

SHIRE OF DALWALLINU

LOCAL PLANNING STRATEGY

Background Report

Endorsed by the Western Australian Planning Commission
24 September 2013

DISCLAIMER

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Consultation with the respective Local Government Authority should be made to view a legal version of the Strategy.

Please advise the Department of Planning of any errors or omissions in this document.



LOCAL PLANNING STRATEGY

BACKGROUND REPORT

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SHIRE OF DALWALLINU LOCAL PLANNING STRATEGY

1 INTRODUCTION

Regulation 12A(3) of the Town Planning Amendment Regulations 1999 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 Dalwallinu'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 for Planning and Infrastructure 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 15 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 for Planning and Infrastructure, 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; and
- 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 Dalwallinu 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 pastoral and mining industries) by establishing rural industries that rely on similar environmental conditions but alternative 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.

Dalwallinu will continue to provide modern and efficient services to meet the 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 it 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 Dalwallinu Townsite will continue to be supported as an historic town maintaining its role as a residential and business centre servicing the important passing trade (both business and tourism). Dalwallinu 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 only support closer development in the rural areas of the district 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 valuable 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.

The Shire will not encourage the extraction, storage or use of nuclear materials including power generation.

5 PLANNING CONTEXT

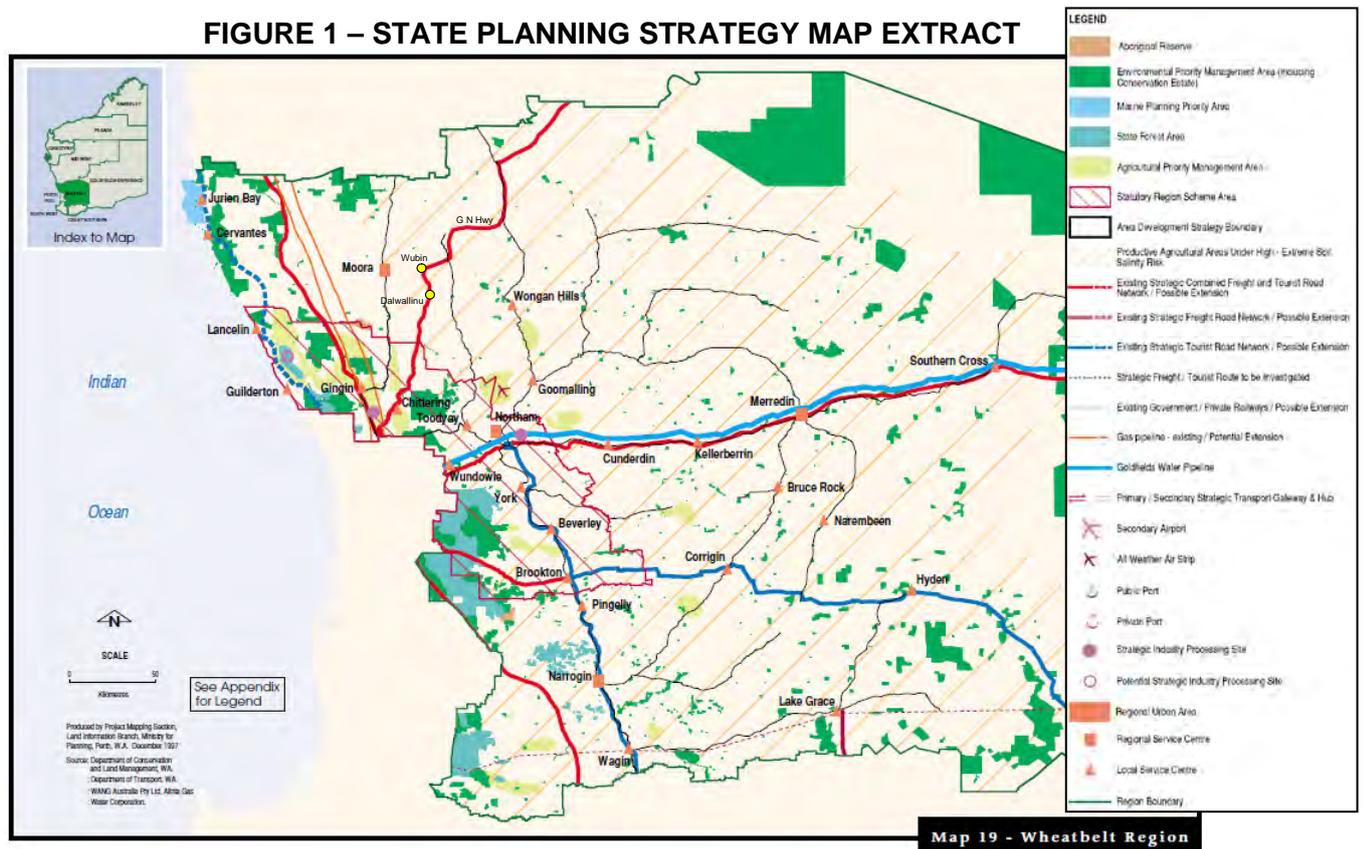
5.1 STATE PLANNING STRATEGY

The State Planning Strategy outlines a *vision* for the Wheatbelt Region as follows;

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 interregional, intra-regional and interstate linkages for both road and rail. Extensive rehabilitation of environmental damage to farmlands in the region will be undertaken.

The Strategy identifies priority actions for the Region, these include;

- Finalise Regional Planning Strategy for the Wheatbelt Region to focus on the Avon Arc.
- Prepare structure plan for Gingin Coast.
- Promote Meenaar industrial area for future industrial development.



Source: State Planning Strategy, 1997

The Strategy Map for the Wheatbelt Region is shown in **Figure 1** above with Dalwallinu and Wubin Townsites added. The Strategy shows Wongan Hills as a Local Service Centre - along with Goomalling. The closest Regional Service Centres are Moora and Northam. The Shire is included in an area shown as 'Productive agricultural areas under high-extreme soil salinity risk'.

The principles, strategies and actions cover several aspects of planning, including;

Environment and resources;

- 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.

Community

- Promote opportunities to develop a range of communities.
- Provide improved educational facilities.
- Promote opportunities for economic development.

Infrastructure

- Address the concerns arising from the decline of small rural settlements, leading to the loss of services through both government and private companies rationalising services.
- Improve service delivery of regional infrastructure to a highly dispersed population.
- Provide a strategic transport network within and to the Wheatbelt Region.

5.2 STATE PLANNING POLICIES

There are many State Planning Policies covering many relevant topics including Urban Growth and Settlement (SPP 3) and Agricultural and Rural Land Use Planning (SPP 2.5).

5.3 REGIONAL STRATEGY

Although the State Planning Strategy recommends that a Regional Strategy be prepared (for the Wheatbelt Region) no such plan has been prepared to date. The Avon Arc is the only statutory region plan in the region and does not include the Shire of Dalwallinu.

6 BACKGROUND

The Shire of Dalwallinu covers an area of 7,187 square kilometres with its closest border located about 170 kilometres north east from Perth. The Shire is roughly rectangular in shape about 85 kilometres north-south and 120 kilometres east-west. The townsite of Dalwallinu is located 252 kilometres from Perth by road, 21 kilometres from Wubin, 53 from Kalannie and 39 kilometres from Ballidu to the south. Dalwallinu townsite is located on the Great Northern Highway just north of the Kalannie turnoff. . The road forms part of the National Highway route around Australia to service the tourist traffic as well as serving as a freight link to Port Hedland and beyond. Road trains up to 36.5 metres are currently allowed to travel to Wubin and up to 53.5 metres on Great Northern Highway beyond Wubin. Local roads in the area carry heavy farm vehicles carting fertiliser and grain, heavy freight vehicles and local traffic.

Figure 2 shows the location of the Shire and townsite in relation to the surrounding settlements and the Perth Metropolitan Region.

The population of the Shire is currently 1,368 of which 899 are electors. The Shire has a total of 680 dwellings, a rate income of 1.8 million dollars and total revenue (with grants etc) of over six million dollars.

The Shire is bounded on the north by the Shires of Yalgoo and Perenjori, on the west by the Shires of Coorow and Moora, on the east by Mount Marshall and Koorda, and on the south by the Shire of Wongan-Ballidu.

FIGURE 2 - LOCATION PLAN



Source: StreetSmart, DLI and PLANWEST

The first known occupants of the land which now comprises the Dalwallinu Shire were Aboriginal groups who had no strict boundaries. They were nomadic and used the area for hunting and gathering rather than developing it for agricultural purposes as the European settlers chose to do.

The Badimia people lived in the north; the Galamaia people (apparently the largest group in the area) occupied other land in the Shire and beyond. The name 'Dalwallinu' is apparently derived from the language of these people and means 'a place to wait a while'. Anecdotal evidence from some other older members of the community suggests that it is also understood to mean 'lame leg' or 'to throw a boomerang'.

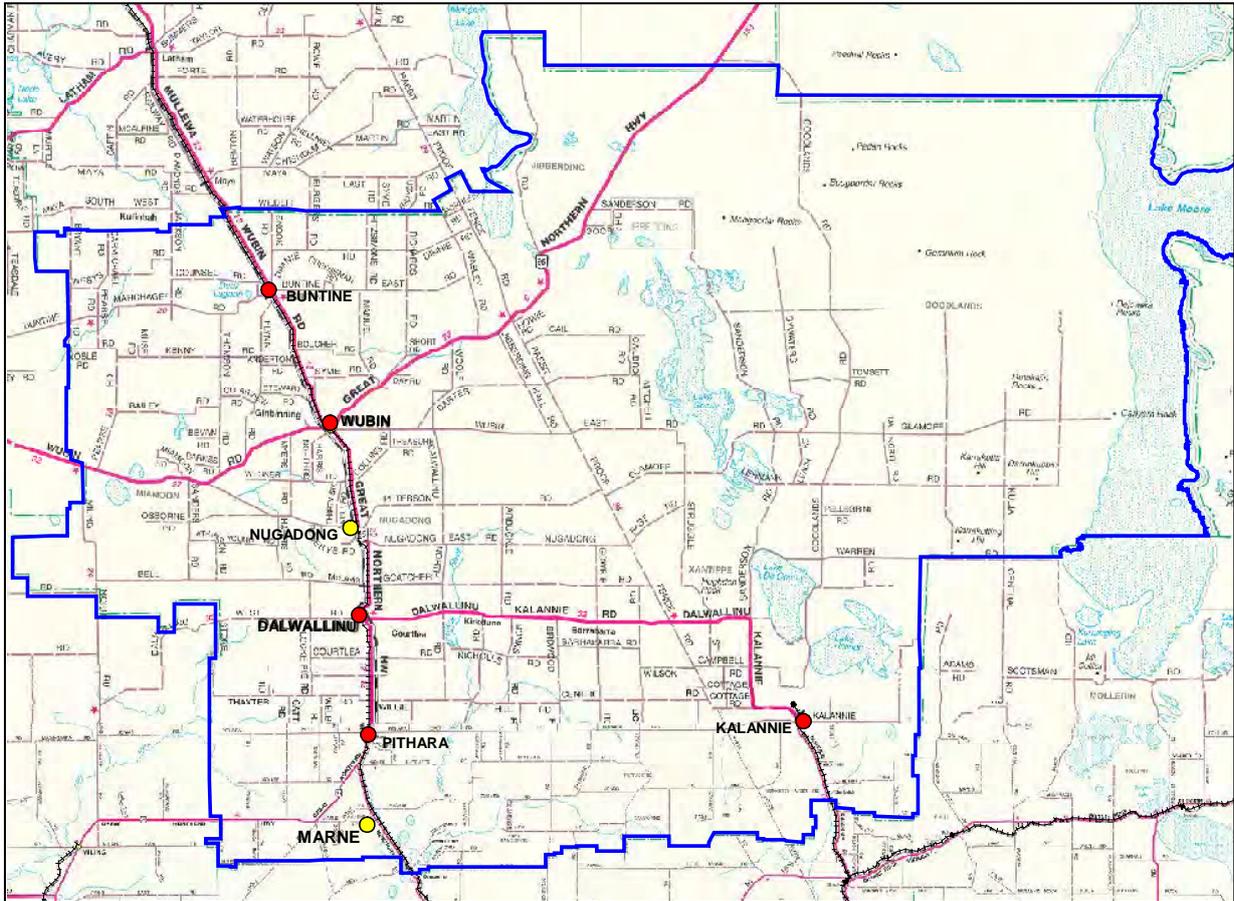
The first European land users in the district were graziers. Benedictine monks from New Norcia, over 100 kilometres south of Dalwallinu, were shepherding sheep on vast pastoral leases taken up in the nineteenth century. The first European settlers arrived in the Dalwallinu area in 1907 with the ambition to develop the area into a wheat growing region. In 1909, the land was surveyed, and in 1910 it was opened up for selection. The first crops were sown the same year.

These pioneers throughout the Wheatbelt region demonstrated tremendous strength and diligence, enduring extremely basic living standards while they sowed their first crops. Towns were established to service the farms in the ensuing years. Most towns in Dalwallinu grew from the need to service the railway line which was completed in 1914. Wheat bin locations determined the location of these townsite - with the exception of Kalannie.

Landuse is predominantly broad-acre agriculture. The dominant business activities are grain growing and sheep production for meat, wool and cattle. Other industries include a wide variety of industries designed to service these primary activities, and a gypsum production plant. However, there is a general current trend in many country areas toward more intensive agricultural pursuits, including viticulture, aquaculture, vegetable production, olive production and tree farming. A more detailed analysis of this economy will be dealt with later in this Strategy. These alternative activities are aimed at diversifying the reliance on single crop or income stream. In many cases a third party is responsible for setting up these activities, either in partnerships, or purchase outright. The most common example is plantations.

Figure 3 overleaf shows a closer view of the Shire and its road and rail network. The Figure shows the great benefit of the Great Northern Highway creating a demand for highway located agricultural and mining services in the Mid west region. The Highway travels from Midland through Dalwallinu and then heads off towards the north-east at Wubin and then through to Meekatharra and beyond. The railway joins the Shire at Damboring having travelled from Perth to Northam. The railway then travels northwards to a point (McLevie CBH bin) 5 km north of Dalwallinu. The line north still exists but is closed between McLevie and Maya, but then continues on to Perenjori.

FIGURE 3 - DALWALLINU DISTRICTS AND TOWNSITES



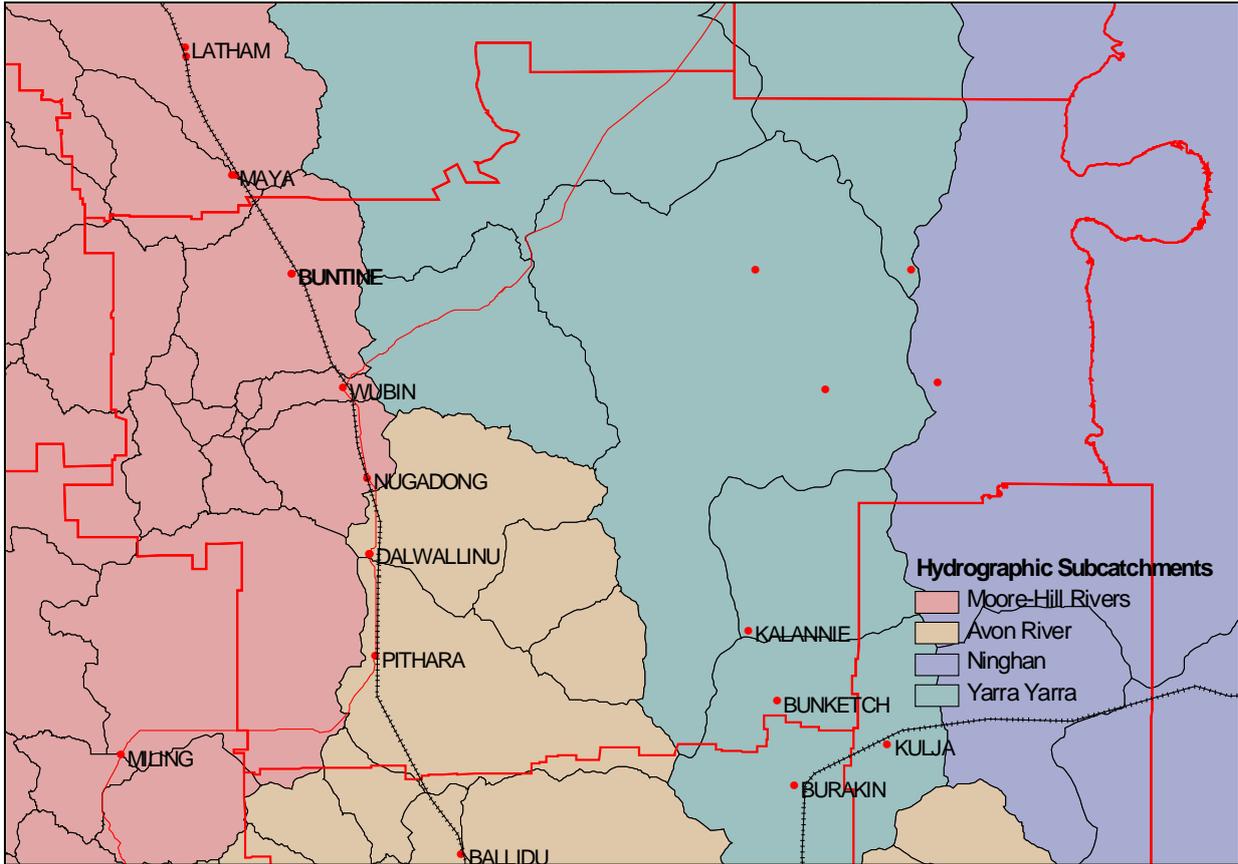
Source: Landgate and PLANWEST

The Kalannie railway line terminates at the town but travels south to Cadoux through Dowerin to the Northam line. Kalannie is connected by sealed roads to Dalwallinu to the west and Dowerin to the south. Gravel roads head north and eastwards. The rabbit-proof fence can be seen marked on the Figure crossing the Dalwallinu-Kalannie Road just west of Kalannie.

7 LANDFORM

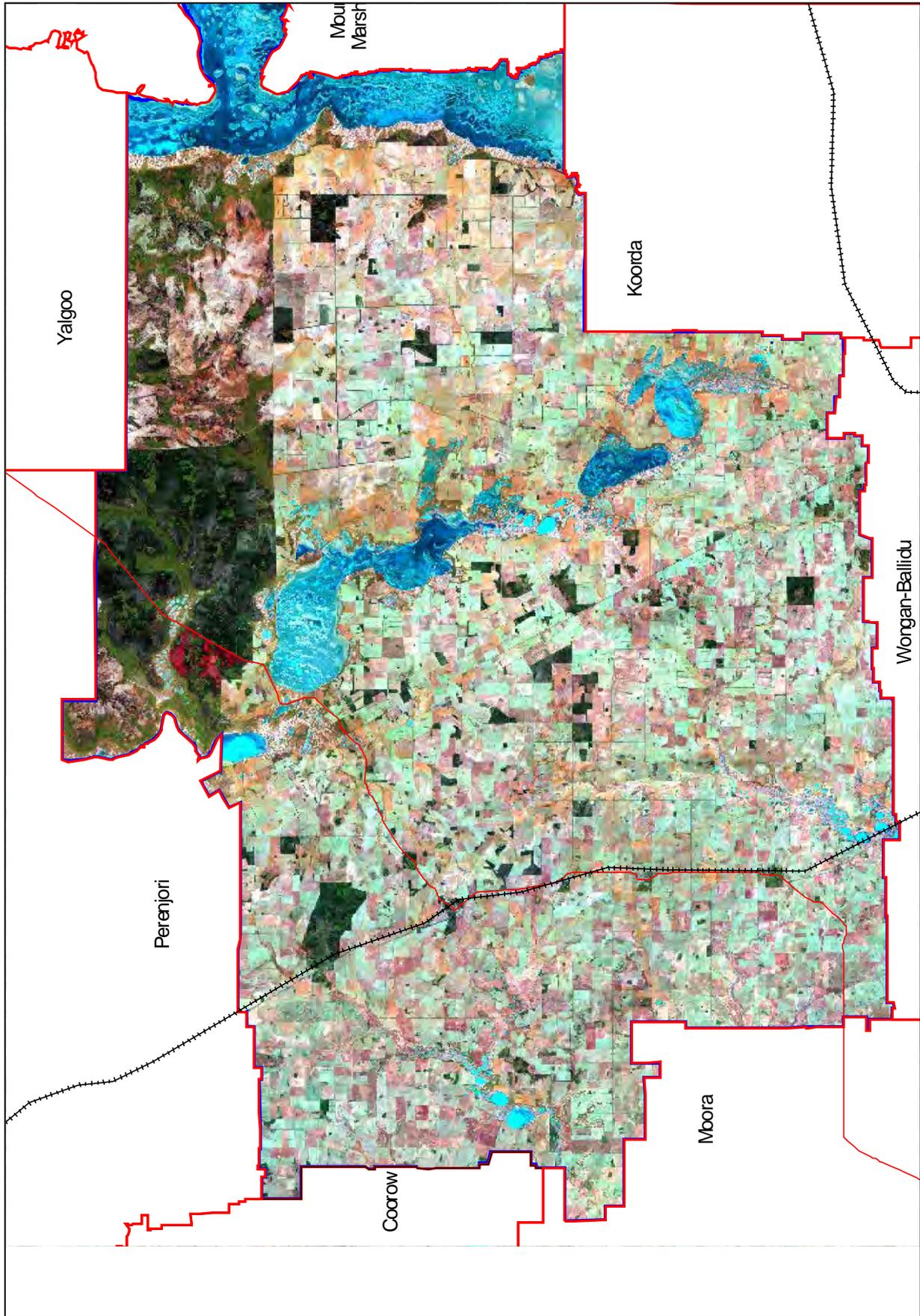
The Shire straddles four catchments basins – for the Avon, Moore, Yarra Yarra and Nighan Rivers (See **Figure 4**). The landform of the Shire varies from 400 metres (AHD) in the eastern part of the district down to 280 metres in the central south and central northern parts. This variation in landform, including lakes and vegetated areas, can clearly be seen from the Satellite Imagery shown in **Figure 5** overleaf. The Environmental Protection Authority has advised that highly likely there are Declared Rare Flora in the area, including *Grevillia pythara*, and Specially Protected Fauna, including *Leipoa ocellate*. Environmental issues such as salinity and a rising groundwater table have been exacerbated by a paucity of native vegetation cover in the Shire. The EPA suggests that these issues could be addressed by including environmental objectives as well as Scheme provisions to, for example, preserve remnant vegetation and encourage replanting of drainage lines.

FIGURE 4 – CATCHMENT BOUNDARIES



Source: GeoView 2005

FIGURE 5 - SATELLITE IMAGERY



Source: DLI 2004

8 GEOLOGY, MINERAL DEPOSITS AND MINING

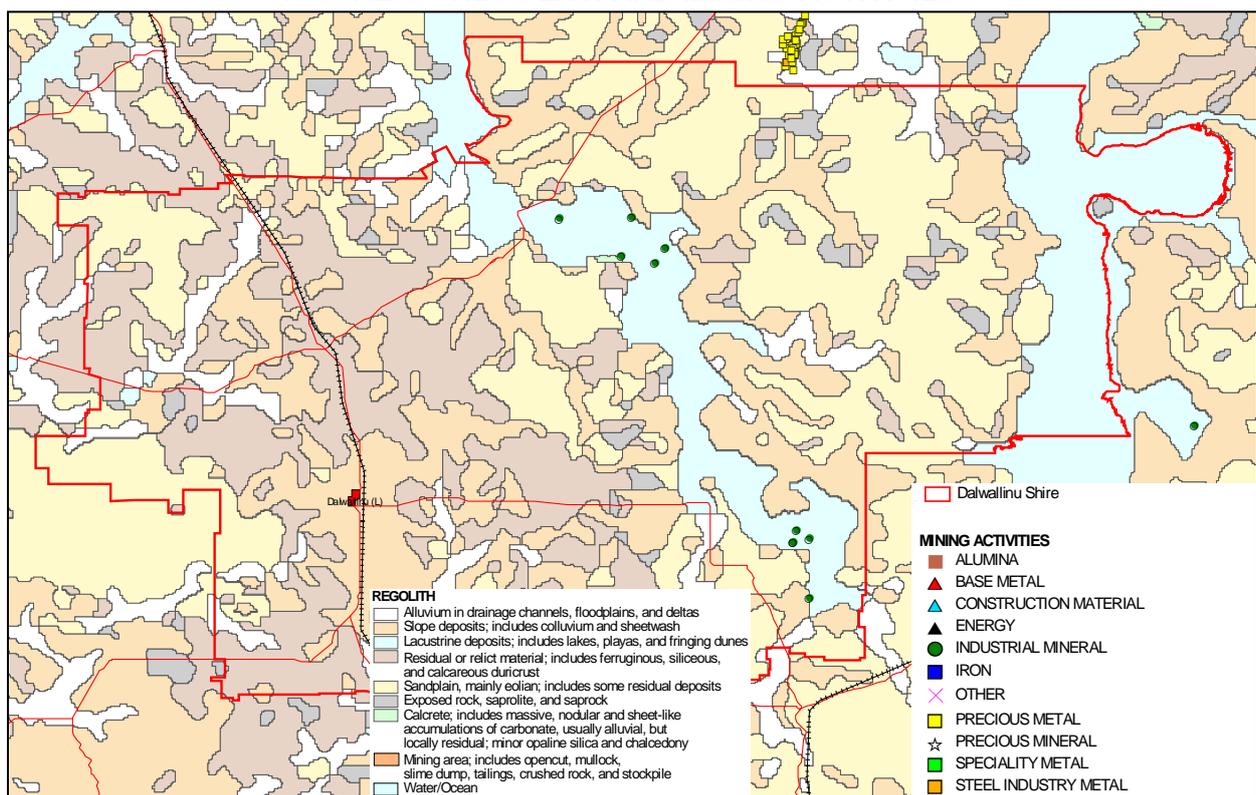
The Shire of Dalwallinu is underlain by rocks of Archean age (older than 2500 million years) comprising granites, gneisses, granulites, and metamorphosed volcanic rocks (greenstones) of the Yilgarn Craton. The greenstones are prospective for gold, nickel, base metals (copper, lead, and zinc) and iron ore. In the Lake Goorly-Lake Hillman area, Quaternary aged (less than 1.8 million years) sediments in the lake systems contain economic gypsum deposits.

The only operating mine within the Shire is Lake Hillman, which accounted for about a third of total State gypsum production in 2011-12. The Pithara gold mine operated between 2010 and 2011, but mining operations have now ceased.

Several gold targets close to Pithara gold mine are under active exploration. In addition, iron ore exploration is currently active in the north-western part of the Shire. There are 42 granted mining tenements wholly or partially in the Shire as well as eight tenement applications. Commodities sought are gypsum, iron ore and gold. There are no commercial gravel, limestone or blue metal quarries in the Shire but the Shire has several sources of gravel through its own reserves and some minor sources on private farmlands.

Figures 6 and 7 provide information on the regolith, geology and mining deposits.

FIGURE 6 – REGOLITH AND MINING ACTIVITIES

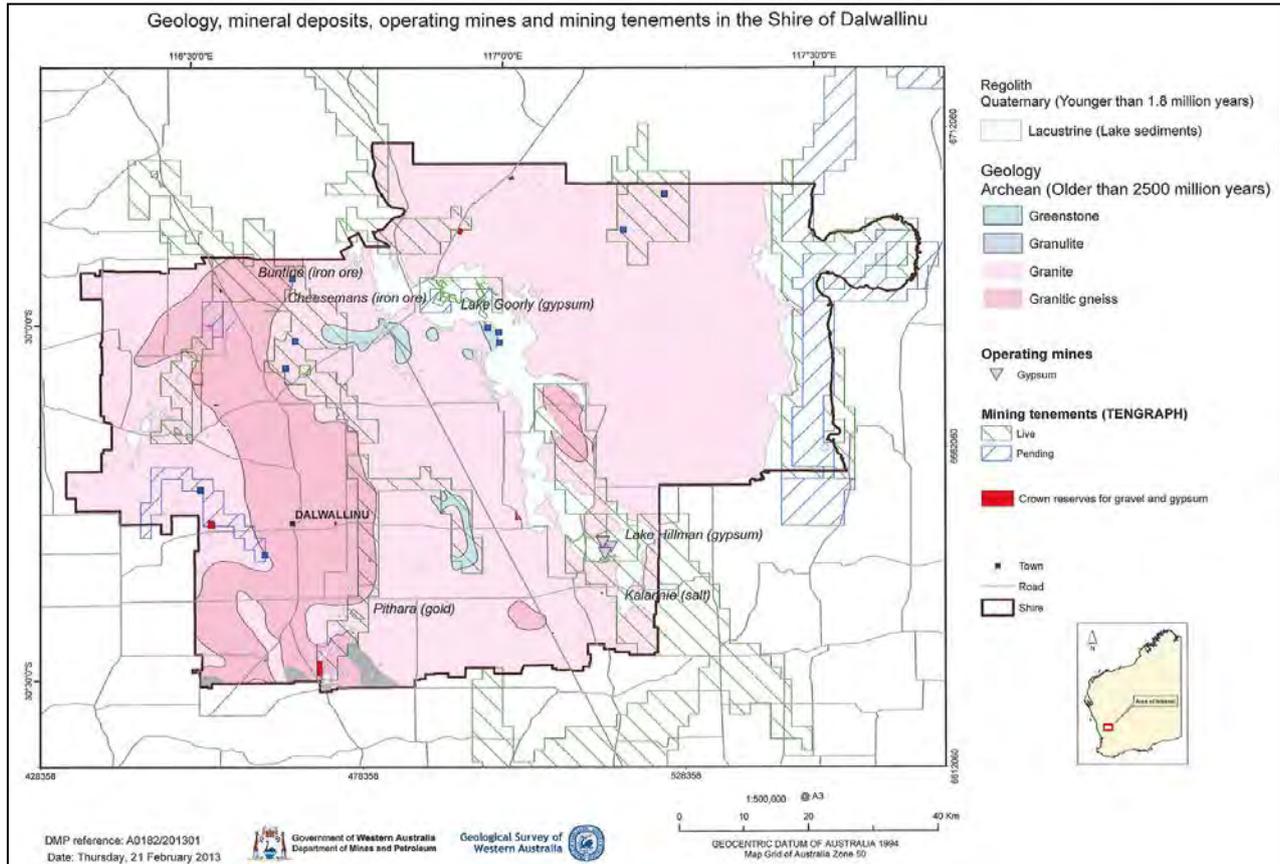


Source: Geological Survey of Western Australia 2012

Implications of Geology on Local Planning Strategy

The implementation or approval of any activities or land uses must consider possible implications on the successful continuation of current or future mining operations. For example Rural-residential development will probably not be supported in a location where there is likely to be mining potential.

FIGURE 7 – REGIONAL GEOLOGY AND MINERAL DEPOSITS



Source: DMP, 2013

9 SETTLEMENTS

The aerial photograph shown in **Figure 8** below provides a view of **Dalwallinu Townsite** with its development concentrated through the central section of the townsite area around the highway alignment.

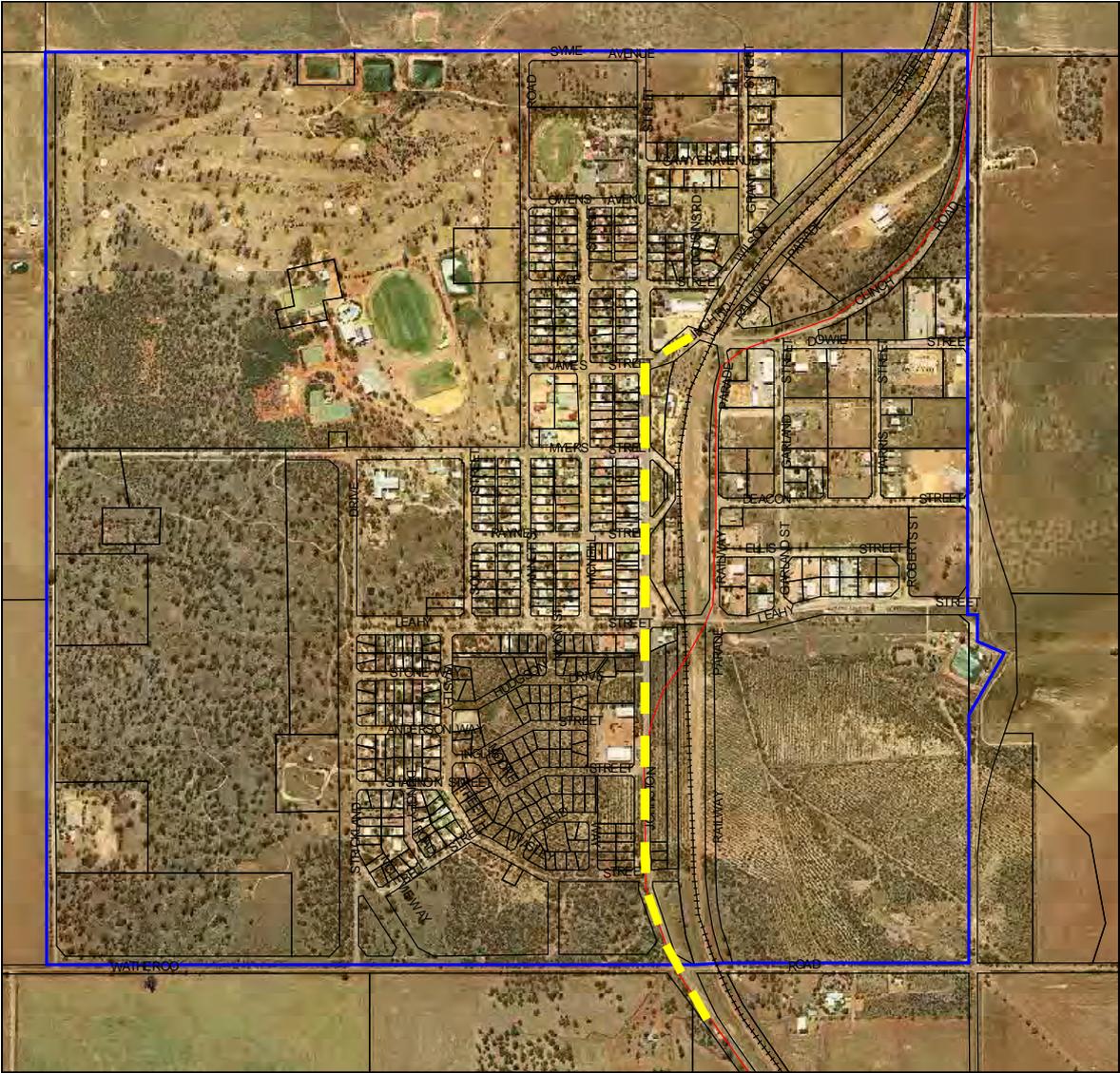
The commercial/business focus remains in a central location immediately abutting the old highway (shown as a yellow dashed line) including the Shire's administration building and community centre. The main highway now deviates away from the town centre in order to facilitate through-traffic, especially larger heavier vehicles. The alignment shown with a red line is the new highway alignment. The blue line defines the townsite boundary.

The use of the term 'heavy haulage route' has been encouraged for the red alignment, rather than 'bypass' as this has connotations of bypassing trade for the town.

Located in the northwest quadrant of the townsite is the recreation complex including a golf course, oval, aquatic centre (swimming pool), hockey pitch, bowling club, squash courts, basketball courts, pony club, recreation hall, and dog training area with the southwest corner a conservation park. The southern area of vacant residential lots has not developed due to instability in ground conditions. This area will be examined later in the strategy. The Shire has been instrumental in the creation of a steady stream of residential lots over the last few years in order to keep pace with the demand. The take-up of these new lots is testament to the steady growth of the residential sector of the town. A new residential area is being progressed that will provide another 44 lots. The area utilises the excess land previously set

aside for hospital purposes located south of the existing facility. The vacant land is shown immediately south of the oval and hockey pitch. Part of this land will be set aside for recreation in order to protect some valued flora.

FIGURE 8 - DALWALLINU TOWNSITE



Source: DLI 2001

The north eastern area of larger lots is industrial with the south-eastern area remaining rural. A further analysis of Dalwallinu Townsite statistics will be examined in the section dealing with population.

Other townsites in the Shire include Kalannie, Buntine, Pithara and Wubin, with Nugadong and Marne remaining undeveloped.

Kalannie is the largest townsite (other than Dalwallinu) supporting about 70 dwellings and many (about 16) rural service oriented businesses and industries. The town is located 53 kilometres east of Dalwallinu and has an oval, golf course, football club and bowling club.

The town is based around the railway sidings, grain storage and its service centre functions. The railway line terminates at Kalannie and travels south through Dowerin to join the Dalwallinu line at Goomalling, and then continuing on through Northam to Perth.

Kalannie was gazetted a townsite in 1929. The name is Aboriginal, and is in a list of names from the York area where the meaning is given as ‘where the Aboriginals got white stone for their spears’ (Source: DLI). The town is well placed to provide services to the Mt Gibson activities.

The photograph on the previous page (**Figure 9**) shows an aerial perspective of the town with the current lot boundaries superimposed. The townsite boundary (shown by the blue line) includes only the built-up area but excludes the golf course and development to the south west of the boundary. The wheat bin extensions to the north of the town are also outside the townsite boundary.

FIGURE 9 – KALANNIE TOWNSITE



Source: DLI 2001

Buntine is located 36 kilometres north of Dalwallinu on the road to Perenjori 15 kilometres north of the Great Northern Highway and Wubin. **Figure 10** below shows the size and extent of development in the townsite.

Buntine supports about 10 houses, a bowling club tennis courts and school. Like many others, the town was established on the basis of a railway siding for wheat and other goods. The wheat bins are still operational and provide a source of employment for the residents.

A golf course is located about 1.5 kilometres north east of the townsite. About 5 kilometres east of the townsite is a DEC conservation reserve measuring nearly 2,000 hectares.

FIGURE 10 – BUNTINE TOWNSITE



Source: DLI 2001

Pithara townsite is located 12 kilometres south of Dalwallinu on the Great Northern Highway. The township supports over 30 houses, a Speedway, a disused hall and the wheat bin facilities (see **Figure 11** below).

FIGURE 11 – PITHARA TOWNSITE



Source: DLI 2001

Wubin Townsite is located 21 kilometres north of Dalwallinu (273 km north of Perth) and is positioned on the Great Northern Highway at its junction where it heads off to Paynes Find, Meekatharra and northwards. Again the origins of the town were based on the establishment of the wheat bins but now is an important service centre and the gateway to the Mid-West mining region.

Figure 12 provides an aerial photograph of the town that supports nearly 30 dwellings, an oval, club house, golf course and several businesses – mostly associated with the rural produce activities.

FIGURE 12 – WUBIN TOWNSITE



Source: DLI 2001

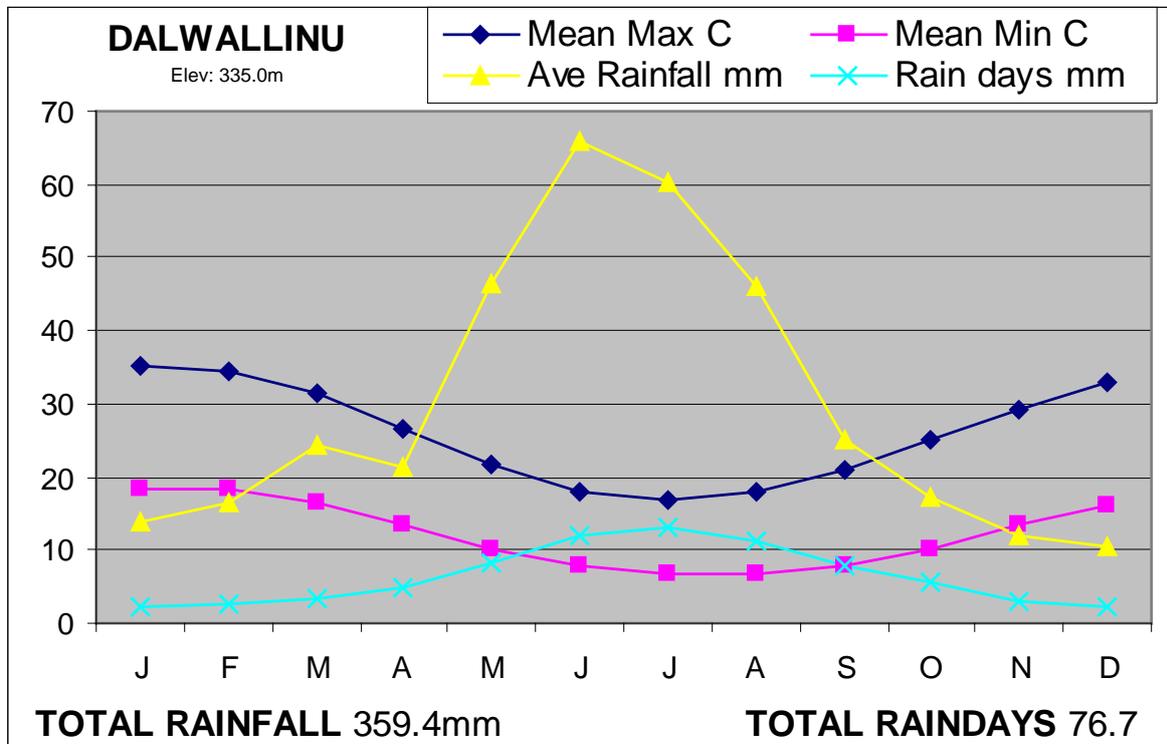
Although this summary covers the main townsites of the Shire there is a distribution of farm dwellings or homesteads throughout the rural areas of the District. The rural economic climate has proven to be unreliable and inconsistent over the last recent period. In order to allow farmers to spread their risk and reliance on solely the rural economy the Shire supports the development of 'farm stay' or tourist accommodation on rural properties.

Permitting short-stay accommodation on the rural properties will not only allow the farmers to diversify their income source but would encourage visitors to 'stay a while' in the District. The spin-off for the Shire and its businesses can only be positive. Such developments, due to their restricted scale, will not jeopardise the future rural production of the properties.

10 CLIMATE

The town lies in the central Wheatbelt, and enjoys a temperate climate with hot, dry summers and light winters. Records have been kept by the Bureau of Meteorology since 1912. The average rainfall in Dalwallinu is 359mm and occurs mainly in winter from May to October.

FIGURE 13 - CLIMATE STATISTICS



Source: BOM 2005

The climate is typical of the Wheatbelt Region with average temperatures shown in **Figure 3** on the previous page (shown in ° Celsius). Minimums frequently drop below zero in winter months.

The highest temperature recorded in Dalwallinu is 46.8° and a minimum of -0.6°. The highest daily rainfall occurred in March (112.3mm) and April (111mm), with the highest monthly rainfall of 200.5mm in March. As would be expected minimum rainfalls in November through to April is 0mm.

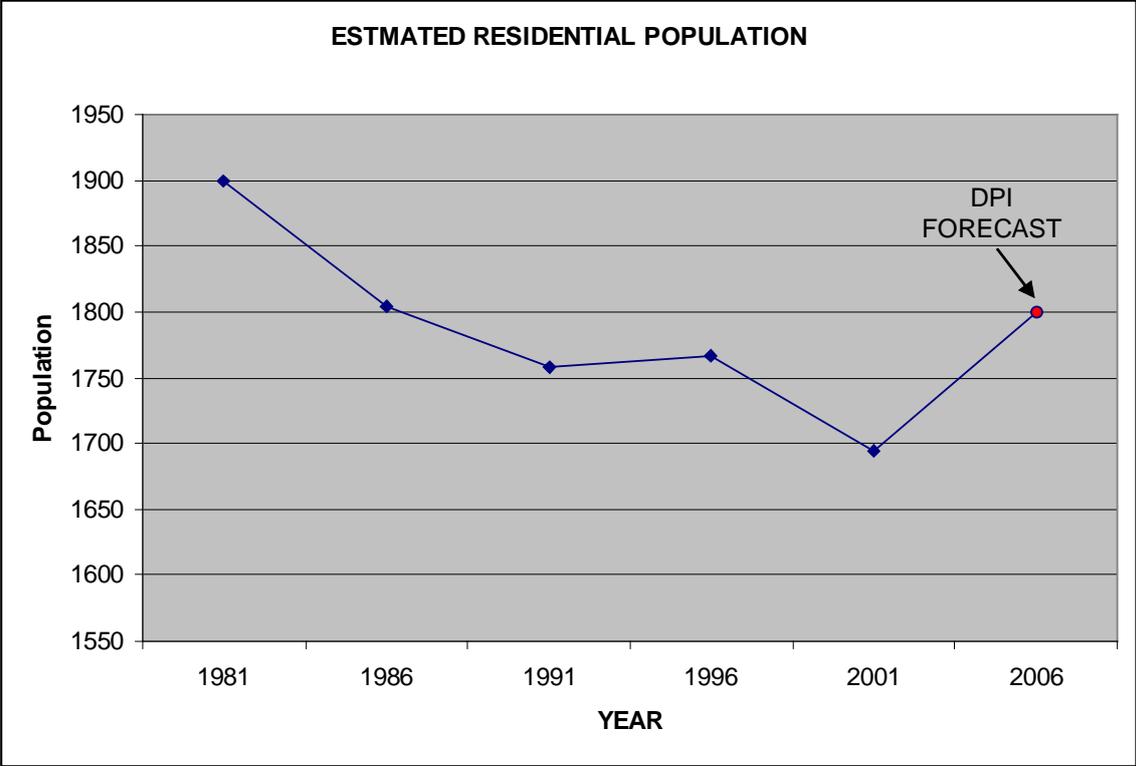
11 POPULATION

Although Dalwallinu has had declining population numbers over the last few Census periods there is optimism for the future.

The Figure below (**Figure 14**) shows the trend of the existing Census Estimated Residential Population over the last few Censuses. The Western Australian Planning Commission produced a Population Report No 4 (Oct 2000) forecasting trends by Local Government Area. In this report it forecast that Dalwallinu Shire's population would be 1,900 in 2001 and 2006, but was unable to forecast past this point for Shires with less than 2,000 population.

The Figure below replaces the WAPC 2001 forecast of 1,900 with the 2001 Census ERP, but leaves in the 2006 forecast of 1,900. It is likely that a review of forecasts based on the 2001 Census would change the 2006 forecast downwards.

FIGURE 14 – POPULATION TRENDS



Source: Western Australian Planning Commission - Population Report No 4, Oct 2000
Note: 2001 Forecast of 1,900 replaced by 2001 Census ERP.

Notwithstanding the recent population statistics, the Shire is prosperous. There were 603 people employed full-time (73.4%) in the Shire as at the 2001 Census, and another 218 part-time (26.6%). Unemployment in the Shire is very low. In the category aged 15-24 only 4.9% were unemployed against 14.1% of the State. Those aged 15 and over represented 3.7% of the workforce, against 7.5 in the State.

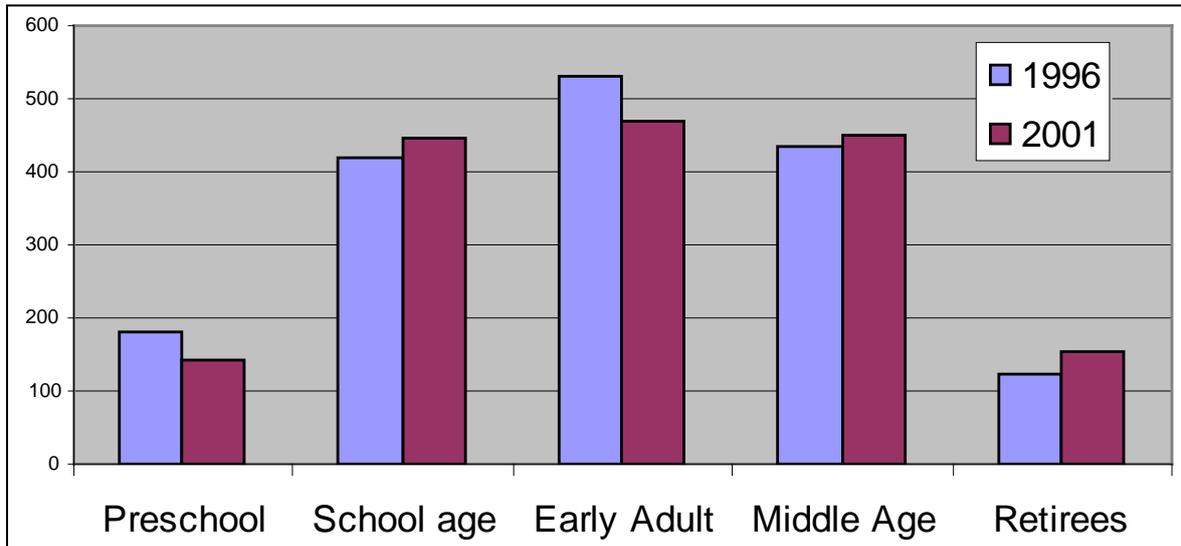
Occupations of those in the workforce are very different to the State statistics. The largest category in Dalwallinu was the Managers and Administrators constituting 36.5% of the workforce in contrast with 8.7% in the State. The Dalwallinu urban centre statistics more closely relate to the proportions of the State with 9.8% (31) in this category. This variation could be accounted for by the number of farmers classed as managers of their farms or pastoral stations.

Labourers were higher with nearly 15% in Dalwallinu (Shire and Town) against 9.1% in the State. Professionals were 19% in the town and 6.5% in the Shire against 27.4% in the State.

Based on the 2001 Census, the Shire of Dalwallinu has experienced a levelling out of the three middle groupings of the chart below. **Figure 15** (shown below) group people into categories with Preschool being ages 0–4, school age 5-19, early adult age 20-39, middle age 40-64 and retirees 65 and above.

The decrease in preschool people and increase in retirees may simply indicate an aging population, but the increase in school age and middle age groups may be a sign of a more stable population base, however this is not supported by the decrease in preschoolers.

FIGURE 15 – POPULATION BY AGE GROUPS



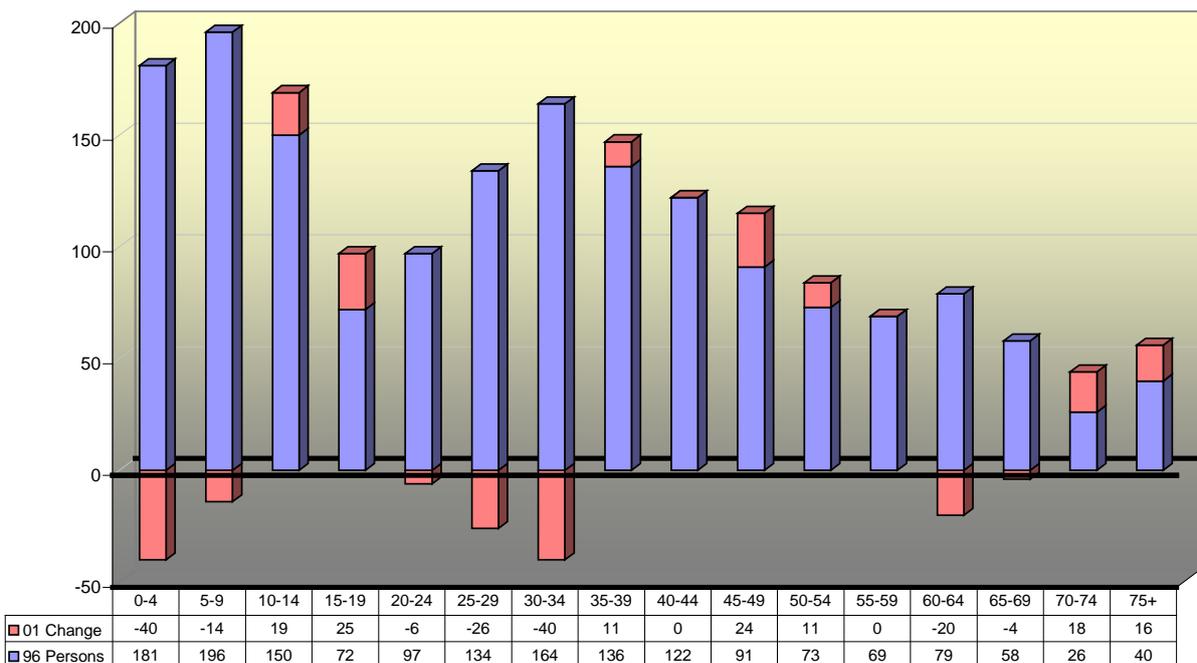
Source: ABS, 1996 and 2001 Censuses

Figure 16 shows a more detailed breakdown of this change by 5 year age groups highlighting the change in each group (both increases and decreases).

The Figure following (Figure 17) provides a slightly different view of the same data with a breakdown by gender as well as 5 yearly age groups. It highlights the uneven changes in gender distribution that have occurred between the Census periods.

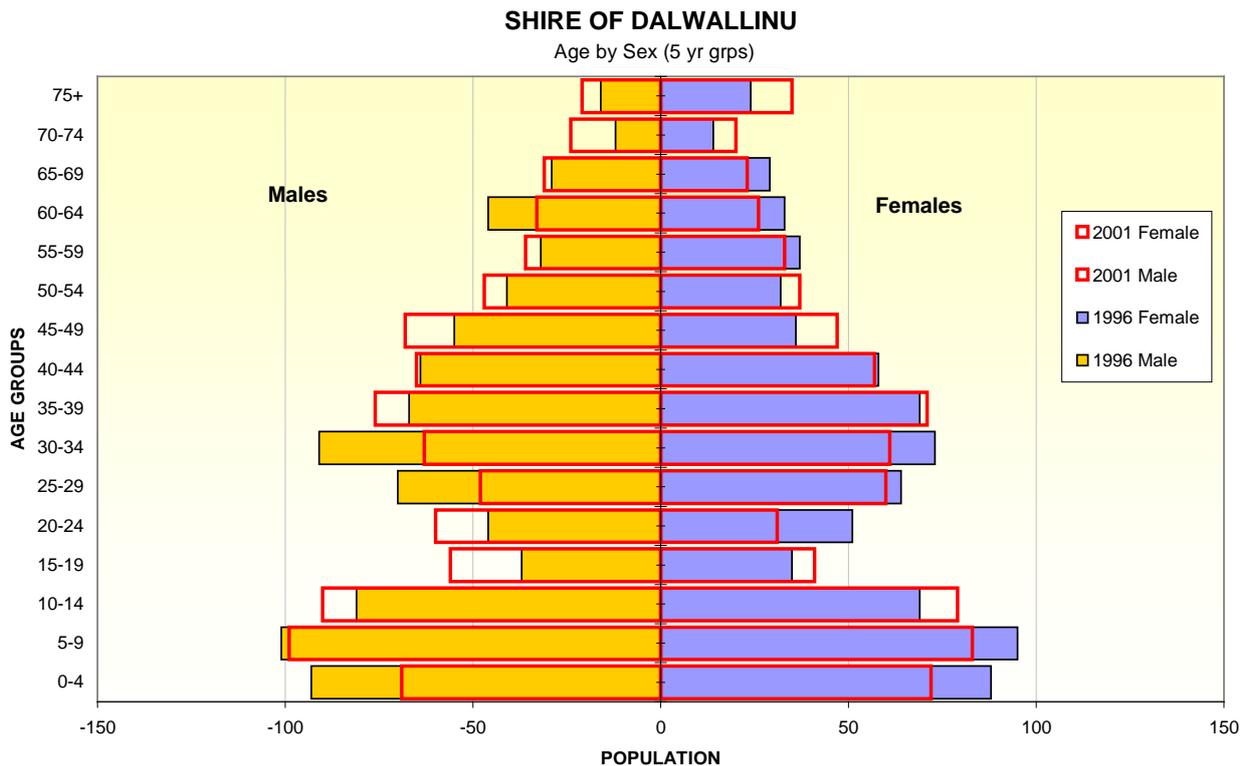
FIGURE 16 – POPULATION CHANGE BY AGE GROUP

Population Change in Different Age Groups (Shire of Dalwallinu)



Source: ABS, 1996 and 2001 Censuses

FIGURE 17 – POPULATION CHANGE BY AGE GROUP AND SEX



Source: ABS, 1996 and 2001 Censuses

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

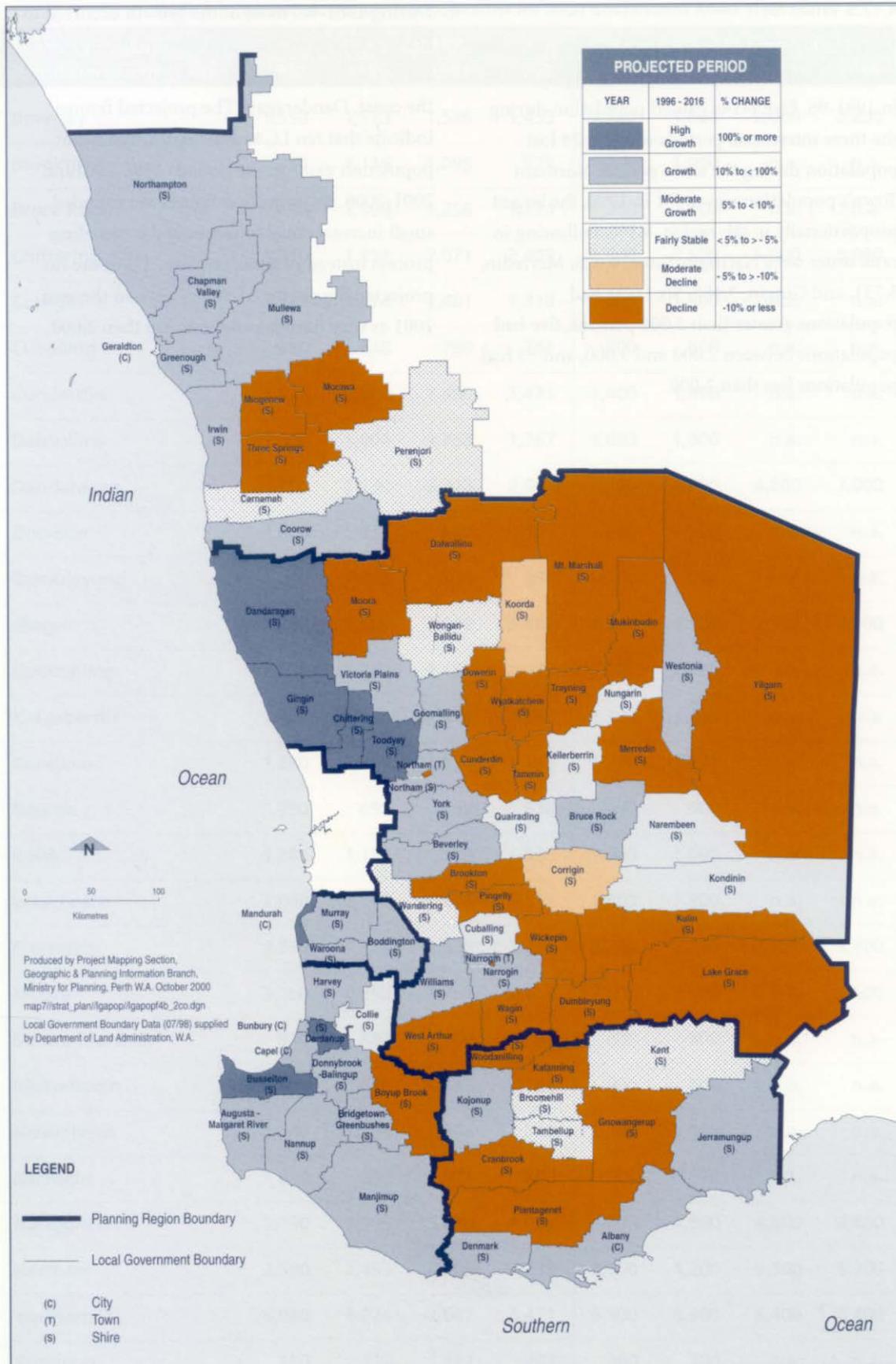
The Shire's strategic location on the National Highway network contributes to a guaranteed future increase in passing trade and exposure to most of the business and tourist traffic.

However, growth population projections for the Shire (Department for Planning and Infrastructure, 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 18** (overleaf) shows the Shire of Dalwallinu forecasts in relation to other Shires in the region.

Dalwallinu Town Population

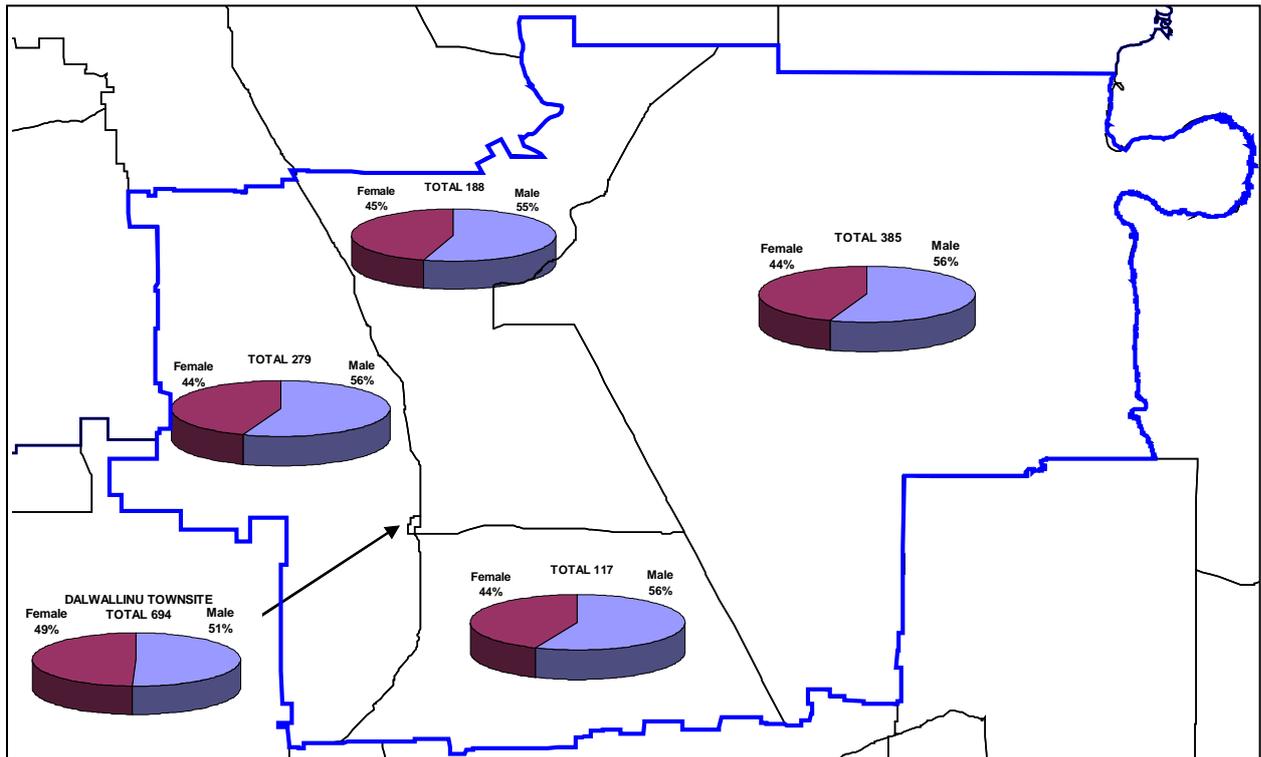
The town population of 694 represents 41.7% of the Shire's population (1,663 in 2001). **Figure 19** shows the number and gender breakdown by Census Collector District for the 2001 Census. The townsite population, in some respects, is being bolstered by a migration from the rural areas which is helping to consolidate regional services and amenities.

FIGURE 18 - PREDICTED POPULATION CHANGE IN LGAs FOR 1996 - 2016



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

FIGURE 19 – GENDER DISTRIBUTION BY CENSUS COLLECTOR DISTRICT



Source: ABS 2001

Rural Population

As with many Wheatbelt communities, the number and dispersed locations of the other townsites throughout the District provided a great distribution of centres for communities working on the land. Whilst these settlements may have been important during the days when the rail sidings were operational and agricultural methods were less mechanised, many are now bypassed by the rail system and agricultural techniques have become less labour intensive. The townsites that have no development at all should be reclaimed by the Shire to ensure that development does not take place. The Shire should encourage those townsites that are partly developed in order to minimise future development. Although the Shire has little obligation to provide normal town services to these remote areas there may be an increased demand for services like school buses, rubbish collection etc that will inevitably stretch the Shire's resources.

The two undeveloped townsites of Marne and Nugadong should be included in this reclamation strategy.

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 created. These lots should be grouped into a 'Special Rural' 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
- Environmental values and risks
- Potential for land use conflict
- Potential impacts on adjacent land uses
- Existence of any buffer areas from incompatible uses.

12 SOCIAL STATISTICS

In March 2003 the Australian Bureau of Statistics released its 2001 Census data for Urban Centres and Local Government Areas (Statistical Local Area). The following analysis is a brief snap-shot that compares the urban centre of Dalwallinu with the Shire and State averages in 1996 and 2001. This provides an indication, or comparison of the status of the Dalwallinu data with the overall levels.

The proportion of the 0-14 (youth) age group for Dalwallinu Urban Centre (31%) and Shire (29.6%) were much higher 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 only slightly lower for Dalwallinu (9.1%) than the State (10.5% in 1996 and 11.1% in 2001). The median age was 31 years of age in Dalwallinu as compared to 33 and 34 in 1996 and 2001 respectively for Western Australia. This constitutes a ranking of 143 in the State – or one of the youngest median ages in the State.

The break-up of males to female ratio in the State was 50-50 in 1996 and 49.8-50.2 in 2001. Dalwallinu Urban Centre had slightly less females than the State average (50.6 – 49.4). The Shire was (53.7 – 46.3) - presumably accounting for a bias towards male workers in the rural areas.

The population count for the town was 697 in 1996 and 694 in 2001, a decrease of 3 people or about 0.4%.

There were 231 full-time and 74 part-time people employed in the town and 603 full-time and 218 part-time in the Shire. These proportions favour full-time workers against the proportions of employment status of the State.

The occupation of employed persons distribution is similar to the State break-up, but variations do occur in some areas as one would expect. In Dalwallinu Urban centre 9.8%, and in the Shire 36.5%, 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 classification of farmers as managers or administrators. Those employed in professional positions in the Urban area (19%) and Shire (6.5%) was both substantially less than the State (nearly 30%). Trade and related workers constituted 18.4% in Dalwallinu Urban area and 6.1% of the Shire whereas the State had 14.2% in 1996 and 13.3% in 2001. Intermediate clerical, sales and service workers made up 9.2% of Dalwallinu's Urban area, and 6.7% of the Shire'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 7.6% of Dalwallinu Urban area workers and around 9% for the State.

Labourers and related workers made up nearly 15% of the employed persons compared with 9.1% in 1996 and 8.8% in 2001 in the State.

The following snippets of data help place Dalwallinu Shire against other Shires by ranking its data against the others. The median weekly wage of \$399 was 43 highest of all Shires, 88.7% of people were Australian born (11th highest), 3.7% of the workforce was unemployed (129th – or very low), 22% of the population over 15 years had qualifications - or 141st highest of all Shires.

In 2001 there were 81 (or 5%) of the total population Aboriginal, with 55 or 8.1% in the Dalwallinu Townsite. There are several areas of interest to Aboriginal people in the Shire, these are plotted on the Strategy Map.

Implications of Social Statistics on Local Planning Strategy

Although there are a decreasing number of people in the 60-64 year old bracket there is an increasing number of the 70+ age group indicating there will be demands on future aged persons' facilities. One can assume that this 35-59 age bracket may also want to settle in Dalwallinu and as such will be demanding the appropriate services. If these services are not provided in Dalwallinu this population may well seek an alternative town as a location to settle. Dalwallinu 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.

The town caters for aged persons' accommodation units in McNeill Street where there are two units of a group of nine. The Shire set aside vacant land on the east side of McNeill Street (facing the existing site) for additional accommodation in order to group the units within the same area.

These facilities are 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.

Consistent with the *Aboriginal Heritage Act 1972* all sites, known and unknown) are protected. Any development that may affect these sites must seek the appropriate clearance through the Aboriginal Cultural Material Committee (of DIA).

13 COMMUNITY FACILITIES

Dalwallinu residents have easy access to a wide range of top-quality community services, from exemplary health care and education through to high-end recreational facilities.

Health

The Shire is exceptionally well serviced in terms of health care. Dalwallinu District Hospital provides an excellent multi-purpose service (MPS). This includes the usual hospital services along with community health promotion; child health care; school-based care; mental health care; speech pathology; immunisation and care for the aged.

The Dalwallinu Medical Centre, which is owned and operated by the Shire, provides a general practitioner, whilst other services are available from a chiropractor, podiatrist, optometrist, massage therapist, psychologist, naturopath and occupational therapist.

Education

Each town in the Shire has pre-primary and primary schools with the exception of Pithara, whose students attend the Dalwallinu District High School. This school offers classes up to Year 10 and services the entire Shire beyond primary education.

If students wish to continue their education beyond Year 10, they may study through the Distance Education Centre which is housed at the Dalwallinu District High School. Here students study with assistance from the high school teachers and through the Distance Education Unit in Perth.

Tertiary education is coordinated through the CY O'Connor College of Technical and Further Education's (TAFE) Central Midlands Campus in Moora. These courses offer students the opportunity to participate in self development, employment skills and hobby courses. Access

to some TAFE course material is also available through Westlink's satellite-delivered programs. Dalwallinu's Westlink Centre is located at the Dalwallinu District Hospital.

The Dalwallinu District High School is currently teaching 222 pupils. The Department of Education and Training advises that there have been no significant changes in student numbers over the last five years. The Department is not aware of any planned future developments in the area and therefore considers that the existing school should cater adequately for students in the area.

The Buntine Primary School is currently teaching 19 pupils, the Kalannie Primary School 68 pupils, and the Wubin Primary School 19 pupils.

National Highway Emergency Services

A new Fire & Emergency Services Authority of WA has recently established a new facility in Leahy Street in Dalwallinu, with fire trucks also housed at Buntine and Kalannie.

St John Ambulance Association has a sub centre based in Dalwallinu, with branches in Buntine and Kalannie. Dalwallinu has a pilot activated lighted airstrip which is used to receive Royal Flying Doctor Service flights.

Volunteer Bush Fire Brigade is coordinated by voluntary officers. The Council is always keen to encourage more volunteers in the community to assist with maintaining these services to a level that should be expected in such locations.

Sports & Recreation

Each town in the Shire has its own sport and recreation facilities as follows. As previously mentioned, **Dalwallinu** has a well equipped Recreation Centre including a grassed oval and hockey field are designed to support many sporting activities. Other sports include tennis, basketball, netball, badminton, hockey, football, cricket, softball and inter-school sports events. There is also an Aquatic Centre, a bowling green and an 18-hole public golf course.

Pithara provides a speedway at McIntosh Park. **Kalannie** has a bowling green, lighted tennis and basket ball courts, badminton courts, a hockey field, a grassed football oval with a new sports pavilion, an 18-hole public golf course and a licensed club. **Wubin** offers tennis courts, an 18-hole public golf course and a new sports club whilst **Buntine** has a sports club, bowls and tennis court.

Religious Services

Dalwallinu supports several religious denominations including the Dalwallinu Gospel Trust, St Luke's Anglican Church, St Gregory's Roman Catholic Parish, Uniting Church, Dalwallinu Baptist Family Church and Church of Christ. Kalannie supports the Kalannie Gospel Trust and St John's Anglican Church (all denominations may use this church for their services).

Other Community Services

The Shire offices, (the administrative centre of the Shire) house the Shire chambers and agencies for government services. The services available in the Shire of Dalwallinu include Australia Post in Dalwallinu and sub contractors in their general stores in Buntine, Wubin and Kalannie; Police Station, Telstra and Family & Children's Services in Dalwallinu

Many regional services have their main offices located outside the Shire, including Department of Employment Education & Training, Main Roads Western Australia and Water Corporation Agricultural West Office having their bases in Northam. Western Power, Agriculture Western Australia District Office, Wheatbelt Development Commission Central

Midlands Office have their offices in Moora. The Department of Conservation & Land Management District Office has its office in Merredin.

Other Commonwealth Government services are mostly based in the sub-regional centre of Moora, or the regional centres of Northam or Geraldton.

Implications of Community Services on Local Planning Strategy

There has been a static attendance of students at the Dalwallinu DHS over the past few years – even though the population count between 1996 and 2001 shows a 25 person increase during that period. The reasons for this situation include the maturing of the stable population, the rural economy, the migration of people towards the larger centres and general technological advances in the primary industry sector that reduce the need for manpower. As mentioned, the Department of Education and Training has indicated that the current school facilities are adequate enough to cater for existing student numbers without the need for significant additional land or facilities for the foreseeable future. There are no plans to establish any new schools, or to close the existing school.

The absence of many Government agencies in the town has been identified as a problem and will be pursued by the Shire.

14 TOURIST ATTRACTIONS - AREAS OF INTEREST

Wubin Wheat Bin and Pithara Hall and Supper Room

These items have recently been added to the State Register of Heritage Places in order to preserve a slice of the district's history. The preparation and maintenance of the Council's Municipal Inventory will ensure other buildings and places are identified and registered for protection in the longer term.

Dalwallinu Railway Station

The station was built circa 1911 is situated in the middle of Dalwallinu on the line from Northam to Mullewa. In recent years the station's passing loop has been removed and even the station building is no longer used for railway purposes, as it is now a cafe.

Dalwallinu Townsite

Vintage agricultural equipment is displayed in the main street of Dalwallinu. Woodland walks are available through the conservation reserve in the south west corner of the townsite. The Council's Caravan Park provides excellent facilities for short term visitor accommodation and will shortly be expanding these facilities.

Two other attractions provide additional interests for the visitor; these include the Dalwallinu Discovery Centre; and the Old Well, from which the district's pioneers drew their water, is situated at the town entrance.

Wildflowers

During the months of August to November the Shire is a blaze of wildflowers and offers much to the tourist. Major tourist activities are held in the second week of September when the Wattle Week Festival occurs. Local wildflower tours are available during the season through Wubin Tourist Centre.

To celebrate the area's spectacular show of wildflowers, the Dalwallinu Tourist Committee hosts an annual Wattle Week Festival in September, which offers tourists and locals alike an opportunity to tour the Shire, discovering the best 'out of the way' places to view the flora. Other activities during Wattle Week include tours, walks and food tasting (Bush Cuisine).

Buntine

Buntine is situated 15 km north of Wubin on the Mullewa Road. Close to the township is an A Class Reserve, a popular picnic spot with wildflowers in season.

Calibro School

Calibro school is situated along Carter Road and is 10 km past the Rabbit Proof Fence. The school is the restored single room Mud Brick School of the 1940s.

Kalannie

1992 National Landcare Award winners. The Landcare Centre is situated in the old Railway Station. The town has its own caravan park and Telecentre with its tourist information section. The grain silos are extensive stretching for a kilometre.

Petrudor

A massive granite outcrop makes the perfect picnic setting with nature all round. BBQ and ablutions are provided.

Pithara

13 km south of Dalwallinu - small town settled in 1906. McIntosh Memorial Park, site of first air fatality in W.A. is 500m east of township.

The 5 Graves

The five almost identical graves lying side by side in the Dalwallinu Cemetery inspired the book about WF Liebe, builder of WA Art Gallery, His Majesty's Theatre, Peninsular Hotel and a farmer in the early days at Wubin.

Wubin

The heritage classified wheatbin, Rock & Mineral Collection (housed in the Tourist Information Centre) and CWA Pioneer Women's Memorial Display. There are many wildflowers in and around the town in season.

Xantippe

This area consists of a large granite rock, water catchment area with an unusual tank. Sweeping views from the top provide expansive views of the broad acre landscape.

The Rabbit Proof Fence No. 2

The fence runs north/south through the eastern third of the shire, this fence was built in 1907- 1908 and much of it remains in good condition. Mileposts mark the distance from the south coast. The fence originally went from Point Anne to north of Cue, where it turned east to join Rabbit Proof Fence No. 1 at Gum Creek.

It is one of three long fences in the state designed to control the rabbit plague, which could wreak enormous havoc in agricultural areas. The fences failed in their purpose, although much time and money was expended to make them work. They stand as a monument to human intention to control a pest, which was and is a national problem. The fences are an indication of the widely held fear of the rabbit invasion and the limited and desperate ideas used to control the pest.

Implications of Tourist Attractions on Local Planning Strategy

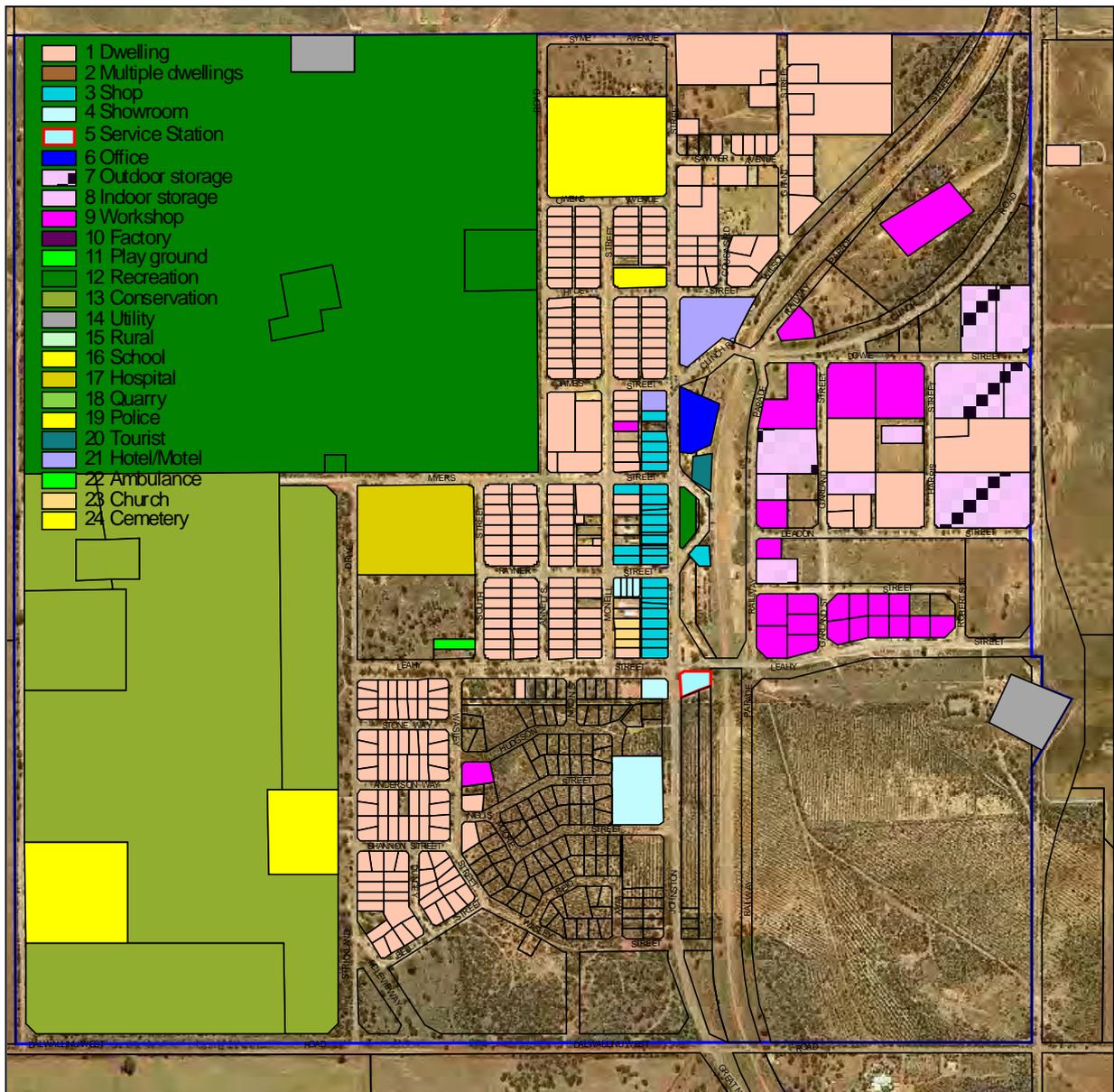
Tourism is an industry that will only grow in the future. The Shire proposes to ensure that these sites are appropriately protected and managed in order to maximise their interest value and tourism appeal.

15 ANALYSIS OF VACANT LAND

Figure 20 below shows the vacant lots within the Dalwallinu townsite. The background to the figure shows a generalised landuse.

Ownership	Residential	Commercial	Industrial	Other/Reserves
Private				
Shire	3		7	
Government Owned				
Crown Reserves/VCL	80	12	3	5

FIGURE 20 - VACANT LAND WITHIN DALWALLINU TOWNSITE



Source: Base Map DLI 2004 and PLANWEST

The Council has carried out several land development schemes over the last decades and has successfully sold these almost as fast as they are created. The next part outlines the most recent projects.

16 LAND RELEASES

The Shire facilitates regular land releases for commercial and industrial purposes and provides a suitable quantity of residential land. Recent projects include the old hospital site (34 lots) and the Cousins Road development (10 lots) for residential land. LandCorp has recently developed the south side of Hugget Drive (in Dalwallinu) for light industrial purposes creating 11 lots in the first stage with an additional 14 lots in stage 2.

Implications of Land Releases on Local Planning Strategy

The Shire's proactive approach to ensure a steady supply and choice of land for various uses has mostly been responsible for the town's growth and consolidation.

17 SHIRE FACILITIES AND AMENITIES

Business Directory

There are many businesses operating in the Shire of Dalwallinu. They are arranged into four categories, namely Agricultural Support, Retail & Wholesale, Services, and Light Industry. The listing, available through the local business directory provides an indication of the diversity and quantity of local businesses, the majority of which are based in Dalwallinu town.

18 TRANSPORT FACILITIES

Rail

The main railway route passes through Northam, to Goomalling, Wongan Hills, Ballidu, Pithara and Dalwallinu. The passenger services ceased many years ago and now the service is solely for freighting grain. The other line through the Shire services Kalannie from Cadoux southwards to Dowerin.

Bus

There is a TransWA bus service passing through Dalwallinu from Port Hedland to Perth that operates Monday through to Thursday on a daily basis. There is a daily courier service (Courier Australia, NiteRoad, TNT).

Air

There is an airstrip located 7 km north of Dalwallinu on the Great Northern Highway which is used for the Royal Flying Doctor service and is available for private plane movements.

Road

As previously mentioned, Dalwallinu townsite is located on the Great Northern Highway route. The highway is a major inter-regional express route linking the metropolitan area with the north-west and forming part of the National Highway route around Australia. Its main purpose is as a freight link to the mining centres of the north-west and as a major tourist route. Road trains up to 36.5 metres are currently allowed to travel to Wubin, and up to 53.5 metre road trains can travel beyond Wubin.

A previous study suggests that the current alignment will be maintained through Dalwallinu Shire, but improvements to the alignment, passing lanes and upgraded shoulders will be progressively carried out. Other roads in the Shire will be maintained to high standard encouraging the use by tourists as well as residents.

A Priority C proposal envisages a bypass around Wubin to a Type 6 standard (8-9 metre seal width) similar to the Highway heavy haulage route through Dalwallinu.

The Northam-Pithara Road is a State Road and, with the Northam-Cranbrook Road, it forms part of a main north-south arterial link from Dalwallinu to Albany. It carries a diverse range of traffic, from tourist and local traffic to heavy freight vehicles. The first priority is to upgrade the road widths to a Type 5 standard (Type 5 is a 7 metres sealed width).

The Dalwallinu-Kalannie Road is a Local Road providing access to the Highway for heavy mining equipment bound for the north-west and also for traffic to Geraldton, via the Wubin-Mullewa Road. The road already carries a significant amount of agricultural produce including grain, fertiliser and stock. It is proposed that this alignment be a Type 4 construction (6 metre seal width).

Implications of Transport Facilities on Local Planning Strategy

Due to the town's location on the National Highway it is essential that the roads leading to Dalwallinu are kept as inviting and accessible as possible. This implies that major access roads must be kept in good condition and signposted to invite traffic to Dalwallinu especially, or at least through it for both bus routes and tourist traffic. 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 any town. Input to these proposals must be on-going and active. To attract tourist traffic the road conditions must be made more suitable (i.e. safer).

The railway provides an essential life-blood to the rural economy and must be properly maintained to ensure a continued successful transport of the rural harvest.

19 ESSENTIAL SERVICES

Wastewater

The Dalwallinu and Wubin townsites have deep sewerage systems managed by the Shire. The other townsites use on-site effluent disposal systems.

Water Supply

Water Corporation currently has licence for an Operating Area for Potable Water for the Goldfields and Agricultural Water Supply Scheme that includes part of the area covered by the Shire. The Water Corporation has land (mostly Crown) throughout the Shire for the purposes of providing water supplies to the Operation Areas. These Reserves have been identified on the Scheme Maps as Public Purpose Reserves for the purpose of 'Water Supply'.

Water is delivered to the Shire via a pipeline from the Cunderdin North line off take from the Mundaring-Kalgoorlie pipeline located south of Dalwallinu. The supply provides potable water for Dalwallinu, Buntine, Wubin, Pithara and Kalannie.

Dalwallinu town is supplied from a summit tank and dam located on Lot 587 Leahy Street. The tank and dam are refilled from the pipeline.

Rubbish Collection

Commercial rubbish in Dalwallinu, Pithara, Wubin, Buntine and Kalannie is collected twice a week, residential once a week. Every fortnight there is a kerbside recyclable collection. There

are only two waste management sites in the Shire including the Dalwallinu site located on the Shire boundary west of the Townsite. This site has an estimated 50-70 year life. The other is a site located about 8 kilometres west of the Kalannie townsite with a 20-30 year life. Both are protected by Special Control Areas in the Scheme.

Power Supply

The State grid provides power to all developed townsites.

Gas Supplies

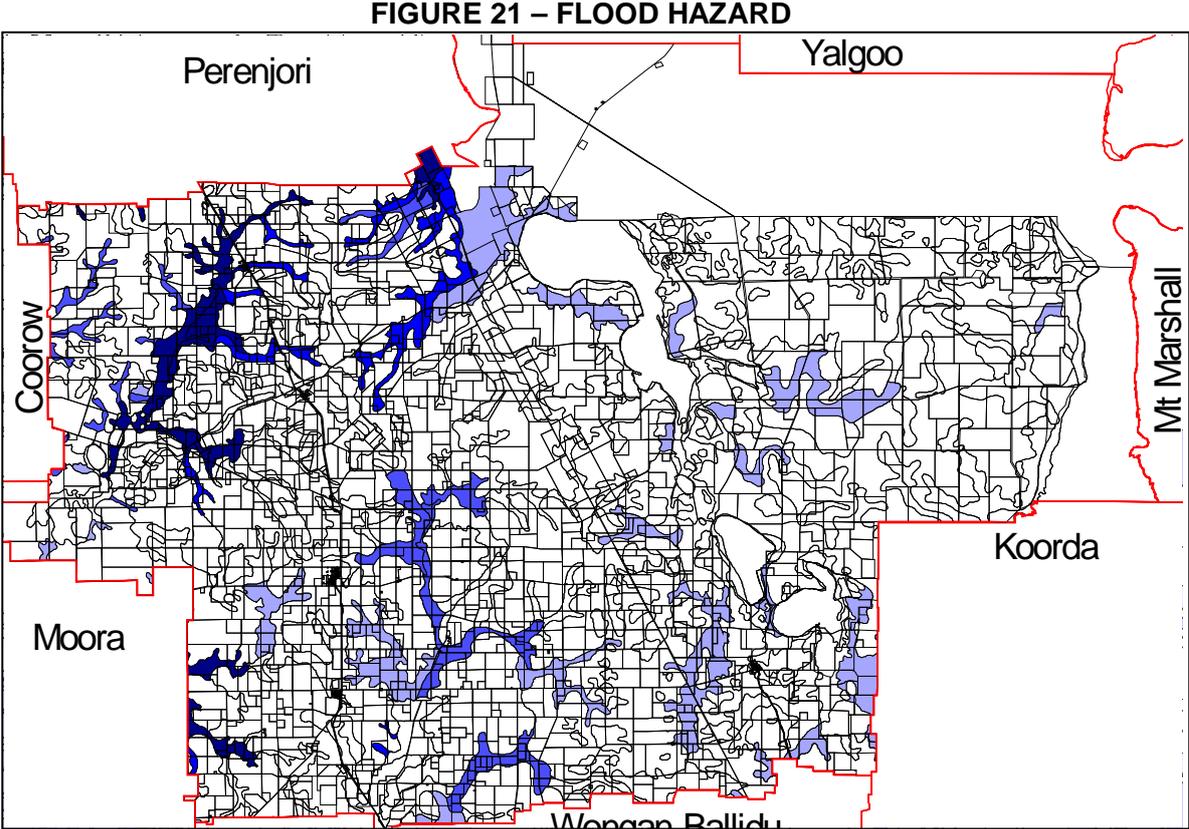
LPG Gas is supplied in cylinders by a local distributor.

Fire Management

Dalwallinu has a bushfire brigade unit located on the corner of Annetts and Myers Streets. Wubin, Buntine and Kalannie have volunteer fire brigade units. A new combined Fire and Emergency Services facility is proposed to be built in Leahy Street (Amendment No 15).

Flood Risk

Information provided by the Department of Agriculture has determined that the majority of the district is a low risk flood hazard area. **Figure 21** below shows graphically the darker areas that are subject to greater flood hazard than others.



Source: AgWA 2005

20 MANAGING NATURAL RESOURCES

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.

Salinity Monitoring

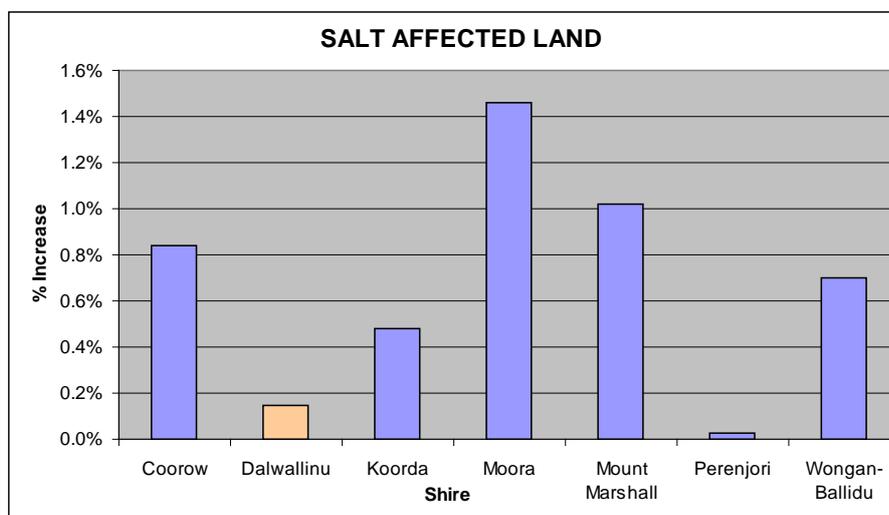
Dalwallinu Shire has had a .1% increase in the saline land component that comprises 11.7% of the Shire. This is still considered excessive when compared to some other Shires, for example Perenjori, where there has been no increase and over only 7% of the Shire.

The salinity estimates have been aggregated to produce Shire summaries. **Figure 22** below provides a summary of the salinity status for the shires in the surrounding area. The table contains area estimates expressed in hectares (ha) as well as the percentage of each shire estimated to be saline, and the rate of increase of these estimates.

From the Table we observe that the estimates of the extent of salinity are increasing for all Shires, albeit at different rates. The following graph displays these changes.

FIGURE 22 - SALINITY STATISTICS SUMMARISED BY SHIRE

Shire	Shire area ha	Salt affected				Change Δ%
		1988		2000		
		ha	%*	ha	%*	
Coorow	418,819	23,475	(5.6%)	26,994	(6.45%)	0.8%
Dalwallinu	722,135	83,384	(11.5%)	84,422	(11.69%)	0.1%
Koorda	283,197	41,255	(14.6%)	42,619	(15.05%)	0.5%
Moora	376,192	23,346	(6.2%)	28,840	(7.67%)	1.5%
Mount Marshall	1,016,138	21,484	(5.2%)	25,703	(6.21%)	1.0%
Perenjori	829,944	29,788	(7.0%)	29,895	(7.05%)	0.0%
Wongan-Ballidu	336,518	34,232	(10.2%)	36,587	(10.87%)	0.7%



Source: DLI, Satellite Remote Sensing Services 2002.

The Yarra Yarra Catchment Regional Council continues to drain and monitor the incidents of salinity and acid soils.

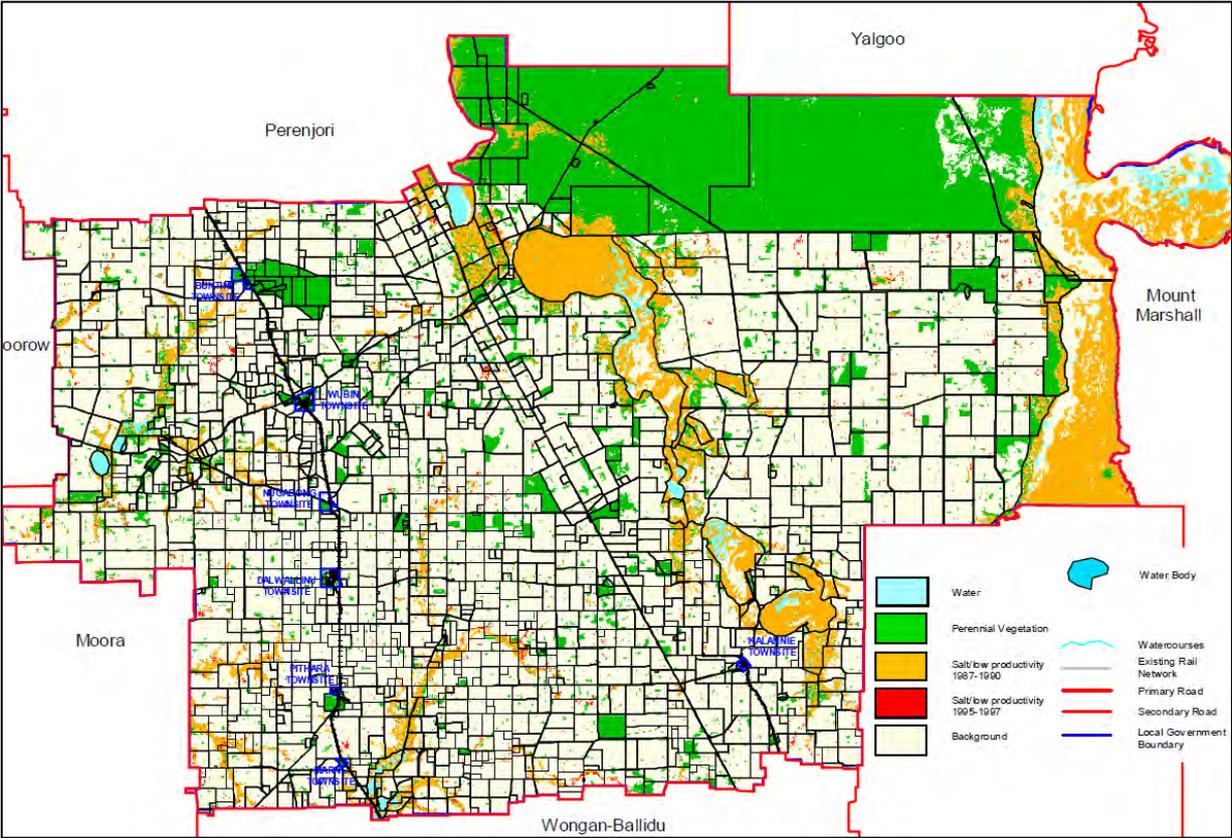
Dalwallinu's success in salt land reclamation and acid soil treatment is a testament to the tree planting programs, drainage improvements and lime application for acid soils should be acknowledged. Substantial tonnages of lime are carted annually to treat acid soils.

Figure 23 below 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. Townsite areas are also shown in blue.

The blue areas shown in **Figure 23** 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 (shown orange).

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

FIGURE 23 - SALINITY MONITORING



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 red, should be advised of these findings with information about remedial measures that can be put in place to mitigate against further increases in salinity levels and areas.

This mapping will be invaluable for determining whether land is suited for conservation areas, protection, future development options and treatment. This, in conjunction with those areas identified by DEC will require further discussion.

A strategy should be put in place to promote the 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.

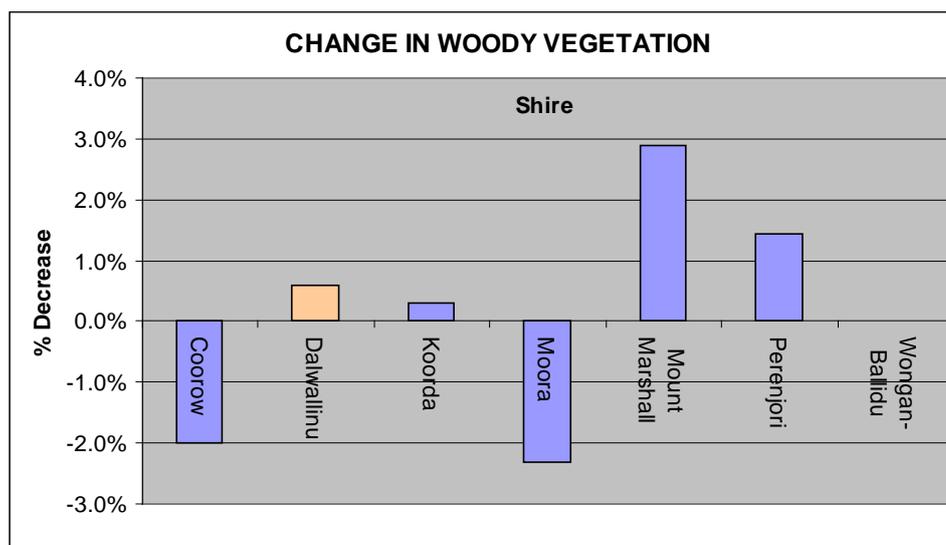
Vegetation Density

This mapping reflects the green areas shown in Figure 20, with the majority of the Dense and Medium density areas contained within DEC managed properties. This may be why the Crown purchased the land, or is as a result of strict management practices. **Figure 24** below shows the positive change in areas of woody vegetation within Dalwallinu and some of the surrounding Shires.

The graph that follows displays these changes graphically.

FIGURE 24 – WOODY VEGETATION STATISTICS SUMMARISED BY SHIRE

Shire	Shire area ha	Woody vegetation					
		Area proc'd %	1988		2000		Change Δ%
			ha	%*	ha	%*	
Coorow	418,819	100%	162,739	(38.9%)	154,417	(36.9%)	-2.0%
Dalwallinu	722,135	100%	136,695	(18.9%)	141,053	(19.5%)	0.6%
Koorda	283,197	100%	26,101	(9.2%)	26,957	(9.5%)	0.3%
Moora	376,192	100%	83,147	(22.1%)	74,478	(19.8%)	-2.3%
Mount Mars	1,016,138	98%	518,396	(52.1%)	547,113	(55.0%)	2.9%
Perenjori	829,944	57%	118,706	(25.1%)	125,511	(26.5%)	1.4%
Wongan-Ba	336,518	100%	22,100	(6.6%)	22,110	(6.6%)	0.0%



Source: DLI, Satellite Remote Sensing Services 2004.

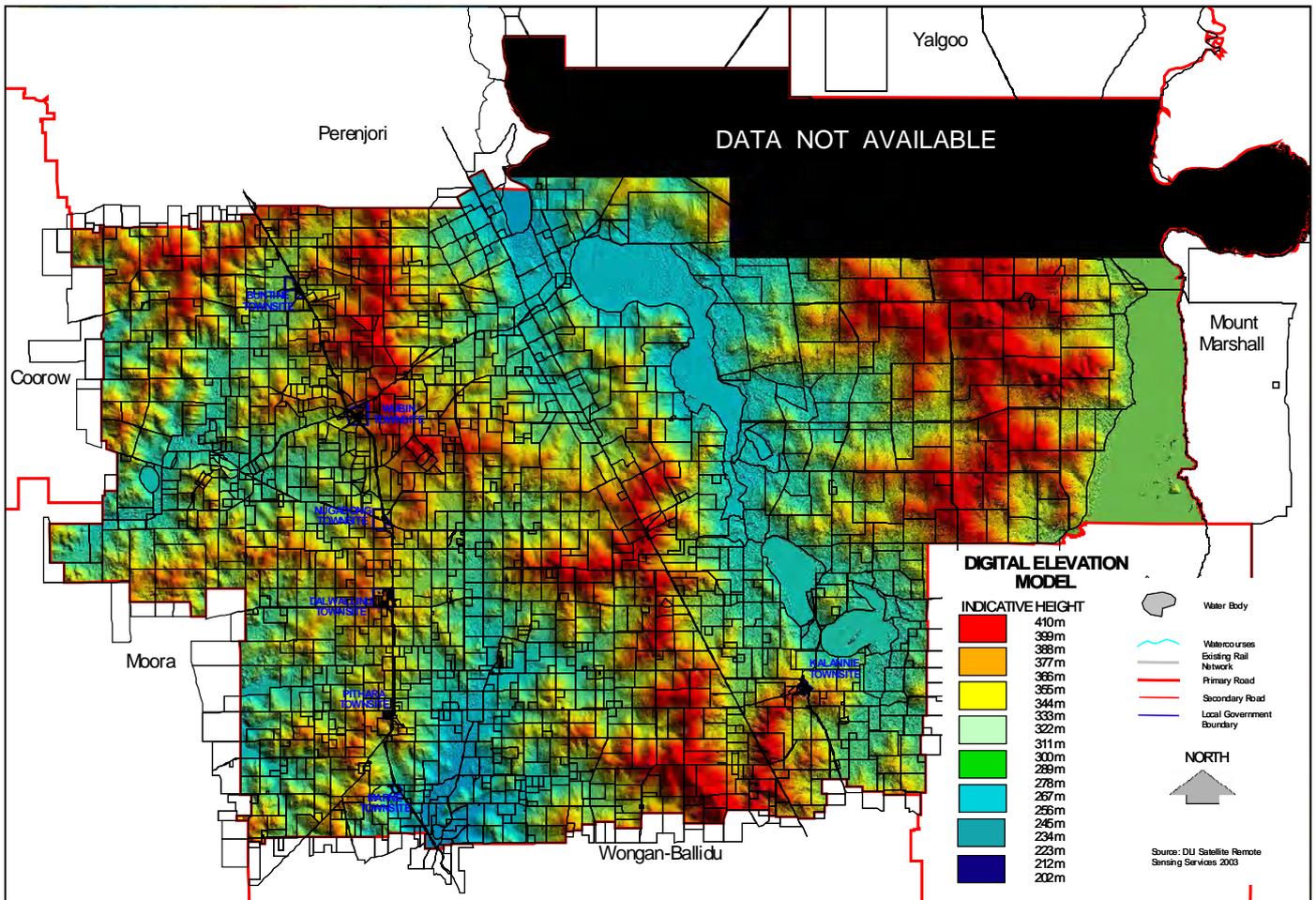
Implications of Vegetation Density on Local Planning Strategy

There are no implications of the slope analysis that affect the Local Planning Strategy except that the Shire should continue to promote, where possible, the protection of vegetated areas.

Digital Elevation Model

Figure 25 below provides a valuable representation of the lie of the land through the Shire. The Figure shows the highest area (in red) occurring towards the eastern parts of the Shire and the land form being divided into parts by the water systems of lakes and low areas shown in blue.

FIGURE 25 – DIGITAL ELEVATION MODEL



Source: Satellite Remote Sensing, DLI 2003

21 ECONOMIC BASE

Primary Industries are the mainstay of the Shire of Dalwallinu economic base, and for the entire Wheatbelt area. Secondary industries and businesses associated with agriculture are a dominant feature of town economies. Mining also contributes to the area's income, with gypsum deposits mined in the eastern section of the Shire.

Business stability in the Shire is very high. The majority of businesses have been operating here for over 10 years. Most have either expanded or remained stable over the past five years.

The Shire's website states that a range of businesses across Dalwallinu were surveyed and asked what they considered to be the most important issues facing those looking to set up a venture in the Shire. Respondents identified:

1. The range of local business services.
2. Transport costs.
3. The supply of skilled labour.
4. Time and distance from suppliers.

They also suggested four advantages of setting up shop in Dalwallinu:

1. The good quality of life in the area.
2. Relatively cheap establishment costs.
3. Convenient location.
4. Reliable transport and freight services.

Agricultural Produce

Dalwallinu is in the Wheatbelt. Agriculture is the main economic activity in the Shire. In June 2002 there were approximately 159 farming operations in the Shire of Dalwallinu, registered as individuals and/or limited liability companies. These farms produced the following tonnages delivered to Co-Operative Bulk Handling Ltd within the Dalwallinu Shire.

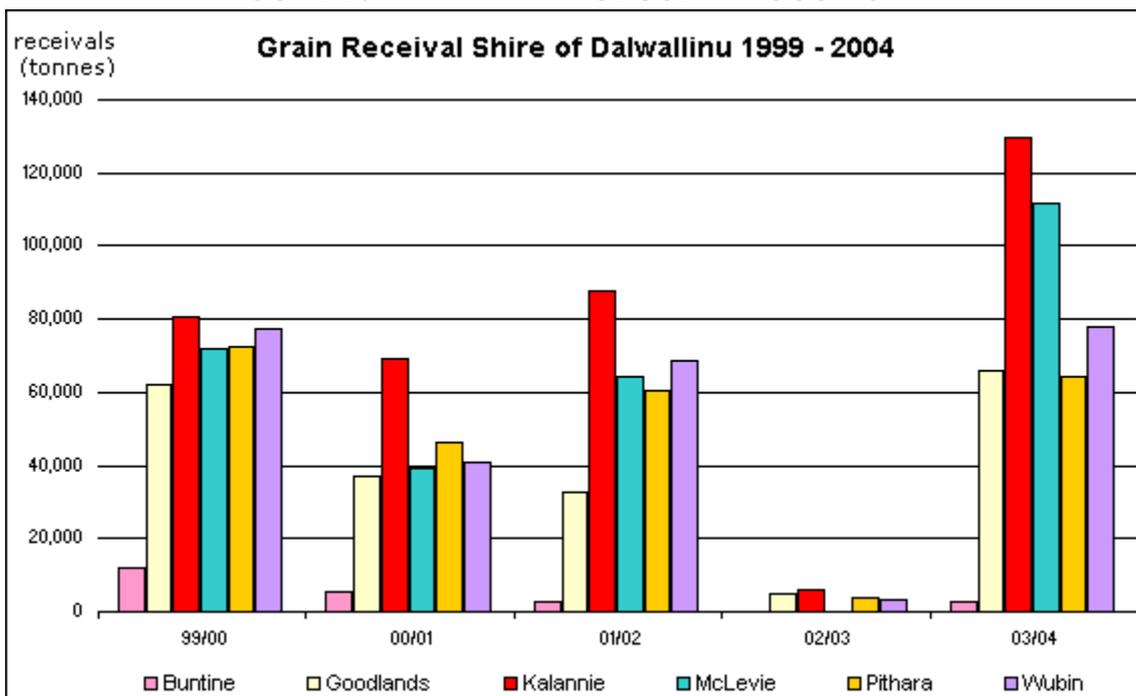
44 percent of the above businesses are partnerships, 36.5 percent are companies and 17 percent are sole traders. Some 92 percent of businesses operating in the Shire are locally owned.

Other agricultural pursuits in the Shire include the farming of sheep for meat and wool; cattle; goats; pigs and horses. There has also been major planting of oil mallees which are used primarily for eucalyptus oil production.

The statistics above do not include grains stored on farms for own use or sold privately.

Figure 26 overleaf shows the grain receivals through CBH over the last five years.

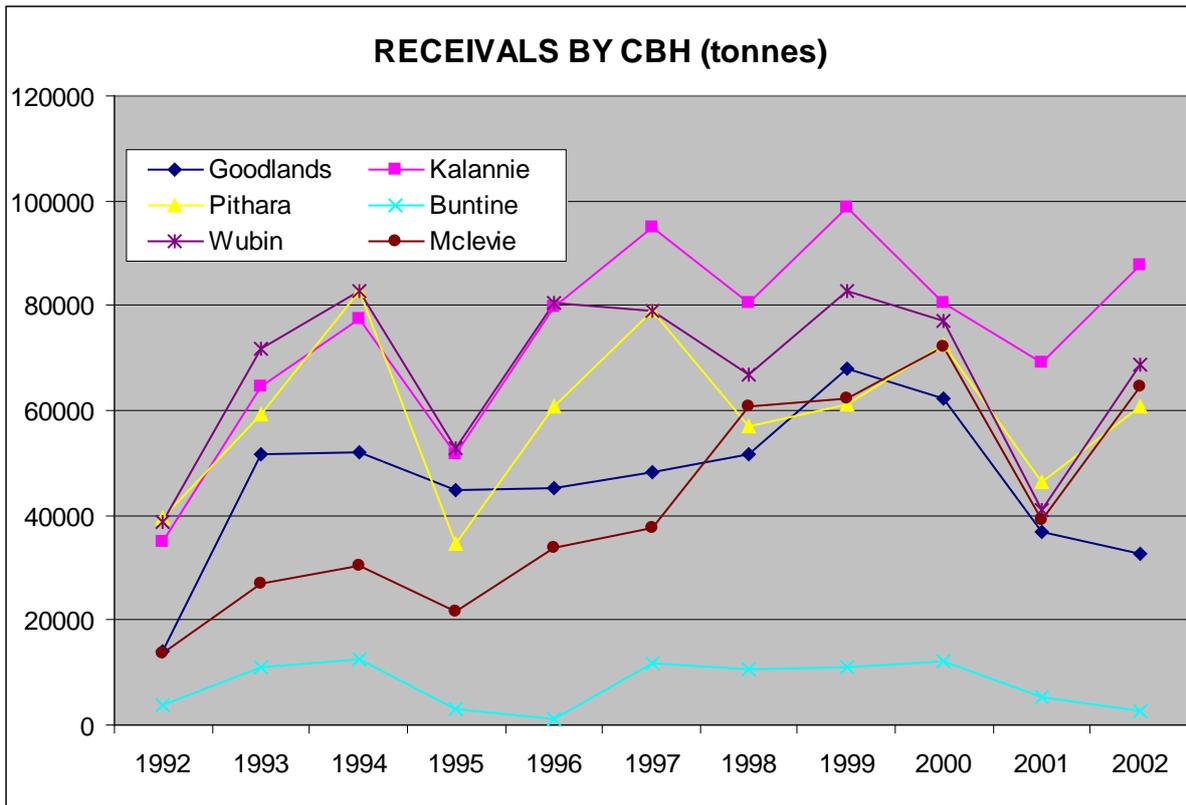
FIGURE 26 – PRIMARY PRODUCE THROUGH CBH



Source: CBH 2001/02

Figure 27 below shows the total grain traffic handled through Dalwallinu CBH depots. Some of this grain originates from outside the shire. The figure overleaf shows the grain handled by CBH but originates from Dalwallinu farms.

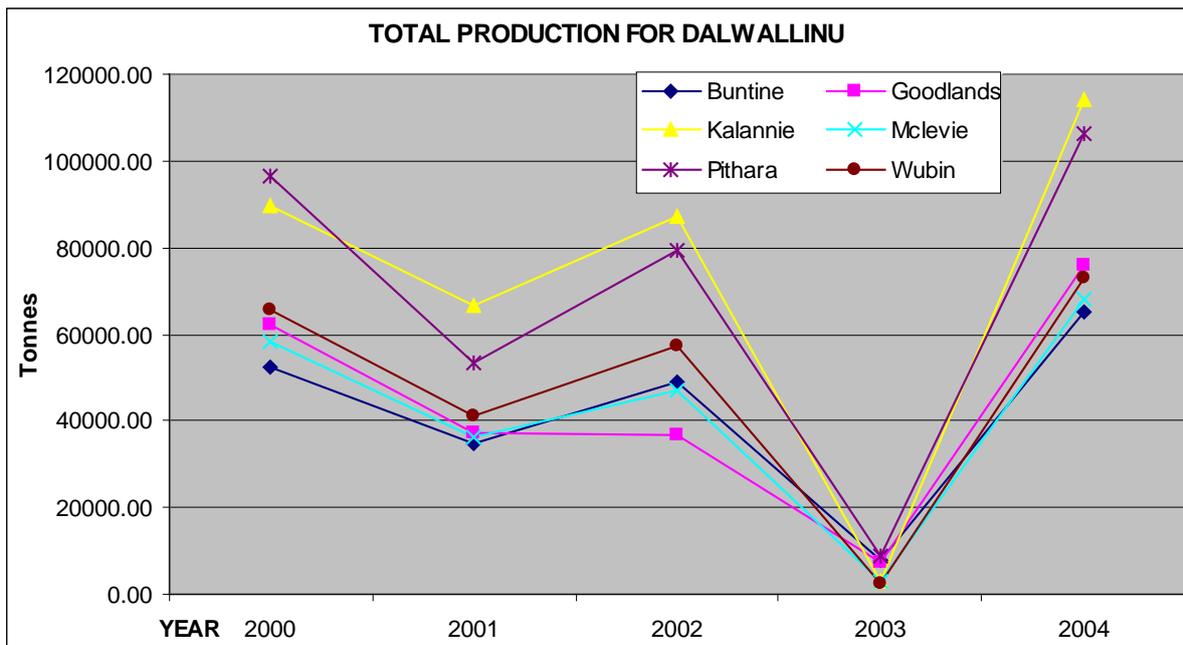
FIGURE 27 – TOTAL RECEIVALS THROUGH CBH



Source: CBH 2005

Figure 28 shows CBH grain from farms within the Shire of Dalwallinu. Although last years production was up a healthy 18.33% on the 1999/2000 production, the chart clearly shows the 2002/03 production dip to a disastrous low of 7.5% of the 1999/2000 level.

FIGURE 28 – DALWALLINU RECEIVALS THROUGH CBH

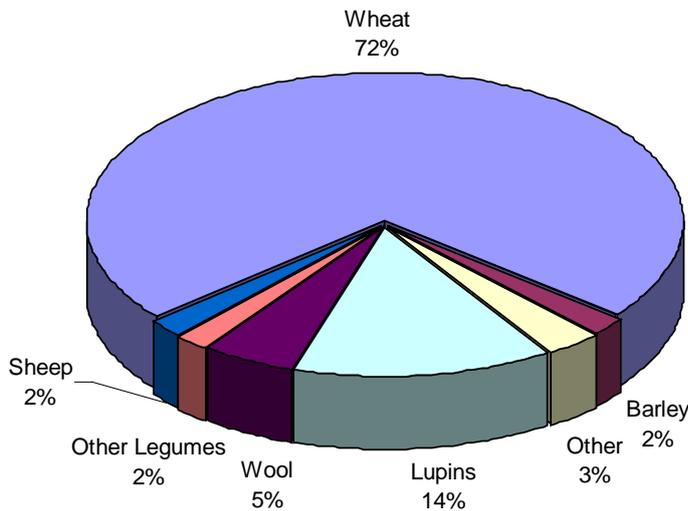


Source: CBH 2005

Figure 29 clearly shows the overwhelming dominance of wheat as the main product. A further analysis of the Shire's production is shown on the following pages.

Much of the readily available data on agricultural production is from different sources and periods, however the following parts try and paint a picture of the significance of some of the data.

FIGURE 29 – PROPORTION OF GROSS VALUE



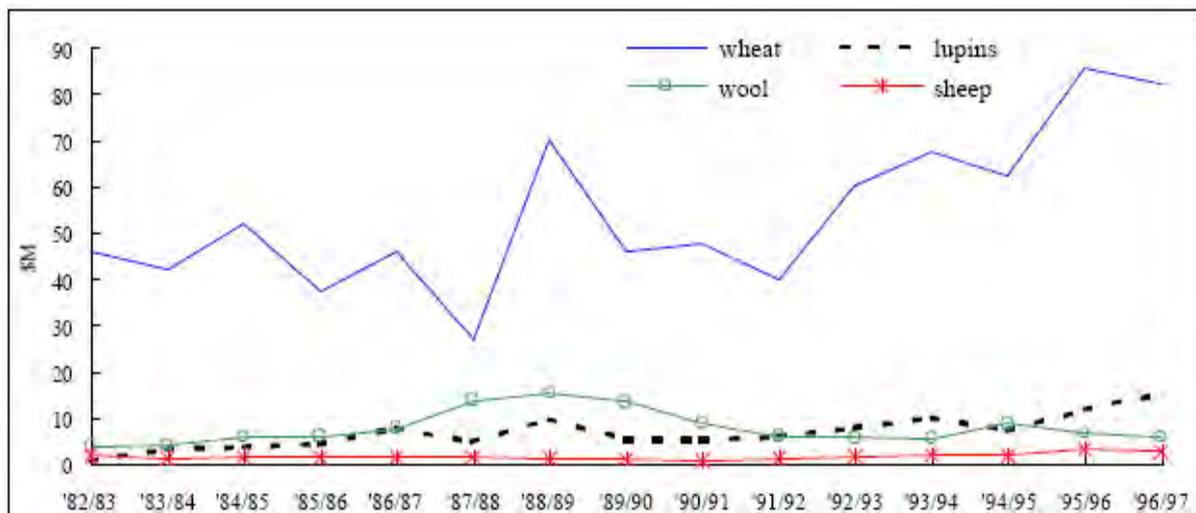
Source: AgWA 2000

	GVAP (SM)	No of farms	Area of farms ('000HA)
Dalwallinu	114	159	568
Mullewa	90	116	998
Northampton	74	168	771
Moora	65	144	353
Chapman Valley	59	115	320
Perenjori	58	111	653
Victoria Plains	55	149	261
Dandaragan	53	177	384
Gingin	53	184	147
Mingenew	44	53	194
Morawa	44	94	445
Three Springs	43	87	231
Coorow	42	94	264
Greenough (incl Geraldton)	37	110	167
Carnamah	21	62	152
Irwin	18	49	112

During this period (1997) Dalwallinu was the most valuable contributor to the Northern Agricultural Sustainable Rural Development Region. This region includes all the Shires listed in the Table shown in **Figure 29**. Its gross value of agricultural production was over \$114 million with an average of over \$716,000 (gross) per farm.

The Shire covers over 700,000 hectares of which nearly 80% is farmland. Wheat accounted for \$83 million, lupins \$15 million and wool \$6 million. **Figure 30** shown below demonstrates the trend of the gross value of major commodities over a 14 year period. The drop in the graph in 87/88 reflects poor prices rather than poor production.

FIGURE 30 – PROPORTION OF GROSS VALUE

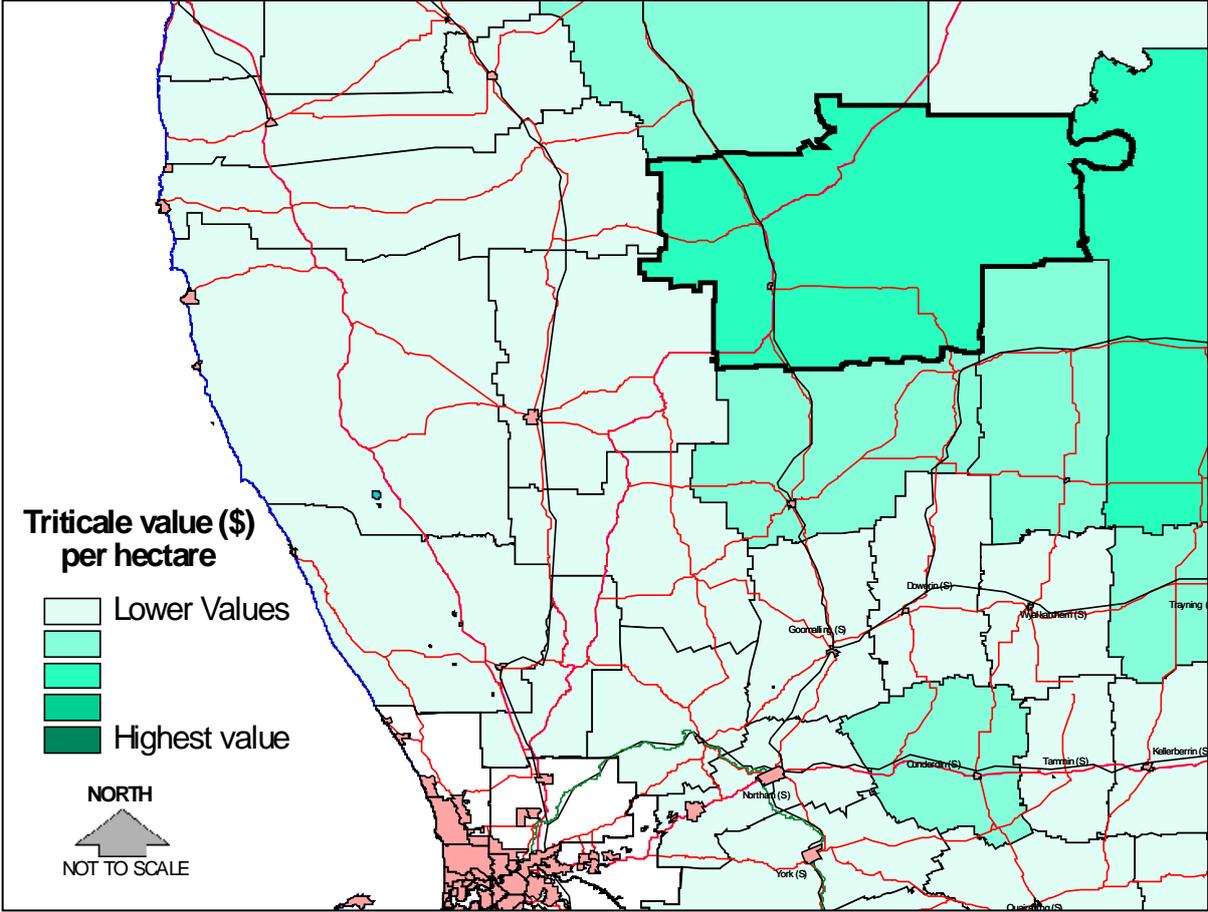


Source: AgWA 2000

The following Figures provide a pictorial view of the value per hectare significance of the primary produce of Dalwallinu compared with the surrounding Shires. **Figure 31** shows the triticale value per hectare as being in the highest bracket in the Wheatbelt. **Figure 32** shows the equivalent in barley production, still high but not in the highest bracket of value.

Figures 33 and **34** show the decreasing significance of Dalwallinu’s value of other crops per hectare like wheat and oats, compared with surrounding Shires. As previously outlined, this data is not indicative of the total value of a single crop.

FIGURE 31 - TRITICALE VALUE PER HECTARE (\$)

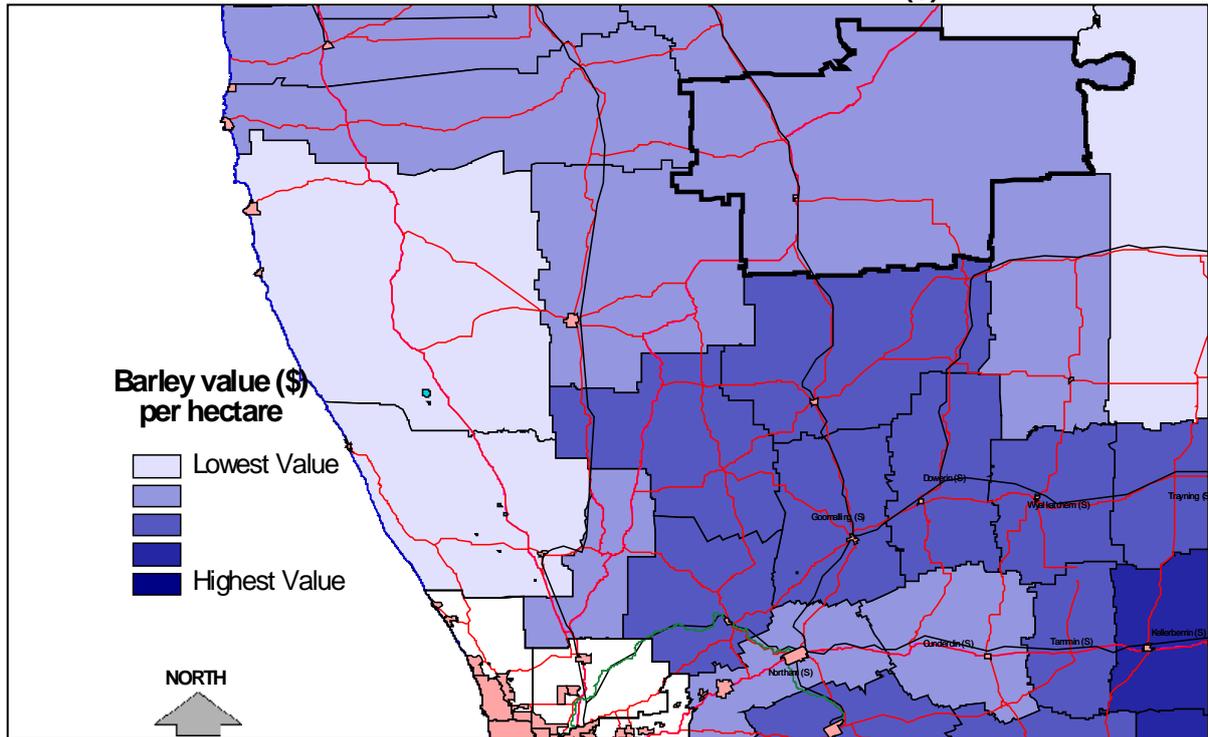


Source: Australian Bureau of Statistics 2001 (AgStats)

Implications of the Economic Base on Local Planning Strategy

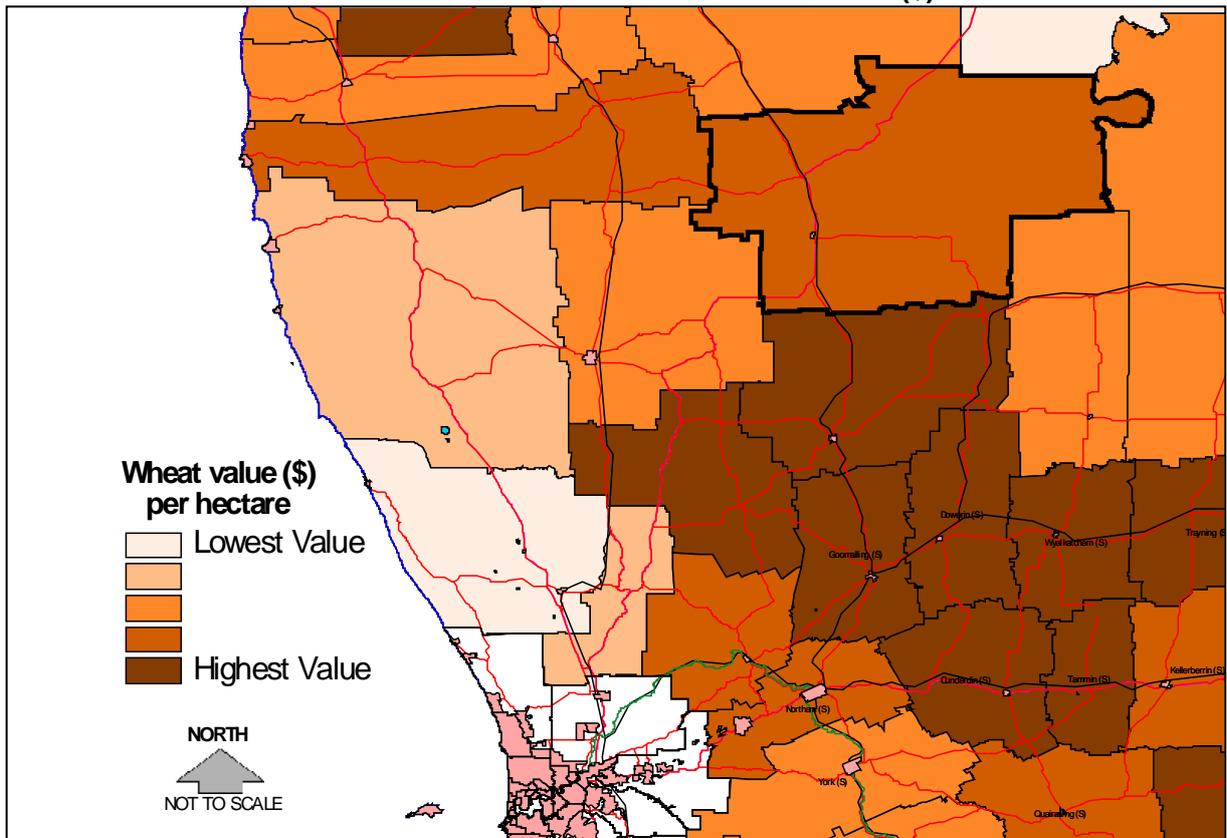
The analysis above shows the dominance of wheat ahead all other agricultural production. The Shire’s prosperity is obviously reliant on the continued protection of this economic base and as such planning decisions should be cognisant of the importance of protecting Prime Agricultural Land.

FIGURE 32 - BARLEY VALUE PER HECTARE (\$)



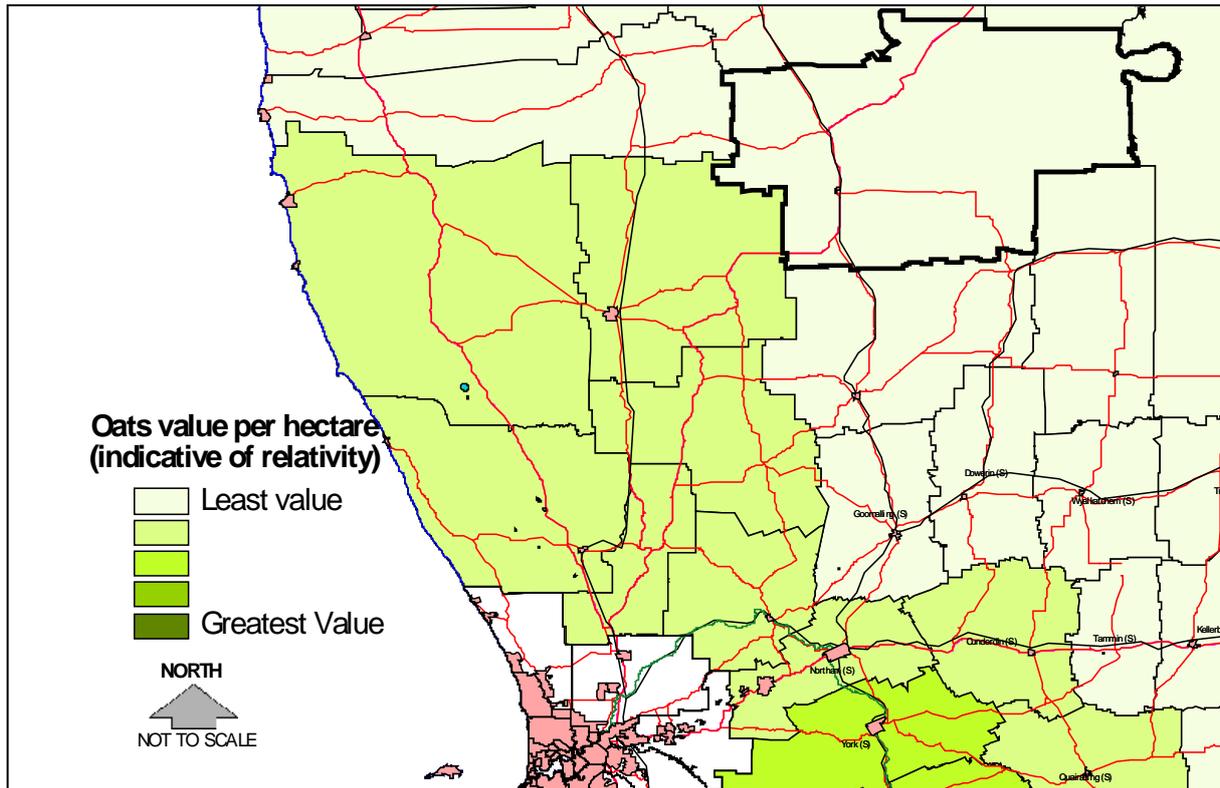
Source: Australian Bureau of Statistics 2001 (AgStats)

FIGURE 33 - WHEAT VALUE PER HECTARE (\$)



Source: Australian Bureau of Statistics 2001 (AgStats)

FIGURE 34 - OATS VALUE PER HECTARE (\$)



Source: Australian Bureau of Statistics 2001 (AgStats)

22 LAND CAPABILITY AND LAND QUALITY

Given the dominance of the wheat production in the Shire (84% of receipts at CBH), it is appropriate to select land best used for dry crops as being Prime Agricultural land. The **Figure 35** below shows an indication of where the highest percentages of Dry Cropping Land occur within the Shire.

Crops included in this general assessment include wheat, barley, oats, narrow-leafed lupins, field peas, canola, chickpeas and faba beans. The mapping in Figure 34 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.

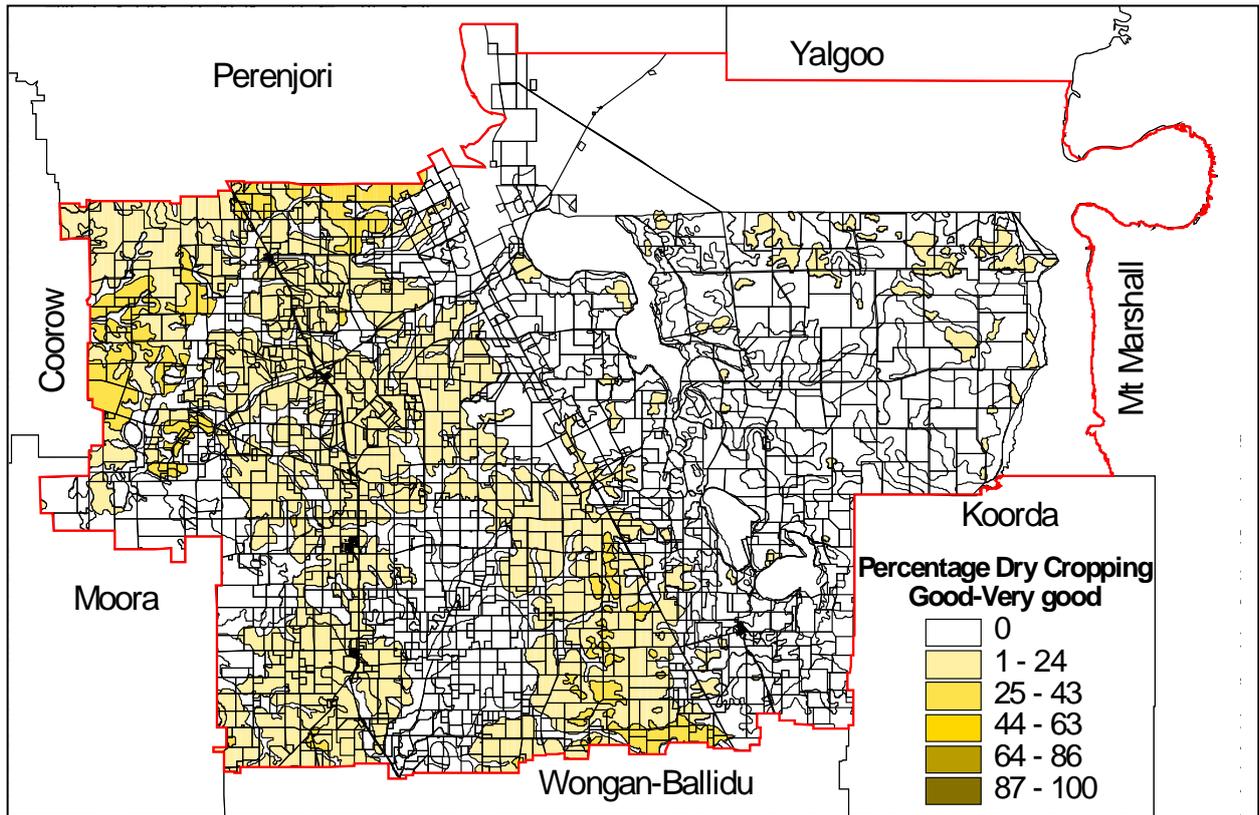
In terms of land quality there are many factors that need to be considered in the selection of uses that could be considered inappropriate, however as there are so many aspects to consider it can become an all-consuming exercise without necessarily achieving the desired outcomes.

These variables include the following;

- Phosphorus Export Risk
- Surface Salinity
- Sub-surface Acidification Risk
- Water Erosion Risk
- Water Repellence Risk
- Salinity Risk
- Soil Structure Decline Risk
- Sub-surface Compaction Risk
- Water Logging Risk
- Wind Erosion Risk

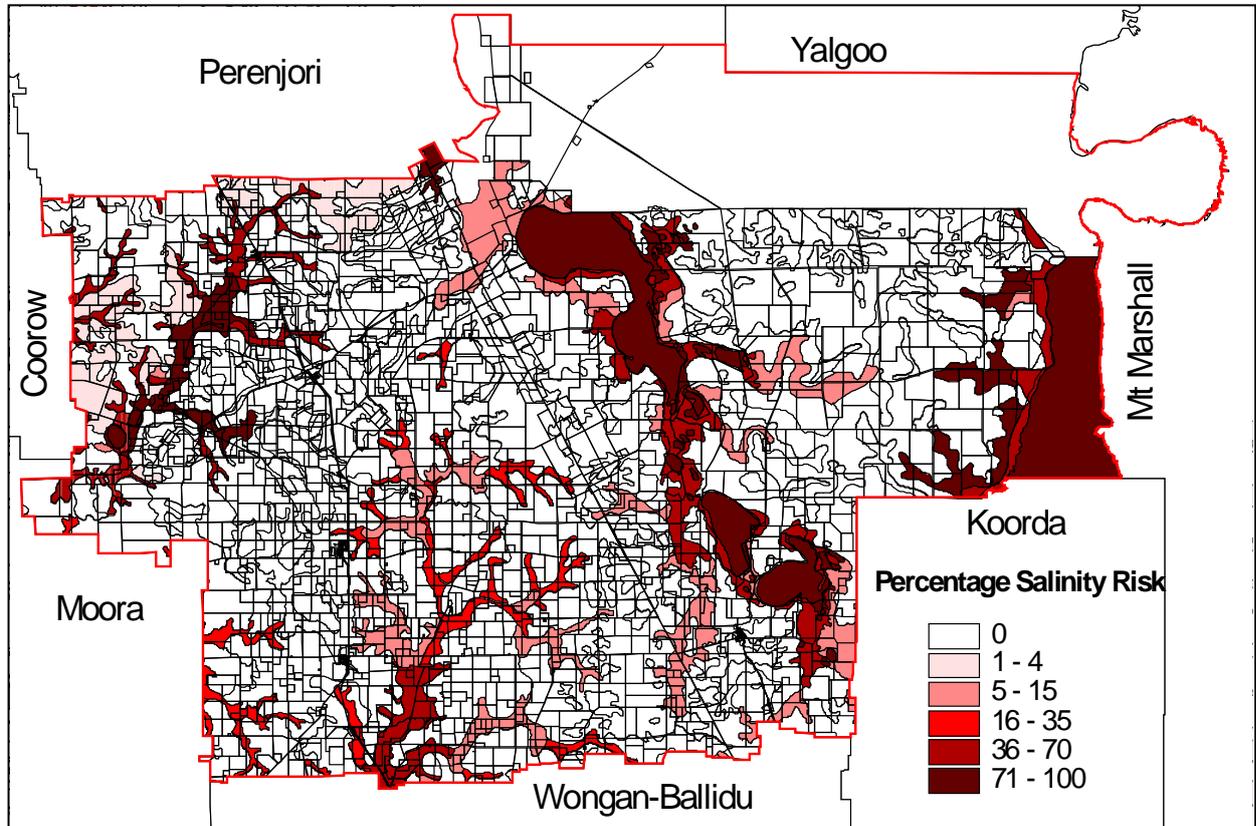
The following two figures provide an example of the patterns resulting from this analysis. These factors will need further discussion before conclusions are drawn in relation to the Local Planning Strategy.

FIGURE 35 – DRY CROPPING LAND



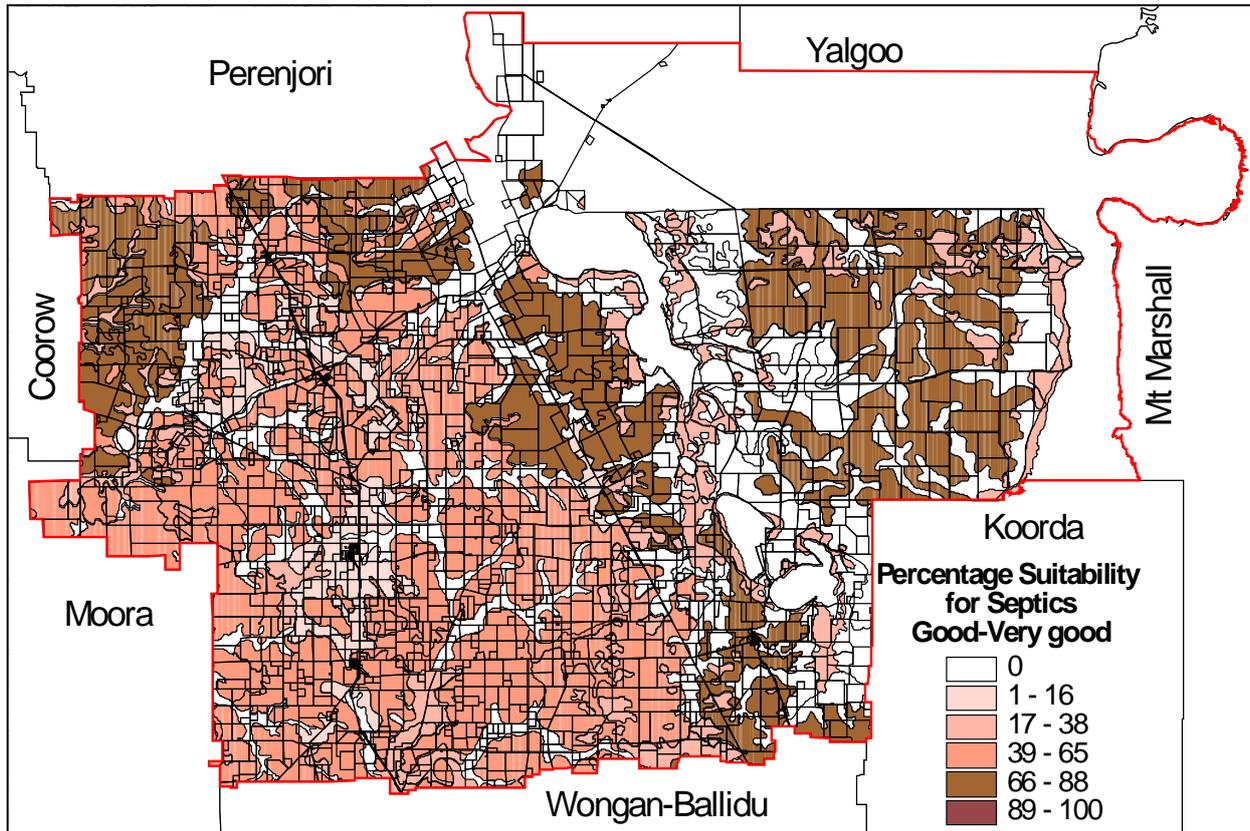
Source: AgWA 2005

FIGURE 36 - SALINITY HAZARD



Source: AgWA 2005

FIGURE 37 – SEPTIC TANK SUITABILITY



Source: AgWA 2005

23 IDENTIFICATION OF PLANNING ISSUES

During the preparation of this Local Planning Strategy various State Government and other relevant authorities were consulted. The following comments were received from the respective agencies.

DPI	Process of scheme review, regional strategies and policies to be taken into account.
EPA/WRC	The Department recommends the use of an environmental officer to undertake preliminary surveys of native vegetation and fauna, and identify significant wetlands and lakes. .
DEC	Listing of reserves provided by Merredin District Office (1999) detailing assessment and recommendations for Nature Reserves and other Reserves Managed by DEC, and additional reserves of interest by DEC.
MRWA	Main Roads advises that there are no proposals for the creation of, or significant changes to, alignments of State roads within the Shire of Dalwallinu. Future development to the east of Dalwallinu (Roberts Road) may impact on any future possible long term bypass option that may be in this area. MRWA is to be consulted on any planning in this area.
WATERCORP	WaterCorp provided a description of services including its Operating Area, water and wastewater, and details of assets held by the Corporation.
DMP	No response.
AGRICULTURE	No response.

FESA	Responded by including a copy of 'Planning for Bush Fire Protection'.
DLI	No response.
DIA	The Department has suggested initial investigations should include a desktop study to determine whether there are any known sites in the district. There are thirteen areas identified from the Department's data base. These are scattered around the Shire.
HOUSING & WORKS	The Department owns several properties in Dalwallinu including two vacant lots and have very little demand for housing at this stage. In order to keep its options open it has requested retention of the R10/R30 coding.
EDUCATION	The Department of Education and Training advises that it does not have any current plans to establish any new schools, nor to close any existing schools, within the Shire.
DPI - LAND ASSET	Land Asset Management Services advises that it has no objections or comments to offer.
LANDCORP	No response.
WAGR	No response.

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

ADVERTISING

The Shire of Dalwallinu Local Planning Strategy certified for advertising on

Signed for and on behalf of the Western Australian Planning Commission.

an officer of the Commission duly authorised by the Commission
(pursuant to the Planning and Development Act 2005)

Date _____

ADOPTED

The Shire of Dalwallinu hereby adopts the Local Planning Strategy, at the Ordinary meeting
of the Council held on the _____ day of
20 .

SHIRE PRESIDENT

CHIEF EXECUTIVE OFFICER

ENDORSEMENT

Endorsed by the Western Australian Planning Commission on

an officer of the Commission duly authorised by the Commission
(pursuant to the Planning and Development Act 2005)

Date _____