



LOCAL PLANNING STRATEGY

BACKGROUND REPORT

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PLANWEST

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SHIRE OF CARNAMAH LOCAL PLANNING STRATEGY

1 INTRODUCTION

Regulation 12A(3) of the *Town Planning Regulations, 1967* (as amended) requires that a Local Planning Strategy shall:

- (a) set out the long-term planning directions for the local government;
- (b) apply State and regional planning policies; and,
- (c) provide the rationale for the zones and other provisions of the Scheme.

2 PREAMBLE

The Shire of Carnamah's Local Planning Strategy has been prepared in two parts. The First Part (the Strategy) will contain a basic introduction with the main emphasis based on a series of **Objectives**, **Strategies** and **Actions**. This will provide an outline to guide the local government in the implementation of the Strategy, with an ability to monitor and track its progress.

The second part (this part) includes background information provided in support of the Strategy document – the first part.

The Department of Planning has determined that this structure is suitable for its purposes in considering the Strategy for endorsement.

3 OBJECTIVES

The objectives of this Local Planning Strategy are to provide;

- a 'leadership' document which provides strategic planning direction for the next 10 years or longer and which manages that growth within a strategic framework;
- a document which sets out the direction for economically, socially and environmentally sustainable development based on comprehensive analysis of state, regional and local planning issues and objectives;
- a document which gives direction both to local government, the Department of Planning, the Western Australian Planning Commission and the Minister in assessment of development proposals and provides strategic planning support for this decision-making;
- a document which provides the basis for coordinated decision-making on future servicing of the local government area by local, state government and any other service agency;
- a document which explains/justifies the strategic direction for growth and development to all stakeholders, and;
- a basis on which the Local Planning Scheme may be reviewed.

4 VISION STATEMENT

The Shire of Carnamah will endeavour to meet the needs of current and future generations through the integration of environmental protection, social advancement and economic sustainability.

The Shire will endeavour to diversify its current economic base (of agricultural and mining industries) by establishing rural industries that rely on similar environmental conditions but alternative and more diversified markets.

The Shire will continue to promote the use of best management practices in all its activities especially in the development of its culture, arts, tourism, hospitality and service sector.

Carnamah and Eneabba will continue to provide modern and efficient services to meet their district service centre role and will be supported as the focus of recreation, administration, commercial and residential development for the Shire and District. To this end the Council will encourage the supply of a range of residential lifestyles (and lot sizes) to provide a choice of living environments to meet a wide range of prospective residents.

The Carnamah Townsite will continue to be supported as a town maintaining its role as a residential and business centre servicing important passing trade (both business and tourism). Both Carnamah and Eneabba towns will also continue to provide for industrial activities to service the surrounding mining operations.

The Shire will continue to promote the creation of new industries, businesses and jobs based on economically sustainable principles. These jobs may be in a variety of disciplines including, primary industry, geo-thermal power exploration, bio-diesel development, tourism and cultural awareness.

The Shire will consider rural living proposals in the rural areas in accordance with the relevant local planning framework and WAPC rural planning policies, and so long as;

- The development is within easy reach of an established townsite offering services and amenities.
- The development is not too close to a developed townsite where it may restrict the future urban expansion of that settlement.
- There is no loss of amenity to the countryside and nature reserves.
- Water resources, natural vegetation and basic raw materials are not jeopardized.
- The salinity levels are not increased as a result of development.
- The Shire is not burdened with undue increases in servicing costs.
- The development meets the needs of the present without compromising the ability of future generations to meet their own needs.

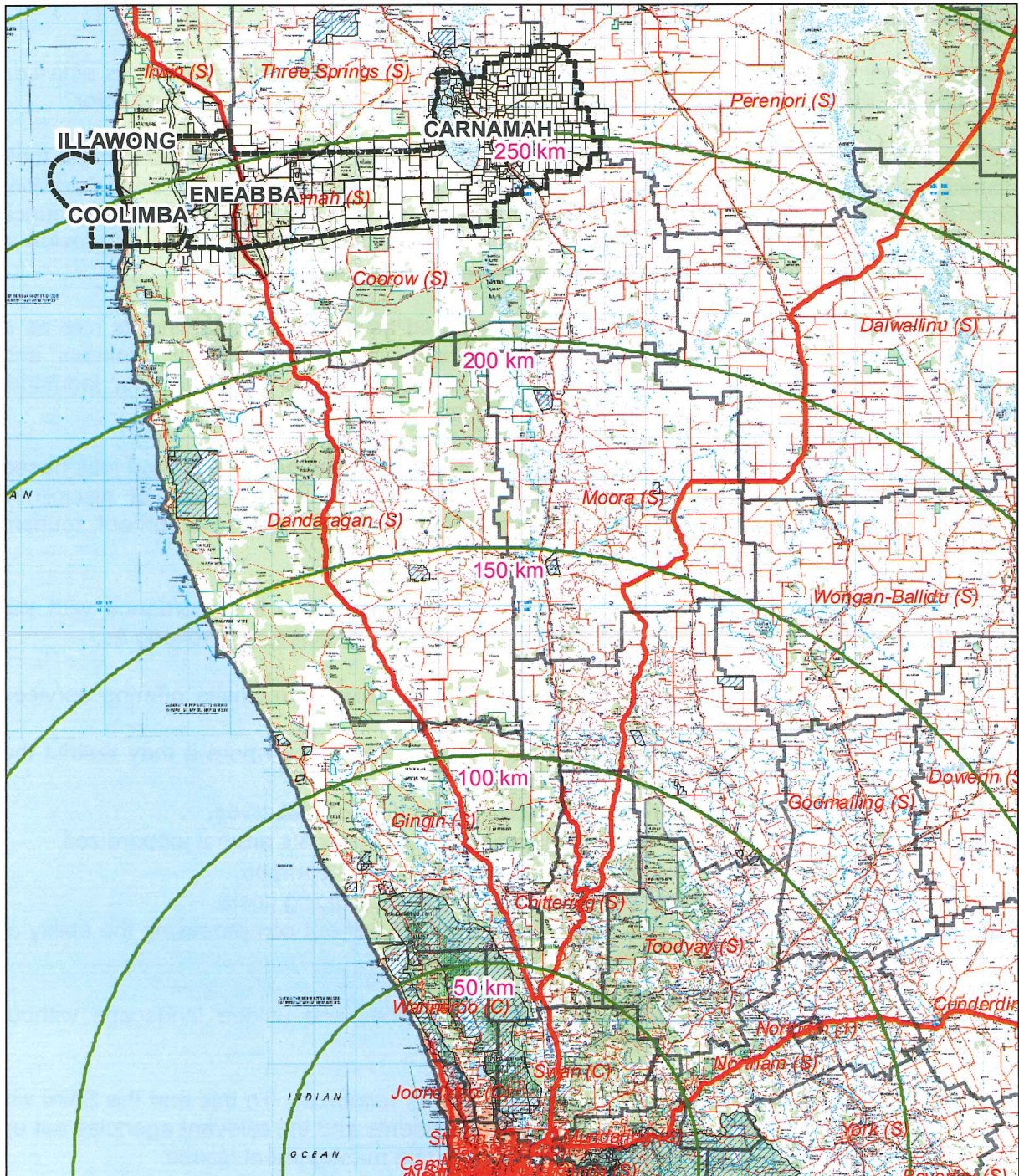
The Shire will continue to promote its cultural resources and unique landscape without jeopardising the integrity of either asset.

The Shire will continue to protect its indigenous cultural resources. To this end the Shire will promote continuing cooperation between itself, its residents and the relevant agencies set up to provide advice and assistance in these social and land management issues.

5 LOCATION AND SNAPSHOT OF THE SHIRE

Figure 1 shows the location of the Shire in relation to the surrounding Shires and the Perth Metropolitan Region. The circles indicate distances from Perth Central Business District. Carnamah townsite is about 293 kilometres from Perth by road via the Midlands Road, and Eneabba is 282 kilometres from Perth via the Brand Highway.

FIGURE 1 - LOCATION PLAN



Source: Nat Maps, PLANWEST

The Shire of Carnamah covers an area of 2,834.6 square kilometres with its closest border located about 230 kilometres north northeast from Perth (ATCF). The Shire measures up to about 116 kilometres in an east-west direction and 30 kilometres in a north-south direction.

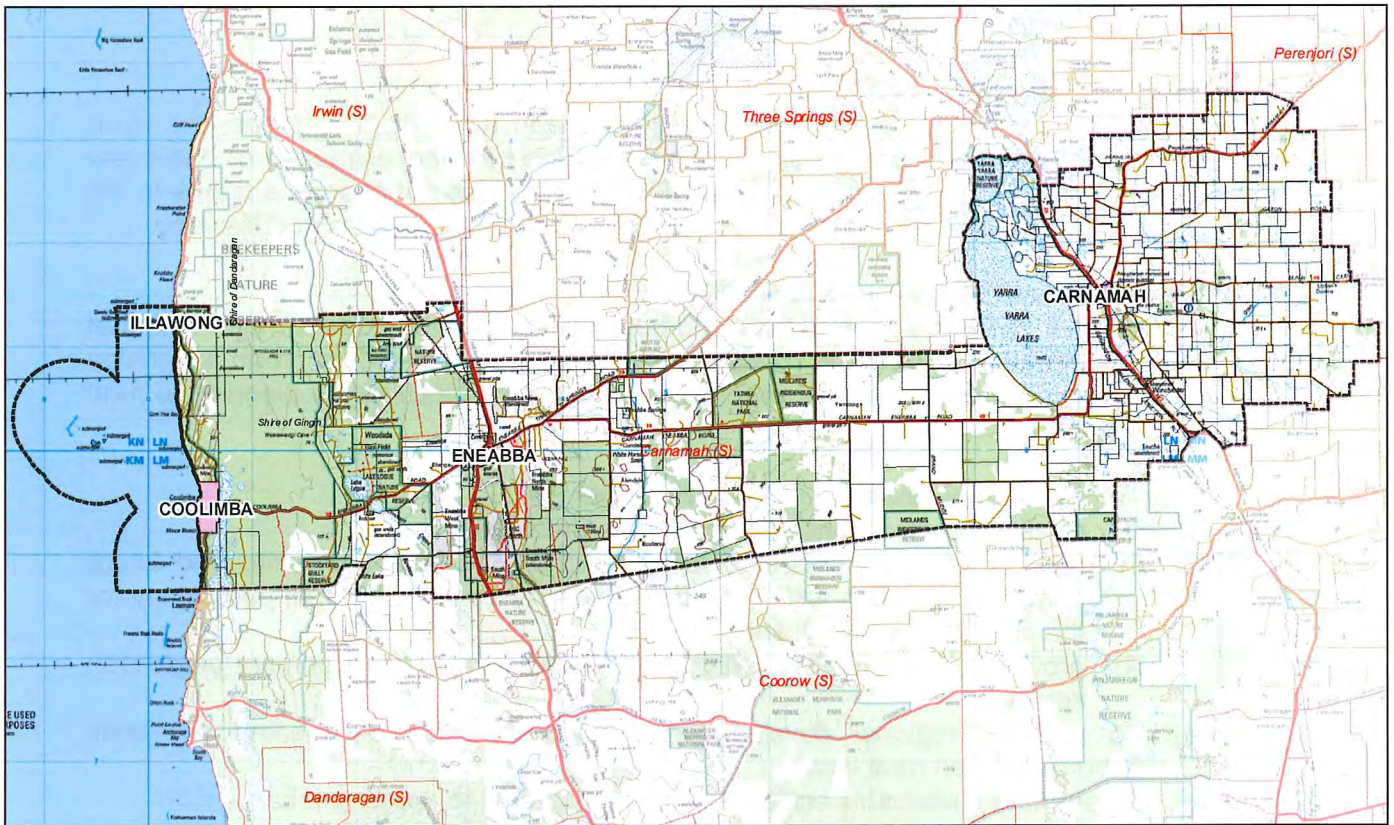
The Shire is located in the Midwest Region of Western Australia.

Some additional Council Statistics include the following;

Population	850
Number of dwellings	511
Length of sealed roads	287.15km
Length of unsealed roads	471.75km
Area	2,834.6km ²
Distance from Perth	308km
Number of Employees:	19 + 5 Part time
Number of Electors:	408
Total Rates Levied:	\$1,168,480
Total Operating Revenue:	\$3,577,823

Figure 2 provides an overview of the Shire outlining the coastal vegetated areas, the townsites, the distribution of farmed land and the lake system west of the Midlands Road opposite Carnamah Townsite.

FIGURE 2 - SHIRE OVERVIEW



Source: Nat Maps, PLANWEST

6 STATUTORY AND STRATEGIC CONTEXT

6.1 STATE PLANNING FRAMEWORK

The State Planning Strategy was prepared in 1997 by the WA Planning Commission. The Strategy is a broad based document that sets out a series of strategies and actions for achieving the main principles identified.

The State Planning Strategy provides a basis for the State Planning Framework. This provides for application of the State Planning Policies (SPPs) on matters of State significance.

6.2 STATE PLANNING POLICIES (SPP)

The Environment and Natural Resources (ENR) Policy (SPP 2) defines the principles and considerations that represent good and responsible planning in terms of environment and natural resource issues within the framework of the State Planning Strategy. The ENR Policy recognises that Planning Strategies, Schemes and decision making should consider any relevant accredited NRM Regional Strategy, or catchment management strategies prepared by catchment groups and endorsed by the State Government agencies, with a view to integrating implementation of appropriate and relevant parts through local planning schemes and assessment of developments.

Basic Raw Materials (SPP 2.4)

While this policy is not specific to areas outside of Perth and adjoining areas, the main objectives of identifying and protecting the location of land for the extraction of basic raw materials is relevant to the Shire of Carnamah. The Council does not operate a quarry in the Shire, and only one sandstone quarry has been located between Coolimba and Illawong.

Land Use Planning in Rural Areas (SPP 2.5)

The main objective of this policy is to protect productive agricultural land from activities that will threaten its productivity, whilst acknowledging a need to accommodate urban expansion and other important uses. The SPP established a number of objectives for planning in rural areas including the following.

- a) To protect rural land from incompatible uses by:
 - i) requiring comprehensive planning for rural areas;
 - ii) making land use decisions for rural land that support existing and future primary production and protection of priority agricultural land, particularly for the production of food; and
 - iii) providing investment security for the existing and future primary production sector.
- b) To promote regional development through provision of ongoing economic opportunities on rural land.
- c) To promote sustainable settlement in, and adjacent to, existing urban areas.
- d) To protect and improve environmental and landscape assets.
- e) To minimise land use conflicts.

Most relevance to the Shire of Carnamah is the SPP's reference to the regional variation and economic opportunities. Some of these regional opportunities include the potential for tree farms, other primary industries (other than agriculture) and rural living areas.

The SPP supports rural zones in schemes as highly flexible zones that cater for a wide range of rural land uses that can support primary production and value adding, small-scale tourism, environmental protection and biodiversity conservation.

The WA Planning Commission supports opportunities for employment and diversification of economic activity related to primary production. As such it promotes the establishment of precincts for primary produce processing close to services and freight routes, and with adequate buffers.

The WA Planning Commission also supports the concept of rural enterprise zones in strategies and schemes that combine light industry and ancillary housing, provided they are carefully planned with general proximity to urban areas, are serviced and have design features that address buffers and amenity and generally meets certain criteria outlined for rural living precincts (Part 5.6 (b) of the SPP).

Coastal Planning Policy (SPP 2.6)

The objectives of this Policy are to ensure that development and the location of coastal facilities takes into account coastal processes, landform stability, coastal hazards, climate change and biophysical criteria. The SPP ensures that appropriate areas are identified for the sustainable use of the coast for public and private uses, including the protection, conservation and enhancement of coastal zone values, particularly in areas of landscape, biodiversity and ecosystem integrity, indigenous and cultural significance.

Public Drinking Water Source (SPP 2.7)

This policy addresses land use and developments in public drinking water supply areas by protecting and managing public drinking water source areas from incompatible land uses and impacts in order to maintain the quality of the drinking water. SPP 2.7 precludes certain uses that are considered detrimental to the quality and quantity of the water supply.

Water Resources (SPP 2.9)

This policy aims to protect, conserve and enhance water resources that have significant economic, social, cultural and/or environmental values. It also aims to assist in ensuring the availability of suitable water resources to maintain living environments, while maintaining or improving water resource quality and quantity. Water conservation measures, including accessing groundwater and recycling opportunities, should be addressed with reference to the Department of Water's Better Urban Water Management 2008 guidelines.

Urban Growth and Settlement (SPP 3)

This State Planning Policy was released in February 2006 and applies throughout Western Australia. The policy aims to provide for the sustainable development of communities throughout the State.

Residential Design Codes (SPP 3.1)

The Residential Design Codes detailed in this policy assist with planning for residential development. This policy is incorporated in all Western Australian local planning schemes, requiring Council's to have regard to it's content when considering approvals for residential development.

Historic Heritage Conservation (SPP 3.5)

This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage.

The Council will ensure that heritage places and areas are carefully identified consistent with the common standards provided by the Heritage Council ensuring that due regard is given to heritage significance in development assessment through provisions in the scheme and strategy, and by adopting local planning policies affecting places entered in heritage list.

State Industrial Buffer Policy (SPP 4.1)

SPP 4.1 provides a consistent state-wide approach for the protection and long-term security of special uses that may create impacts on other uses. It provides for the safety and amenity of surrounding land uses while having regard to the rights of landowners who may be affected by residual impacts. The policy establishes objectives and principles and how the principles should be applied to define and secure buffer areas and who should pay for them. These principles apply to the protection of water supplies

Draft Country Sewerage Policy

This policy although in draft form has been endorsed by State Cabinet and forms part of the recognised planning framework. The main objective of the draft Country Sewerage Policy is to protect public health.

State Sustainability Strategy

The State Sustainability Strategy establishes a sustainability framework containing principles, visions and goals. It seeks to ensure that sustainability is considered and incorporated into decisions and actions for the future of Western Australia at all levels.

Better Urban Water Management 2008 (BUWM)

The Department of Water recommends the adoption of Better Urban Water Management principles. Appropriate consideration for the total water cycle management is required at all stages of the planning process. Water sensitive urban design principles should be adopted in both local government and private developments.

Roads 2025

In 2007 Main Roads WA produced a series of reports dealing regions of WA titled '*Roads 2025 Regional Road Development Strategy (2007)*'. The Shire of Carnamah is included in the Mid-West Report. There are several Local Government Roads and a State road (Brand Highway). These are discussed in more detail in Part 17 – Transport Facilities.

6.3 LOCAL GOVERNMENT

The Shire has a Town Planning Scheme covering the whole Shire. Scheme No 1 was gazetted on 20 May 1994 and has had 6 amendments.

Amendments No 1, 2 4 and 6

These four amendments all involved rezonings (Scheme Map amendments) and were gazetted in 1996, 1998, 2009 and 2012 respectively.

Amendment 3 was an 'Omnibus Amendment' incorporating a variety of changes, but mostly related to mapping changes.

Amendment 5 ensures that single dwellings using secondhand materials are not exempt from the need to obtain a planning approval.

Amendment No 3 (Omnibus Amendment)

1. Rezoning Lots 1, 2, 3, 80, 81, 84 and 85 Carnamah-Eneabba Road, Carnamah from Industrial zone to Special Rural zone; and including the lots in Schedule 4, with the additional new use - The keeping of pigs.

2. Reclassifying Lots 3, 66, portion of Lot 2, portion of Railway Avenue, portion of Lot 106 and Lots 34-37 Slater Street, Carnamah from Recreation Local Scheme Reserve to Industrial zone.
 3. Rezoning Lots 33, 100 and portion of Lots 34 and 35 and portion of a Right of Way, Slater Street, Lot 1 and portion of Lot 2 Railway Avenue, Carnamah from Special Use - Waste Recycling Depot zone to Industrial zone, and deleting the Special Use Zone from Schedule 3 accordingly.
 4. Rezoning portion Lot 3 Niven Street (off McPherson Street) Carnamah from Special Use - Drive In Theatre zone to Residential R10/30 zone, and deleting the Special Use Zone from Schedule 3 accordingly.
 5. Rezoning Lot 100 Caron Street, Carnamah from Commercial zone to Residential R10/30 zone.
 6. Rezoning Lots 11 and 302 Hill Street/Railway Road, Carnamah from Rural zone to Industrial zone, and adding a new clause as follows:
'5.5.10 Development Contributions for Midlands Road. No further subdivision or development will be supported until a development contributions plan has been prepared and adopted by the Council on the advice of the Main Roads WA, for the purpose of levying contributions for the upgrading and/or widening of Midlands Road.'
 7. Reclassifying portion of Carnamah Location 152 Carnamah-Eneabba Road, Carnamah from Public Purposes Local Scheme Reserve to Residential R10/30 and other portion of Carnamah Location 152 Carnamah-Eneabba Road, Carnamah from Residential R10/30 to Public Purposes Local Scheme Reserve.
 8. Reclassifying Lot 148 Railway Avenue, Carnamah from Public Purposes to Public Purposes - Drainage and adding a D notation to the land on the Scheme Map.
 9. Rezoning portion of Location M1509 Bujil-Carnamah Road, Carnamah from Rural zone to Public Purposes - Rubbish Tip.
 10. Rezoning Lot 232 Nairn Street, Eneabba from Special Use - Single Persons Quarters to Special Use - Accommodation Purposes, and amending the Special Use Zone in Schedule 3.
 11. Adding new provisions to the Scheme Text to preclude the use or development for certain nuclear activities within the Scheme Area.
 12. Amending Clause 1.6 by adding sub-clause (f); Schedule 1 - Interpretations, by adding the definition for Environment, Environmental Harm, Nuclear Activity, Nuclear Fuel, Nuclear Power Generation, Radioactive Material and Radioactive Mineral; and amending the definitions of Public Utility, Industry, Industry-Extractive and Industry-Hazardous.
- Gazetted for final approval on 13 October 2006*

Amendment No 5

Adding a new sub-clause 5.1.3 as follows:

5.1.3 Notwithstanding Clause 5.1.2 c), within a townsite as shown on the scheme maps the planning consent of council is required for a transportable dwelling and a relocated structure intended to be modified for use as a dwelling.

Gazetted for final approval on 17 March 2009

7 BRIEF HISTORY

What was to become the Carnamah district was for many years part of the vast wilderness that lay between non-indigenous settlements at Victoria Plains and Irwin. In 1861 a number of pastoral leases were taken up in the district, which it is believed to be used for the periodic grazing of livestock.

Most of Carnamah Station's employees were Ticket of Leave convicts and local Aboriginal People.

In 1874 Carnamah's remoteness was lessened with the establishment of a telegraph office. For a few years, in true pioneering diversification, Duncan Macpherson was the contractor to deliver mail to inland districts and stations between Perth and Geraldton.

In 1894 the Midland Railway line went through and a siding was established near the Macpherson family's homestead, and named Carnamah Siding after their station. The arrival of the railway marked the dawn of further settlement in the district servicing mines in Cue and carting goods and supplies from Perth to mining operations at Rothsay. Following George's death in 1904 Donald became the station's sole owner. Over the years that followed the station slowly reduced in size as Donald began leasing lesser amounts of land. Donald and his unmarried sisters Margaret and Elizabeth continued to reside in the family's large homestead.

In 1910 the Midland Railway Company devised the Improved Farms Scheme to accelerate land sales and settlement in the district, which would also increase traffic and profits for their railway. The scheme was to subdivide some of their land into "Ready Made Farms" of about 400 acres in size. These farms were partially cleared of virgin bush, fenced and were to contain a four roomed house, 1,000 gallon rainwater tank and a dam. This resulted in a large number of clearing, fencing and building contractors working in the district in 1912 and 1913 – as 45 Ready Made Farms were created in Carnamah and Winchester.

The Carnamah Town Hall was officially opened by Donald Macpherson on 17 February 1921 and used for the district's first agricultural show later in 1921, which was conducted by the Carnamah-Winchester branch of the Primary Producers Association.

By this time the town had only a few more buildings including a general store, large stone house, a bakery and general store. In 1924 a stone hotel was built.

In 1923 the Carnamah District Road Board was declared and on formation spanned from Three Springs in the north to Gunyidi in the south, with Carnamah as its administrative centre. By this time local farmers were starting to grow large amounts of wheat and Carnamah began to be seen as a successful and worthwhile agricultural district. As a result the Midland Railway Company was able to sell almost the entirety of its remaining land in the district. By the end of the 1920s the farming population had soared and large amounts of land had been transformed from virgin bush to paddocks. Carnamah soon attracted attention for being one of the highest wheat producing districts in Western Australia.

The growth of the Carnamah townsite stalled before very quickly catching up with the sudden growth that had occurred in the remainder of the district. In 1929 and early 1930 the town grew at an incredible rate, often remarked to have "sprung up overnight like a field of mushrooms." By 1930 the town boasted five general stores, three tearooms, hotel, boarding house, post office, bakery, tailor, dentist, chemist, doctor, hospital, solicitor, builder, four mechanical garages, two churches, accountant, two banks, newsagent, hairdresser, barber, power station, two butchers and a number of commission agents who were sellers of agricultural machinery and farm requirements. Within another few years the town also boasted a vet, its own newspaper, a resident police constable and police station. A small townsite had also been established at Winchester and consisted of a general store and a few houses.

With the financial depression came a horrific drop in wheat prices. Many local farmers made a loss on wheat over consecutive years, and some were forced to abandon their properties. A large number of Carnamah farmers had been deriving their income solely from the growing of wheat and as a result mixed farming became more popular. Many introduced livestock

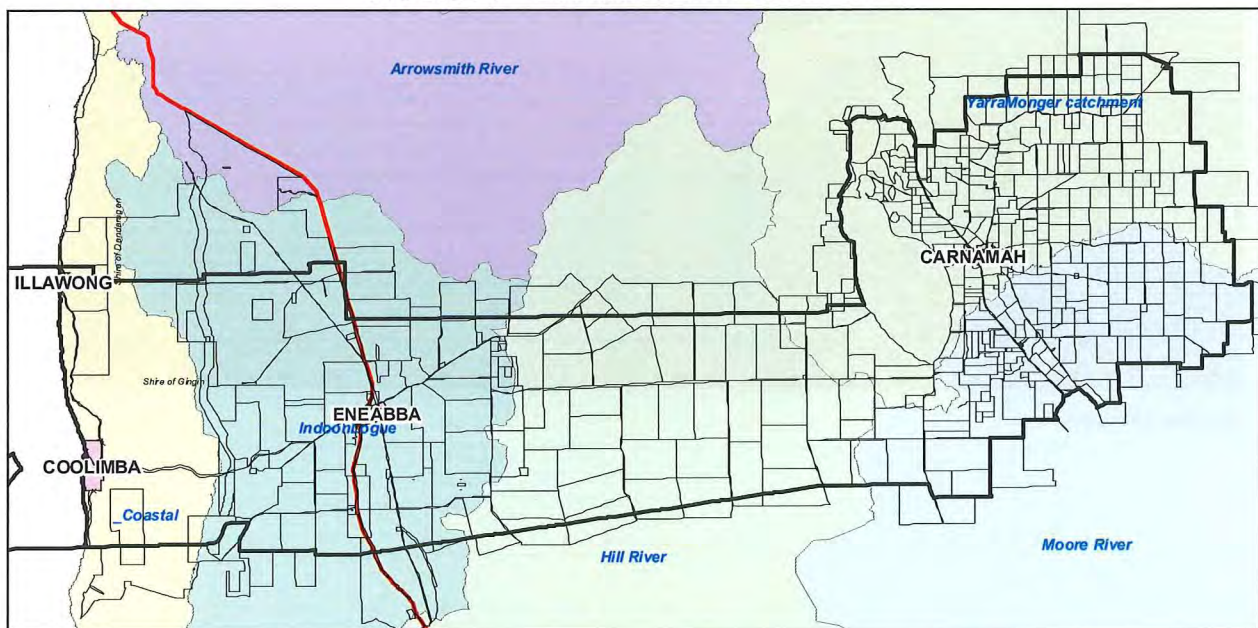
such as sheep and cattle to their properties, and in 1933 a number of farmers began to grow barley for the first time. The town of Carnamah was thriving and undoubtedly at its peak during the early years of the depression. Through a mix of financial strain, advances in farm machinery and the beginning of farms getting bigger the population began to decline. By the end of the 1930s the town no longer had a vet, chemist, doctor, hospital, tailor, dentist, solicitor or boarding house. Through unrelated circumstances the town had also lost one of its general stores in a fire.

8 LANDFORM

The landform of the Shire varies from sea level on the coast, with many areas below 10 metres in height as far inland as 4 kilometres. The highest parts of the Shire are on the eastern boundary reaching 360 metres. Several peaks reach this height towards the Midlands Road. The western part of the Shire is largely uncleared and consists of scrubland and bushland (see **Figure 2**) and is held in Crown Reserves including Beekeepers Nature Reserve, Stockyard Gully Reserve, and Lake Logue Nature Reserve. The more eastern parts of the Shire are mostly cleared for cropping and grazing. There are several major reserves midway through the Shire including Wotto Nature Reserve, Tathra National Park and Midlands Indigenous Reserve. In the eastern part of the Shire, but west of the Midlands Road, are the Yarra Yarra Lake system and Nature Reserve and part of the Capamauro Nature Reserve.

The diagram below (**Figure 3**) shows the two major catchment systems of the Coastal, Indoon Logue, Hill River Moore River and Yarra Monger catchments with the watershed between the system at the change of colour.

FIGURE 3 – DRAINAGE CATCHMENTS



Source: DPI, PLANWEST

9 SETTLEMENTS

The Shire currently has four townsites including Carnamah, Eneabba, Coolimba and Illawong. The latter two remain undeveloped.

The main town is **Carnamah** located on the Midlands Road 12 kilometres from the northern Shire boundary and 16 kilometres from the Shire's southern boundary. **Figure 4** provides an aerial photograph of the townsite showing the urban area, the airstrip, oval, wheat bins and the proximity of farming land.

The townsite measures about 325 hectares in area and about 270 metres above sea level.

Figure 5 provides a closer view of the main developed areas of Carnamah townsite area.

FIGURE 4 – CARNAMAH TOWNSITE



Source: Landgate 2012

FIGURE 5 – CARNAMAH DETAIL



Source: Landgate, 2012

Figure 6 shows a search of Landgate information (which will need to be confirmed) indicates that a significant amount of land is either Crown Reserves or Vacant Crown Land.

TABLE 2 – CARNAMAH VACANCY

OWNER	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
Reserved Land	12	0	0
Vacant Crown Land	5	0	0
Private Land	29	7	5

The table above shows approximate statistics of vacant land in the Carnamah townsite.

The townsite has nearly 136 houses and, what appears to be, a scattered supply of vacant lots. These lots, however may not be available (for various reasons), or are Crown Land (therefore complicated to acquire).

The majority of the vacant residential land occurs on the area west of the railway land - much of which is still in Crown Reserves or Vacant Crown Land.

Eneabba is the Shire’s second townsite with an area of 505 hectares and about 100 metres above sea level. **Figure 7** shows an aerial photograph of the townsite. The townsite is located about 10 kilometres from the Shire’s northern and southern boundaries, about 30 kilometres from coast to the west, and about 60 kilometres from Carnamah townsite.

The settlement has about 83 houses, 4 commercial (retail, shops, offices etc), 8 industry (workshops etc) and several community buildings. Public facilities include a golf course, sporting club and recreation centre. The Council has an office near the recreation centre that is staffed on a Thursday.

FIGURE 7 – ENEABBA TOWNSITE



Source: Landgate, 2012

Figure 8 below provides a closer aerial photograph of the developed part of Eneabba.

Figure 9 shows a search of Landgate information (which will need to be confirmed) indicating that a significant amount of land is either Crown Reserves or Vacant Crown Land.

TABLE 2 – ENEABBA VACANCY

OWNER	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
Reserved Land	16	3	1
Vacant Crown Land	26	22	0
Private Land	9	0	3

The table above shows approximate statistics of vacant land in the Eneabba townsite.

Illawong Townsite is a coastal townsite of 130.5 hectares and is about 20-30 metres above sea level. The townsite is only a few hundred metres from the northern boundary of the Shire (and the Shire of Irwin) and 32 kilometres north of Eneabba. As can be seen from the aerial photograph in **Figure 10** the townsite area is undeveloped - except for three remaining beach shacks.

FIGURE 10 – ILLAWONG TOWNSITE



Source: Landgate, 2012

Figure 11 shows the ownership of land in the Illawong townsite. As can be seen the majority of the land is Crown Reserves except for a strip of land along the coastline that is Vacant Crown Land.

FIGURE 11 – ILLAWONG OWNERSHIP



Source: Landgate, 2012

Coolimba Townsite is located about 26 kilometres west of Eneabba and measures 901.7 hectares. The townsite is less than 5.5 kilometres from the Shire's southern boundary shared with Coorow. **Figure 12** provides an aerial photograph of the townsite.

The townsite is mostly sand dunes about 10 metres above sea level.

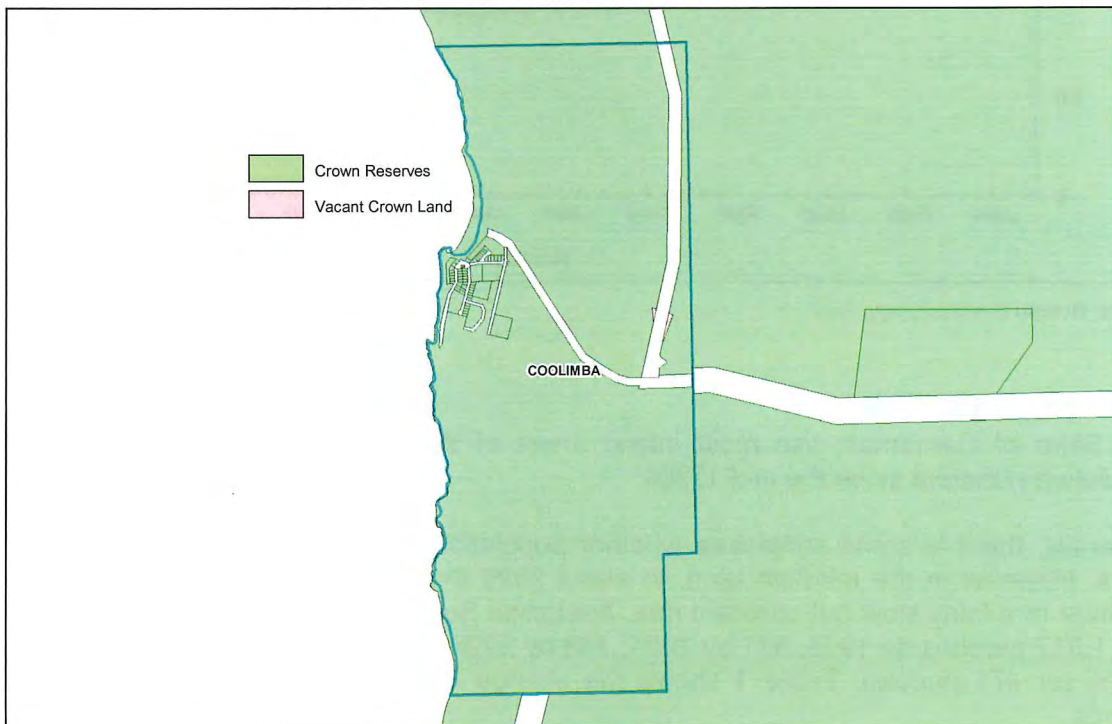
Figure 13 overleaf shows that all the lots in the townsite are Crown Reserves. None of these lots are developed.

FIGURE 12 – COOLIMBA TOWNSITE



Source: Landgate, 2012

FIGURE 13 – COOLIMBA OWNERSHIP



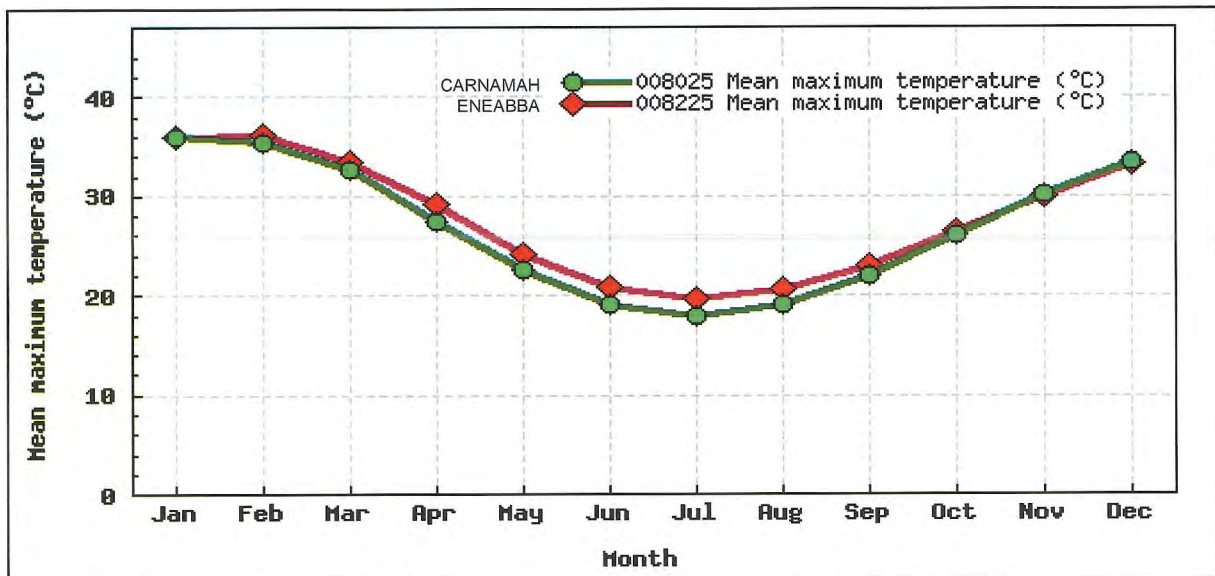
Source: Landgate, 2012

10 CLIMATE

The town lies in the southern Mid West Region and enjoys a temperate climate with hot, dry summers and light winters. The Bureau of Meteorology recording stations are located in Eneabba and Carnamah. The average rainfall in Carnamah is 382.7mm and occurs mainly in winter from May to August. In the wettest month (June) the mean rainfall is 76.2mm, with the driest month (December) having a mean of 9.1mm.

FIGURE 15 - CARNAMAH CLIMATIC DATA

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
Temperature														
<u>Mean maximum temperature (°C)</u>	36	35.5	32.7	27.5	22.6	19	17.9	19.1	22	26	30.1	33.5	26.8	67 1940 2011
<u>Mean minimum temperature (°C)</u>	18.4	19.1	17.3	14	10.8	8.7	7.3	7.2	8.1	10.3	13.3	16	12.5	67 1940 2011
Rainfall														
<u>Mean rainfall (mm)</u>	11.8	14.5	20.3	22.6	51.4	76.2	68	52.4	28.1	16.8	10.3	9.1	382.7	124 1887 2011
<u>Decile 5 (median) rainfall (mm)</u>	2.5	4.8	8.4	13.4	43	67.2	62.1	44.8	24.8	12.3	4.9	3.8	371.1	105 1887 2011
<u>Mean number of days of rain ≥ 1 mm</u>	1.2	1.3	1.7	2.8	5.4	7.8	8.3	7.1	4.5	2.9	1.6	1.1	45.7	104 1887 2012



Source: Bureau of Meteorology, 2012

11 POPULATION

The Shire of Carnamah, like most inland areas of Western Australia has had declining population numbers since the mid 1970s.

Generally, there is some conjecture whether population numbers are stabilising in Country areas. However in the medium term, to about 2026 the decline in numbers is expected to continue at a fairly slow but constant rate. Australian Bureau of Statistics actual Census data was 1,017 persons by 1996; 841 by 2001; 748 by 2006 and 546 by 2011- a decline of nearly 46.3% (or 471 people). **Table 1** shows the change in population over the last 4 Census periods.

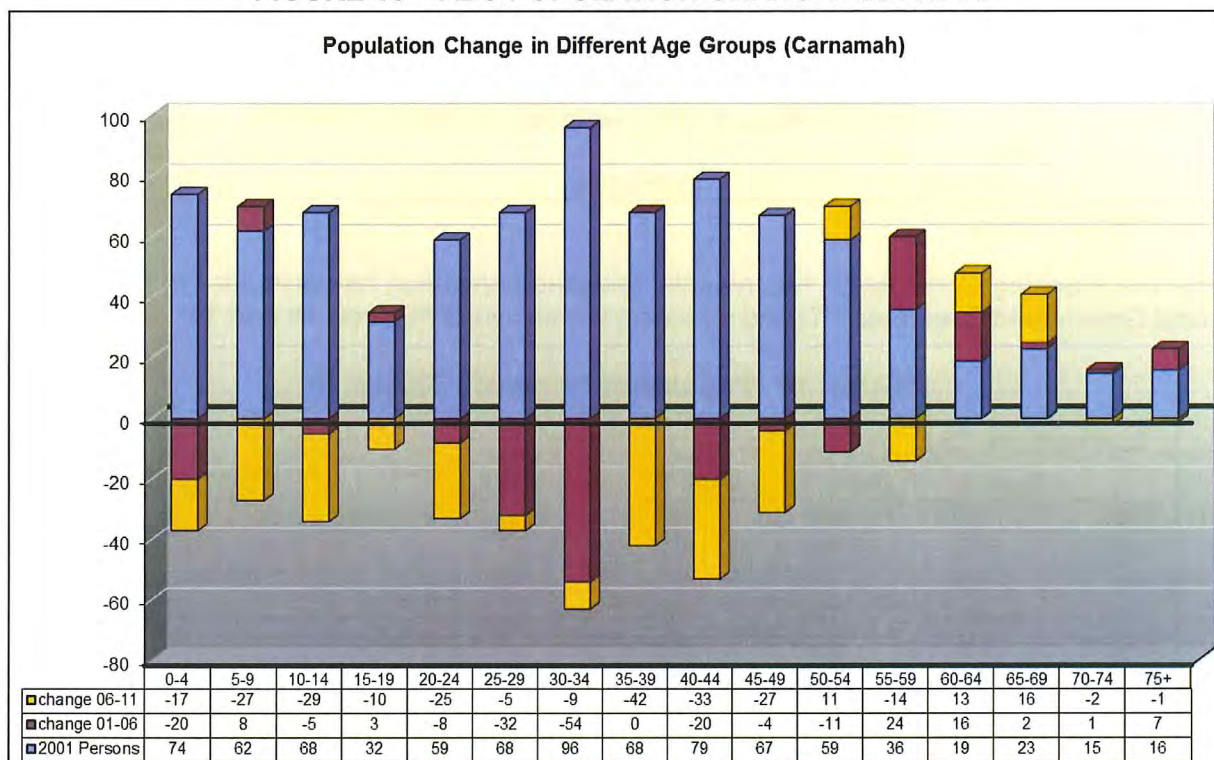
TABLE 1 - POPULATION STATISTICS FOR CARNAMAH LGA

Year	G	Count	TOTAL	Pop Change	% Change
1996	m	585	1017	124	10.9
	f	432			
2001	m	508	841	176	17.3
	f	333			
2006	m	405	748	93	11.1
	f	343			
2011	m	285	546	202	27.0
	f	261			

Source: ABS 2012.

Figures 16 and 17 provide charts demonstrating the change of population over the last three Census periods by gender and age bracket.

FIGURE 16 – ABS POPULATION CHANGE 2001-2011



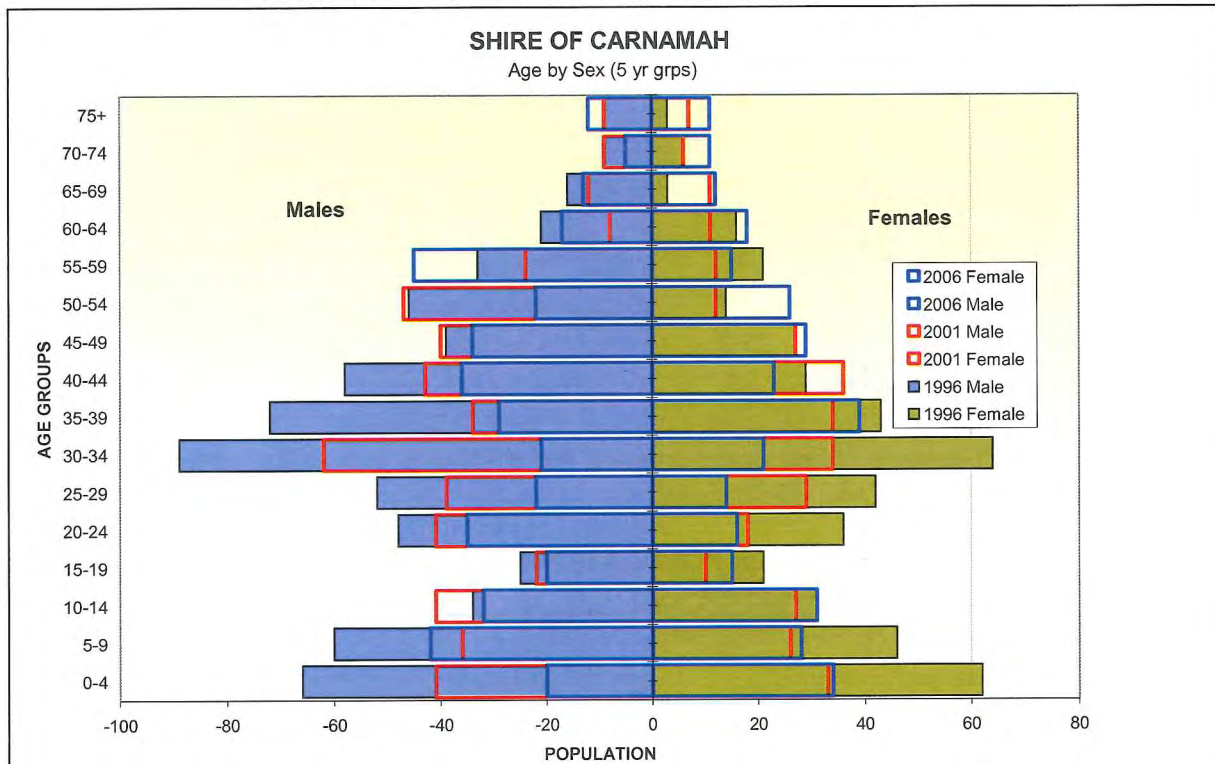
Source: ABS 2011 Census

Carnamah and Eneabba townsites are the only two urban centres in the Shire for which separate statistics are recorded. In 2006 the Carnamah town had a population of 362 persons representing 48.3% of the Shire’s population, and Eneabba with 206 persons being nearly 28% of the Shire.

This leaves only 179 (or 24%) in the rest of the Shire. More detailed information for the 2011 Census will only be available from the ABS from August to December 2013.

Census data by gender is also only available from the ABS from August to December 2013. Figure 17 therefore only shows the 1996 – 2006 population pyramid.

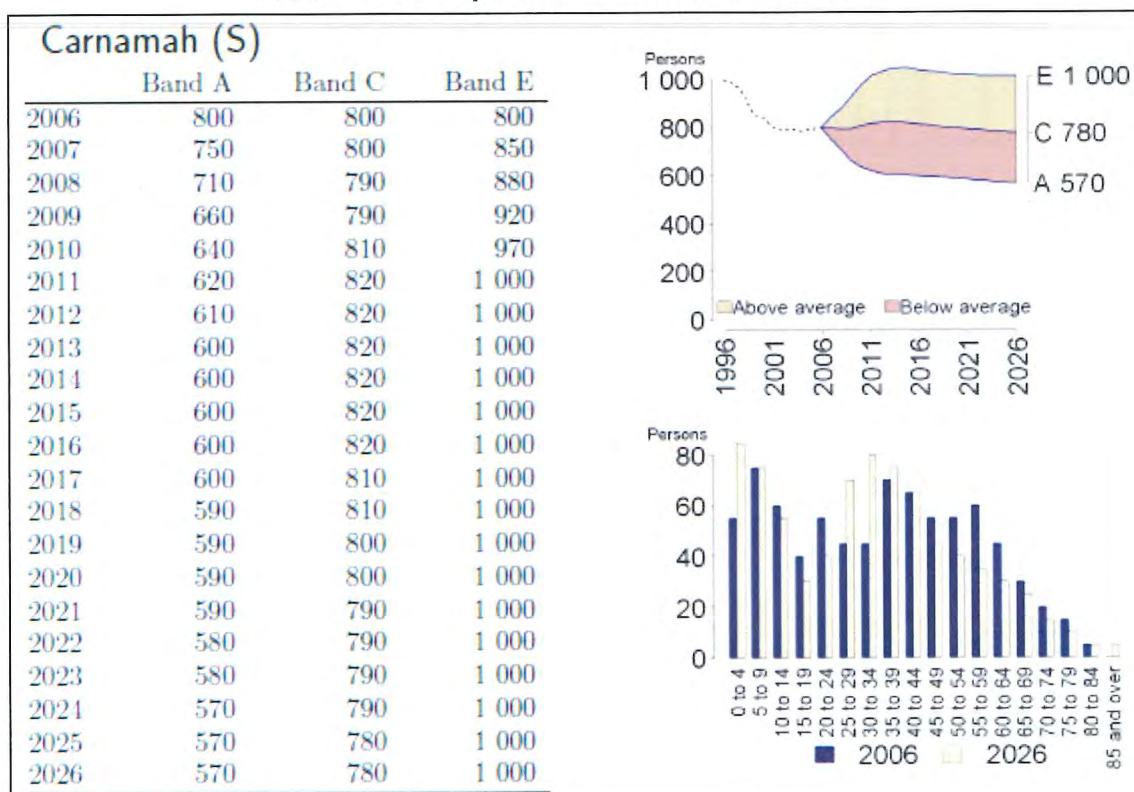
FIGURE 17 –POPULATION AGE PYRAMID 1996-2006



Source: ABS 2011 Census

The WA Planning Commission has recently released population forecasts for the State on a Local Government area basis. These forecasts are shown in **Figures 18 and 19**.

FIGURE 18 - Population Forecasts 2006-2026



Source: Western Australia Tomorrow, Report No 7, WAPC 2012.

The 2026 forecasts shown in the bar chart above (**Figure 18**) suggest that there will be increases in the 0-4 and 25-39 brackets, with the other brackets decreasing - significantly in some cases. These forecasts appear inconsistent with the more recent trends as shown in **Figures 16** where there is a growth, although variable, in the older age groups (from 55 and older).

Figure 19 has been prepared by the WA Planning Commission to give a visualisation of the dynamics of the age structure throughout its forecast. The Figure is split with both the top and bottom parts sharing the same x axis (5 year age groups). The top part overlays the ranges (all bands) for each age group as a polygon. There is a polygon for each census year from 2006 to 2026. Each polygon has been hatched and coloured. Cross hatching indicates the over- lap between census years. The bottom part shows the ranges (all bands) of the AAGR for each age group.

FIGURE 19 - Population Forecasts 2006-2026

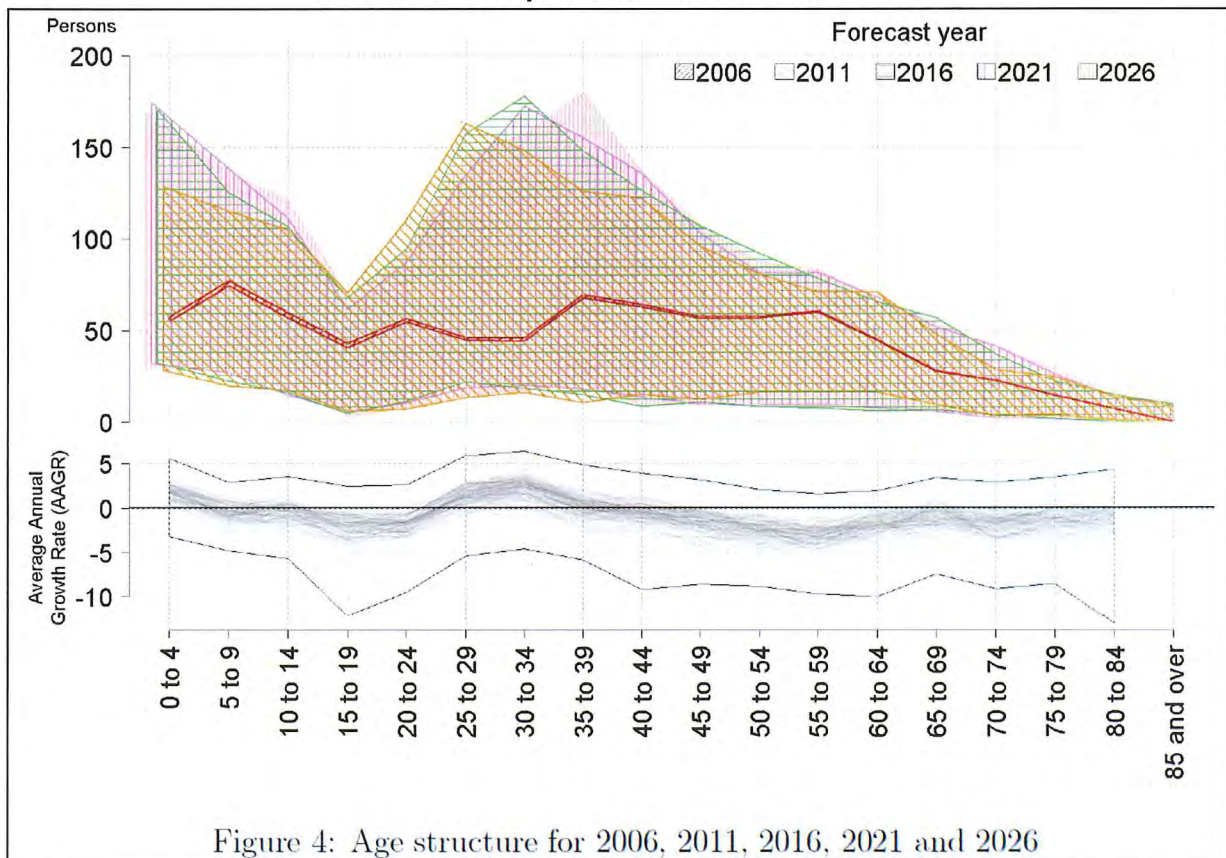


Figure 4: Age structure for 2006, 2011, 2016, 2021 and 2026

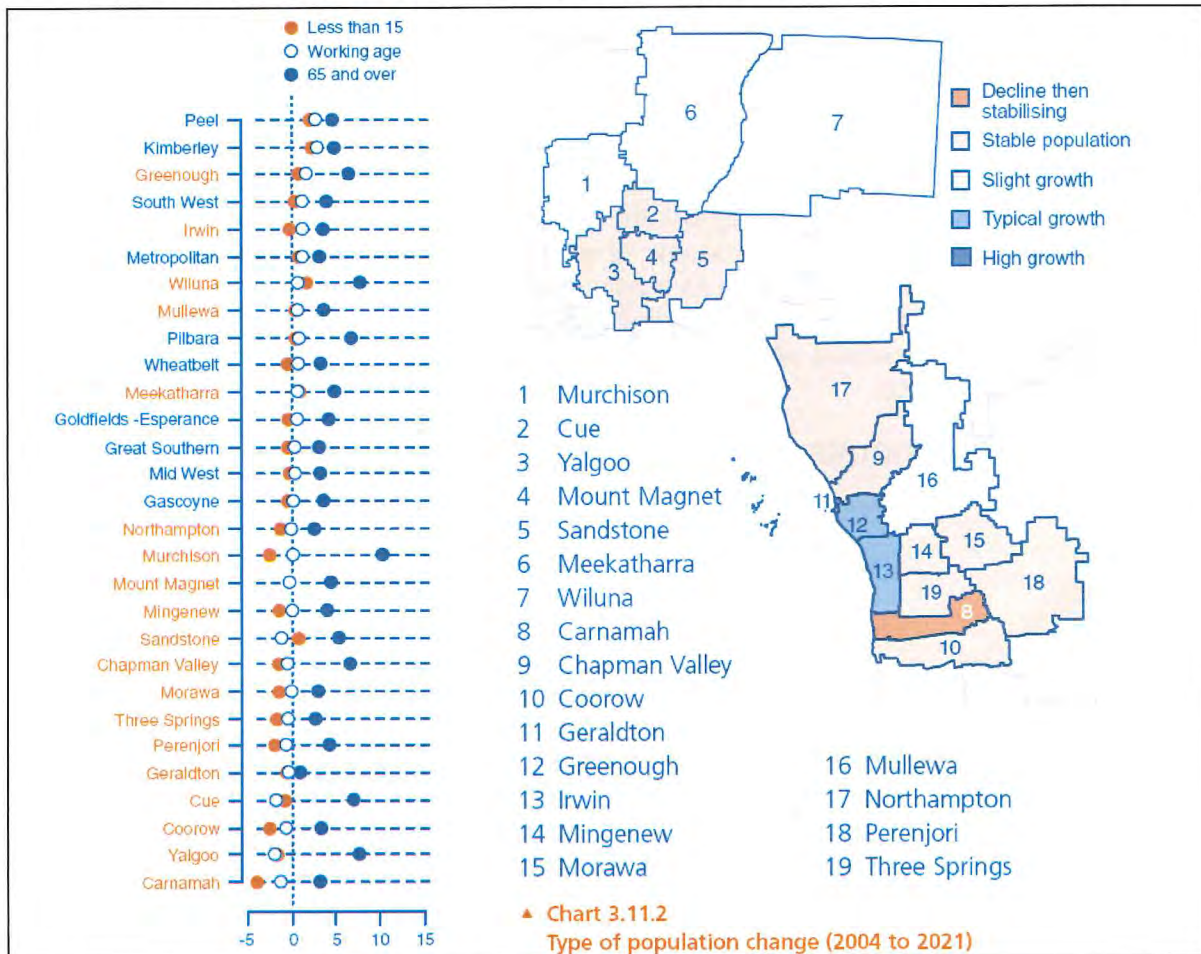
Source: Western Australia Tomorrow, Report No 7, WAPC 2012.

Implications of Location, Climate and Population Characteristics on Local Planning Strategy

The Shire's distance from Perth, its climate and employment opportunities will remain the main factors affecting the rate of growth in the population.

Growth population projections for the Shire (WA Planning Commission, 2005) suggest that, of the 44 LGAs within the Wheatbelt Planning Region, 16 recorded declining then stabilising populations. During the 1981-96 period most of the growth occurred in the LGAs adjacent to the Perth Metropolitan Region. Carnamah is classified as expecting 'decline, then stabilising'. **Figure 20** provides an extract from the 2005 Western Australia Tomorrow report.

FIGURE 20 - PREDICTED POPULATION CHANGE IN LGAs FOR 2001 - 2021



Source: Western Australia Tomorrow - Population Report No 6, Oct 2005, WAPC

Rural Population

In order to provide a choice for prospective residents in the District the Council is keen to ensure that a range of alternative residential lifestyle options be made available. Other than townsites and farms, it is suggested that a greater variety of rural-residential lots be created. These lots should be grouped into a 'Rural Residential' or 'Small Rural Holdings' environment but preferably have access to urban services and amenities. The selection of these areas should be determined on a set of criteria including the following;

- Proximity to services, amenities and facilities
- Land suitability
- Environmental values and risks
- Potential for land use conflict
- Potential impacts on adjacent land uses
- Existence of any buffer areas from incompatible uses.

The Council is prepared to cater for an expected increasing number of people over 65 and their demands on future aged persons' facilities. One can assume that this aging population may want to settle in the district and as such will be demanding the appropriate services. If these services are not provided, this population will seek an alternative town as a location to settle. Carnamah or Eneabba may be the favoured location for retiring farmers in the district, but this cannot be confirmed without more detailed data. The implications of an aging population profile include the need to adequately cater for appropriate accommodation, medical facilities and support services.

Aged persons' accommodation precincts need to be established. The area could incorporate a 'seniors' precinct' including a bowling or recreation club. Accommodation facilities need to be well located within walking distance of the main commercial and community facilities and could benefit from the grouping of these facilities serving residents with similar interests and needs.

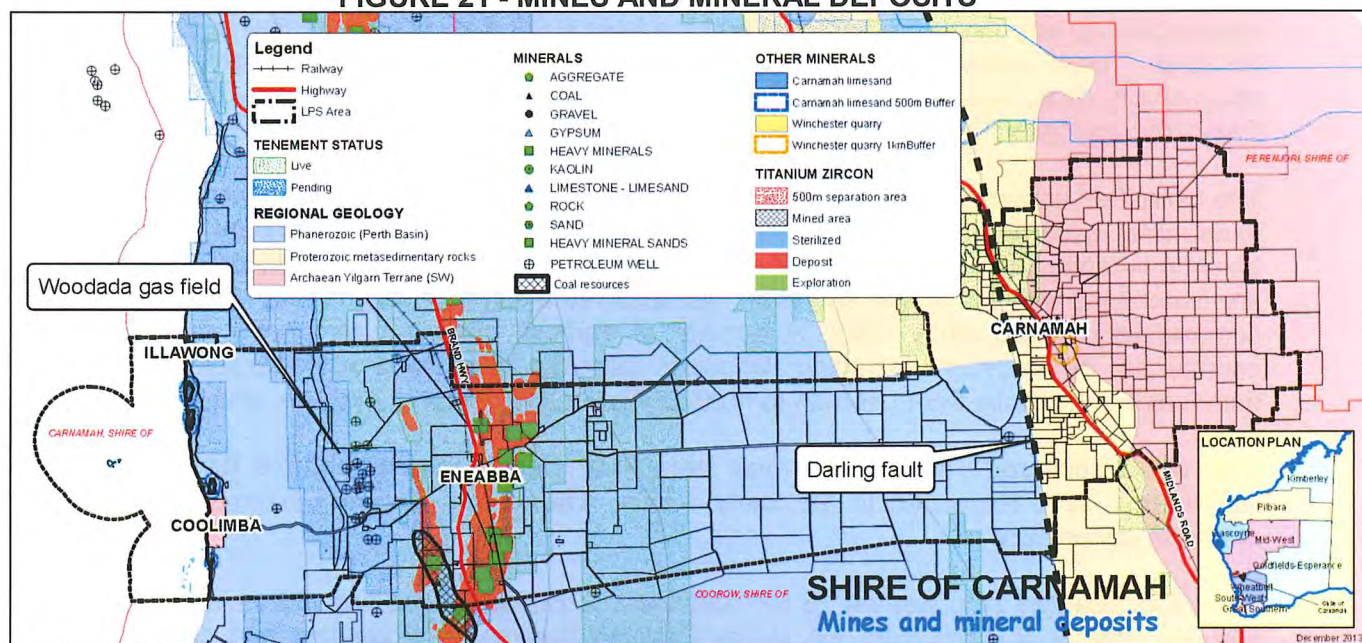
12 GEOLOGY

All mineral exploration and mining in WA is subject to the provisions of the Mining Act 1978, which is administered by Department of Mines and Petroleum (DMP). Minerals, as defined by the Mining Act 1978, include all naturally occurring substances obtained from any land by mining, however construction materials such as limestone, rock, gravel, and sand are not considered to be minerals where they occur on private land.

Planning schemes cannot prohibit or affect the granting of mining tenements (mining leases and exploration licences) or the carrying out of any mining operation authorised by the Mining Act 1978.

Figure 21 shows the locations of mines and mineral deposits and the distribution of mining tenements. The presence of the titanium-zircon mineralization stands out as the dominant resource in the Eneabba area with live and pending mining tenements distributed throughout the rest of the Shire.

FIGURE 21 - MINES AND MINERAL DEPOSITS



Source: Geological Survey of Western Australia, DMP 2012

Mining of Construction Materials

On Crown land, construction materials are defined as a 'mineral' and hence there is need for mining leases under the Mining Act 1978 for construction material extraction. On private property, commercial construction material extraction is authorised by the Shire through the grant of Extractive Industry Licences. It is very likely that mining of construction materials will be required for all new infrastructure (roads, bridges, telecommunications, etc.) to be built in the Shire.

It is important for existing resource extraction sites where there are resources that will last for a number of years, to be identified in the Strategy and protected in the Scheme from developments that would conflict with the extraction, such as any new rural residential subdivisions or townsite expansions. Protection of construction material sites is important because all developments require supplies of cost-effective, high quality resources. (WA Planning Commission's draft State Planning Policy 4.1 for Industrial buffers refers).

Two basic raw material resource areas have currently been identified in the Shire. These resource areas are the 'Winchester' hard rock quarry and the 'Coolimba' limesand openpit.

There are 4 Crown reserves specifically for 'gravel' and 3 Crown reserves for 'marl extraction' within the Shire.

The DMP strongly recommends that all operating sites be progressively rehabilitated, and that all sites have an end-of-mining land use planned for so that the appropriate rehabilitation can be put into place from the initiation of operations.

Mineral and Petroleum Resources

'The Darling Fault lies within about 26 km of the eastern boundary of the Shire. This major structure separates the younger Phanerozoic (less than 542 million years old) sedimentary rocks of the Perth Basin to the west from the Archean (over 2500 million years old) granite and metamorphic rocks of the Yilgarn Craton to the east. Proterozoic (2500-542 million years old) metasedimentary rocks are present within the eastern part of the Perth Basin and also as a thin sequence overlying the Yilgarn Craton. Most of the Shire is underlain by Phanerozoic sedimentary rocks of the Perth Basin. Gentle folding occurs in the pre-Cretaceous (over 146 million years old) strata, including the Beekeeper Formation that is prospective for petroleum (oil and gas) and the Irwin River Coal Measures that is prospective for coal. These rocks are overlain by Cretaceous age (146 to 65 million years old) sedimentary rocks belonging to the Parmelia Formation and generally less than 20 metres of Cainozoic age (less than 65 million years old) sediments.

The Shire has known deposits of limesand, limestone, titanium-zircon (heavy mineral sands), phosphate, gypsum, and coal. In the Eneabba region deposits of heavy mineral sands carrying ilmenite, zircon and monazite were identified in 1968. These titanium-zircon deposits are associated with the former shoreline that occurred along the Gingin scarp and have been commercially mined since 1973. A number of surficial materials also have potential for commercial development including; limesand deposits associated with numerous mobile dunes along the coast from Leeman to north of Illawong, limestone, gypsum, and diatomite.'

Coal was discovered within the Permian Irwin River Coal Measures and the Early Jurassic Cattamarra Coal Measures in the early 1960s. These coal deposits have potential for methane generation.

The Woodada gas field located 13 km northwest of Eneabba was first drilled in 1980. This gas resource is sourced from the Upper Permian Beekeeper Formation and commenced supplying gas to the Perth region in 1982. The Perth Basin sedimentary rocks within the Shire continue to have potential for future petroleum discoveries.

Western Australia has low-medium temperature geothermal resources that can potentially be exploited to provide moderate levels of electric power and low-temperature heat-energy applications. Future technological advances may render much of the Perth Basin amenable to economic geothermal energy developments. Temperature measurements from the Woodada gas-field wells have indicated potential for geothermal energy within the Perth Basin sedimentary rocks in this area.

Mineral and Petroleum Tenements

Geology, mines and mineral deposits, and 'live' and 'pending' mining tenements are shown in **Figure 21**.

There are currently 26 live mining tenements, 8 pending mining tenements, 7 petroleum titles and 4 geothermal titles wholly or partly within the Shire of Carnamah. The petroleum titles target the Perth Basin sedimentary rocks throughout the Shire. The majority of the mining tenements are located in the western portion of the Shire, targeting titanium-zircon mineralization, coal and limesand.

The DMP recommends;

- That the Local Planning Strategy map shows the areas of Titanium Zircon mineralization to inform all stakeholders of the locations of potential mining areas so that future land use conflicts can be reduced. Sensitive land uses e.g. residential or rural residential development should not be permitted within 500 metres of the Strategic Mineral Resource Protection Areas.'
- That the 'Winchester' hard rock quarry, located 3.8 km southeast of the town of Carnamah, is protected from inappropriate land use developments. The EPA guideline distance for the separation of sensitive land uses from hard rock quarrying operations is 1 kilometre. GSWA recommends that the Shire ensures that planning does not introduce sensitive land uses within this 1 kilometre separation area and considers the possibility of introducing a Special Control Area to avoid future conflict.'
- That a number of limesand deposits along the coast, used to neutralize soil acidity in the farmlands of the Wheatbelt, are protected from inappropriate land use developments. Two of these limesand resources are within granted mining leases M70/932 and M70/1 020; another is within pending exploration licence E70/2221. All four limesand resources are located within Reserve 42477 'Parkland, Recreation and letting of cottages' vested with the Shire of Carnamah. **Figure 21** shows the deposits with 500 metre separation areas, which is the EPA guideline distance for the separation of sensitive land uses from sand mining operations. GSWA further recommends that the Shire ensures planning does not introduce sensitive land uses within these separation areas and considers the possibility of introducing Special Control Areas to avoid future conflict.

13 AGRICULTURAL LANDS AND MANAGING NATURAL RESOURCES

The Shire of Carnamah is located in the northern part of the West Midlands Region. The Department of Agriculture and Food Western Australia (DAFWA) has prepared a regional catchment appraisal to assess the status of the Region and make recommendations to assist and improve regional land management practices and outcomes.

13.1 Summary of agricultural industry activities

Types and value of agriculture for Shire of Carnamah (ABS statistics, 2011).

Category	Gross Value \$m
Broadacre cereals (wheat, barley, oats)	23
Legumes	1.9
Oil seeds	2.7
Livestock (sheep and beef cattle)	5.3
Livestock Products (wool)	3.3
Broadacre - Hay	0.2
Total	38.5

13.2 High Quality Agricultural Land

Consistent with DAFWA's recommendation, areas of high quality agricultural land is given consideration in the strategy by inclusion of planning mechanisms to avoid future land use conflict in these areas. These areas of high quality agricultural land are identified in the DAFWA's North Midlands project.

13.3 Summary of land resources:

The Yarra Yarra Lakes are a dominant feature in the shire. East of these lies the granitic Yilgarn craton dominated by sands or loams overlying clay subsoils. To the west of the Yarra Yarra Lakes is the sedimentary Perth Basin - divided into the Dandaragan Plateau (gently undulating plateau with sandplain and laterite), the Arrowsmith Region (dissected lateritic sandplain with hills, breakaways and plateaus) and the Coastal Plain (dunes with alluvial plains and sand sheets, with hills of limestone closer to the coast).

The main soils found across the Shire are Yellow and Pale deep sands with areas of shallow sands and gravels.

13.4 Land Management Issues - Salinity

Trend analysis was recently done¹ by DAFWA across the entire Wheatbelt. For the Shire of Carnamah it can be summarised as follows:

- on the Northern zone of Ancient Drainage (east of the Darling Fault on the Yilgarn Craton) the risk of groundwater rise is currently assessed as moderate and may be in equilibrium; for the Dandaragan Plateau (between the Darling Fault and the Dandaragan scarp) there is a high risk of salinity with a rising watertable trend. While groundwater here is often fresh, high evaporation rates have the potential to transform fresh seeps into saline scalds. Throughout much of the West Midlands the depth to regional groundwater is typically tens of metres and rising groundwater can alternatively be viewed as an increasing water resource.
- Coastal areas (between the Dandaragan Scarp and the coast) have a low risk of salinity.
- Dryland salinity continues to be an important cause of land degradation and a threat to highly productive, low-lying or valley soils, across the agricultural areas. DAFWA has published guidelines for surface and subsurface water management.²
- DAFWA believes that the extent of salinity should be reviewed on a decadal or similar frequency and backed up by ground-truthing and surveys. Salinity risk assessment should be based on the continued long-term monitoring of groundwater levels and trends in the surveillance bore network.

13.5 Summary of other land degradation issues:

A recent document published by DAFWA³ highlights the extent and impacts of these issues.

- Resource condition summaries for Soil acidity suggests that for Carnamah, the rating of soil condition for acidity is mainly poor with deeper subsoil acidity at 20-30cm being below target levels. Liming to maintain optimal soil pH is necessary to ensure long-term quality of the soil resource. Approximately two thirds of the agricultural land within the shire is moderately to highly susceptible to this problem.

¹ Raper et al (in prep) *Groundwater trends analysis for south west Western Australia*. Resource Management Technical Report 388. Department of Agriculture and Food, Perth.

² Guidelines include: *Common conservation earthworks used in Western Australia*, Keen, M.G. (1998). Resource Management Technical Report 185. Agriculture Western, Australia, Perth.
Field Pocket Book of Conservation Earthworks Formulae and Tables, Keen, M.G. (2001). Bulletin 4534. Agriculture Western Australia, Perth.

³ ⁴ Department of Agriculture and Food 2013, *Report card on sustainable natural resource use in agriculture*. Department of Agriculture and Food, Western Australia. http://www.agnc.wa.qov.au/PC_95907.html?s=1608044433

- Soil water repellence is a serious land management issue west of the Darling fault due to the nature of the sandy soils; it has been assessed as being a widespread problem - an estimated 53% of the agricultural land in the shire is moderately to highly susceptible⁴.
- Wind erosion is a potential issue across the whole shire, with the sandy soils of the western region being the most vulnerable. An estimated 43% of agricultural land across the shire is highly to extremely susceptible to the risk.
- Subsoil compaction is also a widespread land management hazard with 93% of agricultural land in the shire susceptible.

13.6 Buffer Zone Guidelines for Agricultural Land

DAFWA supports the inclusion of guidelines for Buffer Zones to protect current and future agricultural activities and reduce land use conflict. Guidelines prepared by the Department of Health 2012 provide advice to assist local governments, developers, land owners and consultants on adequate separation from conflicting land uses, the establishment and maintenance of buffers areas and the requirements for vegetative buffers.

They are available at: *Guidelines for Separation of Agricultural and Residential Land Uses : Establishment of Buffer Areas* available at [http://www.public.health.wa.gov.au/3/113912/pesticide use.pm](http://www.public.health.wa.gov.au/3/113912/pesticide%20use.pm)

The Western Australian Environmental Protection Authority (EPA) 2005 also provides guidelines on generic separation distances for specific intensive agricultural and agrifood processing uses. *Guidance for the Assessment of Environmental Factors – Separation Distances Between Industrial and Sensitive Land Uses*.

13.7 Managing unproductive soils in the future

The following text provides an excerpt from DAFWA Resource Management Technical Report 379- *Changing Land Use on Unproductive Soils* (Blake et al 2012).

5.1 Carbon

A number of companies in Australia provided voluntary carbon credits under the now superseded Australian Government's Greenhouse Friendly™ program. At the time of writing, most companies are offering growers a long-term lease agreement or purchase land for planting trees and cover the costs associated with planting, monitoring and assessment. After December 2011, the Federal Government's Carbon Farming Initiative will provide growers with opportunities to gain financially from sequestering carbon on their properties.

Tree species, such as oil mallees, that are often block planted in the NEAR for carbon credits, may not be the best choice for the inhospitable soil types examined in this project. A survey conducted in December 2009 (Appendix D) on these unproductive soils, showed that even 10 years after establishment the average height of oil mallee trees was less than 2m. The Kyoto Protocol rules adopted by Australia for Article 3.3 sinks require a 'forest' of trees with a height of at least 2m. This rule encourages commercial reforestation in more productive parts of the landscape rather than the investment of integrated plantings on less productive soil types. Article 3.4 of the Kyoto Protocol which covers revegetation that doesn't meet the criteria of Article 3.3, has not been ratified by Australia, but methodologies to generate voluntary carbon offset credits from this type of revegetation may be developed under the CFI.

However, other local native species are adapted to such environments and would appear to perform better in terms of survival and growth rates. The DAFWA has been working with forestry specialists to determine just how much carbon is actually stored by native plants that thrive on these poor soils. Destructive sampling, where a quarter of a tree or shrub is pruned and weighed, was undertaken to determine carbon storage and possible financial returns from such plantings. Initial results are quite promising with a 50-year-old stand of acacia shrubland

⁴ Van Gool et al, 2008, *Land resources in the South-West Agricultural Region*. Resource Management Technical Report 330. Department of Agriculture and Food, Perth.

on acid wadjil soils yielding up to 108 t/ha CO₂-e. Further research is required to gain more information on the various plant species that naturally inhabit these soil types.

Four impediments to this change in land use were identified as: (1) uncertainty of carbon price; (2) limited technical advice; (3) restrictions around subdividing agricultural land; and (4) lack of information about the carbon sequestration potential of species other than oil mallees.

5.3 Future management options for salt-affected areas

The vast majority of research and development for salinity management, and indeed farm management, has been around the use of saltbush grazing systems for sheep. With the dramatic decline in sheep numbers throughout most of the NEAR following the drought years of 2006 and 2007, the role of saltbush for grazing has somewhat declined.

The emerging opportunities associated with carbon farming raise the possibility of establishing trees and shrubs which produce more woody biomass and hence more carbon on these areas. The reestablishment of healthy saline ecosystems using species such as swamp she-oaks, melaleuca and other salt-tolerant varieties could not only provide some income from carbon but also result in positive nature conservation outcomes. More research is required to determine the carbon sequestration potential of such an option to define the most suitable species and planting layouts for different districts, soil types and rainfall zones.

State Lime Supply Strategy

In 2006 the DAFWA, as part of multi-agency authorship, contributed to the preparation of an assessment of the status of the States lime supplies in order to suggest a method of protecting these resources. The report was titled 'Towards a State Lime Supply Strategy'.

The Strategy is a proactive approach to secure the long term supplies of lime for Western Australia. Lime is essentially a low cost material but is fundamentally important in several primary industries including metallurgical processing, construction, road building and as a soil amendment for agricultural systems.

It is acknowledged that the majority of these resources are located on the coast and therefore conflict with other uses like residential, recreation, tourism and conservation.

The report recommends that the planning system acknowledges and protects these resources from competing uses.

Implications of DAFWA issues on the Local Planning Strategy

Salinity on farmland is a potentially significant issue affecting the future productivity of the rural sector, however the preparation of a local planning scheme and strategy are not the primary instruments for monitoring and preventing the increase of salinity rates in the district. However the Scheme and Strategy can assist more directly with the identification and protection of competing interests in the protection of several mineral resources.

14 EDUCATION FACILITIES

The Carnamah High School (4.0 plus 1.4ha) was established in 1912 and is located on the eastern end of the townsite. In 2012 the students number about 104 students catering for years K to 12. There are 18 pre-compulsory students, 46 primary school aged students and 40 secondary students.

The school at Eneabba was established in 1960 and is located in the centre of the townite and occupies a 4.4 hectare site - although not all of this area is used. There are 6 pre-compulsory students, and 28 primary school aged students, totalling 34.

Implications of Education Statistics on Local Planning Strategy

The Department of Education and Training has indicated that the current school facilities are adequate enough to cater for increased student numbers without the need for significant additional land or facilities for the foreseeable future. There are no plans to establish any new schools, nor to close the existing school.

15 TOURIST ATTRACTIONS - AREAS OF INTEREST

TOURIST ACCOMMODATION

Carnamah Caravan Park and On-site Units:

Located near the Carnamah Recreation Centre, the Carnamah Caravan Park offer 20 camping bays and With three fully self-contained, four person units with bathroom, kitchen and lounge facilities.

Carnamah Hotel-Motel:

Located on Macpherson Street, the Carnamah Hotel-Motel, built in 1924, offers accommodation and meals.

Eneabba Roadhouse

One-room accommodation is available.

Western Flora Caravan Park

20kms north of Eneabba, this Western Flora offers not only caravan and self-contained unit accommodation but also guided wildflower tours daily during the wildflower season.

16 COUNCIL FACILITIES AND AMENITIES

The Shire and residents have created a range of activities and clubs to ensure maximum participation, interaction and cohesion of the community. The facilities are located in Carnamah and Eneabba townsites. As many country towns there is a wide range of activities, sports and social groups available for membership.

Carnamah Groups

Anglican / Uniting Church
Carnamah Badminton Club
Carnamah Bowling Club
Carnamah Bush Fire Brigade
Carnamah Childcare Centre (Playgroup)
Carnamah Community Care
Carnamah/Coorow Basketball Club
Carnamah Cricket Club
CDHS P&C Association
Carnamah Golf Club
Carnamah Historical Society & Museum
Carnamah Netball Club
Carnamah/Perenjori Football Club
Carnamah Soil Conservation District Advisory Committee
Carnamah Swimming Club
North Midlands Scout Group
Carnamah Tennis Club
Carnamah Women's Hockey Club
Country Women's Association

Cultivating Carnamah
Cultivating Carnamah Toy Library
Midland Cattle Breeders Association
North Midlands Agricultural Society
North Midlands Stud Merino Breeding Association

Eneabba Groups

Coastal Districts (Eneabba) State Emergency Service
Eneabba Bush Fire Brigade
Eneabba Recreational and Sporting Club
Eneabba Playgroup
EPS P&C Association
Eneabba Progress Association
Eneabba Tennis Club

Volunteer Bush Fire Brigade and Ambulance Service

A volunteer bush fire brigade service and ambulance service are located in Carnamah. The Coastal Districts State Emergency Service is located in Eneabba.

Police

A Police Station is located in Carnamah. The closest station for Eneabba is located in Leeman.

Outside Works Department

The Shire of Carnamah is responsible for the maintenance and upgrading of most roads within the Shire except those under the control of Main Roads WA. The Shire of Carnamah is also available for private works. Current projects include Carnamah-Perenjori Road, Carnamah-Eneabba Road, gravel sheeting, and resurfacing of streets in Carnamah and Eneabba. Grants from Main Roads, Department of Transport and Infrastructure under the Roads to Recovery and Royalties for Regions Programs have contributed to these works.

Environmental Health

The Shire of Carnamah acquires environmental health services from the Shire of Coorow.

Other health facilities in the locality include the North Midlands Medical Practice, Three Springs Dental Clinic and Eneabba Silver Chain Nursing Post

Carnamah Public Library

The Carnamah Public Library is located within the Council's Administration building. It has a basic stock books, audio and visual cassettes, CDs and DVDs.

Eneabba Public Library

The Eneabba public library is located in the Eneabba Recreation Centre and is only open on Thursdays.

Swimming Pools

The Shire of Carnamah operates swimming pools in both Carnamah and Eneabba.

Waste Management

The Shire of Carnamah operates landfill sites in two locations:

- 1.5km east of Carnamah with a life expectancy of 5 years; and
- 2.0km south of Eneabba with a life expectancy of 20 years.

The development strategy sees a need to monitor the traffic volumes on this road and consider additional overtaking opportunities and rest areas. This will help to alleviate the problems of driver frustration and fatigue.

The following description summarises the function and development strategy for the four State roads.

The **Brand Highway** is classified as a Primary Distributor and forms a critical part of the major route through Geraldton to the North West of the State. Brand Highway is a strategic freight, tourist and inter-town route that facilitates the movement of all types of traffic. It caters for all forms of transport related to the agricultural and primary production Industries as well as the mining, oil and gas sector. In addition to the heavy vehicle usage of this road there is also heavy demand by tourists.

The development strategy seeks to improve traffic safety and efficiency by reducing the conflict between the various traffic types on this road. This can be done by improving/increasing overtaking opportunities, realigning substandard road geometry, bridge reconstruction or replacement and redesigning some of the intersections.

The proposed completion of the road between Lancelin and Cervantes, linking up with Indian Ocean Drive and subsequent development along the route, has brought about a marked increase in the level of tourist and commuter traffic from the Perth regions.

The development strategy seeks to improve traffic safety by undertaking selective improvements to the road geometry. Overtaking lanes will be considered.

The **Eneabba-Coolimba Road** is also a Primary Distributor and provides the main link between Brand Highway and the coastal town of Leeman. It provides access for tourist traffic as well as the commuter traffic between accommodation in Leeman and the Iluka operations at Eneabba.

There is a need to increase the traffic safety of this road by undertaking widening and shoulder improvement works.

The **Midlands Road** is a Primary Distributor and forms part of the inland service corridor that connects a number of Wheatbelt towns with Perth in the south and Geraldton in the North. Part of this is the inter-linking of various towns along the route.

The route carries a cross section of traffic ranging from large restricted access vehicle combinations to tourist vehicles as this route services agriculture through grain and fertilizer cartage; talc is also carted from the mine near Three Springs. This road provides good access for tourists during the wildflower season.

The route provides a viable alternative route to Brand Highway for tourists that may be interested in various sites along the road.

The following description summarises the function and development strategy for the four local government roads.

The **Carnamah-Morawa route** technically is not within the Shire of Carnamah, it does impact the access to the Shire. The local distributor provides a link between Carnamah and Morawa. It provides a sealed route for these two rural communities to interact and also provides an alternative more direct route between the Wubin-Mullewa Road and the Midlands Road for traffic heading North East or South West.

The development strategy suggests that as demand increases this route should be upgraded.

The **Carnamah-Perenjori route** is a Regional Distributor that connects the two population centres of Carnamah and Perenjori situated on major north-south inter-regional service corridors. The road carries seasonal grain and fertilizer traffic in addition to providing access to the coast for recreational and tourist traffic from the inland areas.

The road requires widening and sealing to a two lane uniform standard. While seal widening is complete within the Shire of Perenjori, there are salt affected areas where there is significant risk of recurring seal failure.

Inering Road forms part of the Morawa – Carnamah - Perth route which is used by some larger vehicle combinations as well as passenger vehicles. It is proposed that the road needs to undergo seal widening to seven metres as usage dictates.

The **Three Springs - Eneabba Road** connects the Brand Highway through to the intersection with Arrino South Road in Three Springs. The road carries seasonal grain traffic, some general freight traffic and tourist traffic, as well as oversize loads. The road also provides access to the coast for recreational traffic.

In recent years the Shire of Three Springs has widened most of the previously narrow bitumen out to seven metres to provide for the increasing volume and mix of different vehicle categories. The development strategy will progress with resealing the road to a width of 7.0m and is to continue on a progressive basis.

BUS

There is a bus service that passes through Carnamah and Eneabba. The service runs four times weekly from Perth to Geraldton, Kalbarri and Meekatharra. Perth to Carnamah takes about 4.5 hours.

AIRSTRIP

Both Carnamah and Eneabba have airstrips in or adjacent to the townsites. These are currently only gravel strips of 0.9 and 1.4 kilometres respectively.

RAIL

CBH uses rail facilities for bulk grain freight through Carnamah, which is a primary receipt depot. It is possible that the grain industry may be required to rely more on the road infrastructure as the railway system becomes the less favoured mode of transport.

Implications of Transport Facilities on Local Planning Strategy

Due to the competition with other towns on the Midlands Road it is essential that the roads leading to Carnamah and the district are as inviting and accessible as possible. This implies that major access roads must be kept in good condition and signposted to invite traffic to the towns, or at least through them. The treatment of entry statements and verge planting (including wildflowers) may add to the attraction to the district. Exposure to traffic is an essential ingredient in increasing trade. Every effort must be encouraged to ensure that any new regional transport initiative or strategy does not bypass the towns. Input to these proposals must be on-going and active. In order to attract tourist traffic to the district the road conditions must be made more suitable (ie safer).

Eneabba must present itself better for passing trade. Again the approach roads should be as attractive as possible for new arrivals. Signposting for essentials like accommodation,

facilities, amenities and shops must be clear and unambiguous. Townscape programs will address these issues.

18 SERVICING ISSUES

WATER SUPPLY

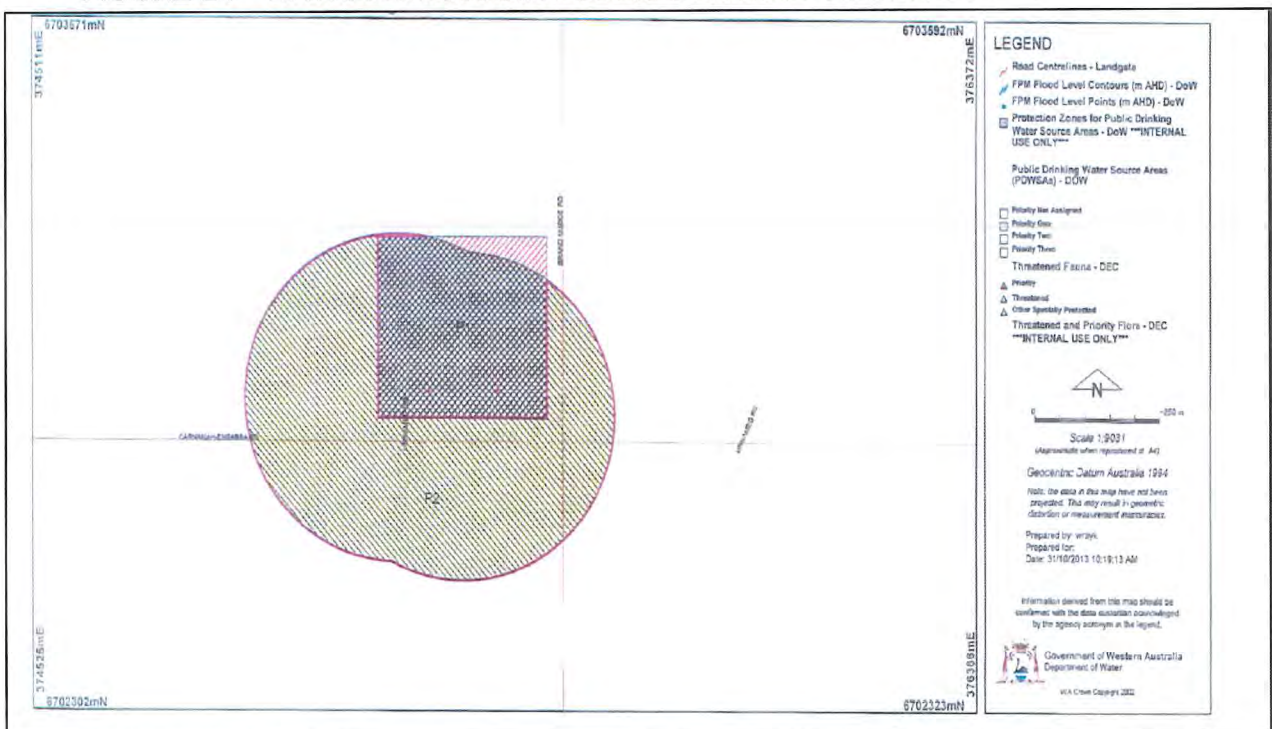
The Department of Water has water assets at Carnamah, and water and wastewater assets at Eneabba. Other assets include trunk mains, water source and storage sites.

The Department of Health advises that potable water supplies must be of the quality as specified in the *Australian Drinking Water Guidelines 2004*.

The Carnamah Public Drinking Water Source Area bores are located at Dathagnoorara on the corner of Brand Mudge and Carnamah-Eneabba Roads (about 20 kilometres south west of Carnamah). The water is pumped via a 200mm main to Carnamah and Coorow. It is treated and stored at a WC site to the east of Carnamah Townsite for distribution. Guidelines for development are included in the *Dathagnoorara Water Reserve Drinking Water Source Protection Plan (2007)*.

Figure 24 provides an extract from the Department of Water's Dathagnoorara Water Reserve plan.

FIGURE 24 – DATHAGNOORARA PUBLIC DRINKING WATER SOURCE AREAS

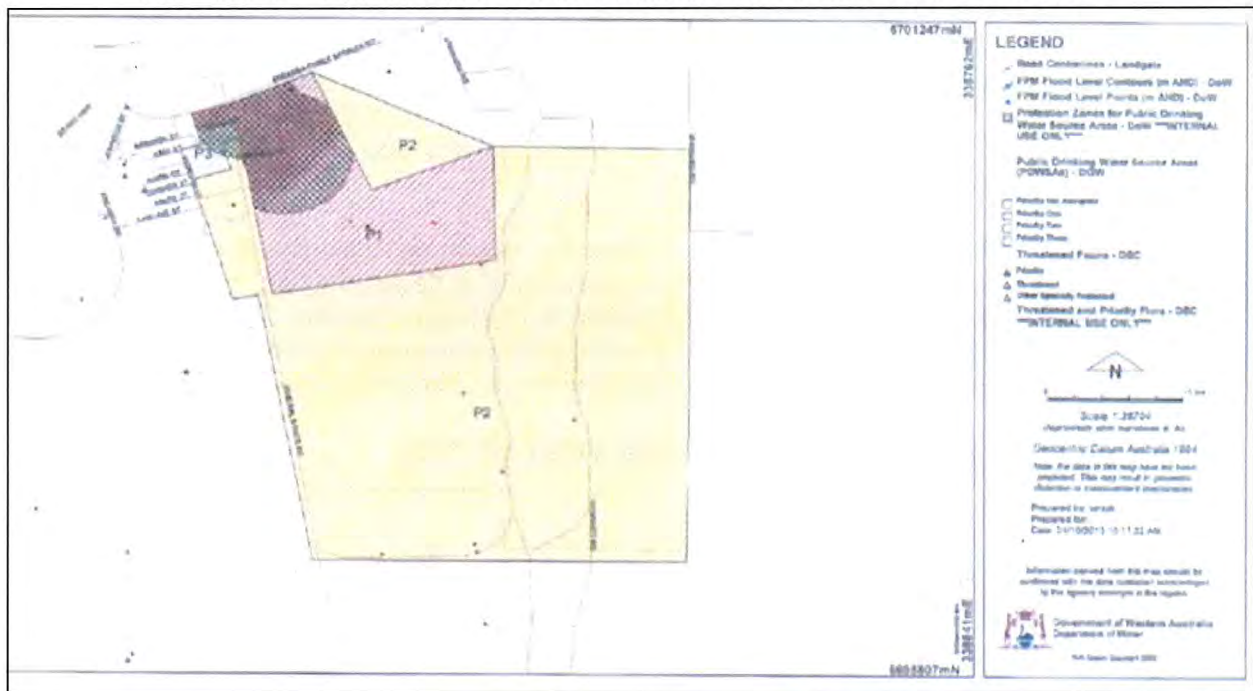


Source: Department of Water, 2013

The Eneabba supply is sourced from a borefield on a WC Public Drinking Water Source Area east of the town. The supply is treated and stored on the same site. The infrastructure requires a 100 metre buffer for the chlorine store, however as the impact area is either totally within the WC Reserve, or in a road reserve there is no need for a Special Control Area. The closest area to this site is zone industrial. Guidelines for development are included in the *Eneabba Water Reserve Drinking Water Source Protection Plan (2008)*.

Figure 25 provides an extract from the Department of Water's Eneabba Water Reserve plan.

FIGURE 25 – ENEABBA PUBLIC DRINKING WATER SOURCE AREAS



Source: Department of Water, 2013

RUBBISH COLLECTION

Household rubbish is collected weekly. The Council operates refuse sites 1.5km east of Carnamah and 0.2km south of Eneabba. The refuse sites have separate disposal allocations for different waste products, ie green waste material, car bodies etc.

WASTEWATER

Water Corporation operates a wastewater scheme in Eneabba. Wastewater is collected and pumped to a treatment plant located 1.5 kilometres north of the town. This facility will need a Special Control Area extending 500 metres from the settling ponds. The pump station on Eneabba Drive is surrounded by a recreation reserve and has no impact on sensitive uses.

POWER SUPPLY

The power supply to Carnamah and the district is part of the state grid system operated and maintained by Western Power.

GAS SUPPLIES

LPG Gas is supplied in cylinders by a local distributor.

FLOOD RISK

Flooding is not considered a risk in Carnamah. Engineering design of roads, culverts and reserves prevents any damage from heavy downpour events.

FIRE MANAGEMENT

Fire management, like most country towns, is manned by a local volunteer fire brigade based in Carnamah and Eneabba.

AMBULANCE

Carnamah and Eneabba have their own St John's Ambulance facilities.

19 ENVIRONMENTAL ISSUES

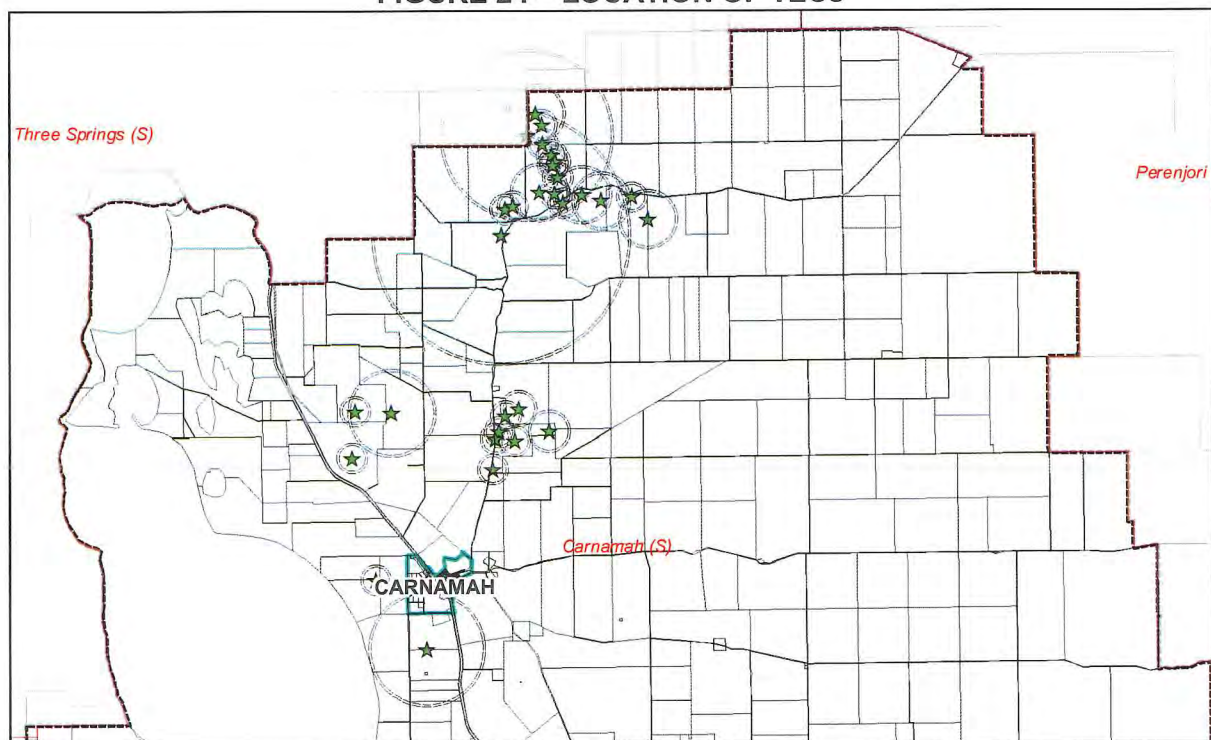
The Shire of Carnamah is located within the Department of Parks and Wildlife's (DPaW) Moora District and Midwest region. The Moora Office is located in Jurien Bay and the regional office in Geraldton.

Conservation Reserve System Flora and Threatened Ecological Communities (TEC)

The DEC has 20 areas of Conservation Tenure in the Shire. The DEC also has management responsibilities relating to introduced flora and fauna species and fire mitigation in areas of Unallocated Crown Land (UCL).

An ecological community is defined as a naturally occurring biological assemblage that occurs in a particular type of habitat. Such a community is deemed to be threatened (TEC) when it is being subject to processes that threaten to destroy or significantly modify it across most of its range. The DEC has identified 3 such communities as shown in **Figure 24**. The single site located south of Eneabba is contained within an existing Conservation Tenure.

FIGURE 24 – LOCATION OF TECs



Source: DEC

Wetlands, watercourses and other surface waters

The same principles apply to these areas as for flora and native remnant vegetation. Any change in use will trigger an appropriate level of assessment. The Department of Water administers two Acts that provide for the granting of licenses for works, including bores, and clearing of native vegetation. Any such proposals will need to obtain the relevant licenses through the Department of Water prior to seeking the Council's approval.

Water quality protection

There are no water protection areas within the Shire, however land near existing borefields at Eneabba and Dathagnoorara have been included in Special Control Areas.

Landscapes and landforms

The same principles apply to these areas as for flora and native remnant vegetation. Any change in use will trigger an appropriate level of assessment.

Buffer requirements

Buffer requirements are required around chlorine stores (100m), rubbish tips and quarries (500m). The Shire has no abattoirs or other noxious industries that currently require buffers. Any new strategic industrial areas (to perhaps cater for these higher impact activities) will need to be assessed in more detail prior to amending the Scheme.

Potential pollutant outputs

There are no potential pollutant outputs that have impacts other than mining activities. These mining activities are administered by the Mines and Petroleum Act and are not determined by the planning statutes, however a Local Planning Policy may be prepared to convey the Council's views about the location of mining camps and the like.

Fauna protection

The same principles apply to these areas as for flora and native remnant vegetation. Any change in use will trigger an appropriate level of assessment.

Contaminated soil or groundwater

The Council is not aware of any contaminated sites within the Shire, and there are none identified on the DEC database. The Department of Water has advised that its internal database has 48 such sites identified within the Shire, however these are not readily available in a useful geographic format through the Department of Environment Regulation.

20 ECONOMIC BASE

Mining Activity

There is an on-going interest in mining activities in the Shire mainly centred mineral sands, limesand, basic raw materials, titanium and other heavy metal resources. The Shire is currently the subject of a major mining activity phase that may put pressure on the land supply, facilities and amenities in the district. However due to the population being well below its previous peak there is capacity in the infrastructure to absorb a significant increase in population.

Agricultural Produce

Although Carnamah is not strictly a Wheatbelt Shire, agriculture is still a significant economic activity in the Shire.

Recent varying rainfalls over the region may have an impact on the values of each crop and if climatic conditions keep changing, it is likely that agricultural pursuits will also change. These changes may include a diversification of landuses to avoid reliance on a single crop type.

It is possible that plantations will become viable in some areas when carbon trading becomes a reality.

Agricultural concerns are currently centred around salinity. Although groundwater levels are dropping due to the lack of rainfall over the past few years there is still an issue with salinity problems around townsites.

Adherence to sound management practices including stormwater drainage and flood mitigation will assist in the control of the salinity problem.

Implications of the Economic Base on Local Planning Strategy

The Shire's prosperity is obviously reliant on the continued protection of this economic base and as such planning decisions should be cognisant of the importance of protecting Prime Agricultural Land.

21 IDENTIFICATION OF PLANNING ISSUES

During the preparation of this Local Planning Strategy various State Government and other relevant authorities were circulated with a letter requesting their respective comments or input into the Scheme. The following comments were received from the respective agencies.

Date	Agency	Comment
27/9/11	DoP	Refers to TPS/LPS Manual
3/11/11	DIA	Refer to DIA Guidelines
11/10/11	DET	Adequate provision for students in the Region
20/9/11	DAFWA	Refer to DAFWA Strategic Plan 2010-15; Yarra Yarra Report 230; W Midlands Reserve Management Technical Report 315; and Towards a state Lime Supply Strategy.
7/10/11	WC	Details of water supply areas and wastewater facilities.
30/8/11	DMP	Recommendations for Strategy content.
24/10/11	DPaW	Listing of Conservation tenure, native vegetation area, TECs, threatened flora, endangered fauna and refers to the Department of Environmental Regulation's (DER) buffer requirements.
22/9/11	MRWA	Refers to Mid West roads 2025, State Roads, WAPC policies etc.

Consultation with the community will be determined in accordance with the Council's requirements.