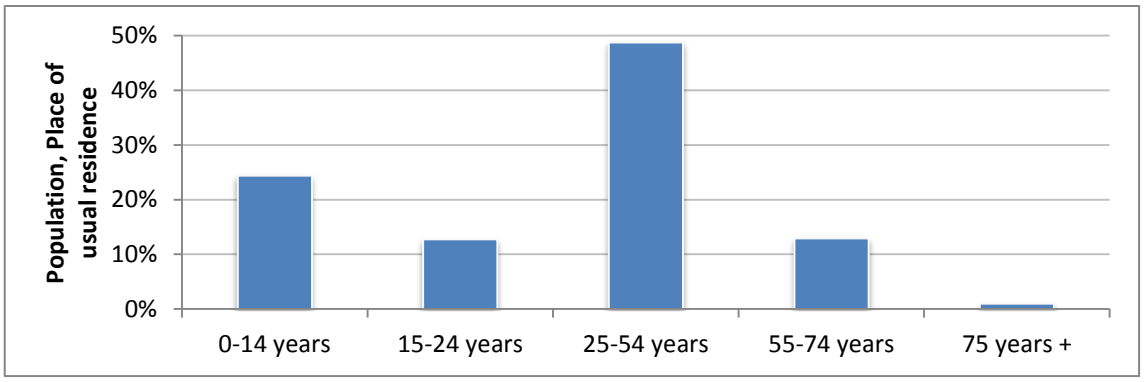
Figure 1. Population by indigenous status, Shire of Wyndham East Kimberley, 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

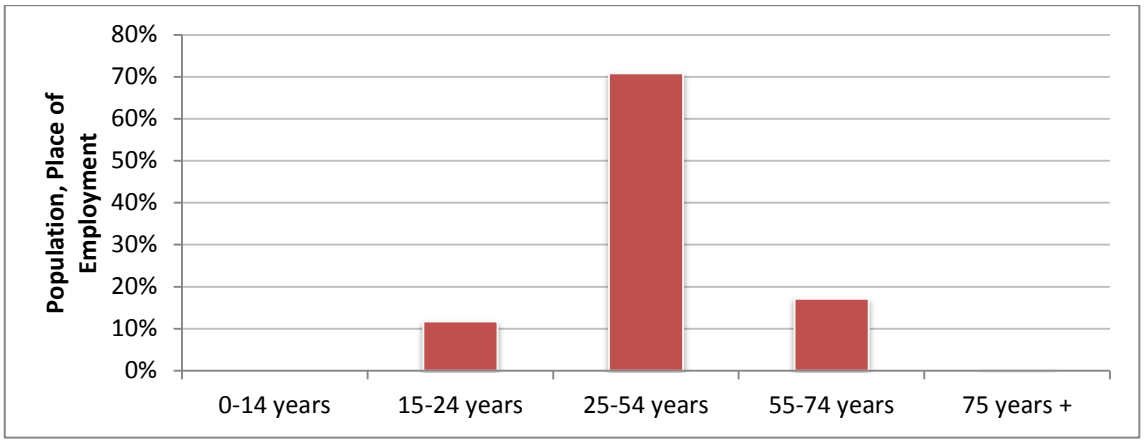
The median age of the resident population for the Kimberley was 31 years compared to 36 years for the State as a whole (Census 2011). Making the area one of the youngest regional populations in the State.

Figure 2. Age structure, Place of residence, Shire of Wyndham East Kimberley, 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

Figure 3. Age structure, Place of employment Shire of Wyndham East Kimberley, 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

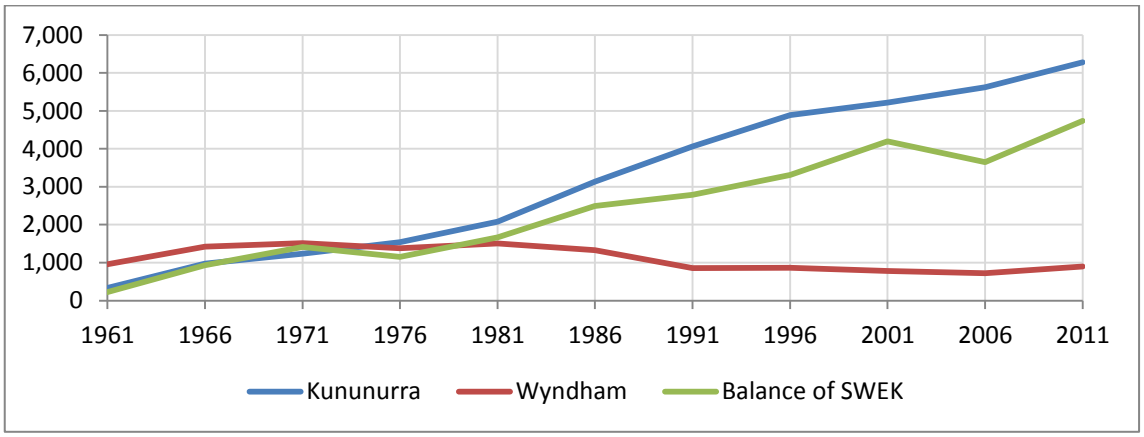
Historical population growth

Census counts

Population statistics can vary depending on the definitions used for counting people. Traditionally the Census of Population and Housing has counted people where they were on Census night. This information is available in time-series and for small geographic areas, however, it does mean that places with a highly seasonal population (particularly in June-August, when the Census is typically conducted), can indicate a quite different population from the people who are usually resident in the Shire.

The following figure shows the long term growth of East Kimberley over a 50-year period. This indicates that that Wyndham has gradually decreased in population (by -0.1 per cent per annum over 50 years), whereas Kununurra has grown very strongly (by an average of 6.0 per cent per annum over 50 years) and the rest of the Shire has increased at an even higher rate (an average of 6.3 per cent per annum over 50 years).

Figure 4. Historical population counted on Census night – 1961 to 2011, Shire of Wyndham-East Kimberley

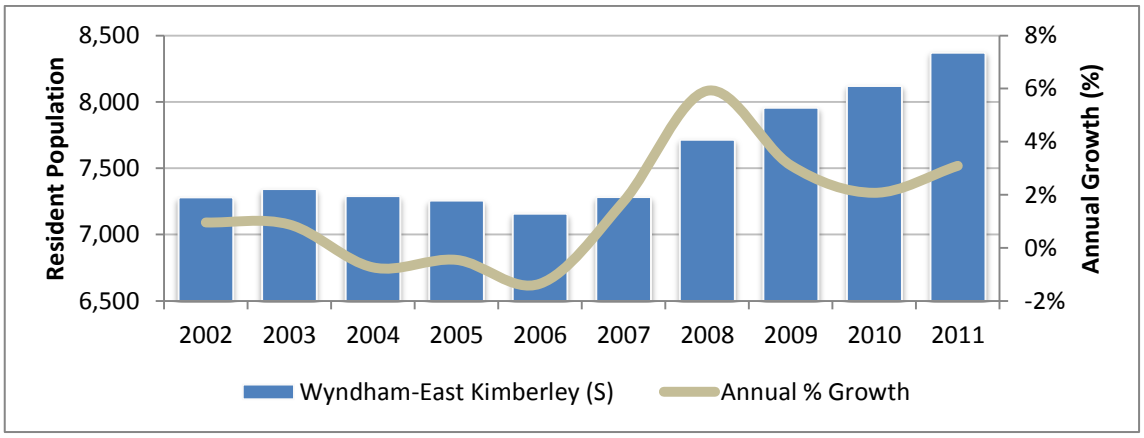


Source: ABS Census 1961 to 2011, Place of enumeration; MacroPlan Dimasi

Estimated resident population

The estimated resident population (ERP) is the most accurate measure of people who are usually resident in an area, however, these statistics are not available for each town or settlement and are generally only available for local government areas. The estimated resident population for the Shire of Wyndham-East Kimberley shows significant population growth in the Shire over the ten years between 2001 and 2011. Over this period the population increased by an average of 3.1 per cent per annum.

Figure 5. Estimated resident population , Shire of Wyndham East Kimberley, 2001-2011



Source: ABS cat. No. 2003.0, Australian Bureau of Statistics 2002 to 2011

Population projections

There are two data sources of population projection available for the Shire, Department of Health and Aging and WA Tomorrow. As shown, below these do not show a significant variation. The following section outlines the projections data

Department of Health and Ageing

The following table shows the expected population growth for the Shire according to unofficial ABS data provided to the Department of Health and Ageing in 2010.

Table 1. Population Projections – WA Tomorrow, Shire of Wyndham-East Kimberley

	Year			
	2011	2016	2021	2026
Persons	7,566	7,779	7,973	8,137

Source: Australian Government Department of Health and Ageing – Unofficial ABS Projections (2010)

Table 2. Population Projections – ABS Unofficial Projections, Shire of Wyndham-East Kimberley

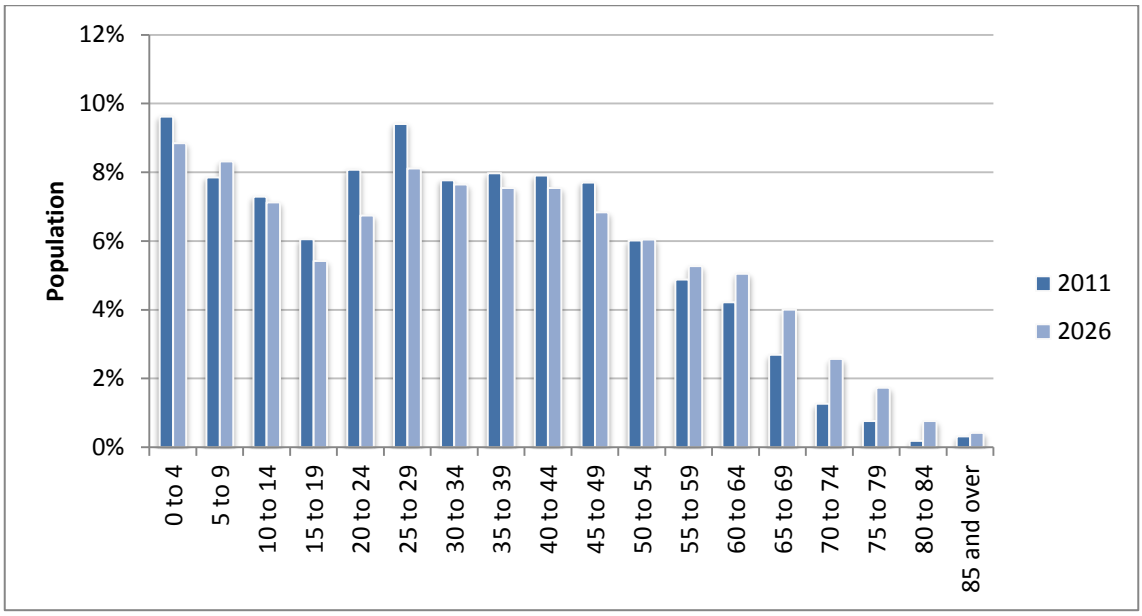
Age (years)	Year			
	2011	2016	2021	2026
0 to 4 years	728	721	720	720
5 to 9 years	594	675	676	677
10 to 14 years	552	522	577	580
15 to 19 years	458	427	409	441
20 to 24 years	611	587	565	549
25 to 29 years	712	707	686	660
30 to 34 years	588	642	638	622
35 to 39 years	603	563	618	614
40 to 44 years	598	588	569	614
45 to 49 years	583	572	567	556
50 to 54 years	455	491	486	492
55 to 59 years	369	402	416	429
60 to 64 years	319	362	393	411
65 to 69 years	204	261	297	326
70 to 74 years	96	142	187	209
75 to 79 years	58	67	105	141
80 to 84 years	14	26	34	62
85 years and over	24	24	30	34
TOTAL	**7,566**	**7,779**	**7,973**	**8,137**

Source: Australian Government Department of Health and Ageing – Unofficial ABS Projections (2010)

This shows the Shire population increasing gradually over time by around 38 persons per annum over the next 15 years.

The change in the demographic of the projected population is likely to have an impact on the overall requirements for community in the long term. The graph bellow shows the demographic change for residents in the Shire until 2026 for the Department of Health and Ageing projections.

Figure 6. Population Projections - Age structure, Shire of Wyndham-East Kimberley



Source: Australian Government Department of Health and Ageing – Unofficial ABS Projections (2010)

WA Tomorrow

Western Australia Tomorrow is a set of forecast prepared by the WAPC based on trends since the 1980s. The current (2012) is based on the 2006 Census. The forecasts represent the best estimate of future population size if trends in fertility, mortality and migration continue. They use the latest information about changes in trends. In some cases these have occurred since the 2006 base year.

Western Australia Tomorrow includes a forecast range known as bands from which a median forecast is derived along with two upper forecasts and two lower forecasts. Users have five forecasts or bands from which to choose. Bands A and B contain the lower forecasts, Band C is the median and Bands D and E the higher forecasts.

Summary forecasts for the Shire overall are shown below:

Table 3. Population Projections – WA Tomorrow, Shire of Wyndham-East Kimberley

Bands	Year			
	2011	2016	2021	2026
A	6,500	6,200	5,900	5,600
B	7,300	7,300	7,000	6,700
C	7,900	8,000	7,800	7,600
D	8,500	8,800	8,600	8,400
E	9,400	9,900	9,900	9,900

Source: WAPC, Western Australia Tomorrow (2012)

Table 4. Population Projections – WA Tomorrow - Band C, Shire of Wyndham-East Kimberley

Age (years)	Year			
	2011	2016	2021	2026
0 to 4 years	810	760	690	660
5 to 9 years	650	750	700	660
10 to 14 years	590	580	630	600
15 to 19 years	500	480	460	490
20 to 24 years	600	550	510	480
25 to 29 years	810	790	720	660
30 to 34 years	710	790	760	690
35 to 39 years	590	600	630	600
40 to 44 years	550	500	490	510
45 to 49 years	540	500	460	450
50 to 54 years	480	480	440	410
55 to 59 years	370	380	380	350
60 to 64 years	270	280	290	280
65 to 69 years	200	210	210	210
70 to 74 years	120	150	160	160
75 to 79 years	65	95	120	130
80 to 84 years	25	50	75	95
85 years and over	30	40	70	100
TOTAL	**7,900**	**8,000**	**7,800**	**7,500**

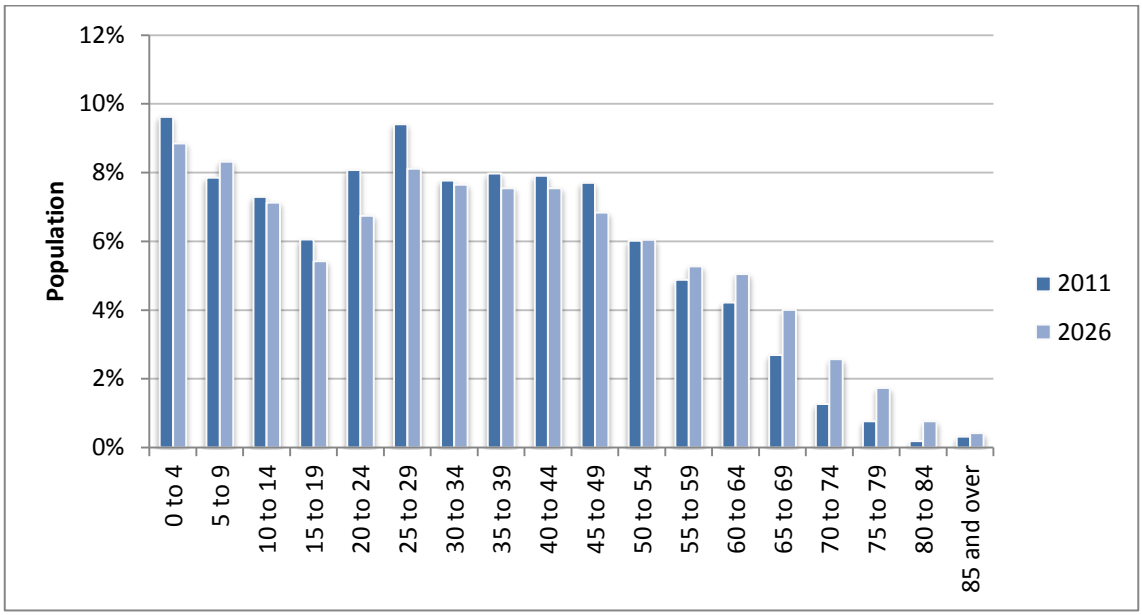
Source: WAPC, Western Australia Tomorrow (2012)

This shows the Shire population decreasing gradually over time by around 27 persons per annum over the next 15 years.

The change in the demography of the projected population is likely to not have an impact on the overall requirements for community facilities in the long term. The

graph below shows the demographic change for residents in the Shire until 2026 for the WA Tomorrow projections.

Figure 7. Population Projections - Age structure, Shire of Wyndham-East Kimberley



Source: Australian Government Department of Health and Ageing – Unofficial ABS Projections (2010)

The number of non-working-age persons in a community dependent on working-age persons can be expressed as a 'dependency ratio'—the number of persons aged less than 15 years and 65 years and over divided by the number of persons aged 15 to 64 years. It gives some indication of the burden falling on working-age persons in order to provide for non-working-age persons.

The table below shows an increase in the dependency ratio from 0.43 in 2011 to 0.51 in 2026. As the ratio increases there may be an increased burden on the productive part of the population to maintain the upbringing and pensions of the economically dependent. This results in direct impacts on financial expenditures on health, as well as many indirect consequences.

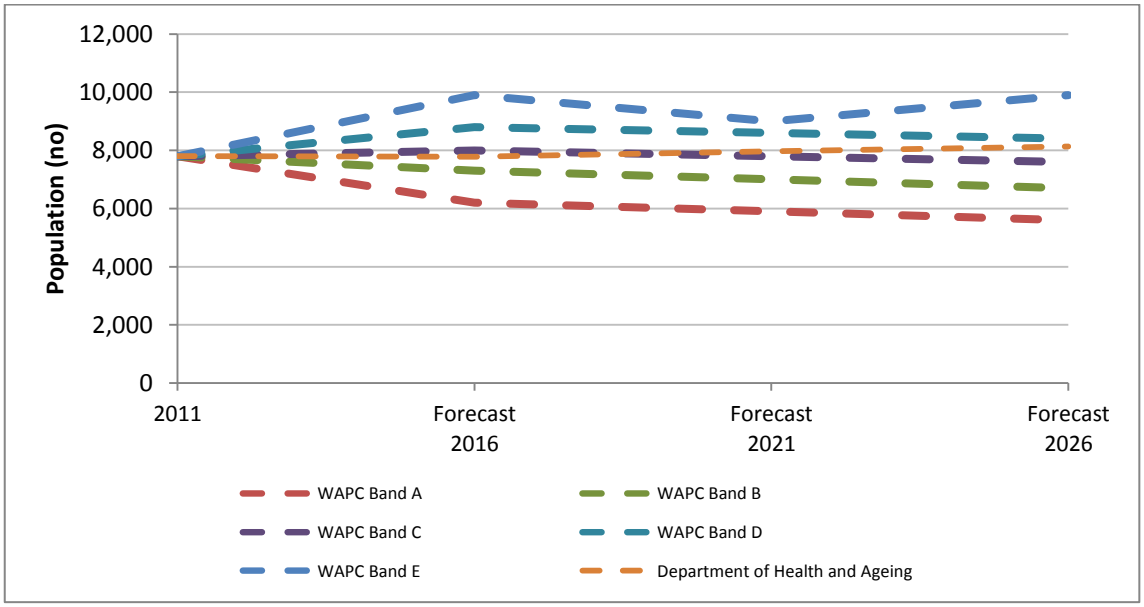
Table 1. Dependency ratios, Shire of Wyndham-East Kimberley – WA Tomorrow

	2011	2016	2021	2026
Working age	5296	5341	5347	5388
Non-working age	2,270	2,438	2,626	2,749
Total	7566	7779	7973	8137
Dependency ratio	**0.43**	**0.46**	**0.49**	**0.51**

Projections Summary

The following graph shows the range of population projections for the Shire.

Figure 8. Population Projections, Shire of Wyndham-East Kimberley



Source: WAPC, Western Australia Tomorrow (2012)

Household projections

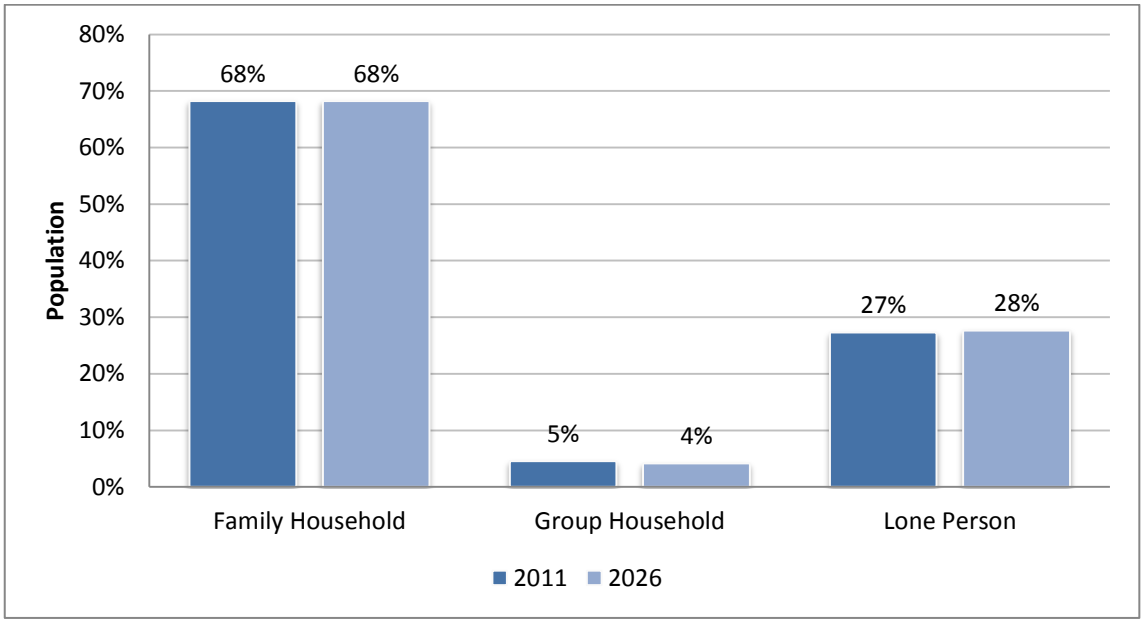
Ages changes are accompanied by changes in household types. The table below shows the little variation in the mix of household types of permanent residents over the next 15 years.

Table 5. Household Projections – WA Tomorrow

	Year			
	2011	2016	2021	2026
Family Household	1,800	1,900	1,800	1,800
Group Household	120	120	110	110
Lone Person	720	750	740	730

Source: WAPC, Western Australia Tomorrow (2012)

Figure 9. Household Projections – WA Tomorrow, Shire

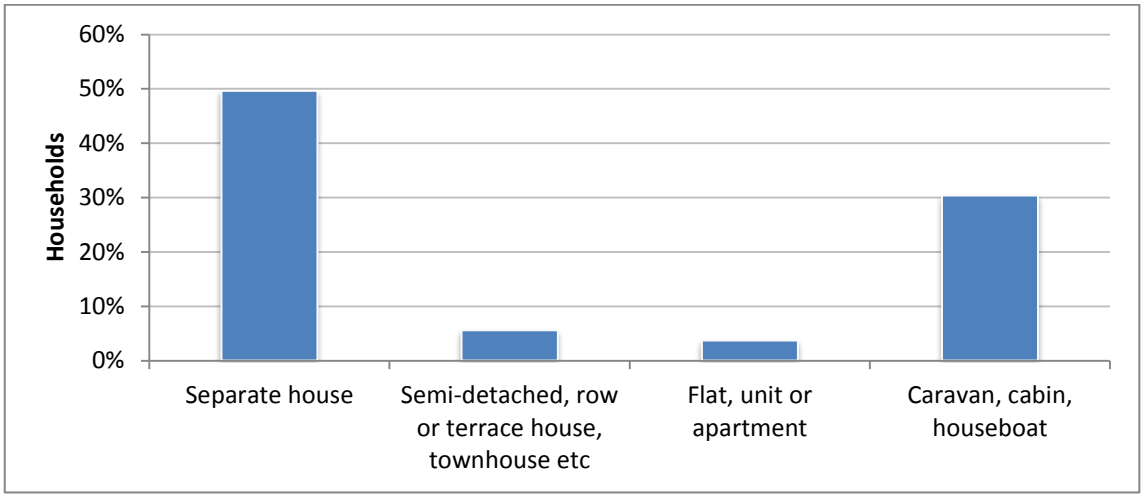


Source: WAPC, Western Australia Tomorrow (2012)

Dwelling occupancy ratios

In the Shire of Wyndham-East Kimberley, the majority of housing stock is single residential housing with 49.6 per cent, followed by Caravan, cabin and house boat with 30.3 per cent of the dwellings in the region and there is no compelling information from the demographic data that indicates a substantial change in the housing mix.

Figure 10. Household Projections – WA Tomorrow, Shire



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

There is some limited correlation between household type and housing type. The table below show the proportion of each household type living in specific accommodation types (as a proportion of household type) in the Shire.

Table 6. Household by dwelling type, 2011

Wyndham-East Kimberley (S)	Family households				Lone person household	Group household	Total
	Couple with no children	Couple with children	One parent family	Other family			
Separate house	65%	86%	86%	100%	51%	73%	71%
Semi-detached, row or terrace house, townhouse	6%	4%	5%	0%	12%	8%	7%
Flat, unit or apartment	5%	1%	3%	0%	7%	3%	4%
Other:							
Caravan, cabin, houseboat	20%	4%	4%	0%	22%	13%	14%
House or flat attached to a shop, office	2%	3%	0%	0%	3%	0%	2%
Improvised home, tent, sleepers out	1%	0%	1%	0%	3%	2%	2%
Not stated	1%	1%	0%	0%	1%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%

Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

There are several points to note from the data:

- The vast majority of couples and families with children live in single residential accommodation.
- There is a significant proportion of families with no children and lone person household accommodated in caravan parks and other short-stay accommodation.

Socio-economic profile of the Shire's residents

In 2011, the Shire had a resident population of 7,799 people and 2,692 private dwellings. Families made up the majority of all households and most of these families were couples without children (including couples whose children had left the family household).

Table 7. Population and household indicators, 2011

Population and Households	Shire of Wyndham-East Kimberley	Kimberley Region	Western Australia
Population	7,799	34,794	2,239,170
Average household size	2.7	2.9	2.6
No. of private dwellings	2,692	10,821	903,487
Family households			
Couple families with children	642	2,921	262,885
Couple families without children	662	2,409	226,879
Single parents families	334	1,622	85,067
Other families	36	174	10,479
Non-family households			
Family households	1,578	6,599	573,705
Non-family households	687	2,645	220,456

Source: ABS Census 2011

The median age of people living in the Shire was 31 years in 2011. This was slightly higher than the surrounding region, but lower than the average for the Western Australia. The key reasons for this are that for the population living in the Shire:

Table 2. the relative proportion of the population aged 0-19 is higher than for Western Australia; and

Table 3. there were a lower proportion of people aged 55-84 than in Western Australia.

Table 8. Population and age indicators,2011

Age Profile	Shire of Wyndham-East Kimberley	Kimberley Region	Western Australia
Median age	31	30	36
Age groups			
0-4	9%	9%	7%
5-14	16%	16%	13%
15-19	6%	6%	7%
20-24	7%	8%	7%
25-34	18%	19%	14%
35-44	16%	16%	15%
45-54	14%	13%	14%
55-64	9%	9%	11%
65-74	4%	3%	7%
75-84	1%	1%	4%
85+	0%	0%	2%

Source: ABS Census 2011

The Shire had predominantly single-residential housing in 2011 (59.8 per cent), with semi-detached (5.6 per cent) and flats, units and apartments (3.7 per cent) making up the balance of dwellings. This dwelling stock is similar to the average dwelling typologies across the Kimberley region and the Western Australia.

Dwelling tenure is quite distinct within the Shire. The proportion of dwellings that are fully owned (i.e. not mortgaged) by their occupants in the area (17.0 per cent) is higher than the average for the Kimberley region (14.7 per cent) but lower than the average for the Western Australia (29.5 per cent). The proportion of people in the area with a mortgage is similar (16.1 per cent) in comparison to the average for the Kimberley region (16.7%), and significantly lower than the average in Western Australia (37.8 per cent). In contrast, 60.9% of the properties in the Shire were rented in 2011, compared to 29.2 per cent in Western Australia.

Table 9. Housing typologies and tenure,2011

Housing Preferences	Shire of Wyndham-East Kimberley	Kimberley Region	Western Australia
Dwelling structure			
Separate house	59.8%	63.4%	70.7%
Semi-detached	5.6%	6.5%	9.3%
Flat, unit, apartment	3.7%	4.7%	7.0%
Other	14.4%	9.8%	0.8%
Tenure Type			
Fully owned	17.0%	14.7%	29.5%
Being purchased	16.1%	16.7%	37.8%
Rented	60.9%	63.0%	29.2%
Other	1.7%	1.4%	1.1%

Source: ABS Census 2011

The unemployment rate of the labour force in the Shire in 2011 was 4.9% which was lower than the surrounding Kimberley region (4.9 per cent) and only marginally higher than the Perth metropolitan area (4.7%).

Table 10. Labour Force, 2011

Employment	Shire of Wyndham-East Kimberley	Kimberley Region	Western Australia
Employed	3,738	14,404	1,097,882
Unemployed	192	821	54,318
Unemployment rate	4.9%	5.4%	4.7%

Source: ABS Census 2011

In 2011, the average individual income was $794 per week for residents living in the Shire. This was significantly higher than the average income in the surrounding Kimberley region ($667 per week), and in Western Australia ($662 per week).

Similarly, the average household and family incomes for the Shire were also higher than the average for corresponding area.

While the proportion of households in the Shire with a mortgage was comparatively low, those households were paying monthly mortgages ($2,167 per month) which were substantially higher than the average in Western Australia ($1,950).

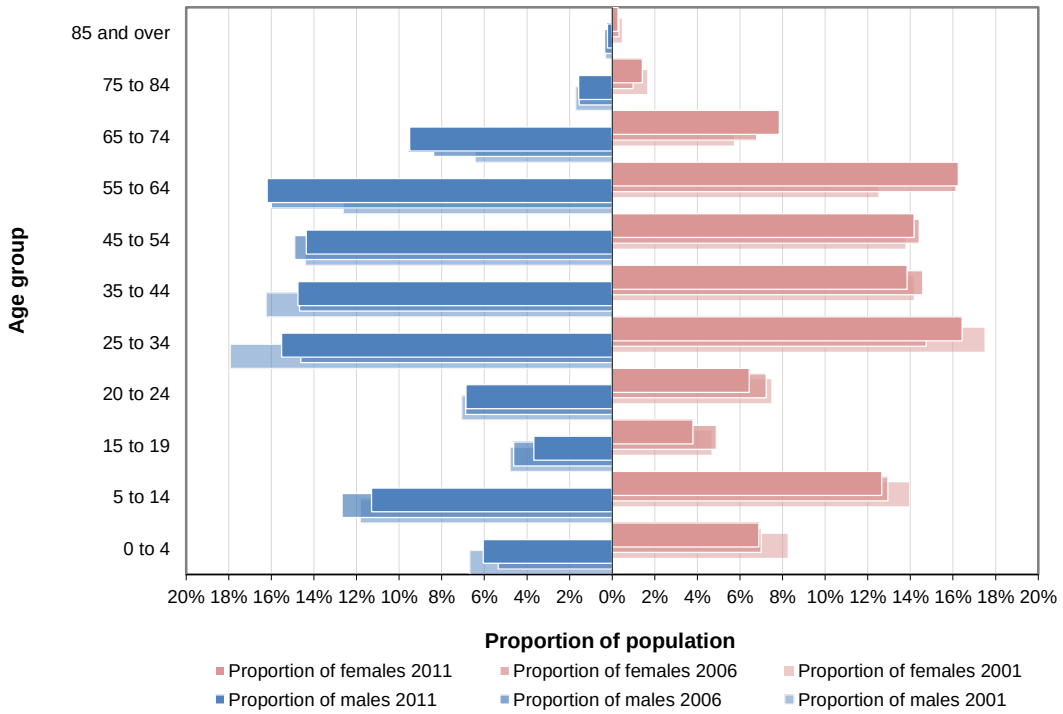
Table 11. Income and household expenses,2011

Income and Household Expenses (2011)	Shire of Wyndham-East Kimberley	Kimberley Region	Western Australia
Median individual weekly income	$794	$667	$662
Median family income	$1,718	$1,498	$1,722
Median household income	$1,547	$1,437	$1,415
Average weekly rent	$120	$125	$300
Median monthly mortgage repayments	$2,167	$2,383	$1,950

Population

Over the period of 2001 to 2011, the number of residents in the Shire increased 2.5 per cent per annum to approximately 11,915 people in 2011. The median age of residents remained relatively constant over this time, ranging from 35 years to 39 years before stabilising at 39 years in 2011. People aged between 55-64 years accounted for the largest proportion of total residents in 2011 (16.21 per cent). Residents aged between 65 to 74 years experienced the most substantial growth from 2001 to 2011, increasing by 5.3 per cent per annum to now account for 6.11 per cent of all residents the area.

Figure 11. Population by age group, Shire of Wyndham-East Kimberley residents, 2011



Source: Australian Bureau of Statistics, Census of Population and Housing; MacroPlan Dimasi

Analysis of the Shire population identified the following:

- An slightly high proportion of males;
- A decreasing number of children in the area specially in the age bracket between five to fourteen years;
- The number of people aged between 15 and 44 years fell in the Shire. The number of males aged between 15 to 444 years declined from 46.0 per cent in 2001 to 40.8 per cent in 2011; and

- Similarly, the number of females in the same age bracket fell from 43.8 per cent to 40.5 per cent the time series. This shows that people aged between 15 and 44 years are moving from within the Shire to outside areas.
- A growing population aged between 55 and 64 years. In 2001, males in this age bracket accounted for 12.6 per cent of all males in the area and in 2011 the accounted for 16.2 per cent. Females of the same age also increased in the area, accounting for 12.5 per cent of all females in 2001 and 16.2 per cent in 2011.
- The number of people aged 65 years and over increased in the Shire. Specifically, the number of males aged between 65 to 74 years increased from 6.4 per cent in 2001 to 9.5 per cent in 2011; and
- Similarly, the number of females in the same age bracket increased from 5.7 per cent to 7.8 per cent the time series. This shows that seniors are moving into the Shire.

Table 12. Age profile, Shire of Wyndham-East Kimberley, 2011

	2001		2006		2011	
Age brackets	Male	Female	Male	Female	Male	Female
0 to 4	6.7%	8.2%	5.3%	7.0%	6.0%	6.9%
5 to 14	11.8%	13.9%	12.7%	12.9%	11.3%	12.7%
15 to 19	4.8%	4.7%	4.6%	4.9%	3.7%	3.8%
20 to 24	7.1%	7.5%	6.9%	7.2%	6.9%	6.4%
25 to 34	17.9%	17.5%	14.6%	14.8%	15.5%	16.4%
35 to 44	16.2%	14.2%	14.7%	14.6%	14.8%	13.9%
45 to 54	14.4%	13.8%	14.9%	14.4%	14.4%	14.2%
55 to 64	12.6%	12.5%	16.0%	16.1%	16.2%	16.2%
65 to 74	6.4%	5.7%	8.4%	6.8%	9.5%	7.8%
75 to 84	1.7%	1.6%	1.5%	1.0%	1.6%	1.4%
85 and over	0.3%	0.5%	0.4%	0.3%	0.2%	0.3%

Source: Australian Bureau of Statistics, Census of Population and Housing; MacroPlan Dimasi

The total number of families in the Shire increased by 1.7 per cent per annum, in line with population growth, to total approximately 1,578 families in 2011. Of those families, 40.2 per cent were couple families without children, 39.8 per cent were families with children and 17.7 per cent were one parent families. Couple family without children experienced the strongest growth from 2001 to 2011, rising by 3.3

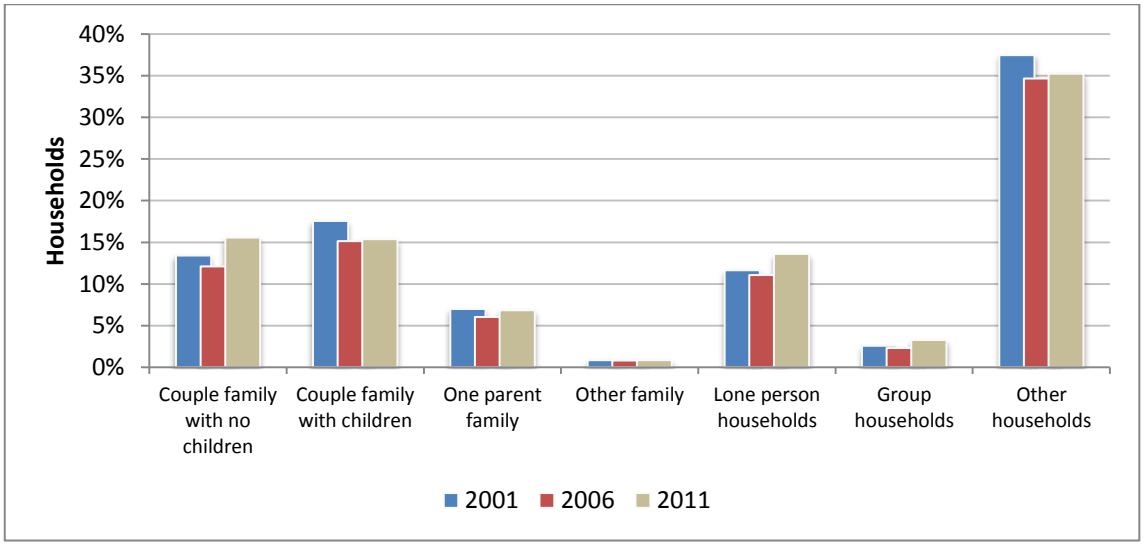
per cent per annum, followed by one parent families with annual growth of 1.6 per cent.

The composition of households in the area has changed over the last 10 years period with a larger proportion of young families locating in the area. Lone person households accounted for 11.6 per cent of all household types in 2001 increasing to 13.6 per cent in 2011, while couple families without children and couple families with children accounted for 13.4 and 17.6 per cent in 2001 and 15.5 and 15.4 per cent in 2011 respectively.

There has been a significant increase in the number of households containing couple families without children (175) and lone person households (156). Over the same time frame, the number of couple families with children, has experienced low growth (26 residences).

This changing composition has resulted in a lower proportion of children residing in the area. However, it is expected an increase in the proportion of children as the number of young families without children in the area continues to grow and eventually progress to the next phase in life (i.e. begin to have children)

Figure 12. Household composition, Shire of Wyndham-East Kimberley, 2011

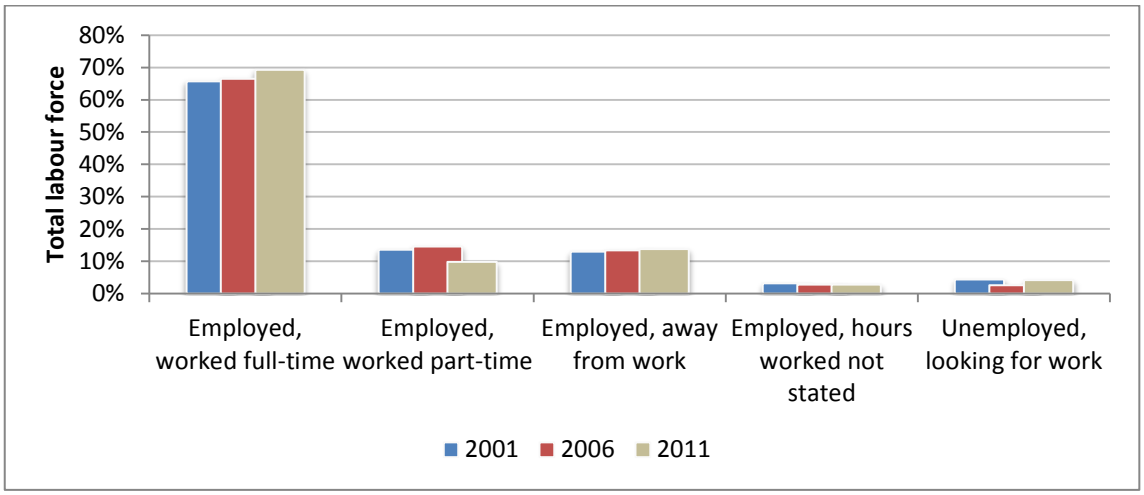


Source: Australian Bureau of Statistics, Census of Population and Housing; MacroPlan Dimasi

Over the period of 2001 to 2011, the number of employed residents in the Shire has increased by 1.4 per cent per annum, to total approximately 3,073 people. In particular, the number of residents in full time work increased by 1.9 per cent per annum, while the number of residents in part time work decreased by 1.9 per cent per annum. The decrease in part time workers could be due in part to the decrease

of students in the area. The number of unemployed residents looking for work increased by 0.9 per cent per annum in the period of 2001 to 2011.

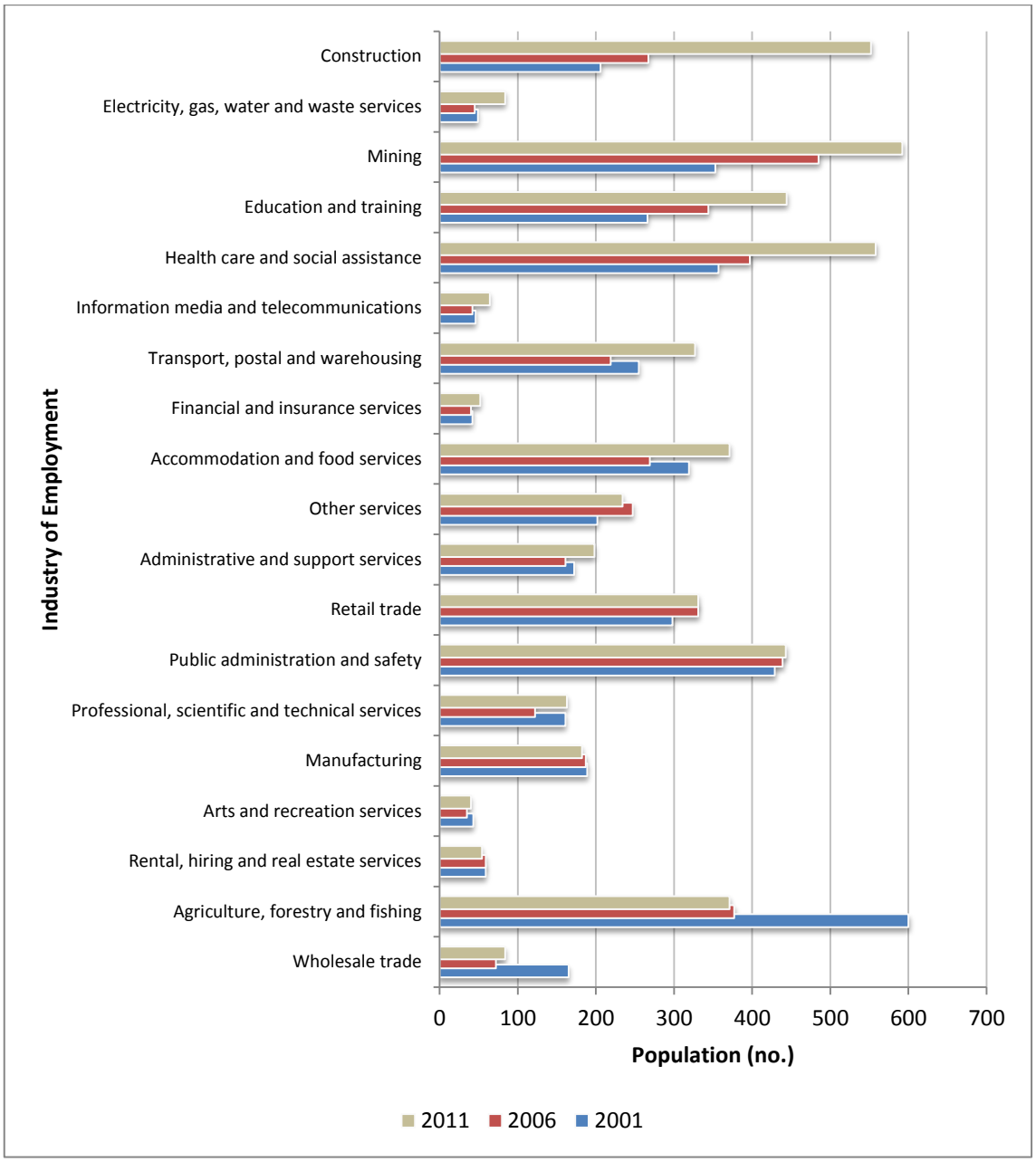
Figure 13. Labour force, Shire of Wyndham-East Kimberley residents, 2011



Source: ABS Census 2011.

The figure bellow shows that the industry of employment of residents in the area had a moderate change over the time series, with those working in construction electricity, gas, water and waste services and mining industries accounting for a far greater proportion of employed persons in recent years. Mining accounted for the largest proportion of employed persons in 2011, constituting 11.5 per cent of all employed residents. Health care and social assistance were the second largest component of employed persons, comprising 10.8 per cent of total employed persons in 2011. The number of residents employed in the agriculture decreased by 4.7 per cent per annum, to account for 7.2 per cent of employed persons in 2011 (down from 14.2 per cent in 2001).

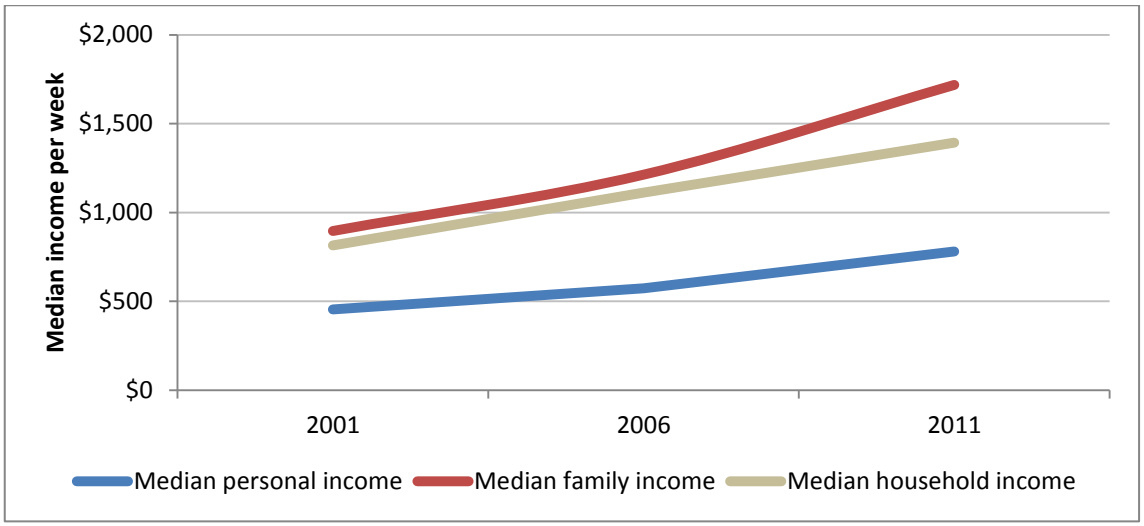
Figure 14. Industry of Employment, Shire of Wyndham-East Kimberley2011



Source: ABS Census 2011.

In line with the increase in the number of employed residents in the area, the income generated by residents increased considerably over the decade. The median family income of residents rose by 6.7 per cent per annum, to total $1,718 per week in 2011. Further, median household and individual incomes grew by 5.5 and 5.6 per cent per annum, respectively.

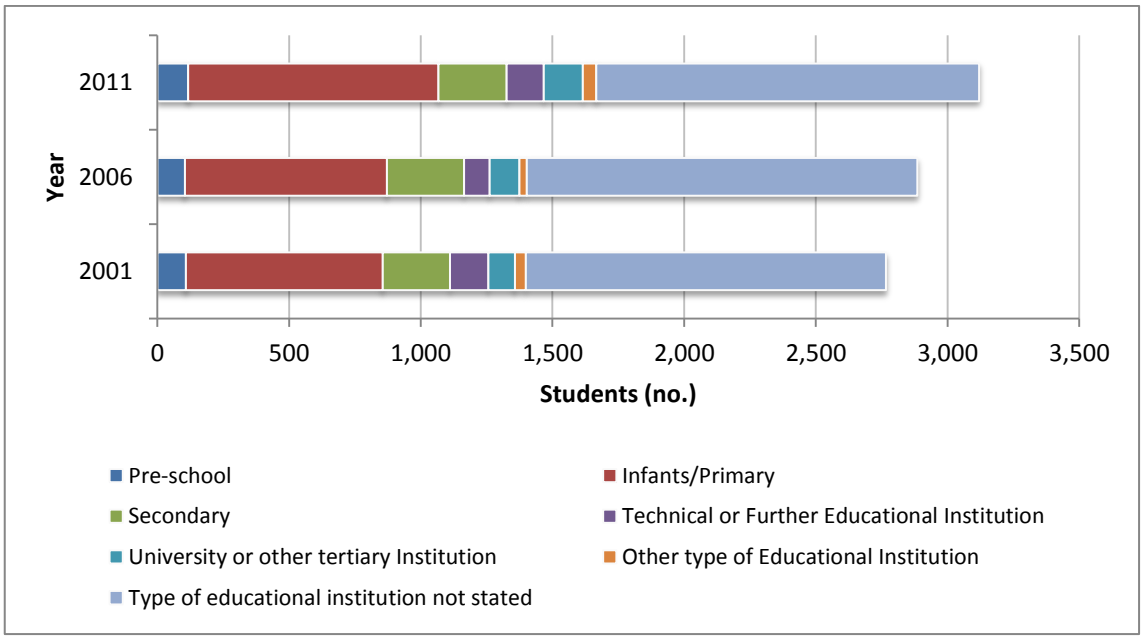
Figure 15. Level of income, Shire of Wyndham-East Kimberley residents, 2011



Source: ABS Census 2011.

In the period between 2001 and 2011, there was a considerable increase in the number of students residing within the Shire. In particular, the number of university or other tertiary institution students grew by 3.9 per cent per annum. On the other hand, the number of technical or further educational institution student decreased 0.3 per cent per annum.

Figure 16. Educational Institutions, Wyndham-East Kimberley



Source: ABS Census 2011.

Section 3: Main economic drivers

The Shire of Wyndham-East Kimberley area constitutes an important focus of development and change in Northern Australia. Large-scale project development proposals, a growing population and host of wider land and environmental considerations make this a dynamic and challenging area.

The Shire economy is built upon a wide and diversifying base. A number of trends and initiatives point to continued prospects and opportunity.

Pastoralism has historically taken up much of the land area. The imprint of this activity is seen across the landscape and in the pattern of landholdings. Commercial fishing and mineral exploration is undertaken within the area. The proximity of onshore and offshore petroleum and gas prospects could present opportunities for supply and servicing of resource development projects. Aquaculture, though currently practised on a very small scale, presents considerable potential for growth.

Irrigated agriculture has been the major focus of land use and economy in recent years, and the stage 2 of the Ord River Irrigation Area (ORIA) will make this one of Australia's hubs of primary production.

Tourism continues to show strong and consistent growth. The Kununurra-Wyndham area is assuming an important position in the opening of the top end of Australia to tourism. The area offers open space, spectacular landscapes, managed conservation estate and a range of educational, cultural and recreational experiences. These are, in brief, the economic indicators of the area. A growing economy including land and resource development projects brings demand for land as well as the requirement for broad-ranging infrastructure. It brings enterprise and employment, providing the foundation for population growth which in turn leads to further urban and service centre development.

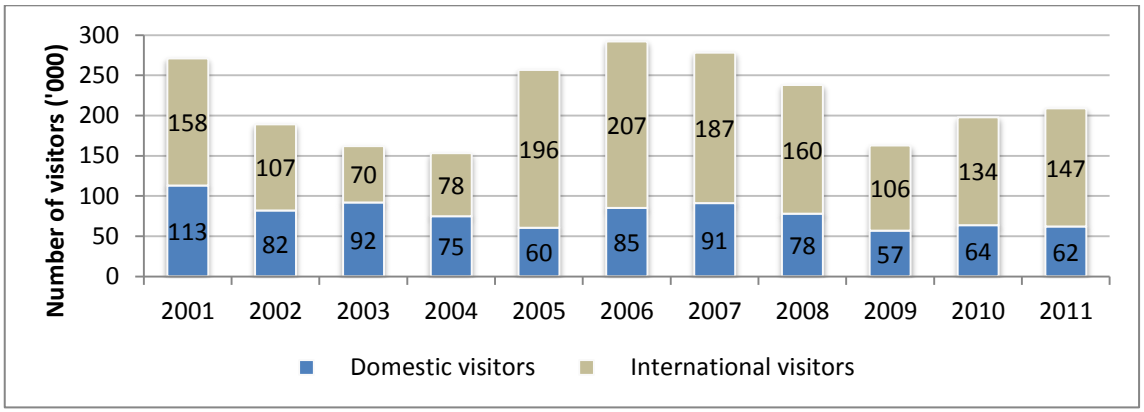
Economic activity

Tourism

The tourism industry continues to make a significant contribution to the Shire's economic activity. Direct flights linking Kimberley to Sydney, Melbourne, Adelaide and Darwin have enhanced the accessibility and attractiveness of the region. Major population centres and natural attractions such as the El Questro Wilderness Park, Drysdale River National Park and Lake Argyle, continue to provide a range of tourism options in the Shire.

Estimates provided by Tourism Western Australia show that across the year of 2011, an average of 209,000 domestic and international visitors arrived in the area.

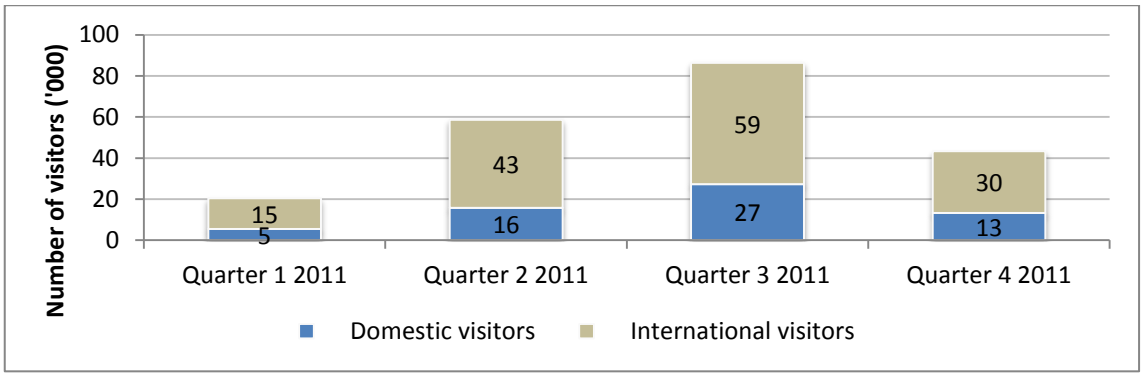
Figure 17. Overnight tourist visitors numbers, Shire of Wyndham-East Kimberley, 2001-2011



Source: Tourism Western Australia, Tourism Research Australia, IVS Trips 1999 onwards, NVS Trips 1999 onwards

More than 28 per cent of domestic and international visitors travelled to the Shire in the months of April through June, with a further 41.4 per cent visiting during July to September.

Figure 18. Overnight tourist visitors numbers, Shire of Wyndham-East Kimberley, 2011



Source: Tourism Western Australia, Tourism Research Australia

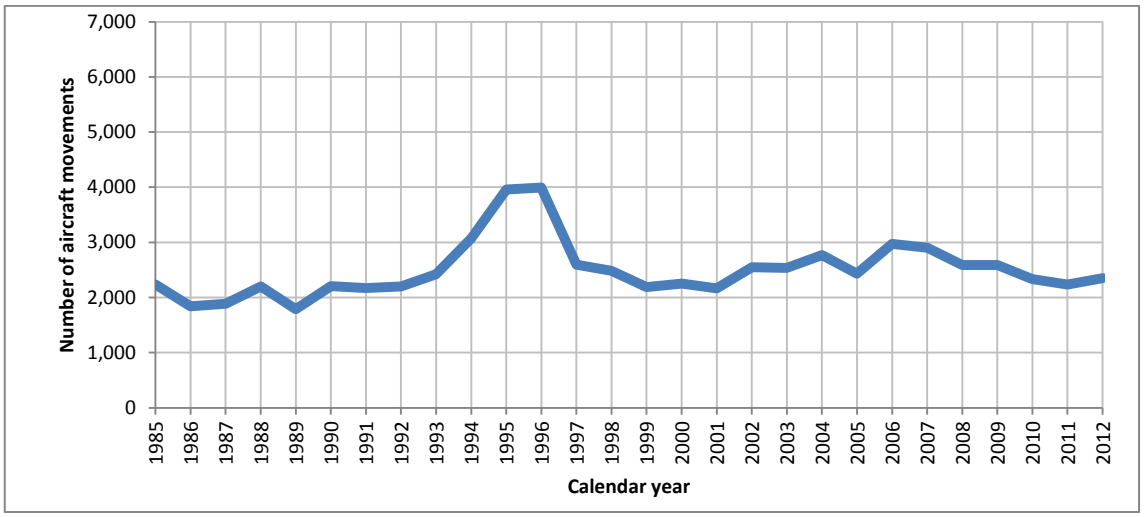
Of all the domestic visitors to the Shire in 2011, 50.7 per cent came for work holiday, while 29.4 per cent visited for holiday/leisure and/or to visit friends/relative. When staying overnight in the Shire, 56 per cent stayed in hotels or resorts, 11 per cent in friend or relatives property, while an additional 6 per cent stayed in serviced apartment.

By contrast, 50.9 per cent of international visitors come to the Shire for working holiday and others 28.6 per cent for holiday/leisure. Most of international visitors stayed in backpacker (34 per cent), 27 per cent stayed at rented house/apartment, and an additional 25 per cent stayed in caravan parks or commercial camping ground.

Aircraft and air passenger movement trends

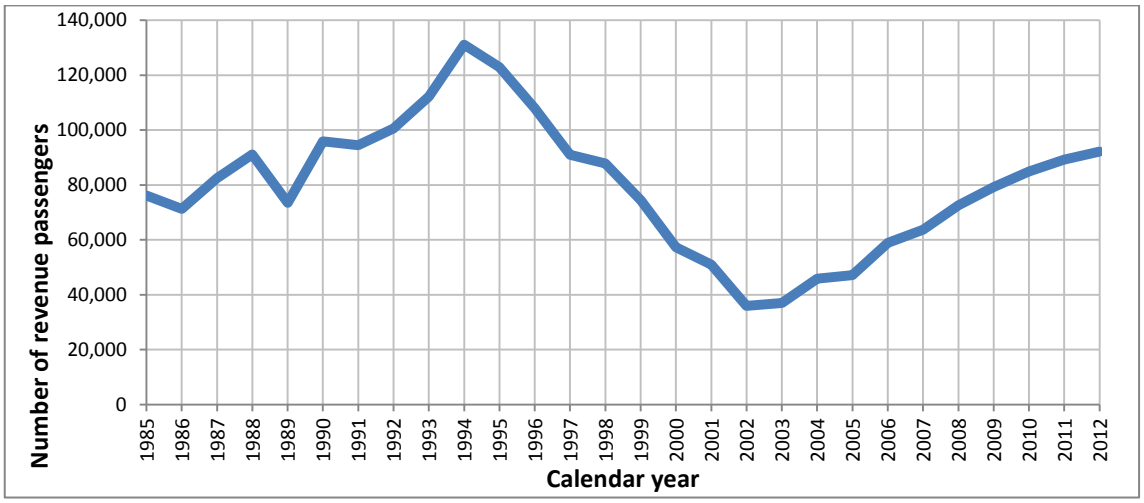
The total number of aircraft movements per year in the Shire has fluctuated at around the same level for nearly two decades. In contrast the total number of passenger movements through the Kununurra airport has increased steadily since 2003. This indicates an increasing degree of travel for each aircraft movement.

Figure 19. Number of aircraft movements through the Kununurra airport.



Source: Bureau of Infrastructure, Transport and Regional Economics, 2013

Figure 20. Number of revenue passengers through the Kununurra airport.



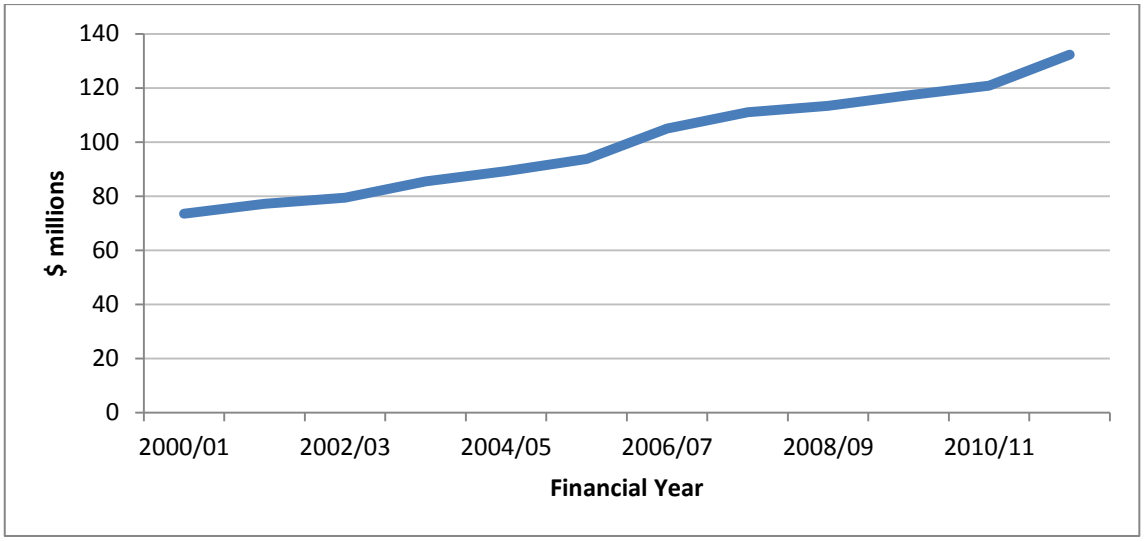
Source: Bureau of Infrastructure, Transport and Regional Economics, 2013

Retail turnover

Retail turnover in the Shire mirrored the consumer confidence within the Kimberley region and Western Australian economy over the last decade.

Retail activity for the region has been measured in terms of turnover and was recorded at $73.5 million for the financial year 2000/01. Turnover steadily increased to reach $132.3 million in 2011, an average of 5.5 per cent over the decade. Kununurra is the major centre in the Shire providing retail services, whilst smaller retail ventures operate in Wyndham.

Figure 21. Estimated retail turnover, Shire of Wyndham-East Kimberley, 2001-2011



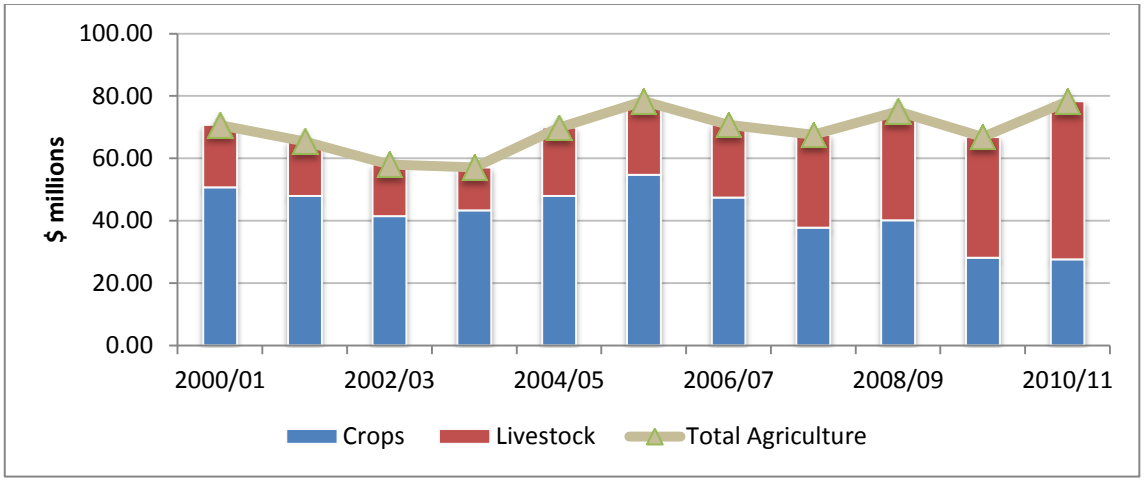
Source: ABS cat. No. 8501.0 Retail Trade, Australia, TABLE 3. Retail Turnover, By State. Regional estimates by the Department of Regional Development and Lands.

Agriculture

Agricultural production for the Kimberley Region was valued at $78.8 million in 2011, which constitutes 30.9 per cent of the value of agriculture in the Kimberley region. The outstanding features of the Shire agriculture are the large numbers of pastoral stations and the Ord River horticulture developments.

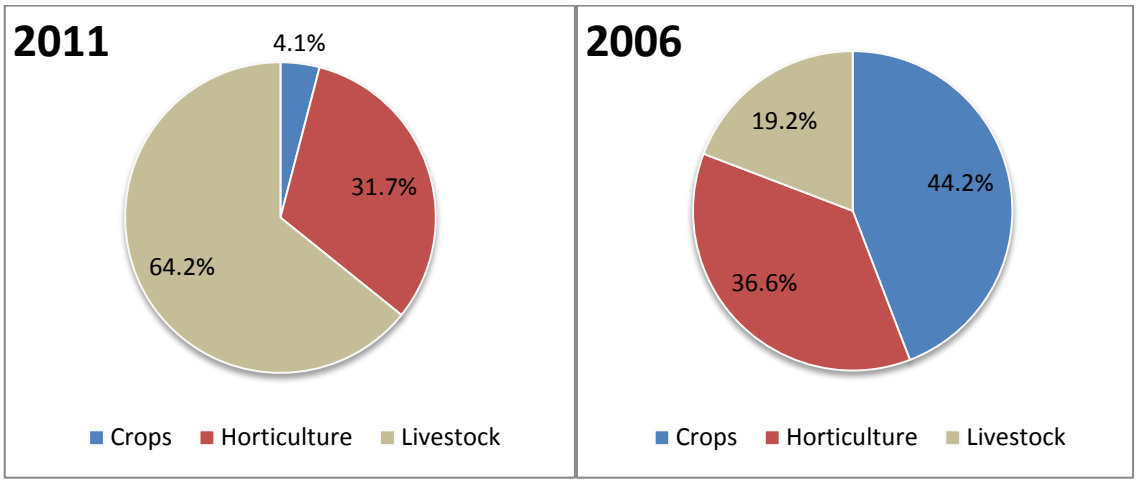
In 2011, the pastoral industry made up 64.2 per cent of the total value of agriculture at $50.6 million. Crop production for the same year was valued at $28.2 million, or 35.8 per cent of regional agriculture.

Figure 22. Value of agricultural commodities produced (VACP), Shire of Wyndham-East Kimberley, 2001-2011.



Source: ABS cat. No. 7503.0 Value of Agricultural Commodities Produced, Australia, Table 1 VALUE OF AGRICULTURAL COMMODITIES PRODUCED, ASGC – State/SD: Western Australia

Figure 23. Share of agricultural commodities produced (VACP), Shire of Wyndham-East Kimberley



Source: ABS cat. No. 7503.0 Value of Agricultural Commodities Produced, Australia, Table 1 VALUE OF AGRICULTURAL COMMODITIES PRODUCED, ASGC – State/SD: Western Australia

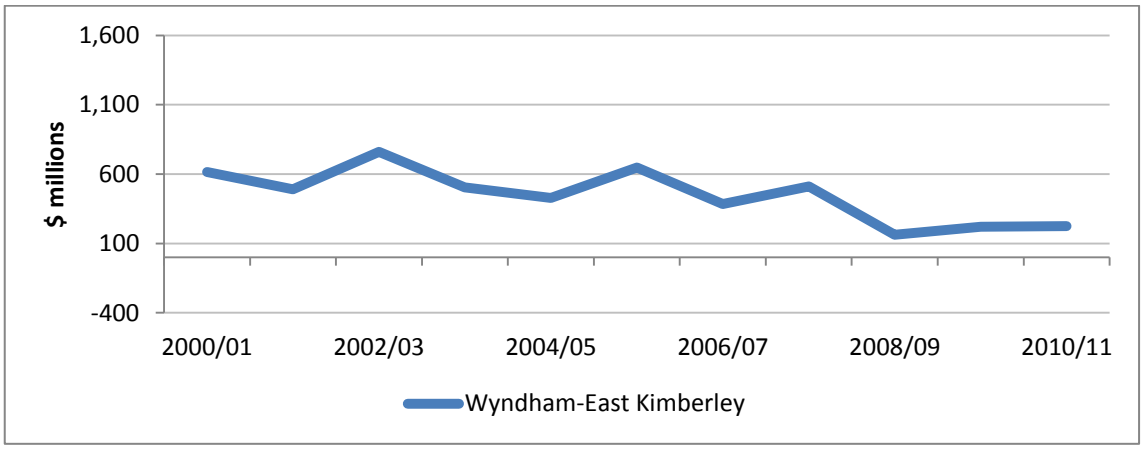
Mining and mineral processing

The Shire accounts for most of Western Australia's diamond production and produces around 90 per cent of the world's pink diamonds.

In 2010/11, the total mining and mineral production in the Shire was valued at $226 million.

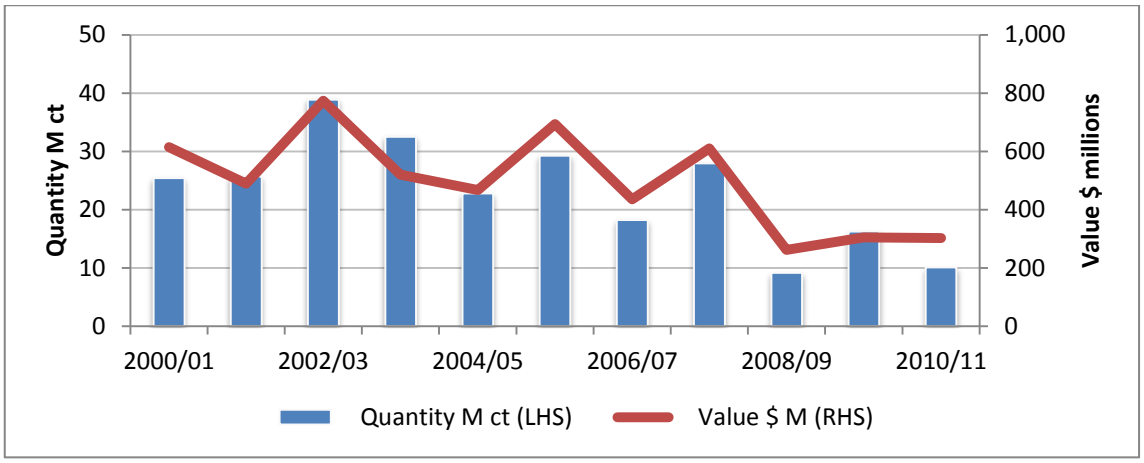
In 2002/3, the Shire mining reached $761 million dropping to $162 million in 2008/9, due to the fall in demand for diamonds created by the global financial crisis. In 2010, the mining industry recovered resulting in a 36 per cent growth, enabled by increased sale volumes for diamonds.

Figure 24. Value of mineral and petroleum production, Shire of Wyndham-East Kimberley, 2001-2011



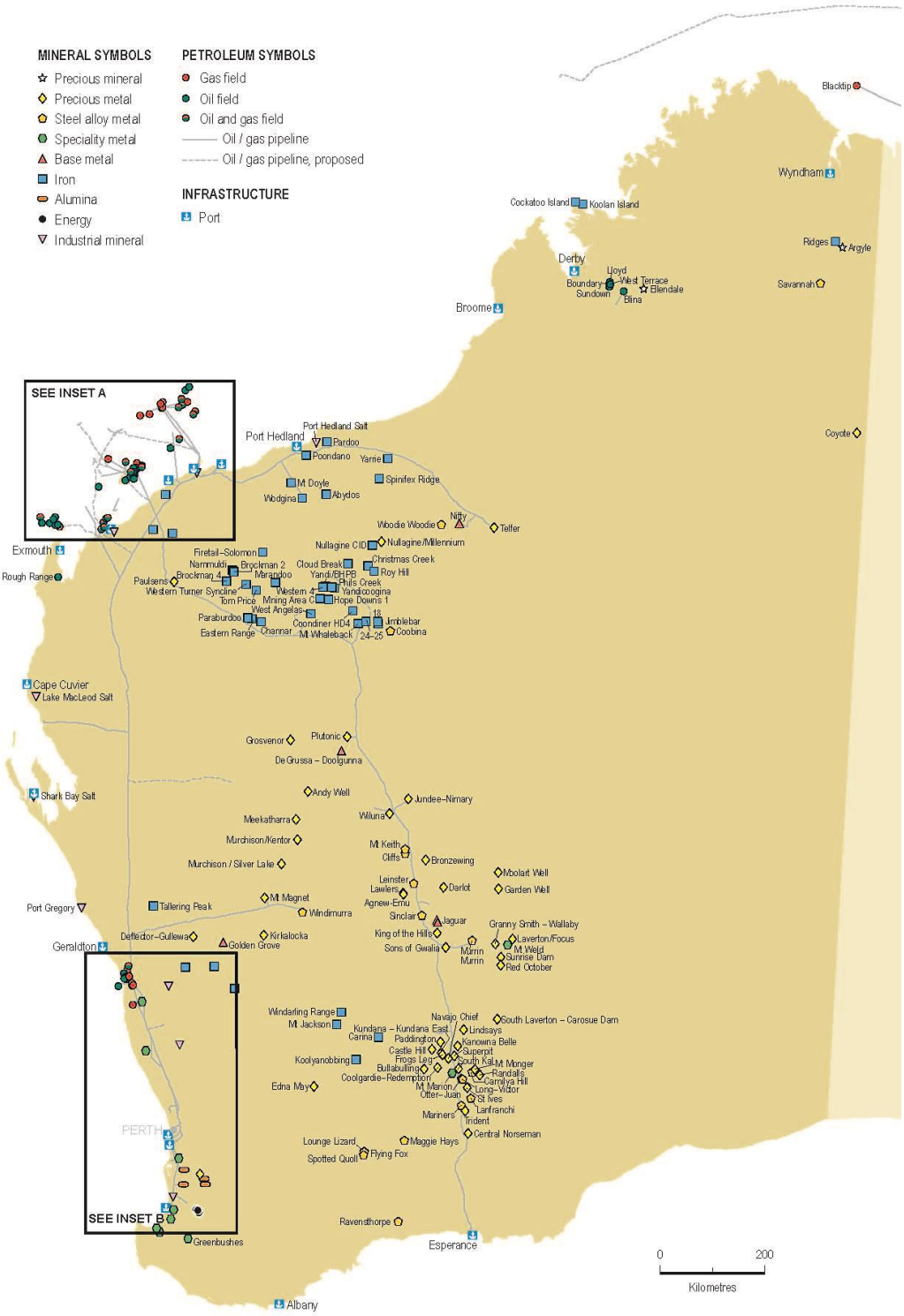
Source: Western Australian, Mineral and Petroleum Statistics Digest, Table – Value of Minerals and Petroleum by Region 2001-2011

Figure 25. Value of diamonds production, Shire of Wyndham-East Kimberley, 2001-2011



Source: Western Australian, Mineral and Petroleum Statistics Digest, Table – Value of Minerals and Petroleum by Region 2001-2011

Figure 26. Major Mineral and petroleum projects in Western Australia

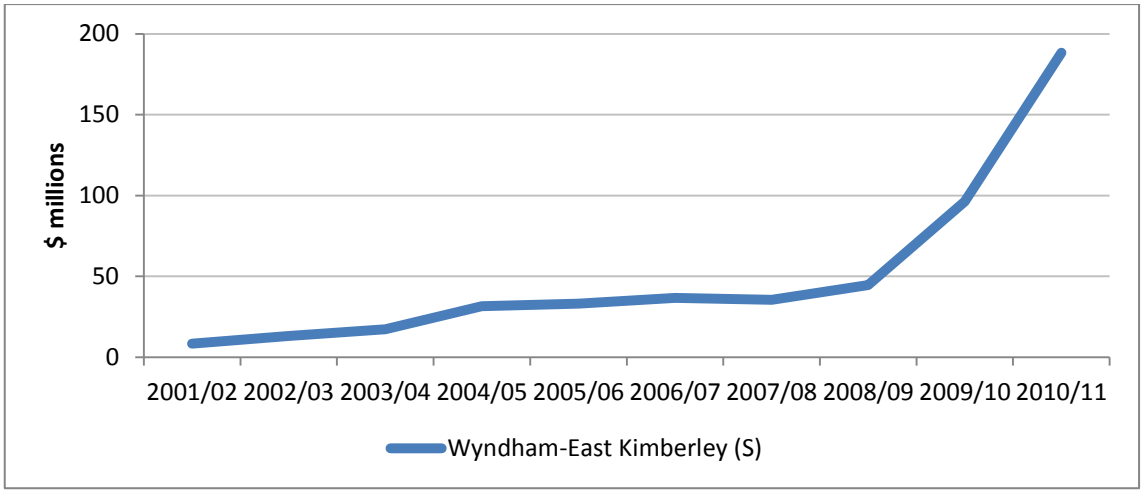


Building Approvals

The value of building approvals in the Shire increased from $8.42 million in 2002 to $188 million in 2011.

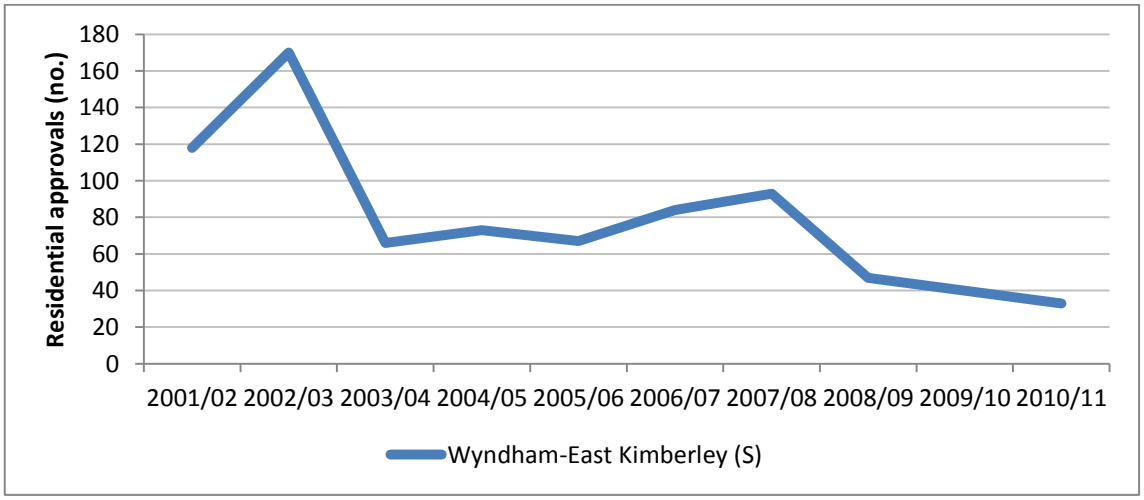
The value of residential approvals increased from $6.2 million in 2002 to $42.1 million reflecting increases in population, the increasing value of housing and housing construction. The value of non-residential construction increased over the last decade, with non-residential approvals reaching $146.3 million in 2011, from $36.1 million in the previous year.

Figure 27. Value of building approvals, Shire of Wyndham-East Kimberley, 2001-2011



Source: ABS cat. No. 8731.0 Building Approvals, Building Approved in Statistical Local Areas: WA

Figure 28. Number of residential dwelling approvals, Shire of Wyndham-East Kimberley, 2001-2011



Source: ABS cat. No. 8731.0 Building Approvals, Building Approved in Statistical Local Areas: WA

Project Investment

Project investment is divided across four categories: under construction; committed; and under construction. Under consideration is where the project idea is being scoped for further development. Once the projects are approved, they are categorised as committed and recognised as under construction once building commences.

The Shire's proximity to Asian markets combined with its strengths in mining, irrigated agriculture, tourism and pastoral industries, underpin its potential as a significant investment location.

Figure 29. Value of proposed projects, Shire of Wyndham-East Kimberley, 2013-2017

Source: Access Economics - Projects included in Investment Monitor March 2012.

Table 4. Labour force Fly-in fly-out and Drive-in drive-out workers origin, Shire of Wyndham-East Kimberley2011

Project	Capital Investment $ million	Construction Workforce	Operational Workforce
Argyle underground development (diamonds)	2,200.0	483	350
Sorby Hills (Stage 1)	70.0	250	500
Ord River Irrigation Scheme (Stage 2 development)	415.0	-	-
Wyndham health facilities refurbishment	3.4	-	-
Remote aged care services in Kalumburu and Warmun	4.5	-	-
Remote clinics in Kalumburu and Warmun	5.5	-	-
Kununurra school precinct upgrades and expansions (primary school, high school, community library, teacher training)	48.9	-	-
Kununurra Airport—new Patient Transfer Facility	0.4	-	-

Source: Access Economics - Projects included in Investment Monitor March 2012.

There was significant growth in project investment since 2007 when the Argyle Diamond Mine initiated its underground project. The current project investments figures have significantly changed after announcements about the status of the offshore oil and gas reserves project.

Figure 30. Kimberley Projects

Source: Department of State Development.

Labour Force and employment

According to the Census definition, the economically active population are all persons of either gender who furnish the supply of labour production of economic goods and services, during a specified time reference period. This means that persons are considered as economically active if and only if they contribute or are available to contribute to the production of goods and services. Minimum age for the economically active population is legally determined by the compulsory schooling (15 years old). Although the international guidelines do not refer to maximum age limit, in Australia upper age limit of economically active population is defined by the age limit for retirement (65 years old).

The currently active population or the labour force is the most widely used measure of the economically active population. It comprises all persons above specified minimum age who, during specified brief period fulfil the requirements for inclusion among the employed or unemployed. Being based on the short term reference period, it is used for measuring the current employment and unemployment situation of a region economy. Measurement of currently active population is based on the following labour force framework:

- Employed - persons aged 15 and above who are engaged in the economic activity and perform an occupation;
- Unemployed - persons aged 15 and above seeking for employment or are available for such an activity;
- Not in the labour force (or not currently active) - persons aged 15 and above which temporarily stopped to perform an occupation, due to the military service (active persons not performing an occupation).

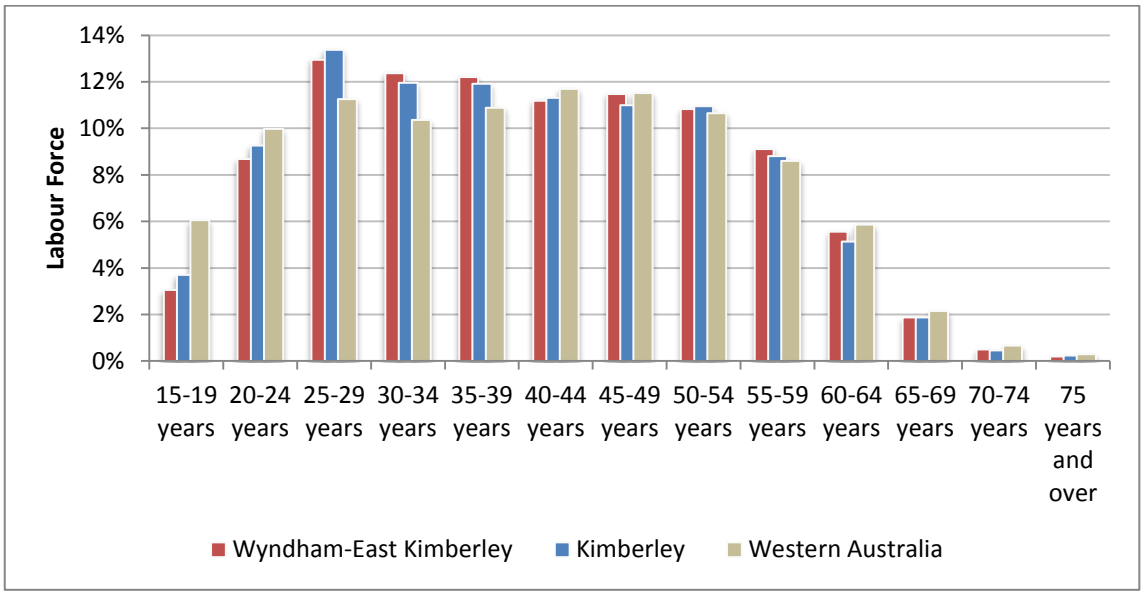
The first two categories make up the currently active population (labour force).

In the Shire, according to the Census from 2011, the labour force aged 15 and above amounted to 4,148 approximately 50 per cent of the total population. The proportion of labour force is higher than the Kimberley region 43.75 per cent and slightly lower than the 51.45 per cent average in the State.

The labour force breakdown of labour force participation rate by age gives a profile of the distribution of the labour force within the Shire. The lowest activity rate compared to Kimberley region and Western Australia was among population aged between 15 and 19 years 3 per cent against 4 and 6 per cent respectively. The age bracket between 25 to 39 were higher the average of the State but similar to the

Kimberley region suggesting a young work force present not only in the Shire by in the region as a whole.

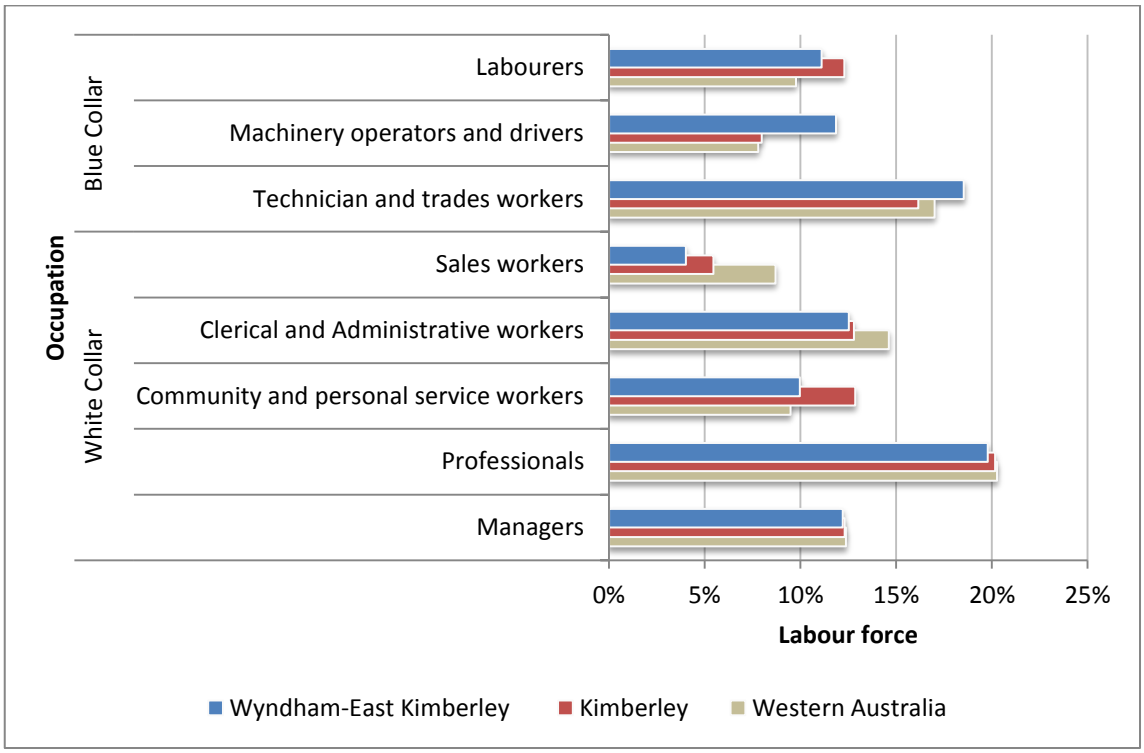
Figure 31. Labour force age comparison, Shire of Wyndham-East Kimberley, Kimberley and Western Australia, 2001-2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

According the Census 2011 the Shire hold a lower percentage of white collar workers (58.5 per cent) compared to the Kimberley and Western Australia (63.6 and 65.4 respectively). Professional services accounted for the largest proportion of employed persons across the entire time series, constituting 19.8 per cent of employed residents in 2011, followed by technician and trades workers with 18.5 per cent and clerical and administrative workers 12.5 per cent of the employed residents.

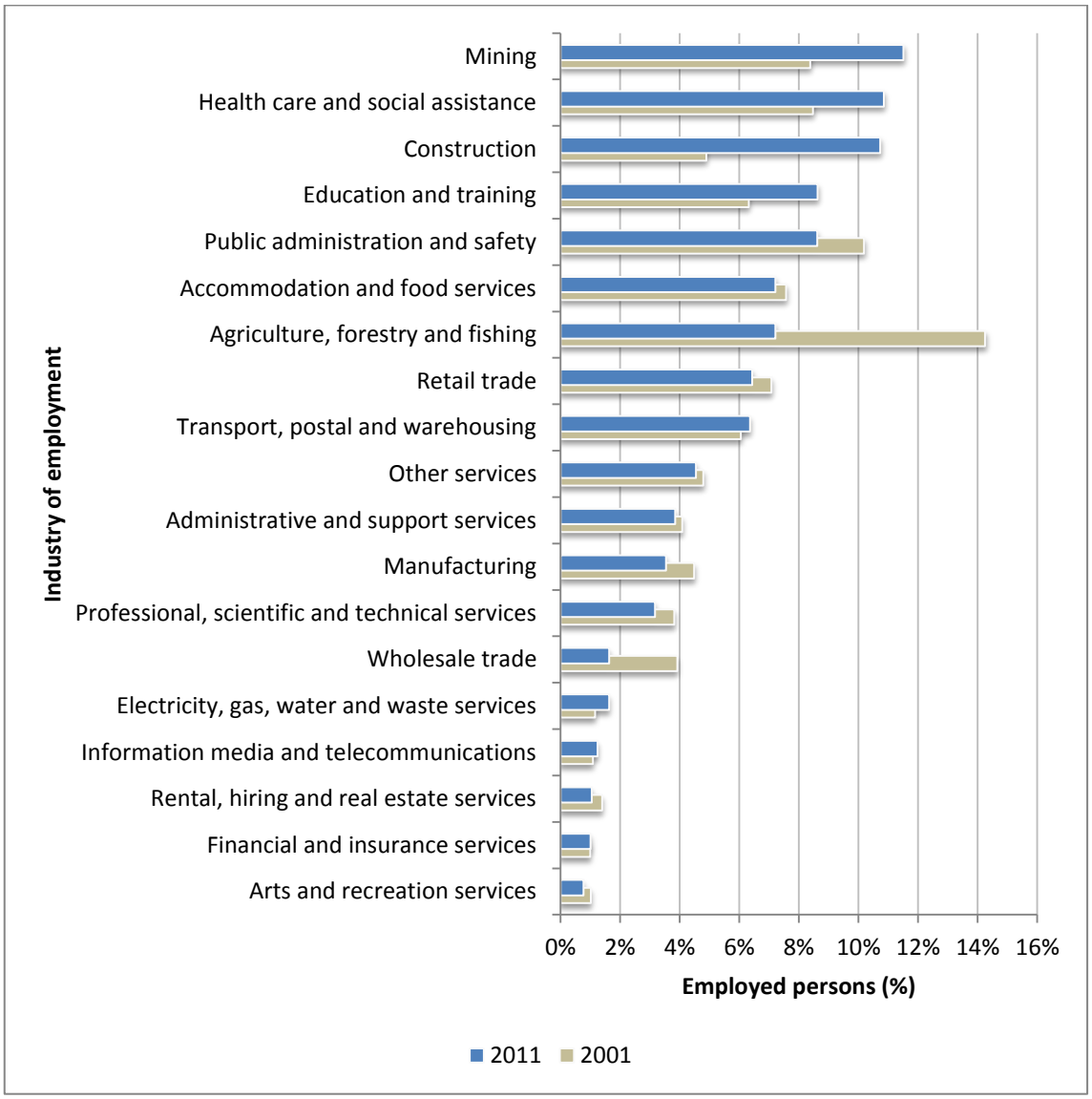
Figure 32. Labour force occupation, Shire of Wyndham-East Kimberley, Kimberley and Western Australia, 2001-2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

The industry of employment in the Shire changed considerably over the time series, with those working in the mining and construction industries accounting for a far greater proportion of employed persons in recent years. Health remained the second largest component of persons employed across the same time period, comprising 10.8 per cent of total employed persons in 2011. The number of residents employed in the mining sector increased by 5.3 per cent per annum, to account for 11.5 per cent of employed persons (up from 8.4 per cent in 2001) and 17.1 per cent of all the workforce in 2011. The industry that accounted the highest increase in number of persons employed was the construction sector with 10.4 per cent increase per annum, comprising 10.4 per cent of all employed residents in 2011 (up from 4.9 per cent in 2001). Wholesale trade and Agriculture, forestry and fishing registered the highest decreased in the number of employed residents, from 3.9 and 14.2 per cent in 2001 to 1.6 and 7.2 per cent in 2011, respectively.

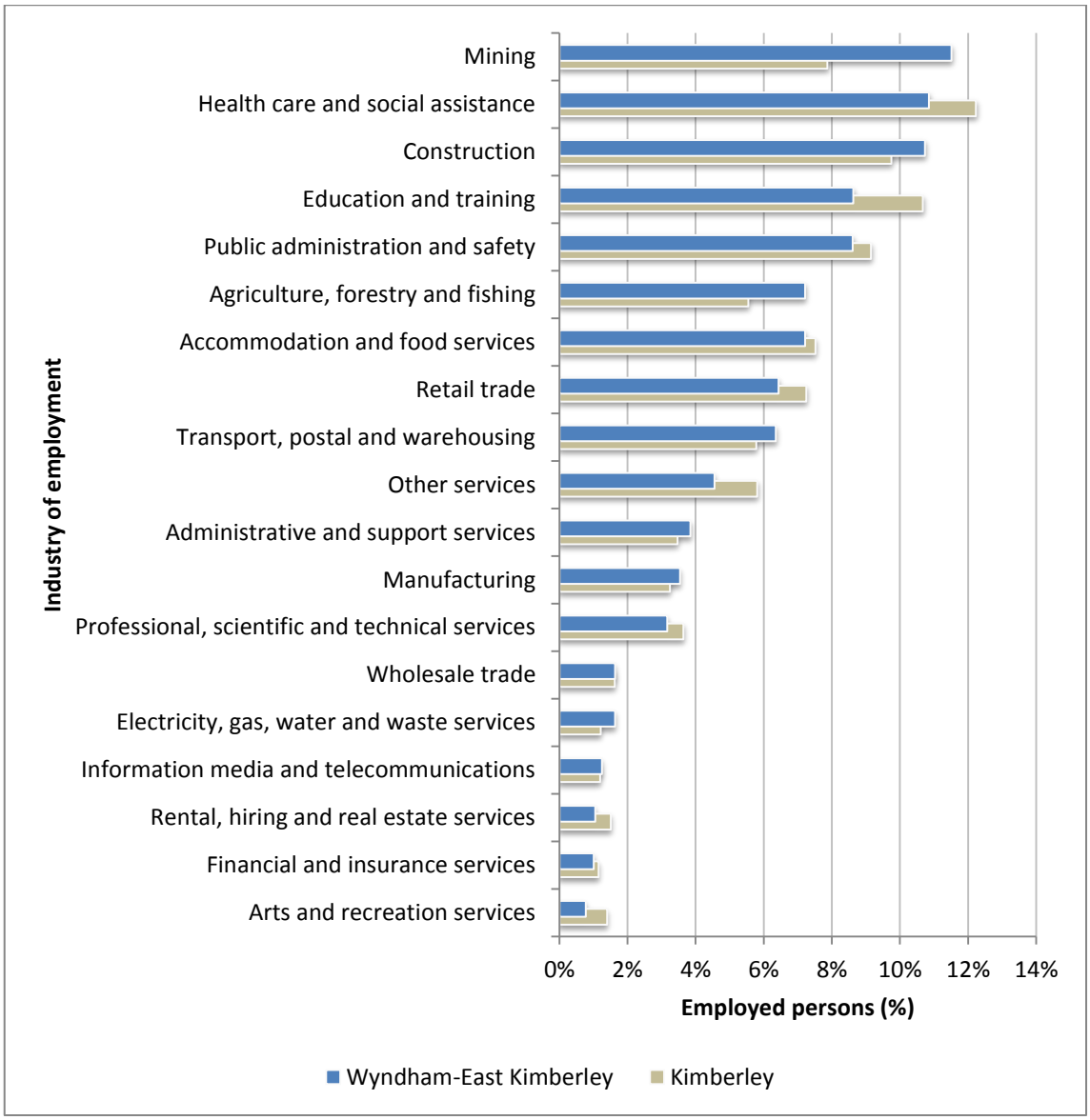
Figure 33. Change in Industry of Employment, Shire of Wyndham-East Kimberley, 2001-2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

Further analysis based on the figure below showed that the major industries of employment in the Shire of Wyndham-East Kimberley diverge from the Kimberley region. The larger industry of employment were related to heavy and general industry such as in mining, construction, transport, postal and warehousing and manufacturing, suggesting a stronger local economy and a lower dependency of government assistance.

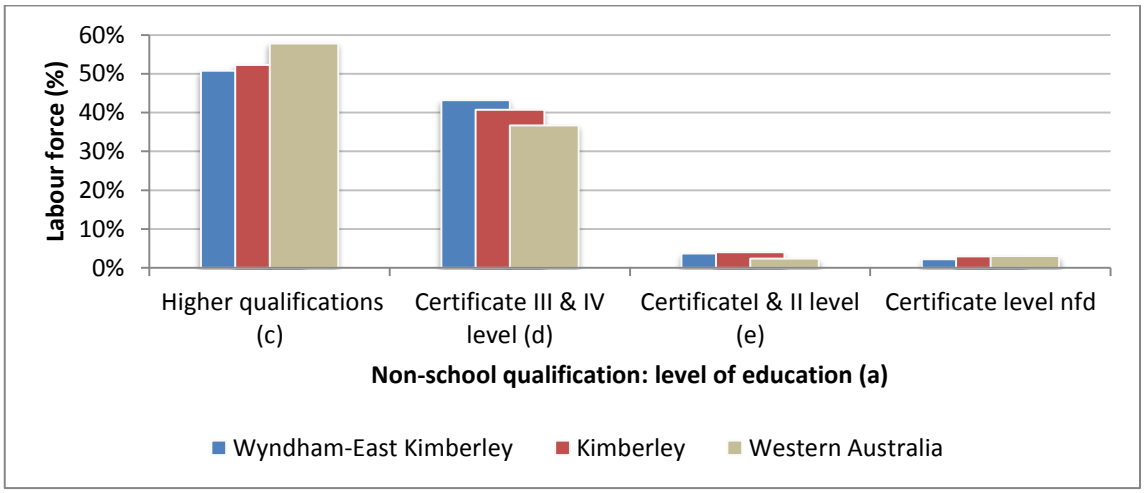
Figure 34. Change in Industry of Employment, Kimberley, 2001-2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

A comparison of the level of education of the labour force between the Shire, the Kimberley region and the Western Australia, indicates a lower proportion of employees with higher qualification in the Shire accounting for 50 per cent of all the workers and a higher proportion (43 per cent) of employees holding certificates III & IV.

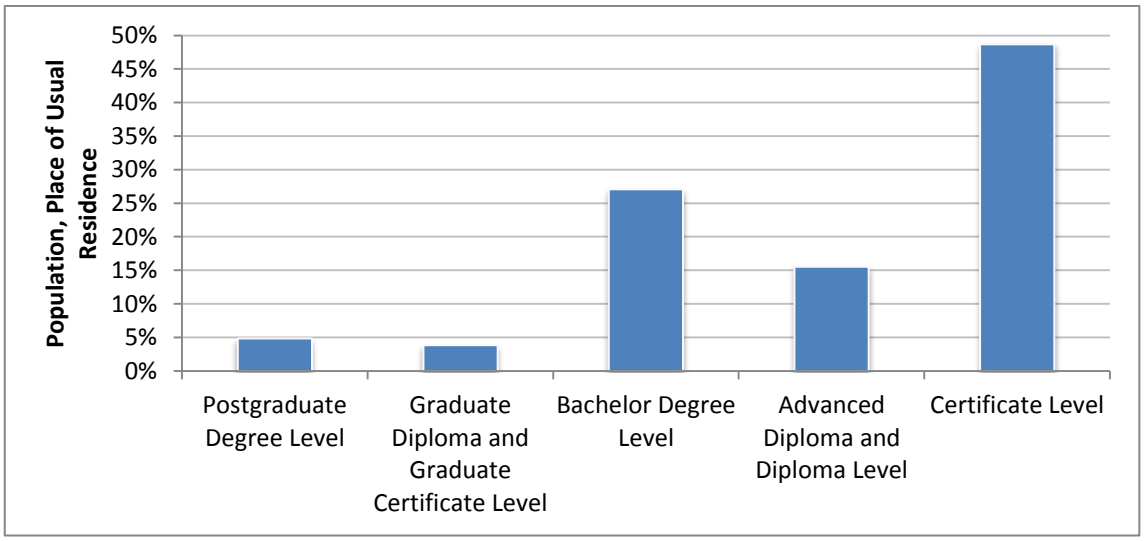
Figure 35. Labour force level of education non-school qualification, Shire of Wyndham-East Kimberley, Kimberley and Western Australia, 2001-2011



(c) Includes Advanced Diploma and Diploma Level, Bachelor Degree Level, Graduate Diploma and Graduate Certificate Level and Postgraduate Degree level.
(d) Includes 'Certificate III & IV Level, nfd'.
(e) Includes 'Certificate I & II Level, nfd'.
Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

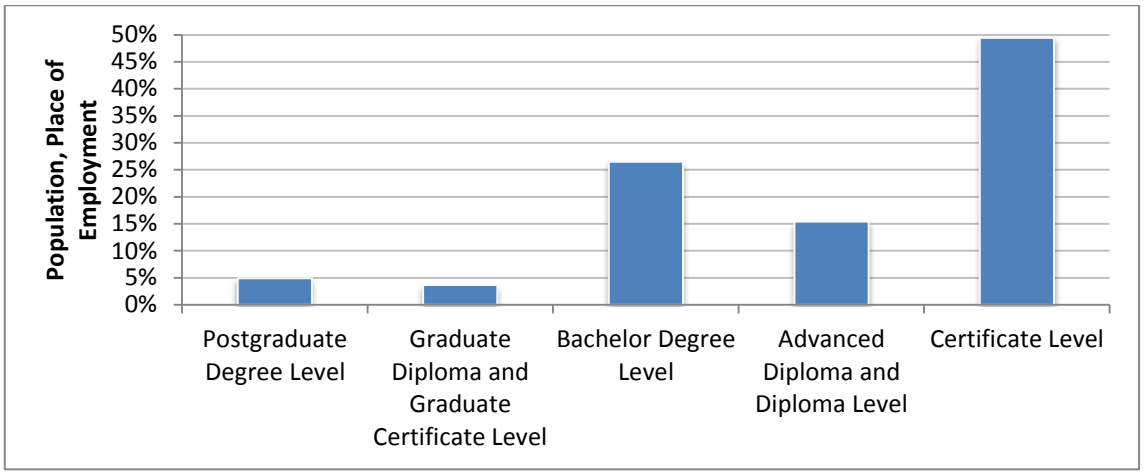
There is no significant difference in qualification level between the resident and worker population, with slightly higher levels of qualification in the worker population, especially in graduate diploma and bachelor degree level.

Figure 36. Qualifications, Place of Usual Residence – 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

Figure 37. Qualifications, Place of Employment– 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

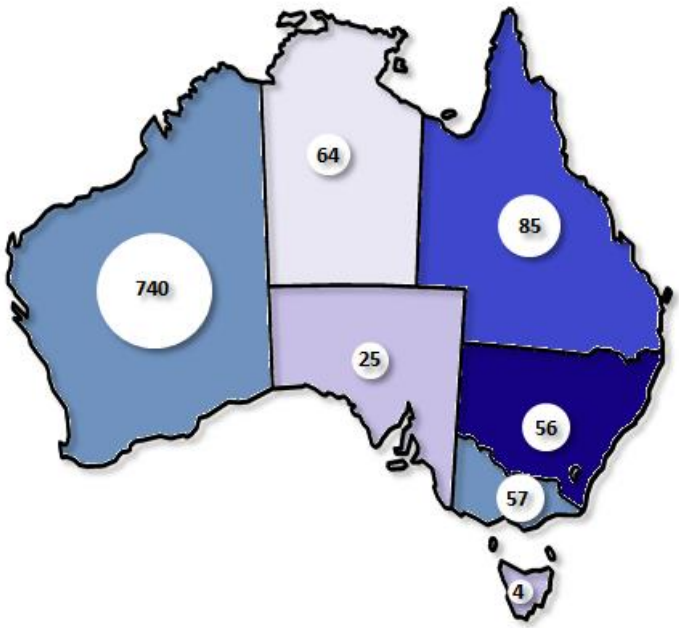
The low population density and the lack of skilled workers demand workers outside of the Shire boundaries. The table and figure below shows the place of residence of FIFO/DIDO workers in the Census 2011.

Table 5. Labour force Fly-in fly-out and Drive-in drive-out workers origin, Shire of Wyndham-East Kimberley2011

Workers place of residence	Shire of Wyndham-East Kimberley
New South Wales	56
Victoria	57
Queensland	81
South Australia	25
Tasmania	4
Northern Territory	64
Australian Capital Territory	3
Western Australia	740
▶ Bunbury	42
▶ Mandurah	53
▶ Perth - Inner	26
▶ Perth - North East	58
▶ Perth - North West	122
▶ Perth - South East	118
▶ Perth - South West	120
▶ Western Australia - Wheat Belt	40
▶ No Usual Address (WA)	81
Western Australia - Outback	79
▶ Pilbara	5
▶ Mid-West	18
▶ Gascoyne	5
▶ Goldfields	5
Kimberley	47
▶ Broome	19
▶ Derby - West Kimberley	10
▶ Halls Creek	18
▶ Roebuck	0
▶ Kununurra	3,177

Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

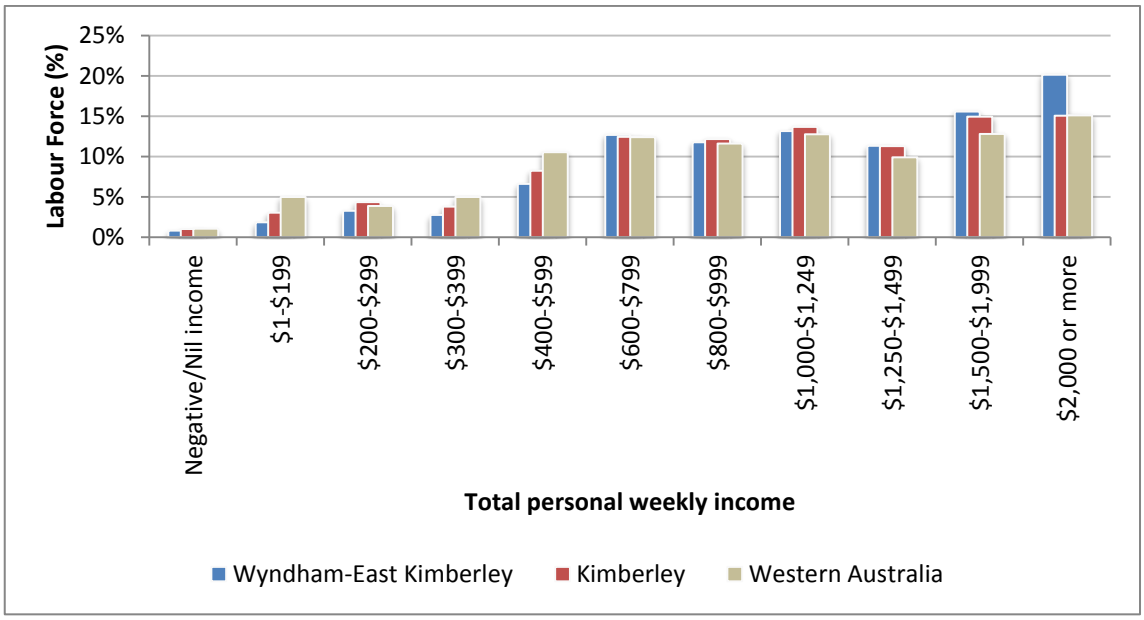
Figure 38. Labour force Fly-in fly-out and Drive-in drive-out workers origin, Shire of Wyndham-East Kimberley2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

In line with the Shire workers profile, the incomes are higher than the average in the state given the substantial proportion of employees working FIFO/DIDO in the mining and construction industries.

Figure 39. Labour force total person weekly income comparison, Shire of Wyndham-East Kimberley, Kimberley and Western Australia, 2001-2011



Source: Australian Bureau of Statistics, Cat. No. 2002.0, 2011; MacroPlan Dimasi

Residential Housing Assessment

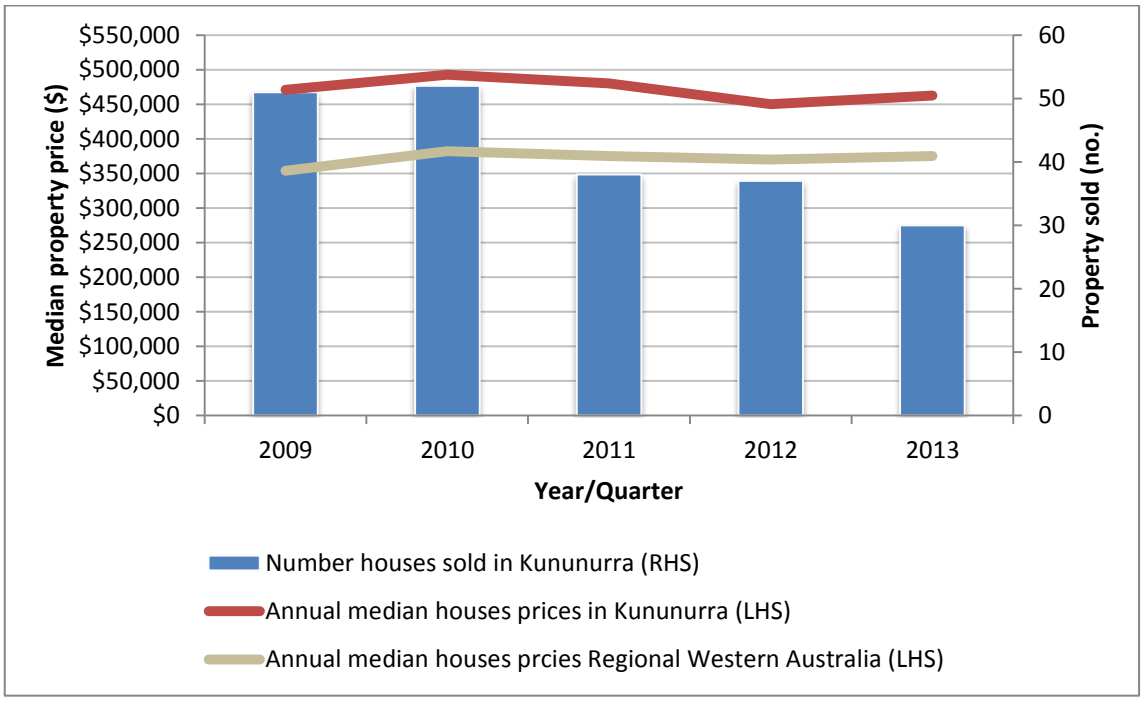
A key constraint to population growth in the Shire is housing, specifically the amount and price of suitable housing options for the workforce. The main inhibiting factor is that the much higher than average house prices deter workers from relocating to the region, while construction of additional housing is almost prohibitively expensive. Planning for sustainable residential growth is therefore critical to ensure long term economic growth and diversity.

Properties sold

The number of houses sold in the Shire has decreased significantly over the past four years due to lack of new developments shortening the supply of stock available in the area. Despite the decrease in supply, the median selling price for residential has kept steady over the period, differently of the median selling prices for multi residential properties and lots of land which have increased significantly in the period indicating a high demand for these types of products.

In 2009, there were approximately 51 houses sold at a median selling price of $471,000. In 2013 year to date there were 30 houses sold at a median selling price of $462,500.

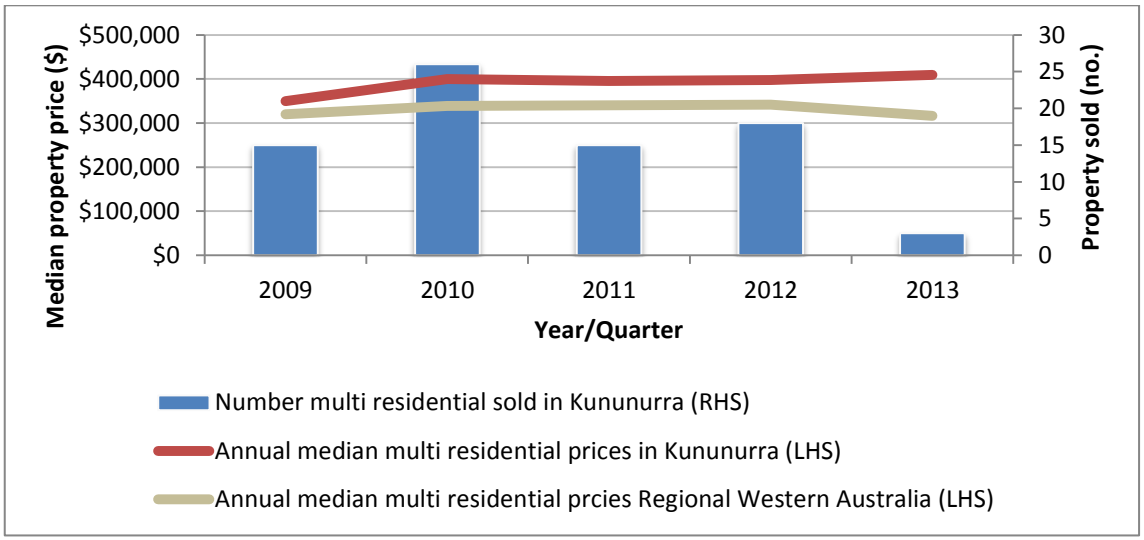
Figure 40. Number of residential houses sold and median selling prices, Shire of Wyndham-East Kimberley, 2009-2013



Source: REIWA.com; MacroPlan Dimasi.

In 2009, there were approximately 15 multi residential properties sold at a median selling price of $350,000. In 2013 year to date there were 3 houses sold at a median selling price of $409,500.

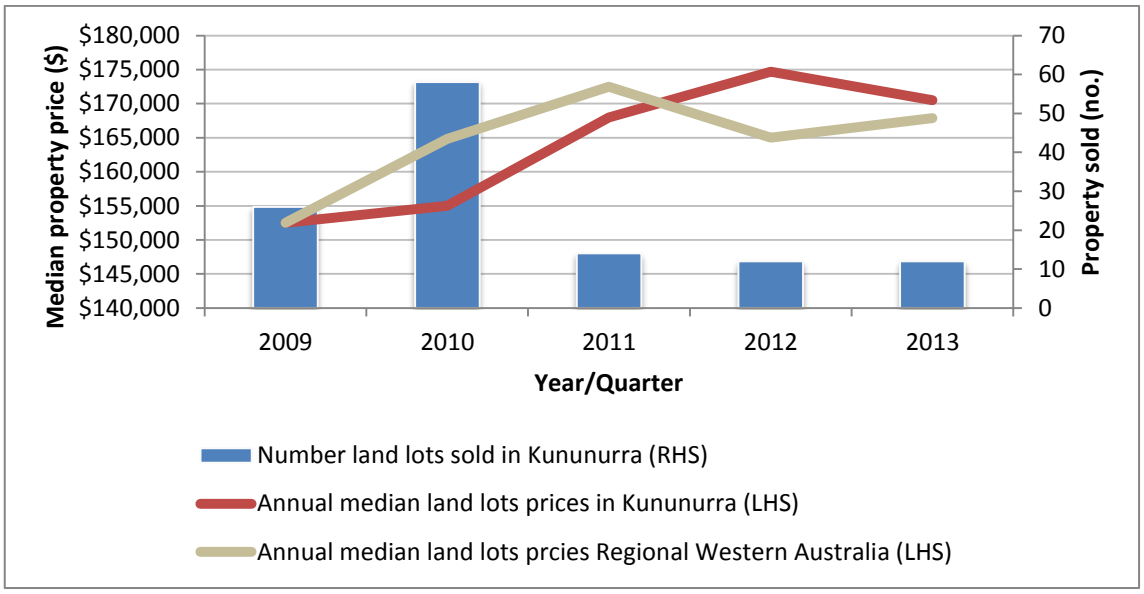
Figure 41. Number of multi residential properties sold and median selling prices, Shire of Wyndham-East Kimberley, 2009-2013



Source: REIWA.com, MacroPlan Dimasi.

In 2009, there were approximately 26 lots of land sold at a median selling price of $152,500. In 2013 year to date there were 12 lots of land sold at a median selling price of $170,520.

Figure 42. Number of land lots sold and median selling prices, Shire of Wyndham-East Kimberley, 2009-2013

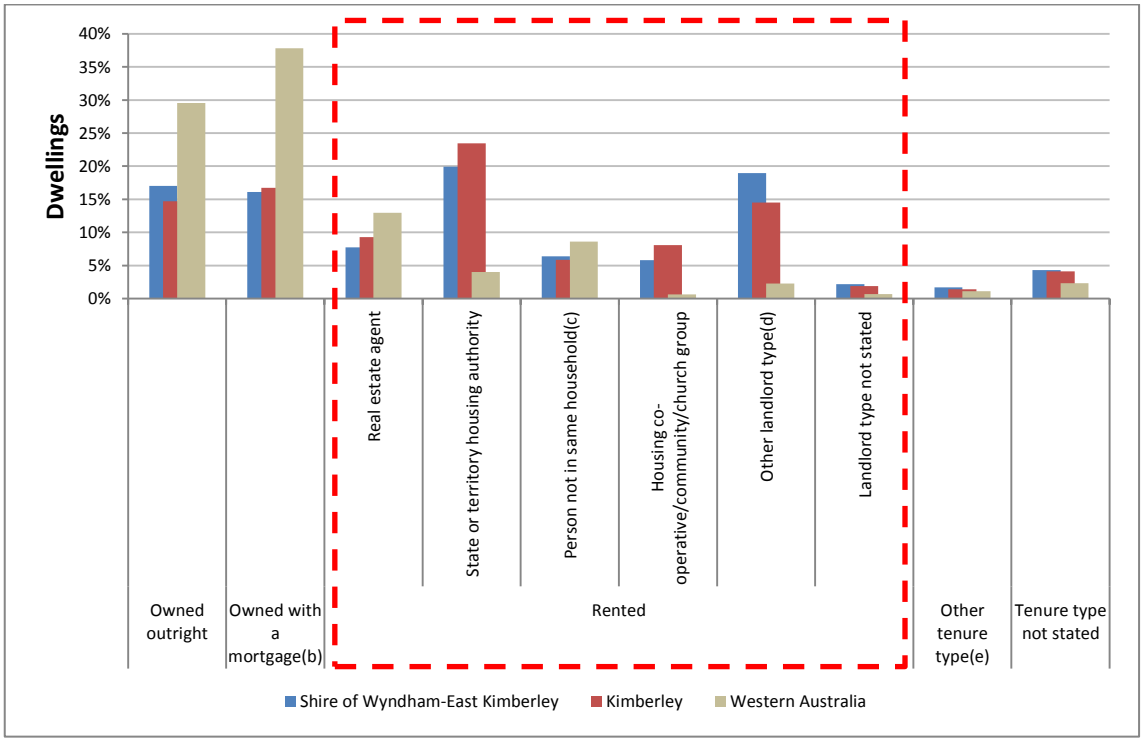


Source: REIWA.com, MacroPlan Dimasi.

Dwelling supply by tenure

The tenure of dwelling stock in the Shire is significantly different by comparison to the broader Western Australia housing market. This is largely due to significant proportions of dwelling being rented by employers to house staff as part of their employment package i.e. 18.9 per cent of all dwellings in the Shire were being rented by 'other landlord type'. In 2011 only 33.1 per cent of all occupied dwellings in the Shire were either owned outright or were being purchased i.e. owner-occupied. This is less than half the average for Western Australia

Figure 43. Dwelling stock by tenure type, Shire of Wyndham-East Kimberley, Kimberley region, Western Australia, 2011

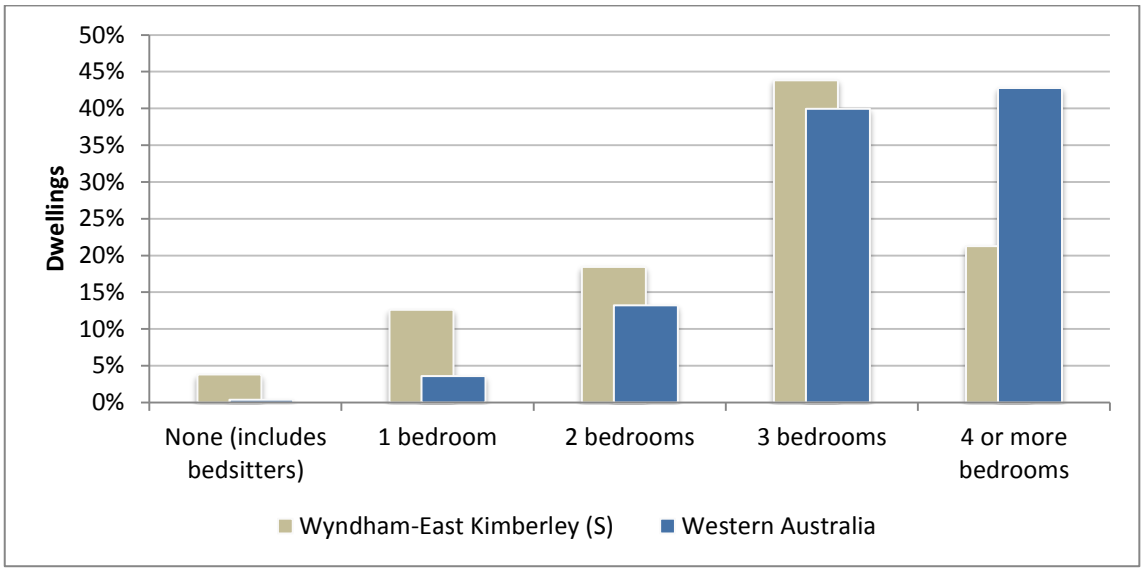


Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

Dwelling supply by number of bedrooms

The dwelling stock in the Shire of Wyndham-East Kimberley as at 2011 was predominantly three bedroom houses which made up 43.8 per cent of the total occupied dwelling at the time. Four or more bedroom houses made up 21.3 per cent of the dwelling stock.

Figure 44. Dwelling stock by tenure type, Shire of Wyndham-East Kimberley, Kimberley region, Western Australia, 2011



Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

Overcrowding and under occupied dwelling stock

The table below shows both the incidence of overcrowding and under occupied dwellings. There is evidence of overcrowding in the existing dwellings with a number of cases where large households are occupying dwelling with few bedrooms.

In 2011 there were at least 210 households that were overcrowded in the Shire. At the same time there were 874 households in the Shire that had more bedrooms than usual occupants. Some of these dwellings may have been occupied by people who were counted as persons not usually resident i.e. FIFO workers and people living in the Shire for less than 6 months of the year.

Despite this there is an indication that there could be a mismatch of dwelling stock to actual household size. That is there could be an existing market shortfall whereby there is a need for more dwellings with one and two bedrooms in the Shire.

Table 13. Detached dwelling stock by number of bedrooms and occupancy, 2011

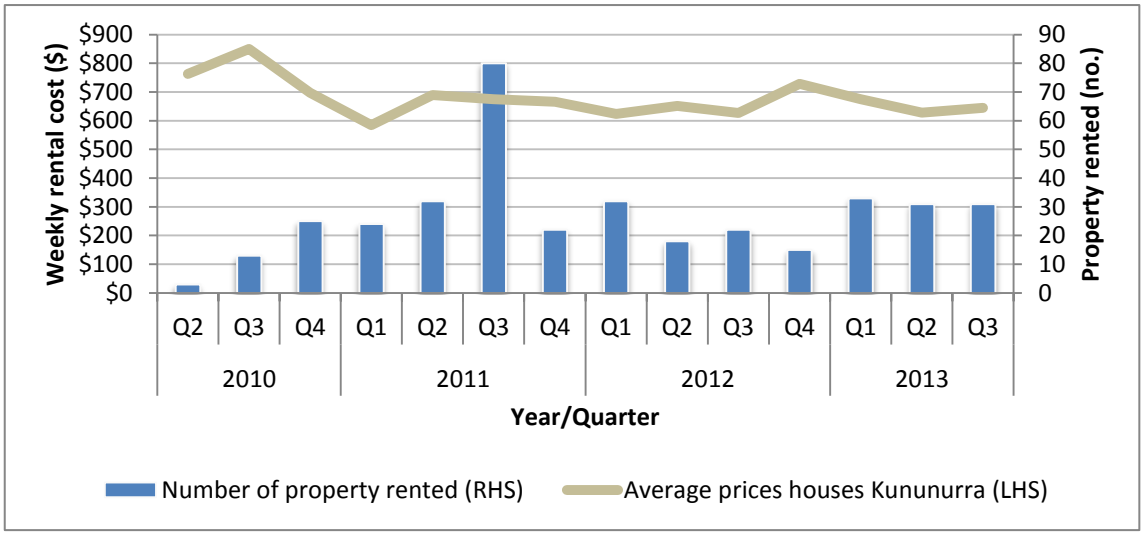
	Number of persons usually resident in a dwelling						
Number of bedrooms	One	Two	Three	Four	Five	Six or more	Total
None (includes bedsitters)	32	35	6	6	3	0	50
One bedroom	130	122	11	7	3	0	143
Two bedrooms	154	143	57	26	6	8	240
Three bedrooms	155	331	142	159	62	110	804
Four or more bedrooms	43	122	69	91	71	64	417
Number of bedrooms not stated	41	20	13	3	5	6	47
Total	555	773	298	292	150	188	1,701
Percentage	33%	45%	18%	17%	9%	11%	100%

Source: ABS cat. No. 2002.0, Australian Bureau of Statistics 2011

Properties rented

The number of properties rented in 2013 year to date has been stable compared to the same period in 2012, however the average rental prices has slightly increase in the third quarter of 2013, after consecutive decreases suggesting a low stock of properties for rent and a high demand.

Figure 45. Residential rented properties and average cost, Shire of Wyndham-East Kimberley, 2010-2013

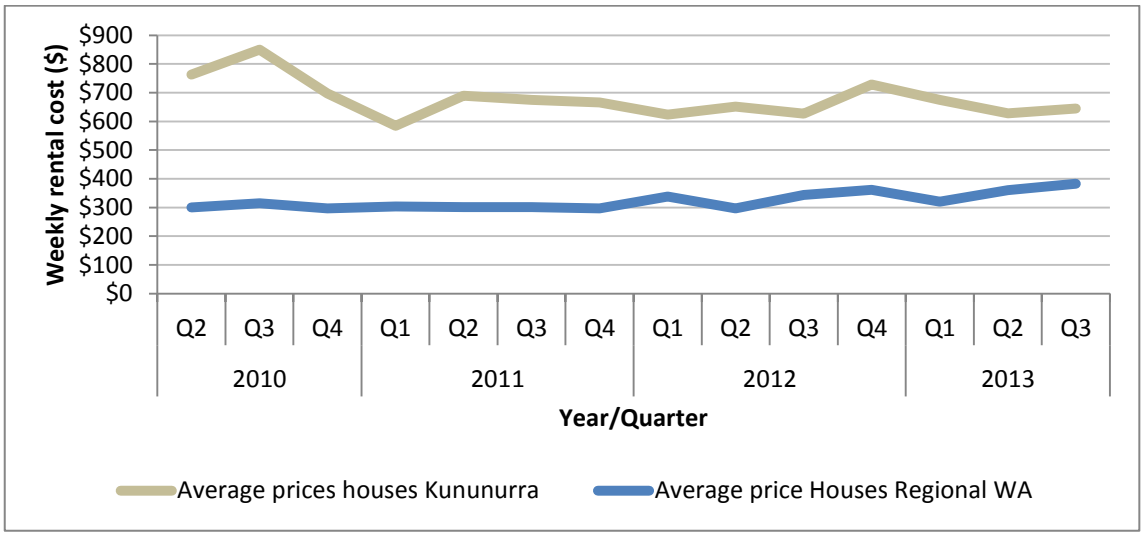


Source: REIWA.com, MacroPlan Dimasi

The figure below shows the weekly rental costs in the Shire has slightly declined over the previous six months stabilising at a median price of $645 per week. In

comparison, the weekly rental cost in the Shire is more than twice the rental cost in the Regional Western Australia

Figure 46. Residential rental properties prices, Shire of Wyndham-East Kimberley, 2010-2013



Source: REIWA.com, MacroPlan Dimasi

Retail assessment

This section of the report provides background information for the Shire of Wyndham-East Kimberley, including a review of the local economy.

Retail supply

Within the Shire of Wyndham-East Kimberley

Retail within the Shire is concentrated primarily in Kununurra, with smaller convenience stores in surrounding areas. Key retrial facilities including the following:

- Kununurra Shopping Centre is the main fully enclosed shopping centre for Kununurra residents and is anchored by the Coles supermarket, together with a range of specialty traders.
- Wyndham has a limited retail supply composed of small shops.

Beyond the Shire of Wyndham-East Kimberley

Beyond the Shire, the other closest major township in the region is Halls Creek, located some 360 km to south.

Halls Creek is the fourth largest centre (behind Broome, Derby and Kununurra) serving the regional population base. It is anchored by an IGA Express and small retail shops. There are not larger retail representatives in the area.

Study area spending

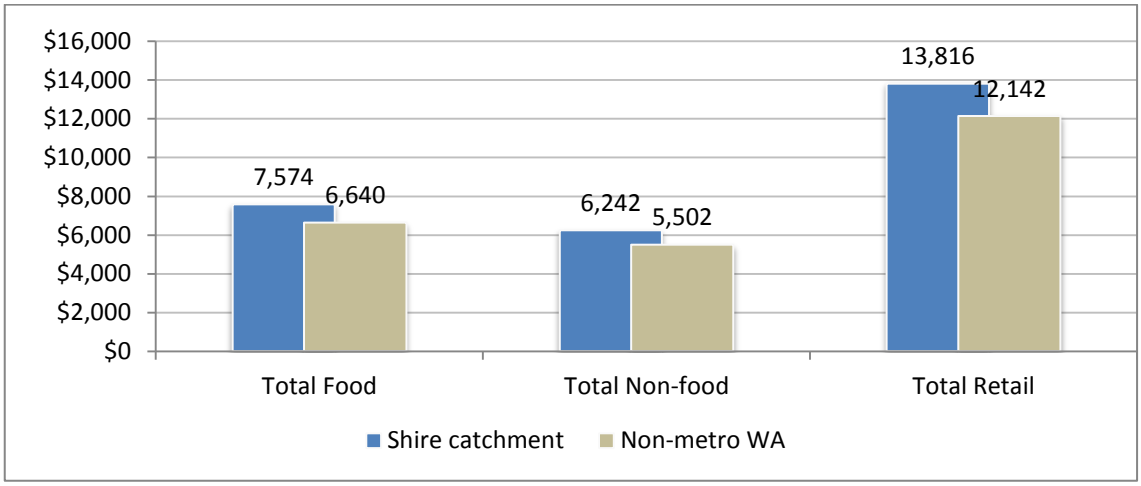
The following chart presents estimates of the per capita retail spending levels for residents of the study area in 2011/12, compared with the respective benchmarks for non-metropolitan Western Australia. All retail spending estimates detailed in this report include GST. As shown, study area spending is well above average across all categories.

Estimates of the overall expenditure market generated by study area residents over the forecast period to 2026 is also presented, however, the spending projections exclude retail inflation.

According to data from an online shopping club, residents from regional Western Australia are considered to be among the nation's biggest online shoppers. The figures state that North West Australians residents spend significantly more than the national average on online shopping, given the gapes that exist in the services in the region.

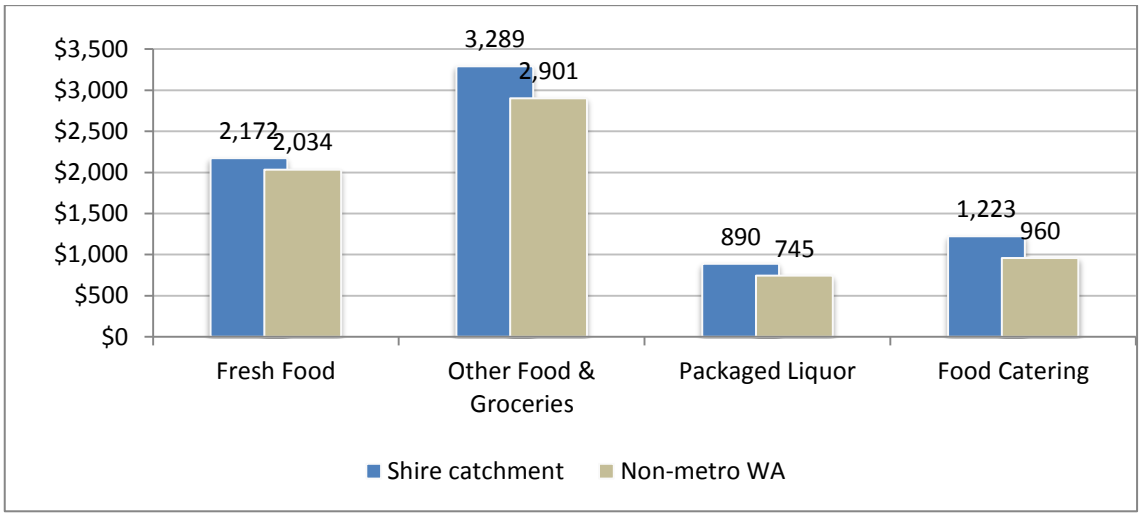
For the Shire in particular, the above indicates that there are currently gaps in the provision of appropriate retailers in the township.

Figure 47. Total retail spending per person, Shire of Wyndham-East Kimberley, 2011/12



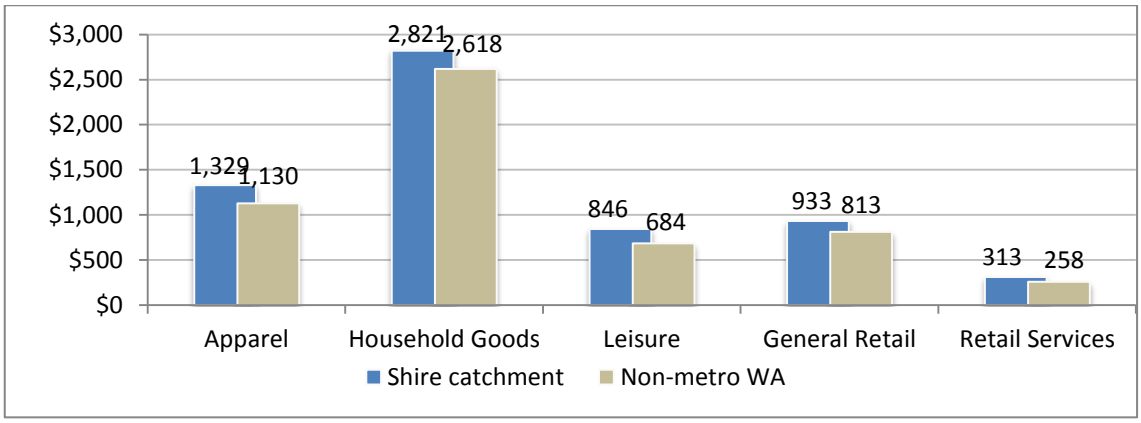
Source: Market Info; MacroPlan Dimasi

Figure 48. Food spending per person, Shire of Wyndham-East Kimberley, 2011/12



Source: Market Info; MacroPlan Dimasi

Figure 49. Non-food spending per person, Shire of Wyndham-East Kimberley, 2011/12



Source: Market Info; MacroPlan Dimasi

Retail spending per capita by sector residents is derived using MarketInfo 2010, a micro simulation model developed by Market Data Systems Limited (MDS). This model is based on information from the Australian Bureau of Statistics' (ABS) Household Expenditure Survey (HES) and the Census of Population and Housing.

Total food expenditure is of most relevance for supermarket and local centre retailing and includes spending on take home food, groceries and packaged liquor (FLG). Other non-food categories of spending are more discretionary in nature and are likely to be retained in larger stores/centres within the Shire or escape to other areas. The various expenditure categories that make up total retail expenditure are:

- FLG – Spending on take-home food, packaged liquor and groceries.
- Food catering – all expenditure at cafes and restaurants and take-away food stores.
- Apparel – all expenditure on clothing, footwear, fashion accessories and jewellery.
- Household goods – including all expenditure on homewares such as crockery, cutlery, linen, as well as home appliances, electronic goods, etc.
- Leisure retail – expenditure on books, music, sporting equipment and the like.
- General retail – expenditure on pharmacy goods, toys, florists, pets.
- Retail services – including hair & beauty, optometry, key cutting, etc.

Table 6. Retail expenditure by product group ($m), Shire of Wyndham-East Kimberley, 2012-2041

Year ending June	FLG	Food catering	Apparel	Household goods	Leisure	General retail	Retail services	Total retail
2012	51	10	11	23	7	8	3	112
2016	**67**	**13**	**14**	**30**	**9**	**10**	**3**	**146**
2021	**94**	**19**	**19**	**42**	**12**	**14**	**5**	**206**
2026	**133**	**27**	**27**	**59**	**17**	**21**	**6**	**291**
2031	**188**	**39**	**38**	**84**	**24**	**30**	**9**	**412**
2036	**267**	**57**	**54**	**119**	**34**	**43**	**13**	**587**
2041	**380**	**82**	**76**	**170**	**48**	**63**	**18**	**838**
Average annual growth ($M)								
2012-2041	11	2	2	5	1	2	1	25
Average annual growth (%)								
2012-2041	7.1%	7.6%	7.0%	7.2%	7.0%	7.6%	7.0%	7.2%

**Inflated dollars & including GST*

Source: Market Info; MacroPlan Dimasi

Retail demand

This section of the report presents a supply and demand analysis for retail floorspace in the Shire.

The estimated provision of retail floorspace per person throughout Australia ate present is 2.25 – 2.40 square meters. There are no official figures measuring retail floorspace on a national basis, with the Australian Bureau of Statistics having ceased the 5-yearly Retail Census in 1991/92.

However, having regard to data previously available from retail censuses, and also allowing for the amounts of retail floorspace which have been built over the past 15 years, a figure in the range of 2.25 – 2.40 square metre is a robust estimate.

A figure in this range is also borne out by information available for areas of Australia where detailed inventories of retail floorspace provision are maintained. For example, in Perth, where the State Government Department of Planning oversees regular surveys of retail floorspace provision across the metropolitan area, and similarly in Canberra, where regular floorspace surveys are also undertaken by the Territory Government, recent results show levels of provision which are in the range 2.25 – 2.80 square metres per person.

Historically, the level of retail floorspace provision throughout Australia has increased steadily over the past 50 years, since suburban shopping centres first started to be developed throughout Australia. The 1991/92 data from the Retail Census showed a level of provision nationally in the order of 1.80 square meters per person. Over the past 20 years, this level of provision is estimated to have increased by 1 to 1.5 per cent annually.

The steady increase in retail floorspace per capita has been driven by both supply and demand factors. On the demand side, the real incomes of Australian residents have improved steadily over this period, due to robust health of the Australian economy. Increases in real incomes have translated into growing demand for retail goods and services.

On the supply side, development trends within the retail industry have seen new store types introduced on an ongoing basis to improve consumers' amenity and shopping experience, as well as to differentiate stores from the competition. Supermarkets have got larger, shopping centres have steadily increased in size while bulky goods/homemaker centres were rapidly developed over the decade from 1995 to 2005. These types of centres were previously almost non-existent throughout Australia.

An important point to make regarding the level of floorspace provision is that very few forecasters and planners managed to accurately predict the evolution of trend in the Australian retail market. As is often the case, a 'status quo' approach was typically used, whereby the conditions applying at the time that a forecast is prepared area assumed to continue to apply over the forecast period. As a consequence, almost all forecasters have underestimated the level of retail floorspace demand both for individual shopping/activity centres and on a state-wide or national basis. This point may be particularly relevant for bulky goods retailing in areas such as the Shire which has a clearly defined and relatively limited population it serves.

The table below details the estimated breakup of the current national provision of retail floorspace per capita, into store types/retail categories. In addition, the estimated bora allocation of total retail floorspace per person for the Shire of Wyndham-East Kimberley population, which in our view should be provided as a minimum within the study area, having regard to the type of retail floorspace in question

Table 7. Retail floorspace provision per person

Type	Retail floorspace per person (sqm)			Shire of Wyndham-East Kimberley		
	Aust. Average	% Retained in Shire	Add on Trade	Within Shire	Beyond Shire	Total
Food retailing						
Supermarkets	0.35	95%	20%	0.33	0.07	0.40
Food retail & liquor specialties	0.15	95%	20%	0.14	0.03	0.17
Food Catering	0.30	70%	25%	0.21	0.05	0.26
Total food	0.80					
Non-food retailing						
Dept. Stores / DDS	0.25	80%	8%	0.20	0.02	0.22
Non-food mini-majors/specialties	0.45	75%	8%	0.34	0.03	0.36
Bulky Goods	0.60	75%	5%	0.45	0.02	0.47
Total non-food	1.30					
Retail services						
Retail services specs.	0.15	95%	13%	0.14	0.02	0.16
Total retail floorspace	**2.25**			**1.82**	**0.23**	**2.04**

Source: Market Info; MacroPlan Dimasi

- The table first shows the estimated allocation, by broad retail category/usage, of the 2.25 square meters per person which is provided nationally, e.g. supermarkets, department stores/discount department stores, food specialties, bulky goods, etc. A conservative total provision figure that of 2.25 square meters is adopted for the purposes of these estimates, being ate the lower end of the range which is estimated nationally.
- The second column then shows the percentage allocation by floorspace type which in our view should be provide within the Shire of Wyndham-East Kimberley study area – at all facilities. This allocation has regard to the nature of the area; the potential for such uses to locate within the Shire, in particular the critical mass required to provide for larger anchors stores and bulky goods; the relative isolation of the area.
- Overall, we consider that at least 80% of the total retail floorspace needs of the study area population should be provided within the study area, with the retailers also likely to serve the FIFO workers and visitors in addition. The remaining 20% represents expenditure which would escape (in net terms) to

facilities located outside the study area. This escape expenditure would be directed primarily to the roles of higher order centres located outside the study area (e.g. facilities within the Perth metropolitan area). Of course the local provision can be higher than 80-90%, and local residents would benefit from such an outcome.

- Across the various store types and retail categories, the level of self-containment of retail expenditure will fluctuate, reflecting the different roles of each type of retailer. Thus, for example, it is anticipated that a very high proportion all of food and grocery retailing should be catered for by retail facilities provided within the study area (95%). On the other hand, for the more discretionary types of retail expenditure, the level of self-containment is assumed to range from 80% in the case of department store/discount department store retailers. Overall, this is considered to be a conservative assessment – the extent of self-containment of non-food retail expenditure could well be higher.
- Adopting the logic outlined above, the level of retail floorspace provision within the Shire of Wyndham-East Kimberley which is considered necessary as a minimum is an estimated 1.82 square meters per person, leaving some 0.44 square meters per person to be provided at higher order centres beyond the study area, primarily the Perth metropolitan area.

Total retail floorspace required

The Table below shows our estimates of the total level of retail floorspace demand which is likely to eventuate within the study area over the forecast period, given the demand considerations previously outlined, and assuming that the required level of retail floorspace per person grows modestly over the forecast period (i.e. at around 1% per annum).

Table 8. Estimated retail floorspace demand, 2012-2041

	2011	2012	2016	2021	2026	2031	2036	2041
Population	**7,799**	**7,859**	**9,433**	**11,459**	**13,978**	**17,119**	**21,044**	**25,961**
Floorspace requirement per capita *								
Resident floorspace demand per capita (sqm) **	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.4
Add-on trade	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**
Floorspace demand								
Retail floorspace demand within Shire	14,155	14,278	17,994	22,974	29,454	37,913	48,982	63,510
Add-on floorspace requirement	1,779	1,811	2,182	2,786	3,572	4,598	5,940	7,702
Total retail floorspace demand	15,934	16,089	20,176	25,760	33,026	42,510	54,922	71,211
Additional floorspace requirement	**-**	**-**	**4,087**	**9,671**	**16,937**	**22,334**	**29,162**	**38,186**

** Market share retention held constant. Major development may induce greater spending retention and floorspace need.*

*** Assumes real growth of 1% per annum in floorspace demand.*

Source: Market Info; MacroPlan Dimasi

Based on all of the above:

- At present, there is an estimated demand of retail floorspace within the Shire which is in the order of 16,089 square meters.
- By 2016, the demand of retail floorspace is forecast to increase to 20,176 square meters, or requiring an additional 4,087 square meters.
- By 2041, the additional potential within the Shire would allow for an additional 38,186 square meters to be built. However, the interplay between supply and demand factors may allow for additional floorspace requirements based on new innovations in the retail sector.

Commercial assessment

This section of the report details the drivers of commercial demand. The drivers of commercial demand in an area are the current and future industry employment structure and the relationship between employee numbers for an industry and the existing take-up of commercial floorspace.

Employment

MacroPlan has undertaken a labour force needs assessment for the Shire of Wyndham-East Kimberley to determine the most appropriate sizing and distribution of office floorspace across de study area.

The purpose of this analysis is to confirm what the need for additional office floorspace is and identify key principles of where this floorspace should be located to achieve sustainable outcomes.

More broadly, a failure to supply an adequate mix and distribution of commercial floorspace can lead to:

- Office floorspace being located on industrial land which reduces visitation to towns and key centres
- Potentially higher lease prices for office floorspace reducing employment in centres.
- Impacts on other centre components including hotels, restaurants and cafes which rely on office workers for visitation.

It is therefore not only important to provide an appropriate volume of commercial floorspace in the Shire by to provide it in locations that support demand for other uses.

Employment land methodology

Projected employment in the study area assessed by analysing historical employment trends within the Shire along within the Shire along with projected changes in participation rates and occupation mix

Understanding the trends in the study area will help define the underlying requirement for local employment opportunities. The following approach has been used to estimate the employment and land requirement for the study area:

Step 1. Population Forecast	• Forecast population in Study Area
Step 2. Labour force analysis	• Analyse labour force data • Make assumptions about future labour force to population rate; participation rates; unemployment rates; and labour force containment rates • Make assumptions about future labour force industry or occupation mix. (e.g. service sector economy) • Assumptions may change depending on development scenarios.
Step 3. Employment forecast by industry or occupation type	• Apply assumptions above to the forecast population in the Study Area • Apply industry or occupation shares to employment forecast.
Step 4. Job forecast by location	• Apply assumed labour force containment to the employment forecasts in Step 3. • Labour force containment rates may change for different sectors
Step 5. Employment land requirement	• Calculate the employment land related jobs - i.e. share of jobs that will not require dedicated employment land (e.g. home based businesses, mobile workers). This is done by analysing place of work data (e.g. persons who worked at home and workers who stated they did not have a fixed place of work). • Apply employment land related jobs to benchmark employment yields per square meter.

Assumptions

The labour force and land use assumptions are outlined in the table below. At this stage, MacroPlan has assumed that current trends and development patterns will continue.

Aside from population forecasts, all variables are held constant (e.g. densities, household structure, dwelling types, labour force, skills, etc.). The implication of this option is that there will be no change in existing levels of labour force containment. More detailed scenario analysis will be conducted in later stages of this project.

MacroPlan will continue to test these assumptions throughout the project.

Table 9. Labour force assumptions , 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
Population	7,360	7,799	9,433	11,459	13,978	17,119	21,044	25,961
RATIOS								
Population aged 15+	76%	76%	76%	76%	76%	76%	76%	76%
Labour force : Population aged 15 +	67%	67%	67%	67%	67%	67%	67%	67%
Employed	95%	95%	95%	95%	95%	95%	95%	95%
Employment self sufficiency	106%	106%	106%	106%	106%	106%	106%	106%
Unemployment rate	4%	4%	4%	4%	4%	4%	4%	4%
LF White collar	46%	46%	46%	46%	46%	46%	46%	46%
LF Blue collar	38%	38%	38%	38%	38%	38%	38%	38%
LF Service / Sales	16%	16%	16%	16%	16%	16%	16%	16%
WP White collar	45%	46%	47%	48%	49%	50%	51%	51%
WP Blue collar	42%	41%	40%	39%	38%	37%	36%	36%
WP Service / Sales	14%	14%	14%	14%	14%	14%	14%	14%
Sustainability index	7%	7%	7%	7%	7%	7%	7%	7%

Source: ABS Census; Map Info; MacroPlan Dimasi

An office market hierarchy

Prior to forecasting demand it is important to understand the broad hierarchy of commercial floorspace as it exists in Western Australia and to a certain extent within the Shire of Wyndham-East Kimberley.

Within the Shire, the fundamental driver for commercial floorspace is the supporting provision of mining related office, which is driving the delivery of commercial floorspace.

More generally, there are three general forms of office accommodation:

- **In Centre or Town Centre** office (principally provided as multi-tenant office developments in centres) mainly confined to the Kununurra town centre.

- **Out of Centre Campus style office**: Mainly provided as Government or Corporate support offices (there is limited supply of this product in Kununurra)
- **Out of Centre Ancillary office**: Provided to accommodate management and administrative functions of manufacturing and distribution companies on Industrial Zoned land.

An understanding of the land use needs and the key drivers of investment for these types of office accommodation is critical. It is also important to recognise that the employment densities of office workers vary significantly on a per hectare basis, depending on the type of office accommodation provided.

The commercial floorspace needs assessment forecasts the volume of floorspace that is likely to be required in the Shire in the future to accommodate office related employment.

Estimated supply of commercial floorspace

It is difficult to accurately calculate the square meter of commercial floorspace that currently exist within the Shire, particularly given the unique office requirements for industry that serves the Kimberley.

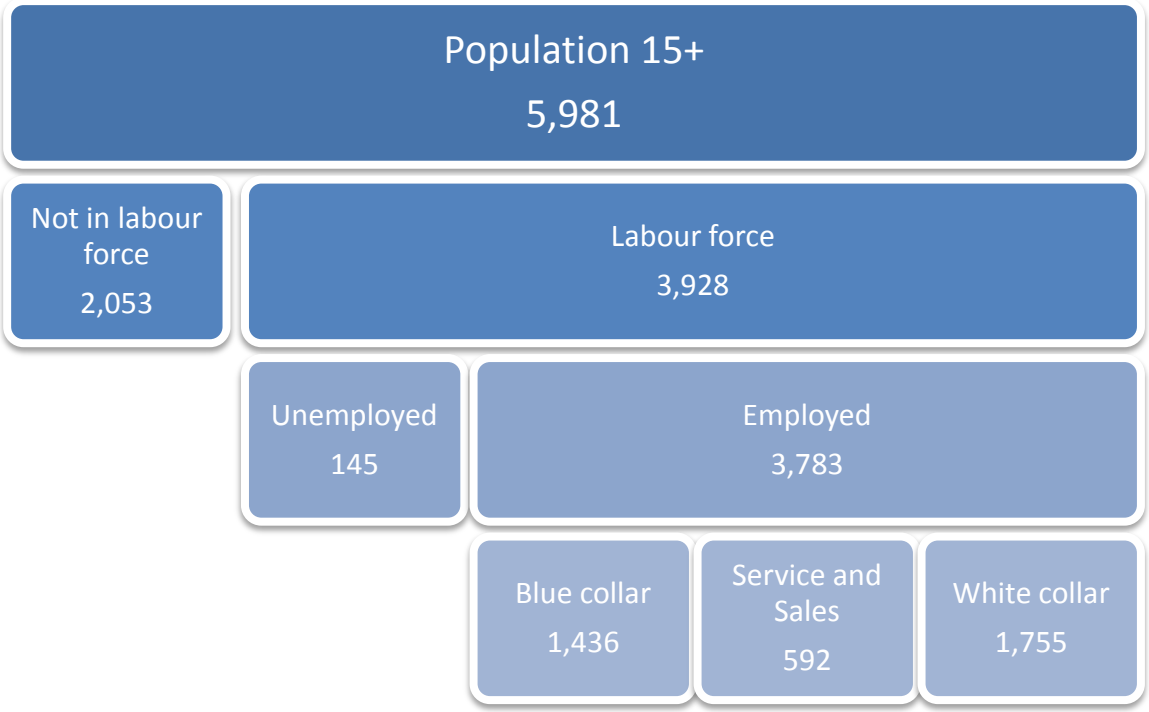
MacroPlan has therefore used an assessment of the labour force composition to estimate a supply requirement and examine the likely growth in the labour force overtime to 2041 and also estimated a future requirement for commercial floorspace.

We have undertaken an assessment of the requirement to 2041 to allow for appropriate consideration of the size of centres and particularly Kununurra. Our analysis includes:

- Estimating the number of full-time equivalent white collar workers.
- Estimating the proportion of these workers that require accommodation in commercial floorspace.
- Estimating the growth in this requirement over time.

The tree diagram below illustrates the steps taken in estimating the full-time equivalent white collar labour force in the Shire in 2011. It reveals that of a labour force of 3,928 there are 1,755 workers who are white collar jobs (i.e. managers, administrators, professionals etc.)

Figure 50. Assessing the current white collar component of the labour force



Source: ABS Census; Map Info; MacroPlan Dimasi

Table 10. Labour force projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
Population	7,360	7,799	9,433	11,459	13,978	17,119	21,044	25,961
Population aged 15+	5,559	5,891	7,125	8,656	10,558	12,931	15,896	19,610
Labour force	3,707	3,928	4,751	5,771	7,040	8,622	10,599	13,075
Employed	3,570	3,783	4,575	5,558	6,780	8,303	10,207	12,592
White collar labour force	1,656	1,755	2,122	2,578	3,145	3,852	4,735	5,841
Blue collar labour force	1,355	1,436	1,737	2,110	2,574	3,152	3,875	4,780
Service / Sales labour force	559	592	716	870	1,061	1,299	1,597	1,970

Source: ABS Census; Map Info; MacroPlan Dimasi

However, not all of these 'white collar workers' require office accommodation in centres. Some will work from home, some will not work in offices (i.e. tradespersons classed as managers) and others will work in office floorspace outside of centres.

Not all of these jobs will be located in Kununurra or Wyndham, with some jobs leaking to other locations, including mining workers and fly-in-fly-out workers. There will also be some jobs performed by non-study area residents.

The table below converts the employment projections into full time equivalent jobs. Based on these and a number of other assumptions derived from assessments of Journey to Work and other data derived from the Census, we can estimate that in 2011 there were around 1,626 FTE white collar jobs. The number of white collar jobs is expected to increase to 6,007 FTE by 2041.

Table 11. Jobs projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
Employed	3,570	3,783	4,575	5,558	6,780	8,303	10,207	12,592
Injection	-268	-284	-343	-417	-509	-623	-766	-945
Containment	3,302	3,499	4,232	5,141	6,271	7,680	9,441	11,646
Inflow	465	493	596	724	883	1,082	1,330	1,640
Jobs in Study Area	3,767	3,992	4,828	5,865	7,154	8,762	10,770	13,287

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 12. Occupations projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
White collar jobs	1,676	1,816	2,245	2,786	3,470	4,338	5,440	6,711
Blue collar jobs	1,564	1,617	1,907	2,259	2,683	3,199	3,825	4,718
Sales and Services jobs	527	558	675	820	1,000	1,225	1,506	1,858
Total	3,767	3,992	4,828	5,865	7,154	8,762	10,770	13,287

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 13. Occupations (FTE) projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
White collar jobs	1,501	1,626	2,010	2,494	3,106	3,882	4,869	6,007
Blue collar jobs	1,405	1,453	1,714	2,029	2,411	2,874	3,437	4,240
Sales and Services jobs	445	471	570	692	845	1,035	1,272	1,569
Total	3,350	3,550	4,294	5,216	6,362	7,791	9,577	11,815

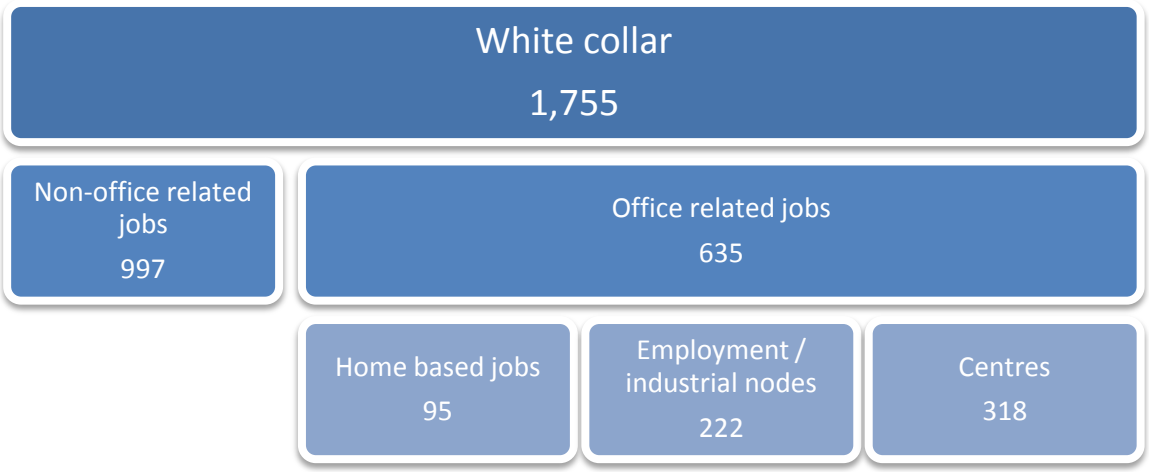
Source: ABS Census; Map Info; MacroPlan Dimasi

The figure below illustrates an estimated allocation in the study area of white collar workers across the various components of commercial floorspace including:

- Home based workers (around 15% of white collar workers who work in a home or mobile based environment)
- Office workers working on business or industrial zoned land (around 35% of office workers)
- Centre (50%)

This creates a current need for around 17,115 square meters of commercial floorspace in the Shire of Wyndham-East Kimberley.

Figure 51. Current estimate of commercial jobs by type, Shire of Wyndham-East Kimberley, 2011



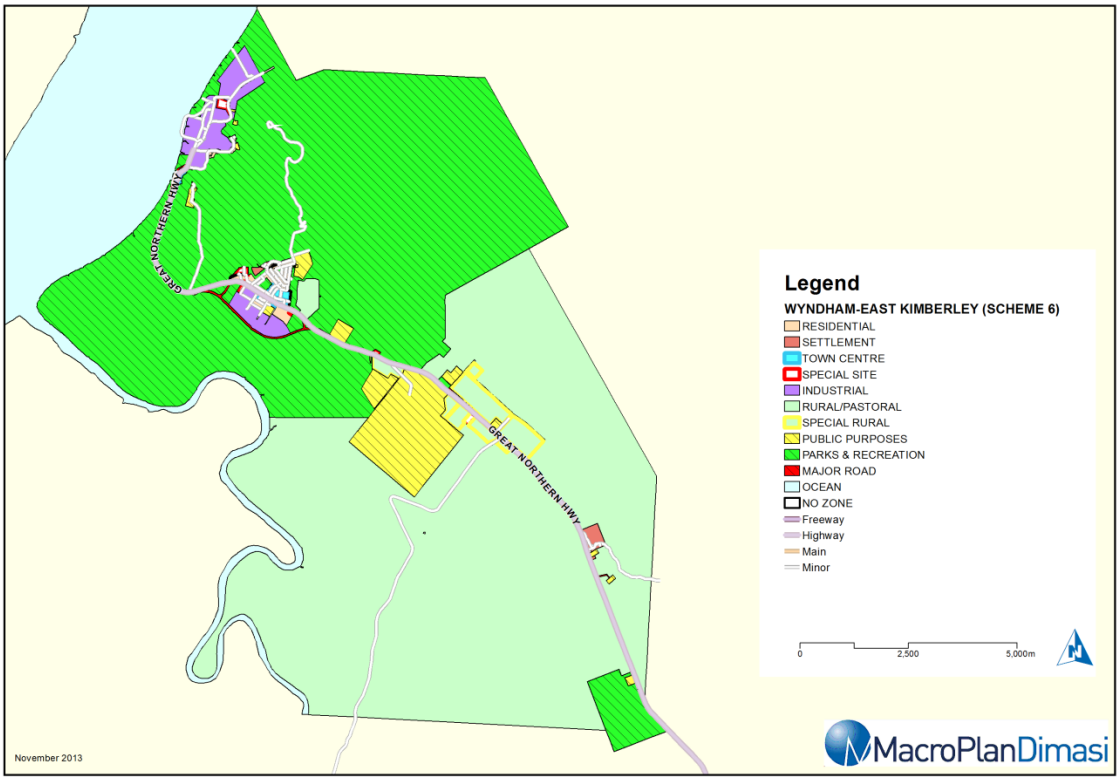
Source: ABS Census; Map Info; MacroPlan Dimasi

The following section of the report assesses likely growth in the Shire labour force and the demand for additional commercial floorspace including a hierarchy allocation.

There are 160 ha zoned for commercial, retail and mixed business uses as described below:

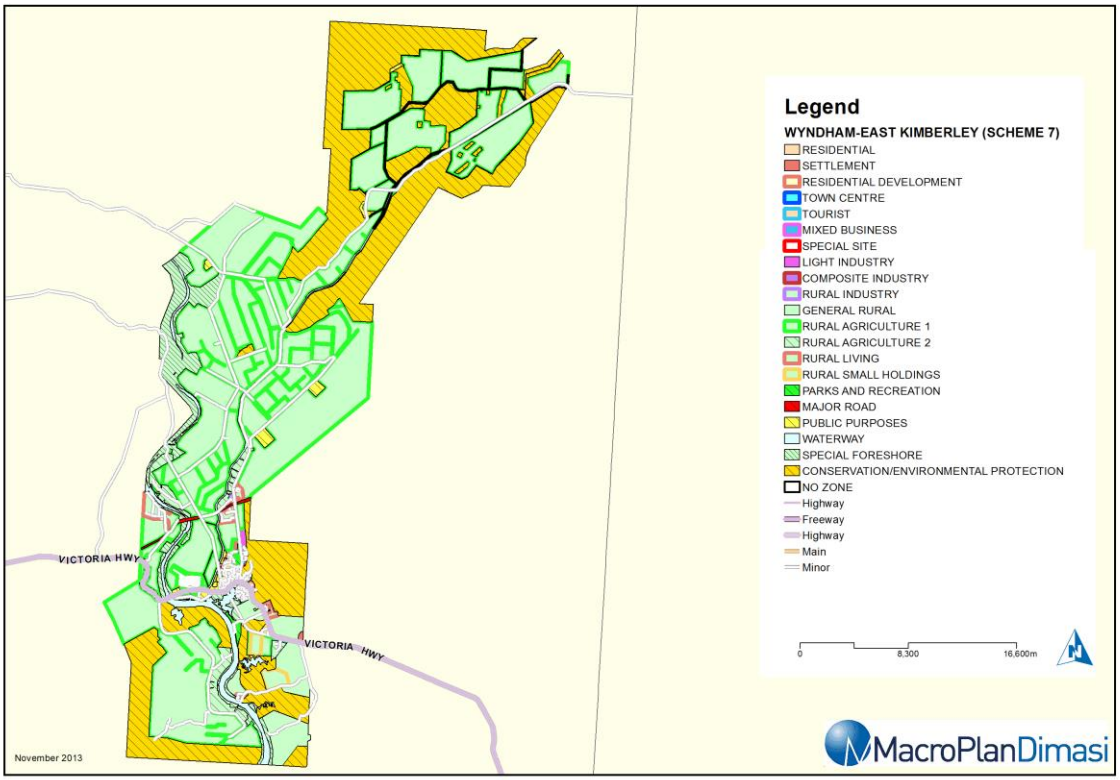
Kununurra	Wyndham	SWEK
•Mixed business 34ha •Tourist 68ha •Town centre 36ha **•Total Commercial 138ha**	•Mixed business 0ha •Tourist 0ha •Town centre 22ha **•Total Commercial 22ha**	•Mixed business 34ha •Tourist 68ha •Town centre 58ha **•Total Commercial 160ha**

Figure 52. Current estimate land use, Wyndham



Source: MacroPlan Dimasi

Figure 53. Current estimate land use, Kununurra, 2011



Source: MacroPlan Dimasi

Commercial floorspace need

This section assesses the future demand for employment of white collar workers in the Shire and converts this to a commercial floorspace requirement to support the levels of employment within the region. In meeting the needs of the local and regional labour force there are two primary stated aims and performance measures:

- Providing employment self-sufficiency (providing up to one job for every resident member of the labour force within the Shire.
- Providing employment self-containment (increasing the proportion of resident workers who actually work within their local area or defined catchment).

Providing employment self-sufficiency does not necessarily equate to employment self-containment. However, benchmarking of ABS census statistics reveals that most municipalities of Australia that offer relatively higher levels of employment relative to their resident labour force tend to experience reduced levels of

commuting outside. This is likely to be more exaggerated within the Shire given the level of FIFO workers to the region. However, this will most likely impact on the mining and blue collar related workers.

The tables below outlines the commercial land need based on the job forecast for white collar jobs.

Total commercial land demand increases from 6,352 square meters in 2011 to 23,467 square meters in 2041. This commercial land requirement is split into:

- Core office: Increasing from 5,081 square meters in 2011 to 18,774 square meters in 2041.
- Secondary office: Increasing from 1,270 square meters in 2011 to 4,693 square meters in 2041.

Table 14. White collar job projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041	Change (2011-2041)
Employed	3,570	3,783	4,575	5,558	6,780	8,303	10,207	12,592	8,809
White collar labour force	1,656	1,755	2,122	2,578	3,145	3,852	4,735	5,841	4,086
Containment	1,639	1,737	2,101	2,553	3,114	3,813	4,688	5,783	4,046
Leakage	-17	-18	-21	-26	-31	-39	-47	-58	n.a.
Inflow	37	79	144	234	357	524	752	928	849
White collar jobs in study area	1,676	1,816	2,245	2,786	3,470	4,338	5,440	6,711	4,894
White collar jobs in study area (FTE)	1,506	1,632	2,018	2,504	3,118	3,898	4,888	6,030	4,398

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 15. Demand for office job projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041	Change (2011-2041)
Primary	356	386	477	592	737	922	1,156	1,426	1,040
Secondary	230	249	308	382	476	595	746	921	672
Non-core office	920	997	1,232	1,529	1,905	2,381	2,986	3,683	2,686

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 16. Office job location projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041	Change (2011-2041)
Home - based office / no formal address	88	95	118	146	182	228	285	352	257
Activity Centre Related	293	318	393	487	607	758	951	1,173	856
- Core	235	254	314	390	485	607	761	939	685
- Secondary	59	64	79	97	121	152	190	235	171
Employment nodes	205	222	275	341	425	531	666	821	599

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 17. Office floorspace demand projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041	Change (2011-2041)
Core	4,690	5,081	6,281	7,794	9,708	12,134	15,218	18,774	13,692
Secondary	1,173	1,270	1,570	1,949	2,427	3,034	3,804	4,693	3,423
Total office floorspace demand	5,863	6,352	7,851	9,743	12,135	15,168	19,022	23,467	17,115

Source: ABS Census; Map Info; MacroPlan Dimasi

Industrial assessment

This section of the report provides and assessment of industrial supply and demand assessment for the Shire.

Employment

A key determinant of demand for industrial land is the size, composition and structure of the industrial economy. 'Blue collar' workers (defined in this report as tradespersons; intermediate production and transport workers; and Labourer) represent the primary employees in an industrial zone. Changes in the size and location of 'blue collar' occupations are likely to provide an indication as to the quantum and requirements of industrial land.

There have been changes in the Shire's employment over the period 1991-2011. Over this period Shire of Wyndham-East Kimberley workers in 'blue collar' occupations has slightly grown to total employment in the Shire. This is reflected in employment growth in the service sector, particularly for mining related occupations.

Table 18. Labour force projections, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
Employed	3,570	3,783	4,575	5,558	6,780	8,303	10,207	12,592
Blue collar labour force	1,355	1,436	1,737	2,110	2,574	3,152	3,875	4,780
Containment	1,539	1,504	1,774	2,100	2,496	2,975	3,557	4,388
Leakage	183	68	37	-10	-78	-177	-318	-392
Inflow	25	113	134	158	188	224	268	330
Blue collar jobs in study area	1,564	1,617	1,907	2,259	2,683	3,199	3,825	4,718
Blue collar jobs in study area (FTE)	**1,405**	**1,453**	**1,714**	**2,029**	**2,411**	**2,874**	**3,437**	**4,240**

Source: ABS Census; Map Info; MacroPlan Dimasi

Table 19. Demand for industrial jobs, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
On site	1,194	1,308	1,560	1,867	2,243	2,673	3,196	3,943
No Fixed Address	126	87	86	81	72	86	103	127
Home Based	84	58	69	81	96	115	137	170

Source: ABS Census; Map Info; MacroPlan Dimasi

Industrial land supply

An active and diverse industrial sector has developed in the Shire, largely based in Kununurra. Most of the land identified for this purpose is locate in the Red Ridge locality on Weaber Plain Road. Wyndham is well serviced with considerable amounts of zoned industrial land available northwards along the Cambridge Gulf in the port precinct and to the south of the Three Mile settlement.

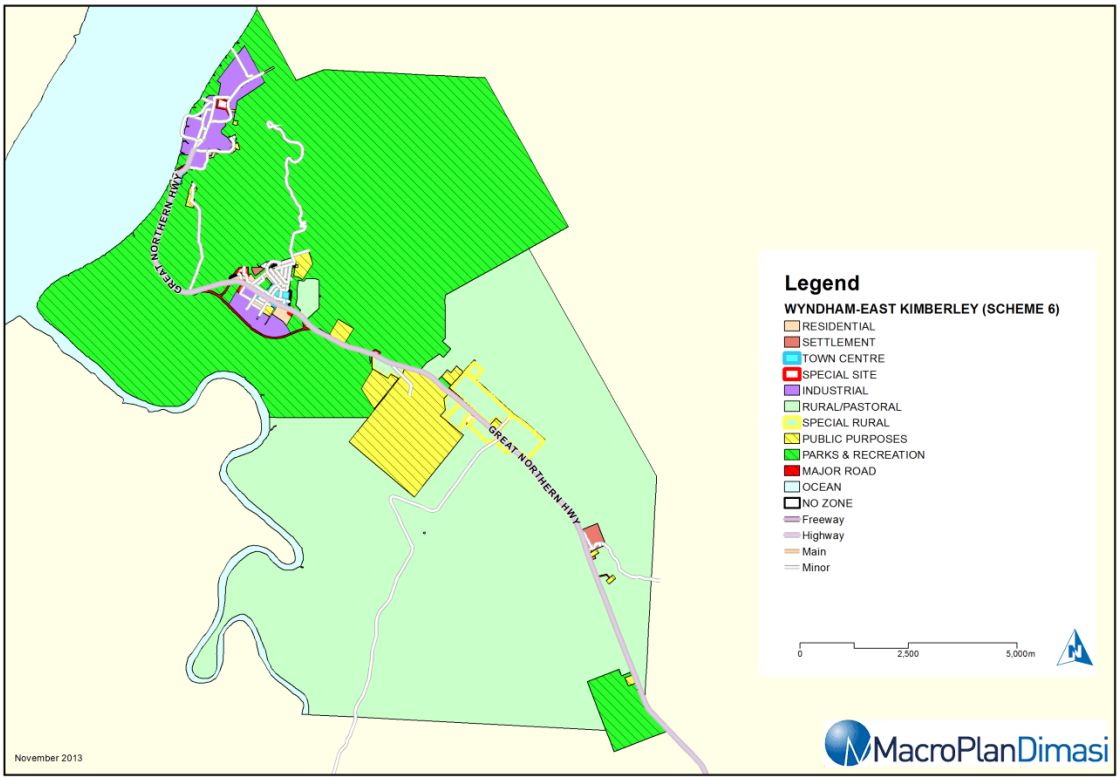
There are a number of industrial precincts within the Shire such as:

- The Argyle Diamond Mine
- Ord River Irrigation Area
- Wyndham Port

There are 420 ha zoned for industrial uses between Kununurra and Wyndham as described below:

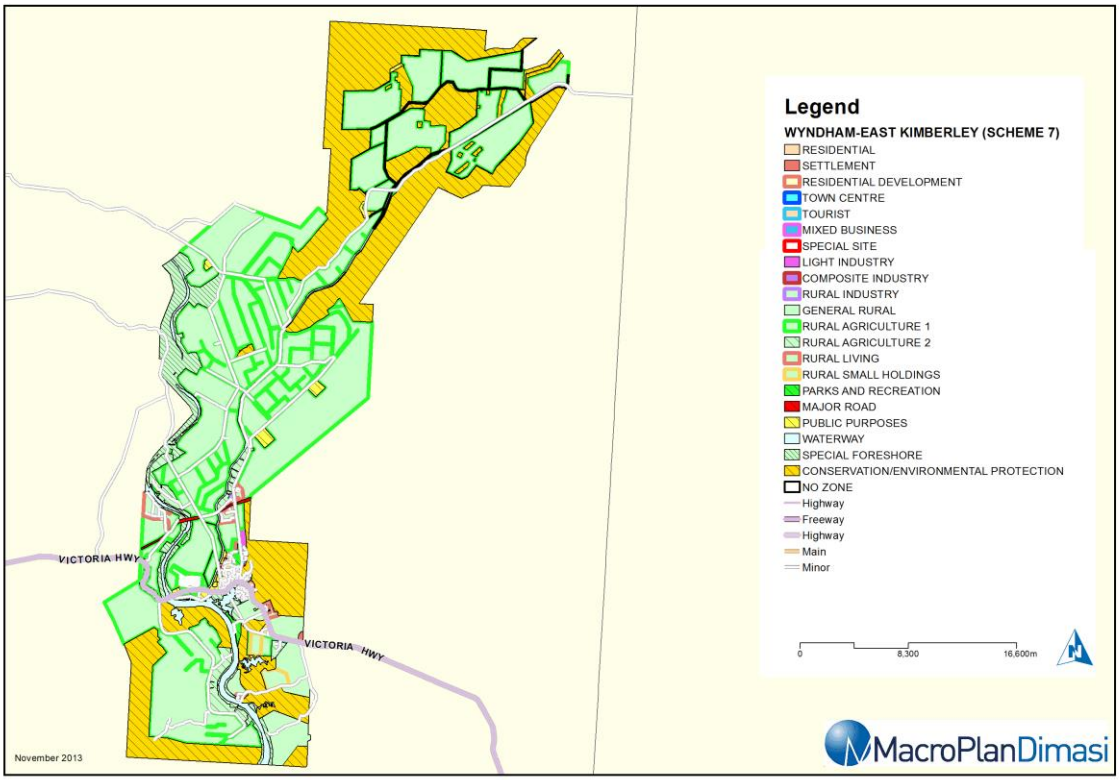
Kununurra	Wyndham	SWEK
•Composite 8ha •Industrial 0ha •Light industrial 89ha •Rural industrial 67ha **•Total Industrial 164ha**	•Composite 0ha •Industrial 256ha •Light industrial 0ha •Rural industrial 0ha **•Total Industrial 256ha**	•Composite 8ha •Industrial 256ha •Light industrial 89ha •Rural industrial 67ha **•Total Industrial 420h**

Figure 54. Current estimate land use, Wyndham



Source: MacroPlan Dimasi

Figure 55. Current estimate land use, Kununurra, 2011



Source: MacroPlan Dimasi

Industrial land requirement

Industrial land requirement can be derived from a number of factors including population growth and local, national or international demand for goods and services.

- Population growth
- Jobs growth (including resident and FIFO)
- Investment in mining and agriculture projects in WA
- Volume of minerals produced in Australia
- Employment in the mining industry in WA
- Value of minerals and petroleum produced in the Kimberley Region

Port expansion at Wyndham will increase production capacity and are likely to have the effect of driving demand for industrial land in the Shire.

The table below summaries the forecast industrial demand for the next 28 years reaching around 282 hectares in 2041.

Table 20. Industrial floorspace demand, Shire of Wyndham-East Kimberley, 2006-2041

	2006	2011	2016	2021	2026	2031	2036	2041
Land requirement (ha)	80	93	111	133	160	191	228	282
Industrial nodes	44	52	64	77	95	113	135	166
Local services	36	41	48	56	66	78	94	115

Source: ABS Census; Map Info; MacroPlan Dimasi

Monitoring industrial land supply

The industrial land requirement estimates outlined in the following section is based on measuring an 'adequate supply' of industrial land. This is defined as 15 years supply of designated industrial land and a 10 year supply of land zoned for industrial development. Future requirement is the additional land required to meet the needs of growth in that period to ensure maintaining an 'adequate supply' of industrial land.

A 15-year supply benchmark substantially exceeds the normal business planning cycles of the land development industry, which is usually three to five years. Sufficient stock of industrial land is required to maintain an ongoing supply to the market. This will:

- Support competition in the industrial land development market to avoid unnecessary upward pressure on land prices.
- Sufficient time to undertake appropriate strategic and infrastructure planning activities.
- Provides certainty and clear direction for investors and businesses.
- Builds growth and critical mass in the market place.

Competitive position

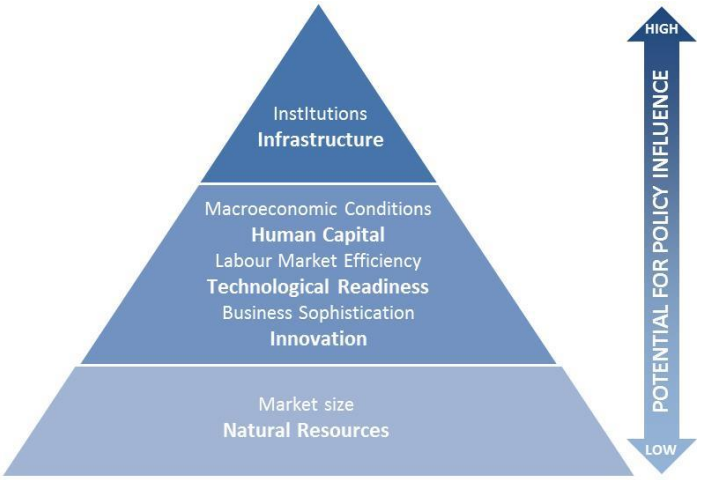
To get a better idea of how to achieve the East Kimberley @25K, an investigation of the competitive position of the Kimberley and of the Shire is instructive.

A range of factors largely explain differences in regions' economic prosperity and growth patterns. These includes differences in resource endowments, the size of markets, demography and population dispersion, levels of human capital, the extent and incidence of taxation and the level and quality of public expenditure, as well as competition and market settings. It is therefore useful to investigate prospects for the region through the prism of its economic performance and competitiveness relative to other regions or wider areas.

A competitiveness index developed by the Regional Australia Institute and drawing on the World Economic Forum's Global Competitiveness Report provides some guidance[1]. The 10 themes of regional competitiveness are distinguished between:

- Those that are essential fixed in nature and cannot easily be adjusted (such as the presence of natural resource or market size); and
- Those that can be changed by policy decisions, either directly through a decision to build, invest or change (such as institutions and infrastructure), or at least influenced by policy (such as human capital and labour market efficiency).

Figure 56. Competitiveness index topics hierarchy



Source: Regional Australia Institute, MacroPlan Dimasi

[1] Regional Australia Institute: Insight Regional Australia, http://.insight.regionalaustralia.org.au

An assessment of the Kimberley on these parameters provides an indication of the areas of comparative strength in the region and those that need attention or strategies to deal with them.

In the following section graphs for selected parameters show the relative comparative rankings for the Kimberley region against all 55 Australian Regions identified by Regional Development Australia and using the data measures utilised in the Insight project. Note that this includes regions within capital cities. The graphs show relative distance from the median rank, 1 represents the highest ranking and -1 the lowest ranking amongst the regions.

The section also includes comparative rankings for the Shire of Wyndham-East Kimberley local government area against all 560 local government areas in Australia. These are displayed with similar measures as for the regional comparisons.

Institutions

The institutional environment within a specific region is determined by a combination of Commonwealth, State, and local government controls.

These institutions play an integral role in creating the legal and administrative framework within which investor and business operate and households reside and therefore have as strong bearing on competitiveness due to the level of influence on investment decisions. For instance, an investment environment with minimal red tape may increase the incentives to invest in a certain region.

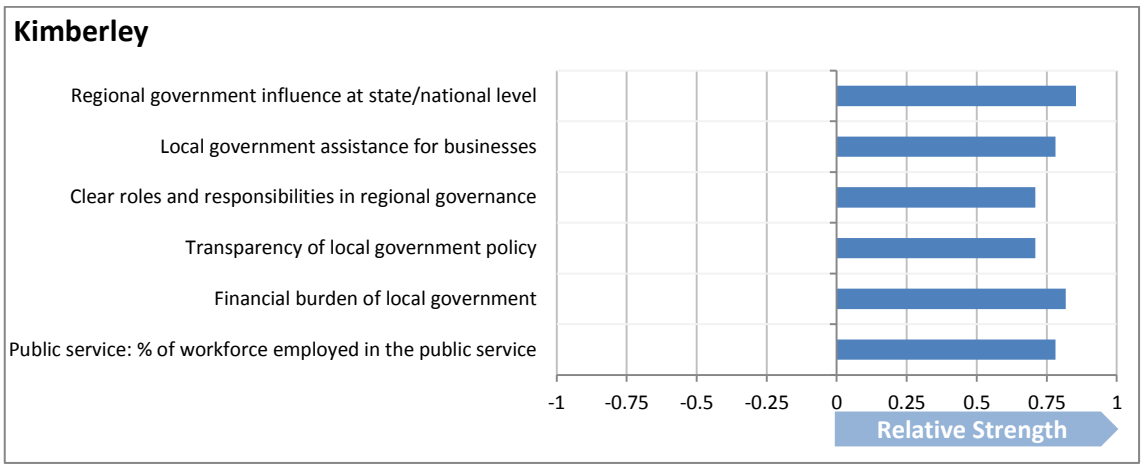
Alternatively, a lack of transparency or trustworthiness in the institutional framework may serve to discourage investment.

Table 21. Institution situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► **Regional government influence at state and national level**	- The Kimberley is a high profile regional location and has very good exposure at the state and national government level.
►**Clear roles and responsibilities in regional governance**	- At the development level there is quite a lot of crossover between individual local governments and state agencies and at development policy level there is some duplication across all three tiers of government.
► **Financial burden of local government**	- The local governments have very high financial commitments for the provision of infrastructure and services for a rapidly expanding population, with a limited rate base and are under constant financial pressure.
► **The local and regional assistance available for businesses.**	- The local and regional bodies have limited funds available for direct business assistance, but it ranks amongst the highest amongst Australian regions.
► **Regional government independence (Councils with more autonomy are more able to respond to local needs/demands)**	- Compared with some other Australian jurisdictions, there is a high reliance on government decisions made outside of the region, particularly at State government level.

Source: Regional Australia Institute, MacroPlan Dimasi

Figure 57. Relative strengths: Institutions



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: In comparative terms the Kimberley is in a strong institutional position: its influence at state and national level is comparatively high and regional governance is relatively transparent with reasonable clarity of roles However, regional autonomy is quite low: local capabilities are highly dependent on continuing influence and good relations with the state government (in particular) and national government for resources; there is limited ability to raise funds locally for expansion projects. The

relatively high proportion of people working in the public sector has positive and negative aspects to it: there is a high understanding amongst the various levels of the bureaucracy of regional conditions, but a reduced reliance on private sector activity to drive the economy.

Infrastructure and services

Infrastructure and transport (and, by extension, essential services) are crucial elements in determining the location of, and type of, investment activities and business sector that can develop in a region.

Well-developed infrastructure, particularly dependable electricity and telecommunications systems are an integral component of business production. Similarly, effective transport systems are vital in allowing regions to move their goods and services in a secure and timely fashion.

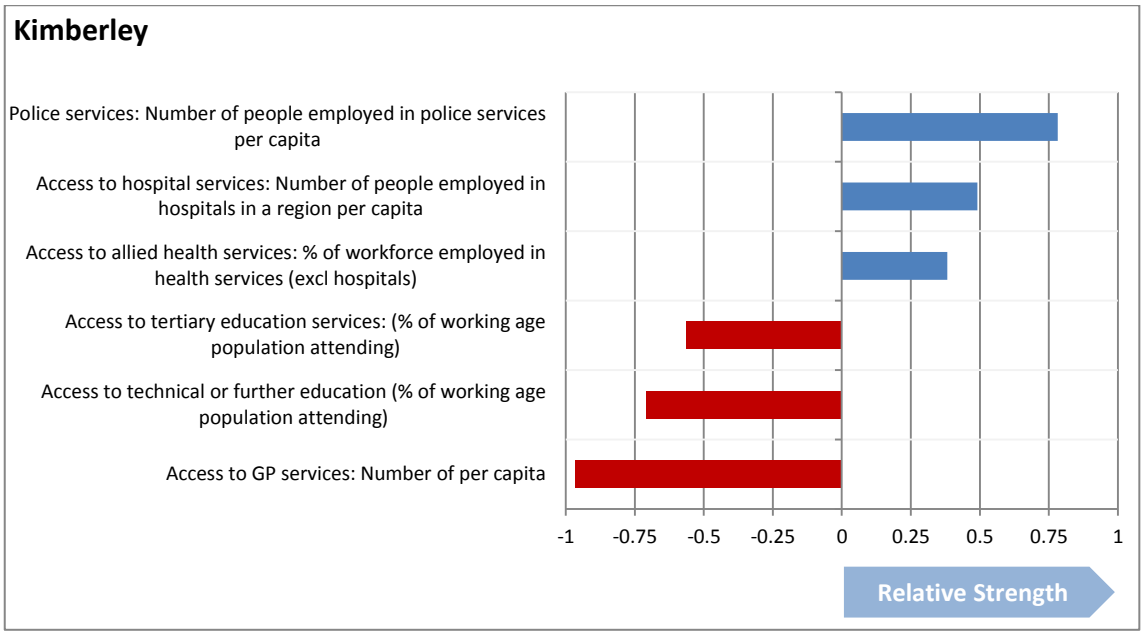
Both of these measures directly influence a region's ability to host economic activities through adequate infrastructure and also increase the region's ability to interact with other markets.

Table 22. Infrastructure and services situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Road infrastructure	- The region contains part of the intrastate regional road network - given the relative remoteness of the Kimberley it is a high quality connection.
► Aviation infrastructure	- The region has several large airports, including two that have regular interstate connections. One of the two airports has regular international operations and the other is capable of expansion to regular international operations.
► Access to higher education.	- There is only limited access to higher education – the University of Notre Dame Broome Campus provides a range of vocational education and training courses, but there is virtually no access to tertiary education in the Shire of Wyndham-East Kimberley
► Port infrastructure	- Existing port facilities in the region are of limited scale. The Port of Wyndham is expected to be important for the export of additional agricultural production from an expanded Ord River irrigation area. Additionally, with the potential expansion of mining in the East Kimberley, export of bulk commodities and the receipt of necessary supplies through the Port of Wyndham will only increase.
► Land cost	- Land cost generally is very high for all classes of accommodation. The median cost of buying a house in 2012 was $450,000 in Kununurra compared to $370,000 the Regional Western Australia.
► Access to hospital services and to allied health services	- There are good quality districts and regional hospitals, but limited specialist services. There is evidence that people need to leave the region for long periods for specialist treatment. There is limited aged care available.

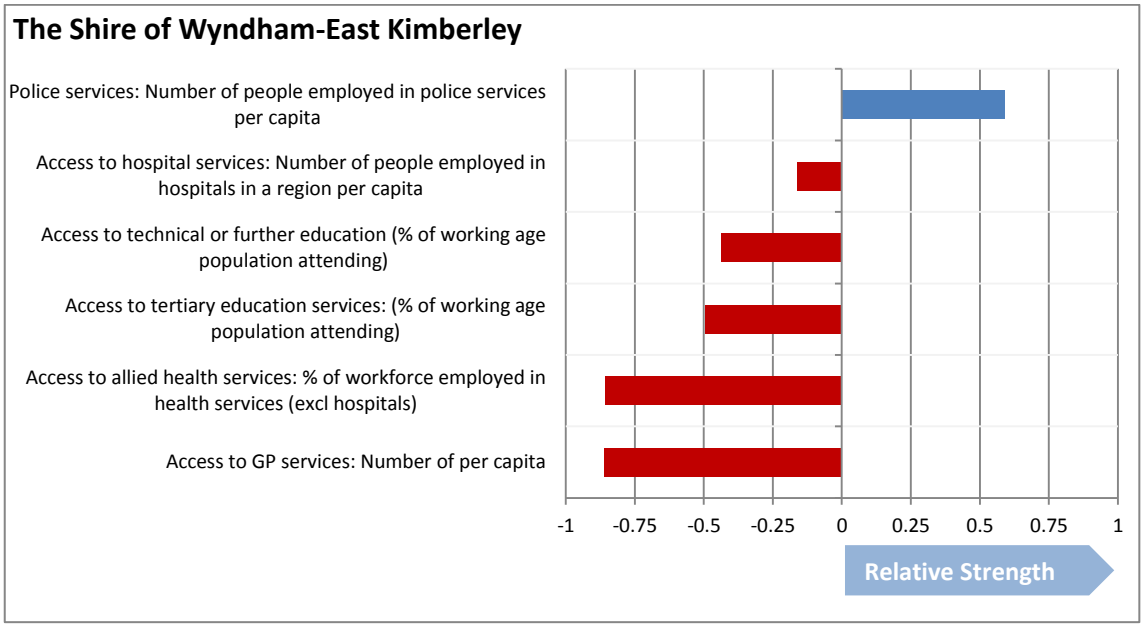
Source: Regional Australia Institute, MacroPlan Dimasi

Figure 58. Relative strengths: Essential Services



Source: Regional Australia Institute, MacroPlan Dimasi

Figure 59. Relative strengths: Essential Services



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: The region has good transport connections and infrastructure. However it ranks poorly in all aspects of access to health services and education services. These are critical areas if the population is to be to retained and expanded. Extended GP, specialist and aged services are required to service population growth and to meet East Kimberley @ 25

objectives. There is a critical need for vastly expanded access to tertiary education and also technical and further education.

The Shire of Wyndham-East Kimberley matches the regional pattern across all measures, with low rankings for all essential services except police services.

Macroeconomic conditions

Economic conditions determine the quality of the general economic climate in a region. Economic stability is a key factor in ensuring high levels of trust in the market for both consumers and producers. High levels of trust lead to high long term investments rates (by business and households), which are an integral component of competitiveness. Conversely, uncertainty acts as a deterrent to investment, thereby decreasing competitiveness.

Table 23. Macroeconomic conditions situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Population churn	- The population turnover is high. This makes it difficult to develop a large and consistent group of regional 'champions'.
► Stability of the local economy (local inflation)	- Local inflation is high – local costs generally are high compared with elsewhere in the country.
► Building approvals – value of new investment	- The rate of building approvals is generally high, showing good evidence of business willingness to invest in the local community.
► Total income per person	- The average income is higher than the national average, with a high proportion of individual workers earning high incomes.

Source: Regional Australia Institute, MacroPlan Dimasi

Overall: Average incomes are high, meaning there is wealth in the community and latent demand for new business initiatives; however the cost base is very high.

Human capital

Human Capital is a measure of the capabilities and skills of the workforce in a particular region. Both health and education are major contributors to a region's level of human capital, as both of these factors are understood to increase labour efficiency and competitiveness.

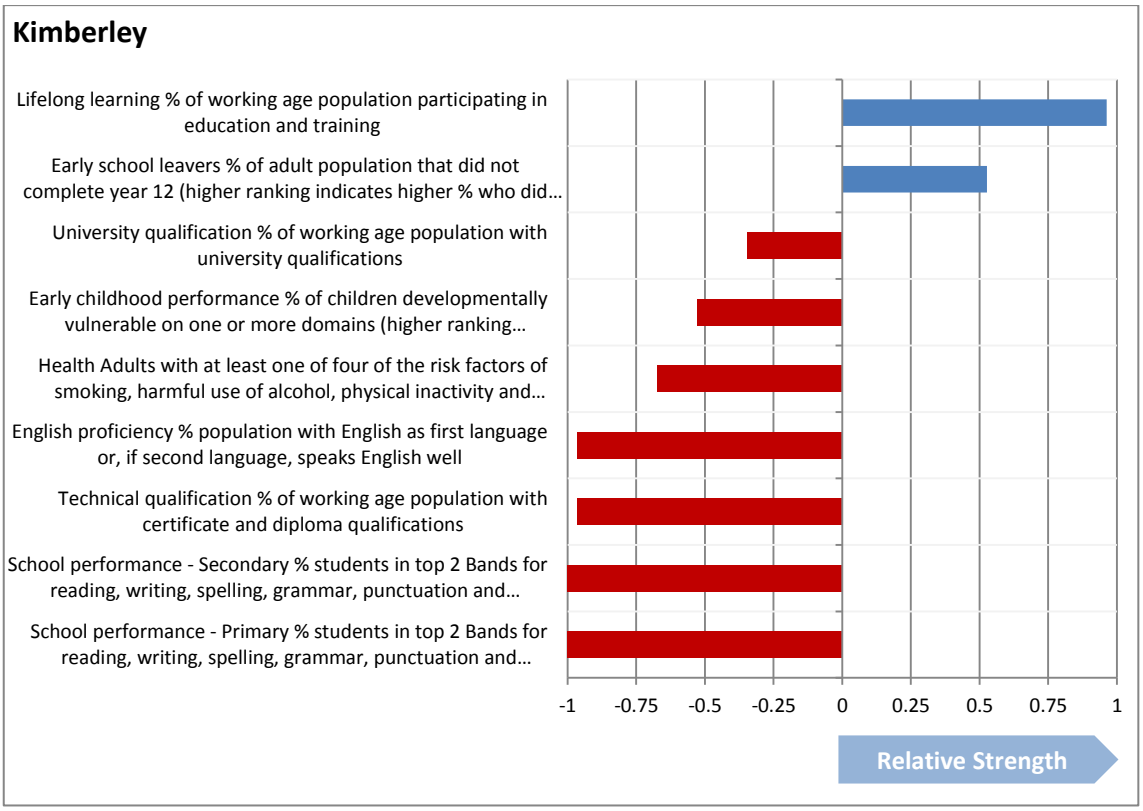
Regions of non-metropolitan Australia which have high levels of human capital – that is, a well-educated workforce and a propensity towards lifelong learning – are expected to experience higher levels of economic growth, are more adaptive and innovative and are more resilient to negative outside influences.

Table 24. Human capital situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Median age of the workforce	- Generally the workforce is younger than the national average, with a high proportion in the 25 to 44 year age groups.
► Workforce education levels	- The region has a lower proportion of qualified people in the workforce, even compared with other resources regions in Australia.

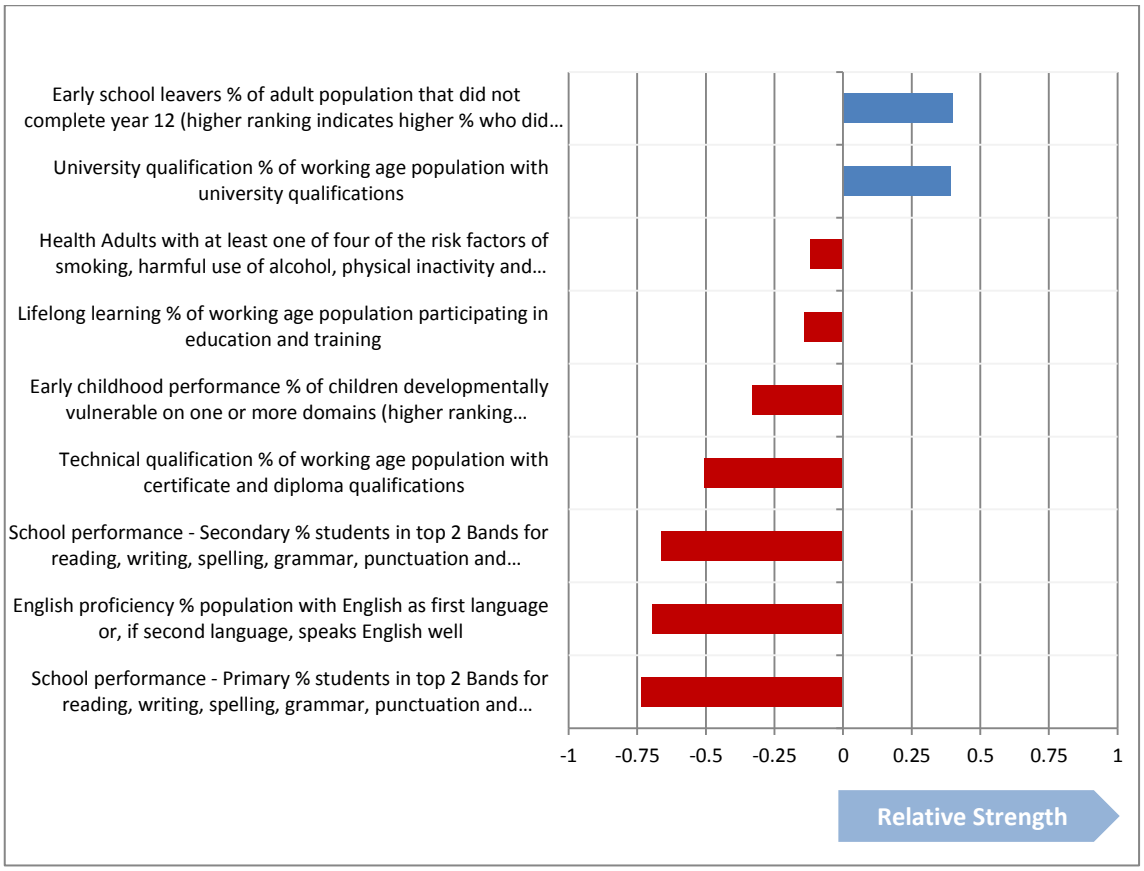
Source: Regional Australia Institute, MacroPlan Dimasi

Figure 60. Relative strengths: Human Capital



Source: Regional Australia Institute, MacroPlan Dimasi

Figure 61. Relative strengths: Human Capital



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: The region has a relatively young, healthy and energetic workforce. However, the region ranks comparatively poorly on other measures of human capital, with a lower than average incidence of trade qualifications and of tertiary education amongst the workforce. The high proportion of FIFO and DIDO workers limits the ability of this part of the workforce to contribute to regional expansion beyond the specific project on which they are working. Of particular note is the relatively low school performance scores at both primary and secondary level. This is a key factor that must be improved if population retention and growth is to be achieved.

The Shire of Wyndham-East Kimberley has good scores on early childhood performance and higher than average rankings of workers with university qualifications.

Labour Market Efficiency

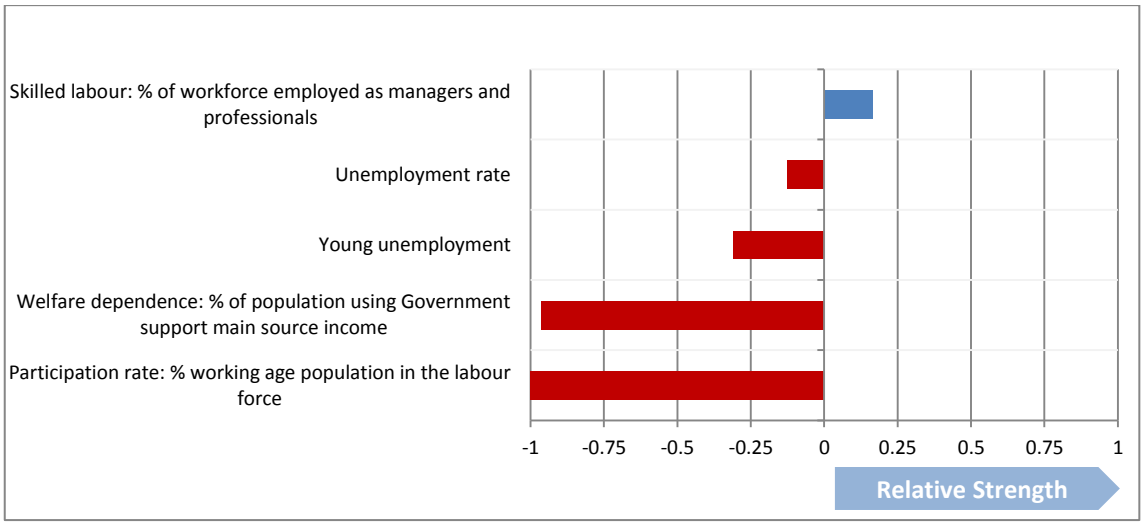
Both employment rates and the levels of labour force participation are key inputs into the creation of an efficient labour market. Generally, long-term unemployment indicates the presence of inherent structural problems which may adversely impact competitiveness. Low labour force participation may reflect low education levels in the region, a lack of economic opportunities or an atypical age structure (such as a skew towards retirement age person).

Table 25. Human capital situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Wage/labour costs	- Above average
► Unemployment rates in the region	- Below average
► Levels of labour force participation in each region	- Generally high
► Youth unemployment	- Below average
► Skilled labour	- Above average
► Welfare dependence	- Very high

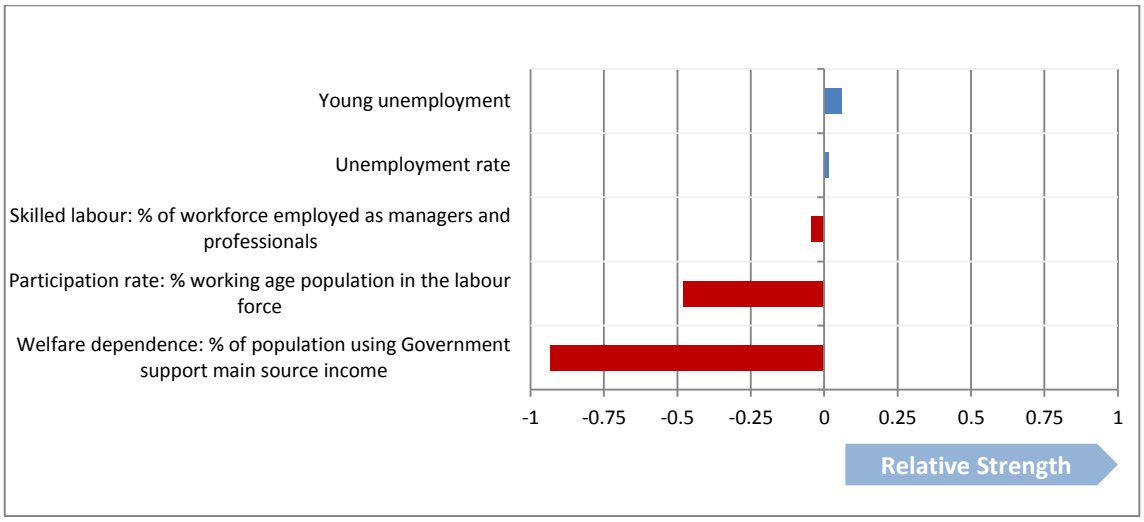
Source: Regional Australia Institute, MacroPlan Dimasi

Figure 62. Relative strengths: Labour Market Efficiency, Kimberley Region



Source: Regional Australia Institute, MacroPlan Dimasi

Figure 63. Relative strengths: Labour Market Efficiency, Shire of Wyndham-East Kimberley



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: In comparative terms the labour force is relatively engaged, flexible and mobile. However, the participation rate is quite low, possibly partly reflecting the indigenous population, but also possibly reflecting the lower than average participation of partners of people working in major projects who might regard their time in the Kimberley as a relatively short term and not have employment that meets their needs or expectations.

The level of skilled labour (i.e. people employed as managers and professionals) in the Shire is slightly lower the country average. Furthermore, the Shire of Wyndham-East Kimberley has high level of welfare dependency.

Technological readiness

Information and communication technologies have historically played a crucial role in creating innovative and more efficient work practices and lifestyles, improving productivity and greatly speeding up commercial processes.

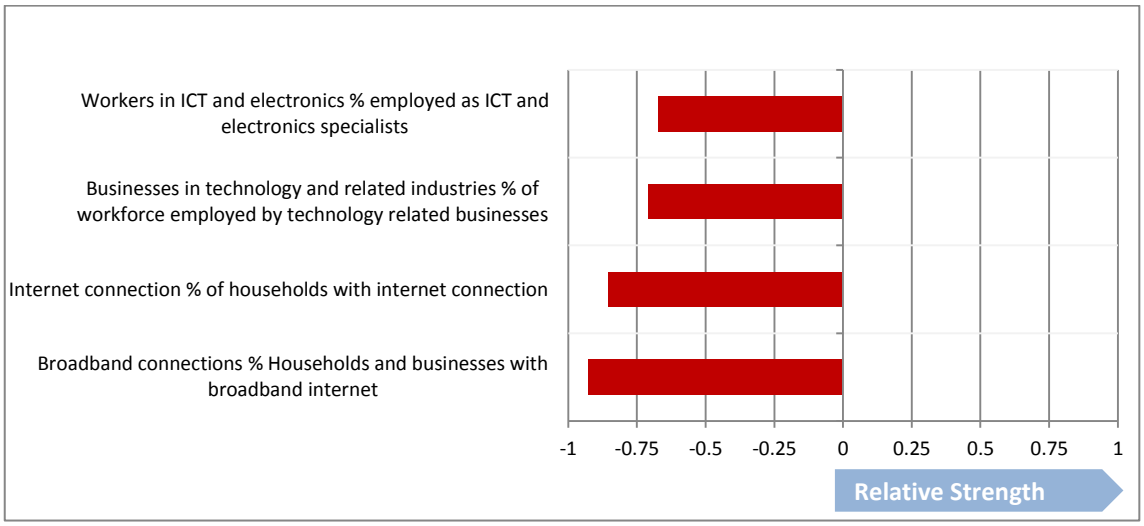
At present, digital innovations are transforming the way businesses operate, from retail services through to manufacturing and primary industries. For non-metropolitan regions to keep pace with metropolitan Australia, business and households need access to the latest technologies and the skills to use them. Therefore, technological readiness and a region's speed in adopting technologies is

a vital element in determining a region's competitiveness and ability to attract investment by both households and businesses.

Table 26. Technological readiness situation, Kimberley region and Shire of Wyndham-East Kimberley

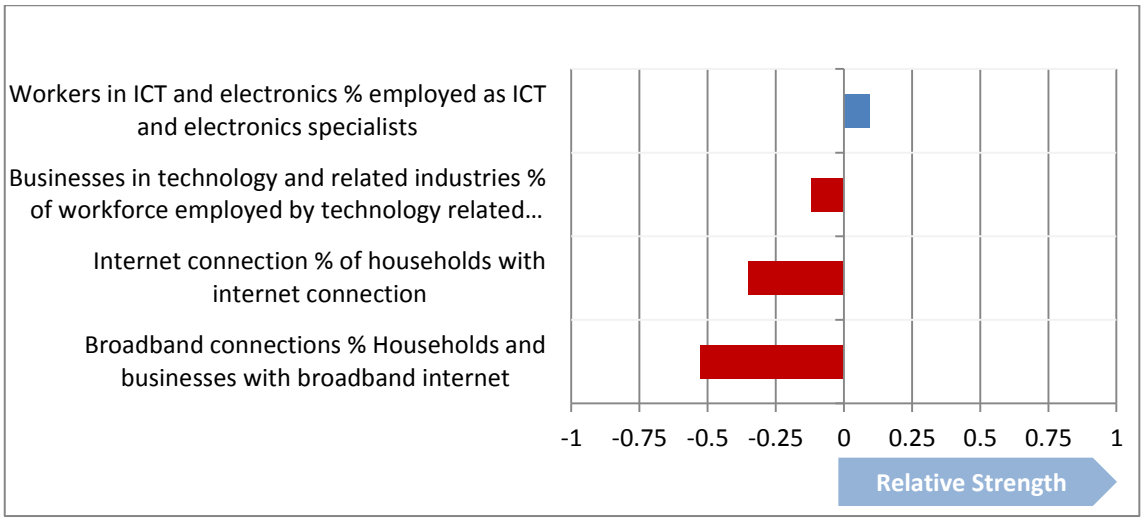
Competitiveness Index Element	Kimberley Situation
► Government IT investment	- Comparatively low
► High-speed broadband availability	- Large parts of the major centres already have NBN commenced or are on the three-year rollout program
► Mobile phone coverage	- Adequate in the major centres. The project new mobile communications infrastructure will be provided at 113 sites across the State, increasing mobile phone coverage by up to 22 per cent and boosting access to next generation broadband services. 25 sites in the Kimberley along the Great Northern Highway have been identified to receive this infrastructure upgrade.
► Businesses in technology related industries	- Average for a regional centre

Figure 64. Relative strengths: Technological Readiness, Kimberley Region



Source: Regional Australia Institute, MacroPlan Dimasi

Figure 65. Relative strengths: Technological Readiness, Shire of Wyndham-East Kimberley



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: There is a long way to deliver high speed broadband in most parts of the region and particularly in remote settlements. This is not a barrier to growth. There is no particular expertise amongst the business community for technology related industries.

The Shire has a relative high proportion of workers in ICT occupation.

Business sophistication

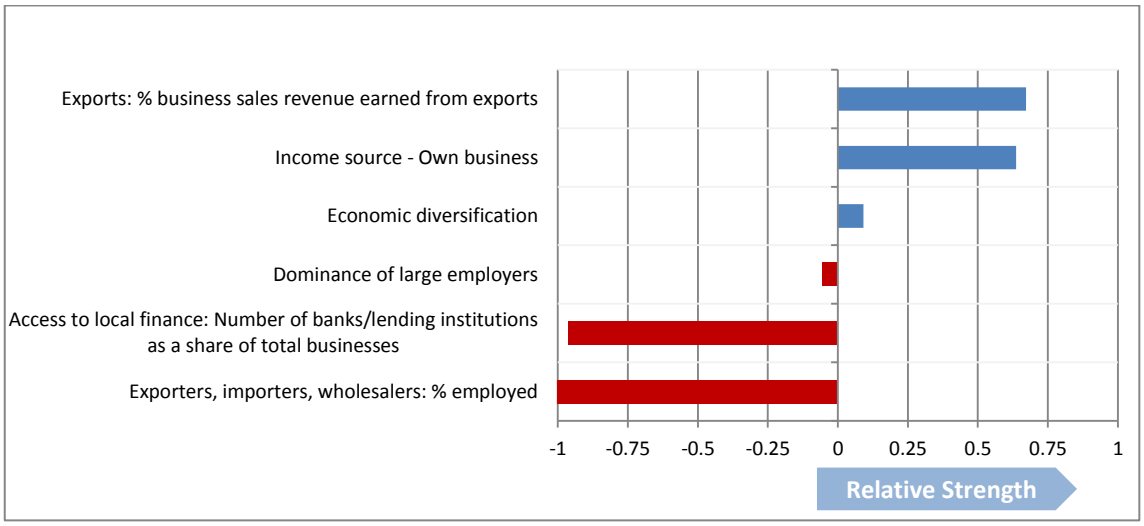
Business sophistication is determined by two key factors: the quality of a region's overall business networks and the quality of individual firms' operations and strategies. These two elements are inextricably linked and work together to encourage higher efficiency and levels of competitiveness. A region's level of business sophistication signals to potential investors the region's current productivity capabilities and their potential for responding to competitive pressures.

Table 27. Business sophistication situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Quality of region's overall business networks	- Small business networks and local chambers of commerce exist and can be expanded
► Dominance of large employers - number of large firms in the region.	- A good balance of employers with a slightly tendency for larger employers
► Exports	- High proportion of imports in all sectors (except for mining and agriculture), particularly services
► Economic diversification	- Slightly above the national average
► Access to local finance	- All channelled through Perth and elsewhere
► Income source – own business	- Significative SME sector

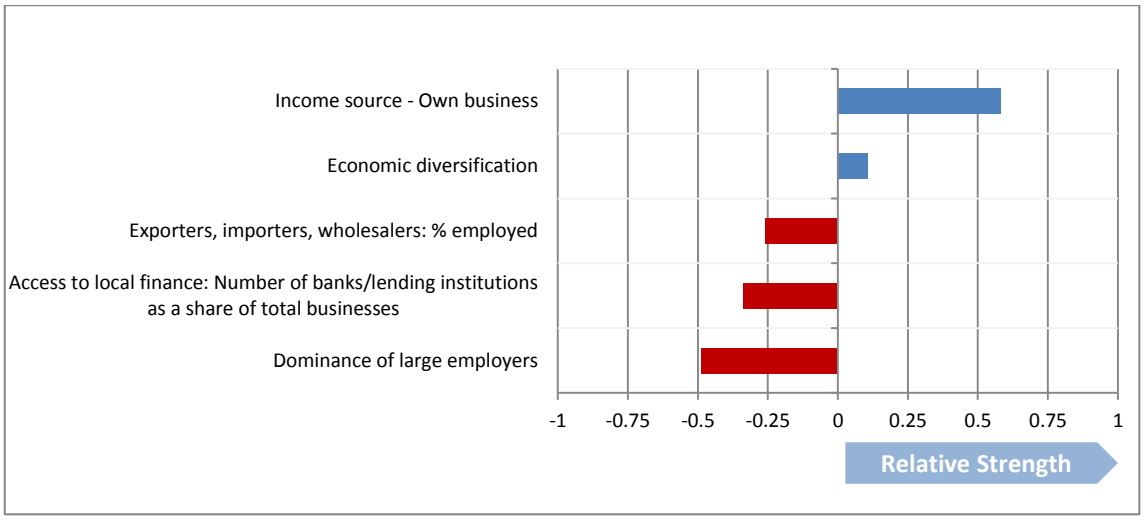
Source: Regional Australia Institute, MacroPlan Dimasi

Figure 66. Relative strengths: Business Sophistication, Kimberley Region



Source: Regional Australia Institute, MacroPlan Dimasi

Figure 67. Relative strengths: Business Sophistication, Shire of Wyndham-East Kimberley



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: The region has a good balance between large and small employers with a significative small and medium business sector.

The Shire of Wyndham-East Kimberley shows a most diverse and sophisticated business environment in the Kimberley, with the highest level of income sourced from own business, a high dominance by large employers.

Innovation

The relationship between innovation and competitiveness becomes increasingly relevant in developed economies in which markets need to be at the forefront of cutting edge products and processes in order to retain their competitive advantage.

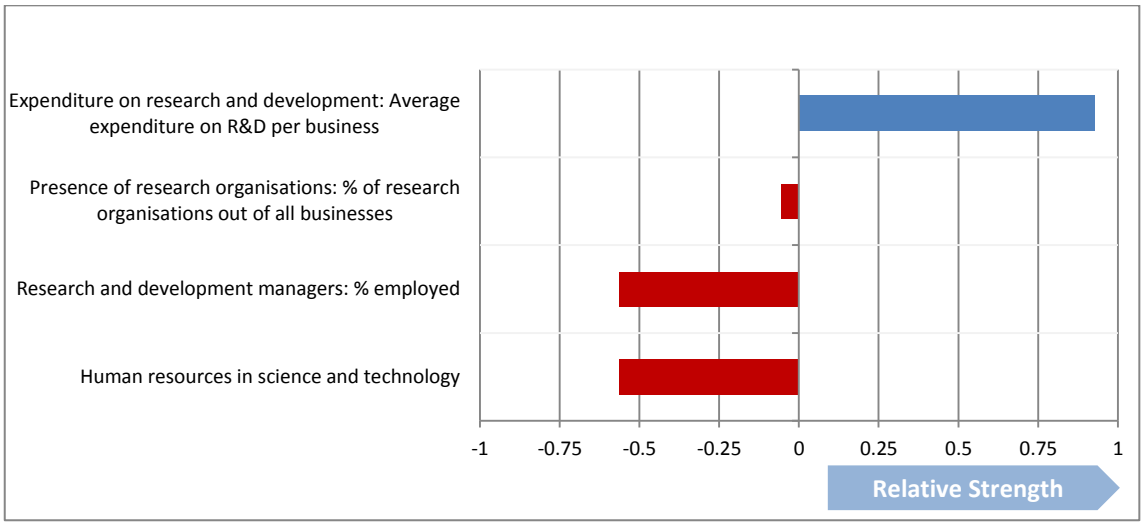
In the context of non-metropolitan regions of Australia, innovation is indicative of business willing to try new approaches to improving productivity and engaging with the enterprise environment, the digital agenda and investing in education and training. A reluctance or inability to innovate significantly reduces the competitiveness of a region.

Table 28. Innovation situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley situation
► Human resources in science and technology	- Comparatively low
► Presence of research organisations	- Very low
► Patents	- Very low
► Expenditure on research and development	- Very low, except for within major companies as part of their operations research; this explains the high overall ranking.

Source: Regional Australia Institute, MacroPlan Dimasi

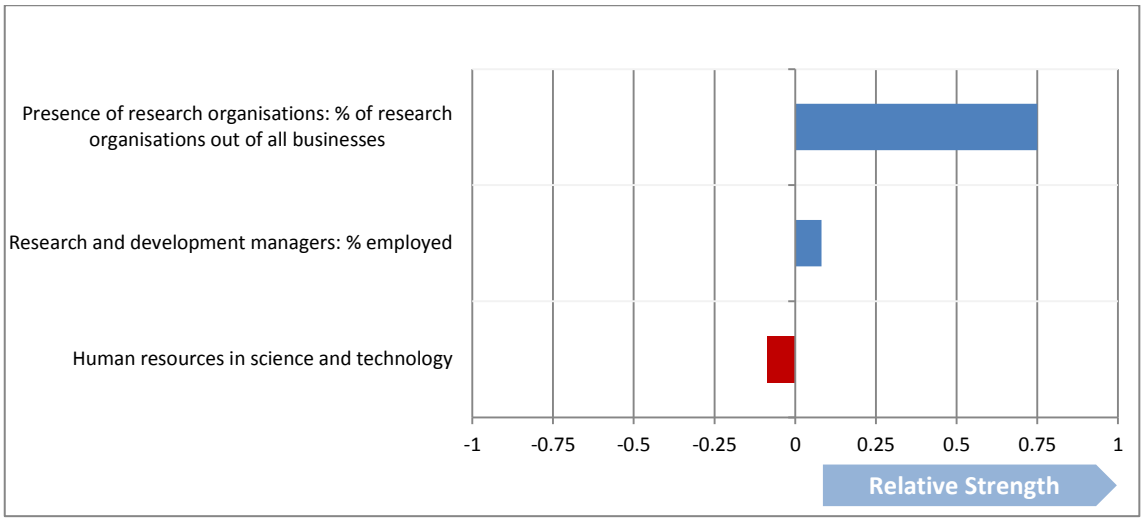
Figure 68. Relative strengths: Innovation, Kimberley Region



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: Amongst the major agriculture, minerals and resources companies the level of leading edge research and development is very high and its application in the region is widespread, resulting in continuous innovation and globally competitive operations. This presents an opportunity for the future of the region. It provides a level of skill and expertise that can be applied to other regional enterprises and also opportunity for supply chain and spin-off enterprises

Figure 69. Relative strengths: Innovation, Shire of Wyndham-East Kimberley



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: Amongst the major agriculture, minerals and resources companies the level of leading edge research and development is very high and its application in the region is widespread, resulting in continuous innovation and globally competitive operations. This presents an opportunity for the future of the region. It provides a level of skill and expertise that can be applied to other regional enterprises and also opportunity for supply chain and spin-off enterprises.

Economic fundamentals and Market size

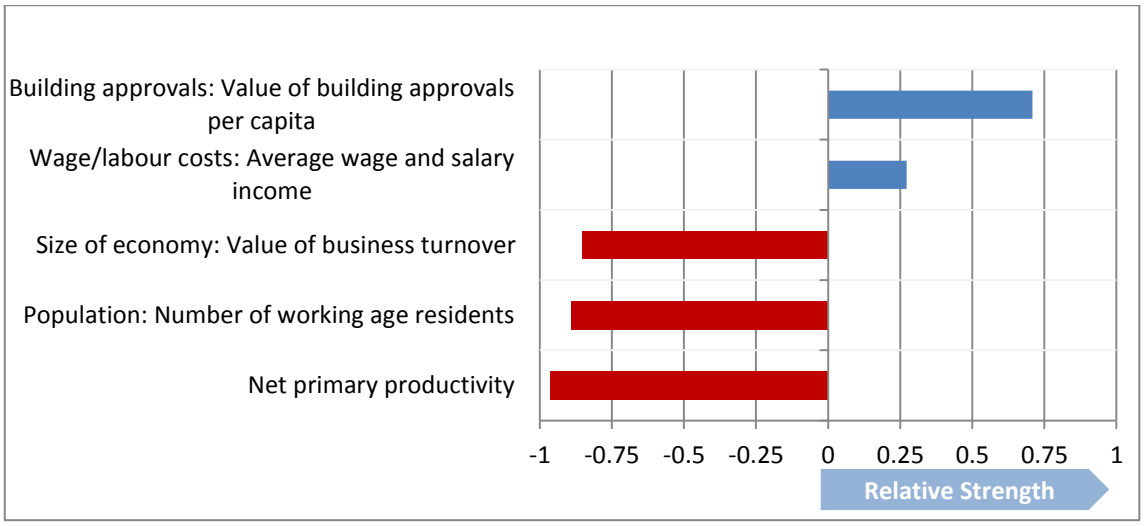
Market size and proximity to market are important determinants of regional competitiveness for non-metropolitan regions. Generally, larger markets allow firms to develop and benefit from economies of scale and encourage entrepreneurship and innovation. A small residential population and low numbers of local businesses can reduce economic opportunities and limit business growth

Table 29. Economic fundamentals and Market size situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley situation
► Size of local market	- There is a substantial and growing population base, although it is relatively small compared with most other Australian regions. A key strategic advantage is the presence of very large purchasers in the form of the major mining companies – local businesses able to supply to them will develop skills and expertise in selling to world-class purchasers, which will increase their viability for expansion outside of the region, including international expansion.
► Number of businesses relative to population size	- There is a relatively small business sector – this might be explained by the presence of very large employers and the high cost base
► Proximity to markets	- Main metropolitan markets are distant and will have high freight cost to service them. This will affect the viability of some potential agri-business diversification projects

Source: Regional Australia Institute, MacroPlan Dimasi

Table 30. Economic fundamentals and Market size situation, Kimberley region and Shire of Wyndham-East Kimberley



Source: Regional Australia Institute, MacroPlan Dimasi

Overall: While the region currently has a relatively small local market, it is coming to a scale that it can support a greater range and diversity of business and services; the presence of world-class purchasers provides a substantial opportunity.

Natural resources

A region's physical endowment, in terms of both the access to natural resources and the physical attributes of the region such as climate, are hugely influential in determining a region's competitiveness. Access to natural resources can create economic opportunities through offering inputs to productions (such as access to water or good quality soil), and can be used to generate production outputs (such as mineral or extractives).

Similarly, the physical make up of a region can be an important determinant of the region's ability to connect to external markets. If a region is situated on the ocean, they may have access to ports, a viable tourism industry, and be naturally more connected to wider markets than an inland region. In contrast, an area which is difficult to access, such as a remote community, will have more difficulty exporting goods and therefore be at an automatic comparative disadvantage.

Table 31. Economic fundamentals and Market size situation, Kimberley region and Shire of Wyndham-East Kimberley

Competitiveness Index Element	Kimberley Situation
► Regional access to natural resources	- There are abundant mineral and water resources.
► Physical attributes of a region, and whether they are conducive to industry	- The climate is conducive to agriculture. There are high-value heritage sites, giving tourist potential.

Source: Regional Australia Institute, MacroPlan Dimasi

Overall: There is opportunity for several main classes of expansion to the externally-oriented sectors of the Kimberley economy:

- Expansion of the economic base – Agriculture, mining and tourism
- Diversification projects: several of these are possible and addressed below.
- Exportable services: at the moment the services base of Kimberley is small and underdeveloped. However research institutes and tertiary education focussing on further development of the region's base minerals, energy and agriculture industries and spin-offs form technology-based diversification would provide a services sector with output applicable outside of the region. This is an area of great opportunity for the region.

Relative socio-economic indicators

Socio-economic indexes for areas (SEIFA)

SEIFA assesses relative socio-economic disadvantage and advantage, which the ABS defines in term of:

> *"people's access to material and social resources, and their ability to participate in society."*

The socio-economic indexes for areas are derived from Census data for individuals, families and households using the following dimensions:

- income variables;
- education variables;
- employment variables;
- occupation variables;
- housing variables; and
- other miscellaneous indicators of relative advantage or disadvantage.

They are available for small areas with populations of between 200 and 800 people (Statistical Area 1 – see Appendix), which allows for a fine-grained assessment of the population in an area.

Four indexes are available, which from slightly different perspectives:

- Index of Relative Socio-Economic Disadvantage (IRSD);
- Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD);
- Index of Economic Resources (IER); and
- Index of Education and Occupation (IEO).

Low scores indicate a high degree of disadvantage and high scores mean a low level of disadvantage. The scores are normalised to a mean of 1000 whereby any score below 1,000 relates to a higher level of disadvantage than the average for Australia. For comparisons, the decile rankings provide a simpler approach to comparing the data. A decile of 1 indicates the lowest 10 per cent of scores in Australia; decile 2 contains the next 10 per cent of score rankings.

The socio-economic indexes for areas (SEIFA) produced from the 2011 Census of Population and Housing show that the Kununurra and Wyndham area generally ranks poorly on all four of the indexes.

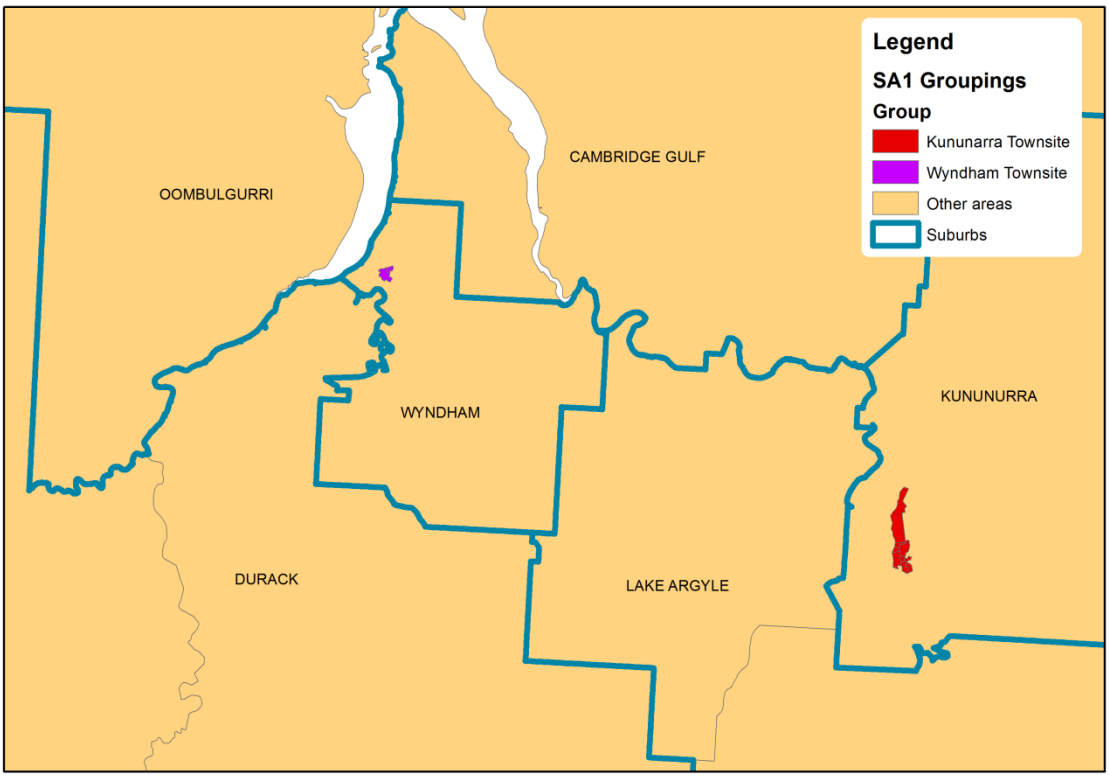
The following table indicates the SEIFA scores and deciles for the Statistical Area 1s that make up the Shire of Wyndham East Kimberley Area. This indicates that in general the Shire of Wyndham East Kimberley ranks poorly on the SEIFA scores. The exceptions are certain areas in and around Kununurra which have a relatively high ranking (deciles above 5) indicating a lower level of disadvantage than the average for Australia. Many of the SA1s outside Kununurra however rank in the lowest decile indicating very high levels of social disadvantage across the broader local government area.

Table 32. Table 1 - SEIFA for the Shire of Wyndham East Kimberley, 2011

Grouping	2011 Statistical Area Level 1 (SA1)	Index of Relative Socio-economic Advantage and Disadvantage		Index of Relative Socio-economic Disadvantage		Index of Economic Resources		Index of Education and Occupation		Usual Resident Population
		Score	Decile	Score	Decile	Score	Decile	Score	Decile	
Kununurra Townsite	**5120801**	1117.8	9	1102.2	9	1199.0	10	998.9	6	204
	5120807	473.8	1	328.9	1	422.2	1	808.5	1	153
	5120811	1036.4	7	1020.9	6	960.1	4	1090.7	8	935
	5120812	512.6	1	413.0	1	429.9	1	812.4	1	139
	5120814	991.0	5	1011.0	5	958.8	4	979.9	5	604
	5120815	962.3	4	963.0	3	941.1	3	950.7	4	793
	5120816	1028.0	6	1020.1	6	983.6	4	1008.4	6	657
	5120817	932.4	3	903.6	2	883.2	2	998.8	6	751
	5120818	967.7	4	956.7	3	907.3	2	992.6	5	546
Wyndham Townsite	**5120808**	906.8	2	892.0	2	884.0	2	1012.6	6	278
	5120810	807.1	1	790.0	1	775.9	1	912.6	3	504
Other areas	**5120802**	779.0	1	760.0	1	780.7	1	902.2	2	215
	5120803	712.7	1	643.4	1	711.4	1	929.1	3	265
	5120804	799.3	1	783.7	1	747.5	1	915.7	3	420
	5120805	1038.4	7	1042.4	7	1049.1	7	1024.9	7	744
	5120809	600.3	1	493.7	1	536.7	1	857.2	1	469
	5120813	729.8	1	711.1	1	702.2	1	836.7	1	101

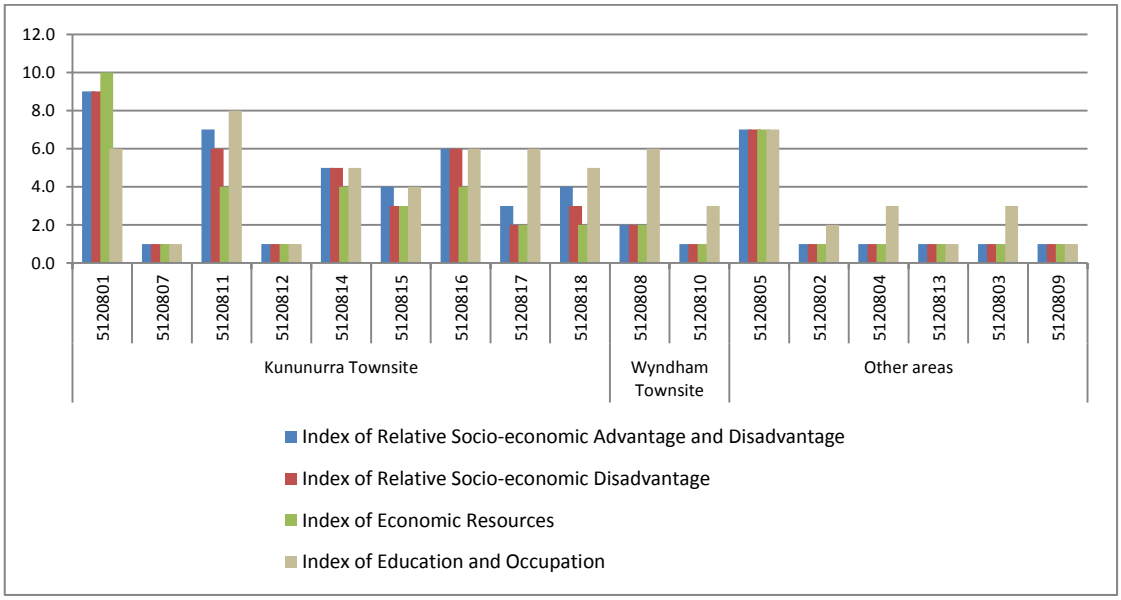
Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Figure 70. SA1 Groupings



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Figure 71. SEIFA Indices by Decile



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

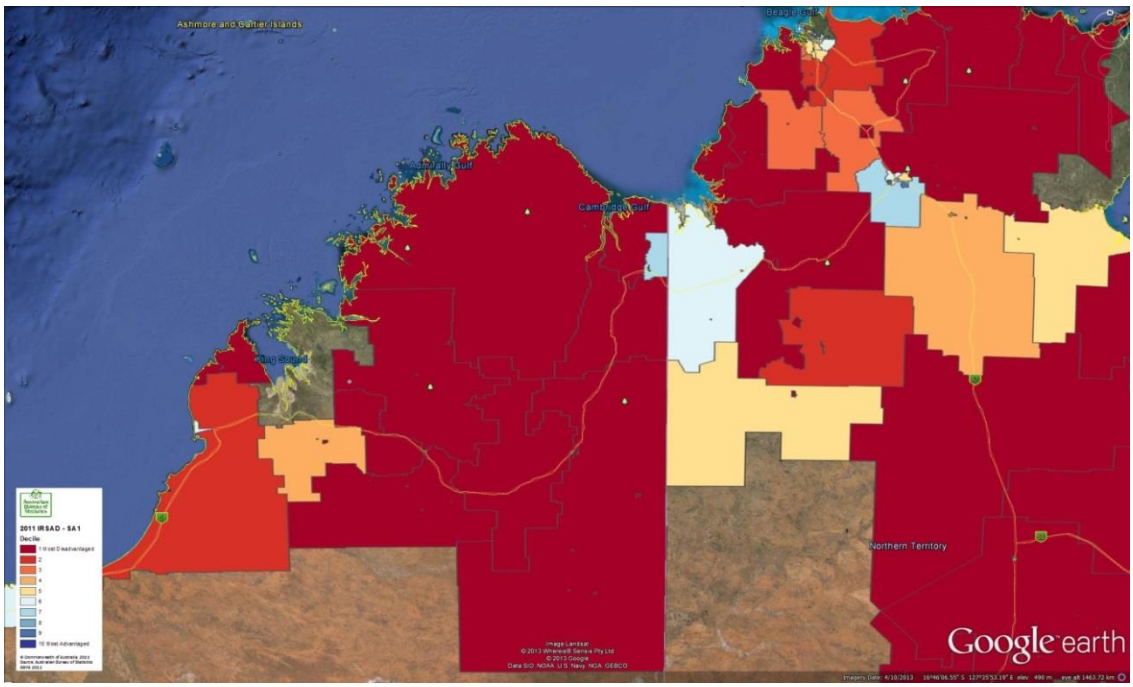
Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)

The IRSAD summarises variables that indicate either relative advantage or disadvantage, therefore this index ranks areas on a continuum from most disadvantaged to most advantaged.

An area with a high score on this index has a relatively high incidence of advantage and a relatively low incidence of disadvantage. Due to the differences in scope between this index and the IRSD, the scores of some areas can vary substantially between the two indexes. For example, consider a large area that has parts containing relatively disadvantaged people, and other parts containing relatively advantaged people. This area may have a low IRSD ranking, due to its pockets of disadvantage. However, its IRSAD ranking may be moderate, or even above average, because the pockets of advantage may offset the pockets of disadvantage.

The following figure shows that disadvantage is broadly spread across the region. Whilst the region is extremely large and the trends are difficult to discern, in general terms areas of great social advantage tend to be ben represented by the smaller SA1s and based on the way that the ABS compiles SA1 geographies, smaller SA1s generally relate to areas of higher population density (albeit within this region still at very low densities).

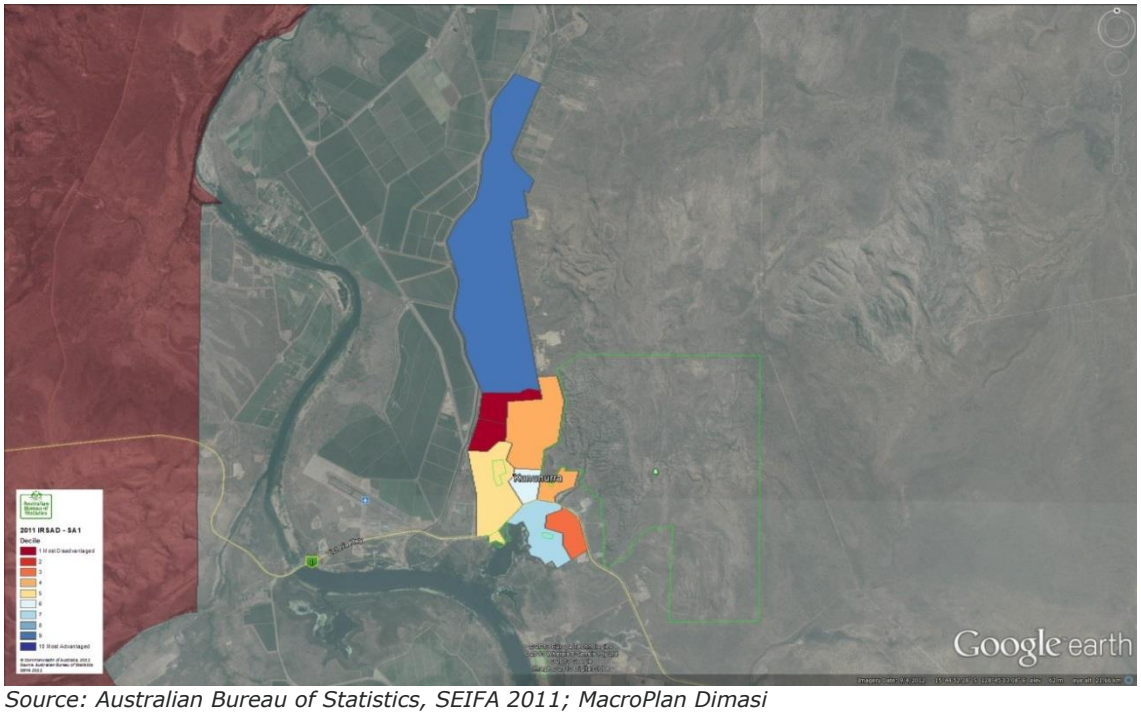
Figure 72. Index of relative socio-economic advantage (blue) and disadvantage (red) – Kimberley and Northern Territory region, 2011



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

The more localised map of Kununurra below shows that within the urbanised area of Kununurra there is greater social advantage to the north and south and at the same time a some of the highest levels of disadvantage (lowest declie) in the central areas of Kununurra.

Figure 73. Index of relative socio-economic advantage (blue) and disadvantage (red) – Kununurra area, 2011



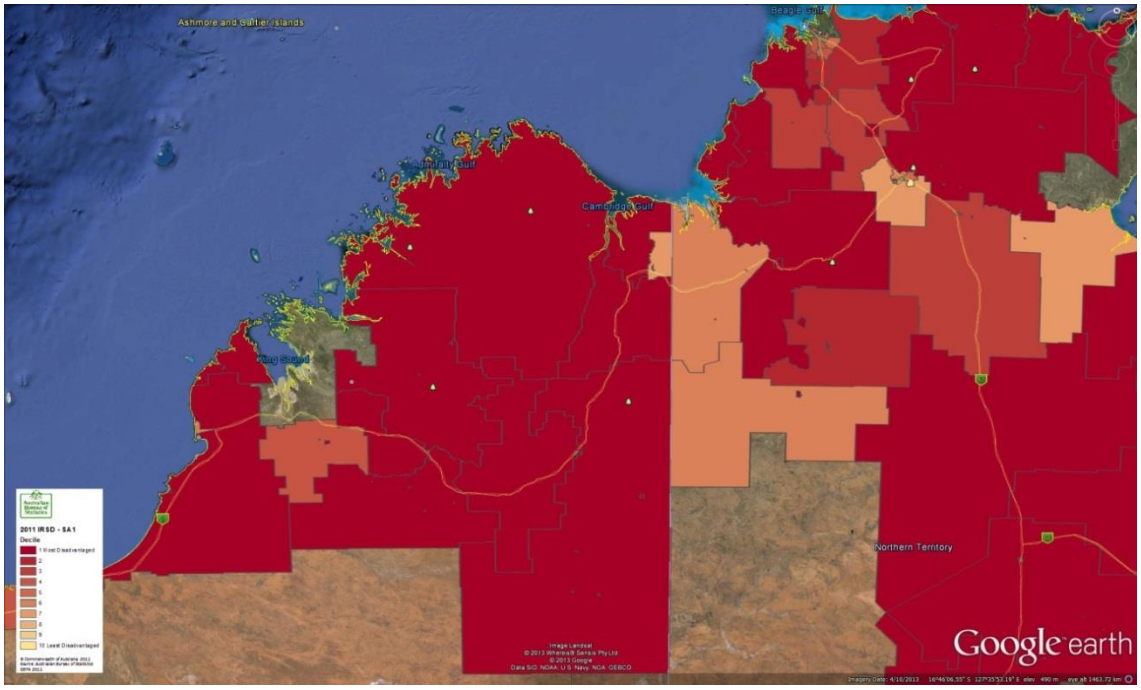
Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Index of Relative Socio-Economic Disadvantage (IRSD)

The IRSD summarises variables that indicate relative disadvantage, with a low score indicating a high proportion of relatively disadvantaged people in an area. The index does not necessarily mean that an area with a very high score has a large proportion of relatively advantaged ('well off') people, as there are no variables in the index to indicate this. We can only conclude that such an area has a relatively low incidence of disadvantage.

The following figure shows that in general terms the Kimberley and Northern Territory region is highly disadvantaged (indicated in red)

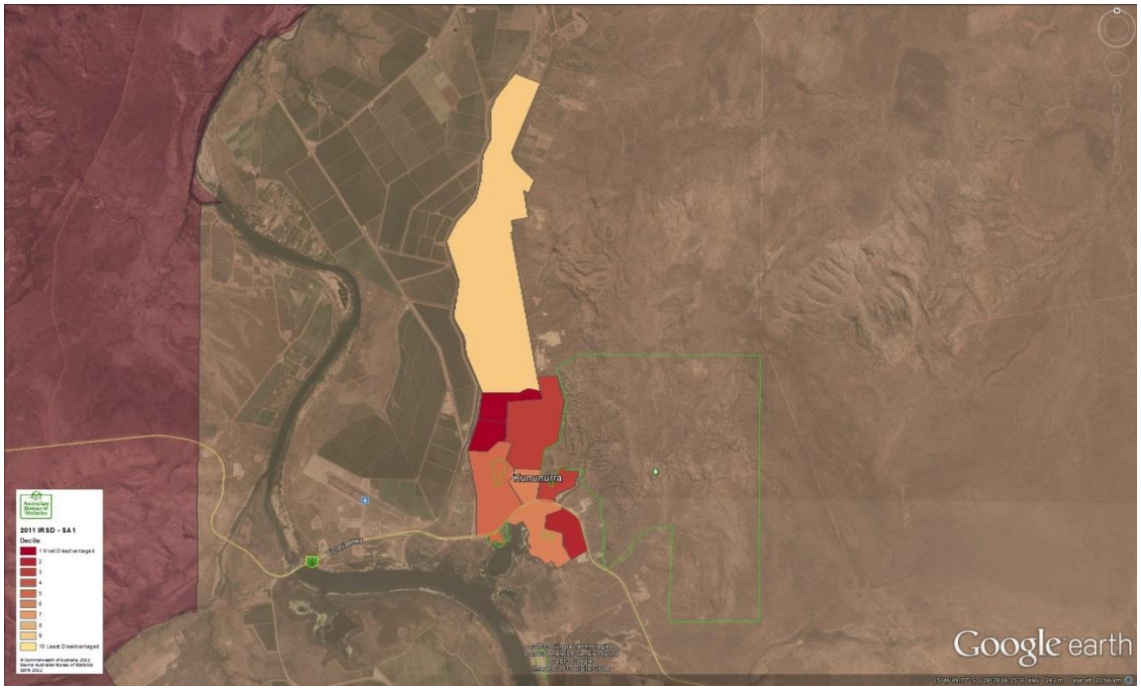
Figure 74. Index of socio-economic disadvantage – Kimberley and Northern Territory region, 2011



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

The same index in shown in more detail for the Kununurra area shows that the index is highest to the north of the town (i.e. less disadvantaged) and lowest in the central areas which as with the IRSAD measure are in the lowest decile within Australia representing the highest level of social disadvantage.

Figure 75. Index of relative socio-economic disadvantage – Kununurra area, 2011



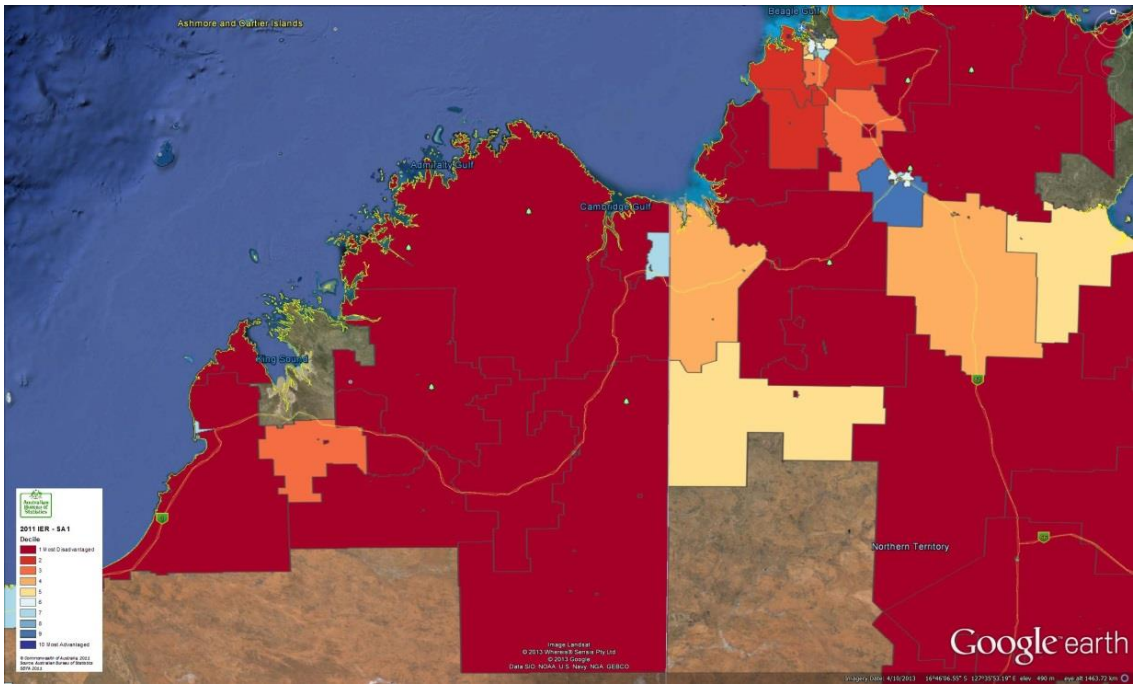
Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Index of Economic Resources (IER)

The IER summarises variables relating to the financial aspects of relative socioeconomic advantage and disadvantage. These include indicators of high and low income, as well as variables that correlate with high or low wealth. Areas with higher scores have relatively greater access to economic resources than areas with lower scores.

As with the other SEIFA indices, at a regional level many parts of the Kimberley and Northern Territory region show the lowest decile of economic resources indicating that disadvantage on this measure is widespread across the region.

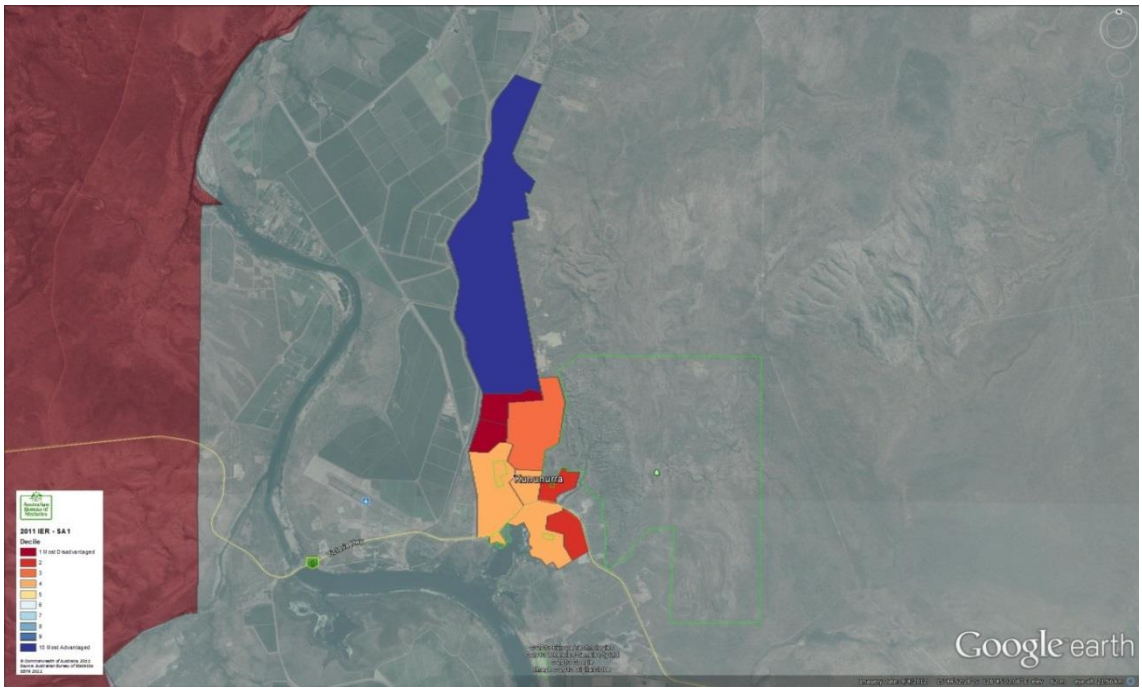
Figure 76. Index of economic resources – Kimberley and Northern Territory region, 2011



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

The more localised figure of Kununurra town centre and immediate surrounds indicates a similar story to that of the IRSAD with significant advantage within the northern part of the area and the most disadvantaged areas in the central area indicating fewer economic resources.

Figure 77. Index of economic resources – Kununurra area, 2011



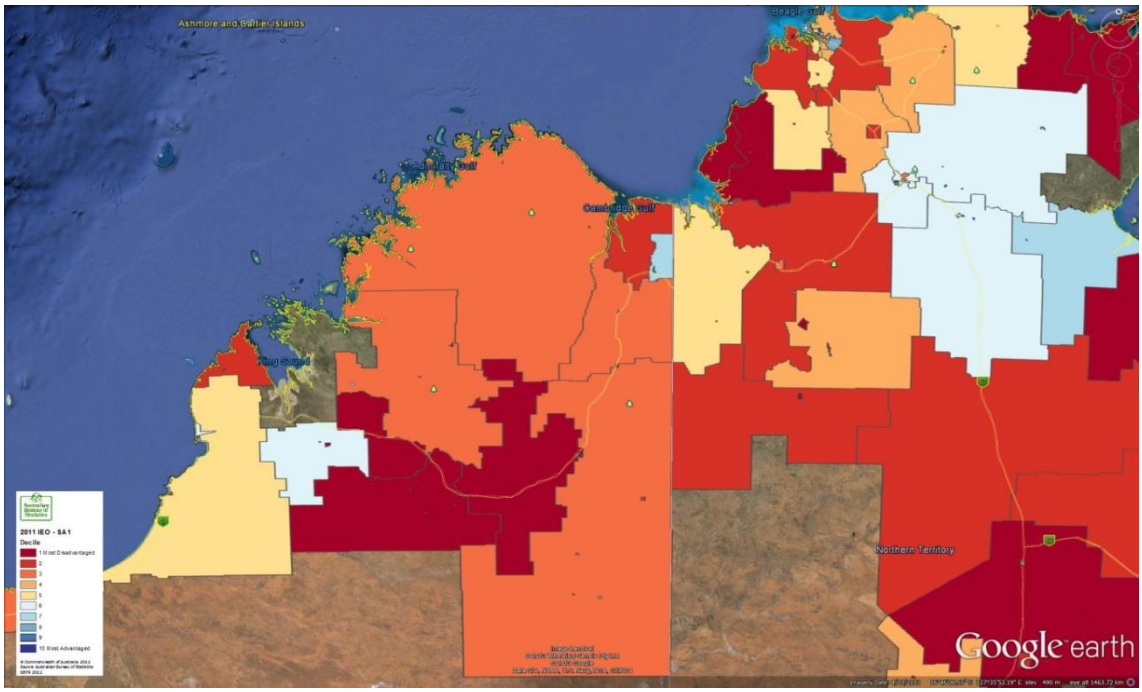
Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Index of Education and Occupation (IEO)

This index summarises variables relating to the educational and occupational aspects of relative socio-economic advantage and disadvantage. This index focuses on the skills of the people in an area, both formal qualifications and the skills required to perform different occupations. A low score indicates that an area has a high proportion of people without qualifications, without jobs, and/or with low skilled jobs. A high score indicates many people with high qualifications and/or highly skilled jobs.

The following figures show that again, the Kimberley and Northern Territory region ranks towards the lower end of the scale against the nation average, however not to the same degree as with the other SEIFA indices. Based on the IEO index many of the areas are within the lower-middle to upper-middle deciles in terms of advantage. This suggests that while the Kimberley and Northern Territory region has significant economic challenges to overcome, the education and occupation profile of its residents means that over time, its socio-economic performance should improve as its residents have a reasonable capacity to work in higher-paying jobs.

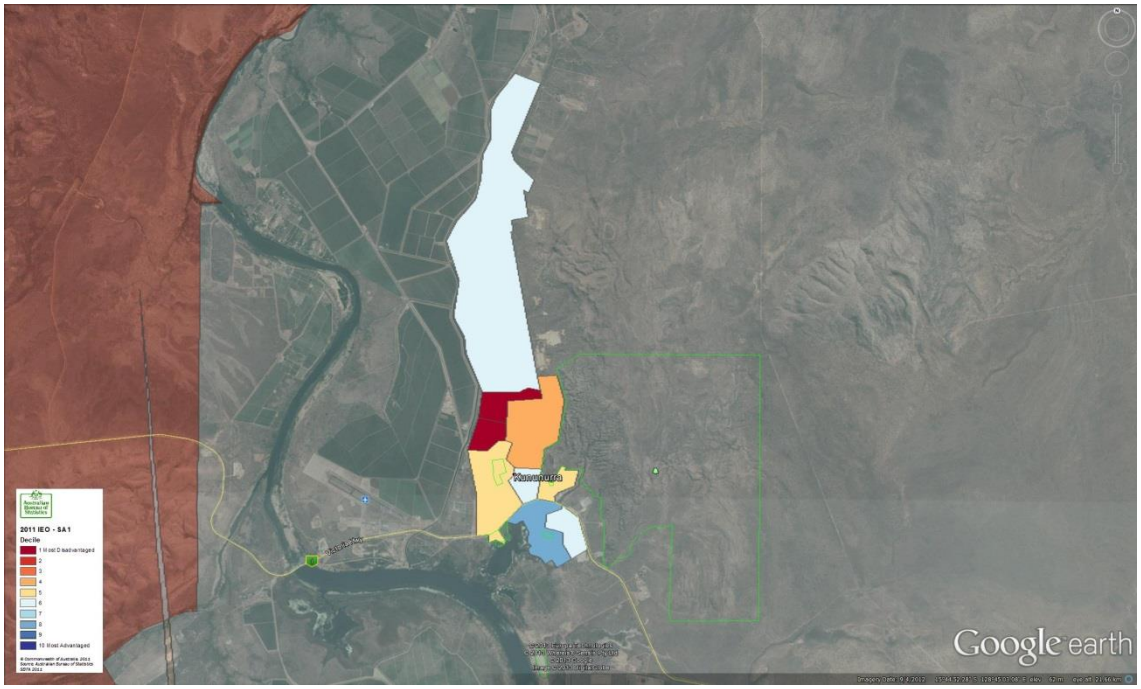
Figure 78. Index of education and occupation– Kimberley and Northern Territory region, 2011



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

At the more localised level, the Kununurra area again indicates that in the central areas are disadvantaged in terms of occupation and education. The northern and southern parts of the area show some degree of advantage however not to the same degree as within the other SEIFA index measures.

Figure 79. Index of education and occupation – Kununurra area, 2011



Source: Australian Bureau of Statistics, SEIFA 2011; MacroPlan Dimasi

Section 4: Growth pressures and alternative future growth patterns

Growth pressures and alternative future growth patterns.

This component of work will incorporate (but not be limited to) the pressures and constraints identified in the stakeholder forums and provide more detailed assessment of:

- Current and potential constraints or 'gaps' hampering economic and employment growth or development;
- Potential growth of existing industries;
- New industries and opportunities, taking into account the region's competitive advantages;
- Constraints to the development of current and proposed employment lands;
- Forecast future trends, including associated:
    - Implications for the take up of employments lands;
    - Indicative employment implications with respect to forecast population growth, including accommodation/housing requirements for permanent and temporary workers;
    - Translation of economic benefits and consequential employment at a local level (through multiplier etc);
    - Where employment is likely to be generated, with respect to economic and employment sectors, geographic/spatial distribution; and
    - Potential sources of future workers.

Section 5: Growth scenarios and assumptions

Growth scenarios and assumptions

Based on Census count information over a 50-year period, the long-term growth of the Shire of Wyndham-East Kimberley has averaged 4.2 per cent per annum. While the population in Wyndham over this time has been gradually declining, the rest of the Shire has grown significantly. Notably this is from a very small population base in 1961 which is arguably the reason for such high rates of growth.

The *Kimberley Planning and Infrastructure Framework* estimates that future growth of the Shire could be between 2.7 and 4.2 per cent per annum. The Kimberley Regional Planning Committee has establish an indicative, aspirational target for Kununurra to grow at the high end of the scenario which will result in the population increasing by:

- 5.0 per cent per annum in Kununurra;
- 2.2 per cent per annum across the rest of the Shire; and
- an overall average of 4.0 per cent per annum across the Shire.

Table 33. Growth scenarios from the Kimberley Planning and Infrastructure Framework

Town/ area	Low growth (pa)	Medium growth (pa)	High growth (pa)
Kununurra	3.0%	4.0%	5.0%
Wyndham	2.2% (natural growth)		
Major settlements	2.2% (natural growth)		
Minor settlements	2.2% (natural growth)		
SWEK average growth	**2.7%**	**3.3%**	**4.0%**

Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

Given that these future growth rates are lower than the past long-term growth of the Shire's population, they can be argued to be reasonably realistic, although it will require some challenges to be met over the future. The larger a population gets the harder it becomes to maintain high growth rates.

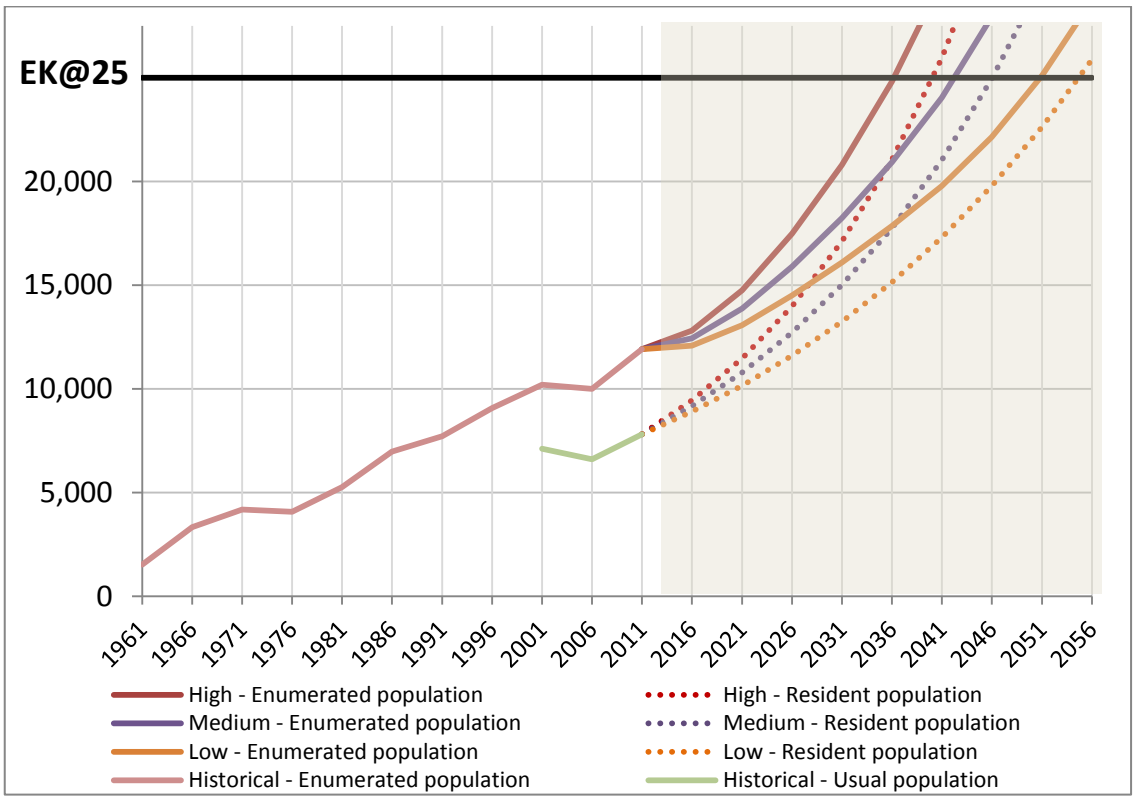
Table 34. Historical and future population growth rates

Town / area	Historical population growth – 1961 – 2011 (pa)	Future aspirational growth (pa)
Kununurra	6.0%	High scenario = 5.0% p.a.
Wyndham	-0.1%	Natural growth = 2.2% p.a.
Major settlements	6.3%	Natural growth = 2.2% p.a.
Minor settlements	6.3%	Natural growth = 2.2% p.a.
SWEK average growth	**4.2%**	**Aspirational growth = 4.0%**

Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

The following figure illustrates the effect of the low, medium and high (aspirational) growth rates on bother the resident and enumerated (ie. including FIFO and visitors) population in the Shire. This indicates that the Shire could reach 25,000 people between 2036 and 2056, depending on the growth scenario used and the population measure.

Figure 80. Long-term population growth – 1961 to 2056, Shire of Wyndham-East Kimberley



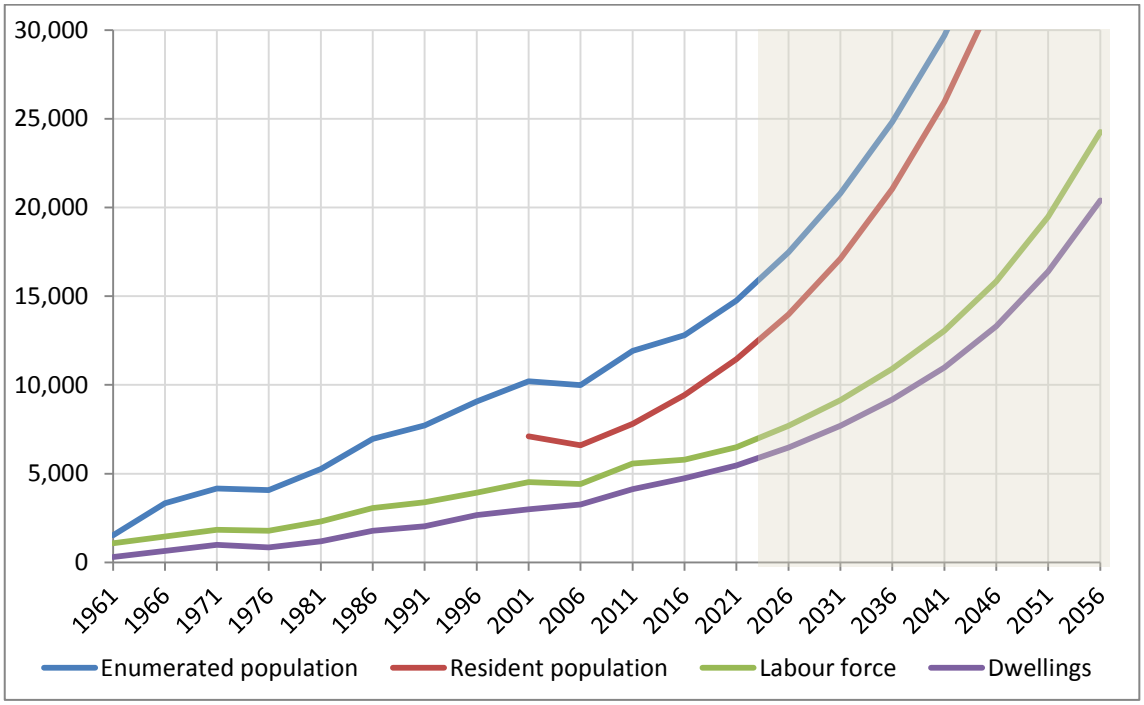
Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

Low growth scenario;

The low growth scenario indicates that the Shire will reach a population of 25,000 people by:

- 2051 based on enumeration (count on Census night); and
- 2056 by resident population.

Figure 81. Low population growth scenario, Shire of Wyndham-East Kimberley



Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

To achieve the low population scenario, the Shire will require the jobs and dwellings as indicated in the following table. Note that in the short term (2011-2016) there is a projected decrease in employment, which reflects the completion of major construction works associated with Ord Stage 2.

Figure 82. Low scenario – population, labour force and dwellings, Shire of Wyndham-East Kimberley

	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Enumerated population	11,914	12,084	13,066	14,504	16,093	17,847	19,781	22,151	25,109	28,730
Resident population	7,799	8,898	10,156	11,596	13,245	15,133	17,297	19,777	22,621	25,882
Labour force	5,565	5,315	5,747	6,379	7,078	7,849	8,700	9,742	11,043	12,635
Dwellings	4,134	4,471	4,834	5,366	5,954	6,603	7,318	8,195	9,290	10,629

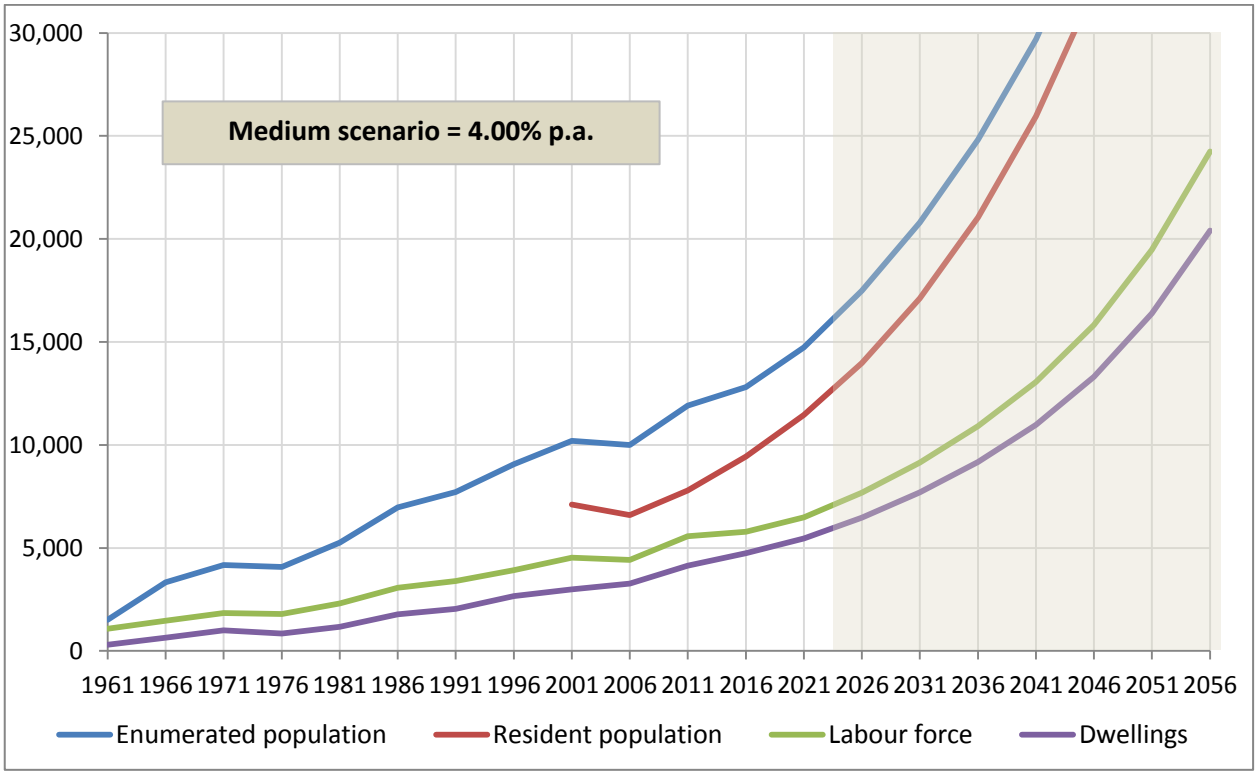
Source: ABS Census 2011; MacroPlan Dimasi

Medium growth scenario

The medium growth scenario indicates that the Shire will reach a population of 25,000 people by:

- Just after 2041 based on enumeration (count on Census night); and
- 2046 by resident population.

Figure 83. Medium population growth scenario, Shire of Wyndham-East Kimberley



Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

The following table shows the number of jobs and houses that will need to be created to support the future population growth according to the medium scenario.

Table 35. Medium scenario – population, labour force and dwellings, Shire of Wyndham-East Kimberley

	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Enumerated population	11,914	12,440	13,868	15,894	18,233	20,932	24,049	27,950	32,921	39,184
Resident population	7,799	9,161	10,779	12,707	15,005	17,749	21,029	24,955	29,659	35,301
Labour force	5,565	5,613	6,099	6,990	8,019	9,206	10,577	12,292	14,479	17,233
Dwellings	4,134	4,603	5,131	5,880	6,745	7,744	8,897	10,340	12,180	14,497

Source: ABS Census 2011; MacroPlan Dimasi

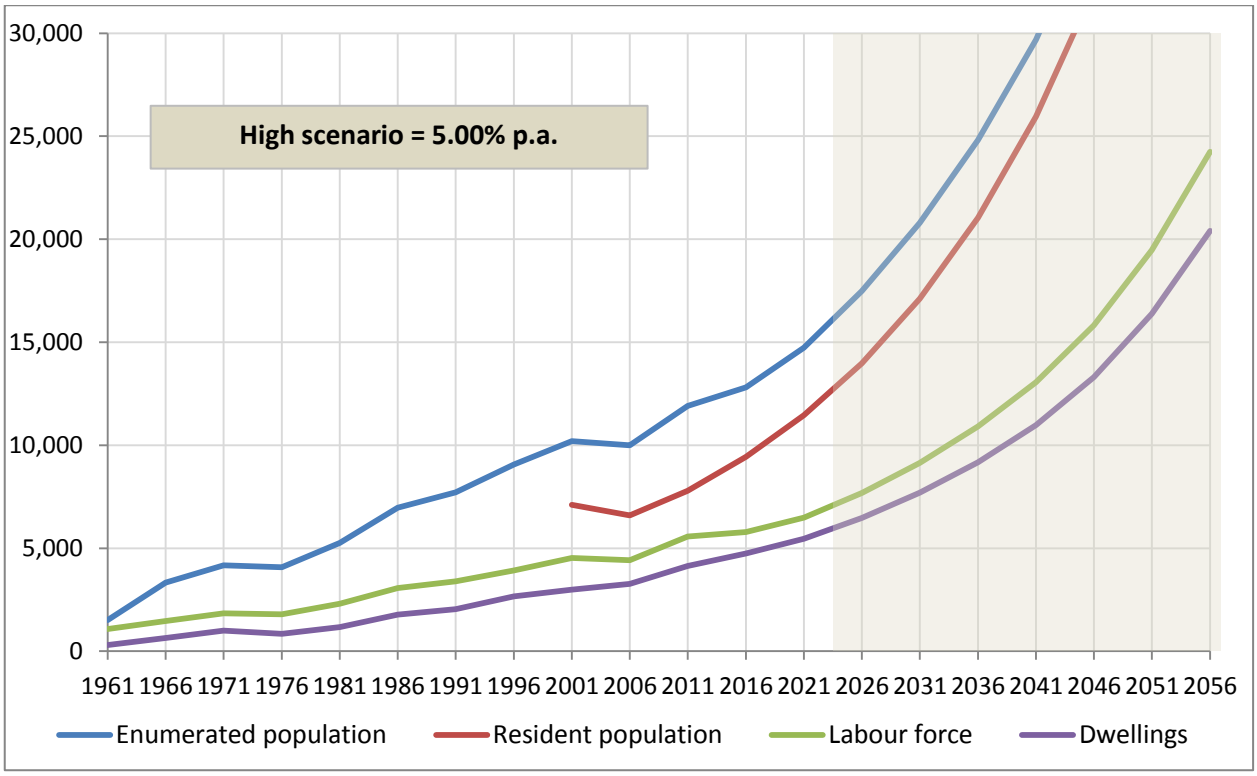
High growth scenario (aspirational target)

The high population growth scenario indicates that the Shire would reach a population of 25,000 people by:

- 2031 based on enumeration (count on Census night); and
- around 2036 based on the resident population.

The following figure indicates the growth of the Shire under this high (aspirational) scenario. It also highlights how maintaining a high rate of growth as the population base increases becomes more challenging over time. The Kimberley Planning Committee has projected the growth to 2036 and the following figure extrapolates these same assumptions out to 2056.

Figure 84. High population growth scenario, Shire of Wyndham-East Kimberley



Source: WAPC, Kimberley Planning and Infrastructure Framework; ABS Census 1961-2011; MacroPlan Dimasi

The following table indicates the growth of the enumerated population, resident population, labour force and dwellings under the high (aspirational) scenario.

Table 36. High scenario – population, labour force and dwellings, Shire of Wyndham-East Kimberley

	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Enumerated population	11,914	12,811	14,743	17,484	20,801	24,818	29,690	35,990	44,286	55,142
Resident population	7,799	9,433	11,459	13,978	17,119	21,044	25,961	32,134	39,898	49,678
Labour force	5,565	5,780	6,484	7,690	9,148	10,915	13,057	15,828	19,477	24,251
Dwellings	4,134	4,740	5,454	6,469	7,696	9,182	10,984	13,315	16,384	20,401

Source: ABS Census 2011; MacroPlan Dimasi

Section 6: Infrastructure required

Infrastructure scenarios

The growth of Wyndham-East Kimberley to a population of 25,000 people is based on the following assessment. This shows the number of jobs and dwellings that will be needed to grow Wyndham-East Kimberley to 25,000 people (and beyond) under the aspirational (high) growth scenario.

Table 37. Aspirational growth scenario for the Shire of Wyndham-East Kimberley

	2011	2016	2021	2026	2031	2036	2041
Enumerated population	11,914	12,811	14,743	17,484	20,801	24,818	29,690
Resident population	7,799	9,433	11,459	13,978	17,119	21,044	25,961
Labour force	5,565	5,780	6,484	7,690	9,148	10,915	13,057
Dwellings	4,134	4,740	5,454	6,469	7,696	9,182	10,984

Source: ABS Census 2011; MacroPlan Dimasi

Employment land requirements

For East Kimberley grows towards a population of 25,000 people it will need additional land for employment. These land requirements will meet what are called first and second-round effects of growth:

1. Initially, more employment land will be needed to accommodate new jobs that will attract more people to Wyndham-East Kimberley. Without this jobs growth, the future population growth would be very limited; and
2. As a result of population growth and the consequential demand and expenditure of those people on goods and services, additional employment land will be required.

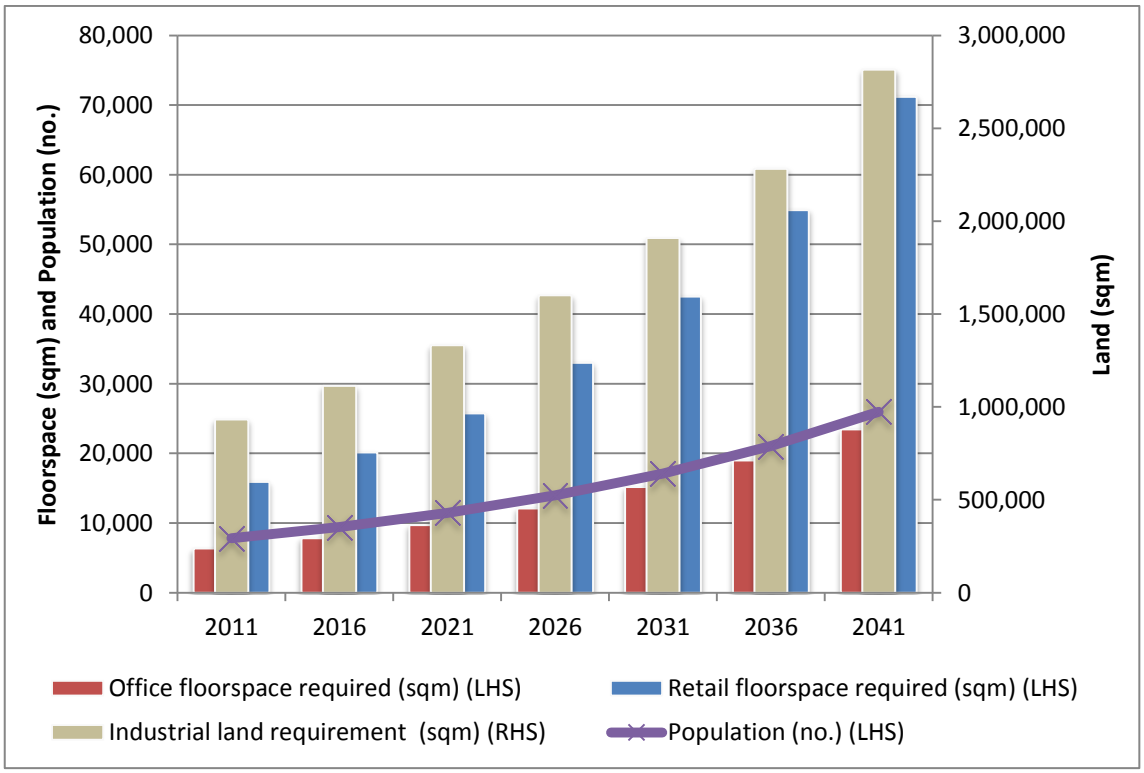
Section 3 of this report details the growth needs of Wyndham-East Kimberley and that analysis is summarised in the following table and graph.

Table 38. Additional land requirements for Wyndham-East Kimberley at 25,000 people

	2011	2016	2021	2026	2031	2036	2041	Change (2011-2041)
Population (no.)	**7,799**	**9,433**	**11,459**	**13,978**	**17,119**	**21,044**	**25,961**	**18,162**
Retail floorspace required (sqm)	15,934	20,176	25,760	33,026	42,510	54,922	71,211	55,277
Office floorspace required (sqm)	6,352	7,851	9,743	12,135	15,168	19,022	23,467	17,115
Industrial land requirement (sqm)	934,060	1,114,114	1,333,642	1,601,793	1,909,434	2,282,935	2,816,350	1,882,290

Source: MacroPlan Dimasi

Figure 85. Additional land requirements for Wyndham-East Kimberley at 25,000 people

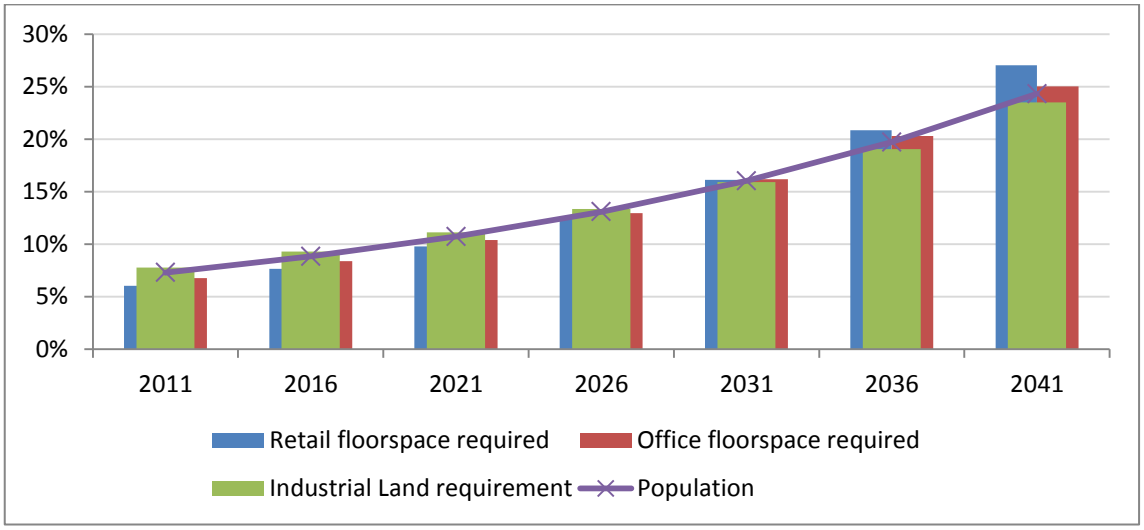


Source: MacroPlan Dimasi

An important factor for the area is that as it grows, the population becomes more self-sustaining in terms of the types of services that are available locally. In effect, this reduces the amount of retail expenditure that 'leaks' out of the local economy. At present that expenditure goes to Darwin or Perth as people seek a broader range

of goods that are available in those areas. As East Kimberley grows, more of those goods will be available locally. For that reason, the retail floorspace required will increase at a greater rate than the overall population growth. The following figure shows this growth as East Kimberley grows towards 25,000 people.

Figure 86. Change in floorspace requirements relative to population growth



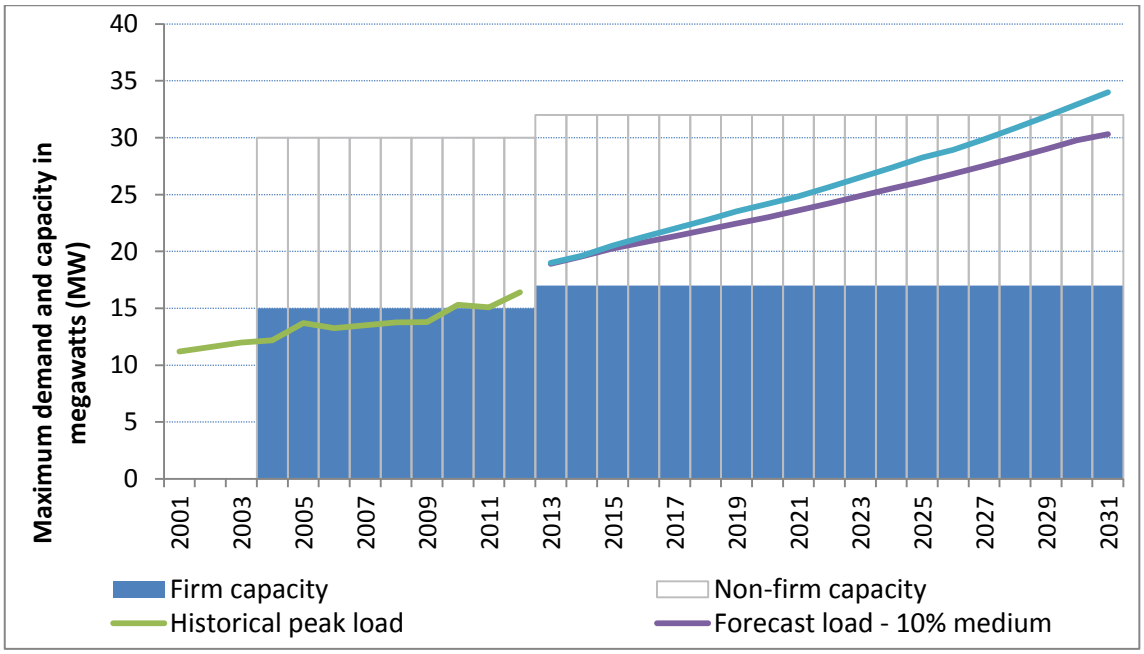
Source: MacroPlan Dimasi

Utility infrastructure

Electricity

Electricity demand in the East Kimberley is managed through a combination of permanent supply and supplementary generation during peak periods. The permanent supply is under contract from Pacific Hydro.

Figure 87. Kununurra forecast demand growth for electricity and total capacity



Source: Horizon Power

Water

Demand for potable in the East Kimberley is driven by the needs of industry. Domestic demand represents a small proportion of overall demand and therefore does not represent a major constraint to the growth of the town.

A more pressing constraint than capacity is the physical location of the existing borefield and its effect on expansion of Kununurra. Any relocation of that facility should take into account the aspirational growth for Kununurra (5 per cent per annum) and allow for expansion over time to meet the demand from population growth.

Community facilities and amenities

Community infrastructure service standards provide an indication of the types and number of facilities and services needed as a community grows in size. These service provisions need to be treated as indicative as there are a number of other factors that are critical such as the isolation of the area and whether alternative facilities can be used in nearby areas.

The following table provides an indication of the typical community service ratios that a community can reasonably expect or demand depending on the size of the population. Note that the population thresholds should also account for peak population size as areas such as the East Kimberley which has a highly seasonal visitor population often needs facilities to service the total number of people in an area, rather than just its 'usual residents'.

Table 39. Typical service levels for community infrastructure (local government)

Facilities	Service Level	Ratio (persons per facility)	Descriptions and Specifications/Standards
General Standards			
Active Recreation Space	ha/1,000 populatio n	2	Includes all sporting fields (junior and senior), courts and greens available for public use.
Active Recreation Space Standards			
Playing Fields	District	15,000	Min. 10.7 hectares - includes pathways, passive open space, car park, toilets, Regional playground, BBQ facilities, shade (hard and natural), large trees, District clubrooms
Playing Fields	Sub-District	5,250	6.1 to 10.7 hectares- includes BBQ, Small passive open space, toilets, subdistrict clubrooms, shade, car park, playground.
Playing Fields	Neighbou rhood	N/A	Between 2.7 to 6.1 hectares - includes car park, toilet/change rooms, playground.
Playing Fields	Local	3,500	Less than 2.7 hectares (not a desired space)
AFL Field	Local		
Soccer Field	Local		
Cricket Wicket	Local		
Hockey Field	Local		
Rugby Field	Local		
Aquatic Centre	District	50,000	A lap/hydrotherapy/aqua fitness pool Minimum of 1mgl of water bodies, plus water play, change rooms, kiosk, office space
Aquatic Centre	Sub-District	20,000	A lap/hydrotherapy/aqua fitness pool Less than 1mgl of water bodies plus change rooms and office/kiosk.
Indoor Recreation Centre	District	35,000	Min of 3 multi marked indoor courts, cafe , function space, fitness centre, crèche
Indoor Recreation Centre	Sub-District	25,000	Min of 2 multi marked indoor courts, kiosk
Indoor Recreation Centre	Local	7,000	Min of 1 multi marked indoor court, kitchen
Basketball courts	Local		
Tennis Courts	Local		

Facilities	Service Level	Ratio (persons per facility)	Descriptions and Specifications/Standards
Netball Courts	Local		
Skate Park	District	25,000	Minimum 400m2 with Shade, water points, toilets, public transport
Skate Park	Sub-District	7,000	300m2 - 400m2 with shade and water points
Skate Park	Local	3,500	Less than 300m2
BMX Track	District	25,000	Professional track with club rooms, lighting, electric start gate, shade, car park, fencing
BMX Track	Sub-District	10,000	open public track, with water points, shade, toilets
Passive Recreation Space Standards			
Combined Passive and Active spaces		N/A	These are combined and incorporated into the Playing fields.
Local Parks and Playgrounds	Local	1,000	
Other Standards			
Public Toilets	Local	1 per park	Male/Female and one with disability access
Public Change Rooms (Beaches)			Change rooms, toilets and possibly outdoor shower
Specific Standards			
Sports Change rooms	Sub-District	4,000	Toilets and change facilities, water point and shade
Clubrooms	District	15,000	4 Change room facilities, Kitchen, 250m2 function area, meeting/office space, umpires change and outdoor
Clubrooms	Sub-District	7,000	2 change rooms, servery, 100m^2 function space, storage.
Golf Course	District	25,000	Minimum of 9 holes
Beach Facilities	Sub-District		
Social/Cultural			
District Community Centre	District	20,000	Multi-purpose facility providing services for children and families. Offerings include playgroup, parenting courses, after school care, counselling, leisure and learning programs, health outreach services, crèche, meeting space for community groups, etc Function 250m^2, commercial kitchen, multiple meeting rooms, office space(s), outdoor entertainment.
Local Community Centre/ Neighbourhood Centre	Sub-District	5,000	Smaller scale than community centre, providing meeting spaces for community groups, playground for children, public toilets, and informal office space Function under 250m^2, kitchen and office space.

Facilities	Service Level	Ratio (persons per facility)	Descriptions and Specifications/Standards
Library	District	12,000	Facility providing access to printed, audio and on-line information, resources. Flexible learning and activity spaces. Minimum 500m^2
Library	Sub-District	6,000	Facility providing access to printed, audio and on-line information, resources. Flexible learning and activity spaces. May be collocated with other council activities Less than 350m^2
Youth Centre	Sub-District	15,000	Space providing activities, personal support, health services and life skills specifically for young people. Minimum 200m2 with stage, breakout area(s), attached to either skate or park lands.
Seniors Centre	Sub-District	10,000	Space providing activities, personal support, health services and specifically for older people.
Childcare Centre	District	7,500	Providing after school and holiday care and activities Minimum 90 place long day care
Childcare Centre	Sub-District	5,000	Providing after school and holiday care and activities Less than 90 place child care.
Health			
Community Health Clinic	Sub-District	10,000	Preventative health care for community

Section 6: Infrastructure delivery program

Infrastructure schedule for a population of 25,000 people

Based on the growth for the Shire of Wyndham-East Kimberley through to 25,000 people it will require additional facilities and services to meet the demands of the population.

The following table indicates the number of facilities that will be required to service the growing population. The table indicates in fractions the ratio of each different type of facility that will be required to meet the growth of the Shire. A fraction less than one means that the Shire will only need one facility to service the entire population, however, given the distances between Kununurra and Wyndham, it is likely to require two facilities, purely as a result of travel times and logistics between areas. A ratio of less than one also means that to some degree a facility may be underutilised until the population increases further.

In other cases more than one facility will be required as the population grows and the schedule indicates when those facilities are likely to be required over time.

Table 40. Infrastructure schedule for a the Shire of Wyndham-East Kimberley's aspirational growth to a population of 25,000

Year	Provision Ratio	Shire of Wyndham-East Kimberley							Growth provision
		2011	2016	2021	2026	2031	2036	2041	
Population projection		7,799	9,433	11,459	13,978	17,119	21,044	25,961	Aspirational growth
Population 70+		237	395	624	904	1,313	1,858	2,591	
Cultural and Lifestyle									
Art and Cultural Facilities	40,000	0.2	0.2	0.3	0.3	0.4	0.5	0.6	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Performing Arts Centre	35,000	0.2	0.3	0.3	0.4	0.5	0.6	0.7	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Library	40,000	0.2	0.2	0.3	0.3	0.4	0.5	0.6	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Youth Recreation Space	30,000	0.3	0.3	0.4	0.5	0.6	0.7	0.9	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Multipurpose Community Centre									
Large	40,000	0.2	0.2	0.3	0.3	0.4	0.5	0.6	One larger facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Small to Medium	10,000	0.8	0.9	1.1	1.4	1.7	2.1	2.6	The site location and design of a community centre should allow for its capacity to grow beyond servicing 10,000 people.
Sports Facilities									
Multipurpose Sports Centre	30,000	0.3	0.3	0.4	0.5	0.6	0.7	0.9	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Aquatic and Fitness Centre	40,000	0.2	0.2	0.3	0.3	0.4	0.5	0.6	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to

Year	Provision Ratio	Shire of Wyndham-East Kimberley							Growth provision
		2011	2016	2021	2026	2031	2036	2041	
									accommodate expansion over time.
Multipurpose Hard Courts	30,000	0.3	0.3	0.4	0.5	0.6	0.7	0.9	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Lawn Bowling Club	40,000	0.2	0.2	0.3	0.3	0.4	0.5	0.6	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Education and Workplace Relations									
Kindergarten and Child Services	9,000	0.9	1.0	1.3	1.6	1.9	2.3	2.9	Three facilities will be required to service a population of 25,000 people (two in Kununurra and one in Wyndham)
After School Care	6,000	1.3	1.6	1.9	2.3	2.9	3.5	4.3	Four to five facilities will be required to service a population of 25,000 people.
Child Care Centre	4,000	1.9	2.4	2.9	3.5	4.3	5.3	6.5	Six to seven facilities will be required to service a population of 25,000 people.
Primary School Government	9,000	0.9	1.0	1.3	1.6	1.9	2.3	2.9	Three primary schools will be required to service a population of 25,000 people (two in Kununurra and one in Wyndham)
Primary School Non-Government	1:3 government schools	0.3	0.3	0.4	0.5	0.6	0.8	1.0	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Secondary School Government	30,000	0.3	0.3	0.4	0.5	0.6	0.7	0.9	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Secondary School Non-Government	1:2 government schools	0.1	0.2	0.2	0.2	0.3	0.4	0.4	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Centrelink	120,000	0.1	0.1	0.1	0.1	0.1	0.2	0.2	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Health									
Community	50,000	0.2	0.2	0.2	0.3	0.3	0.4	0.5	One facility will be able to accommodate a population of

Year	Provision Ratio	Shire of Wyndham-East Kimberley							Growth provision
		2011	2016	2021	2026	2031	2036	2041	
Health Clinic									25,000 people, however the facility should be designed to accommodate expansion over time.
Hospitals	100,000	0.1	0.1	0.1	0.1	0.2	0.2	0.3	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Medicare Centres	130,000	0.1	0.1	0.1	0.1	0.1	0.2	0.2	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Aged Care Places									
Residential Aged Care - High Care	44:1,000 aged 70+	10	17	27	40	58	82	114	A single aged-care facility would be able to service a population of 25,000 people.
Residential Aged Care - Low Care	44:1,000 aged 70+	10	17	27	40	58	82	114	A single aged-care facility would be able to service a population of 25,000 people.
Homecare facilities	21:1,000 aged 70+	5	9	14	20	29	41	57	A single aged-care hub would be able to service a population of 25,000 people.
Emergency Services									
Police	25,000	0.3	0.4	0.5	0.6	0.7	0.8	1.0	One facility will be able to accommodate a population of 25,000 people, however the facility should be designed to accommodate expansion over time.
Fire	25,000	0.3	0.4	0.5	0.6	0.7	0.8	1.0	Each single facility would be able to service a population to 25,000 people, so a facility at Kununurra and one at Wyndham could service future needs.
Ambulance	25,000	0.3	0.4	0.5	0.6	0.7	0.8	1.0	Each single facility would be able to service a population to 25,000 people, so a facility at Kununurra and one at Wyndham could service future needs.

Table 41. Community facilities actual provision ratios

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Aquatic Centre								
Regional					120,000			120,000
District						100,000		
Sub District		50,000		60,000			45,000	
Neighbourhood								
Local								
Art Gallery								
Regional			30,000					150,000
District								47,500
Sub District								
Neighbourhood								
Local								
Community Centre								
Regional								100,000
District				10,000		100,000		35,000
Sub District						25,000	45,000	

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Neighbourhood			20,000			15,000	15,000	
Local	8,800	5,000	6,000		10,000		10,000	7,500
Civic Centre								
Regional			30,000					
District								
Sub District								
Neighbourhood								
Local								
Multipurpose Hard Courts								
Regional								35,000 (6-10 Courts)
District				10,000				25,000 (2 courts)
Sub District						25,000 (6-12 courts)		
Neighbourhood						10,000 (2-4 courts)		
Local						7,500		
Library								
Regional								60,000
District				30,000		125,000		35,000
Sub District	35,000					25,000	45,000	
Neighbourhood		12,000	15,000		15,000			
Local								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Indoor Recreation Centre								
Regional								75,000 (3-6 Courts)
District				30,000 (2-3 courts)		75,000 (4-8 courts)		30,000 (1-2 courts)
Sub District						25,000 (2-4 courts)	45,000	
Neighbourhood							15,000	
Local								
Performing Arts Centre								
Regional			50,000			200,000		50,000
District								35,000
Sub District								
Neighbourhood								
Local								
Museum/Historic Centre								
Regional			30,000					
District								
Sub District								
Neighbourhood								
Local								
Active Public Open Space Sporting Complex								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Regional	35,000					200,000 (6-8 playing fields)		50,000
District						100,000 (4-6 playing fields)		25,000
Sub District						25,000 (2-4 playing fields)	45,000	
Neighbourhood						15,000 (1-2 playing fields)		
Local	1,750	2,000		1,000	3,500	7,500	10,000	7,000
Surf Life Saving (outpost capacity)								
Regional						100,000		
District								
Sub District								
Neighbourhood								
Local								
Sporting Reserve								
Regional								
District	17,500	10,000			15,000			
Sub District								
Neighbourhood								
Local								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Youth Recreation Space (include wheeled sports)								
Regional						100,000		
District	35,000	10,000		20,000	10,000	75,000		
Sub District				30,000		25,000	45,000	
Neighbourhood			20,000			15,000		
Local				5,000 (Skate Park) 10,000 (BMX Facility)		7,500		
Community Arts Centre								
Regional								
District						75,000		
Sub District							45,000	
Neighbourhood				**12,000**				
Local			10,000					
Community based Health Precincts								
Regional								
District								
Sub District							45,000	
Neighbourhood		10,000			10,000		15,000	
Local	8,800						10,000	
Seniors Centre								
Regional								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
District								
Sub District								
Neighbourhood							45,000	
Local	11,700	10,000			10,000		15,000	
Early Years Facility								
Regional								
District								
Sub District								
Neighbourhood								
Local	8,800							10,000
Occasional Child Care								
Regional								
District								
Sub District								
Neighbourhood				**12,000**			15,000	
Local	5,800	5,000		4,000	4,000		10,000	
Out of School Care Services								
Regional								
District								
Sub District								
Neighbourhood							10,000	
Local	8,800	5,000		4,000	6,000			
Neighbourhood House								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
Regional								
District								
Sub District								
Neighbourhood							10,000	
Local			20,000	3,000 (small) 20,000 (large)			15,000	
Sports Pavilion/Change rooms								
Regional								
District								
Sub District								
Neighbourhood								
Local	3,900	4,000		3,000	5,000			
Passive Open Space (including playgrounds)								
Regional								
District								
Sub District								
Neighbourhood								
Local	1,100	1,000		1,000	3,500		10,000	
Sporting Facilities								
Regional								

Community Facilities	Regional LGA				Outer Metropolitan LGA			
	Karratha City of the North	Shire of Augusta-Margaret River	Shire of Clarence Valley	Shire of Murray	SPP 3.6 Local Govt Guidelines Supporting Information	City of Rockingham, WA	City of Wyndham, Vic	City of Wanneroo, WA
District								
Sub District (Golf Course, Lawn Bowling, High Order Tennis)				30,000 (Bowls)	3,500 (Tennis)	50,000 (Golf) 25,000 (2-4 greens)	45,000 (Bowls) 45,000 (tennis)	
Neighbourhood (low order Tennis)							15,000	
Local								

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