

SHIRE OF WANDERING

Local Planning Strategy

Endorsed by the Western Australian Planning Commission
15 May 2007

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PART 1 – LAND USE PLANNING FRAMEWORK

1.1 BACKGROUND

Land use planning is about the careful allocation and ordering of land for various purposes and activities and in such a way as to minimise land use conflict. It can prescribe and control the way in which land can be used and developed, including how to get to and from the land.

The pattern and allocation of land for various uses should generally be a reflection of expressed community aspirations and desires, conforming to the notion of the 'public good'.

The system of land use planning in Western Australia is largely based on the *Planning and Development Act 2005*.

The *Planning and Development Act 2005* provides for the preparation of local planning schemes that set out the way land is to be used and developed within the 'scheme area'.

Most cities, towns, and settled areas of Western Australia are now covered by local planning schemes. And in most cases, the schemes apply to the whole of the local government area. The operative local planning scheme for the Shire of Wandering is Local Planning Scheme No 3 that was gazetted on 30 October 2001.

1.2 THE ROLE AND PRUPOSE OF A LOCAL PLANNING STRATEGY

The *Town Planning Regulations 1967* require a Local Planning Strategy (LPS) be prepared with any new local planning scheme. The LPS is to enable the scheme to express more clearly the strategic vision, policies, objectives, and proposals for land use and development over a 10-15 year timeframe.

A LPS also provides a means to interpret State and regional land use and development policies and region schemes at the local level, and apply them to local circumstances.

Although the LPS is to accompany the local planning scheme it has no statutory force or effect by itself. However, by reference in the local planning scheme, the Shire is to have regard for the LPS in local area plans, area improvement plans, local planning policies, and proposals to use and develop land.

The LPS is to be prepared with public and key stakeholder input, participation, and consultation.

People, groups, and organizations that have been consulted to date in the formulation of this LPS are listed at Appendix 1.

1.3 FORMAT AND STRUCTURE OF THE WANDERING LPS

The LPS is divided into 2 Parts summarised as follows:

- (i) 'Part 1 - The Land Use Planning Framework', which provides background to the

purpose of the strategy and the land use planning context in which it is made, and provides an overview of the physical (or natural) and cultural environments, and issues and opportunities that have shaped the recommended strategies and actions;

- (ii) 'Part 2 - The Strategy', which outlines a series of both general and specific actions and tasks that should be implemented, at the Shire level and at local level (such as within planning precincts).

The Shire has been divided into planning precincts based on predominant land use, the regional road network, and major physical features. 'Planning Precinct 1', encompasses the Wandering townsite.

Appended to the LPS are recommended strategies across the Shire, and the recommended strategies and actions within each planning precinct. These summarise more broadly the individual strategies and actions listed under Part 3 of the LPS.

1.4 STRATEGY AREA AND REGIONAL SETTING

The Wandering Shire covers an area of about 1,955 sq km; the Wandering townsite is located towards the southern end of the Municipality, and is about 120 km from Perth. The Regional Location is shown in Figure 1.

Wandering is an attractive township close to Albany Highway and about 89 km from the Armadale town centre.

The Council is aware of increasing interest in subdivision and development in the rural parts of the district, and it wants to be able to guide any such activity to the best advantage of the community.

The LPS encompasses the whole of the Wandering Shire ("strategy area").

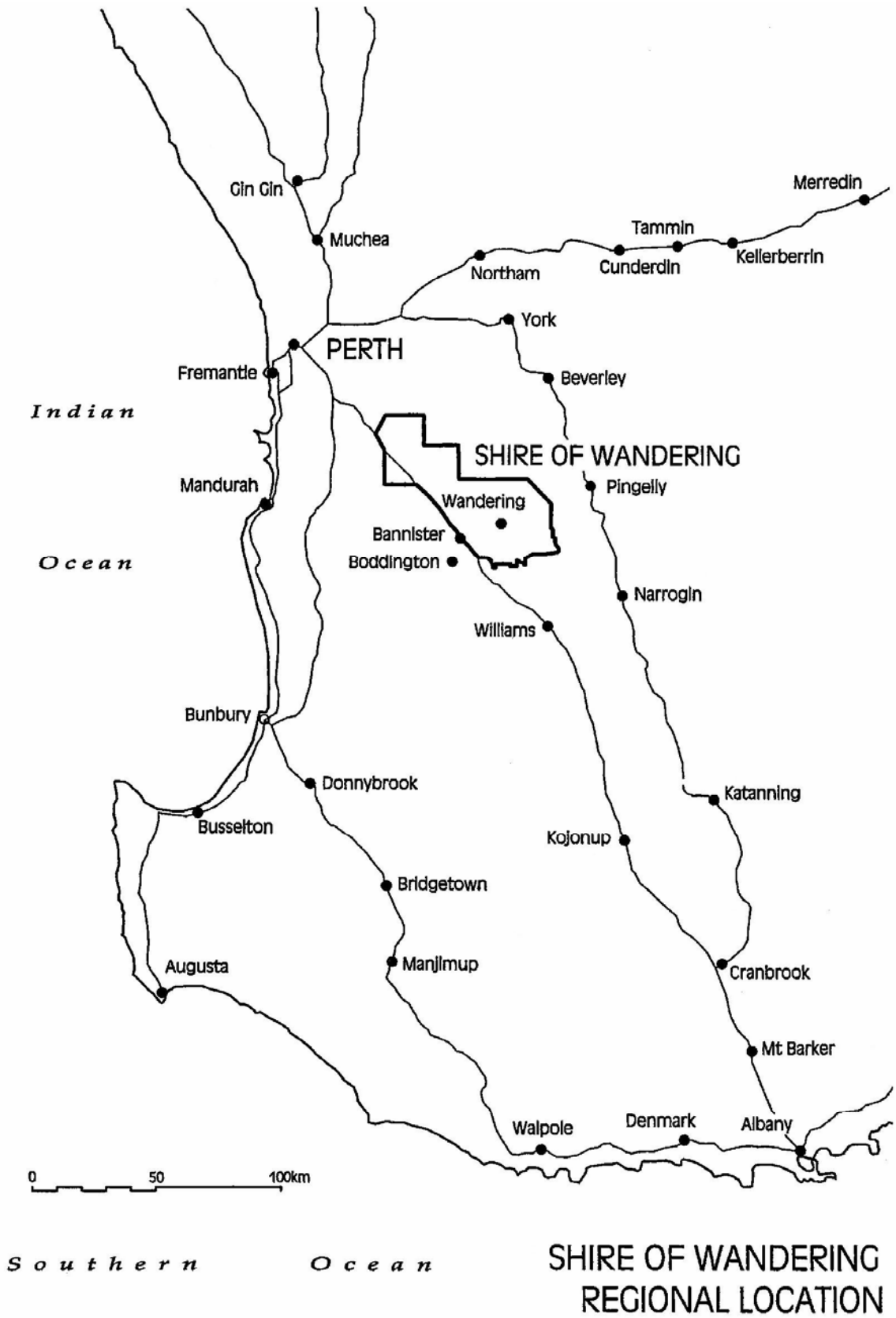


FIGURE 1

PART 2 – STATE AND REGIONAL PLANNING CONTEXTS

2.1 THE STATE PLANNING FRAMEWORK

The 'State Planning Framework' is a Statement of Planning Policy (*Statement of Planning Policy No. 1*) made by the Western Australian Planning Commission (WAPC) under the *Planning and Development Act 2005*. It applies throughout Western Australia.

The 'State Planning Framework' unites State and regional policies, strategies and guidelines within a central framework providing a context for decision making on land use and development. It informs the WAPC, local government and others involved in the land use planning process on those aspects of State level planning policy which are to be taken into account to ensure integrated decision making across all spheres of land use planning.

The WAPC and local governments must have due regard to the provisions of the framework in preparing local planning schemes and making decisions on planning matters.

The framework is divided into 2 parts:

- *Part A – General Principles for Land Use and Development*

This Part comprises 5 principles derived from the *State Planning Strategy* that form the basis for all other provisions of the framework. As well, they act as the underlying principles for all State and regional plans, policies and strategies.

The 5 principles are:

Environment

To protect and enhance the key natural and cultural assets of the State and deliver to all West Australians a high quality of life which is based on environmentally sustainable principles.

Community

To respond to social changes and facilitate the creation of vibrant, safe and self-reliant communities.

Economy

To assist in the creation of regional wealth, support the development of new industries and encourage economic activity in accordance with sustainable development principles.

Infrastructure

To facilitate strategic development by providing for efficient and equitable transport and public utilities.

Regional Development

To assist the development of regional Western Australia by taking account of the special assets and accommodating the individual requirements of each region.

- *Part B – State and Regional Provisions*

This Part lists plans, policies, and strategies that have been endorsed by the WAPC and which form part of the framework.

2.2 THE STATE PLANNING STRATEGY (SPS)

The WAPC has prepared the State Planning Strategy as a basis for co-ordinating and promoting regional land use planning and land development, and for guiding the state and local governments on those matters. (State Planning Strategy, p 1).

The Western Australian *State Planning Strategy* (WAPC, 1996) provides a strategic guide for land use planning throughout Western Australia up to the year 2029, Western Australia's bicentenary. It aims to:

- set out a common vision for development in the State and for the regions within it;
- provide a guide to the State Government on its land use planning response and the programmes and actions required to achieve the vision set out in the strategy;
- identify the likely changes and prepare for them; and
- establish a mechanism to ensure that the strategies are implemented and kept current.
- The strategy sets out a vision for each administrative region along with specific regional strategies and actions in context of that region's land use planning and development.
- For the Wheatbelt Region, which includes the Shire of Wandering, the strategy's vision is:

"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".

2.3 STATE SUSTAINABILITY STRATEGY

The State Sustainability Strategy has been prepared to integrate environmental, social, and economic matters.

The strategy notes that *sustainability is a global process but Western Australia is the first Australian State to undertake a comprehensive assessment of what it means for forty-two areas of government. The State Sustainability Strategy is based on a Sustainability Framework of eleven sustainability principles, six visions for Western Australia and six*

goals for government.

- Actions across government that support the framework will be implemented over a ten-year period and beyond.

2.4 STATE SALINITY STRATEGY

Salinity is seen as the greatest environmental threat facing Western Australia. The *State Salinity Strategy* (State Salinity Council 2000) sets out a strategy to manage salinity and outlines the management options and tools that are available to landholders in the south-west agricultural region. It highlights the need for urgent and large-scale intervention on the hydrological system if the Strategy's goals are to be achieved.

The salinity strategy identifies effective and integrated planning at a catchment level that addresses broad issues of land and water management as a key issue in salinity management.

The Salinity Strategy concludes that:

Land trading would enable catchment groups to discuss the natural turnover of farmers from their area, and see if it can also be organised to allow for:

- *specific land "niches" to attract new owners and land uses, including conservation buyers for bush but also possibly some more intensive industries;*
- *aggregating the cleared and non-saline land into viable properties, the larger areas of uncleared land into viable reserves and salinised land into viable areas to allow for proper management options;*
- *developing binding cross-boundary arrangements for managing and trading in the excess water; and*
- *constructively addressing the future of properties becoming non-viable due to salinity.*

2.5 STATE PLANNING POLICY NO. 2 – ENVIRONMENT AND NATURAL RESOURCES POLICY

This policy sets out the principles and considerations that will be applied by the Shire of Wandering to integrate environment and natural resource management within broader land use planning and decision making, to protect, conserve and enhance the Shire's natural environment, and promote and assist in the sustainable use and management of the Shire's natural resources.

2.6 STATE PLANNING POLICY NO. 2.5 – RURAL SUBDIVISION POLICY

State Planning Policy No. 2.5 (SPP2.5) (WAPC 2002) applies to rural and agricultural la- in the State. The Policy is guided by the fundamental principles that:

- The State's priority agricultural land resource should be protected.

- Rural settlement opportunities should be provided if sustainable and of benefit to the community.
- The potential for land use conflict should be minimised.
- The State's natural resources should be carefully managed.

Under SPP2.5 local government is to:

- *identify and appropriately zone agricultural areas of State or regional significance and other agricultural areas;*
- *where necessary, identify and appropriately zone areas for rural-residential and rural smallholdings;*
- *identify and zone appropriately, areas of natural resources which require protection from incompatible development;*
- *wherever possible, provide planning direction for agriculturally-associated rural activities or land uses; and*
- *in the absence of a local planning strategy make recommendations to the Commission in respect to rural land subdivision having due regard to the objectives of this policy.*

There are no Agricultural Priority Management Areas identified in the Shire of Wandering. The LPS is to address rural land use, and rural-residential and rural smallholding areas.

2.7 STATE PLANNING POLICY NO. 2.7 – PUBLIC DRINKING WATER SOURCE POLICY

This policy sets out the principles and considerations that will be applied by the Shire of Wandering to protect and manage public drinking water source areas from incompatible land uses and pollution to maintain the quality of drinking water.

2.8 STATE PLANNING POLICY NO. 2.9 – WATER RESOURCES

This policy sets out the principles and considerations that will be applied by the Shire of Wandering to protect, conserve and enhance water resources within the Shire that are identified as having significant economic, social, cultural and/or environmental values, to assist in ensuring the availability of suitable water resources to maintain essential requirements for human and all other biological life with attention to maintaining or improving the quality and quantity of water resources and to promote and assist in the management and sustainable use of water resources.

2.9 REGIONAL NATURAL RESOURCES MANAGEMENT STRATEGIES

The Shire of Wandering overlaps three Natural Resource Management (NRM) Regions,

Swan, Avon, and South West. Each of these regions has developed accredited, NRM Regional Strategies and investment plans through the regional catchment councils. These strategies include;

- Avon Natural Resource Management Strategy (2005)
- South West Regional Strategy for Natural Resource Management (2005)
- Swan Region Strategy for Natural Resource Management (2004)

The strategies and investment plans are accredited for Commonwealth and State funding under the National Action Plan for Salinity and Water Quality and the continuation of the Natural Heritage Trust.

Land contained within the Swan NRM region consists predominantly of FPC managed State Forest with future development being concentrated around the Wandering Townsite located within the South West NRM Region. NRM issues identified by the regional strategies that have relevance to land use planning include;

- Exposure of acid sulfate soils
- Protection of biodiversity
- Erosion and sedimentation
- Vegetation clearing and its effects on environmental values and hydrology
- Habitat destruction and fragmentation
- Eutrophication and other pollution of surface and groundwater
- Groundwater allocation
- Protection of wetlands
- Floodplain management
- Protection of coastal habitat
- Air quality
- Greenhouse gas emissions

- Floodplain management
- Groundwater quality
- Surface water quality
- Expansion of urban development onto agricultural land and areas of basic raw materials
- Protection of water quality and minimization of erosion through water sensitive urban design
- Preventing mismatches between land use and land capability

The Local Planning Strategy recognises the need to improve the integration of NRM issues, considerations and principles into the Shire's land use planning decision making.

PART 3 – LOCAL PLANNING CONTEXT

3.1 ROLE OF LOCAL GOVERNMENT

The Shire of Wandering has resolved to prepare a LPS for the whole of the Shire. This initiative is to reflect the way in which all land within the Shire may be used and developed, or protected, leading to the achievement of the vision and fulfillment of community aspirations and needs as expressed in the Shire's strategic plan.

It also provides the Shire with an opportunity and a clear direction to interpret and apply State and regional planning policies to local circumstances.

3.2 THE SHIRE OF WANDERING STRATEGIC PLANS

The mission of the Shire of Wandering is a local government providing a representative government for its residents and ratepayers. Council delivers needed services and facilities to maintain and enhance the quality of life, and ensures equity in service provision for its people through responsible use of available resources

The Shire's vision for Wandering is: - Working with the community to retain and progress a rural lifestyle based on broad acre farming with limited location controlled sympathetic development to ensure a strong and prosperous community.

The LPS provides a basis upon which the vision can be achieved.

PART 4 – PHYSICAL AND BIOLOGICAL ENVIRONMENT

This Section provides an overview of the physical and biological environment for the Shire. It highlights significant region wide issues and opportunities presented by the environment in context of land use planning for the Shire.

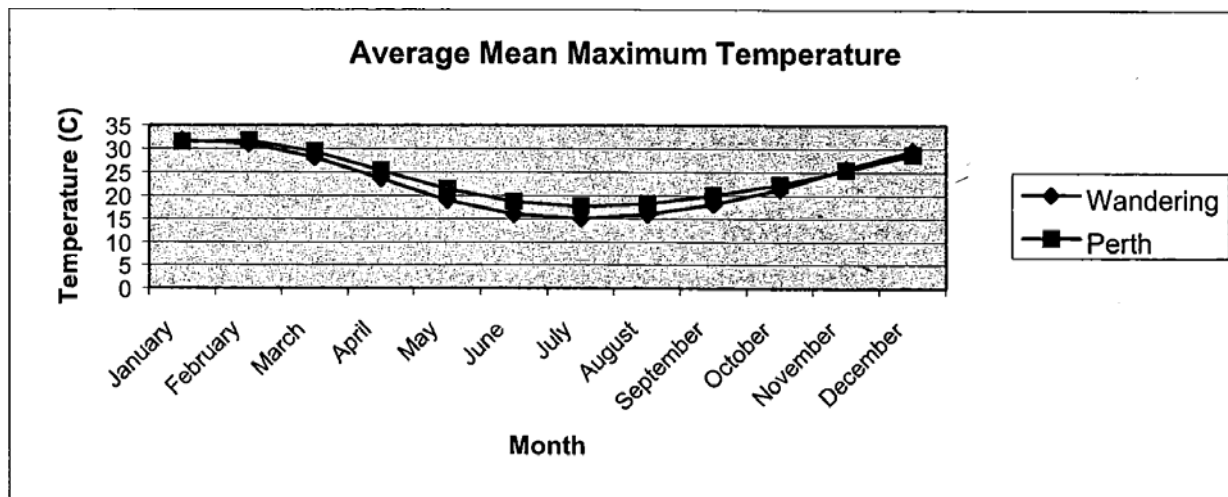
4.1 CLIMATE

The Shire of Wandering experiences a typical temperate climate with hot summers, cool winters, and moderate annual rainfall occurring predominantly in winter. The average maximum daily temperatures range from 32°C in January to 15°C in July, with average minimum temperatures ranging between 14°C in January and 4°C in July.

The Shire is sufficiently inland to experience little moderating effects from the ocean, resulting in often very hot conditions during summer and very cold conditions during winter, with frost prevalent. Wandering regularly records the lowest temperature in the State during winter months, with the lowest recorded temperature being -5.7°C .

Mean maximum temperature, mean minimum temperature, and mean monthly rainfall is presented in Figure 2, 3, and 4. Longer term trends in climate anticipate a moderate increase in average temperatures and a decrease in winter rainfall.

FIGURE 2



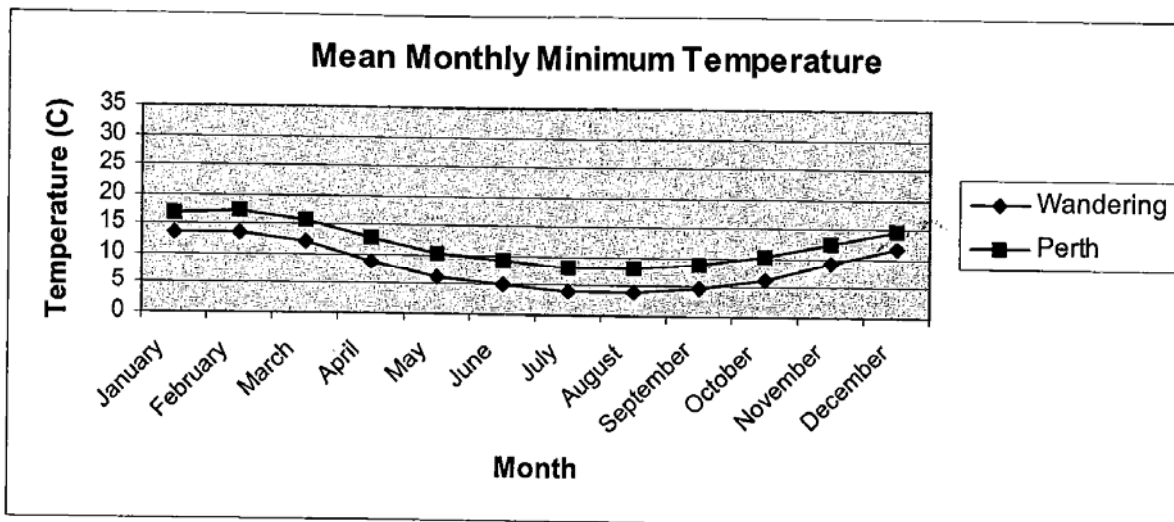


FIGURE 3

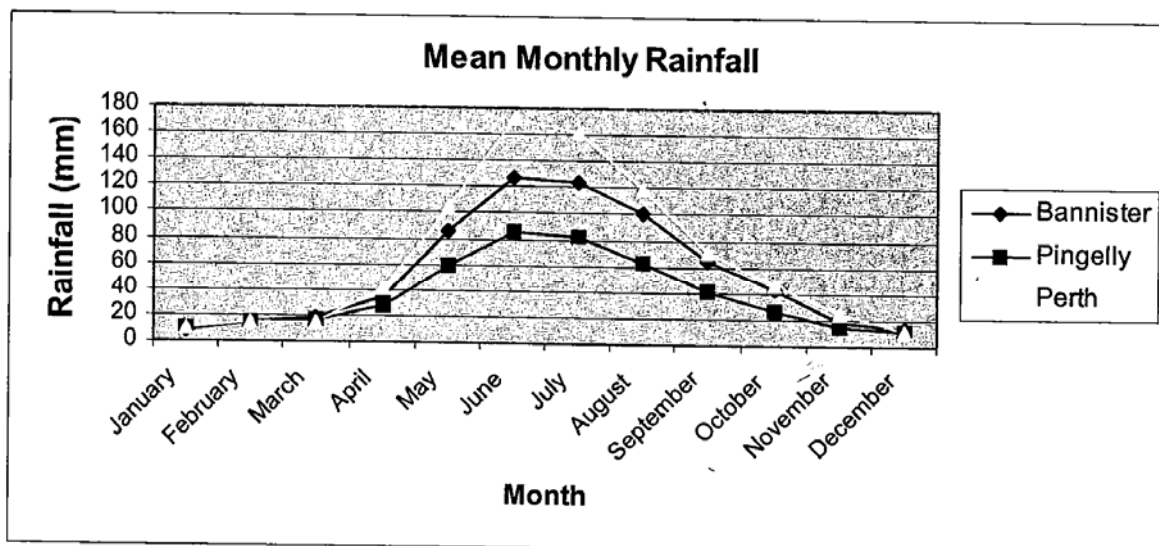


FIGURE 4

The Shire is east of the high rainfall belt adjacent to the Darling Scarp. Rainfall is relatively low, decreasing from approximately 650mm annually in the western areas of the Shire to about 450mm annually in the east. Over 80% of rainfall occurs between the months of ay and October, usually associated with the passing of cold fronts. Rainfall is frequently associated with occasional summer thunderstorms. Rainfall Isohyets are presented in Figure 5.

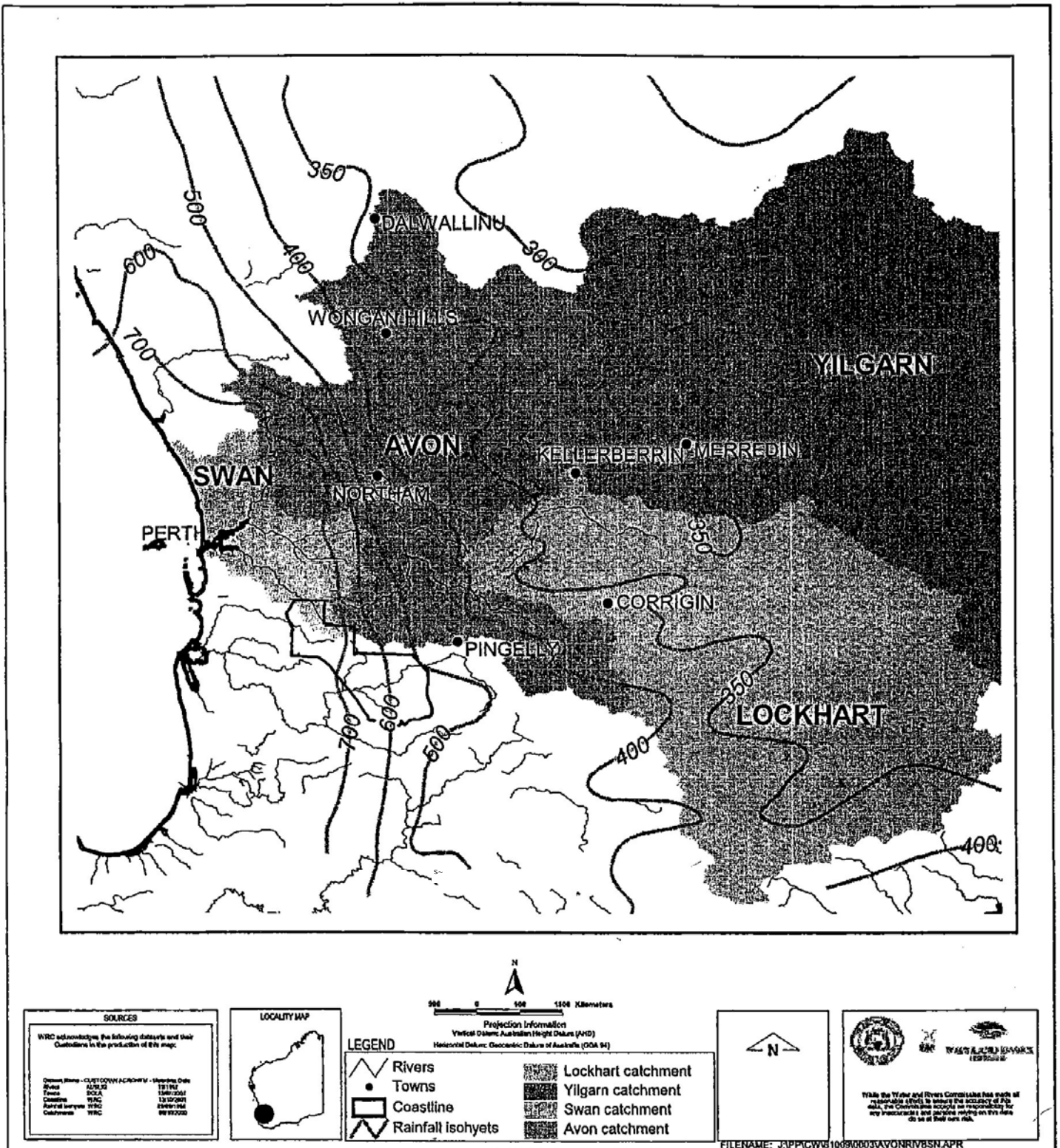


FIGURE 5

4.2 Geology

The Shire is located on the Darling Plateau, a lateritic surface resulting from deep weathering of crystalline Pre-Cambrian rocks on the western portion of the Yilgarn Craton. The Yilgarn Craton consists of granites and gneisses formed from the metamorphism of earlier granites, sediments and some mafic igneous rocks.

A regolith layer overlies the Yilgarn Craton, formed as a result of weathering of underlying rocks.

The laterite profile is part of the regolith and occurs mainly on upland areas. The profile consists of three zones, an upper ferricrete, an intermediate mottled zone, and a lower clay layer.

4.2.1 Landform and Soil Development

The Tertiary period (60 to 100 million years BP) experienced a more tropical climate which led to increased rates of rock weathering and soil formation. The formation of deep soils occurred and is known as the lateritic profile. Accumulations of iron, aluminium, and quartz in the upper parts of the profile and leaching of other constituents form the remainder of the profile. A typical cross section of the lateritic profile is shown in Figure 6.

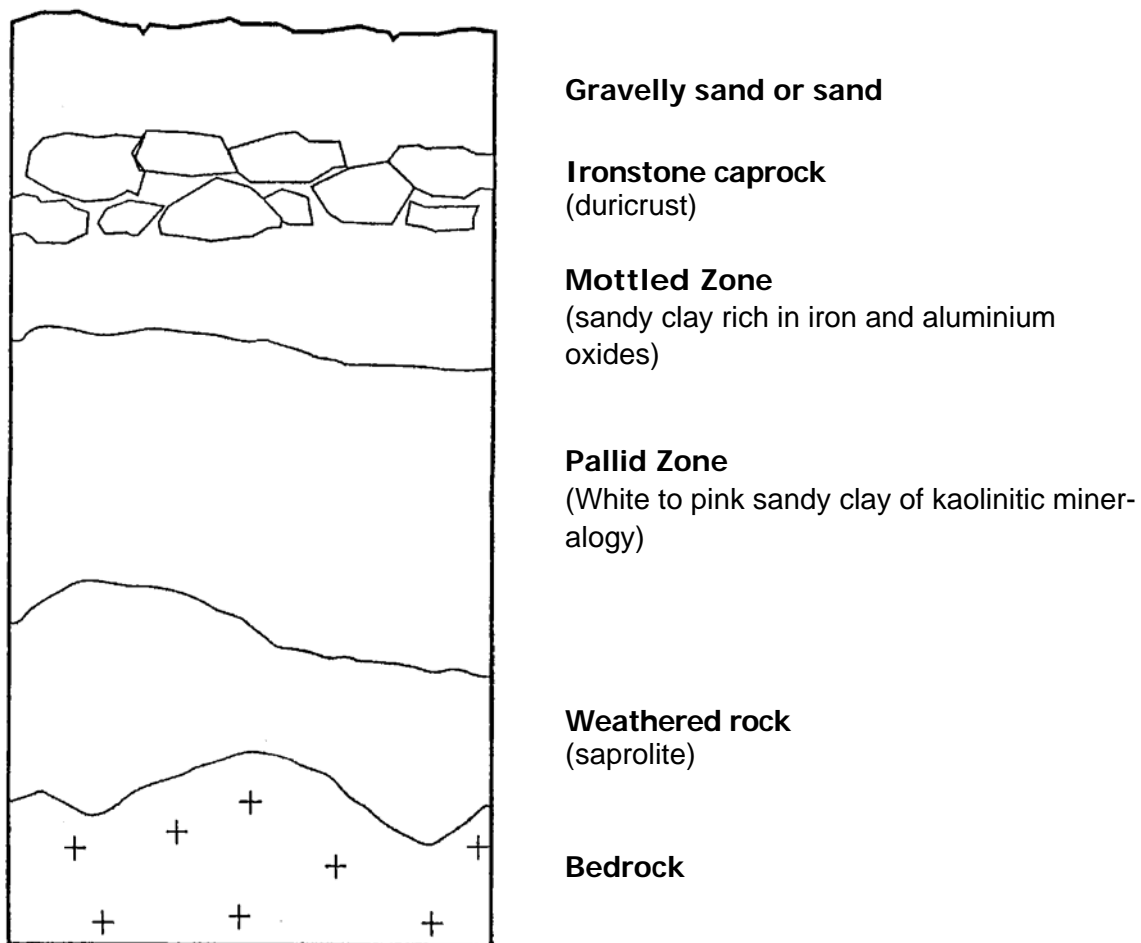


FIGURE 6

Geological uplift that occurred during the Pleistocene period (10 000 to 2 million years BP) resulted in the development of the major drainage systems of the south-west and initiated a cycle of erosion which stripped the lateritic mantle of the Darling Plateau exposing the lateritic profile.

Geological erosion and stream dissection have eroded the Darling Plateau laterite, forming the soils within the Shire. This has resulted in the current landscape within the Shire – undulating hills, valley landforms, and exposure of underlying basement rocks on hills and slopes. In lower areas, alluvial deposits have accumulated to form valley flats and terraces along the major rivers.

4.2.2 Areas of Prospectivity

The granites and gneisses are not known to be prospective for any minerals other than as a source of crushed rock for aggregate and polished granite for facing stone.

4.3 LAND RESOURCES

4.3.1 Land Systems

Land system information is based on a survey completed by Churchward and McArthur (1977). Nine land systems have been identified within the Shire, based on the major valley systems associated with the Murray River and its eastern tributaries — the Hotham, Williams, and Bannister rivers. Landform associations can be categorised into 4 main groups:

- lateritic uplands
- minor valley within upland terrain
- major valleys dissected into underlying basement rocks
- valley floors

Landform associations are presented in Table 1. Major soils associations are listed from most prolific in each association to minor occurrences.

TABLE NO. 1 – LAND SYSTEMS

Land system	Description	Major soils
255Mv Murray Valley	Deeply incised valleys.	Red loamy earths, shallow duplexes, and rock outcrop.
255Dp Darling Plateau	Lateritic Plateau.	Duplex sandy gravels, loamy gravels, shallow and deep gravels, deep sands and wet and semi-wet soils.
253 Qd Quindanning	Deeply incised valleys with some rock Outcrops.	Grey deep sand duplexes, bare rock, red deep sandy duplexes, red deep loamy duplexes, and shallow sands.
253 Wn Wundowie	Lateritic plateau with some rock outcrops.	Deep sandy gravels, loamy gravels and shallow gravels.

257Dy Dryandra	Gently undulating (3 – 10%) terrain with lateritic rises and rock outcrops.	Sandy and loamy earths and duplexes; ironstone gravelly soils.
257Pb Pumphreys Bridge	Broad valley floor with minor dunes.	Alkaline grey shallow sandy duplexes, grey deep sandy duplexes, grey shallow loamy duplexes, and saline wet soils.
253Mu Marradong	Lateritic plateau remnants.	Duplex sandy gravels, loamy gravels, grey deep sandy duplexes and loamy duplexes.
253By Boyagin	Terrain rejuvenated by headward incision of Dale River, exposing irregularly undulating granite with prominent isolated and extensive lateritic mesas.	Sandy and loamy gravels and sands on mesas, gradational and duplex soils on granite slopes, colluvial loamy and gravelly duplexes and clays below scarps.
253C1 Clackline	Moderately dissected areas with gravelly slopes and ridges and minor rock outcrop.	Grey sandy duplexes, some gravels, rock and loamy duplexes.

The distribution of land systems is shown in Figure 7.

4.3.2 Land Degradation

Appropriate land management is required to ensure that rural land within the Shire is not degraded, thereby reducing conservation value and affecting agricultural productivity.

Land systems (Figure 7) within which significant areas are susceptible to various forms of degradation are shown in Table 2.

TABLE NO. 2 – LAND DEGRADATION

Land system	Form of degradation		
	<i>Salinity</i>	<i>Waterlogging</i>	<i>Water erosion</i>
Darling Plateau			X
Marradong		X	
Quindanning		X	X
Wundowie			X
Pumphreys Bridge	X	X	
Dryandra		X	
Boyagin		X	X
Clackline			X

4.3.3 Salinity

Soil storage of salts occurs in lateritic profiles within the Shire. The salts are water soluble and are bound to the soil due to the lack of water. The principal cause of salinity is the mobilisation of salts (particularly sodium chloride) because of increasing

groundwater levels. Increasing groundwater levels are usually associated with the extensive removal of deep rooted, perennial native vegetation and its replacement with shallow rooted, annual crops and pastures as introduced crops and pastures use much less water than native vegetation.

Only small areas of the Shire are affected by soil salinity and are mainly in areas near rivers and watercourses in the southern part of the Shire.

The issue is still of concern due to the gradual increase in hillside saline seepages and local geological complexity which make it difficult to predict susceptible areas. Apart from localised hillside seeps, areas considered particularly susceptible to salinity occur within the valley floors of the Pumphreys Bridge and Dryandra systems.

4.3.4 Waterlogging

Waterlogging occurs when a soil is saturated with water, thereby replacing most or all of the soil air, and the supply of oxygen to plant roots is greatly limited. (Lantzke, 1993). Factors contributing to susceptibility of land to waterlogging include flat topography (limiting drainage) receiving drainage from adjacent areas, low soil permeability, and seepage.

Waterlogging can occur on duplex and clay soils within valley floors of the Pumphreys Bridge and Dryandra systems, but also within small areas of the Marradong systems.

4.3.5 Water Erosion

The incidence of water erosion is greatly dependent on slope, rainfall, drainage from adjacent areas and land management practices. Any areas which receive and concentrate surface runoff are at risk. Highly erodible soils occur immediately below breakaways within dissected lateritic terrain in the western portion of the Shire. Steeper slopes within parts of the Marradong and Quindanning systems are also susceptible, particularly down-slope from rock outcrops.

4.3.6 Subsurface Acidification

Agricultural practices, such as the use of ammonium based fertilisers and legume pastures, are resulting in soils becoming more acid. Acidification within the Shire, however, is considered a minor land degradation issue. The *Land Qualities for South-West WA* indicates that no lands within the Shire are highly susceptible to acidification.

Should localised surface acidification be identified as an issue in the future, DOA suggest the investigation of several management techniques. These include liming, feeding hay back onto paddocks, limiting the rate of nitrogen leaching, minimising the use of elemental sulphur fertiliser and adopting a less damaging crop regime, planting more acid-tolerant crop species, do nothing and accept decreasing yields, or adding extra nutrients such as N, P, and K.

Land evaluation has been used as an indication of land capability. Each evaluation has been determined in accordance with *Land Evaluation Standards for Land Resource Mapping* prepared by DOA, based on a desktop analysis of land systems within the Shire and the potential for land degradation. Due to the broad nature of this

information, the analysis should be considered as an overview only. Where appropriate, more specific and localised land capability assessments should precede proposed development.

Four main rural land uses have been considered — pasture, cereal crops, horticulture, and rural residential. Factors affecting the suitability of land for each land use are as follows:

- Pasture - Salinity, water erosion, wind erosion, soil water storage, waterlogging, water repellence, soil structure decline, subsurface compaction, and subsurface acidification.
- Cereal Crops - Waterlogging, soil workability, wind erosion, water erosion, soil water storage, subsurface acidification, water repellence, soil structure decline, subsurface compaction.
- Horticulture & other perennial - Salinity, waterlogging, soil workability, water repellence, soil water storage.
- Rural Residential - Waterlogging, land instability.

TABLE NO. 3 – GENERAL LAND EVALUATION

Land system	Major Soil	General Capability ^{1,2}			
		<i>Pasture</i>	<i>Cereal Crops</i>	<i>Horticulture & other perennial</i>	<i>Rural residential</i>
Darling Plateau	Duplex sandy gravels	High	Fair	Fair-high	Fair
	Shallow and deep gravels	Fair	Fair	Fair-high	Fair-low
	Deep sands	Fair	Fair	Fair	Fair
	Wet and semi-wet soils	Low	Low	Low	Low
Quindanning	Grey deep sandy duplexes	Fair	High	Fair	High
	Bare rock	Very low	Very low	Very low	Very low
	Red deep sandy duplexes	High	Fair	Fair-high	High
	Red deep loamy duplexes	High	Fair	Fair-high	High
	Shallow sands	Low	Low	Low	Low
Wundowie	Deep sandy gravels	Fair	Fair	Fair-high	Fair
	Loamy gravels	Fair	Fair	Fair-high	Fair
	Shallow gravels	Fair	Fair	Low	Low
Dryandra	Sandy and loamy earths	High	High	Low	Low
	Ironstone gravelly soils	Low-fair	Low-fair	Low	Low
Pumphreys Bridge	Alkaline grey sandy duplexes	Low-fair	Low-fair	Low	Low

	Grey deep sandy duplexes	Fair	Fair	Low	Low
	Grey shallow loamy duplexes	Fair	Fair	Low	Low
	Saline wet soils	Very low	Very low	Very low	Very low
Marradong	Duplex sandy gravels	High	Fair	Fair	Fair-high
	Loamy gravels	High	Fair	Fair	Fair-high
	Grey deep sandy duplexes	High	Fair	Fair	Fair-high
	Loamy duplexes	High	Fair	Fair	Fair-high
Boyagin	Sandy and loamy gravels	High	High	High	Fair
	Gradational and duplex soils	High	High	High	Fair
	Colluvial loamy and gravelly duplexes	High	High	Fair	Fair
	Clays below scarps	Low	Low	Fair	Low
Clackline	Grey sandy duplexes	High	High	Low-fair	Fair
	Some gravels, rock and loamy duplexes	Low-fair	Low-fair	Low-fair	Low

NOTES

The evaluation does not include the Murray system which occurs only in the State Forest in the northern part of the Shire.

¹General capability has been determined as follows: (after DOA, 1999b):-

- **Very high:** very few physical limitations present and easily overcome. Risk of land degradation is negligible.
- **High:** minor physical limitations affecting either productive land use and/or risk of degradation. Limitations overcome by careful planning.
- **Fair:** Moderate physical limitations significantly affecting productive land use and/or risk of degradation. Careful planning and conservation measures required.
- **Low:** High degree of physical limitation not easily overcome by standard development techniques and/or resulting in high risk of degradation. Extensive conservation measures required.
- **Very low:** Severe limitations. Use is usually prohibitive in terms of development costs or the associated risk of degradation.

²The evaluation does not take into consideration rainfall or water supply.

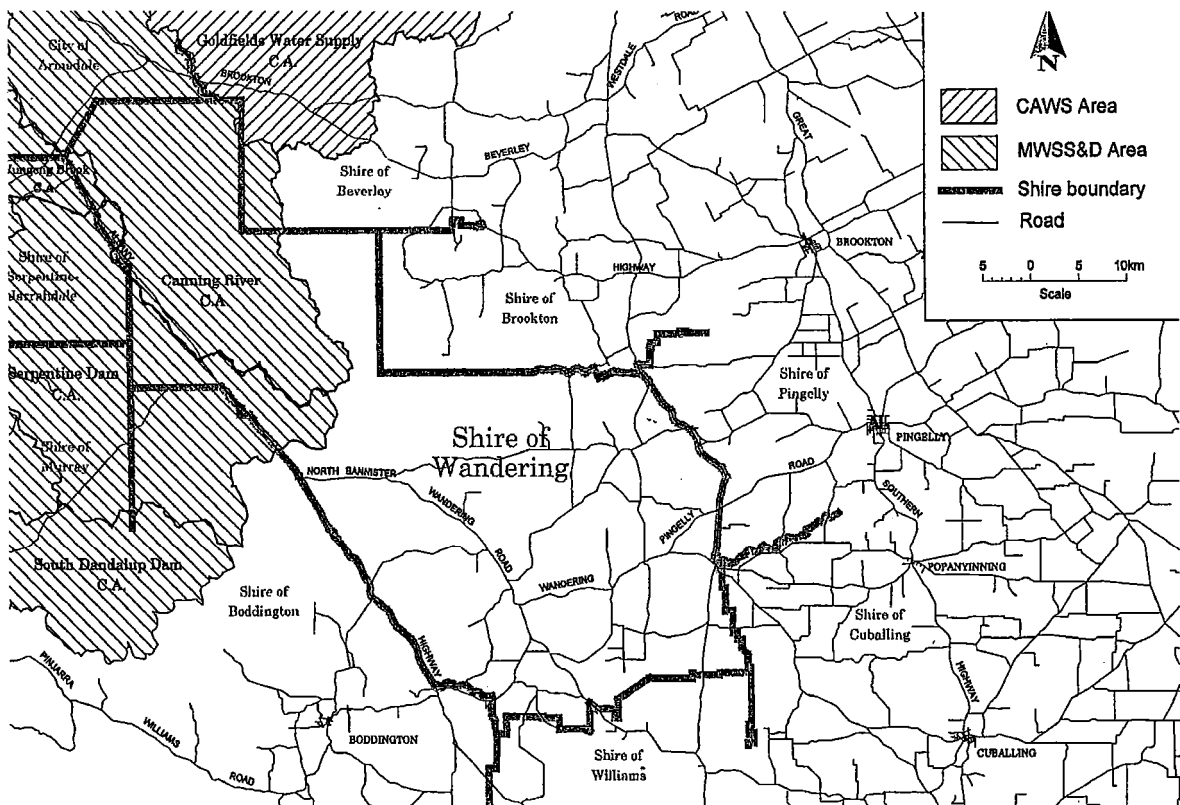
4.5 Water Resources

4.5.1 Surface Water

There are several rivers in the Shire, divided into 3 main catchments — the Canning River, Serpentine River, and Murray River.

The Canning River catchment is located in the north of the Shire and comprises the State Forest/FPC estate areas. The Canning River is fresh in this location and is a Public Drinking Water Source Area (PDWSA). The river flows north from the Shire to the Canning Reservoir in the City of Armadale. Location 4820 (off Albany Highway) is in the "Rural" zone in the Shire's Local Planning Scheme; all of the balance of the PDWSA in the Shire is Local Reserve for State Forest.

The PDWSA in the Shire is shown in Figure 8.



Public Drinking water source areas within the Shire of Wandering

PUBLIC DRINKING WATER SOURCE AREA FIGURE 8

The Serpentine River commences in the Shire of Wandering. The river flows west towards the Serpentine Reservoir in the Shire of Serpentine-Jarrandale.

The southern portion of the Shire is within the Murray River catchment. The Bannister and Hotham Rivers are the 2 main tributaries of the Murray River that run from the Shire. Both rivers are seasonal and in summer are reduced to pools of increasingly saline water. Flows through both rivers have increased because of land clearing for agricultural activities in the Shire, resulting in additional land runoff.

Salinity increases during summer months when water levels and flows are lower. Summer nutrient 'spikes' are also possible due to agricultural waste runoff into low flowing pools following summer storms.

The main forms of watercourse degradation in the Shire are described in Table 4.

TABLE NO. 4 – WATER COURSE DEGRADATION

River Degradation Threat	Description
Salinity	Increase in water salinity within rivers and watercourses, due mainly to agricultural practices. River salinity in the Shire can be relatively high compared to areas to the west as there are no major freshwater tributaries feeding the river systems, particularly in the southern part of the Shire. River salinity is less of an issue in the northern part of the Shire as this area is mainly State Forest.
Erosion and sedimentation	Clearing of vegetation in the river catchments in the southern section of the Shire has resulted in increased water flows and corresponding sediment flow. Sedimentation in watercourses to the west of the Shire has occurred. Unfenced watercourses in agricultural areas allows for free access by stock to foreshores and watercourse banks. Excessive stock numbers can cause erosion of banks and increase sedimentation further downstream.
Loss of riparian vegetation	Riparian vegetation has been removed or reduced in southern sections of the Shire. Impacts associated with removal of riparian vegetation include decreasing watercourse bank stability, increasing nutrient runoff and removing habitat.

4.5.2 Groundwater

Limited data is available on groundwater resources within the Shire. The geology indicates that it is likely only limited reliable groundwater resources would be available in the southern agricultural areas of the Shire. In areas where groundwater is available, its reliability in terms of quantity and quality would need to be fully investigated prior to commencement of any development that would rely on the water source.

DOA has recently completed a groundwater study of the Wandering Townsite. The study concluded that the Wandering townsite is situated in the influence of two groundwater flow systems:

- A large southern system which is influenced primarily by recharge and discharge of the Wandering catchment;
- A small northern system bounded by two gabbro dykes, one that follows the trace of Down Street, the other forming the northern boundary of Wandering catchment.

The study indicates that groundwater levels in the area are rising and thus increasing the risk of salinity affecting freshwater dams and other land uses in the Shire.

4.6 VEGETATION

The Shire is located in the *Darling Botanical District – Dale Subdistrict* as defined by Beard (1980). The northern portion of the Shire is largely Jarrah-Marri forest (*E. marginata* & *E. calophylla*) with Math, Wandoo and Jarrah woodland in the drier south-eastern portion. Vegetation communities that existing across the Shire are described in Table 5.

TABLE NO. 5 – VEGETATION COMMUNITIES

Vegetation system	Description
Jarrah – Marri forest	Occurs in small pockets on western part of Shire and extensively in the north (State Forest) where there is higher rainfall. <i>E. marginata</i> is dominant, however also occurs with <i>E. calophylla</i> . A range of smaller trees are sometimes present, including <i>Banksia Grandis</i> (Bull Banksia) and <i>Allocasuarina fraseriana</i> (sheoak).
Marri & Wandoo woodland	System covers the majority of southern and eastern areas of the Shire. Math occur mainly on sandy soils while wandoo occurs mainly on clay soils. Smaller associated trees include <i>Accacia acuminata</i> (jam) and <i>Allocasuarina fraseriana</i> (sheoak).
Wandoo & powderbark woodland	Occurs over a small area in the south-eastern corner of the Shire. <i>E Wandoo</i> is dominant and occurs mainly on clay soils. Trees can reach 20-25 metres in height, however are more widely spaced than in the jarrah forest.

Under the *Environmental Protection Act 1986*, the clearing of native vegetation requires a permit from the Department of Environment and Conservation unless it is for an exempt purpose. Any development proposal that will lead to the clearing of native vegetation will require consultation with the Department of Environment and Conservation to determine if a permit is required.

4.6.1 Remnant Vegetation

Remnant vegetation can be described as any remaining stands of indigenous vegetation on private land, Unallocated Crown Land, or Crown Reserves (WAPC, 1999a). There are large areas of remnant vegetation within the Shire, particularly within Conservation Park, State Forest and areas of Unallocated Crown Land in the north of the Shire.

In the southern parts of the Shire, large areas of land have been cleared for agricultural purposes and there is less (but still significant) remnant vegetation. There may be limited areas within private agricultural land and there is frequently remnant vegetation along road reserves.

Immediately east of the Wandering townsite there is remnant vegetation on private land. Remnant vegetation may also be found on scattered Crown Reserves throughout the southern section of the Shire and within Dryandra Woodland in the south-eastern corner of the Shire.

The extent of remnant vegetation within the Shire, based on the most recent information available from DOA, is shown on maps prepared by the Department for Planning and Infrastructure and held by the Shire.

Under the *Environmental Protection Act 1986*, the clearing of native vegetation requires a permit from the Department of Environment and Conservation unless it is for an exempt purpose. Any development proposal that will lead to the clearing of native vegetation will require consultation with the Department of Environment and Conservation to determine if a permit is required.

4.6.2 Rare Flora and Fauna

The Department of Environment and Conservation (DEC) is the responsible agency for protection of flora in Western Australia. DEC is also responsible for the protection of native fauna throughout the State under the *Wildlife Conservation Act 1950*.

Threatened and priority flora and fauna are listed in Appendix 2.

Introduced fauna in the Shire includes those associated with agricultural activities (sheep etc) and pest species such as fox, rabbit, goat, feral cat, and feral pig.

The *Forest Management Plan 2004-2013* provides the following *Objective* and *Actions* (relevant to the Shire) in relation to management of Rare Flora and Fauna.

Objective

The plan proposes the following Actions at the landscape scale for the purpose of seeking to protect, and assist the recovery of threatened and priority species of flora and fauna and ecological communities:

Actions proposed

- *The Department will maintain a list identifying threatened and priority species of flora and fauna and threatened ecological communities. (Threatened species and communities are those under risk of extinction. Priority species and communities are those that may be threatened but for which there are insufficient survey data, and those that are rare but not threatened).*

- *The Forest Products Commission and the Department will undertake operations in accordance with guidelines for operations in the presence of fauna, to be developed as part of the Fauna Distribution Information System, which is to be completed by the Forest products commission:*
 - *to the satisfaction of the Department; and*
 - *in consultation with the Conservation Commission.*

- *The Department will develop and implement recovery plans for selected threatened species and ecological communities, including:*
 - *the Western Shield fox baiting program (which seeks to reduce predation pressure on threatened and priority species of fauna).*

4.6.3 Weeds and plant pathogens

Weeds are plants (usually self-sown exotics) growing where they are not wanted (CALM, 1987). There is limited information on weed species in the Shire. DEC is responsible for managing weeds in State Forest/FPC estate land and has identified several strategies for ongoing weed management, including:

- Continue surveys to determine the occurrence of weeds and pests
- In conjunction with the Agricultural Protection Board, prescribe a program to control declared weeds and pests
- Carry out control programs as resources permit
- Educate the public on the problems with weeds and use of safe control measures
- Assess the efficacy of control techniques and where necessary modify techniques to achieve greatest efficiency.

DEC activities in relation to weed management are guided by the *Environmental Weed Strategy for Western Australia* (DEC, 1999).

DOA has prepared and released Western Australia's *State Weed Plan*. The plan has been developed to "help achieve coordinated, effective weed management throughout Western Australia". Key actions under the plan include the following:

- Increase public awareness to gain community acceptance of the significance of weeds and their responsibilities for weed management.
- Coordinate weed management planning, implementation and monitoring across all land.
- Encourage cooperative local and regional programs based on assessed priorities.

- Apply risk assessment methodology for determining weed management priorities.
- Encourage cooperative local and regional programs based on assessed priorities.
- Apply risk assessment methodology for determining weed management priorities in coordinated management programs.
- Promote weed management as an integrated process based on the principles of sustainable natural resource management.
- Establish an appropriate policy and legislative base for effective management of all serious weeds across the state.
- Ensure efficient use of new and existing resources in weed management.
- Monitor regularly the implementation and effectiveness of all aspects of the State Weed Plan.
- Encourage all public land and private land 'managers to act as "Good Neighbours".
- Recognise the role and expertise of volunteers in weed management.

Of relevance to agricultural weeds, the *Agriculture and Related Resources Protection Act 1976* and the *Agriculture Protection Boards Act 1950* outline the requirements of landholders to control, and spread of Declared Plants on their land and the responsibilities of the Agriculture Protection Board in implementing Declared Plant requirements.

The Shire of Wandering has the opportunity to be involved in implementing several actions under the plan, particularly supporting the local Landcare group and volunteers associated with the group, and by liaising regularly with State Government in respect to land management practices across agricultural and State Forest areas.

The major plant pathogen in the Shire is dieback, caused by the *Phytophthora* species of soil-borne fungus, capable of attacking at least 900 plant species (CALM, 1992). Dieback cannot be eradicated once it has infected an area, and as a result management and control measure focus on preventing the disease establishing in currently unaffected areas, and minimising the spread in affected areas.

There is always a challenge of identifying the expression of the pathogen due to a lack of indicator species, and due to its being present in some areas of the Shire because of the extensive land clearing that has historically occurred.

The northern portion of the Shire has been identified as being within a disease risk area.

A Biosecurity and Agriculture Management Bill is currently being developed to address issues of biosecurity across the State. The Shire will be able to consider its position on biosecurity in its strategic planning tools once the roles and responsibilities of State and local governments have been determined through the finalisation of the proposed bill and regulations.

4.7 AREAS OF ENVIRONMENTAL SIGNIFICANCE

The northern portion of the Shire is largely State Forest, however there are several conservation reserves established under the CALM Act.

System 6 (Department of Conservation and Environment October 1983) has identified 3 Management Priority Areas (MPA) wholly or partly in the Shire that are described as C41, C43, and C44.

C41 Lupton MPA is partly in the Shire and partly in the Shire of Brookton. In the Shire it comprises Reserve 26666 ("Timber"), and is a Local Reserve for "Recreation and Open Space" in the Shires Local Planning Scheme No. 3. The System 6 report notes that:

"The area contains lateritic uplands supporting open-woodland of wandoo, with powderbark on the ridges and jarrah on the more undulating parts. The valleys support wandoo woodland with stands of jam, rock sheoak and manna wattle. The area is particularly important as it is the only area of comparable size available for reservation which contains these vegetation types and their associated fauna. No dieback has been recorded in the MPA"

C43 Gyngoorda MPA is wholly within the Shire, and is a Local Reserve for State Forest in the Shire's Local Planning Scheme No. 3. It comprises State Forest 87 and the System 6 report notes that:

"Gyngoorda MPA contains vegetation which is characteristic of the lower rainfall -areas in State Forest. Open forest of jarrah and some marri, with an understorey of sheoak and banksia, covers most of the area. There is also some open-woodland of wandoo and some stands of powderbark.

There is a picnic spot beside Albany Highway and outstanding scenic views from Bannister Hill. Recreational activity is likely to increase. However, the risk of spread of dieback may necessitate some controls."

C44 Wandering MPA is wholly within the Shire. It comprises Reserves 26596 and 28332 which are Local Reserve for State Forest in the Shire's Local Planning Scheme No 3; Reserve 28197 that is in the Rural zone; Reserve 18534 that is Local Reserve for Recreation and Open Space; and Forest Reserve 145/25 that is in the Rural zone. The System 6 report notes that:

"The MPA conserves a range of vegetation types, some of which have been severely affected by agricultural development elsewhere in the System 6 region. Lateritic uplands support open-woodland of wandoo mixed in places with powderbark, and also open forest of jarrah and marri. Granitic outcrops support rock sheoak, jam and herblands while wandoo with some yarri occurs in the valleys."

The protection of areas of environmental significance within the Shire is largely provided for through the existing system of conservation reserves and State Forest. The *Forest Management Plan 2004-2013* covers an area in the south-east of the Shire of Wandering as

well as adjoining Shires. The plan proposes the amendment of reserve purposes for several reserves in the northern portion of the Shire, namely by their classification as National Park. This area is largely outside the control of the Shire (in terms of land use planning) and should not have any effect on proposals within the LPS. For full details the reader is referred to the *Forest Management Plan 2004-2013*.

The south-eastern portion of the Shire is affected by proposals in the *Dryandra Woodland Management Plan 1995-2005*. The plan indicates that the remnant vegetation in this area has high conservation significance. Management goals for the area include:

- Conserve biological, physical, cultural and landscape values.

- Facilitate public enjoyment of Dryandra in a manner compatible with the conservation goal.

- Manage commercial uses in a manner that minimises the impact on other values.

Reserves within the Dryandra Forest area are areas of State Forest with multiple use purposes. The *Dryandra Woodland Management Plan 1995-2005* proposes that some reserves will become nature reserves, some will become National Park, and others will remain as State Forest.

Under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, a permit is required for the clearing of native vegetation unless it is for an exempt purpose. Any development proposal that will lead to the clearing of native vegetation will require consultation with the Department of Environment and Conservation to determine if a permit is required.

PART 5 – LAND USE AND MANAGEMENT IMPLICATIONS

5.1 AGRICULTURE

5.1.1 Protection of Agricultural Areas

Aside from State Forest, agriculture is the most significant land use within the Shire of Wandering in terms of both land area and economic value. It is a general perception that agricultural land should be protected from incompatible development — a concept that is the basis of Statement of Planning Policy 2.5 — Agricultural and Rural Land Use Planning (SPP2.5) (WAPC 2002). SPP2.5 proposes zones for agricultural land as follows:

- Priority agriculture zone
- General agriculture zone

Priority agriculture land is defined by SPP2.5 as being land which:

- (a) has been identified by State agencies and the local government in consultation with the community as an agricultural area of State or regional significance; or
- (b) has been identified in a local planning strategy as being an area of local agricultural significance; and
- (c) is not already an existing Rural-Residential or Rural-Smallholdings development.

The Shire does not include land that has been delineated to be of State or regional agricultural significance. There are areas within the Shire that may be identified as having local agricultural significance.

The capability of soils within the Shire to support agriculture is largely dependent on the underlying geology. From a broad analysis of Table 3 — General Land Evaluation, it can be concluded that large areas of the Shire are not highly capable for some agricultural activities, particularly on the areas of lateritic uplands, minor valleys with upland terrain and valley floors. The soils associated with major valleys dissected into underlying basement rocks contain areas associated with higher capability for agriculture. The Marradong, Dryanfira, and Quindanning land system units represent the most capable agricultural land within the Shire.

It should be noted again however, that the capability assessment in this local planning strategy has used broad scale mapping, and that detailed localised land capability assessment should be undertaken on a case by case basis to support proposed developments.

5.1.2 Diversification of Agriculture

Farmers within the Shire are encouraged by DOA to investigate the diversified use of land. Forestry is also being promoted by the Forest Products Commission and DOA as a land care tool to contain land degradation such as waterlogging and increasing salinity.

Horticulture requires deep, medium textured and gravel-free soils with free drainage, flat terrain, and good water supply. Whilst there are areas of flat terrain in the Shire, some are subject to waterlogging and surface salinity. Water supplies are also limited, particularly in the eastern part of the Shire where rainfall is less and groundwater may be saline. Some consideration also needs to be given to climatic implications, particularly winter chilling and frost susceptibility.

Soils developed from basement rocks are more fertile than those derived from weathering of the lateritic profile. Some soils within valleys are susceptible to winter waterlogging due to poor subsurface drainage and the presence of clay soils.

Diversification into cropping can be accommodated on a large scale on suitable agricultural land within the Shire, however, more intensive forms of agriculture may be appropriate in smaller areas of high quality land. The land evaluation indicates that the Marradong land system units offer the best opportunity for agriculture and potential for more intensive agriculture. However, the Dryandra and Quindanning systems are also suitable for general agricultural purposes.

It is important to note that more specific localised land capability assessment would be required prior to the establishment of more intensive agricultural land uses, with emphasis on soil suitability and water availability.

5.2 MINING

As noted previously, the granites and gneisses of the Yilgarn Craton are not prospective for minerals. Some exploration licences have been issued throughout the Shire; however these do not have major implications for land use planning. In the foreseeable future it is unlikely that there will be any mining activity within the Shire.

There should be occurrences of basic raw materials (BRM) within the Shire, with most extractive industries expected to be small in scale. Management of extraction licences for BRM are administered by the Shire.

5.3 LAND DEGRADATION

5.3.1 Salinity and Waterlogging

The main focus of strategies to combat salinity relate to the reduction of groundwater levels. Revegetation of cleared areas is a key mechanism to achieve reduced groundwater levels. Further rehabilitation of salt affected land is also required as salt remains on the surface following a retreat of groundwater levels. DOA is considering the use of modified land management techniques and assessment of salt-tolerant plant and crop species to address this issue.

As part of a state-wide strategy to combat and manage salinity, the state government has produced the *Salinity Action Plan*. The aim of the plan is to:

- Reduce the rate of degradation of agricultural land, and where practicable, recover, rehabilitate, or manage salt-affected agricultural land

- Protect and restore key water resources to ensure salinity levels are kept to a level that permits safe, potable water supplies
- Protect and restore high value wetlands and natural vegetation, and maintain natural diversity within agricultural areas
- Protect designated infrastructure affected by salinity

In terms of management of ground and surface water, the *Salinity Action Plan* contains several water management strategies:

- Increasing water use by introducing deep-rooted perennial species
- Increasing water use by annual crops and pastures
- Draining, pumping and disposing of groundwater
- Improving protection and management of remnant native vegetation

Management of salt affected or potentially affected land is important for the ongoing viability of agriculture. Areas where salinity and waterlogging are prevalent or where there is potential for salinity should be planted out with deep-rooting species to assist in water table management. Drainage of salt affected and waterlogged areas into streams should not occur, however promotion of fresh water flows to streams should be encouraged where appropriate. Maximising the use of water on-site should be promoted, achieved by revegetating with native species and introducing higher water-using crops in susceptible areas.

Waterlogging is related to salinity and occurs when soil layers become saturated with water and may result in pooling of water on the ground surface. Management of waterlogging requires appropriate land management (use of appropriate pastures and cropping regimes on the advice of DOA), rehabilitation of degraded remnant vegetation, and tree planting.

5.3.2 Wind and Water Erosion

Protection and reinstatement of vegetation is the most effective method of managing erosion. When located appropriately vegetation contributes to water use, can bind soil, and can act as windbreak. Maintaining ground cover in agricultural areas provides another opportunity to control erosion.

5.3.3 Soil Acidification

The use of less acidic fertilisers, the application of lime, and the increased use of perennial grasses can assist in managing soil acidification.

5.4 ENVIRONMENT AND CONSERVATION

Protection of the environment is paramount to the ongoing success of the established agricultural base of the Shire. Land degradation due to agricultural practices is a major driver of environmental degradation in the Shire (as in much of the Wheatbelt). Modified land management practices, the establishment of the Wandering Productivity Group, restrictions on further land clearing, and increasing awareness regarding environmental issues all assist in the ongoing protection of the Shire's environment.

Several broad principles should be encouraged to assist in management of agricultural land within the Shire:

- Support the ongoing operation of local Landcare groups and Landcare coordinator
- Restrict further clearing of remnant vegetation
- Restrict clearing of riparian vegetation and encourage revegetation where possible – increasing stability of foreshores and creating nutrient and sediment traps
- Ensuring adequate setbacks are achieved between nutrient sources (fertiliser applications, effluent disposal systems) and watercourses
- Considering broader implications and downstream effects of land clearing and land use management

The further clearing of remnant vegetation should not be supported. Revegetation of cleared land should be encouraged, particularly along stream and drainage lines, but also within areas of marginal agricultural capability (such as stony soils or rock outcrops). When undertaking revegetation programs it is important that these areas are fenced to prevent access and damage by stock.

There are opportunities for the establishment of conservation or biodiversity corridors throughout the Shire. The corridors need not be large areas of land however where possible they should link significant areas of remnant bushland and allow for the movement of fauna. The streams, drainage lines, and roads within the Shire provide good opportunities for the establishment of such corridors.

Local Government Biodiversity Planning Guidelines have been developed by the Western Australian Local Government Association (WALGA). These guidelines establish a process for identifying, protecting and managing natural areas, which the guidelines define as:

"an area that contains native species or communities in a relatively natural state and hence contains biodiversity. Natural areas can be areas of native vegetation, vegetated or open water bodies (lakes, swamps), or waterways (rivers, streams, creeks - often referred to as channel wetlands, estuaries), springs, rock outcrops, bare ground (generally sand or mud), caves, coastal dunes or cliffs (adapted from Environmental Protection Authority 2003a). Note that natural areas exclude parkland cleared areas, isolated trees in cleared settings, ovals and turf areas"

Opportunity exists to work with both WALGA, and particularly, the NRM Regions, to seek funding to prepare a local biodiversity strategy consistent with WALGA's Local Government Biodiversity Planning Guidelines, to facilitate the protection and management of natural areas. Given the large scale clearing of native vegetation that has occurred in the past

for farming land in this area, consideration should be given to pursuing a regional approach to preparing a local biodiversity strategy.

Apart from the State Forest and conservation estate, the majority of the southern portion of the Shire contains remnant vegetation in parcels less than 20 hectares in size, making many pockets of remnant vegetation more difficult to manage successfully. Whilst there may be challenges in managing this land successfully, it is possible that any such areas have high conservation value given that much of the remainder of land in this area has been previously cleared for agriculture.

These areas of remnant vegetation should therefore be protected where possible. It should be noted that permits are generally required under the *Environment Protection Act 1986* for clearing of native vegetation.

The EPA has prepared Guidance Statement No. 33 *Guidelines for Environment and Planning*, for environmental guidance for land use planning and development. It is intended by the EPA to be a resource document for local government, State government agencies, consultants, proponents and the public, and the main purposes of the Guidance Statement are:

- to provide information and advice to assist participants in land use planning and development processes to protect, conserve and enhance the environment
- to describe the processes the EPA may apply under the Environmental Protection Act to land use planning and development in Western Australia, and in particular to describe the environmental impact assessment (EIA) process applied by the EPA to local planning schemes.

5.5 RURAL LIVING DEVELOPMENT

Rural living development encompasses Rural-Residential and Rural-Smallholding development. Detailed land capability assessment is required to identify specific areas that are suitable for rural living. The onus should lie with the proponent of rural living development to demonstrate that a proposed development is suitable, and that public health, amenity, and the environment will not be compromised.

Adequate and sustainable water supply and land capability are the major constraints to the establishment of rural living development within the Shire.

There are a range of town planning and environmental issues that determine the suitability of a site for rural living development. In general, rural, living should only be promoted where similar land uses already exist, or where there is appropriate infrastructure available and local land and site capability assessment indicates that the land is suitable for development. A site would also need to be capable of facilitating microbial purification (of septic tank effluent) and be sufficiently stable to allow for the construction of dwellings.

Rural living development generally needs to be separated from productive agricultural land and areas of mineral prospectivity; however the land capability assessment should indicate that the site is suitable for development.

Fire management plans should be prepared to accompany any application for rural living

development. This is of particular importance in areas where there is remnant native vegetation.

SPP2.5 requires that a reticulated domestic water supply be provided to land zoned 'rural-residential' (up to 4 ha). Land zoned 'rural-smallholding' requires both a water source for domestic supply and for fire-fighting purposes.

Water supply within the Shire is likely to come from surface water catchments, water harvesting from roof areas, and may be supplemented by groundwater. However, detailed site-specific investigations would be required to support any proposal for rural living development.

PART 6 – CULTURAL ENVIRONMENT: AN OVERVIEW

6.1 SETTLEMENT HIERARCHY PATTERN

The town of Wandering is the only established urban centre within the Shire. There is a gazetted undeveloped townsite at Dwarda.

Roadhouses are located in the Shire on the Albany Highway at North Bannister, and at Bannister where the Albany Highway crosses the Hotham River.

6.2 HERITAGE

The Municipal Inventory was prepared in January 1997 by Kelly Aris, B. Arch (Hons), Conservation Architect, and Julia Ball, B.A. (History), Grad. Dip. Public History, Heritage and History Research, in accordance with the Heritage Council of Western Australia Guidelines for the compilation of Municipal Inventories.

It was adopted by the Council on 20 February 1997 and was reviewed by Shire staff in December 2003 and January 2004.

The Municipal Inventory provides a detailed history of the Wandering district. The following summary draws heavily on the Municipal Inventory; persons interested in reading more should refer to the complete Municipal Inventory.

6.2.1 Aboriginal Heritage Overview

The Shire appears rich in Aboriginal history, culture, and heritage, particularly in the eastern half around springs.

The majority of sites are artefact sites, but there are also ethnographic sites, burials, middens engravings, grinding structure, quarries, ceremonial sites, historical sites, mythological sites, fish traps, and other constructed structures.

The records of the Department of Indigenous Affairs (February 2003) reveal 32 recorded Sites within the Shire.

Implications

All sites of Aboriginal significance, whether recorded or not, are protected under the *Aboriginal Heritage Act 1972*.

Any future use and development of land is to have regard for the Act. Where an Aboriginal site of significance is discovered during the course of establishing the use or development, or there is potential for a site to be discovered, an independent assessment of the site for Aboriginal heritage is to be undertaken by the proponent. This will determine whether a site exists and is to be protected, or clearance can be given to proceed with the proposed use or development.

6.2.2 Non-Aboriginal

There are alternative versions of the name "Wandering", and whilst it is impossible to determine which is the correct version it is likely that each contains an element of truth.

Firstly, there is a story of the sandalwooders driving their teams down what was the old York Williams Road and viewing from a prominent hilltop a shining finger of water, which they unthinkingly called "Wandering Brook". In time, Wandering took this name and later was abbreviated to just "Wandering".

A second story is similar to that recorded by Albert Schorer. It would seem that when George Stedman Watts' horses went missing, he sought the help of a group of aborigines camped nearby to recover the horses. Using words and sign language, he sought to communicate with the aborigines without success – all the aborigines answered was something that sounded like "wandoo-in". Later these words were translated to mean "camping place by the trees". Again in time, poor speech changed two native words into the one, "Wandering".

Finally, a further version of the name is "Wandering Brook" which was used by Thomas Saw in 1859 and George Stedman Watts in 1861 in their lease applications for land in the area. Apparently, Thomas Saw did not proceed with his application. For many of the early years, the area was known as "Wandering Brook" – perhaps a derivative of this name. It was late in the 1890s that "Brook" was dropped and the name became "Wandering". (The Horses Came First. Albert Schorer)

Between 1 June and 30 September 1831, Mr A. Hillman, government surveyor, surveyed a route for a road between Perth and Albany. The construction of the road was completed in 1841 and on 23 June 1841 it was officially declared open for traffic. It was obvious a great deal of importance would soon be attached to the Perth-Albany road which naturally would later benefit Wandering when passenger traffic came into vogue.

George Stedman Watts is credited with being the first European to discover the Wandering Area, which was founded on 5 March 1859. Mr Watts selected the first farm in the area in 1861, near where the horses were found grazing, and named the property "Grassdale". This property is still farmed by descendants of the Watts family.

The first road at Wandering was a track to the 54-mile peg known as the Old Sounds Road. This track was blazed by George Watts' family in the first year of the settlement. The route was purposely made to pass by the fresh water 'Gnowing Spring' seven miles from Wandering and 10.5 miles from the 54 mile peg.

The first freehold lands in the Wandering district were 140 acres (Avon Location 484) and 40 acres (Avon Location 485) granted to George and John Watts (sons of George Stedman) in 1866.

George Stedman Watts' two eldest sons, George and John, managed and worked the lease of No. 1876 and their own land and it was in 1866 when their father evidently retired from active farming that he transferred the land to his sons. From 1866 there is no clear record of the movements of Watts. His departure from Canning to reside permanently at Wandering probably occurred sometime between 1872 and 1880.

The original school was set up in 1870 and enrolment remained minimal yet constant.

The several small schools that operated near the railway through the Hotham Valley struggled to maintain the necessary attendance of eight pupils. The settlers had difficulty in claiming the required number of pupils to open a school, and sought the withdrawal of children from an existing school to where the proposed school site would be closer to them.

For some time after the first settlement, only sufficient agriculture to maintain the direct settlement itself was carried out. This was because the land was difficult to clear, and sale of any excess grain was difficult due to uncertain transport.

Whilst the land was settled prior to 1866, the Wandering Road Board was not established until 1874. The Roads Board was bounded on the north by the Canning districts, on the west by the Murray district, on the east by the York and Beverley districts and on the south by the north bank of the Hotham River, to include the Perth to Albany road.

On 6 October 1874, a new Roads Board at Wandering was constituted. On 27 October 1874 a meeting of settlers was convened and the appointment of officers carried out. The meeting was presided over by George Stedman Watts. At the initial meeting Mr John Watts was elected the first chairman of the Wandering Roads Board. The main problem that confronted the Roads Board was the building of roads with very little capital. If Wandering was to exist it was imperative that it gradually build up a system of roadways and water supplies to cater for the teams. This was gradually overcome by the sinking of wells.

On 26 July 1912, Wandering was officially declared a new townsite. However, a town centre did not develop in the Wandering region as the settlements were too sparse.

A railway through the Wandering district was extended from Boddington to Dwarda in 1913. The completion of the line from Dwarda to Narrogin spur line, on 18 September 1926, played an important role in the development of Narrogin as the main centre of the region. Dwarda was named after the Dwardadine Gully. It was a coaling stage, with locomotive triangle-turn and an ash pit. A railway barracks was brought from Crossman to Dwarda in 1937. Wandering as a centre was approximately eight miles to the north of Dwarda, thus only the southern section of the Shire of Wandering had the benefit of rail transport.

In 1915, the lack of facilities and government services in the Wandering district Was mentioned in the press:

The district of Wandering is one of the oldest settled portions of the State; and though it has had distributed over its four corners a thriving and an industrious band of settlers, it has, from time immemorial been one of the most neglected portions of Western Australia. Wandering has no railway facilities, and beyond a solitary post office and an agricultural hall, it has no public institutions whatever. Its nearest railway siding is seven miles south of the township - at a place called Dwarda - a remote centre, with the proverbial gum tree terminus, which does duty for the railway station. Wandering's only State Government land mark - its Agricultural Hall - does duty as a church, road board office, and for other public functions; but its doors are padlocked night and day, from the depredations of burglars and other desperadoes. [newspaper article, no name, 29 October 1915] Land development in the Wandering area progressed at a slow rate until after World War Two. Timber growth in most of the district is reasonably heavy. Before the utilisation of heavy machinery, development was, of necessity, fairly slow as the hard work of clearing had to be done virtually by manpower alone. With the advent of the bulldozer, about 1948, the heavier work was done by machinery followed by clearing up with manual labour. In the following

twenty years a gradual change in methods took place. The development of water supplies also advanced considerably.

The construction of the Wandering Water Supply scheme was commenced in early 1963. Originally it consisted of a 1.5 million gallon earth tank which supplied a standpipe water carting service. Subsequently a small reticulation to serve eleven was installed in December 1964. There was a steady and consistent growth in the town to twenty one services in June 1974.

(Source: Municipal Inventory January 1997; Kelly Aris, B. Arch (Hons), Conservation Architect, and Julia Ball, B.A. (History), Grad. Dip. Public History, Heritage and History Research.)

Implications

Local Planning Scheme No. 3 contains provisions enabling the Council to designate heritage areas and to formulate local planning policies to guide the use and development of land within those areas.

6.2.3 Native Title

The Shire is entirely within a native title claim by Gnaala Karia Booja registered in the Federal Court and with the NNTT.

Implications

Any change of status of Crown Land that has not previously been freehold is to be subject to Native Title clearance.

6.3 TOWNSCAPE

Townscape describes the way an image or identity of a place, particularly an urban environment, is projected. It is usually expressed through its scale and pattern of development, its setting, and its built form. The Shire has undertaken works to enhance the townscape, including construction of dual-use paths.

The town of Wandering is the only place within the Shire where townscape is of significance. The benefits of improvements to a townscape include a greater sense of 'belonging' for local residents and attracting increased numbers of visitors.

Implications

The townscape of Wandering has little or no implication for the broad allocation of land use. However, subsequent development and built form should be climate responsive and project a typically 'Australian architecture style'.

A compact, discrete townscape can enhance pedestrian comfort and convenience, and provide improved linkages and connections between residential areas, and commercial and community facilities.

6.4 POPULATION AND HOUSING

6.4.1 Population

The population in the Wandering Shire at the 2001 census was 318 persons, down from 370 persons at the 1996 census. Wandering is the significant centre of population in the District, but separate statistics are not available for the townsite.

The Australian Bureau of Statistics has provided information of population and total dwellings in the Shire of Wandering for each census from 1986 to 2001, as shown in Table 6.

TABLE NO. 6 – POPULATION AND TOTAL DWELLINGS SHIRE OF WANDERING 1986-2001

	Population		Total Occup	Persons/Occupied Dwellings	
	% change p.a.	No.		No.	
1986	430	117		3.68	
	-0.8		+3.7		-4.3
1991	414	136		3.04	
	-2.2		+0.2		-2.5
1996	370	129		2.87	
2001	318	122		2.61	

Population projections from 2001 to 2006 provided by the Department for Planning and Infrastructure for the Shire, based on medium growth scenarios indicate a modest population increase to 352 persons by 2006, at an average annual growth rate of 0.08%.

6.4.2 Age Structure

The 2001 census showed that the median age was 38 years compared with 34 years for the whole of the state. The age structure of the population of the Shire was as shown in Table 7.

TABLE NO. 7 – AGE STRUCTURE SHIRE OF WANDERING 2001

YEARS	MALE	FEMALE	TOTAL
0-4	14	7	21
5-9	12	19	31
10-14	9	16	25
15-19	0	0	0
20-24	9	7	16
25-29	10	16	26
30-34	9	14	23
35-39	16	11	27
40-44	11	13	24
45-49	17	6	23
50-54	12	11	23
55-59	13	15	28
60-64	6	9	15
65-69	10	9	19
70-74	0	6	6
75-79	0	9	9
80-84	0	0	0
85-89	0	3	3
90-94	0	0	0
95-99	0	0	0
100 and over	0	0	0
TOTAL	148	171	319

With an increasingly ageing population, like elsewhere in the State, the future adequate provision of aged services, facilities, and suitable accommodation will be important. Failure to provide these is likely to result in residents leaving the Shire for places that do provide suitable accommodation, services, and facilities.

6.4.3 Household Size AND Composition

At the 2001 census the average household size in Wandering was 2.6 persons/household. This is comparable to the State average of 2.7 persons/household.

Most households were 'family' households, with or without children (76.8%); 3.2% were one-parent families; and 20% were in lone person households.

Whilst the traditional family and household structure is well represented in the Shire, and thus strongly influences dwelling type and form, the number of lone person households, together with the number of 'one parent' households, is an important consideration in providing dwelling types and residential densities.

Implications

A continuing decline in the resident population could have significant local economic impacts in terms of a lower labour supply, vacant dwellings, and result in the school and community services and facilities not being fully used.

Expansion and value adding to the Shire's traditional farming industry together with diversification into other industries and uses would underpin population growth.

Increased numbers of visitors to the Shire will require supporting services and infrastructure, leading to investment and population growth.

PART 7 – EXISTING LAND USE AND ISSUES

7.1 WANDERING TOWNSITE

A groundwater study of the Wandering Townsite was undertaken in March 2002 to provide technical information to help form the basis of a salinity management strategy through the Rural Towns Program. The program was established in 1997 to arm communities to fight townsite salinity. The 2002 study recommended that the Shire take the following actions to assist in salinity management:

- revegetate public areas above and around the community centre car park;
- delineate the transmissive zone and devise an economic dewater strategy;
- line Dam No. 2;
- manage surface water in the catchment;
- rejuvenate the main creek to assist in surface drainage;
- revegetate areas of dead or dying native vegetation with salt tolerant trees and shrubs; and
- reduce recharge on cleared land to the west.

(a) Residential

Wandering is located on the western side of an intersected valley running north south, and with a narrower valley lying east west. The topography allows views from many parts of the town.

The existing residential area in Wandering is in the northern part of the townsite on the western side of Watts Street which is the main through road. There are a few scattered houses on the eastern side of Watts Street on farming properties.

There has been recent development of houses in the area bounded by Michibin, Gnowing, Cheetaning, and Down Streets. The older established residential part of the town is northwest of Down Street/Watts Street.

The Shire has acquired land for residential purposes on the western side of the town, and has subdivided the first stage. It expects that this subdivision will meet foreseeable demand for residential lots.

(b) Community Facilities

The civic and cultural facilities are located along Watts Street with Council office/Post Office, CWA meeting rooms, Shire depot, and Agriculture Hall on the western side of the road. A telecentre is located in the Agriculture Hall. The Wandering Tavern is located on the eastern side of Watts Street.

The major formal recreation facilities in the town are on land bounded by Down Street, Watts Street, Sewell Street, and Michibin Street. This area incorporates showgrounds, recreation oval, indoor recreation centre, and tennis courts. There is sufficient area available on-site for extensions to the recreation facilities to accommodate future needs.

The Wandering Golf Club is located to the east of the town off the North Wandering Road.

(c) Public Purposes

The Wandering cemetery is located on the western side of Watts Street on the southern side of the town.

The Department of Education and Training has advised the Wandering Primary School is on Crown Reserve 18502 of 3.9457 ha. The school provides places for pre-primary and primary students. Secondary school students are offered places at Boddington and there is a school bus service provided. School enrolments at the Wandering Primary School in recent years are in Table 8.

Guidelines for the planning of Government schools require a primary school on a 4 ha site for every 1,250 dwellings (approximately 4,000 residents), and a secondary school on a site of 10 ha for every 5,500 dwellings (approximately 17,600 residents). A district high school on a 6 ha site is to be provided in country areas where separate high and primary schools are not warranted.

TABLE NO. 8 – WANDERING PRIMARY SCHOOL ENROLMENTS 1993 - 2003

Year	Total	Numbers of Students Pre-Primary	Primary
1993	23	8	15
1994	28	7	21
1995	25	4	21
1996	20	1	19
1997	19	2	17
1998	30	11	19
1999	33	9	24
2000	26	6	20
2001	18	5	13
2002	16	3	13
2003	25	8	17

The municipal rubbish disposal site is on freehold land owned by the Shire south of Moramocking Road. The site is adequate for foreseeable needs.

Services in the town include recreation facilities; public services such as Post Office and school; and community facilities such as churches and social groups. But goods and services provided by fuel supply agents, machinery dealers, and shops are not available in Wandering and must be obtained from towns such as Boddington or Narrogin.

(d) Industrial and Commercial

A sawmill previously operated from a site within the town has closed due to lack of suitable logs. In addition to supplying rough sawn timber, a timber furniture maker was established on site.

The Shire's Local Planning Scheme provides for an industrial zone west of the Wandering-Pingelly Road, at the southern end of the townsite. Whilst there has not been any industrial development on this land to date, the Shire is to acquire land to create 5 industrial sites.

There is no local shop or fuel outlet in Wandering. The tavern stocks a limited range of daily convenience items but residents need to travel to a nearby town for shopping. Fuel supplies are obtained from one of the Albany Highway roadhouses, or nearby towns.

The Shire has acquired land on the eastern side of Watts Street opposite the Shire office and is to invite proposals for development of commercial premises including a convenience store (shop and fuel outlet).

7.2 DISTRICT

(a) Rural and Agricultural

The predominant land use in the district is for agricultural production. As shown in Table 9, about 87,400 ha (or 45% of the total area of the district) was in 62 farms in 1996/97 (the most recent data available).

Agricultural production has traditionally been focussed on cropping and sheep. With changing markets, pressures of increasing land values, and pressures from persons seeking lifestyle change, different forms of agriculture are now being practiced.

The established CBH grain receival storage off the North Bannister Wandering Road has capacity for only about 25-30% of the average grain crop from the district. Growers must truck the balance 70-75% of their crop to receival sites elsewhere including the Perth metropolitan grain receival depot, Williams, Pingelly, and Dale.

Successful vineyards have been established followed by wineries, which have expanded into tourist facilities. Commercial tree plantations are well established, and are expanding, immediately to the west of the shire. There is potential for this land use to expand in the district as part of farm diversification or a single crop. Olives are also cultivated in the district and appear to be well suited to local conditions.

The Council is supportive of diversification of agricultural production that has the potential to expand both the economic base and the population of the district. It will support other rural uses that complement and do not have the potential to constrain broad acre farming. Specifically the Council will be mindful of the need for buffer separation for some uses to avoid land use conflicts from dust, spray drift, odour, or noise.

Water for agriculture is a valuable resource in the district and intensive agriculture must have a sustainable water supply on the same lot; this water supply is not to be based on dams which rely on catchment from other properties, or which reduce the flow of water to other properties.

(b) State Forest

There are extensive areas of State Forest through the north-west and north of the district. Approximately 48% of the whole of the district is reserved for State Forest (about 93,800 ha).

Significant parts of the State Forest are also reserved for water catchment, for hills dams. The FPC manages the State Forest.

(c) Highway Developments

There are roadhouses/travellers facilities located at Bannister and North Bannister off the Albany Highway in the district. Both places provide fuel and refreshments for travellers using the highway.

Implications

Sufficient land is now available for residential uses and community facilities/services. The Council is to develop land for industry, and is to make land available for a convenience store in the town.

Subject to sustainable water supplies there are opportunities for diversification into less traditional agricultural production including intensive horticulture.

PART 8 – THE ECONOMY AND EMPLOYMENT

8.1 ECONOMY

The town of Wandering is at the centre of a farming community that produces wheat and coarse grains, and clover, as well as livestock including sheep, cattle, and pigs. CBH grain receival storage is located off the Wandering-North Bannister Road just to the north of the town.

The latest statistics available for agricultural production in the district are for 1996/97. In that year 87,400 ha were farmland, being about 45% of the total area of the Shire. There were 62 farms with an average area of 1,410 ha. Recent developments in the farming areas have included vineyards and wineries, which have also been instrumental in attracting more visitors to the district.

The Shire understands the need to maintain buffers for the protection of some landuses, such as wineries, as per the EPA 'Guidance for the Assessment of Environmental Factors (in accordance with the Environmental Protection Act 1986) — Separation Distances between Industrial and Sensitive Land Uses' (EPA, 2005).

The Strategy recognises and acknowledges the need for and the impact of buffers to protect existing and proposed industries, infrastructure and services from any proposed development that is considered incompatible and/ or will generate landuse conflict.

Details of agricultural production in the Shire are set out in Table 9.

TABLE NO. 9 – MAJOR AGRICULTURAL ACTIVITIES SHIRE OF WANDERING 1996/97

Agricultural Industry	Value of farm production (\$'000)	Total area of production (ha)	Dollars per hectare (\$/ha)
Intensive animal products			
Apiculture	0	0	
Intensive meat	9.11	0.21	
Eggs	0	0	
Total Intensive animal products	9.11	0.21	43,231
Pasture animal products			
Wool	6,124	27,250	
Milk	0	0	
Grazing meat	2,475	30,512	
Other	0	0	
Total pasture animal products	8,599	57,762	149
Crops – broad scale			
Cereal crops for grain	4,802	15,903	
Grain legumes and oilseeds	574	1,955	
Hay/pastures	614	1,073	
Total broad scale crops	5,990	18,931	316

Crops - horticulture			
Nurseries, turf and cut flowers	0	0	
Vegetables	0	0	
Fruit	1	0.2	
Grapes	287	33.9	
Total horticultural crops	288	34.1	8,445
Non-productive land (ha)		10,717	
Total Shire of Wandering	\$14,886	76,727	\$194

The Shire of Wandering contributes nearly \$15 million to the gross value of agricultural production in the state. The Department of Agriculture further reports that in 1996/97, wool was the major commodity produced in the Shire, with a value of more than \$6 million. The next most important commodities were sheep (\$2.1 million) and oats (\$1.8 million).

8.2 EMPLOYMENT

Employment by industry sector within the Shire at the 2001 census is summarised in Table 10.

TABLE NO. 10 – EMPLOYED PERSONS BY INDUSTRY SHIRE OF WANDERING

Industry	Persons			
	Male	Female	Total	%
Agriculture, Forestry and Fishing	79	34	113	63.5
Mining	4	3	7	3.9
Manufacturing	3	0	3	1.7
Electricity, Gas and Water Supply	0	0	0	0
Construction	3	0	3	1.7
Wholesale Trade	6	0	6	3.4
Retail Trade	3	6	9	5.1
Accommodation, Cafes and Restaurants	6	0	6	3.4
Transport and Storage	3	3	6	3.4
Communication Services	0	0	0	0
Finance and Insurance	0	0	0	0
Property and Business Services	0	0	0	0
Government Administration and Defence	3	3	6	3.4
Education	0	10	10	5.6
Health and Community Services	0	0	0	0
Cultural and Recreational Services	0	6	6	3.4
Personal and Other Services	0	3	3	1.7
Non-classifiable/not stated	0	0	0	0
Total	110	68	178	100

Implications

With a low population base and Wandering being the only centre of population there are no major land use implications associated with the growth or expansion of the local economy through its primary production sector.

However, any expansion through the means of production (e.g. infrastructure and services) will be contingent upon environmental acceptability, and sustainability of the resource.

With the rapid rate of growth in telecommunications and the internet, there is emerging a trend for the establishment of home-based businesses to provide a wider range of products and services to the Wandering community.

There is now much more awareness of products and services that are available from around the world. Telecommunications provide an opportunity to access such products and services, and allow an international, national, or state agency, firm, or business to have a local presence.

Consideration of home-based businesses is a legitimate land use option that is accommodated through Local Planning Scheme No. 3.

PART 9 – UTILITY SERVICES

9.1 MOVEMENT

The movement of people, goods, and services to and from, and within the Shire is by road.

9.1.1 Regional Road Network

The regional roads serving the Shire are the Albany Highway, North Bannister-Wandering Road, Wandering Pingelly Road, and the Wandering Narrogin Road. Main Roads Western Australia (MRWA) is responsible for the maintenance of the Albany Highway; the Shire is responsible for the other roads.

The Albany Highway is a major inter-regional north-south route that forms the main route between Perth and Albany, as well within the Great Southern region, and further afield to Esperance. It carries a mixture of light, tourist, and heavy transport vehicles.

The Wandering-Narrogin Road forms part of a broader inter-regional route from the Albany Highway to Narrogin and beyond as far as Esperance. It is increasingly used for light traffic, as well as transport of livestock and general freight.

9.1.2 Other Roads

The Shire is responsible for the maintenance of the local (district) road system that provides access to farming properties for the movement of people and produce. Heavy vehicle traffic during harvesting and transfer of grain from the CBH receival depot during the year has the potential to damage the local road infrastructure.

The local road system is used widely for the school bus services.

9.1.3 Local Road Network Wandering Townsite

The main street in the town is Watts Street, which also is part of the regional road, provides access for local, regional and through traffic within the townsite.

The Shire is to provide for a heavy vehicle stopping place in Wandering adjacent to the tavern and proposed shop site off the eastern side of Watts Street.

The local road system within the town provides adequate vehicular access 9.1.4 Cycle and Pedestrian Networks.

The Shire has provided pathways throughout much of the townsite to improve cycle and pedestrian access.

Wandering's local streets are generally relatively safe for shared use by pedestrians, cyclists and motor vehicles due to low traffic volumes.

9.2 ELECTRICITY

Electricity is available throughout the Shire from the Western Power grid. A new residential subdivision in the town has underground electricity; the distribution of electricity elsewhere in the town is overhead.

9.3 WATER SUPPLY

The Water Corporation provides a water supply in the town of Wandering from bitumen catchments and dams located on water reserve 29674 located within the Wandering townsite boundary.

Water supply is also sourced in an augmentation capacity from off the Great Southern Towns Water Supply (GSTWS) system via the Darkan Boddington, DBI water main extension. This main is classified as non rated mains and its designated purpose is water source for Wandering only. It has a very limited capacity to supply additional services on route.

The water supply to the town and environs is generally limited to levels lower than about 290m AHD. The Water Corporation has no plans to extend water supply services or to extend supply from the Great Southern Towns Water Supply network.

On site water supply is required for properties outside the town.

Implications

The limitations to water supply are not likely to constrain development within the townsite, but may limit potential nearby such as within the proposed industrial subdivision.

9.4 WASTEWATER TREATMENT

Reticulated sewerage is not available within the Wandering townsite, and the town is not identified in the (draft) Country Sewerage Policy of the state government as a priority for sewerage.

The (draft) Country Sewerage Policy allows residential densities up to a maximum of MO, subject to no individual proposal exceeding 25 lots or dwellings and a total town expansion of no more than 50 lots.

The limitation on 25 lots for one proposal includes any planned future stages, but does not include developments or subdivisions at a density of R5 or less.

Industry will be limited to "dry" industry that generates less than 540 litres/2000m² site area per day.

The scale of development is, and will remain, limited to the capacity of each development site to

accommodate on-site effluent disposal. The (draft) Country Sewerage Policy includes specifications for on site wastewater disposal.

Implications

Industry will be limited to "dry" industry. Due to limitations on the number of residential lots that can be developed at an R10 density without sewer, future subdivisions and townsite expansion may be limited to densities of R5 and above to satisfy the- draft Country Sewerage Policy.

9.5 TELECOMMUNICATIONS

Telecommunication services are provided to the district, which also receives television and radio services. There is reasonably good NextG/CDMA network mobile phone reception, but only very limited GSM network reception restricted to western parts of the Shire.

Implications

The level of telecommunication services is not likely to be a constraint to development or growth in the district.

PART 10 – THE LAND USE STRATEGY

The section describes the aims and objectives of the strategy, recommended strategies, and specific strategies and actions unique to planning precincts.

10.1 AIMS AND OBJECTIVES

It is the aim of the strategy to:

- formulate a strategy that provides for a coordinated approach (between all levels of government) to land use planning throughout the Shire within a framework that has regard to the environmental, social, and economic values;
- protect and enhance the environmental values and natural resources of the Shire and to promote ecologically sustainable land use and development;
- safeguard and enhance the character and amenity of the Shire's natural and built environment;
- set aside or designate land required for public and community purposes, and provide for land uses that will facilitate the health and well-being of residents of the Shire;
- ensure a sufficient supply of serviced land suitable for housing, commerce and industry, agriculture and other rural pursuits, community facilities, recreation and entertainment, and tourist infrastructure;
- assist employment and economic growth by providing opportunities for home-based employment;
- promote the sustainable use and management of rural land and intensive agricultural areas whilst accommodating associated 'value-added' activities and pursuits;
- provide for Rural-Residential and Rural Smallholdings land that can be developed and managed in a sustainable way; and
- recognise and protect places of natural beauty and of historic and scientific interest which are considered important to the heritage of the Shire.

The Shire's Municipal Inventory identifies 22 places, 13 of which are recommended for protection under the local planning scheme, or are listed for retention and conservation. The local planning scheme provisions for heritage protection are based on the Model Scheme Text in the *Town Planning Regulations 1967*. The Shire may adopt a heritage list based on the Municipal Inventory, or nominate a heritage area under the Scheme.

10.2 RURAL AND AGRICULTURE

The strategy plan is attached as Figure 10. Information relating to use of rural land is in plans prepared by the Department for Planning and Infrastructure with input from the Department of Agriculture and Food and include:

- Annual Horticulture
- Perennial Horticulture
- Salinity risk
- Flood Risk
- Water Erosion Risk
- Wind Erosion Risk

These plans are included as Attachments for ease of reference. The opportunities and constraints for rural land arising from broad mapping is largely dependent on the proposed land use and ultimate form of development.

There may be constraints applicable to broad agriculture which provides opportunities for alternative or complementary rural related land uses.

The Council supports continuation of broad acre farming as the principle land use in the district. It will support other rural uses that complement and do not have the potential to constrain broad acre farming. Specifically the Council will be mindful of the need for buffer separation for some uses to avoid nuisance from dust, spray drift, odour, and noise.

In assessing proposals Council will consider the generic buffers outlined in EPA Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and Sensitive Land uses.

The district appears to be well suited to farm diversification including viticulture, commercial tree plantations and agroforestry, some aquaculture depending on water supply, and crops such as olives. It will be essential for proposals for crops dependent on a water supply (other than rainfall) to demonstrate a sustainable water supply from within the same lot.

The operators of an established vineyard and winery have developed facilities for visitors, including short stay accommodation. The Council supports such development.

More intensive agricultural uses require smaller land area than for broad acre farming, although lot size allowance must be made for sustainable water supply (where appropriate), a dwelling, and farm buildings. In many cases existing farming properties are made up with a number of separate lots for which individual Title is available. Subject to land suitability and sustainable water supply, these lots may be suitable for intensive agricultural production without the need for subdivision or re-zoning. The land use of 'Intensive Agriculture' is permissible in the Rural zone and is subject to planning approval.

However, in all probability land suitability assessment and water supply assessment will also point to larger parcels of land in which case applications for subdivision are likely. The Council's recommendations to the WAPC on such applications will be based on detailed investigations of land suitability and water supply, and the land requirements appropriate for the proposed form of intensive agriculture.

The WAPC Policy DC 3.4 "Subdivision of Rural Land" addresses subdivision for intensive uses agriculture in the following terms:

It is WAPC Policy that the subdivision of rural and agricultural land for closer settlement (rural-residential and rural smallholdings) and more intensive agricultural uses should be properly planned through the preparation of regional and local planning strategies and provided for in local planning schemes prior to subdivision.

Areas in the Shire suitable for intensive agriculture are broadly identified in Figure 10 of this Local Planning Strategy.

The Commission may require re-zoning of land to facilitate subdivision for more intensive agricultural use unless the proposal complies with the criteria in WAPC Policy DC 3.4. Land may be re-zoned to 'Rural Residential' to facilitate subdivision for more intensive agricultural uses.

The WAPC's Policy DC 3.4 includes requirements for subdivision for "homestead lots" to enable an existing house on a farm to continue to be occupied provided that:

- (a) The land is in the Wheatbelt agricultural policy area.
- (b) The population in the locality is declining or relatively static¹.
- (c) The homestead lot has an area between 1 and 4ha, or up to 20 ha where it is desirable to respond to the landform or to include existing outbuildings or water sources.
- (d) There is an adequate water supply for domestic, land management and fire management services.
- (e) The homestead lot fronts a constructed road.
- (f) The homestead lot contains an existing residence.
- (g) A homestead lot has not been excised from the farm in the past.

Criteria for subdivision for "conservation lots" as set out in the WAPC's Policy DC 3.4 include that the vegetation has been identified and agreed as worthy of protection in an approved strategy, catchment plan, or a specific assessment by an appropriate expert be conducted in accordance with principles contained in schedule 5 of the Environmental Protection Act 1986.

This Local Planning Strategy does not include vegetation assessment to the level of detail necessary for subdivision for conservation. It will be necessary for each proponent to prepare a specific assessment having regard for the criteria set out in the Commission's Policy DC 3.4.

10.3 RURAL RESIDENTIAL

SPP2.5 provides that Rural-Residential is land used for residential purposes in a rural setting which provides for alternative residential lifestyle and which seeks to preserve the amenity of such areas and control land use impacts.

In accordance with SPP2.5, Rural-Residential lots should range from 1 ha to 4 ha depending on local conditions, and have a mandatory provision of a reticulated potable water supply to an appropriate standard as determined by the licence holder. However, where land was in a Rural Residential (or similar) Zone prior to gazettal of SPP2.5, a reticulated potable water supply is required for Lots smaller than 2 ha.

The physical and social infrastructures required to support the subdivision and development of Rural Residential land exist in Wandering, and there will not be any undue difficulty in satisfying additional demand. Such development will assist in stimulating further growth in the town. Generally the Council is more likely to support those proposals that are likely to contribute to growth of the town.

Existing areas for rural residential development are shown in Figure 10. Land to the north of the townsite and bounded by Westwood Road, White Road, Bannister Road, and North Bannister-Wandering Road is in a Rural Residential zone in the Shire's Local Planning Scheme No. 3. The total area is about 450 ha. Whilst the WAPC has granted preliminary approval for the first stage, subdivisional works have not commenced.

The Council recognises other landowners may be interested to have their land rezoned to facilitate subdivision. It will be the responsibility of each applicant for rezoning to Rural Residential to have a land suitability assessment prepared to the satisfaction of both the Council and the Western Australian Planning Commission.

When considering proposals for Rural Residential zones the Council will have regard for the following matters, in addition to provisions of the Scheme and WAPC policy:

- proximity to the town
- standard of road access to the land
- availability of community facilities and services, and likely additional demand
- availability of a sustainable water supply
- existing land use on the subject lots and adjacent land
- the potential impacts on continuation of existing land uses on adjacent land, and the potential impacts of those existing uses on the proposed rural residential lots
- remnant vegetation
- bush fire risk and management
- impact on scenic landscape, conservation, and heritage attributes
- risk of land and water degradation with regard to flooding, soil erosion, salinity, landslip, or any other form of environmental impact

- land capability with demonstrated fair to high capability of sustaining the proposed development and use
- buffer requirements.

Implicit in the Council's consideration will be the avoidance of land use conflicts between existing agricultural uses and the uses on proposed Rural Residential lots.

Given the importance of broad-acre agriculture to the local economy, rural residential development should be located on soils with only moderate capability for agricultural land use to ensure the most productive land is not taken out of production. This should be coupled with the desirability of locating rural residential developments in reasonable proximity to the Wandering townsite to assist in service and infrastructure provision. Areas suitable for this form of development are shown on Figure 10.

SPP2.5 provides that Rural Smallholdings land is land used for minor rural pursuits, hobby farm, conservation lots, and alternative residential life style purposes where part-time income from cottage industries, home business/home occupation, and use of the land for agriculture may be derived. This land use seeks to preserve and enhance landscape quality, environmental values and conservation attributes.

In accordance with SPP2.5, Rural Smallholding lots are in the range from 4 ha to 40 ha depending on local conditions and land uses. A reticulated potable water supply is not required under SPP2.5.

When considering proposals for Rural Smallholding zones the Council will have regard for the proposed land uses and the same matters as for Rural Residential developments (repeated as follows), in addition to provisions of the Scheme and WAPC policy:

- proximity to the town
- standard of road access to the land
- availability of community facilities and services, and likely additional demand
- availability of a sustainable water supply
- existing land use on the subject lots and adjacent land
- the potential impacts on continuation of existing land uses on adjacent land, and the potential impacts of those existing uses on the proposed rural residential lots
- remnant vegetation
- bush fire risk and management
- impact on scenic landscape, conservation, and heritage attributes

- risk of land and water degradation with regard to flooding, soil erosion, salinity, landslip, or any other form of environmental impact
- land capability with demonstrated fair to high capability of sustaining the proposed development and use
- buffer requirements.

Implicit in the Council's consideration will be the avoidance of land use conflicts between existing agricultural uses and the uses on proposed Rural Smallholding lots.

Rural Smallholdings development for intensive horticulture is more suited to the southwestern portion of the Shire where rainfall is greater and soils are generally deeper and well _drained. Development along the Bannister River could have greater potential for water supply. Subdivision for Rural Smallholdings development in these areas could also allow for the imposition of stringent planning conditions aimed at improving and managing agricultural activities adjacent to waterways. These conditions may include (but not be limited to) such matters as:

- Drainage lines and the banks of streams could be planted with local trees and shrubs and where possible fenced to provide sediment stripping, habitat creation and fauna linkages.
- Heavy rainfall, particularly during storms, can cause major impacts by washing soil and animal manure into water courses and dams. Soil trapping dams and filter strips can be considered as a management practice.
- Drainage of water from salt affected areas to stream lines can often shift the problem further downstream; however, in certain cases through good design drainage can be beneficial.
- Contour banks that allow fresh surface water harvesting to flow to the streams without infiltration can be helpful in maintaining stream flows and reducing recharge.
- Developments and intensive farming should be set back from streams and drainage lines to reduce the risk of flooding and nutrient loss.
- Dams should be located out of drainage lines where possible and should maintain the flow of sufficient water to stream lines.
- The size and location of dams should be designed in such a way that impacts on adjoining properties are minimised.
- River pools should be restored and protected.
- Fringing and foreshore vegetation along rivers and streams should over time, be replanted with local species, and logs and other water slowing strategies introduced to restrain the flow of sediments.

A subdivision off Moramocking Road to the south of the town has been approved for 72 lots of between 5 ha and 10 ha, with an average of about 5.9 ha. A substantial number of lots have been created and most have been developed.

Rural Smallholding lots suited to rural industry and home business are in an existing subdivision off Wandering-Pingelly Road, and Pennington Road. Depending on lot take-up there is potential for expansion as shown on Figure 10.

Further subdivision for Rural Smallholding lots is intended to cater for lot sizes from 4 ha to 40 ha and will not be supported outside the areas shown on the Local Planning Strategy map, with the exception of the special circumstances for subdivision in the Commission's Policy DC 3.4 — Subdivision of Rural Land. These special circumstances in Policy DC 3.4 February 2008 include;

- Subdivisions that are not fragmentation and do not result in a loss of character (Policy Clause 4.1 a-f),
- Subdivision for conservation of biodiversity and natural heritage (Policy Clause 4.8), and
- Subdivision for homestead lots (Policy Clause 4.9).

The areas identified on the Strategy Plan as being suitable for Rural Smallholdings will require rezoning prior to subdivision.

10.5 HIGHWAY DEVELOPMENTS

The Council supports provision of traveller's facilities of a high standard at the two Albany Highway roadhouses in the district.

The Council will generally support expansion of the facilities and services provided to travellers and which are consistent with the Council's overall objectives.

10.6 WANDERING TOWNSITE

The Shire will seek to implement the recommendations of the groundwater study that was undertaken in March 2002 to provide technical information as the basis of a salinity management strategy under the Rural Towns Program.

The specific recommendations from that Study are that the Shire:

- revegetate public areas above and around the community centre car park;
- delineate the transmissive zone and devise an economic dewatering strategy;
- line Dam No. 2;
- manage surface water catchment;

- rejuvenate the main creek to assist in surface drainage;
- revegetate areas of dead or dying native vegetation with salt-tolerant trees and shrubs; and
- reduce recharge on cleared land to the west.

The Shire's Municipal Inventory identifies 22 places, 13 of which are recommended for protection under the local planning scheme, or are listed for retention and conservation. The local planning scheme provisions for heritage protection are based on the Model Scheme Text in the *Town Planning Regulations 1967*. The Shire may adopt a heritage list based on the Municipal Inventory or nominate a heritage area under the Scheme.

10.6.1 Residential

The residential area encompasses the existing developed residential areas of Wandering and the land identified as being suitable for future development.

The Council wants to provide for lifestyle options. The proposed residential density is R10 that, amongst other things, provides for a minimum area of land of 1,000m² per dwelling.

The proposed residential density has regard for site conditions, and the reliance in the town at present on on-site effluent disposal systems.

The sawmill site generally bounded by Mills and White Streets, Westwood and Turton Roads, could become available for residential use. A gravel borrow-pit at the northern end of the sawmill site off Westwood Road requires rehabilitation.

Land to the west of Down Street, and south of Reserve 29674 (for Water Supply), is suitable for residential development and extension of the Michibin Street residential area. This area has been acquired by the Council for residential subdivision. The Council has also identified land, north of the primary school and west of Watts Street to be suitable for residential development. The latter area is now farmed.

These residential extension areas are included in the Residential zone in Local Planning Scheme No. 3; site development will depend on demand.

Predominant land uses will be for residential purposes. The Council will consider home based businesses and other uses that are consistent with residential development and will not adversely affect local amenities.

10.6.2 Community

This classification includes public uses such as school, civic and community facilities, and recreation.

The existing school site satisfies current criteria for a primary school, and should be

adequate for all foreseeable needs.

Additional community facilities are not likely to be established in the town, and residents will need to travel to nearby towns for a wider range of services.

Extensive areas are set aside for recreation, as well as for conservation of vegetation, or to provide open space buffers.

Land in the northwestern part of the town is proposed for conservation of flora and fauna as well as protection of water quality. Passive recreation use is consistent with the primary objectives. The area is Unallocated Crown land, and the Council may consider requesting a vesting order for a purpose such as "Protection of Remnant Vegetation" as recommended by the Department of Conservation and Land Management.

The major formal recreation facilities in the district include showgrounds, recreation oval, indoor recreation centre, and tennis courts. There is sufficient area available for extensions to the recreation facilities to accommodate future needs.

The Council encourages provision of accommodation and visitors' facilities in the town. To that end it proposes land between Moramocking Road and Cheetaning Street west of Watts Street be developed for a caravan park. There are no current proposals for commencement of development on this site of approximately 9.6 ha. As well as providing short stay accommodation for visitors, the proposed caravan park would also address the need for accommodation for seasonal workers, including those working on farm diversification projects.

10.6.3 Industrial and Commercial

Industrial activity in Wandering has been centred on the sawmill on the northern side of the town. However the volume of production from the sawmill use has declined due to shoyge of suitable cut logs.

The Council is to develop an industrial area on land west of Wandering-Pingelly Road at the southern end of the townsite. There is some potential for value added industries using timber. These may include furniture making and timber crafts.

The indications are there is sufficient land identified for industrial uses to cater for future needs for industry in the town.

The commercial centre includes the civic and cultural, administrative, and commercial uses in the town. Existing commercial uses are limited, and are centred on the tavern.

The Council is promoting the establishment of a convenience store (shop and fuel outlet) in the town, on the eastern side of Watts Street. Such development will provide much needed local services, and provide impetus for further development.

The Council supports a wide range of land uses consistent with the function of the commercial centre, and flexibility for the Council to approve those uses it considers most appropriate.

10.7 WANDERING TOWNSITE:

A townsite strategy is required for Wandering to investigate the need for and to accommodate additional residential and commercial land required because of the Boddington gold mine project. In conjunction with the preparation of the expansion plan, Section 6.4 - Population and Housing, of this Strategy should be updated. The townsite expansion plan will require the final approval of the WAPC.

10.8 BIODIVERSITY

The Shire will consult with WALGA to request the NRM Regions consider providing resources to prepare a local biodiversity strategy consistent with WALGA's Local Government Biodiversity Planning Guidelines, to facilitate the protection and management of natural areas. The request should consider pursuing a regional approach to the preparation of a local biodiversity strategy given the large scale clearing of native vegetation that has occurred in the past.

10.9 BUFFERS

Developments that may need a buffer include industries (including rural and extractive), agriculture, infrastructure, and services. Buffer requirements are generally guided by State and regional policy, including that which is set by the EPA, WAPC, and DOIR.

Based on available information, existing and proposed developments that require a buffer have been identified on the strategy map. The Shire, will therefore, not generally support proposed development that will:

- i. result in a incompatible land use being located within a buffer such as residential or rural residential; and
- ii. create a land use conflict as the result of a proposed development that will require a buffer or the proposed expansion of an existing development that results in a buffer that needs to be increased, that encroaches on incompatible land uses such as residential or rural residential.

In assessing development proposals that require or are impacted on by a buffer requirement, the following will apply:

- i. existing development, the buffer will be in accordance with recommended distances as stipulated by State and regional policy unless a buffer study has been prepared and endorsed by the relevant State Government authority to adopt a modified boundary; and
- ii. proposed expansion of an existing or new development, a buffer study will need to be submitted and may require referral to the EPA.