



SHIRE OF VICTORIA PLAINS

LOCAL PLANNING STRATEGY

BACKGROUND REPORT

This document provides background information in support of
the Local Planning Strategy

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Updated August 2010

1 STATE AND REGIONAL PLANNING CONTEXT

1.1 State Sustainability Strategy

The State Sustainability Strategy (2003) 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. It should underpin future planning for the Shire of Victoria Plains.

1.2 State Planning Strategy

The State Planning Strategy was released in 1997 and describes the following vision for the Wheatbelt Region:

In the next three decades, the Wheatbelt Region will be characterised by a range of expanded towns linked by improved transport and commuter links to Perth. A range of consolidated service centres will grow throughout the region. The Wheatbelt will become an area of innovation in agriculture, environmental management and the development of downstream processing of agricultural and mining products. The region will develop stronger inter-regional, intra-regional and interstate linkages for both road and rail. Extensive rehabilitation of environmental damage to farmlands in the region will be undertaken.

Strategies identified to realise the vision include:

- Ensure that agricultural land is managed sustainably;
- Protect natural resources (especially water resources) and prime agricultural land from incompatible development;
- Protect landscape and cultural heritage values;
- Promote opportunities to develop a range of communities;
- Promote improved educational facilities;
- Promote opportunities for economic development;
- Address the concerns arising from the decline of small rural settlements, leading to the loss of service delivery of regional infrastructure to a highly dispersed population.
- Provide a strategic transport network within and to the Wheatbelt Region.

1.3 Draft Wheatbelt Regional Strategy (WRS)

In 2009 the WA Planning Commission prepared a directions paper for a draft WRS. The draft document suggests future needs and policies be based on the region rather than administrative boundaries. The document suggests several possible directions including those relating to remnant vegetation, retention of valuable agricultural land, buffers, plantations, tourism, raw materials, land supply, settlement hierarchy, and servicing issues. Local Planning Strategies should be consistent with the WRS.

1.4 State Planning Policies

State Planning Policies (SPP) are prepared and adopted by the WA Planning Commission. The WA Planning Commission and local governments must have due consideration for these policies when making decisions on planning matters. The following State Planning Policies are relevant to the Shire of Victoria Plains:

SPP 2 Environment and Natural Resource Planning

This is a broad policy that is supported by more specific policies. It details guiding objectives for water resources, air quality, soil and land quality, biodiversity, agriculture and rangelands, minerals, petroleum and basic raw materials, marine resources and aquaculture, landscapes, greenhouse gas emissions and energy efficiency.

SPP 2.4 Basic Raw Materials

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 Victoria Plains. The Council does not operate a quarry in the Shire.

SPP 2.5 Agriculture and Rural Land Use Planning

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 agricultural areas including the following.

- 1. *Protect agricultural land resources wherever possible by:***
 - (a) discouraging land uses unrelated to agriculture from locating on agricultural land; and
 - (b) minimising the ad hoc fragmentation of rural land; and
 - (c) improving resource and investment security for agricultural and allied industry production.

- 2. *Plan and provide for rural settlement where it can:***
 - (a) benefit and support existing communities, and
 - (b) have access to appropriate community services and infrastructure.

- 3. *Minimise the potential for land use conflict by:***
 - (a) providing adequate separation distance between potential conflicting land uses.
 - (b) introducing management requirements that protect existing agricultural land uses;
 - (c) identify areas that are suitable and capable of intensive agricultural pursuits as agricultural priority areas; and
 - (d) avoid locating new rural settlements in areas that are likely to create conflict with established or proposed agricultural priority areas.

- 4. *Carefully manage natural resources by -***
 - (a) discouraging development and/or subdivision that may result in land or environmental degradation;
 - (b) integrating land, catchment and water resource management requirements with land use planning controls;
 - (c) assisting in the wise use of resources including energy, minerals and basic raw materials;
 - (d) preventing land and environmental degradation during the extraction of minerals and basic raw materials; and
 - (e) incorporating land management standards and sequential land use change in the land use planning and development process.

Only two small areas are designated as Agricultural Priority Management Areas in the Shire. These are reflected on the Strategy maps and include the westernmost extreme of the Shire (west of Mogumber) and an area south east of Bolgart.

SPP 2.9 Water Resources

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.

SPP 3 Urban Growth and Settlement

This is a broad policy that is supplemented by more specific policies. It details guiding policy measures for creating sustainable communities, managing urban growth across Western Australia, planning for liveable neighbourhoods, coordinating services and infrastructure, managing rural-residential growth and planning for the Shire particularly in relation to historic townsites.

SPP 3.1 Residential Design Codes

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

1.5 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.

2 LOCATION AND SETTLEMENTS

The Shire of Victoria Plains covers an area of 2,563 square kilometres with its closest border located about 88 kilometres north east from Perth as the crow flies. The Shire is about 64 kilometres wide and 64 kilometres deep. The townsite of Calingiri is located 143 kilometres from Perth (via Bindoon), 39 kilometres from Wongan Hills and 61 kilometres from Toodyay to the south. Calingiri townsite is located on the hub of several important routes.

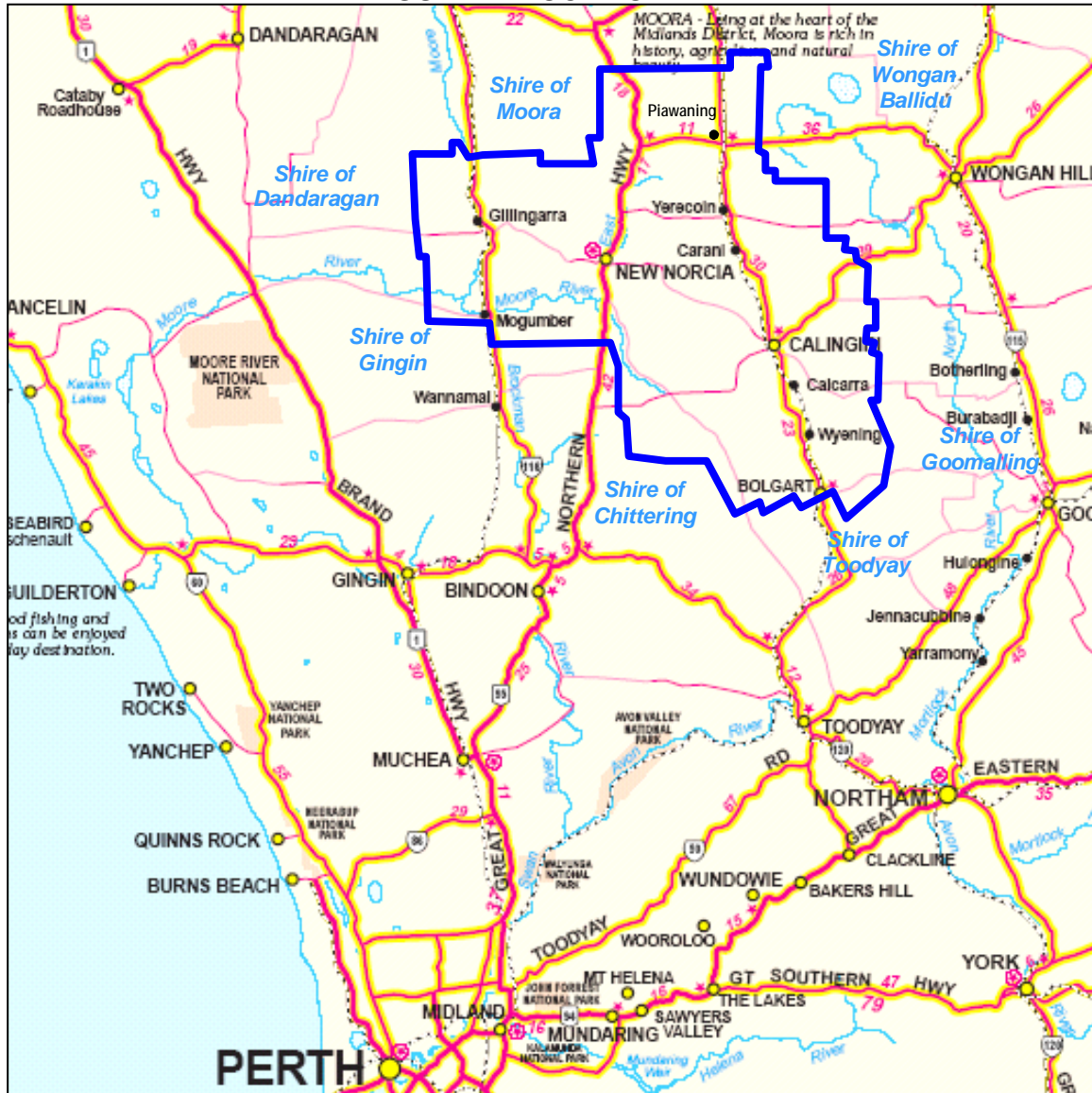
The Shire has 207 kilometres of sealed roads with over 600 more kilometres remaining unsealed.

Figure 1 shows the location of the Shire and townsite in relation to the surrounding settlements and the Perth Metropolitan Region.

The Wongan Hills – Calingiri Road is a State Road and classified as a Priority A Route in the Wheatbelt Regional Road Development Strategy. The route functions as a rural arterial road that provides access to Wongan Hills and areas further north, and westwards to Great Northern Highway and the Perth Metropolitan Area. The road also provides an alternative to the Highway and carries heavy farm vehicles carting fertiliser and grain, heavy freight vehicles and local traffic.

The Shire is bounded on the north-east by the Shire of Wongan-Ballidu, on the north-west by the Shires of Moora and Dandaragan, on the east by the Shire of Goomalling, on the south by the Shires of Chittering and Toodyay, and on the west by the Shire of Gingin.

FIGURE 1 - LOCATION PLAN



Source: StreetSmart, Landgate & PLANWEST

The Council's web site states that 'The Victoria Plains Road Board was one of the first of nineteen road boards established in Western Australia in 1871 to build and maintain roads and bridges throughout the state. In the early days, Victoria Plains stretched from the Indian Ocean to the South Australian border and from Carnamah in the North, to Bolgart in the South.'

'Today, our total area lies across 256,973 hectares with a population of 1000. The area is renowned for its prosperous agricultural activities, beautiful wildflowers, longstanding heritage and of course, the home of the Benedictine Community at New Norcia'.

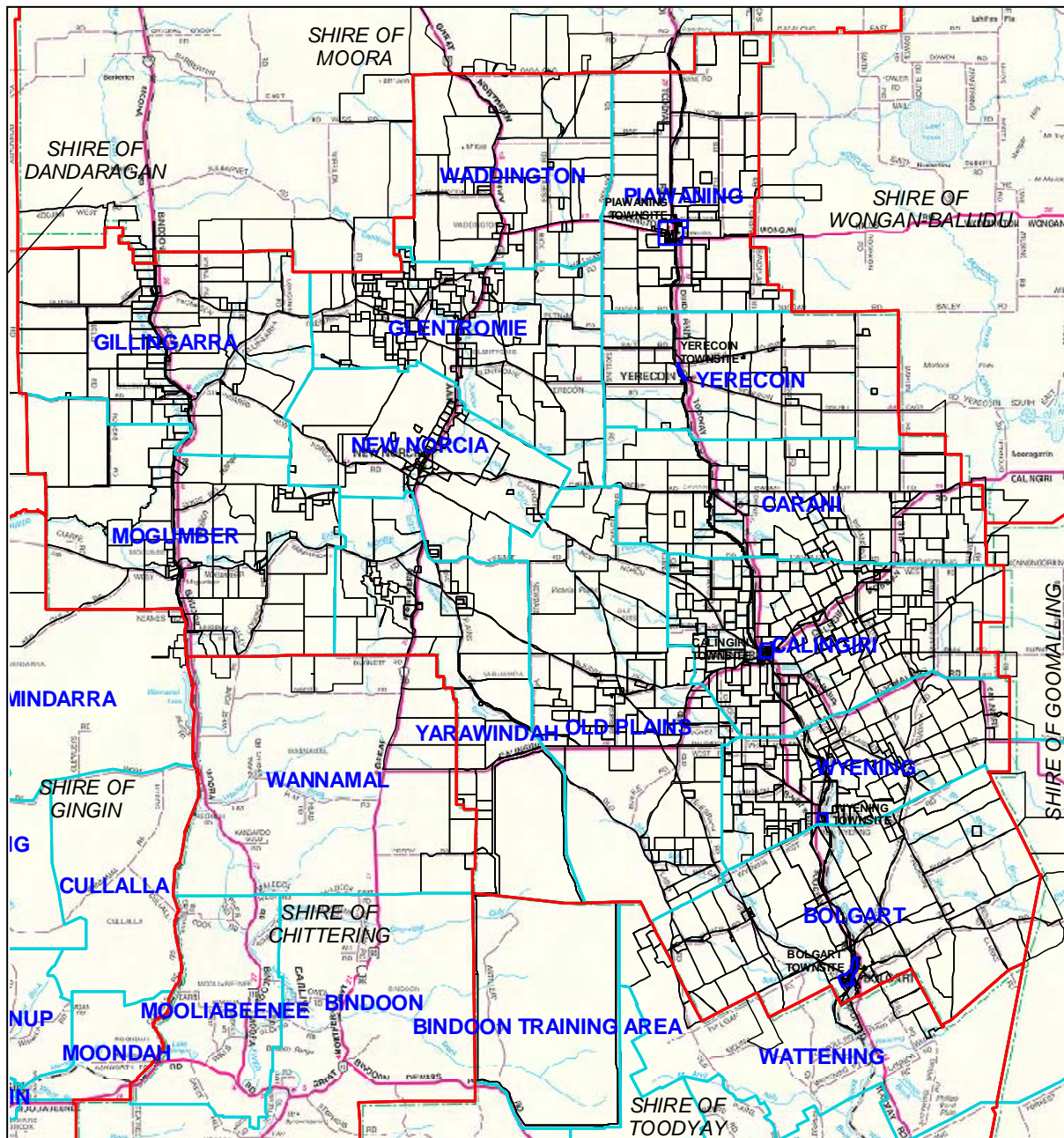
The web site adds that 'The history of the Victoria Plains district began in 1836 with the discovery of the Moore River by George Fletcher Moore. Further exploration was undertaken by Captain John Scully who, in a letter to the Governor in March 1841, reported the naming of the area as the Victoria Plains.

In 1846 a party of Catholic Missionaries led by Dom Rosendo Salvado founded a Benedictine mission at New Norcia. The Shire of Victoria Plains is situated 130km north -

east of Perth, along the Great Northern Highway and has a population of 1000. Today the area is one of the States leading farming and grazing areas. The Shire has three schools and many other community services.'

Figure 2 below shows the Localities in blue and the surrounding Local Government areas.

FIGURE 2 - VICTORIA PLAINS DISTRICTS AND TOWNSITES



Source: DLI, DPI and PLANWEST

The Shire has seven settlements, however New Norcia, Mogumber and Gillingarra appear not to be official townsites. The townsites include Calingiri, Bolgart, Piawaning, Wyering and Yerecoin.

The aerial photograph shown overleaf in **Figure 3** provides a view of Calingiri Townsite with its development concentrated along the two main arteries of Yulgering Road and Toodyay

Road. Calingiri is clearly the central administration, recreational, commercial, cultural and residential centre of the Shire. The townsite does not possess unlimited areas for expansion under the current Local Planning Scheme, although there would appear to be adequate industrial land for the immediate future. Potential for expansion is restricted in the south west by the railway and to the north by the golf course and town recreational area (including the oval). The townsite measures about 75 hectares in total.

Calingiri is home to the Shire Office, public library, sportsground, cemetery and a tourist information bay on the main street (Toodyay-Bindi Bindi Road). The Calingiri caravan park bookings can be made through the Shire Office. The Victoria Plains Tourism Association holds an annual Wildflower Walk just south of Calingiri. This is held in August/September and details can also be obtained from the Shire office.

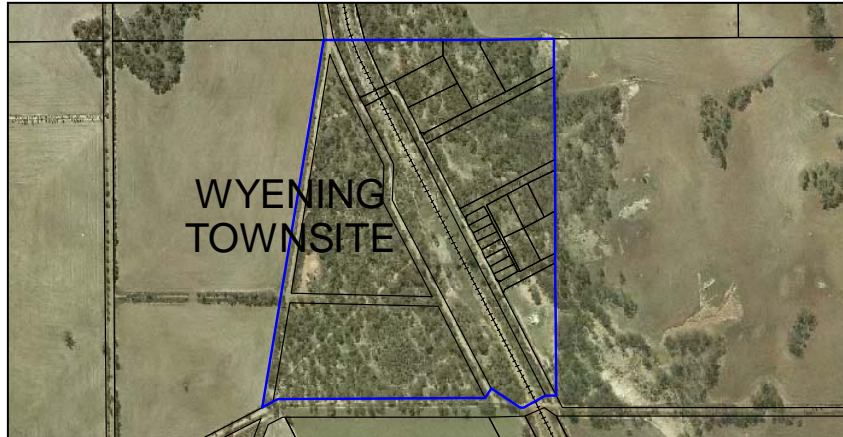
FIGURE 3 - CALINGIRI TOWNSITE



Source: DLI 2001

The following aerial photographs provide an indication of the extent of development at the Shire’s other townsites.

FIGURE 4 - WYENING TOWNSITE

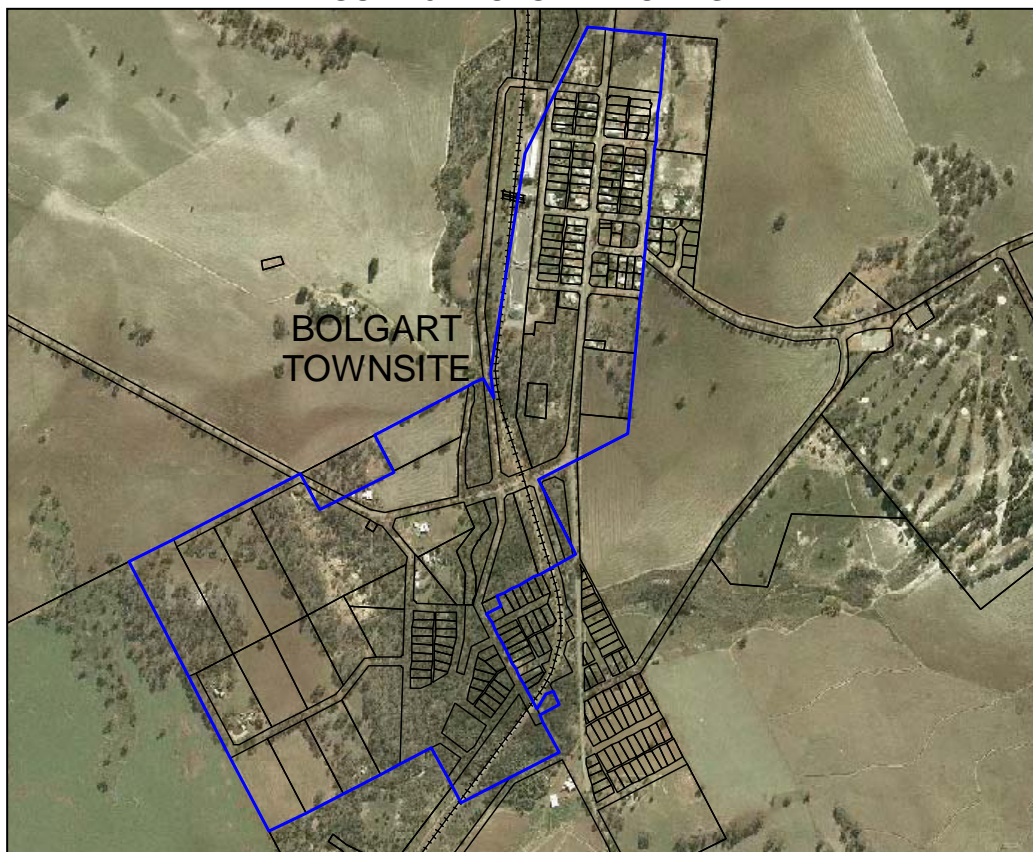


Source: DLI 2001

Wyening, shown on the previous page has virtually no development and is only 44 hectares in total. On the other hand, **Bolgart** (shown below) has a number of dwellings, commercial outlets, a school, golf course and other facilities clubs and amenities. The railway reserve houses the wheat bins. The total townsite measures about 98 hectares.

The Council is currently considering setting aside land for a future industrial area in the town.

FIGURE 5 - BOLGART TOWNSITE

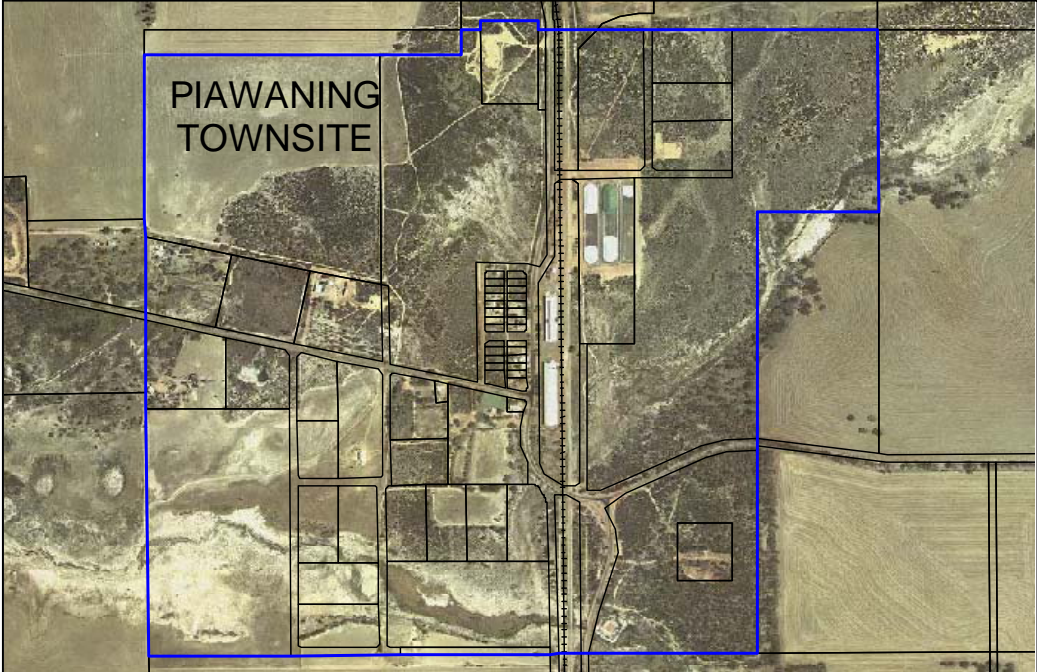


Source: DLI 2001

As the photograph above shows, the majority of the town's development occurs in the northern part of the townsite. The southern end is on lower ground and is fragmented by the river and railway; also the soils are more suitable in the northern section for development.

Piawaning Townsite (248 hectares) is shown overleaf. As can be seen from the photograph the townsite remains largely undeveloped. The wheat bins remain operational, with a shop located in the main street.

FIGURE 6 – PIAWANING TOWNSITE



Source: DLI 2001

Other than these townsites there are several other settlements, and another townsite, within the Shire. These include the following;

New Norcia will be discussed in more detail later in this strategy, but the settlement is mainly anchored around the Monastery which is home to the Benedictine Community and is a world renowned tourist destination being the only monastic township in Australia. The photograph below provides an aerial view of the buildings and surrounding land.

FIGURE 7 – NEW NORCIA SETTLEMENT

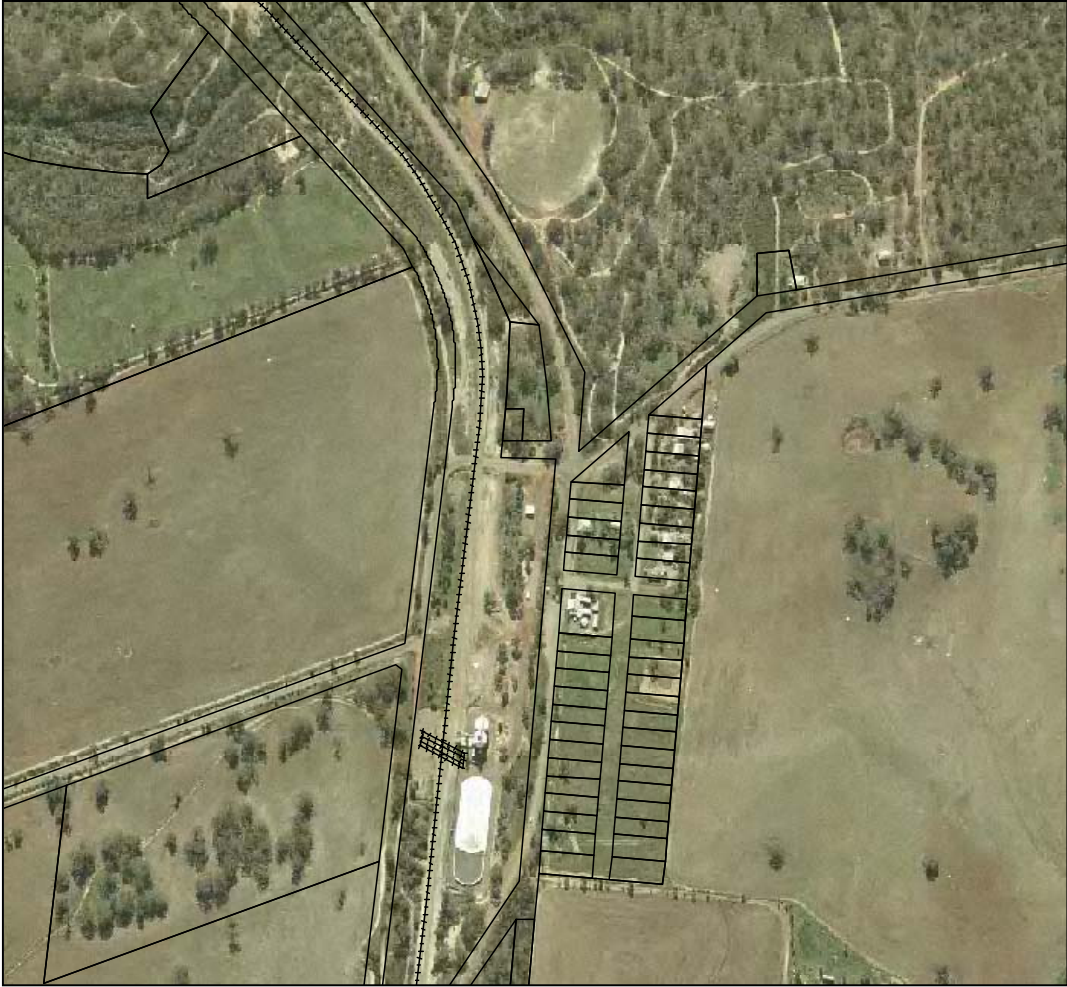


Source: DLI 2001

Mogumber settlement (**Figure 10**) is located at the southern end of the Shire on the Bindoon Moora Road. Again, the settlement has probably grown on the basis of the railway siding that still provides a wheat storage facility. The settlement is small with only 7 or 8 houses, a few mixed commercial uses, a recreation hall and oval and a library.

There has been a recent enquiry regarding a proposed caravan park and associated hotel/tavern facility to be located on the south east corner of the Bindoon-Moora Road and the Yarawindah Road. The Council has yet to receive a formal submission.

FIGURE 10 – MOGUMBER SETTLEMENT



Source: DLI 2001

Mogumber Mission is an old settlement that provides a location for Aboriginal people to stay a while. The facility is leased and controlled by the Wheatbelt Aboriginal Corporation.

Although the facility provides an interesting destination and will no doubt attract visitors to the area thus contributing to the list of activities in the district, it is located outside the Shire.

The photograph overleaf (**Figure 11**) shows the extent of the development. More details about the history and operation are included in the discussion about tourism in the area.

FIGURE 11 – MOGUMBER ABORIGINAL SETTLEMENT



Source: DLI 2001

3 CLIMATE

The town lies in the central Wheatbelt, and enjoys a temperate climate with hot, dry summers and light winters. The average rainfall in Victoria Plains is estimated to be between 400 and 550 depending on location, and occurs mainly in winter from May to October.

The climate is typical of the Wheatbelt Region with average temperatures shown in the table below (shown in ° Celsius).

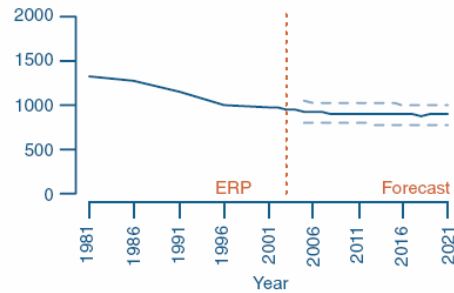
	LOW	HIGH
Winter	11	16
Summer	25	33

4 POPULATION

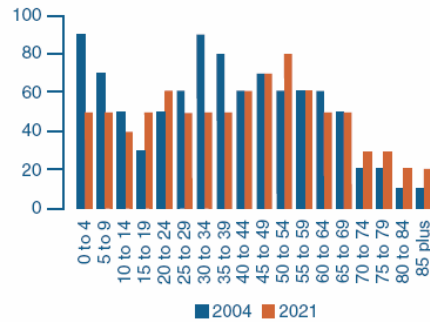
Victoria Plains, like most inland areas of Western Australia has had declining population since 1981, however this decline has levelled out since 1996. The decline in between 1996 and 2001 was only 11 people, and only 20 people between 2001 and 2006.

Table 1 – WAPC Population Projections 2004 - 2021.

	2004	2006	2011	2016	2021
0 to 4	95	80	60	55	55
5 to 9	75	80	75	50	50
10 to 14	45	50	70	65	45
15 to 19	30	30	40	50	50
20 to 24	50	40	35	45	60
25 to 29	60	60	45	40	55
30 to 34	95	80	70	55	50
35 to 39	80	85	75	65	50
40 to 44	55	60	80	70	60
45 to 49	70	60	65	85	75
50 to 54	60	65	55	60	80
55 to 59	60	60	60	55	60
60 to 64	60	60	55	60	50
65 to 69	45	50	50	45	50
70 to 74	20	25	35	35	35
75 to 79	20	15	20	35	35
80 to 84	10	10	10	15	25
85 plus	10	10	10	15	15
Total	940	920	910	900	900



▲ Chart 4.125.1 Expected accuracy



Source: WAPC, WA Tomorrow: Population Report No 6, 2005

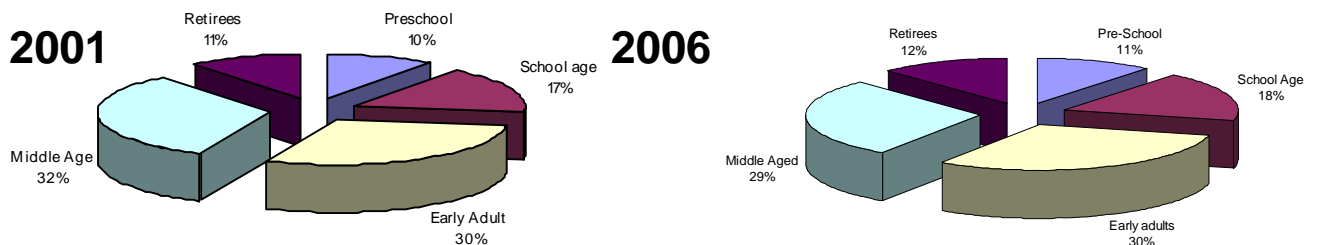
There is some conjecture whether population numbers are generally stabilising in country areas. However in the medium term, to about 2021 a general decline in numbers is expected to continue at a fairly slow but constant rate.

The pie charts below show the changes in age groupings with the Shire from the 2001 to the 2006 Census. The age groupings include the following;

Age Group	Ages
Pre-School	0-4
School Age	5-19
Early Adults	20-39
Middle Aged	40-64
Retirees	65+

The charts clearly demonstrate the consistency of the Middle Age group with increases in the Pre-school and Retirees groups. The Early Adult and School Age groups have decreased

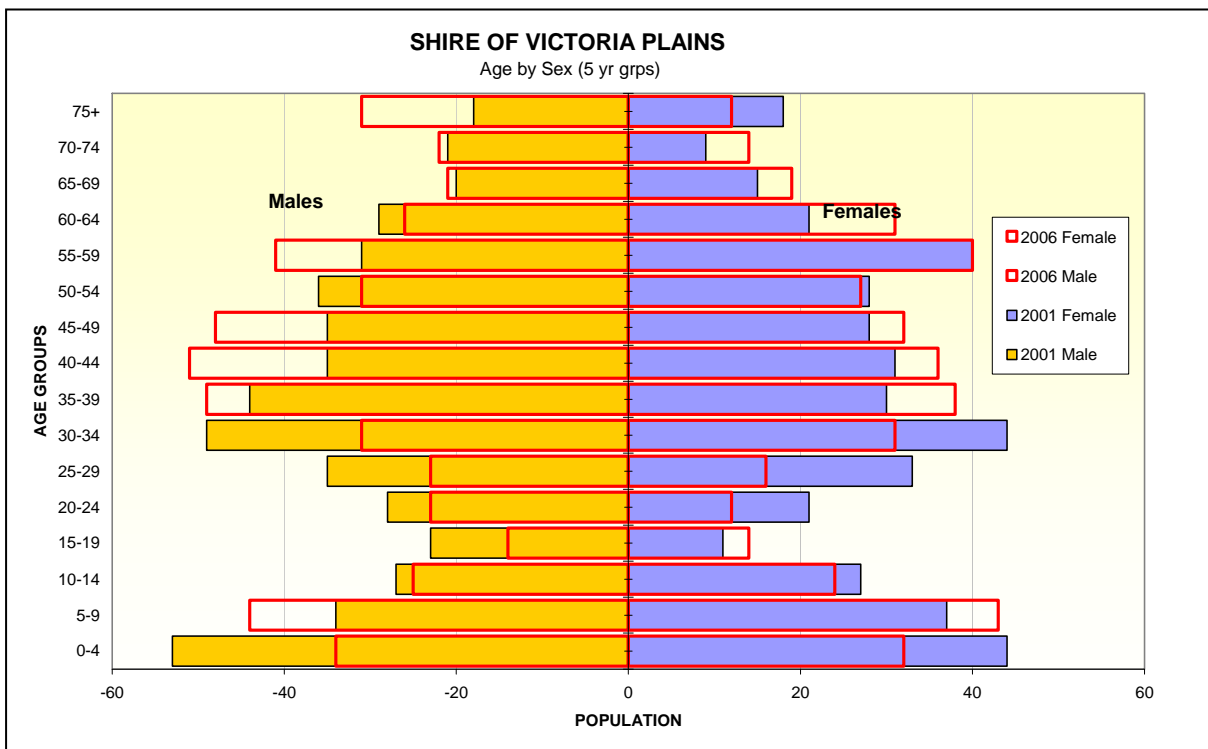
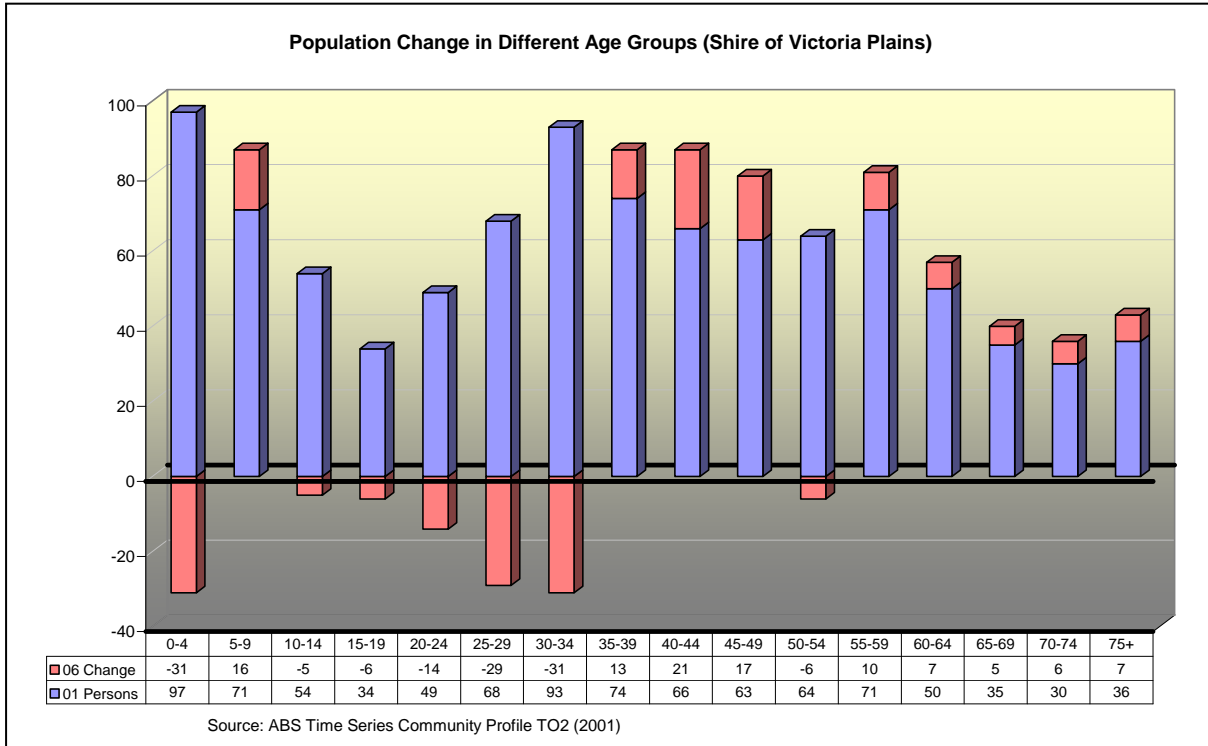
FIGURE 12 - VICTORIA PLAINS AGE GROUP DISTRIBUTION



Source: ABS 2001 and 2006 Census

The two charts overleaf (Figure 13) provide alternative views of the same information, but better demonstrate the variations between Censuses in different ways.

FIGURE 13 – VIEWS OF POPULATION STATISTICS



Source: ABS 2001 and 2006 Census

Notwithstanding the declining population, the Shire is prosperous. There were 475 people employed in the Shire as at the 2006 Census (72% full-time). Of these people, the majority were employed in agriculture and associated industries (56%). Other significant employers were from retail and wholesale trade, education and hospitality.

Rural Population

As with many Wheatbelt communities, the number and dispersed locations of the smaller townsites throughout the District present a problem for servicing. Whilst these settlements may have been important during the days when the grain silo rail sidings were operational, many are now bypassed by the rail system and therefore perform no useful function in the current economic system. The townsites that have no development at all should be reclaimed by the Council to ensure that development does not take place. The Council should also review those townsites that are partly developed in order to minimise future development, or even discourage further building development. Although the Council has little obligation to provide normal town services to these remote areas, further development may encourage an increased demand for services like school buses, rubbish collection etc that will inevitably stretch the Council's resources.

In order to provide a choice for prospective residents in the District it is recommended that alternative residential areas be created. Other than selected townsites and farms, it is suggested that larger rural-residential lots be encouraged in certain locations.

The Council will ensure that the market for rural residential lots is not flooded with unsold lots; however the supply must provide a reasonable variety of choice for size, location and character.

These lots should be grouped into a 'Rural Residential' environment. The selection of these areas should be determined on a set of criteria including the following;

- Proximity to services, amenities and facilities
- Land suitability and capability
- Environmental values and risks
- Potential for land use conflict and impacts on adjacent land uses
- Existence of any buffer areas from incompatible uses
- Providing a choice of lifestyles and individual identities
- Any other factors considered relevant by the Council.

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

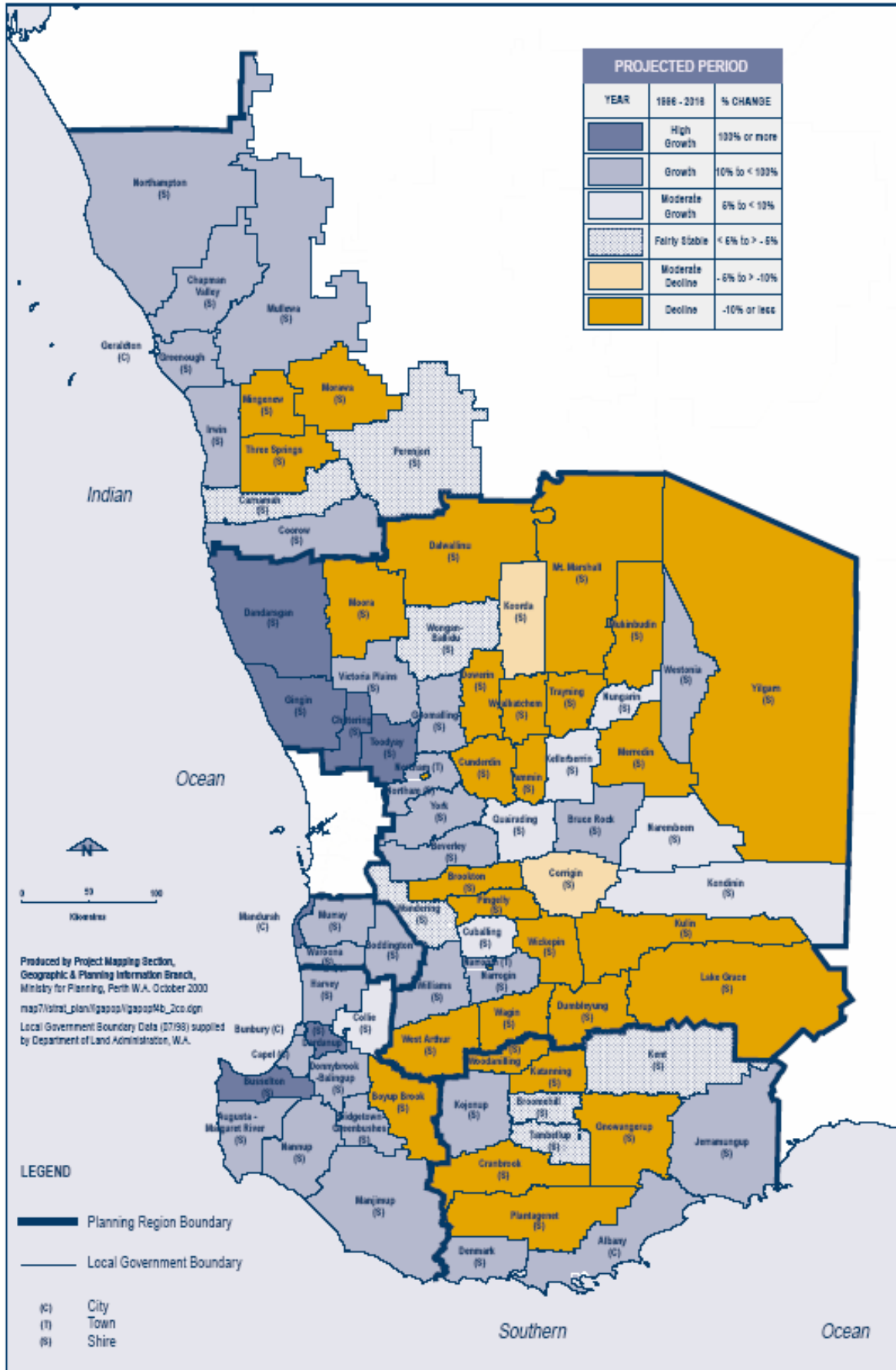
The Shire's distance from Perth and its regional climate will remain an obstacle to the lack of growth in the population projections. Calingiri's location away from the major Highway network contributes to the reduced passing trade and exposure of most of the tourist traffic.

Growth population projections for the Shire (Department of Planning, 2000) suggest that, of the 44 LGAs within the Wheatbelt Planning Region, 35 recorded declining populations. During the 1981-96 period most of the growth occurred in the LGAs adjacent to the Perth Metropolitan Region.

Figure 14 overleaf shows this information extracted from the Western Australian Planning Commission's Population Report No 4, Oct 2000. Notwithstanding this gloomy situation, the districts to the west of Victoria Plains are beginning to feel the effects of the expansion of the Perth Metropolitan Area. Shires like Gingin, Chittering and Toodyay especially, are forecast to have 'high growth' rates over the next 10 years. The effect of this expansion pressure is expected to radiate into areas like Victoria Plains over the next decade or so. Both Calingiri and Bolgart are looking for a variety of residential lot sizes to cater for a demand in town lots, special residential and rural residential lifestyles.

The growing significance of the grain and fertiliser route passing Calingiri will ensure it remains an important stop between Wongan Hills and the Great Northern Highway.

FIGURE 14 - PREDICTED POPULATION CHANGE IN LGAs FOR 1996 - 2016



Source: Western Australian Planning Commission - Population Report No 4, Oct 2000

5 EDUCATION FACILITIES

The Shire has three schools, the first in Calingiri (Cavell Street) with current enrolment of 46 students for the Kindy to Year 7. An additional 7 students are forecast for 2006 for Kindy, and 4 less for Year 7.

The second school is in Bolgart (Smith Street) with current enrolment of 49 students for Kindy to Year 7. Forecasts for 2006 should be around 46 students from Kindy to Year 7.

The third school is in Yerecoin (Miling Road). Current Enrolments are at 36 students for Kindy to Year 7. Forecasts for 2006 should be around 35 students for Kindy to Year 7.

Implications of Education Statistics on Local Planning Strategy

The student forecasts indicate a slight increase for Calingiri students in 2006, and a minor decrease in enrolments for Bolgart and Yerecoin implying little significant change to the student population. These adjustments are not seen as significant to the Strategy proposals.

6 SOCIAL STATISTICS

In March 2003 the Australian Bureau of Statistics released its 2001 Census data for Urban Centres. The following analysis is a brief snap-shot that compares the Shire of Victoria Plains with State averages in 1996 and 2001. This provides an indication, or comparison of the status of the Victoria Plains data with the overall levels.

The proportion of the 0-14 (youth) age group for Victoria Plains (22.7%) was slightly lower than the State average of 22.4% in 1996, and 21.3% in 2001. At the other end of the scale the over 65 years group was substantially higher for Victoria Plains (11.1%) than the State (10.5% in 1996 and 11.1% in 2001). The median age was 35 years of age in Victoria Plains as compared to 33 and 34 in 1996 and 2001 respectively for Western Australia.

The break-up of males to female ratio in the State was 50-50 in 1996 and 49.8-50.2 in 2001. Victoria Plains had significantly less females than the State average (54.8 – 45.2). The population count for the town was 980 in 1996 and 965 in 2001, a decrease of only 15 people or nearly 1.5%.

There were 350 full-time and 125 part-time people employed. This represents better proportions in the full-time employment status than the State.

The occupation of employed person's distribution is similar to the State break-up, but variations do occur in some areas as one would expect. In Victoria Plains 42.6% were employed in management or administration compared with 9.4% in 1996 and 8.7% in 2001 for the State. An explanation of this variation may be attributed to the presence of regional offices in Calingiri, but more so the classification of farmers as managers or administrators. Those employed in professional positions in the Shire (4.8%) was substantially less than the State (nearly 30%). Trade and related workers constituted 12% in Victoria Plains whereas the State had 14.2% in 1996 and 13.3% in 2001. Intermediate clerical, sales and service workers made up only 3.8% of Victoria Plains's employed persons compared with the State's 15.7% in 1996 and 16.1% in 2001. Elementary clerical, sales and service workers made up only 1.8% of Victoria Plains' workers and around 9% for the State.

Labourers and related workers made up 16.5% of the employed persons compared with 9.1% in 1996 and 8.8% in 2001 in the State.

The distribution of the population is clearly concentrated within the town of Calingiri; however the ABS does not separately list Calingiri as an urban centre making it difficult to substantiate this.

As at 30 June 2002 other selected statistics include the following; 49 people were on the aged pension, 24 had a Newstart allowance, 5 were unemployed (.9%) and there no parenting allowances (single) or youth allowances.

The average individual annual taxable income in 2000-01 was \$36,157, with an average wage and salary income of \$24,305.

Implications of Social Statistics on Local Planning Strategy

The increasing number of people 55 and over indicates there will be demands on future aged person's facilities. One can assume that this age bracket may want to settle in Calingiri and as such will be demanding the appropriate services. If these services are not provided this population may well seek an alternative town in which to settle. Calingiri may be a 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 accommodation, medical facilities and support services.

These facilities should be well located within walking distance the main commercial and community facilities and are well placed to provide a grouping of facilities serving residents with similar interests, and needs. The Council should earmark vacant land in a strategic location for future developments targeting this market.

7 ABORIGINAL SITES

The Department of Indigenous Affairs has suggested initial investigations should include a desktop study to determine whether there are any known sites in the district. Seven sites are known to exist in the Shire. There are no restrictions, they have open access and all appear on the interim register. Two of the seven locations are termed 'unreliable'. These two include a mythological site in the Wattening-Bolgart area, and a 'man made structure' located nearly eight kilometres west of Piawaning. The remaining 5 sites (as marked on the Strategy Map) are all in the Muchae-Walebing area and include two modified trees and three artefacts/scatter sites.

Implications of Aboriginal Sites on Local Planning Strategy

As the Strategy is not suggesting any specific development proposals it is suggested that there are no implications. However, applicants for development approvals in the vicinity of the areas identified as having Aboriginal sites should be reminded of the need to protect and report findings immediately they are discovered.

8 TOURISM

Victoria Plains is well known for its attractive natural environment and areas of historic interest. The district offers many attractive **wildflower drives**. One of the most prolific areas for wildflowers is along The Old Plains Road which runs for 29 kilometres and was once used by Benedictine Monks for travelling to Perth. Abundant flora and fauna can be found around this area including birds, lizards, kangaroos and echidnas.

Bolgart claims the **first settled farm** in the district and features the historic Bolgart Hotel built in 1916 and the Bolgart Bell Tower. The Bolgart Caravan Park has green lawns and

shady trees to enjoy. There is a new playground, a tourist info bay south of the town and a lovely mural at the primary school. The town is located at the southern end of the Shire on the Toodyay Bindi Bindi Road 21 kilometres south of Calingiri.

Wyening is located midway between Bogart and Calingiri on the Toodyay Bindi Bindi Road. The **Wyening Mission and Winery** was built around 1890, still has some original vats, casks and old wine making equipment including tools, wedges, etc. The Mission House was erected around 1879 and was built traditionally to form the shape of a cross.

On the corner of Calcarra Road & Corondeen Road, south of Calingiri, is the **Old Blacksmiths Shop** site that used to be run by local craftsmen. A plaque commemorates the area.

Mogumber is a settlement located 39 kilometres north of Bindoon and 46 Kilometres south of Moora. The area features one of the highest timber and concrete bridges in WA, at 12m above the picturesque Moore River and 82.5 metres long, opened in 1984. The bridge is made of Blackbutt and Jarrah. The old stone post office and store is also of interest, plus a rare patch and home of the endangered species, the Mogumber Bell.

The photograph below (**Figure 15**) shows the old Mogumber Station built in 1892, originally called Moore River Station but renamed Mogumber Station in 1894. The Station's buildings, including a station master's quarters and a refreshment room used in the early days, were all built of weatherboard. There was a station master in attendance from when the station opened until the 1st of December 1978. Today the station's siding is still open.

FIGURE 15 - MOGUMBER STATION



Source: Don Copley

Located 10 kilometres west of Mogumber is a historical Aboriginal mission. Located 135 km north of Perth, the tiny settlement on the Moore River is a reminder of the insensitive treatment of Aboriginal people by providing a destination for the lost generation.

The Wheatbelt Aboriginal Corporation and **Mogumber Heritage Tours** have been successful in gaining a Heritage Grant for \$5000 to provide and install interpretive signage to heritage sites at Mogumber, including the publication of photographs and historical data for the former Moore River Native Settlement.

The grants allocated through the Department of Indigenous Affairs focus on innovative projects that assist in the education and protection of Indigenous heritage and culture. Some of these funds would assist in plans for the Moore River Native Settlement, or Mogumber Farm as it is now known, to operate as a tourist destination.

The Wheatbelt Area Consultative Committee, which administers the Regional Partnership programme locally, has endorsed the project as a significant employment generating opportunity for the local community.

The aim of this project is to develop and operate a viable, self sufficient and self-managed tourism activity that acts as a focus for Indigenous people, their culture and the natural beauty of the area.

Yerecoin is a thriving little town located 21 kilometres north of Calingiri with a popular Tavern and a good community spirit. Originally the **local Monastery** bred horses in this area for sale to India. Later these were owned by the Midland Railway Company.

Piawaning is located 30 kilometres north of Calingiri on the Toodyay-Bindi Bindi Road. The huge grain storage facilities have a capacity for about 110,000 tonnes.

Gillingarra is located in the west of the Shire 13 kilometres north of Mogumber on the Bindoon Moora Road. The area features a beautiful seasonal display of wildflowers.

New Norcia is home to the Benedictine Community and is a world renowned tourist destination being the only monastic township in Australia. Tours of the town operate twice daily from the museum. The Community founded by Dom Rosendo Salvado in 1846. New Norcia is today the home of 18 Benedictine Monks.

For the first time in 150 years, ancient doors have been unlocked and visitors are welcomed to a world of olive groves, church bells and secret courtyards. The architecture, with its strong Spanish flavour, dominates the Australian bush setting. Twenty seven of the buildings are classified by the National Trust and the town as a whole is registered on the National Estate. The buildings house richly decorated interiors with old master works of art and extravagant furniture and furnishings.

Nearby accommodation includes Monastery Guesthouse, New Norcia Hotel and the Old Convent. Local services include crafts, Monastery Roadhouse, New Norcia Trading Post, Tourist Information Centre and the Shire Office in Calingiri.

Historic **Canterbury** is located 3km south of New Norcia. It caters for a wide variety of local arts and crafts, including Aboriginal Crafts, specialising in sheepskin products including coats, seat covers, ugg boots, bags, toys and souvenirs.

Self **guided walking** tour which features many of New Norcia's landmarks including the Abbey Church, a statue of Bishop Salvado, the 19th Century Sundial, the Bishop's Well and the Beehouse.

The **Museum** contains everything from the founder's gold teeth to gifts from Isabella II, Queen of Spain. The extensive array of artefacts tells the story of New Norcia's time as an

aboriginal mission, the centre of the monks' extensive farming activities and place of education & culture. The Art Gallery upstairs houses the Monks' art collection.

Gillingarra Located in the west of the Shire features beautiful seasonal displays of wildflowers.

Heritage Places

In 1998 the Shire Council commissioned the preparation of a Municipal Inventory of Heritage Places in response to the Heritage of WA Act 1990 (s45). Places of heritage value are recorded in this document in order that they may be identified, recognised and protected for the benefit of the local population as well as tourists. The inventory identifies buildings and places that have contributed to the historic development of the Shire and retain some degree of value. The document will be progressively updated and recommends various management procedures depending on the selected category.

Trails Master Plan

In 2003 the Shire Council commissioned the preparation of a Trails Master Plan with a grant from the Department of Sport and Recreation. The Plan was prepared through consultation with Shire personnel, Councillors, community representatives, New Norcia representatives and Government agencies.

The Master Plan identifies;

- Primary and Secondary Drive Trails;
- Historic Monastic Walk Trail;
- Nature Reserve Walk Trails; and
- Cultural/Town Walk Trails.

The backbone of the Plan is a 200 kilometre drive trail that takes the trail users through the main towns, landscapes and nature reserves in the Shire. Along the trail users can stop and walk along nature trails or historic and cultural trails at a number of defined destinations.

Implications of Tourist Attractions on Local Planning Strategy

Tourism is an industry that will only grow in the future. The Council proposes to ensure that these sites are appropriately protected and managed in order to maximise their interest value and tourism appeal. A periodic review and update of both the Municipal Inventory and Trails Master Plans should be considered subject to funding availability.

9 LAND DEMAND AND AVAILABILITY

The only land release that is currently being pursued is the creation of additional industrial lots in Bolgart. The Council is currently reviewing several options for the subdivision of land in the north east corner of the town to satisfy an immediate demand for industrial land.

This proposal was included in Amendment No 4 that had received final approval from the Minister. The Council has also been exploring the option for developing land on the north east corner of Lambert Crescent and Edmonds Street for residential development. The land is already owned by the Shire.

Amendment 5 seeks to rezone Lot 21 Toodyay Bindi Bindi Road, Bolgart, from 'Rural' to 'Rural Residential' (about 25 hectares to create approximately 11 2.5 hectare lots). This application is yet to be determined.

Amendment No 6 to Scheme 4 seeks to allow the 242 hectares to be subdivided into 113 rural residential lots. The lots vary in size from 1 - 3.2 hectares. The Amendment has been adopted by the Council and is currently with the Commission. This development is located immediately east of the Mogumber settlement and will be designed to use roof-top rain collection and suitably sized storage tanks.

It is important that this Strategy identifies the need for additional land releases around the Shire. These releases must be sensitive to demand, but also they must provide a supply adequate to offer a choice of size, configuration, location and type of use permitted.

The supply of residential, industrial, rural residential, commercial and other land must be monitored by the Shire on an on-going basis. There has been 11 new houses built in Calingiri town site in the last 4 years.

Any shortfall of supply will either mean prices will rise unrealistically and detract from developers, and developers will establish in another district. Alternatively, some enterprises will just not happen. A glut, or over-supply, can have equally serious results by flooding the market and reducing prices whereby developers take a loss and will not invest in the Shire in the future.

Figure 16 shows the land ownership and vacancies within the Calingiri townsite, whilst **Figure 17** shows the current landuse in the townsite.

Implications of Land Demand and Availability

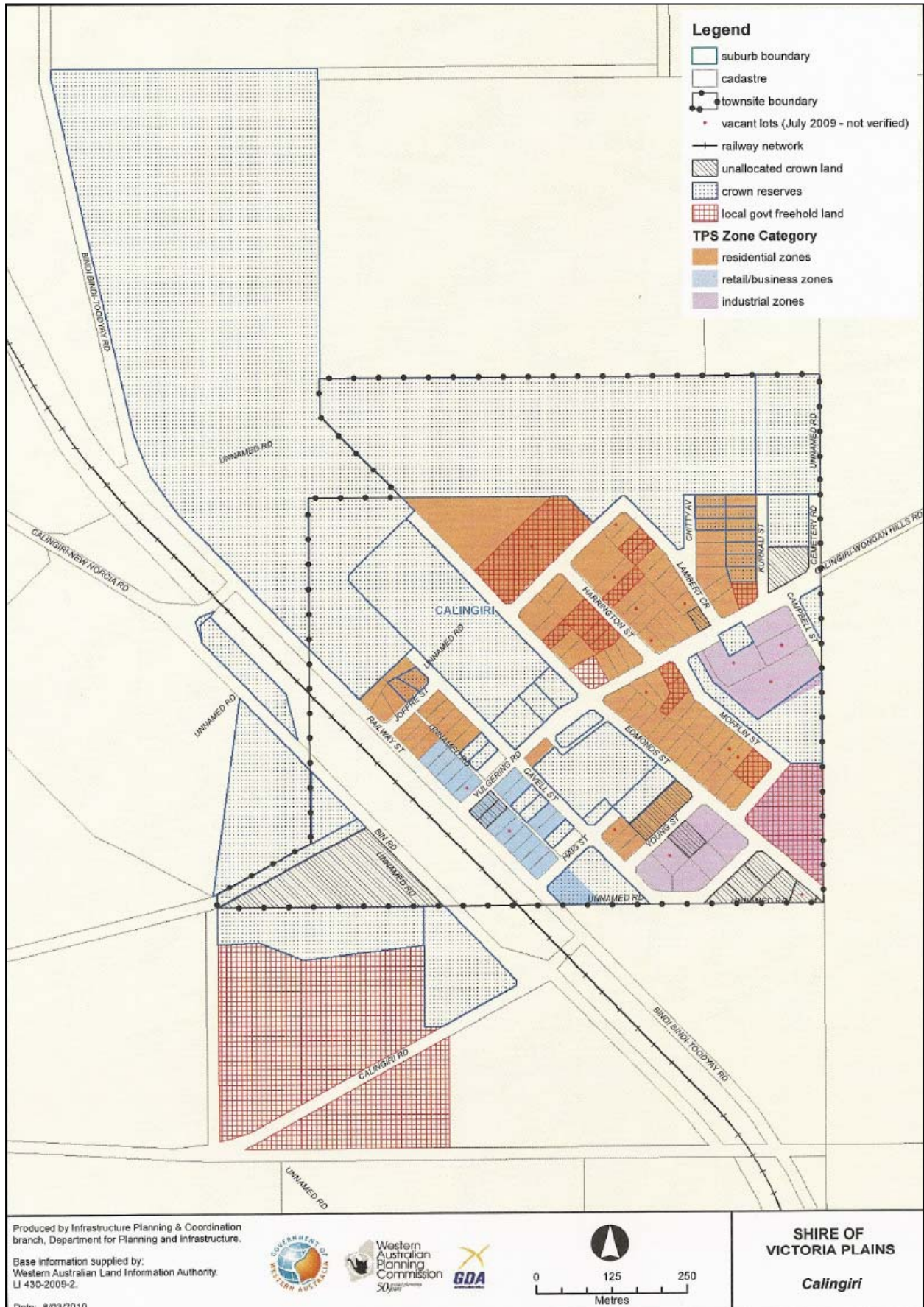
It would appear from **Figure 16** overleaf that the town has an adequate supply of zoned residential land for the near future - providing the region is not affected by a significant development (for example an influx of people related to a mining project).

Many of the lots identified as vacant are not necessarily available for sale. As a result, the Council will be progressing with a new residential subdivision in the area north of Lambert Court with an anticipated yield 13-16 lots.

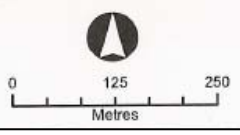
The Council has no available commercial lots and there are only two vacant privately owned lots in Calingiri. There appears to be adequate industrial land zoned to cater for future demands within the next 10-15 years at the rate of take-up in Calingiri, however the Council has been made aware of a demand in Bolgart.

Advice indicates that a piped water supply may be an issue however the industries anticipated for this area will not require water for uses other than ablutions. This supply can be managed by roof top collection in suitably sized tanks. Development can be made contingent on the development having a minimum sized roof and being a dry industry (ie one not requiring water for its operation).

FIGURE 16 - LAND OWNERSHIP IN CALINGIRI TOWNSITE



Produced by Infrastructure Planning & Coordination branch, Department for Planning and Infrastructure.
 Base information supplied by: Western Australian Land Information Authority. LI 430-2009-2.
 Date: 8/03/2010



SHIRE OF VICTORIA PLAINS
Calingiri

Source: WA Planning Commission 2010

FIGURE 17 - LANDUSE IN CALINGIRI TOWNSITE



Source: WA Planning Commission 2010

10 SHIRE FACILITIES AND AMENITIES

The Shire and residents have created a wide and varied range of activities and clubs to ensure maximum participation, interaction and cohesion of the community.

Recreation and Other Facilities

Calingiri Recreational Hall (Yulgering Road, Calingiri)

The Calingiri Recreation Hall was opened on 29 March 1980 and is the main hall within the Shire of Victoria Plains with social events such as cabaret, school concerts and weddings being held in it.

The Hall, run and maintained by the Shire, has a large open area for large functions, a kitchen, bar area, toilets, a small meeting room and two squash courts.

Bolgart Hall (George Street, Bolgart)

The Bolgart Hall was built in 1932 with additions being made in 1948 and 1953. The Bolgart Hall was opened on 17 January 1933, after the former Agricultural Hall in the original townsite had burnt down exactly two years previously. The Hall was situated adjacent to the football and cricket ground, and convenient for use by the clubs.

In 1936, the tennis club transferred from the old townsite and located near the hall with a bough shed constructed. Afternoon teas for all the clubs were served in the hall.

In 1952, fundraising facilitated the purchase of the old Culham Hall. It was dismantled, the bricks cleaned and transported, by the members of the local community, for use in construction of the front additions to the Bolgart Hall.

A grand opening was held to celebrate the new extensions; a memorial plaque was unveiled on 26 April 1953. The back rooms that had been used for the football change rooms were vacated, and the CWA women furnished the rooms for their Branch meeting rooms.

The Hall now has a stage area, side meeting room, kitchen and outside toilets. It is run and maintained by the Bolgart Progress Association.

Yerecoin Hall (Miling Road, Yerecoin)

The Yerecoin Hall was constructed in the early 1950s. Prior to the Hall being constructed all social activities took place at the school. Some of the activities that have occurred in the Hall are cabarets, sports windups, birthday parties, art, aerobics, badminton and films have also been shown.

The interior of the Hall has a similar set up of the Bolgart Hall with a stage area, side meeting room, kitchen and toilets. It is run and maintained by the Yerecoin Progress Association.

Piawaning Hall (Toodyay Bindi Bindi Road, Piawaning)

The Piawaning Hall was also constructed in the late 1950s with additions being made in the early and late 1970s. The Hall is used for many events throughout the year with meetings, sporting events and dances. It is also used by the schools within the Shire of Victoria Plains. The Hall is run and maintained by the Piawaning Progress Association.

Mogumber Hall (Bindoon Moora Road, Mogumber)

The Mogumber Hall was constructed in 1959 and is the social centre of the Mogumber Community. The Hall is run and maintained by the Mogumber Progress Association.

Gillingarra Recreation Hall (Bindoon Moora Road, Gillingarra)

The Gillingarra Recreation Hall was constructed in 1936 with a gala sports day being held to commemorate the occasion, followed by a dance in the evening. School picnics, concerts, dances and annual sports days were ongoing events at the hall.

In 1962 the hall was extended to accommodate a badminton court. In 1965/66 the hall was lined to dado height. In 1983 it was decided that a Recreation Centre was required comprising a sports hall, social hall, meeting rooms and a kitchen. The original hall was moved 100 metres and the shell was retained, but it was clad the same as the adjoining new structure. The Hall is run and maintained by the Gillingarra Sport and Recreation Club.

On 8 November 1986 the new hall was opened and a ball celebrated the event.

Other Groups, Clubs and Associations

Calingiri provides for a variety of sports and club activities including tennis, bowling, football, hockey and golf. The Calingiri sports club provides a venue for many of these activities as well the Progress Association and the VP Arts Society.

There are four active Landcare groups including;

- West Koojan-Gillingarra Land Conservation District Committee (LCDC)
- Piawaning-Yerecoin LCDC
- Calingiri-New Norcia LCDC
- Soloman-Yulgan Catchment Group

Tennis is also provided for in Piawaning, Bolgart, Gillingarra and Yerecoin. Bolgart also has a bowling club. As well as Calingiri, Progress Associations are also established at Piawaning, Yerecoin, Bolgart, Mogumber and Gillingarra.

Implications of Shire Facilities and Amenities

The presence of all of the listed clubs, amenities and interest groups in Calingiri emphasises the importance of consolidating development within a single townsite, or sharing the facilities with Bolgart. The policy of the Department of Sports and Recreation of allowing a fair distribution of facilities in other towns needs to be assessed in terms of on-going sustainability. Allowing development to be distributed around the Shire may weaken its effectiveness.

11 TRANSPORT FACILITIES

Clearly the main mode of transport through the Wheatbelt is by road. Transport of rural produce by rail is dependant on the delivery of the produce from its source, by road, to collection points for loading into trains.

Figure 18 below shows the Shire in the framework of the major transport routes to the coast and to Perth. The Cooperative Bulk Handling (CBH) sites are also shown. The majority of the grain cartage in the Shire occurs along the Highway linking the townsites with the CBH receival points. The maintenance obligations revert to the Main Roads WA. The railway through the western part of the Shire is no longer operational and has no implications for the three settlements in this area.

The Main Roads WA 2020 Regional Road Development Strategy – 1997 (RRDS) classifies major routes as separate categories including Great Northern Highway, State Roads and Local Roads. The following routes are included in the Strategy;

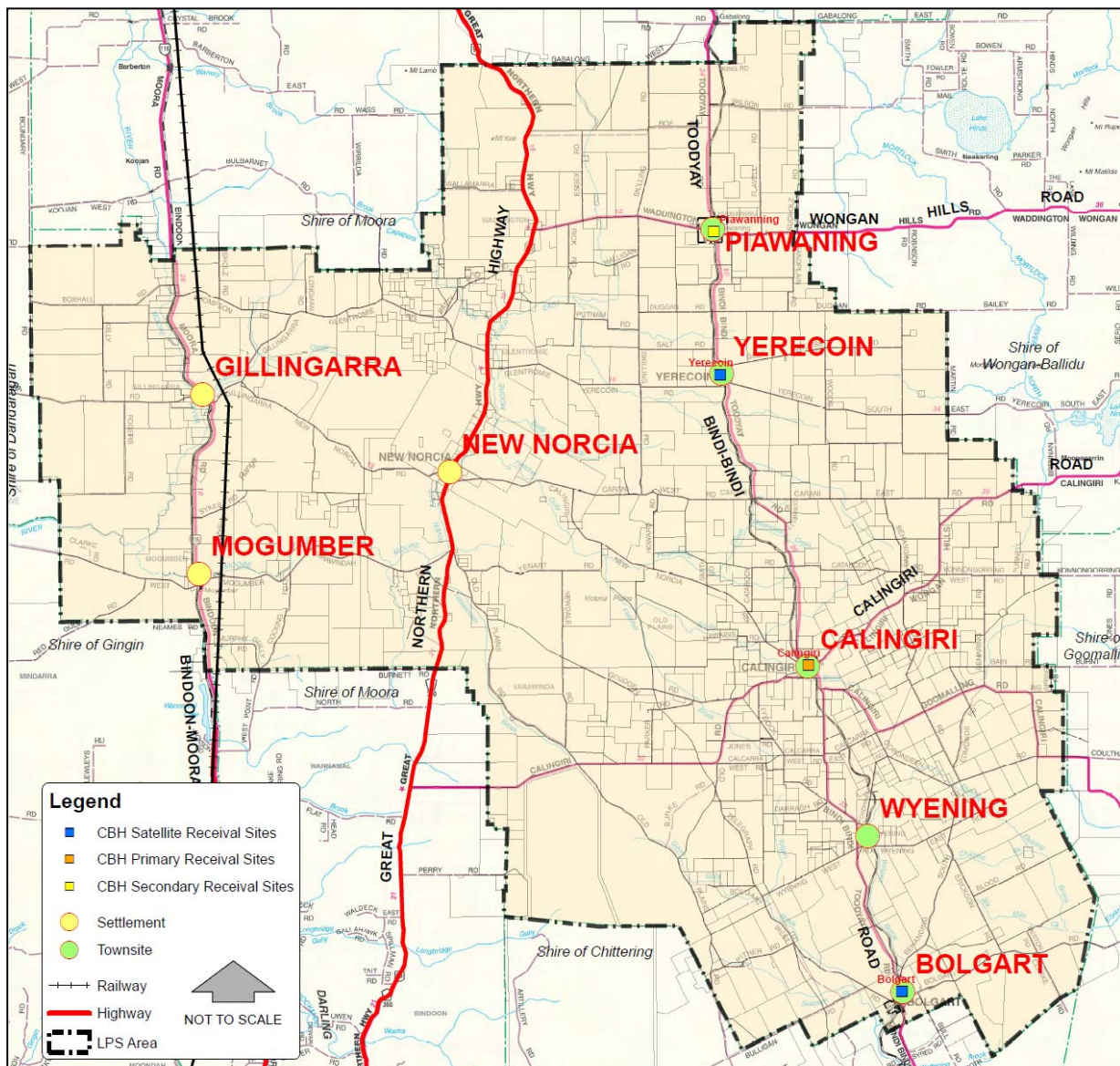
Great Northern Highway

The Highway is a major inter-regional express route linking the Perth Metropolitan Area with the north-west of the State. The route forms part of National Highway round Australia. Although triple roads trains are only allowed south to Wubin, doubles are permitted through to Upper Swan.

Due to the variety of vehicle types and speeds there is a need to upgrade alignments, seal shoulders, improve passing opportunities and widen sealed surfaces. The Strategy indicates the possible future need for a bypass of New Norcia townsite requiring a realignment of the Highway south of the townsite. Main Roads suggests that future development should be guided by this possibility.

The Strategy prioritises upgrading the majority of this alignment through the Shire of Victoria Plains to a *Type 6 Sealed Road*. Type 6 standard includes an 8-9 metres sealed surface with no kerbing and a space for stationary vehicles to stand clear of traffic lanes, and to assist cyclists.

FIGURE 18 - MAJOR TRANSPORT ROUTES



Source: CBH, PLANWEST and Landgate

Wongan Hills – Calingiri State Road

The road's main function is for carrying grain and fertilisers but it is expected to cater for increases in tourist and other freight traffic. The Strategy gives priority to upgrading the route from Wongan Hills to the Great Northern Highway to a *Type 5 Standard* (this implies a 7 metre seal).

Bindoon – Moora State Road

The Strategy identifies this route as a major north-south arterial link, connecting Moora and towns further north with Great Northern Highway and Perth Metropolitan Region. The route caters for tourist and freight traffic. The roadway north of Mogumber already has a 7 metre seal but the route south of Mogumber requires upgrades to alignments, passing opportunities and widening.

Waddington – Wongan Hills Local Road

Although classified as a local road this route provides access from Wongan Hills to the Great Northern Highway or through Moora and Badgingarra to the coast. The route is not only a tourist route but is also used to cart grain, fertiliser, livestock and general freight.

The existing narrow seal was considered inadequate for the variety of types and speeds of vehicles. The Strategy suggests a *Type 4* standard be achieved (6 metres sealed road with no kerb). Within the Shire the road is now 6.2 metres in width with 1 metre gravel shoulders.

The Council is not aware of any by-pass routes for Bolgart but a bypass for New Norcia is planned as a part of the Great Northern Highway upgrade but this should have no implications for the shire as it is planned to run through the privately owned farmland of the Benedictine Community.

There are no airstrips within the Shire - other than those used by pastors.

Implications of Transport Facilities on Local Planning Strategy

Due to the town's location away from a major Highway it is essential that the roads leading to Calingiri and Bolgart 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 town, or at least through it. 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 sustained to ensure that any new regional transport initiative or strategy does not bypass the town. Input to these proposals must be on-going and active. To attract tourist traffic the road conditions must be made more suitable (ie safer) to better cater for the variety of traffic types forecast to use the roads in the future.

Any new development, especially affecting the alignments outlined above, should minimise direct access to these roads by providing independent access and road systems.

Maintaining an efficient structure of routes for fertiliser, hay and grain cartage through the Shire will assist in keeping the district in the activity network (eg. lime-sand route). Access roads to and from CBH receival points need to be regularly monitored and maintained.

12 SERVICING ISSUES

Water Supply

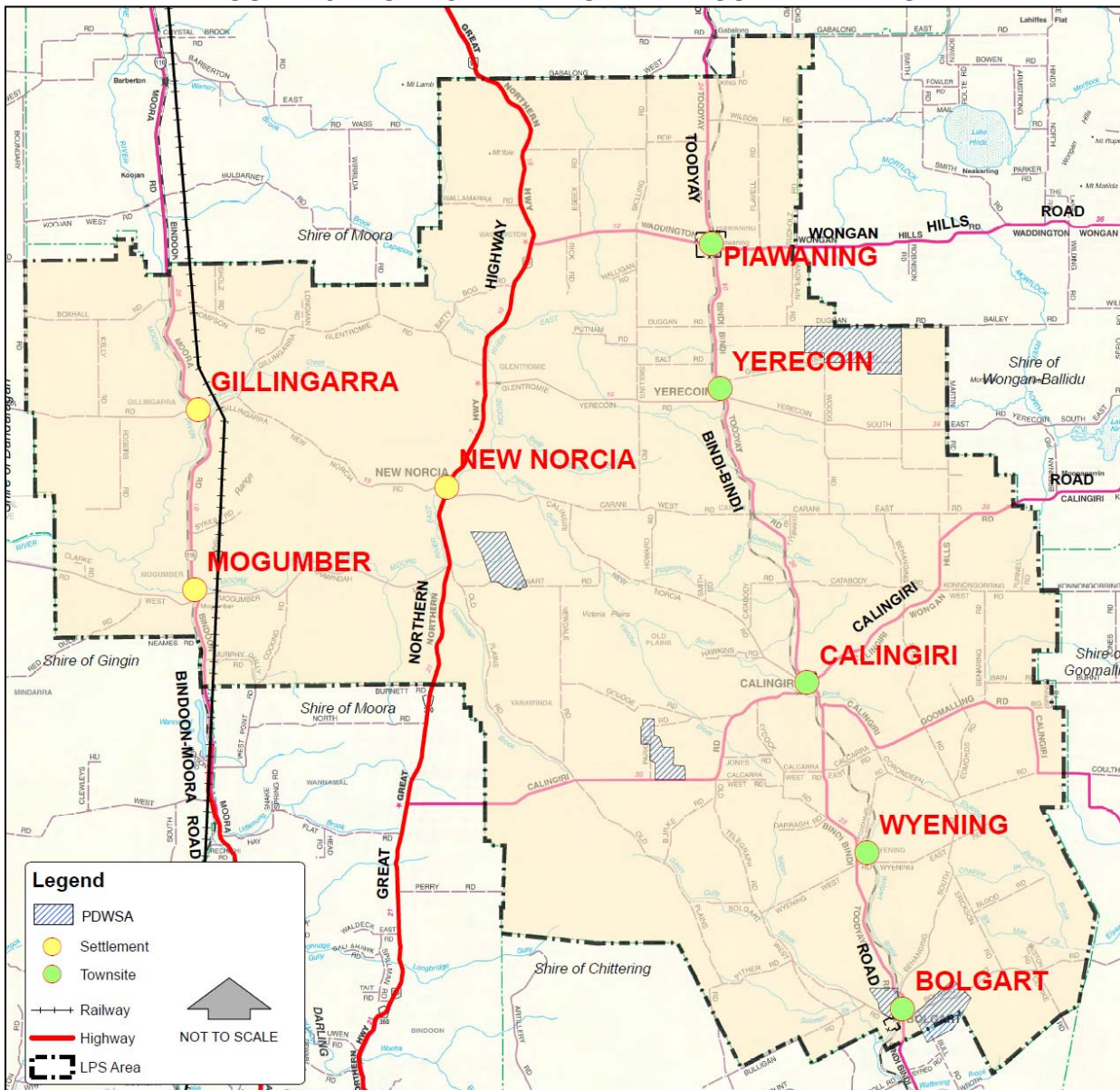
No response was received from WaterCorp requesting its comments and/or requirements to be included in this Strategy. Further inquiries regarding water supply capacities, potential water sources and areas that could be serviced by potable water supplies within the Shire

were met with a negative response. Advice indicated that the WaterCorp did not have the resources to provide this information.

Calingiri, Bolgart, New Norcia and Yerecoin have reticulated water mains supplies using the public drinking water source protection areas (PDWSA) shown in **Figure 19**. Piawaning has a reticulated supply but gets its water piped from the Yerecoin supply. The water supply in Yerecoin (and Piawaning) is substandard and has resulted in restricted development opportunities.

Figure 19 shows the location of the PDWSAs in the Shire. Where no piped water supply is available in the Shire alternative provision should be made through roof-top collection and tank storage.

FIGURE 19 - PUBLIC DRINKING WATER SUPPLY AREAS



Source: WAWA, PLANWEST

Wastewater

The Shire manages a septic tank effluent disposal system in Calingiri and Yerecoin. All other towns and development operate on individual septic tank and leach drain systems.

Rubbish Collection/Disposal

Mobile garbage bins are supplied to each town resident and are collected every week. The Shire rubbish tips are located at Calingiri, New Norcia, Bolgart and Mogumber.

The tips are located as follows;

- Calingiri - Crown Reserve 34141 - Calingiri Goomalling Road - currently in use
- Bolgart - Lot 1 Diag 16424 - Bolgart East Road - currently in use
- Mogumber - Crown Reserve 8588 - Bindoon Moora Road - currently in use
- Piawaning - Lot 50 - Toodyay Bindi Bindi Road - closed
- New Norcia - Just off Great Northern Highway on private land.

The Calingiri and Mogumber sites are nearing the end of their useful lives.

Power Supply

Power to all development within the Shire is supplied by Western Power. Current supplies are considered adequate however any major increase in demands may require a review of the system network - especially in relation to industrial supplies with larger than normal demands.

Gas Supplies

LPG Gas is supplied in cylinders by a local distributor

Fire Management

Fire fighting facilities are provided for the town of Calingiri in the Emergency Services Building, Yulgering Road. The facilities include State Emergency Services Vehicles comprising a bushfire tanker and ambulance. The six outlying populated towns are provided with volunteer bushfire brigade vehicles comprising the following equipment;

- Bolgart - Fire Shed on George Street - A fire tender and ambulance.
- Yerecoin/Piawaning - Fire Shed on Miling Road Yerecoin – A fire tender.
- New Norcia – Co-located Emergency Services Shed - Great Northern Highway New Norcia – A tender and ambulance.
- Mogumber/Gillingarra Fire Shed - Bindoon Moora Road Gillingarra – A fire tender.

The shire operates on effective and active volunteer service.

Implications of Services within the Shire on Local Planning Strategy

The lack of information regarding the provision of water within the Shire makes planning difficult and reactive rather than planning within capacities. Whether in townsites or in rural areas, the location of future areas for development will need to be assessed on a case by case basis. Generally development will not be encouraged in the smaller townsites and settlements, due partly to the lack of services, but also to encourage growth to be consolidated in Calingiri or Bolgart.

Plans to use a regional land fill site are currently being developed for putrescible wastes. Inert waste will be separated at Calingiri and Bolgart transfer stations for recycling or disposal.

PDWSA areas need to be protected from development that may impact the quality of the ground water. These areas will be shown on the Strategy Map. Supply quality for Piawaning (and Yerecoin) should be reviewed in order to maintain an adequate water supply for the towns.

13 GEOLOGY

All mineral exploration and mining in WA is subject to the provisions of the Mining Act 1978, which is administered by Department 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.

The Geological Survey of Western Australia (GSWA) aims to meet DMP's objective of 'achieving responsible development of industry and resources for the benefit of Western Australians'. This is achieved through the provision of quality geo-scientific data and information and advice to the mining and petroleum industries, government and public to encourage and support resource exploration and facilitate informed land use planning and State development.

GSWA has a responsibility for investigating and reporting on all occurrences of minerals in WA including industrial minerals and basic raw materials. The DMP can make recommendations concerning the protection of strategic resources of specific minerals from sterilisation as a consequence of residential or industrial development or the construction of roads or other infrastructure. The responsibility for implementing such recommendations rests with local government, the Department of Planning and the Western Australian Planning Commission.

Advice from the Geological Survey WA indicates that about 90 per cent of the Shire overlies crystalline rocks of Archaean age (i.e. > 2500 million years). These are predominantly various types of granite, but a belt of metamorphic rocks of the Jimperding Gneiss Complex passes diagonally through the area. The remaining 10 per cent of the Shire lies to the west of the Darling Fault, and comprises flat-lying Cretaceous sedimentary rocks of the Perth Basin. The broad outlines of the geology are shown on 1:2,500,000 Geological Map of Western Australia, further details can be found on the Perth and Moora 1:250000 Geological Sheets published by this Department. This mapping can be obtained from the Department's GeoVIEW.WA on line GIS system.

Apart from small-scale quarrying of construction materials for road, etc, the recorded mining activity within the Shire has been the extraction of some 300 tonnes of kaolin from near Piawaning in 1989. Other mineral occurrences recorded from the area include gold and anthophyllite asbestos near Bolgart, and platinum-group elements with associated nickel and copper at Yarwindah Brook, near New Norcia. The locations of these can be found in the Geo VIEW. WA of DMP's website: <http://www.dmp.wa.gov.au/aboutus/geoviewlaunch.asp>

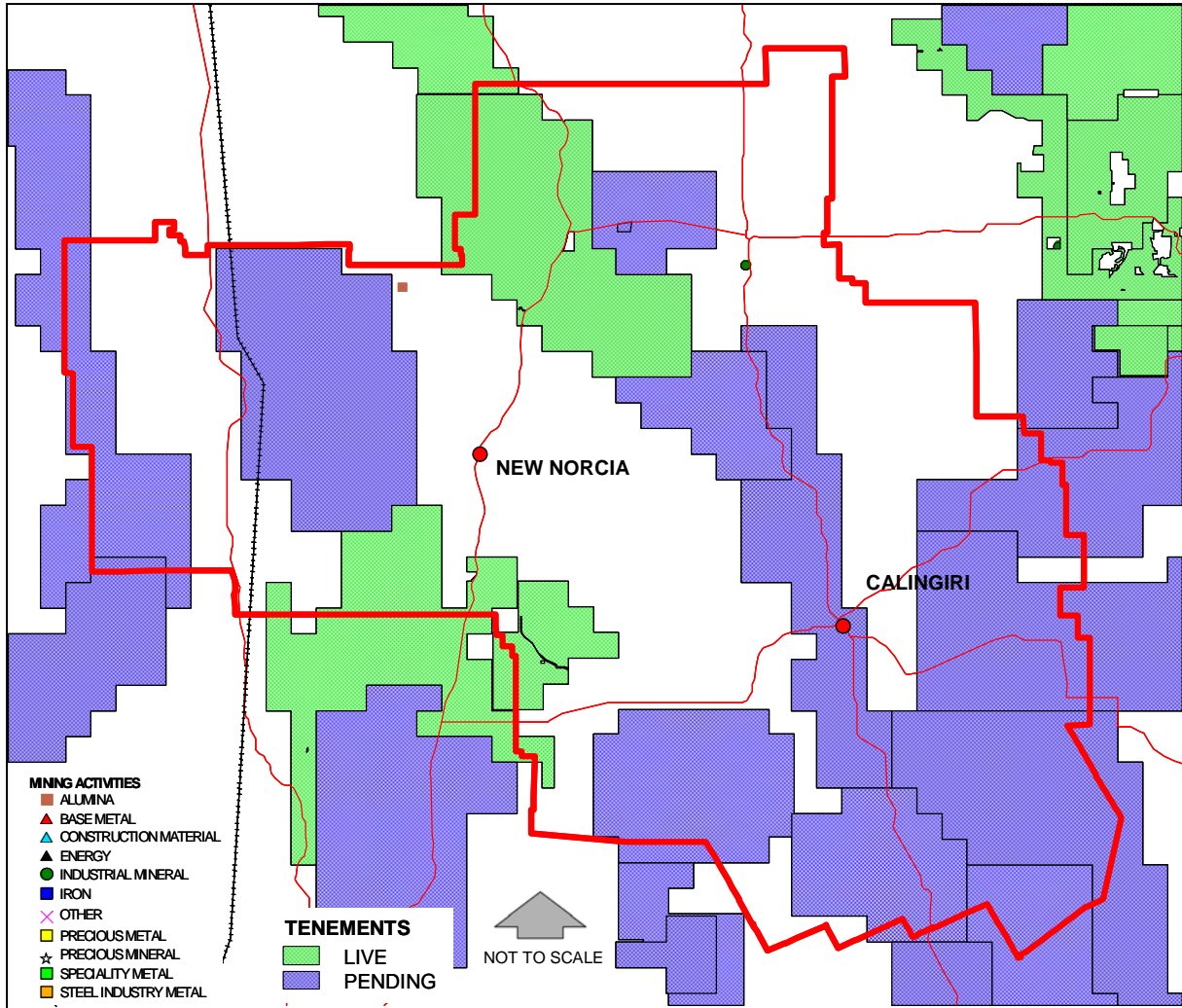
The Yarwindah Brook occurrence received some media publicity about 15 years ago, but further investigation indicated that it was uneconomic. The deposit lies within a large gabbro intrusion and is likely to attract further exploration because platinum and nickel prices are currently high.

The GSWA suggests that the Strategy make allowance for current and further mining activities within the Shire and take due account of the need for ongoing extraction of construction materials, such as sand and gravel, to provide raw materials for construction works within the Shire.

Figure 20 shows a map from Department Mines and Petroleum (DMP) that displays the distribution of the mining activities within the Shire of Victoria Plains.

The Shire has no quarry sites.

FIGURE 20 – TENEMENTS AND MINING ACTIVITIES



The following table shows information about the tenements including the target commodities, such as diamonds, nickel and copper and precious metals (gold and platinum). There are 3 granted exploration licences within the Shire and 4 further exploration licences under application.

TEN NO	HOLDER	POSSIBLE COMMODITY	STATUS	DATE
E70/2523	Rio Tinto Exploration	Diamond	Granted	29/10/2003 – 28/10/2008
E70/2693	Swanove Enterprises Pty Ltd	Nickel and copper	Pending	02/06/2004
E70/2687	Rojex Mining Services Pty Ltd		Pending	17/05/2004
E70/2444	Swanove Enterprises Pty Ltd	Nickel and copper	Granted	04/07/2003 - 03/07/2008
E70/2301	Murchison Resources Pty Ltd	Nickel and copper	Granted	07/12/2001 - 06/12/2006
E70/2371	Galtrad Pty Ltd	Precious metals	Pending	22/09/2000
E70/2429	Newcity Corporation	Precious metals	Pending	09/03/2001

Giralia Resources recently made an announcement to the Stock Exchange about a magnetite deposit at Yerecoin and Bauxite Resources have undertaken some exploration for Bauxite north of New Norcia, however no further details are currently available.

14 MANAGING NATURAL RESOURCES

The Shire of Victoria Plains is part of the Rural Towns Program, with only Piawaning currently participating. The Program was established in 1997 as part of the State Salinity Strategy to assist local communities to tackle salinity generally but specially in townsite areas where the problem can be more acute. Townsite salinity occurs because towns are traditionally built in low-lying areas. Natural development of the land and townsite area has resulted in tree clearing, causing watertables to rise.

The Rural Towns Program aims to provide solutions to the environmental and economic problems that arise as a result of townsite salinity.

The Rural Towns Program is working with several local governments especially in the Wheatbelt agricultural region, to measure the characteristics of groundwater systems and produce computer-generated models to predict the effects of townsite salinity in the future for each specific area.

These models can also show the likely effectiveness of various salinity management strategies suitable for each area, helping the community to plan and implement programs to protect their future.

The Department of Land Information (DLI) has prepared several analyses using the Satellite Remote Sensing Techniques. These include mapping over the whole district to show Salinity Monitoring, Digital Elevation Model, Slope Analysis, Vegetation Density, Vegetation Density and High Slope and LandSat Images.

Western Swamp Tortoises at Mogumber

In 2001 25 critically endangered Western Swamp tortoises were released into swamps at Mogumber. The translocation was part of the Western Swamp Tortoise Recovery Plan, which aimed to bring this species - the world's rarest tortoise or turtle - back from the brink of extinction.

The tortoises, captive-bred and reared at Perth Zoo, were released into swamps on land purchased by the Department of Environment and Conservation north-west of Lake Wannamal.

Flood Risk

Generally there are no flood risks in the Shire. However, in the past there has been an issue of flooding in the southern parts of the Bolgart townsite. Many years ago the whole town was relocated to its current location to avoid these floodwaters. This flood-prone area still remains within the existing townsite boundary. The Council's Local Government Insurance Services Risk Management consultant lists a flood event in the Shire as unlikely with the level of risk rated as low. In the antecedent information relating to the preparation of that risk register no floods were noted in Victoria Plains.

The Strategy map opposes any development in the southern parts of Bolgart townsite.

Seismic Activity

A minor earthquake event was recorded at Bolgart with a magnitude 2.8 on the 18 July 2003. In 2005 (17 March) a 2.7 quake was recorded at Calingiri and in June a 2.5 quake was recorded East of Bolgart

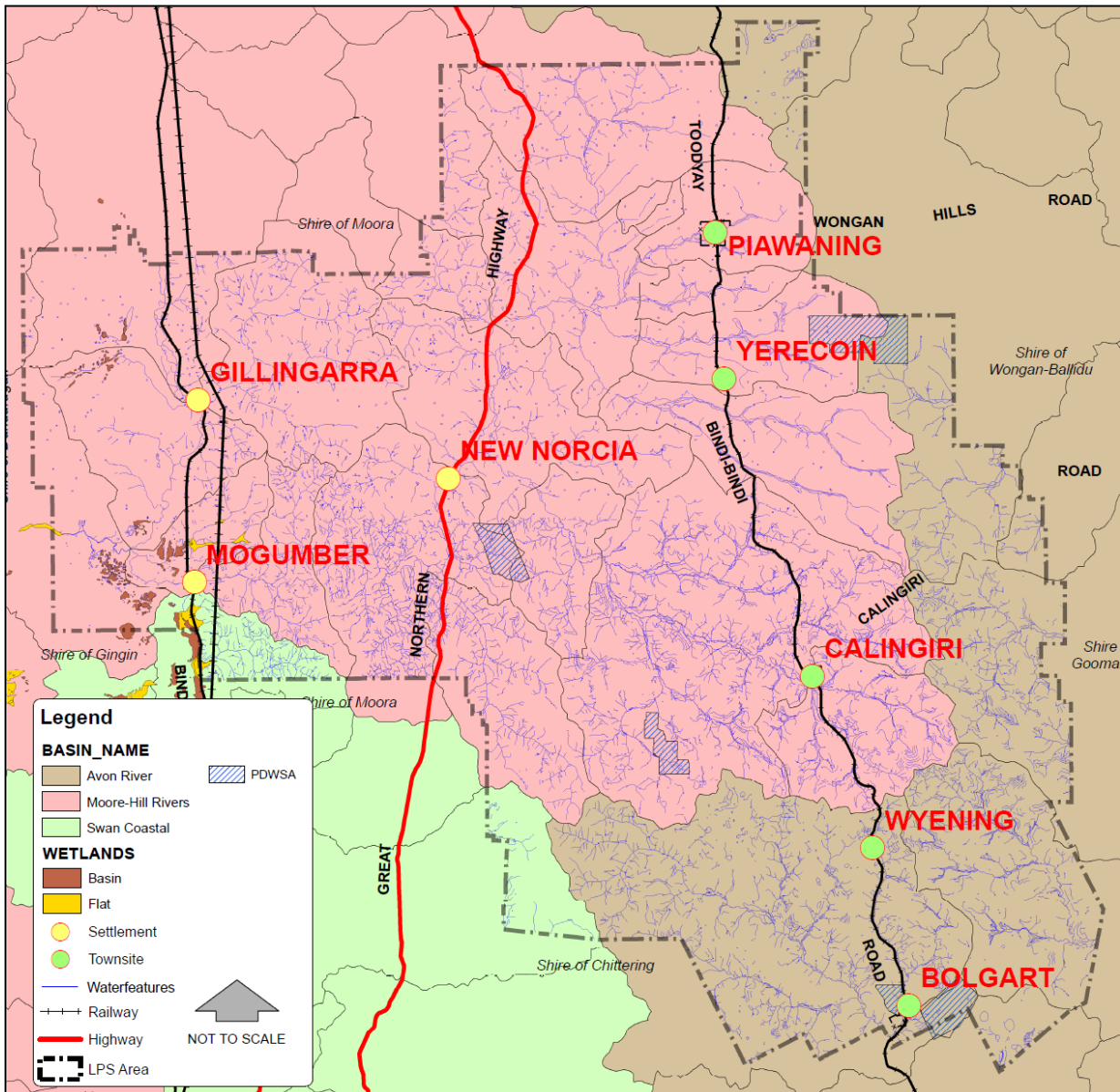
There has been other minor activity around Wongan Ballidu including several in Cadoux and a small one in Ballidu in late Jul 2010.

CATCHMENT AND WATER MANAGEMENT

The Shire of Victoria Plains falls mainly within the Moore-Hill Rivers catchment basin. However as can be seen from **Figure 21**, parts of the Shire occur in the Avon River and Swan Coastal catchments.

The Figure also shows water features throughout the Shire as well as public drinking water supply areas for Yerecoin, Calingiri, Bolgart and New Norcia. Uses within these PDWS areas are required to be assessed by the Department of Environment and Conservation under the Water Quality Protection Note relating to land use compatibilities. PDWS areas are designated various priority areas that are determined by potential impacts on groundwater supplies. For example areas close to well heads are Priority 1 where many more intensive uses are not permitted.

FIGURE 21 - CATCHMENTS AND WATER AREAS



Source: Department of Environment and Conservation 2005.

The Northern Agricultural Catchment Council has prepared Regional Natural Resource Management Strategy to better understand issues relating to salinity, biosecurity, farming systems and soil conditions, surface water control and allocation, ecological integrity, water

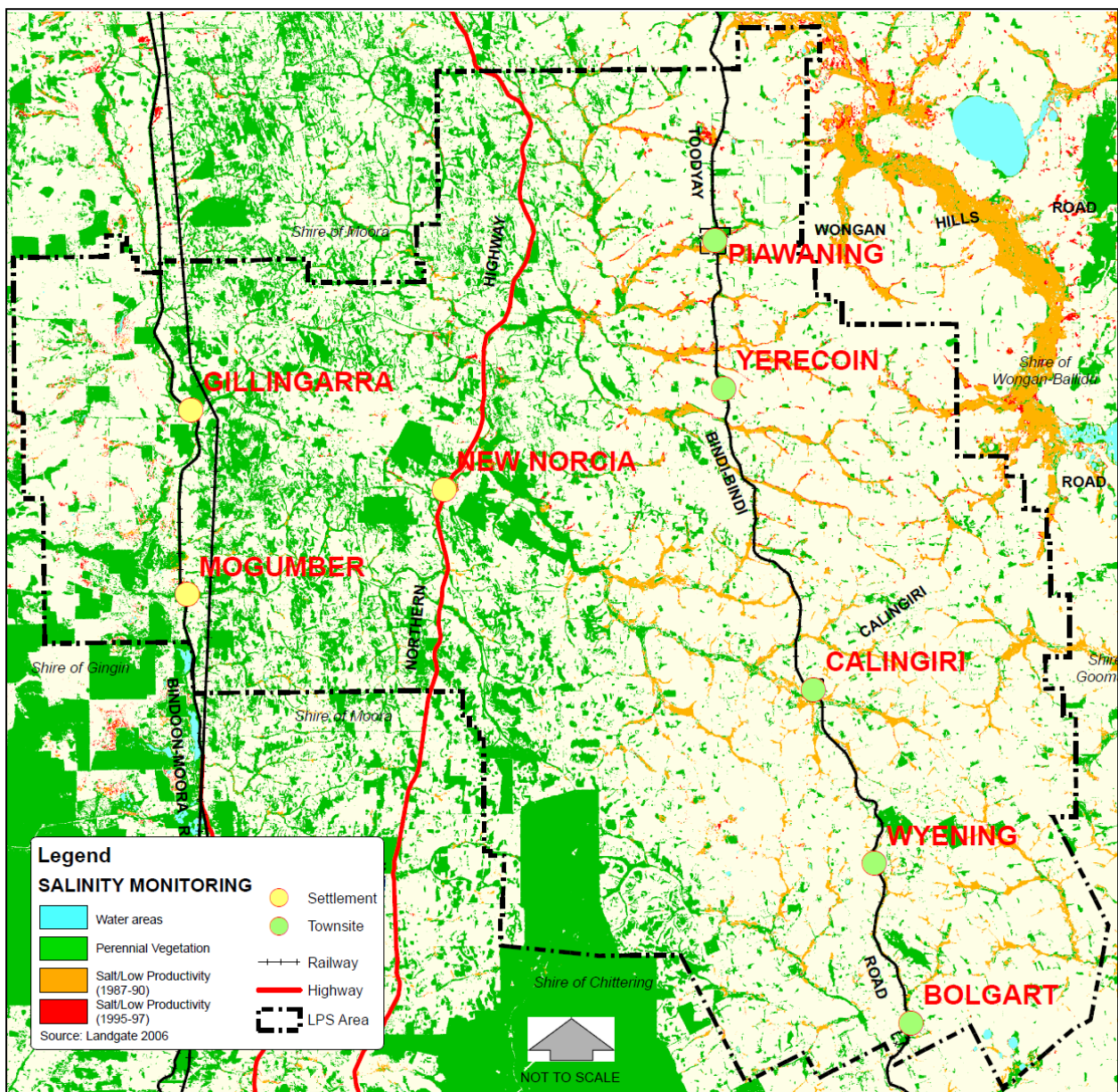
supply, groundwater and air quality and the built environment - amongst other issues. The Strategy encourages local government involvement through participation, partnerships and other contributions.

SALINITY MONITORING

Figure 22 shows the mapping produced by the DLI that monitors the changes in area subject to high salinity levels and resultant low productivity yields. These changes were recorded in two periods. The first was between 1987 and 1990 with the second period was between 1995 and 1997.

The blue areas shown in **Figure 22** indicate 'water', with the adjacent areas shown orange as salt/low productivity as recorded between 1987 and 1990. The areas shown red (and hardly visible at this scale) show the *additional* land recorded as salt/low productivity between 1995 and 1997.

FIGURE 22 -SALINITY MAPPING



Source: DLI, Satellite Remote Sensing Services 2002.

It is important to note that the Figure in this Strategy is provided as an indication of areas affected by salinity. More accurate data needs to be acquired from DEC to better identify the precise areas of concern. Very little of the land in the Shire is held as Reserves.

The mapping clearly shows the drainage pattern of the region and the areas with perennial vegetation (shown green).

The drainage lines shown blue and orange appear from the LandSat imagery to remain unusable. The aerial photographs show these areas as not being cropped, but in some cases vegetated. Some of these more vegetated areas are already in Crown ownership and managed by the Department of Environment and Conservation (DEC).

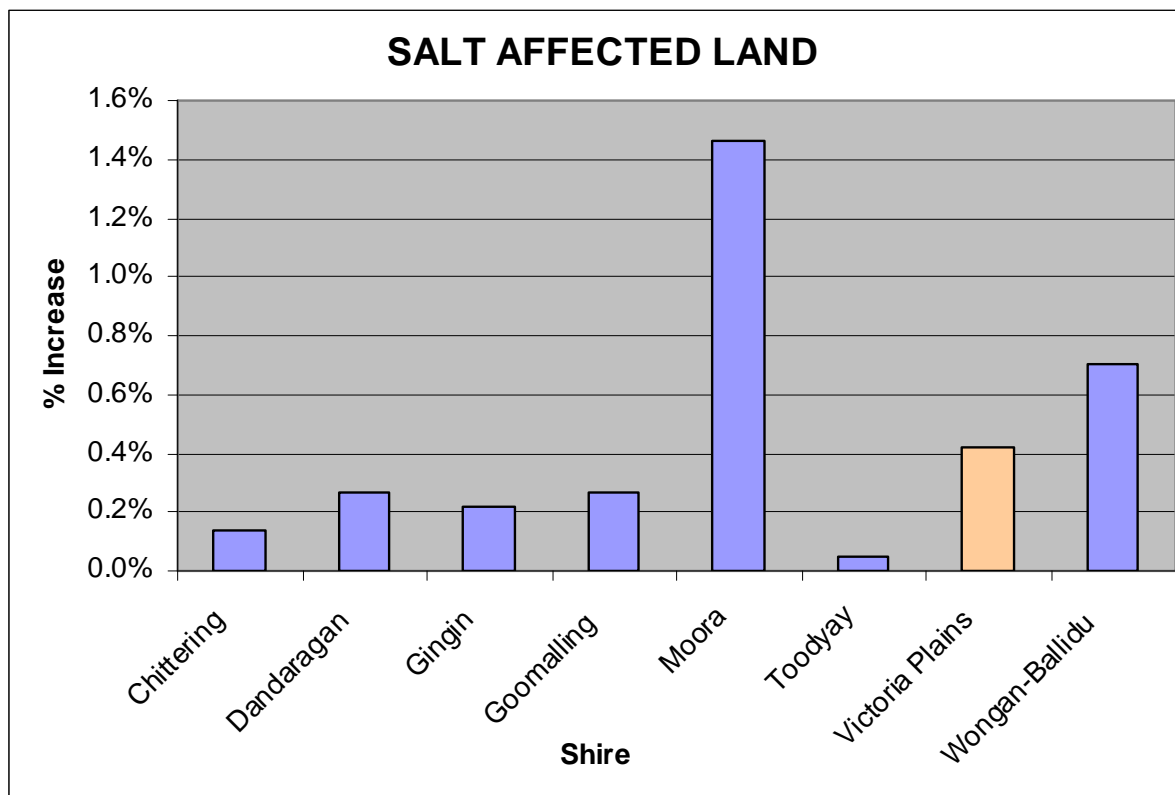
Victoria Plains Shire has had a 0.4% increase in the saline land component that comprises 3.83% of the Shire. This is still considered excessive when compared to Toodyay where there has been only a 0.1% increase over only 0.54% of the Shire.

In the 1987-1990 period Victoria Plains had 8,676 hectares identified as 'salt affected', whereas by the 1995-1997 period this had increased to 9,758 hectares, an increase of over 1,000 hectares.

The salinity estimates have been aggregated to produce Shire summaries. **Table 2** below provides a summary of the salinity change for the shires in the immediate area.

From the table we observe that the estimates of the extent of salinity are increasing for all shires, although at different rates.

TABLE 2 - SALINITY STATISTICS SUMMARISED BY SURROUNDING SHIRES



Source: DLI, Satellite Remote Sensing Services 2002.

Implications of Salinity Monitoring on Local Planning Strategy

The owners of the land areas shown orange, and especially the more recent red areas (shown in **Figure 21**), should be advised of these findings with information about remedial measures that can be put in place to mitigate further increases in salinity levels and areas.

Where salinity areas are determined by DEC to be severe it may lead to restrictions on the use of the land until remediation works have been completed. Overall increases in salinity may result in the Shire being eligible for future funding to help address the issues.

This mapping will be invaluable for the assessment of land suited for the assessment conservation areas, protection, future development options and treatment.

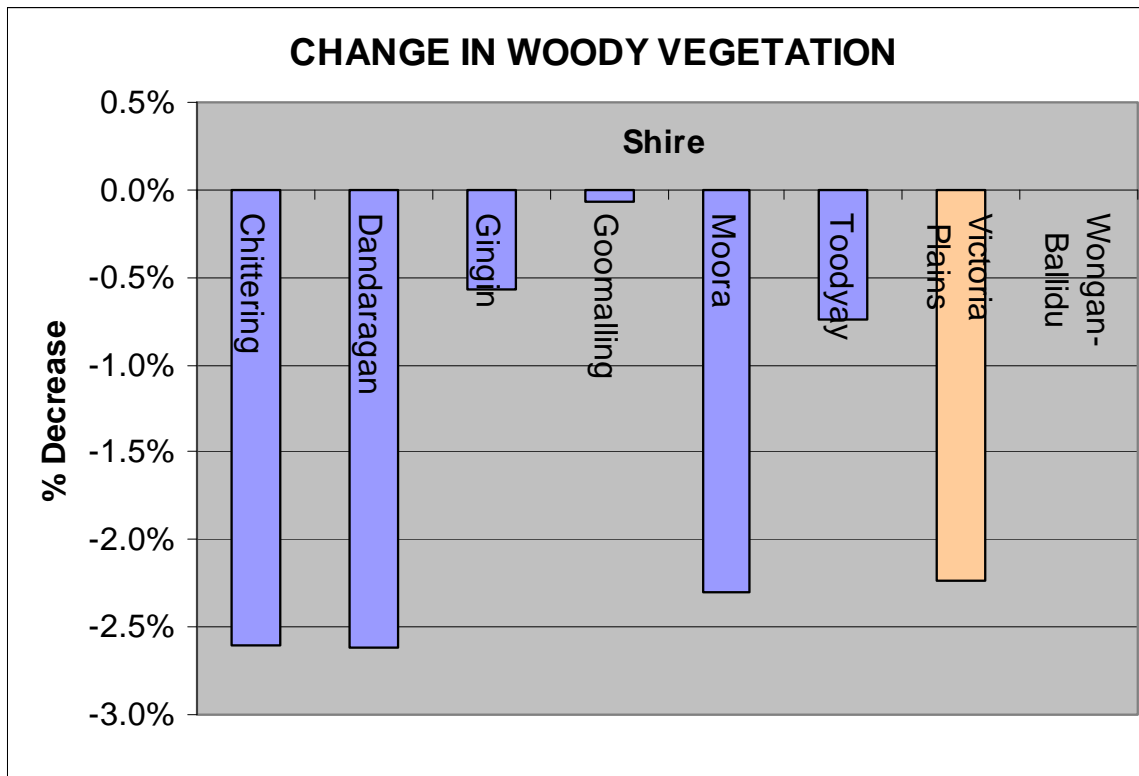
VEGETATION

The DLI has also analysed the occurrence of woody vegetation in 1988 and in 2000 over much of the Wheatbelt region. **Table 3** below shows the statistics for Victoria Plains and the surrounding Shires.

The Table shows the % decrease in the extent of woody vegetation compared with Goomalling, Wongan Hills, Toodyay and Gingin having less than 1% further decrease.

In 1988 Victoria Plains had 56,061 hectares (or 22%) woody vegetation. By 2000 this had decreased to 50,355 hectares (or 19.7%). Although the percentage change may seem minor, it still involves the loss of over 5,000 hectares of woody vegetation.

TABLE 3 – CHANGE IN WOODY VEGETATION STATISTICS SUMMARISED BY SURROUNDING SHIRES



Source: DLI, Satellite Remote Sensing Services 2002.

Implications of Woody Vegetation on Local Planning Strategy

In terms of woody vegetation a strategy should be put in place to promote the identification and acquisition of such areas in order to protect areas of viable vegetation that cannot be

cleared. The purchase cost of these holdings should be minimal due to the limited use and restrictive clearing practices established in wooded areas of the State.

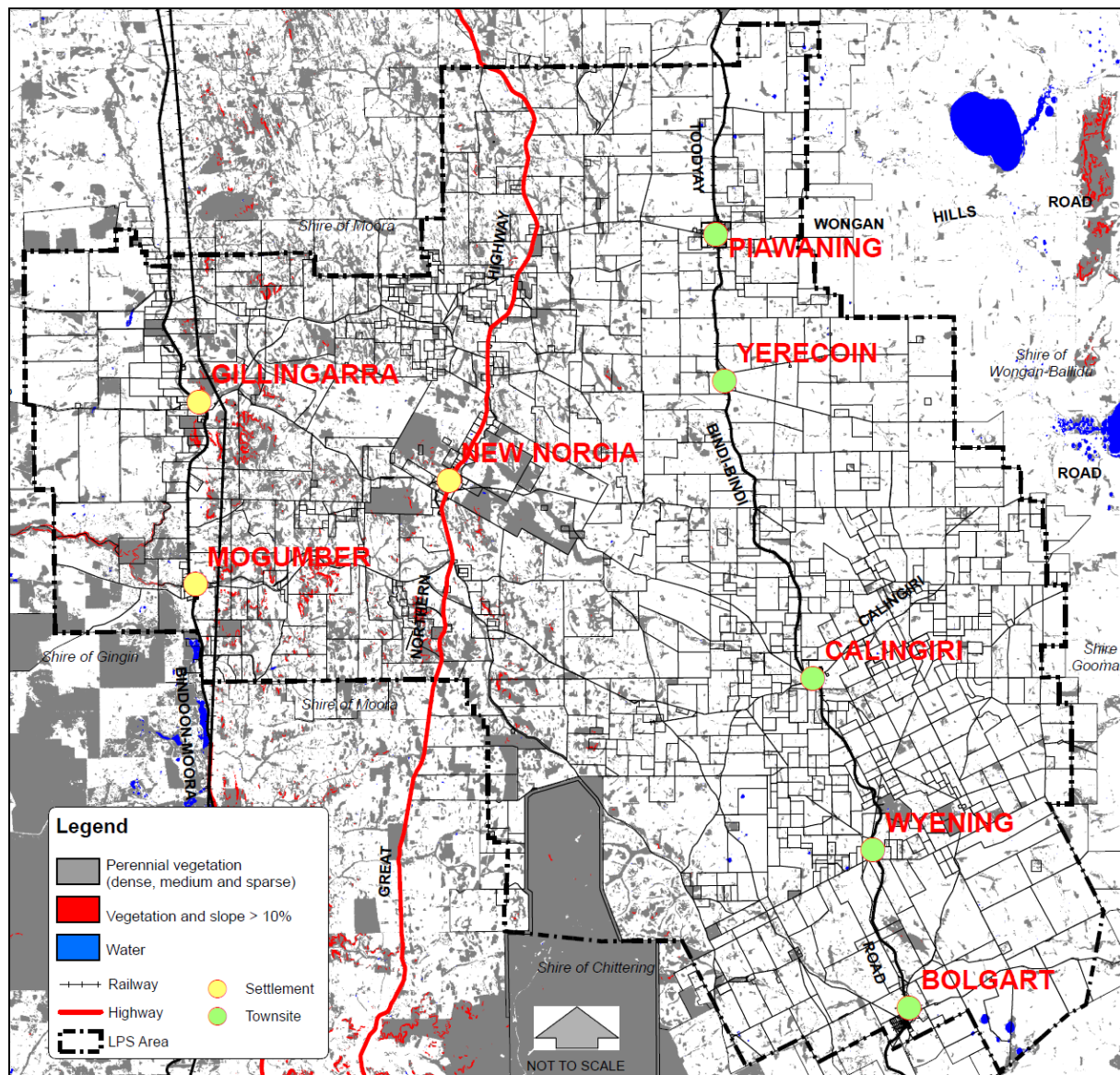
The mapping provides a useful tool for Landcare projects to target most susceptible or delicate areas in most need of treatment.

Options for protecting remnant vegetation areas includes private land conservation tied to incentives for fencing and management grants as well as rate relief. Land owners should be encouraged to explore further voluntary covenanting programs and join information and support programs (such as Land for Wildlife).

SLOPE ANALYSIS

Figure 23 provides information of vegetation and slope analysis. The grey areas indicate dense, medium and sparse vegetation areas. The red parts - mostly small areas in the western part of the Shire - show areas of dense, medium and sparse vegetation with a slope of greater than 10%.

FIGURE 23 - SLOPE ANALYSIS



Source: DLI, Satellite Remote Sensing Services 2002.

The slope analysis mapping shows the area of the Shire west of the Bindoon-Moora Road, and east of the Great Northern Highway in the category of 0-2.5 grade. Slopes of 2.5-5% (and a few areas of 5-10% slopes) occur at an increasing rate from the Highway westwards to the Bindoon-Moora Road.

Implications of Slope Analysis on Local Planning Strategy

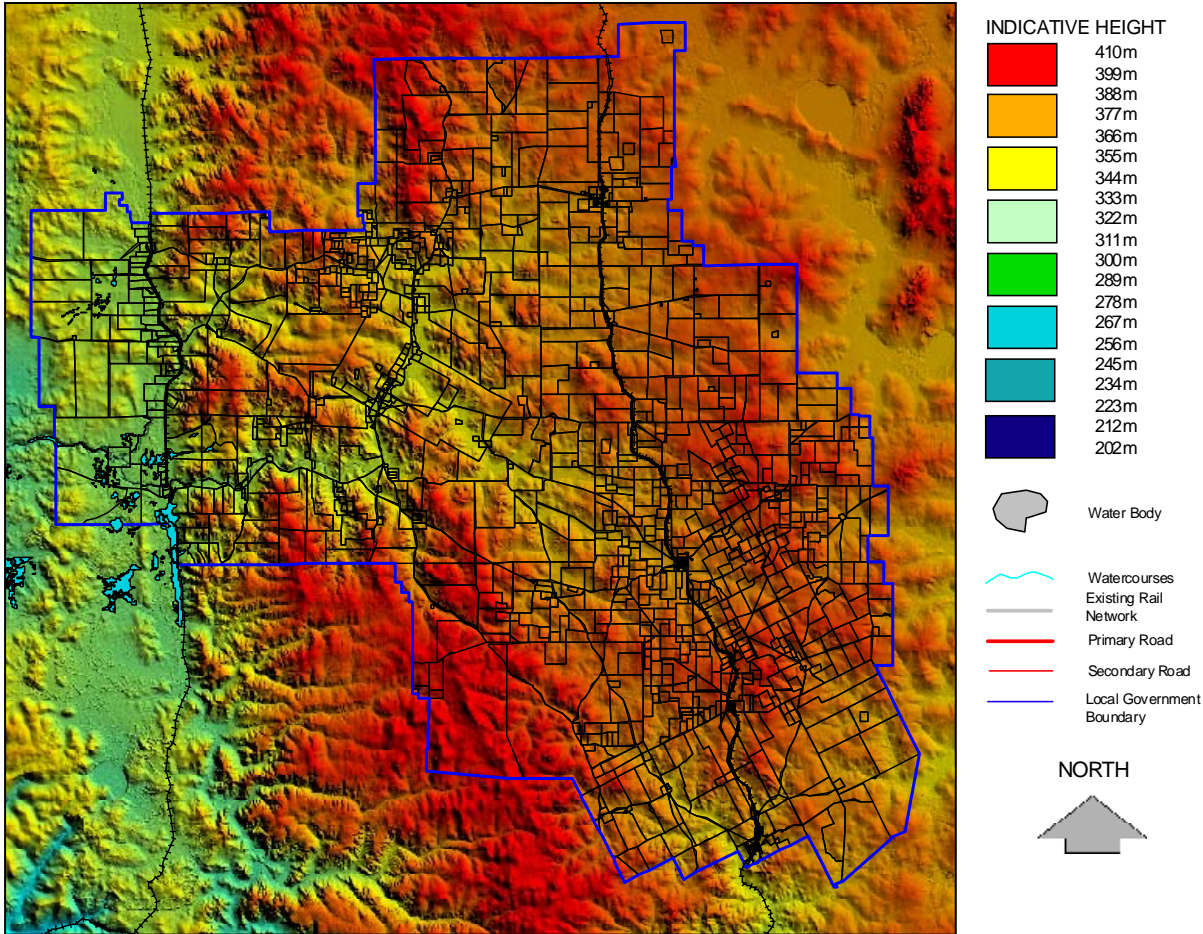
There are few implications of the slope analysis that affect the Local Planning Strategy except that further development, especially in the western parts of the Shire, will need to be cognisant of the increased fire risks associated with slope and vegetation.

DIGITAL ELEVATION MODEL

A Digital Elevation Model (DEM) has also been prepared for the Shire district. This model not only indicates height (above sea level) but also imposes a 3-dimension aspect to the data. The result is a picture that shows the subtle changes in height and topography. The ground levels in the Shire range from around 245 metres in the north-west corner of the district, up to 410 metres in several locations.

Figure 24 below clearly shows the 'blue' drainage pattern and the red elevated lands. The cadastre has been superimposed to assist in locating land holdings.

FIGURE 24 - DIGITAL ELEVATION MODEL



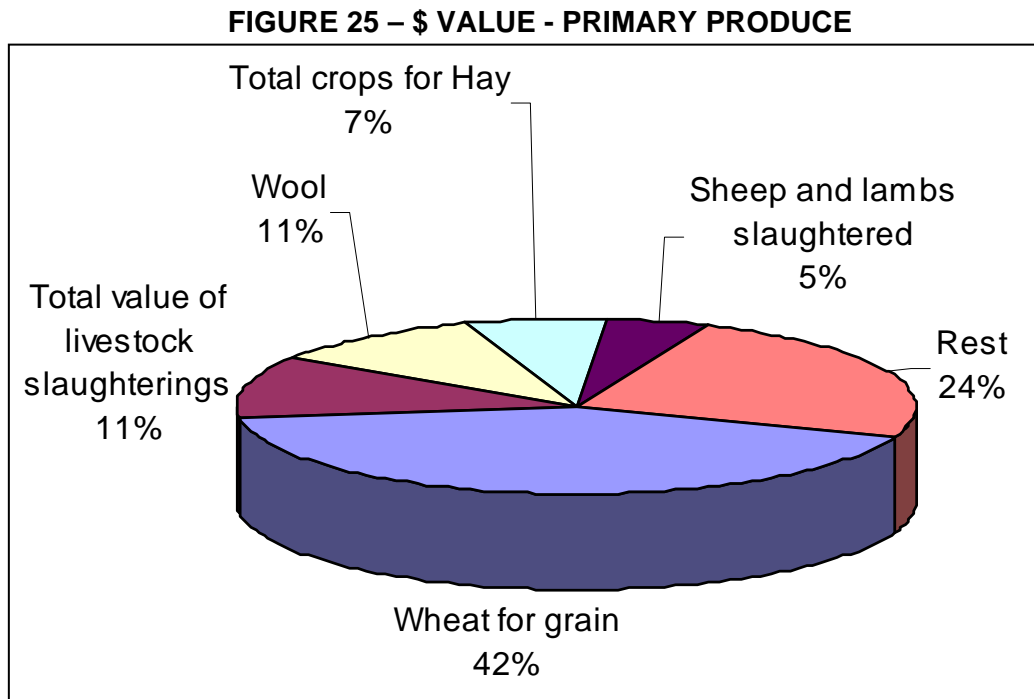
Source: DLI, Satellite Remote Sensing Services 2002.

Implications of Digital Elevation Model on Local Planning Strategy
None.

15 ECONOMIC BASE

Agricultural Produce

Victoria Plains is in the Wheatbelt. Agriculture is the main economic activity in the Shire. In June 2002 there were approximately 154 farming operations in the Shire of Victoria Plains, registered as individuals and/or limited liability companies.



Source: AgWA 2004

The pie chart shown in **Figure 25** demonstrates the overwhelming dominance of wheat as the main product. The statistics provided by the ABS clearly show the importance that the Shire of Victoria Plains plays in the production of wheat, barley and oats.

Implications of the Economic Base on Local Planning Strategy

The analysis above shows the dominance of wheat ahead all other agricultural production. 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. For example the Council will not support subdivision of rural land where it considers such a proposal will significantly impact the supply of prime agricultural land and its on-going viability.

Each application will be considered on its merits and such applications may be supported where the Council considers there is a demonstrated benefit to the community.

The Council will support the location of rural industries in locations appropriate to their supply and transport. These facilities need to be protected, but at the same time the industries must contribute to the provision of infrastructure used by them.

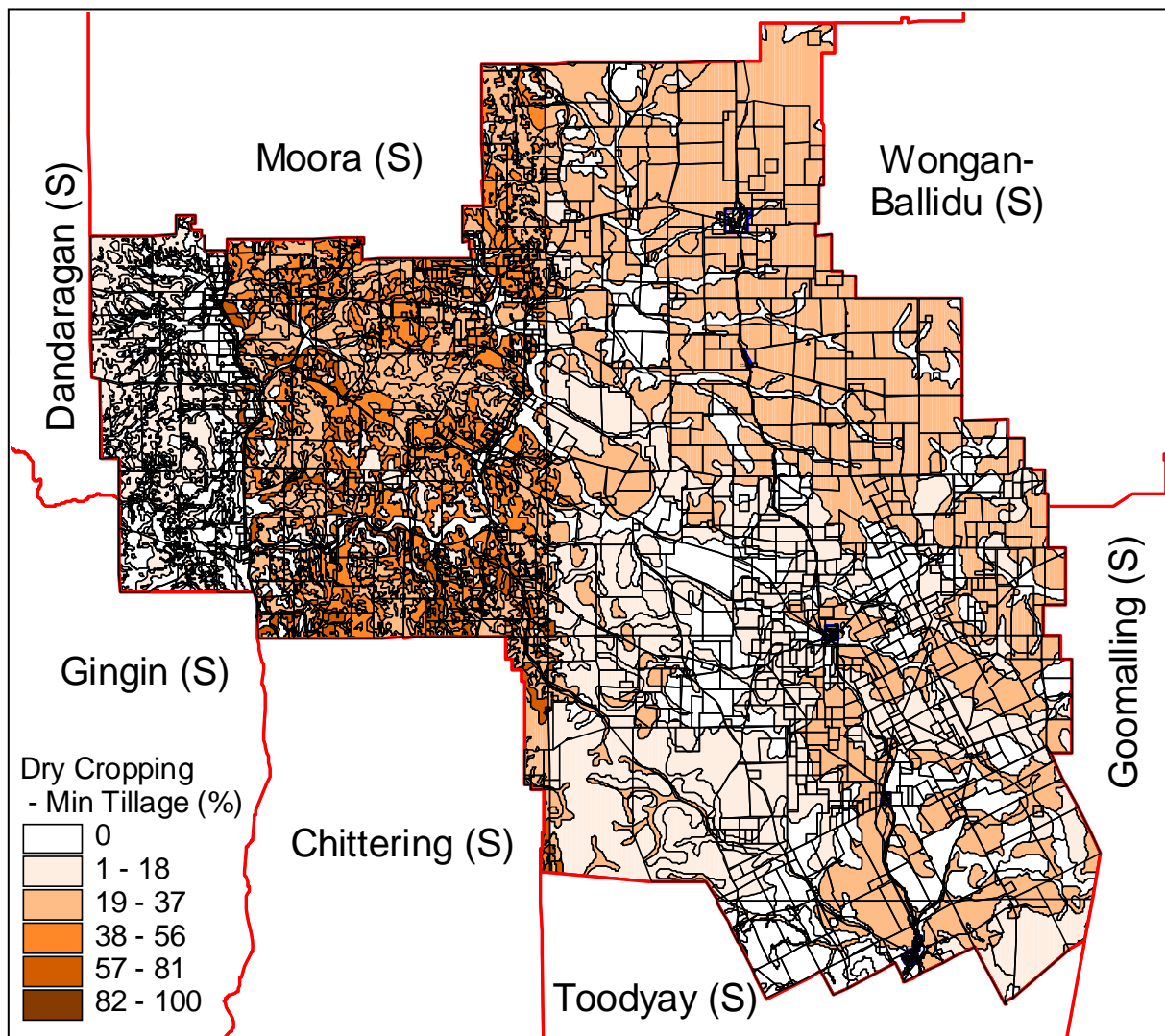
The WAPC's SPP 2.4 Basic Raw Materials does not apply to the Shire, however Giralia Resources has recently made an announcement to the Stock Exchange about a magnetite deposit at Yerecoin, and Bauxite Resources have undertaken some exploration for Bauxite north of New Norcia. There are numerous mining tenements throughout the Shire but no details are usually given on what they are looking for and the success or otherwise.

16 LAND CAPABILITY AND QUALITY

Given the dominance of the wheat production in the Shire (42% of value), it is appropriate to select land best used for dry crops as being Prime Agricultural land. The **Figure 26** below shows an indication of where the highest percentages of Dry Cropping Land with minimum tillage occur within the Shire.

Crops included in this general assessment include wheat, barley, oats, narrow-leaved lupins, field peas, canola, chickpeas and faba beans. The mapping in **Figure 26** includes best two classes with the best versatility in the assessment with the breakdown shown as a percentage of each mapping unit in this class.

FIGURE 26 – DRY CROPPING LAND



Source: AgWA 2004

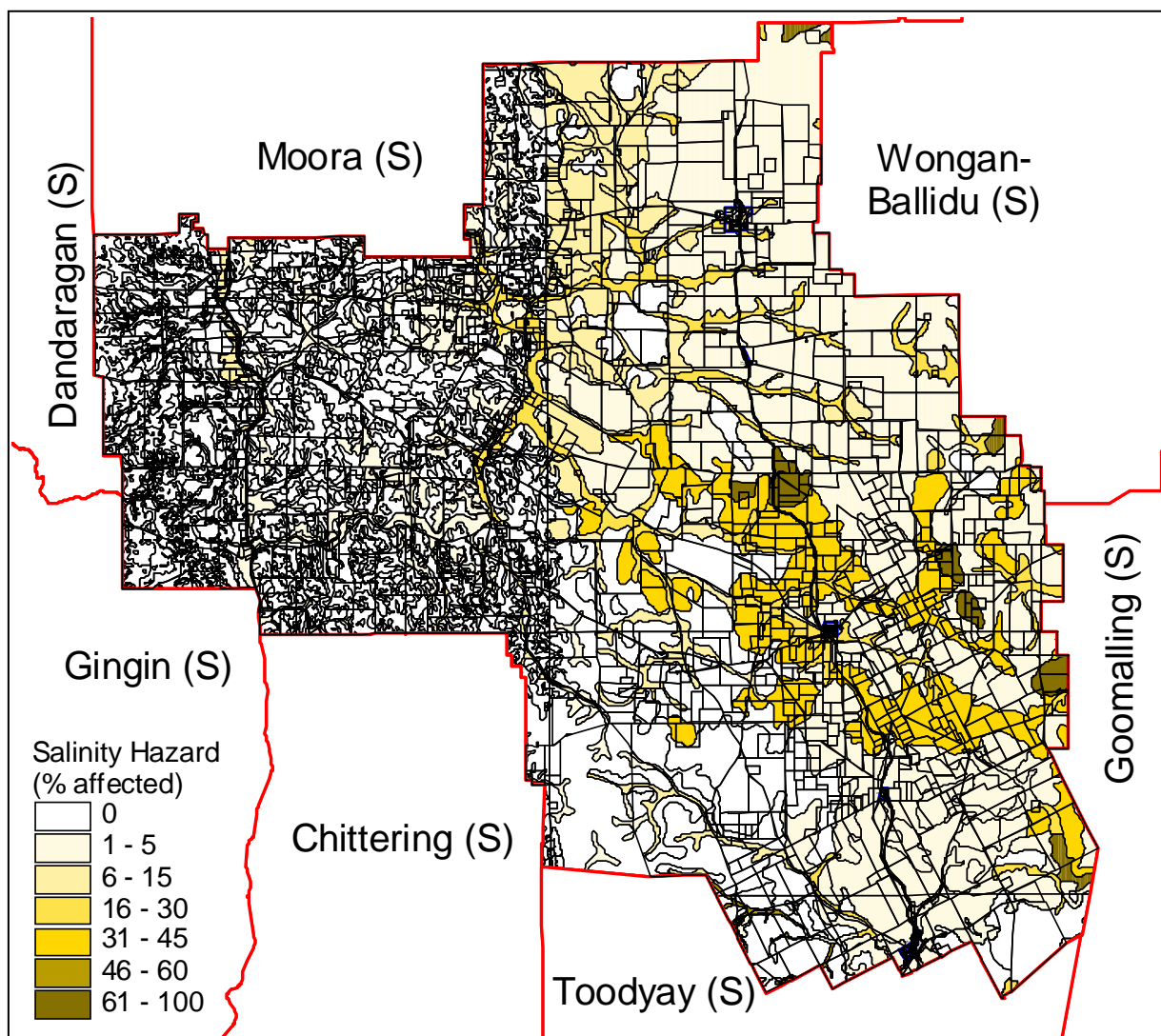
In terms of land quality there are many factors that need to be considered in the selection of uses that could be considered inappropriate; however as there are so many aspects to consider it can become an all-consuming exercise without necessarily achieving the desired outcomes.

The land capability variables can include the following;

- | | |
|--|-------------------------------|
| Ease of excavation | Flood hazard |
| Land instability | Microbial purification |
| Ph levels | Phosphorous export hazard |
| Rooting depth | Salinity hazard |
| Salt spray exposure | Site drainage potential |
| Sub-surface acidification susceptibility | Water logging/inundation risk |
| Water repellence susceptibility | Soil water storage |
| Wind erosion hazard | Soil workability |

The following two figures provide an example of the patterns resulting from this analysis. These factors will need further discussion before conclusions are drawn in relation to any development proposal.

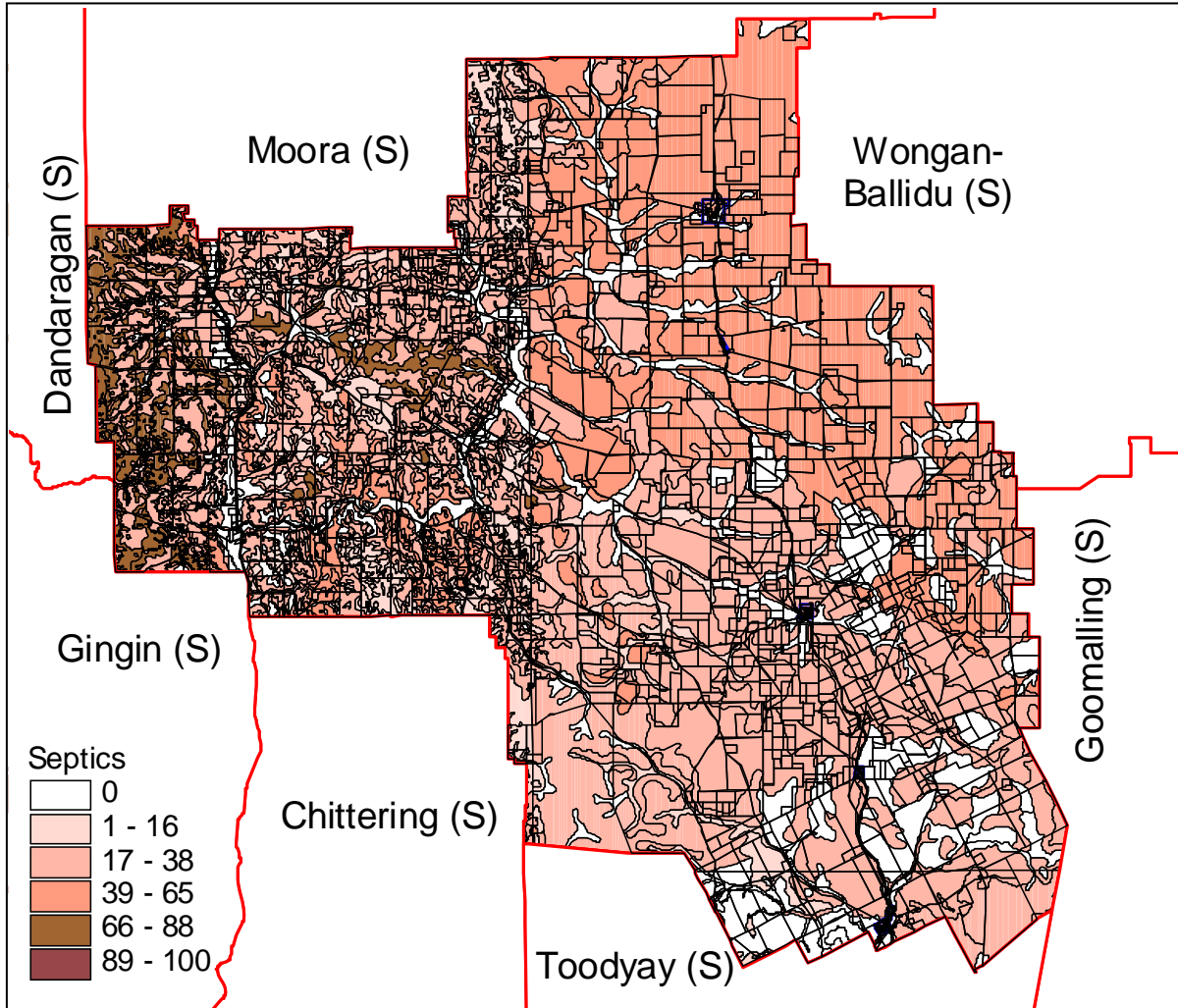
FIGURE 27 - SALINITY HAZARD



Source: AgWA 2004

State Planning Policy 2.5 identifies Bolgart as an area of potential/developing area requiring additional and detail investigation.

FIGURE 28 – SEPTIC TANK SUITABILITY



Source: AgWA 2004

Implications of Land Capability on the Local Planning Strategy

The Council will require an analysis of the land capability of each rural residential proposal. The Council is keen to put the onus back on to the proponent to convince the Council (and community) that a proposal is viable. A land capability assessment will need to establish whether the land is capable of on-site effluent disposal, has minimum flooding, salinity, wind erosion, and any other factor that may impact the on-going viability of priority agricultural areas.