

# Warren-Blackwood

# Rural Strategy

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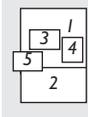


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## MINISTER'S FOREWORD

The Warren-Blackwood Region is a rich and diverse area; in many ways it is a regional icon of the State. It is renowned for its high karri forests, diversity of vegetation, the remote south coast, and its topography and landscape variety. The area is highly productive in terms of agriculture, forestry and mining and has been a main contributor to the development of the State's economy. These natural assets and its close proximity to the Perth metropolitan area have also made it a popular tourism and recreation destination, with it being increasingly recognised as a desirable place to live.



The natural and developed advantages of the region need to be conserved and enhanced to maximise the opportunities for current and future generations. There is a wide range of land and water management issues confronting the region. Although no particular issue alone is regarded as critical at this stage, it is important that resources are managed carefully to arrest and reverse any trends of degradation.

This Strategy is one of the first regional planning documents to embrace the principles of sustainability at its foundation. It aims to provide the best balance between social, environmental and economic factors. In particular, it has brought together the natural resources themes of land, water and biodiversity, emphasising their interdependence and the need to consider each in relation to development and land use outcomes. The fourth theme of the coast is also integrated in the Strategy framework.

The Strategy has been developed with a detailed level of ongoing public consultation and community input. Specific consultation exercises on the main issues and draft strategy were successful with the outcomes modified to represent a position supported by the community. The level of community ownership that has resulted is the key to its sustainability.

The Strategy introduces new concepts of natural resources management into rural land use planning and provides opportunities for sustainable development in accordance with community-established targets and best management practices. It promotes a concept of responsible land management above regulation and land use control, a system that can continue to evolve with changes in agriculture and environmental targets.

In releasing this Strategy, I would like to acknowledge and thank the study management group members for their efforts and dedication over the three years of its development, and the technical advisory group which provided essential support. Most importantly, I thank the community for its valuable contribution of knowledge and ideas to the Strategy which is a tribute to the efforts of all parties.

I commend this Strategy to the community of the Warren-Blackwood Region and look forward to your continued involvement in its implementation for your benefit.

**Alannah MacTiernan MLA**  
Minister for Planning and Infrastructure



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## SUMMARY

### Background

Preparation of the Warren-Blackwood Rural Strategy was one of the principal recommendations of the *Warren-Blackwood Regional Planning Strategy*. Its purpose is to provide a planning framework to address the rural land use, land management, agricultural productivity, environmental protection and resource rehabilitation issues that were unable to be resolved in the regional planning strategy.

The Warren-Blackwood Region is probably the richest agricultural region in the State and has significant potential for further development. It has a diverse economic base and there is a wide range of landcare issues to be addressed. The Strategy sets out the Government's broad planning policies and strategies for the region and presents a framework for the planning strategies of the four local governments in the study area. Working in close partnership with those shires, the local planning strategies have been prepared concurrently with this Strategy.

### Objectives

The main objective of the Strategy has been to introduce the principles of sustainability and natural resources management into the planning system and to attain an appropriate balance between enhancing productive capacity, protecting the environment and maximising community opportunity. It has focused on implementing the relevant recommendations and requirements of the *State Planning Strategy*, *Statement of Planning Policy No. 2.5 Agricultural and Rural Land Use Planning Policy* and *Environment and Natural Resources Management Statement of Planning Policy No. 2*. In addition, it has provided a link to other key natural resources management based initiatives relevant to the region. These include the *State Sustainability Strategy*, *Regional Western Australia - A Better Place to Live*, the *South West Regional Strategy for Natural Resource Management*, the *Blackwood Basin Group's various strategies and business plans*, the *State Salinity Strategy* and *catchment recovery strategies*, and Landcare, Rivercare, Bushcare and Coastcare.

### Process

The agricultural land assessment process involved combining high-capability land and water availability data to identify those areas having the greatest potential for diversified and intensified agricultural production. These assessments were

carried out for the various sub-catchments located within each river basin. High-capability land was taken as areas with greater than 70 per cent of that land identified as Class 1, 2 or 3 for annual and/or perennial horticulture. To determine the water availability, the assumed environmental flow requirements for each stream were deducted from the mean annual flow rates to give a conservative sustainable yield figure for that stream. By deducting the current yield within the sub-catchment, the amount of water available for divertible usage was indicated. Using a typical annual irrigation rate for the area, this showed up the amount of additional high-capability land that could be irrigated sustainably in each sub-catchment. Where there was a significant agglomeration of existing intensive agricultural uses and/or potentials within a catchment, that area was recognised as an agricultural area of State or regional significance. The *Agricultural Economic Potential study* also supplied valuable information on the potential of each shire in terms of producing higher-value agricultural commodities for the lucrative export markets.

### Zonings

From the agricultural land assessment process, three conceptual rural zonings — Agriculture, Priority Agriculture and Rural Landscape Protection — were identified. The objective of the Agriculture zone is to protect the productive capacity of the land and allow for limited low-key, non-rural developments where they will not compromise that productive capacity. Within the Priority Agriculture zone, the primary objective is to provide a higher level of protection to the productive capacity of the land and the key land and water resources that underpin it. The Rural Landscape Protection zone is intended to protect and enhance the intrinsic landscape, environmental or cultural values of the area, while allowing for ongoing rural uses that are compatible with that level of protection.

### Natural Resources Management

The basic natural resources management data used for the Strategy was the South West Regional Strategy for Natural Resource Management and the four technical reports which underpinned it. Two of those documents, namely *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West*, have made recommendations and observations in terms of the conservation values of various waterways,



wetlands, riparian environments, vegetation associations, threatened ecological communities and declared rare flora. However, there is currently insufficient data available to identify clearly those areas spatially on or adjacent to freehold land. The Strategy has set out a process for the relevant agencies to confirm the respective scientific and community values of those identified conservation-quality areas and determine their relative priority for conservation, including assessing the most appropriate methods of protection, most suitable funding options and special incentives, and the best methods of management and maintenance of the areas.

## Principles

The primary goal of the Strategy is to facilitate ongoing rural development within the region on the basis of sustainability in terms of economic, social and environmental parameters, in a manner which is consistent with the opportunities and constraints of the region's natural resources. The main principles are:

- Sustainability being the concept which underpins the Strategy and the application of natural resources management actions;
- Regional and local planning strategies incorporating or linking into, where appropriate, the strategies and actions of other natural resources management initiatives;
- Gaining the best balance between economic, environmental and social objectives;
- Promoting sustainable diversification and intensification of agricultural production;
- Protecting the productive capacity of agricultural land;
- Promoting a planning system that is operationally efficient and environmentally effective;
- Promoting fairness and equity in land management;
- Promoting community ownership of the Strategy;
- Facilitating ongoing education and awareness of the key issues; and
- Pursuing ongoing refinement of the Strategy and actions.

## Strategies

Flowing on from the trends and implications identified in respect to the existing resources in Chapter 3, 12 separate issues and strategies have been developed:

**LAND MANAGEMENT** — Use land management principles, accepted best management practices and agreed targets rather than tight land use controls to facilitate sustainable agricultural production and land uses in rural areas.

**WATER RESOURCE MANAGEMENT** — Processes have been set out to identify water availability, protecting water quality and rationalising water usage in supporting agricultural expansion, diversification and intensification.

**ENVIRONMENTAL PROTECTION** — The *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* technical reports have provided the broad framework for future conservation objectives, but further detail is required to identify specific areas, priorities and protection levels. The process to achieve that outcome is outlined.

**LAND USE CONFLICTS** — Guidelines have been developed to assist local governments to avoid or deal with land use conflicts and nuisance issues between adjoining uses in rural areas.

**COASTAL MANAGEMENT AND DEVELOPMENT** — Coastal assessment strategy and management proposals are outlined.

**AGROFORESTRY vs TREE PLANTATIONS** — In recognition of the significant advantages to the environment and the community of agroforestry over tree plantations, options for addressing the economic and tax incentive imbalances have been outlined.

**RURAL SUBDIVISION** — Established that the primary principle in considering rural subdivisions is the protection of the productive capacity of agricultural land, and criteria and guidelines have been established for use in the local planning strategies to guide this process.

**RURAL-RESIDENTIAL** — Outlined the requirement for zoning or policy area recognition in the local planning strategy/town planning scheme, focusing on consolidation of settlements around existing townsites (i.e. within five kilometres). Also required is the preparation of a structure plan, addressing issues including environmental design, accessibility, road layout, service provision and buffering. Guidelines for preferred design criteria which recognise the special landscape, topographical or environmental characteristics of the parent lot, are also set out.

**RURAL SMALLHOLDINGS** — Set out the requirement for identifying an appropriate area/s in proximity to a town/urban area (i.e. within five kilometres). Also required is the preparation of a



structure plan addressing issues including road layout, service provision and vegetation and landscape protection.

**TOURISM DEVELOPMENTS** — Support the provision of low-key tourism development in Agriculture and Rural Landscape Protection Zones, subject to local government approval and satisfying specific requirements.

**REGIONAL TRANSPORT** — Diversification and intensification of agricultural production will have transport implications, which need to be reassessed at a regional level. Encourage downstream processing and regional transport, which maximises road-rail combinations.

**LAND VALUATIONS** — Guidelines for land valuations and rating to reflect clearly the zoning, permitted uses and conservation measures for rural land.

### Planning Units

For the purpose of analysis and presentation of the Strategy, the region has been divided into 13 planning units based on the Natural Resources zones developed by the then Department of Environmental Protection and Agriculture Western Australia in 1992. This has allowed the natural resources data to be analysed, synthesised and translated to broad planning policies and strategies at the regional level. The local planning strategies for the four local governments have then used planning precincts based on identifiable groupings of land developments and uses to draw the broad regional guidelines into detailed and precise local zonings, policies, strategies and provisions.

In Chapter 7, each planning unit is presented with a natural flow from base data through to strategy under the following headings:

#### *Planning Unit Location*

- Planning Unit Description
- Natural Resources Description
- Land Capability and Water Availability
- Major Issues

#### *Conceptual Rural Zoning*

- Natural Resources Management Objectives
- Planning Objectives
- Land Use Categories
- Subdivision Criteria

### Partnership

The Strategy has been carried out in close partnership with the four local governments and key State government agencies. By agreement, the local governments each have prepared their local planning strategies concurrently with this Strategy. A funding grant from the Natural Heritage Trust enabled them to appoint a common planning consultant to co-ordinate with the Strategy. The result is four local planning strategies that incorporate natural resources management principles and the objectives of the Natural Heritage Trust. They are also consistent with and complementary to the Strategy in principle and in basic data, but with variations to suit local circumstances.

### Public Consultation

There has been a significant degree of public consultation associated with the Strategy. Rather than start with the usual public workshops which ask broad questions on local issues and community aspirations, a number of previous consultation exercises and their outcomes were analysed and synthesised into an *Warren-Blackwood Rural*



*Blackwood Valley, grazing.*



*Karri Valley Resort.*



*Strategy Issues Discussion Paper* covering 10 main issues. Each issue was then discussed in terms of background, opportunities and constraints, options and potential actions. The Issues Discussion Paper was made available to all rural landholders and they were invited to comment on its content and proposals, with 41 submissions received. The draft strategy incorporated many of the valuable concepts put forward in those submissions and was advertised for three months as the second major component of the public consultation. A further 17 submissions were received on the draft strategy, and these formed the basis of further amendment and refinement to produce the final Warren-Blackwood Rural Strategy.

## Implementation

The Strategy has provided the framework and guidelines for the preparation of the four local planning strategies. At the same time, it becomes Western Australian Planning Commission policy for the Warren-Blackwood Region and provides a basis for planning decisions in the region. It will be incorporated within and implemented under *Statement of Planning Policy No. 1 State Planning Framework*.



## SUMMARY OF MAJOR FINDINGS AND RECOMMENDATIONS

The principal outcomes of the Strategy are summarised below:

### Principles:

- The concept of **sustainability** underpins the overall Strategy and all sub-strategies.
- The Strategy focuses on the **natural resources management** themes of land, water, biodiversity and the coast.
- The Strategy provides a link to the **other natural resources management initiatives** developed for the region and translates the relevant components into the regional and local planning strategies.
- The Strategy promotes an appropriate **balance** between economic development, environmental protection and social opportunity.
- The Strategy promotes **sustainable expansion, diversification and intensification** of agricultural production throughout the region.
- The Strategy provides for the protection of the **productive capacity** of agricultural land throughout the region.
- The Strategy establishes a planning system framework that is operationally **efficient** and environmentally **effective**.
- The Strategy promotes **fairness and equity** in sharing the costs and responsibilities associated with addressing natural resources management issues.
- The key to success in natural resources management is to develop **community ownership** through full consultation with all landholders and other key stakeholders in the region.
- The ongoing success of the Strategy depends on continuous **research, education and awareness** of the issues.

### Process:

- **Land capability and water availability** — The capacity to increase the sustainable productive capacity of agricultural land is more dependent on the availability of adequate supplies of good-quality water than it is on the existence of high-capability soils. The Strategy has assessed the environmental flow requirements of streams in various sub-catchments, along with their existing yields, to determine the amount of water available for additional irrigation usage. By intersecting the land capability and water

availability in each sub-catchment, additional development potential was demonstrated, and this was a major determinant in identifying Priority Agriculture areas in the region.

- **Water resources** — The Strategy has linked the land use planning system into water resource management by using preliminary environmental flow requirements to identify sub-catchments where the current yield may be approaching the sustainable yield level. This highlights sub-catchments where more detailed study to refine the environmental flow requirements is appropriate and where efforts to improve efficiency of water usage can help to avoid future restrictions on water supply.
- **Waterways, wetlands and biodiversity conservation** — Current information on the special conservation values of the waterways, wetlands and biodiversity areas of the region has allowed those significant areas to be identified in a broad sense, but there is as yet insufficient data to enable it to be reflected fully in the Strategy and local planning strategies. A process has been devised to enable those areas to be identified in relation to private freehold land, confirm community values and priorities and to consider the most appropriate means of conservation.
- **Best management practice/code of practice** — An efficient and effective rural land management system will require best management practice/code of practice guidelines for the various land use types, locations and/or circumstances. Many such guidelines have already been prepared and are in use, but more are required. These will be developed by the involved community and industry, with government agency support. Key issues of planning relevance will need to be drawn out of those guidelines and translated into town planning scheme provisions as a backup to community implementation.
- **Target setting and monitoring** — Utilisation of best management practice/code of practice guidelines go hand in hand with target setting and monitoring in the various sub-catchments. These values will be established and the actions carried out by the Department of Environment and the local catchment management groups, in conjunction with the local communities.
- **Agricultural economics** — Traditionally, rural planning has been based on current production statistics. The Agricultural Economic Potential



Assessment allowed future projections and production scenarios to be developed, taking into account value-adding ratios, gross value and gross margin, as well as market trends, international export markets and other influences. The future scenario potentials for each local government area could then be used for concept planning in regard to population, employment, transport, infrastructure and facilities.

- **Socioeconomic impacts** — Rural decline or marginal rural population growth can be resolved sustainably only by actions that will provide ongoing economic, environmental and social returns. These deteriorating rural circumstances have been in evidence for at least 30 years, but have been exacerbated to some extent in recent years by large-scale tree plantation developments and currently by the effects of the *Forest Management Plan 2004-2013*. This may be partly or fully offset by promoting and supporting sustainable expansion, intensification and diversification of agricultural production, including facilitating broadscale agroforestry in lieu of large plantations.

#### Strategies:

##### Land management:

- Promote sustainable agricultural production.
- Provide an emphasis on land management practice rather than tight land use control.
- Use best management practice/code of practice in conjunction with catchment target setting and monitoring to guide land management.
- Incorporate backup provisions into planning strategies and schemes.

##### Water resource protection:

- Ensure expansion, intensification and diversification of agricultural production is within the sustainable yield limits of the sub-catchment.
- Review the environmental flow estimates for those catchments where sustainable yield has been or is close to being reached.
- Support the preparation of community-based water allocation management plans and incorporate the outcomes as a refinement of the sub-catchment assessments and planning.
- Promote greater efficiency of use and management of water resources, especially where sustainable yield has been reached.

- Promote the concept of comprehensive sub-catchment management strategies to address a range of environmental and resource issues.

##### Environmental protection:

- Identify, prioritise and implement conservation values established.
- Implement policies on waterways protection and foreshore management.
- Promote the concept of comprehensive sub-catchment management strategies to address a range of environmental and resource issues.

##### Land use conflicts:

- Agriculture is to be considered the pre-eminent rural use, with all others being of secondary importance.
- The dividing boundary should be taken as the critical point to consider setbacks in each case.
- Houses, tourism developments and other non-rural uses to require formal local government planning approval in each case.
- Consider current and potential future uses in assessing appropriate setbacks.
- Assess setbacks in relation to existing developments on the basis of individual merit.

##### Coastal management:

- Prepare a regional coastal planning strategy for Augusta to Walpole.
- Prepare a coastal management plan for coastal strip adjacent to freehold lots west of Black Point.
- Assess and co-ordinate road construction and servicing requirements to the private freehold lots prior to any increase in development.

##### Agroforestry vs tree plantations:

- Ensure tree plantations remain an as-of-right crop in Agriculture zone.
- Recognise agroforestry as having better environmental, social and landcare opportunities than large plantations.
- Address and pursue issues of tax incentives to balance economic discrepancies between agroforestry and tree plantations.
- Promote agroforestry as an integral component of co-ordinated farm and catchment planning.

##### Rural subdivision:

- Overriding principle is to protect the productive capacity of agricultural land.
- Subdivision proposals to demonstrate agricultural productivity benefits.
- Support for farm rationalisations that improve the productive capacity, environmental



rehabilitation or resource management of the land.

- General criteria for assessing subdivision proposals established.

#### **Rural-residential:**

- Rural-residential estates to be identified as policy areas in local planning strategy or scheme, in response to a demonstrated need.
- Subdivision and development not permitted until land rezoned and structure plan prepared and approved.
- Rural-residential estates to be located in close proximity to an urban centre, but not in or adjoining significant agricultural areas.
- Estate design to show flexibility to protect and enhance significant landscape and environmental features.

#### **Rural smallholdings:**

- Rural smallholding estates to be identified as policy areas in local planning strategy or scheme, in response to a demonstrated need.
- Subdivision and development not permitted until land rezoned and subdivision guide plan prepared and approved.
- Rural smallholding estates to be located in reasonable proximity to an urban centre, but not supported on land that would otherwise be Priority Agriculture zone.

#### **Tourism development:**

- Up to five chalets may be acceptable within a Rural zone, but greater tourism development to require specific rezoning.
- Formal planning approval required for all tourism developments in rural areas.
- Identify specific tourism precincts where tourism development has significant potential.
- Tourism developments and uses not to constrain normal agricultural usage on adjoining rural land.
- Tourism developments not to conflict with the management objectives on any adjoining CALM estate.

#### **Regional transport:**

- Assess all agricultural and rural uses in reviewing the regional transport network.
- Emphasise road-rail combination in regional transport network.
- Identify sub-regional scale industrial estate site adjacent to the road-rail corridor.
- Promote downstream processing of regional produce within the region.
- Utilise existing log-haul roads for heavy vehicle transport routes wherever possible.

#### **Land valuations:**

- New land valuations to acknowledge and incorporate scheme zonings, development restrictions, conservation measures, etc.
- Pursue tax/rate concessions for endorsed conservation measures (e.g. covenants) on rural land.



Broadacre grazing.



Warren Beach.



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# **PART I BACKGROUND**

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## 1.0 INTRODUCTION

### 1.1 The Warren-Blackwood Region

The Warren-Blackwood Region, comprising the Shires of Manjimup, Bridgetown-Greenbushes, Boyup Brook and Nannup (see Map 1), is an area of wide physical contrast, great natural beauty and high economic productivity. With a total area of approximately 1,412,000ha and a 2001 census population of 16,706, it contains 58.9 per cent of the total South-West land area and has 13 per cent of the population.

Extending from the south coast and the Scott Coastal Plain, over the southern end of the Darling Scarp and into the plateau of the western agricultural areas, the region is dissected by the two major river basins, which give the region its name. The Blackwood River passes through the Shires of Boyup Brook, Bridgetown-Greenbushes and Nannup, whereas the Warren River basin is contained almost totally within the Shire of Manjimup. The CALM estate accounts for 64.6 per cent of the regional area, but this is greater in the Manjimup Shire (79.5 per cent) and Nannup Shire (78.8 per cent). The remaining land has been generally cleared for agricultural uses, with only a very small proportion being urban or rural-residential land.



The Warren-Blackwood Region features a wide variety of productive agricultural land uses, surrounded by large areas of State forest and national park.

The Warren-Blackwood Region has traditionally been an area of high productivity and great economic importance. On the limited freehold land available, the gross value of agricultural production for the region in 2000 was \$187 million, an increase of 14.7 per cent since 1996. With high-capability soils, relatively good supplies of high-quality water and considerable export opportunities, there is significant potential for intensification and diversification of production.

The region is also subject to considerable uncertainty now as the timber industry is being affected by the rationalisation and cutback of native forest timber harvesting and the *Forest*

*Management Plan 2004-2013* and is undergoing a process of readjustment. Government agricultural services have been rationalised in recent years and agricultural producers are affected by fluctuating commodity prices and rural economic change. In addition, the region is affected by a wide range of land degradation factors, which potentially threaten future productivity, viability and ecological sustainability.

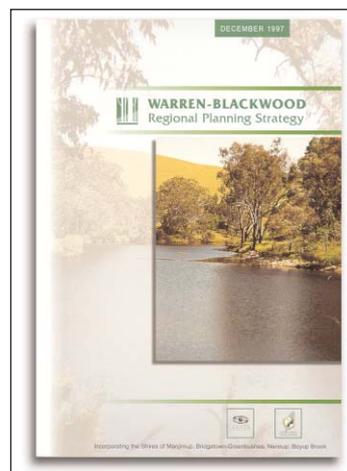
Although the population is relatively small and current growth rates relatively low, the region is becoming increasingly attractive as a lifestyle alternative to city living and the rapidly developing coastal areas to the north and west. Tourism, which has always been a significant industry in the area, is also growing rapidly. With the wide variety of natural attractions and the ambience of the region, its appeal in this regard will almost certainly continue to grow.

It is clear that the Warren-Blackwood Region is of State economic significance, as well as being of great environmental and social/cultural value. It is imperative that careful planning to protect the natural resources be undertaken in line with the aspirations of the local community.

### 1.2 Warren-Blackwood Regional Planning Strategy

The final *Warren-Blackwood Regional Planning Strategy* presented a comprehensive planning framework for the region for a 20 to 25-year time horizon. The strategy was supported by five specific planning strategies, covering:

- Urban and infrastructure
- Rural land use
- Resource development
- Conservation
- Coastal



The Warren-Blackwood Regional Planning Strategy made strong recommendations about the preparation of this Strategy and highlighted many of the issues to be addressed.

The land use strategy of the *Warren-Blackwood Regional Planning Strategy* is shown on Map 2.

Within the rural land use strategy component a number of sub-strategies and recommended actions were set out under the following headings:

- Protection of productive capacity
- Land and water degradation
- Sustainability of agricultural systems and practices
- Balancing water resource allocation
- Tree plantations and agroforestry
- Accommodation of other rural land uses
- Strategies for specific areas

During the assessment and preparation of the *Warren-Blackwood Regional Planning Strategy*, vital information from (then) Agriculture WA and CALM on land capability and remnant vegetation was not available. As a result, the agricultural significance of each area could not be assessed adequately, nor appropriate strategies proposed. Accordingly, the recommended actions under the rural land use strategy included one principal action, which stated:

*“Prepare a regional rural strategy to address, at a regional scale, the issues raised in this rural land use strategy and to set the framework for local rural strategies”*

This was supported by a number of other recommended actions on associated details.

This Strategy fulfils that requirement.

### 1.3 Warren-Blackwood Rural Strategy

The delay in finalising the Strategy is unfortunate, but this has also presented some positive outcomes. Along with the additional land capability and remnant vegetation data, valuable water resource, waterways and wetlands and vegetation and biodiversity data, has also become available. This has enabled a much more comprehensive assessment of the natural resources of the region to be undertaken.

One primary objective of the Strategy is to introduce natural resources management principles and activities into the planning system at the local and regional level. The *Warren-Blackwood Regional Planning Strategy* clearly demonstrated the strong interdependence of land and water resources and the close links with vegetation and biodiversity. It is therefore important to incorporate the natural resources themes of land, water and biodiversity. Coastal environs, as a theme, has also

been included because there is clear overlapping and interlinking in that area. At this stage, the other resource areas of minerals, marine and atmosphere have not been included.

A second primary objective is to ensure that the principle of sustainability is paramount in all considerations. This has been developed as a balance between economic, environmental and social needs.

The third primary objective is to incorporate the initiatives being undertaken by other agencies and groups using natural resources management principles. This includes the *State Planning Strategy*, the *Regional Western Australia - a Better Place to Live*, Natural Heritage Trust objectives, the *South West Regional Strategy for Natural Resource Management*, the *State Salinity Strategy*, the Blackwood Basin Group’s zone action plans and business plans, and others.

The outcome of the Strategy will set out the State’s rural planning objectives for the region and will be a framework for assisting the four local governments in the development of their individual local planning strategies. The Strategy focuses primarily on freehold land, in acceptance of the fact that CALM has administrative and management responsibility for its own estate under separate legislation. However, the influence and interaction of the resources between the CALM estate and freehold land is fully acknowledged as significant given the extent of the CALM landholding. CALM has also made a significant contribution by way of the extensive knowledge base for biodiversity conservation and landscape assessment in respect of private freehold land.

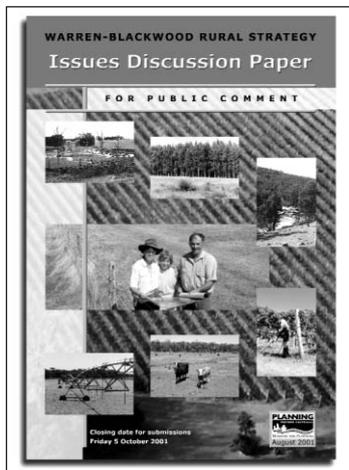
### 1.4 Study Process and Public Consultation

Throughout the *Warren-Blackwood Regional Planning Strategy* and this Strategy, the emphasis has been on ensuring effective public consultation. It is most important that the Strategy identifies key community issues and develops responses and actions in conjunction with the key stakeholders, including local landholders and the local community generally. This will maximise public support and ownership of the Strategy and ensure its effective implementation.

There have been extensive public workshops and consultation programs in the region on a wide variety of topics in recent years, including for several phases of the *Warren-Blackwood Regional Planning Strategy*. These have produced a wealth of valuable base data on local issues, community concerns and suggested solutions. However, it was

clear that the local community was tired of attending endless workshops to discuss the same broad concepts, make the same general proposals and see little or no practical results. There was an opportunity, instead, to work with the issues and the potential solutions already identified, to take the consultation exercise to the next level.

Ten principal planning and resource use issues were identified and formed the basis of the *Warren-Blackwood Rural Strategy Issues Discussion Paper*. Each issue had a general



*The Warren-Blackwood Rural Strategy Issues Discussion Paper was widely distributed throughout the region in mid-2001. It resulted in a wide range of responses and provided valuable information which formed a foundation for the Strategy.*

introduction/explanation, followed by a summary of associated opportunities and constraints, and suggested a range of options and future actions to resolve the issue. This paper was widely distributed among rural landholders in the region in August 2001 and submissions were invited. The 41 submissions received provided a wealth of insights and gave a much clearer picture of the community's concerns and aspirations. The outcomes of the submissions received were then brought together with the natural resources data to produce the draft *Warren-Blackwood Rural Strategy*.

The draft strategy was released for a three-month public advertising period on 22 March 2003 and community presentations and discussions were held in each of the shires, with 17 submissions received. They were generally supportive of its concepts, but identified a number of specific issues or suggested changes. There was no major issue of concern, although predictably rural subdivision was raised several times. These submissions have now been fully analysed and evaluated and the draft strategy has been reviewed to incorporate relevant modifications. The final Strategy represents the planning vision of the State Government, the Western Australian Planning Commission (WAPC) and the community for the Warren-Blackwood Region.

## 1.5 Study Management

The Strategy has been project managed by the Department for Planning and Infrastructure (DPI) on behalf of the WAPC. A key component of the process has been the establishment of the study management group which comprised representatives of each of the four local governments as well as the Department of Environment (DoE), the Department of Agriculture (DoAg), the Department of Conservation and Land Management (CALM) and DPI. The role of the management group, which has met on a regular basis throughout the process, has been to represent State and local interests, contribute its varied range of knowledge and expertise, debate the issues and options and present to the WAPC a draft and final Strategy for consideration. A wider Technical Working Group covering State and local government and various community groups was consulted for general and specific advice as required and met on an occasional basis for consultation and updating on the progress and direction of the Strategy.

The development of the four local government local planning strategies concurrent with the Strategy was also assisted by a Natural Heritage Trust grant for the purpose of achieving the integration of natural resources management principles into the developed rural planning framework.

By working as a close partnership involving State and local government and community representatives and developing the Strategy and local planning strategies concurrently, a range of important objectives and benefits have been achieved, including:

- issues being identified more easily and resolved by consensus;
- greater consistency of principles between regional and local levels;
- simplicity of ensuring that the appropriate level of detail of strategies, actions and provisions appears in the appropriate level of document;
- greater compatibility of implementation across administrative boundaries through using the same database and principles, but varying policies and provisions to suit local circumstances;
- greater ability to attract external funding or incentives through a co-ordinated regional approach; and
- simplifying subsequent modification and review.



### 1.6 Responsibilities with the Strategy

The Strategy was drawn together from a wide variety of sources, with special input from various agencies, local governments, strategies, policies, community groups and general community participation. In conjunction with the development of the Strategy, the four local governments prepared the respective rural components of their local planning strategies. From this base:

- The WAPC retains responsibility primarily for maintaining subdivision control, carrying out strategic and regional planning and advising the Minister for Planning and Infrastructure in regard to town planning schemes and general planning matters. It has adopted the Strategy as its planning policy for the region and will use it to guide its decision-making for the region.
- The local governments have responsibility for administering their respective local planning strategies and town planning schemes, carrying out local planning and exercising development control within their district. They will use the Strategy as a framework and guideline for their planning administration.
- Other agencies will continue to administer their own respective areas of responsibility, but will use the Strategy to define their interrelationship with the planning system.
- Other community groups will continue their existing role and responsibilities, but will use the Strategy as a framework and guideline to assist their activities.
- The community will share the cost of conservation measures where it shares in the benefits.

## 2.0 PLANNING CONTEXT

### 2.1 Government Policies

A number of established government policies are relevant to the important regional issues, or need to be taken into account in addressing those issues. There is a need to identify the relevant policies and highlight where they may complement the regional issues and desired outcomes, and to indicate where there may be a potential conflict. It is the role of the Strategy to assess the apparent conflicts and to draw out a specific strategy that best resolves the matter without compromising the intent or objectives of the policy.



The Warren-Blackwood Rural Strategy draws upon and links in with a number of other State-level strategies affecting the region.

### 2.2 State Sustainability Strategy

After exhaustive public consultation, the State Government released its concept for sustainability in September 2003. *Hope for the Future: The Western Australian State Sustainability Strategy* defined *sustainability* as:

*“ . . . . meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity”.*

The sustainability framework consists of:

- seven foundation principles and four process principles that reflect the core values of sustainability;
- six visions for Western Australia’s sustainability; and
- six goals for government and 42 priority areas for action.

The six goal are:

- Sustainability and governance
- Contributing to global sustainability
- Sustainable use of natural resources
- Sustainability and settlements
- Sustainability and community
- Sustainability and business

Some of the priority areas for action relevant to this Strategy include:

- Maintaining our biodiversity
- Sustainable agriculture
- Sustainable forestry and plantations
- Sustainable tourism
- Sustainable coastal and marine environments

### 2.3 State Planning Strategy

WAPC developed the *State Planning Strategy* in accordance with the following vision:

*“The State Planning Strategy will significantly contribute to the quality of life of all Western Australians in the years to 2029, by using the land use planning system to facilitate and contribute to regional wealth; the conservation and enhancement of the environment; and the building of dynamic and safe communities which nurture human activity.”*

Under the broad objective of Securing a High Quality Environment, the following four key strategies are underpinned by a number of supporting actions for implementation:

- Prevent further loss in biodiversity;
- Ensure that water resources are conserved and their quality protected;
- Ensure that land and soil are safeguarded and that degradation does not occur; and
- Promote planning, management and protection of resources.

More specifically for the South-West Region, there is a range of supporting actions for the following four key strategies:

- Protect natural resources from incompatible development;
- Implement landcare programs such as Integrated Catchment Management to reduce soil and river salinity and pollution of water resources;
- Protect sensitive environmental areas and cultural heritage; and
- Promote opportunities for economic growth.



## 2.4 Regional Development Policy

The regional policy statement for Western Australia *Regional Western Australia - A Better Place to Live* complements the State Planning Strategy. Its vision is:

*“Western Australian regional communities will be healthy, safe and enjoyable places to live and work, offering expanded and improved educational and employment opportunities for their residents and a high standard of services.*

*Regions will have robust, vibrant economies based on the sustainable use of economic, social and environmental resources and a strong partnership approach within and between regional communities, industry and Government.”*

It lists the following four regional development policy goals, which are supported by a range of strategies and targets:

- Governance — Understanding, partnering and delivering better outcomes for regions;
- Economic — Growing a diversified economy;
- Social — Educated, healthy, safe and supportive communities; and
- Environment — Valuing and protecting the environment.

## 2.5 Statement of Planning Policy No. 2.5

As a result of increasing concern about planning, development and land management pressures in rural areas, the Government reviewed its past policies and produced a new policy (*Statement of Planning Policy No. 2.5 — Agricultural and Rural Land Use Planning*) under Section 5AA of the *Town Planning and Development Act 1928*. The Act requires that local government must have due regard to this policy in the preparation or amendment of town planning schemes, strategies and policies and when providing comment and advice on planning applications that deal with rural land. In conjunction with *Statement of Planning Policy No. 2.5 — Agricultural and Rural Land Use Planning*, WAPC’s *Development Control Policy No. DC 3.4 — Subdivision of Rural Land* was also reviewed and upgraded to provide the framework for the subdivision of rural land to achieve the four key objectives of the statement of planning policy.

In its background and purpose section, it makes the following statement:

*“The Western Australian Government considers that productive agricultural land is a finite national and State resource that must be conserved and managed for the longer term.*

*As a general objective, the exercise of planning powers should be used to protect such land from those developments, activities or influences that lead to its alienation or diminished productivity, while always accepting the need for land for expanding urban areas and other uses of State significance.”*

Under policy objectives, it states:

The four key objectives of the policy are-

1. Protect agricultural land resources wherever possible by-
  - a. discouraging land uses unrelated to agriculture from locating on agricultural land;
  - b. minimising the ad hoc fragmentation of rural land; and
  - c. improving resource and investment security for agricultural and allied industry production.
2. Plan and provide for rural settlement where it can-
  - a. benefit and support existing communities; and
  - b. have access to appropriate community services and infrastructure.
3. Minimise the potential for land use conflict by-
  - a. providing adequate separation distance between potential conflicting land uses;
  - b. introducing management requirements that protect existing agricultural land uses;
  - c. identify areas that are suitable and capable for intensive agricultural pursuits as agricultural priority areas; and
  - d. avoid locating new rural settlements in areas that are likely to create conflict with established or proposed agricultural priority areas.
4. Carefully manage natural resources by-
  - a. discouraging development and/or subdivision that may result in land or environmental degradation;
  - b. integrating land, catchment and water resource management requirements with land use planning controls;
  - c. assisting in the wise use of resources including energy, minerals and basic raw materials;
  - d. preventing land and environmental degradation during the extraction of minerals and basic raw materials; and
  - e. incorporating land management standards and sequential land use change in the land use planning and development process.

## 2.6 Natural Resources Management Policy

WAPC has prepared *Statement of Planning Policy No. 2 Environment and Natural Resources (SPP 2)*, which has as its three objectives, to:

- integrate environment and natural resources management with broader land use planning and decision-making;
- protect, conserve and enhance the natural environment; and
- promote and assist in the wise and sustainable use and management of natural resources.

Policy measures that should be included or considered in planning strategies, schemes and decision-making are set out under 10 specific headings, including:

- Water resources
- Soil and land quality
- Biodiversity
- Agricultural land and rangelands
- Landscapes

## 2.7 Natural Heritage Trust Objectives

The Natural Heritage Trust was set up by the Commonwealth Government in 1997 “to help restore and conserve Australia’s environment and natural resources”. In 2001, the Government announced additional funding which extended the project for five years.

The Natural Heritage Trust areas of activity are:

- protecting and restoring the habitat of threatened species, threatened ecological communities and migratory birds;
- reversing the long-term decline in the extent and quality of Australia’s native vegetation;
- protecting and restoring significant freshwater, marine and estuarine ecosystems;
- preventing or controlling the introduction and spread of feral animals, aquatic pests, weeds and other biological threats to biodiversity;
- establishing and effectively managing a comprehensive, adequate and representative system of protected areas;



Community groups and landholders can contribute greatly to environmental rehabilitation using resources and guidelines such as this poster, produced by the Water and Rivers Commission with support from the Natural Heritage Trust. (By courtesy Water and Rivers Commission)



- improving the condition of natural resources that underpins the sustainability and productivity of resource based industries;
- securing access to natural resources for productive purposes;
- encouraging the development of sustainable and profitable management systems for application by landholders and other natural resources managers and users;
- providing land-holders, community groups and other natural resources managers with understanding and skills to contribute to biodiversity conservation and sustainable natural resources management; and
- establishing institutional and organisational frameworks that promote conservation and ecologically sustainable use and management of natural resources.

As a part of this project, application was made for Natural Heritage Trust funding to assist with the preparation of the four local planning strategies to incorporate and implement the principles and strategies of the Strategy, especially in regard to natural resources management and the objectives of the Natural Heritage Trust. A total of \$50,000 was granted, which has been used solely by the four local governments for the preparation of the rural component of their local planning strategies.

## 2.8 South West Catchments Council Strategy

The South West Catchments Council has prepared the *South West Regional Strategy for Natural Resource Management* as the first phase of a project to provide strategic direction and co-ordination of natural resources management within the regional catchments and assist in funding applications to the Natural Heritage Trust. The strategy was prepared on the basis of input from catchment and community groups and was co-ordinated by the South West Catchments Council. The second phase will be to develop business plans that identify priorities for implementation according to available resources, partners and opportunities.

That strategy focused on five general goals, each of which is supported by a range of objectives, strategies and actions:

- Conservation of natural resources
- Sustainable use of natural resources
- Integrated planning and management
- Research and monitoring
- Community development

That strategy was underpinned by four technical reports on:

- *Waterways and Wetlands in the South West*
- *Bush and Biodiversity in the South West*
- *Profile of NRM Issues in the South West*
- *Coastal Environs in the South West*

Each of those technical reports has provided extensive information and data on the state of the respective resources and their needs for conservation. Along with the strategy, they form the basis of the natural resources management component of this Strategy.

## 2.9 State Salinity Strategy

The State Salinity Council prepared the *State Salinity Strategy* to address the rapid expansion of salinity in agricultural areas of the State and its potentially devastating environmental, economic and social effects. A key statement in the strategy says:

*“The community needs to consider where it would be possible and/or economic to control salinity in the longer term, and for any given area whether we should try to reverse salinity (recovery), stop it from getting worse (containment), or learn to live with and manage it (adaptation)”.*

Its goals are:

- *to reduce the rate of degradation of agricultural and public land, and where practical recover, rehabilitate or manage salt-affected land;*
- *to protect and restore key water resources to ensure salinity levels are kept to a level that permits safe, potable water supplies in perpetuity;*
- *to protect and restore high value wetlands and natural vegetation, and maintain natural (biological and physical) diversity within the south-west region of Western Australia;*
- *to provide communities with the capacity to address salinity issues and to manage the changes brought about by salinity; and*
- *to protect infrastructure affected by salinity.*

Further chapters in the report outline strategic approach to addressing salinity, tools to manage salinity, community action to address salinity and monitoring and evaluation.



## 2.10 Blackwood Basin Group Strategies

The Blackwood Basin Group, and its predecessor the Blackwood Catchment Co-ordinating Group, have produced several documents addressing natural resources management and landcare in the Blackwood Basin, including *Strategic Directions for Land Conservation in the Blackwood Catchment, and Business Plan — 2000 and Beyond*.

The group has as a mission statement:

*“To inspire the sustainable community management of the Blackwood Basin’s resources for the benefit of current and future generations through coordination and education”.*

Its purpose and activities are described as:

*“ . . . . a community operated organisation that delivers assistance to achieve sustainable land management across the Blackwood Basin. The group specialises in accelerating on-ground action through coordination of natural resources management and education”.*

The Blackwood community has identified the following priority issues:

- Rising water tables and salinity
- Loss of remnant vegetation and biodiversity
- Degraded streams and eutrophication
- Waterlogging, inundation and flooding
- Water and wind erosion
- Spread of environmental weeds
- Increasing soil acidity

The basin has been divided into nine Landcare zones, three of which cover the basin area within the Warren-Blackwood Region. Zone action plans are in various stages of preparation and implementation for those three zones.

## 2.11 Other Resource-Protection Initiatives

Apart from the Blackwood Basin, the Warren-Blackwood Region also contains a large portion of the Warren Basin and a small portion of the Leschenault (Collie) Basin. Both areas have developing catchment management groups, which will take on a similar role to the Blackwood Basin Group. In addition, there is a number of Land Conservation District Committees (LDCs), Landcare groups, environmental groups and community groups which undertake various natural resources management initiatives that deserve due acknowledgement and support in this Strategy and local planning strategies.

## 2.12 Local Planning Strategies

Local planning strategies are now a required component of a town planning scheme, replacing the former scheme report. Their purpose is to profile the district, set the future direction and outline the rationale for the scheme zonings and provisions. In many cases, especially with natural resources management, the strategies and actions for implementation are best carried out voluntarily through community or stakeholder co-operation. However, in some instances, the local government may determine that there is a need for some legislative backing to carry out the strategies and actions necessary to achieve natural resources management objectives, in which case, formal scheme provisions would be required. Achieving the appropriate balance between this, the community position and State policy requirements is the role of the respective local government in preparing its scheme documents.





### 3.0 EXISTING RESOURCES AND IMPLICATIONS

#### 3.1 Physical Description

##### Geology and Prospectivity

The underlying geology and the geological history during the past 3,500,000,000 years of the earth’s development are the major controlling factors of the:

- physiography
- natural surface drainage development and evolution
- groundwater resources
- soils
- actual and potential mineral and petroleum resources

Because rock is the source material for the soils, it is a very significant factor in the development of the natural vegetation.

Table 1 contains a generalised description of the geology, mineral resources and prospectivity of the region.

##### Physiography and Landscape

The Warren-Blackwood Region is divided into three physiographic/landscape areas (see Map 3).

*The Scott Coastal Plain* — generally a low-lying, swampy plain featuring windswept parabolic dunes. In the east, limestone and granite headlands protect sandy beaches, which are punctuated by rivers and estuaries. In the west, long beaches with steep reflective faces are backed by parabolic Holocene dunes and some mobile Holocene sandsheets. Inland in the west, much of the flat swampy plain has been cleared for agriculture. Remnants of sub-coastal dunes occur inland as do granite outcrops, which appear as large domes often dominating the surrounding landscape. Vegetation generally consists of eucalypts, peppermints and wattles on the slopes, and heath and sedge in the lower areas. Soils are basically sandy, generally deep dry sands with winter waterlogged sandy duplex soils near the Scott River. Some sand deposits contain economic concentrations of titanium minerals.

*The Darling Plateau* — an undulating, dissected peneplain with gravelly, pale orange soils cloaked by extensive areas of tall forest. Deep, steeply sided valleys occur throughout this area, occasionally punctuated by impressive dome-shaped granite outcrops. In the west, the landscape becomes more distinctly undulating with granite boulders and steep-sided valleys and is substantially influenced

**Table 1 — Geology and Mineral Resources**

GEOLOGICAL UNIT OR GROUPING (ROCK TYPES)	LOCATION	MINERALS OR ROCK EXTRACTED	POSSIBLE ADDITIONAL MINERALS OR ROCKS OR ADDITIONAL OCCURRENCES	PLANNING UNITS
Yilgarn Craton. (Granite, gneiss, dolerite metasediment)	East of Darling Fault, north of Pemberton.	Greenbushes pegmatite. (Tin, tantalum, lithium).	Gold, mica, pegmatite minerals, crushed rock, monumental stone.	BR2, BR3, CR1, DR2, WR1, WR2, WR3, SC2
Albany-Frazer Orogen. (Granite, gneiss)	East of Darling Fault, south of Pemberton.	—	Crushed rock, monumental stone.	WR1, SC1, FR1, FR2
Perth Basin. (Sandstone, shale, siltstone, coal)	West of Darling Fault, isolated patches near Boyup Brook.	Gravel, sand.	Gravel, sand, coal, oil, gas.	BR2, CR1, DR1
Coastal sediments. (Sand, clay, lime sand, limestone)	Within 10km of coast.	Titanium minerals, limestone.	Titanium minerals, limestone, limesand, sand.	BR1, DR1, WR1, SC1
Regolith. (Ironstone, clay, weathered rock)	Veneer over whole surface except coastal sediments.	Ironstone gravel, kaolin clay.	Ironstone gravel, kaolin clay, bauxite.	BR2, BR3, CR1, DR1, DR2, WR1, WR2, WR3, SC1, SC2, FR1, FR2



by the winding course of the Blackwood River. Soils are predominantly gravels with occasional block laterite outcrops and some elevated areas of sands and sandy loams. In the deeper valleys, the



The steep-sided Blackwood Valley provides contrasting landscapes and views.

soils are heavier alluvials. Around Manjimup-Pemberton, there are considerable areas of heavy red loams, or karri loams, which are of significant horticultural value. The Wheatbelt Plateau displays a wide, open landscape of long views that are dominated by agricultural use. Extensive clearing has been undertaken which accentuates the level to gently undulating topography. Scattered vegetation occurs on the fringes of broad fields or is clustered in groups around the granite outcrops that occur. The dominant vegetation type is tall jarrah/marri forests with banksia and blackboy understorey. On the Pemberton slopes, high karri forest with jarrah and marri dominates, interrupted by low, broad swampy valleys and granite domes.

**The Blackwood Plateau** — gently undulating with a low, hilly relief, and has broad depressions with swamps, but is at a lower elevation than the Darling Plateau. Soils are characterised by laterite, gravels and grey sand on upper areas and sandy, yellow soils on slopes and river terraces.

A regional-scale landscape assessment for the whole of the State was published in *Reading the Remote — Landscape Characters of Western Australia*. The report addressed the Warren-Blackwood Region, identifying landscape character types, visual quality classification and provided an aesthetic character summary, which have been used in the Strategy.

## Climate

The climate of the Warren-Blackwood Region is a warm temperate Mediterranean type with distinct seasons characterised by cool, wet winters and warm to hot, dry summers. Average temperatures in the region are moderate and generally higher in the north-east of the region and become progressively cooler towards the southern coastline.

Boyup Brook temperatures range from a minimum of 4.3°C in winter to more than 30°C during summer, whereas in Manjimup, it ranges from 5.8°C during winter to 26.6°C in summer.

Rainfall is generally high in the winter months. The southern portion of the region receives more rainfall and generally has a longer wet season than the northern portion. It ranges from 1,250mm per annum in the Northcliffe-Walpole area to 550mm per annum in the East Boyup Brook area.

The Darling Plateau dominates the landscape of the Warren-Blackwood Region, and greatly influences localised climatic conditions, particularly rainfall, and vegetation communities.

## Trends and Implications

- The predicted greenhouse impacts are likely to see a reduction in annual rainfall, temperature rises and other climatic changes, with a significant rainfall decline already apparent over the past 30 years. This could have serious implications for agriculture in the region, with reduced run-off, significantly less water availability and a likely further deterioration in stream water quality.
- Tall forests, especially karri, are landscape character icons of the State worthy of special landscape protection. Freehold properties adjoining national parks and State forests, and in particular those which occur as isolated pockets within the national parks or State forests can, however, have significant impacts on the visual quality, conservation values and management of those areas.
- The deep and steeply sided Blackwood Valley is also a landscape character icon with its long valley views and intermix of farming and vegetated areas, especially along the tourism drive from Nannup towards Balingup and in the vicinity of Bridgetown.
- The coastal fringe has special landscape characteristics (e.g. the dramatic landforms and the diversity of the heath and scrub) which are very fragile and exposed to the forces of the Southern Ocean storms and winds, requiring special protection for the freehold land in that area.
- Tree plantations can add variety to the colours, textures and vistas in the rural landscape, but they can also detract from the experience where they enclose a previously attractive, open landscape or where they block views to significant landscape features.

**Table 2 — Population by Local Government Area**

LGA/LOCALITY	CENSUS 1976	CENSUS 1996	AAGR* 1976-1996 %	CENSUS 2001	AAGR 1996-2001 %
<b>Manjimup (LGA)</b>	<b>8,670</b>	<b>10,093</b>	<b>0.82</b>	<b>10,030</b>	<b>-0.12</b>
Shire Rural	3,694	4,133	0.55	4,219	0.41
Manjimup (Urban Centre)	3,893	4,390	0.64	4,402	0.05
Pemberton (Locality)	810	994	1.13	948	-0.92
Northcliffe (Locality)	NA**	239	—	150	-7.45
Walpole (Locality)	273	337	1.17	311	-1.54
<b>Bridgetown-Greenbushes (LGA)</b>	<b>2,890</b>	<b>3,904</b>	<b>1.75</b>	<b>3,935</b>	<b>0.15</b>
Shire Rural	1,260	1,378	0.47	1,461	1.20
Bridgetown (Urban Centre)	1,386	2,123	2.66	2,094	-0.27
Greenbushes (Locality)	244	403	3.26	380	-1.14
<b>Nannup (LGA)</b>	<b>1,020</b>	<b>1,144</b>	<b>0.61</b>	<b>1,183</b>	<b>0.68</b>
Shire Rural	509	623	1.12	652	0.93
Nannup (Locality)	511	521	0.10	531	0.38
<b>Boyup Brook (LGA)</b>	<b>1,920</b>	<b>1,604</b>	<b>-0.82</b>	<b>1,558</b>	<b>-0.57</b>
Shire Rural	1,278	1,051	-0.89	1,010	-0.78
Boyup Brook (Locality)	642	553	-0.69	548	-0.18
<b>Warren-Blackwood Region Total</b>	<b>14,500</b>	<b>16,745</b>	<b>0.77</b>	<b>16,706</b>	<b>-0.05</b>
Rural	6,741	7,185	0.33	7,342	0.43
Urban	7,759	9,560	1.16	9,364	-0.41

Source: Australian Bureau of Statistics, 1983, 1998 and 2002

\* Annual average growth rate (%)

\*\* Northcliffe included in Manjimup Shire Rural for 1976

### 3.2 Demographics

The 2001 census figures indicate a mixture of outcomes for the four local government areas. As shown in Table 2, the total Warren-Blackwood Region population has declined marginally over the past five years, in comparison to a longer-term trend of small to moderate growth. There has been a small decrease in urban population, but this has been mostly offset by continued rural population growth. However, those trends have not been consistent across the region.

In the Manjimup Shire, there was a slight overall population decline after a previous moderate growth rate, with the rural areas maintaining population growth. Manjimup town's growth slowed considerably, but the other three towns dropped in population, significantly so in Northcliffe. Bridgetown-Greenbushes Shire overall had a reduced growth rate, but the rural growth rate actually increased in that period. In contrast, the large growth rates of the towns of Bridgetown and Greenbushes actually became small population losses. The Nannup Shire has maintained its small growth rate in the rural and urban areas. Likewise

the Boyup Brook Shire has maintained a small population decline, but the rate of loss in the town has slowed.

#### Trends and Implications

- The population decline in the Boyup Brook Shire has been in evidence for about 40 years, is the result of a number of socioeconomic factors and is a trend typical of most Wheatbelt local government areas.
- The social changes brought about by the *Forest Management Plan 2004-2013* /restrictions on native forest logging will have a significant effect on population levels, especially in the Shire of Manjimup and, to a lesser extent, in the Shire of Nannup. Some of those effects are now becoming apparent, but the full impacts will not be known for several years.
- Various government initiatives have been promoted to offset those impacts, but their full extent and possible population implications are not known either, so it is difficult to make any accurate medium to longer-term projections.
- Apart from the changes in total population numbers arising from these actions, there also



- may be significant age group, occupation, industry and socioeconomic implications arising from any population replacement.
- The concept of new jobs in the plantation timber industry replacing those of native forest timber workers may have significant implications due to the different location of the two resources, which could require a substantial population relocation.
- Changes in rural economics, such as falling commodity prices, rising production costs, rising labour costs, technology changes and international trade agreements and subsidies, have influenced a rural downturn and population loss over the past 25 years in broadacre grazing and cropping areas. There appears little prospect of change in this category.
- A greater concentration on diversification and intensification of rural production may help to offset the changes in the timber industry and the decline in the broadacre farming sector.
- Unforeseen major project developments can have a substantial impact on the local population, not only from the additional workforce, but also from the families of the new workforce and the flow-on effects throughout the community.
- Although it is hard to predict numerically, there is likely to be continued interest in the lifestyle opportunities afforded by the region as an alternative to city living or the highly popular Cape to Cape Region.

### 3.3 Urban Development

This aspect of regional planning and development was covered in the *Warren-Blackwood Regional Planning Strategy* and it is not intended that it be readdressed in this Strategy. However, some of the impacts of urban development have implications for rural areas, which need to be considered here. The *Warren-Blackwood Land Release Plan 2001 to 2005* was prepared “to advise government on land use planning and the co-ordination of services and infrastructure provision” requirements in the region.

#### Trends and Implications

- The general lack of reticulated sewerage facilities in many of the towns and the relatively high cost of servicing (relative to the ultimate market value of the resultant lot) cause many developers and lot purchasers to prefer rural-residential developments over the traditional residential lots.
- Expanding non-rural areas, especially rural-residential subdivisions, encroach on surrounding prime agricultural lands (especially near Manjimup) and affect attractive rural and natural landscapes (especially near Bridgetown).

### 3.4 Regional Economy

There is a diverse regional economy, with significant contributions from four broad product areas — agriculture, forestry, mining and tourism.

#### Agriculture

Out of the total of 1.4 million hectares in the region, the CALM estate and other reserves cover 67 per cent, leaving approximately 345,000 ha in agricultural holdings. Boyup Brook is the only local government area with less than 50 per cent of its land area in reserves. From the land in agricultural production, the gross value of agricultural products for the region in 2000 was \$187 million, an increase of 14.7 per cent since 1996. As a comparison, the total State gross value of agricultural production for 2000 was \$4,736,549,904.

Each of the four local government areas in the region has a different complexion in its agricultural economic base, with annual and perennial horticulture representing more than half the gross value of agricultural production in Manjimup Shire, Bridgetown-Greenbushes being predominantly beef production, Boyup Brook having mostly wool and sheepmeat, and Nannup focusing more on beef and potato production.

#### Forestry

Native forest timber production has always been a major component of the local economy and employment base. Agreed production levels under the *Forest Management Plan 2004-2013* have been set at 54,000 cubic metres per annum of first and second-grade karri logs and 131,000 cubic metres per annum of first and second-grade jarrah logs, for the next 10 years. The majority of the timber produced in this State, particularly karri, comes from the Warren-Blackwood Region.

As the native forest production is reduced, greater emphasis is likely to be focused on plantation timber production. It is difficult to get accurate current forecasts on the plantation industry, but previously it had been suggested that there would be hardwood plantings of 200,000ha across the South-West/Great Southern Regions by 2008. Associated with this, it was estimated that 1,250 direct permanent jobs and 1,500 indirect positions

would be created, with an economic benefit of about \$570 million per annum. Hardwood harvesting is likely to average about 20,000ha per annum for woodchip production. The Forest Products Commission has about 10,000ha of softwood plantations, with private plantations covering a further 15,000 to 20,000ha. The Forest Products Commission is replanting its plantations at a rate of about 350ha per annum, but private softwood plantations are not being replanted. This is leading to a decline in softwood production. Softwood plantations currently produce about 150,000 cubic metres per annum of sawlogs and a similar volume of woodchips.

### Mining

Mining activity is restricted mostly to two product groups and two mining areas. Production and processing development saw the Greenbushes mines produce tantalite, spodumene and tin worth \$304 million in the two years to 2002. Heavy mineral sands worth approximately \$20 million were mined at Jangardup in 2002. As this source is depleted, a



*Mineral sand mining provides an opportunity for sequential land uses, whereby land is rehabilitated to its original state or a condition suitable for subsequent productive use after the valuable mineral deposits have been recovered.*

*(Photo by courtesy Cable Sands)*

new mine west of Lake Jasper is due to be developed, with production worth about \$300 million over the life of the operation. Further proven mineral sands deposits exist across parts of the Scott Coastal Plain agricultural area and these are likely to be mined in the future.

Minor deposits of kaolin (Bridgetown-Greenbushes Shire) and lime sands (Manjimup Shire) have been mined but production has now been cut back. There are known deposits of coal and bauxite in the Wilga Basin north of Boyup Brook, but there are no plans for these to be mined at this stage.

### Tourism

The Warren-Blackwood Region is one of the State's primary tourism zones due to its varied topography and landscapes, extensive forests, remote coastline, mild climate, and cultural attractions. The provision of farm stays and chalets in rural areas has become one of the largest tourism growth industries in Australia. However, it has proved difficult to get accurate data on the scale of the local rural tourism industry in terms of number of units, growth rate, employment or economic value.

### Trends and Implications

- Agricultural production is continually expanding, and the availability of further quality soils and water supplies indicates considerable future opportunities in agriculture.
- Opportunities for expansion of the local horticultural market is only marginal, but the export market potential, especially in South-East Asia, is significant.
- The extensive areas of broadacre cropping and grazing offer opportunities for intensification of land uses and diversification of production, providing greater economic security for the producer and employment opportunities for the community.
- Protection of the productive capacity of the agricultural land against inappropriate subdivision, zoning, development and uses is critical.
- Protection and management of the land and water resources are also critical.
- Horticultural developments pose a more significant environmental threat to adjacent waterways and wetlands, with the increased soil disturbance and greater fertiliser and chemical use leading to potentially greater erosion, sedimentation and nutrient transport, but the far greater level of returns provides opportunities for achieving more sophisticated levels of land management and environmental protection.
- The inevitable socioeconomic impacts of the cutbacks on native forest logging can only be partially offset by expansion of plantation forestry and the horticultural industry, due to the different skills required, generally different location, different employers, disruption to community structure, and different infrastructure needs.
- The increased production and diversification offer greater opportunities for downstream processing and value-adding in the region.



- Tree plantations present various economic, environmental and employment opportunities, but agroforestry appears to offer far greater sustainable benefits for the region and the community.
- Current and future mining activity at Greenbushes is unlikely to have significant impact on freehold agricultural land or the environment, subject to appropriate rehabilitation.
- Possible future sandmining on agricultural land on Scott Coastal Plain offers opportunities for sequential land uses, with mining being followed by rehabilitation of the land to its previous ecological status or to a state suitable for ongoing agricultural production, or a combination of the two.
- Access to the limited deposits of lime sands in the region is of great importance to sustainable agricultural production, land management and landcare.
- Low-key, farm-based tourism facilities offer the benefits of diversified economic and employment opportunities for the region and the landholders, but great care must be taken to avoid conflicts with productive agricultural activities.

### 3.5 Land Resources

Out of a regional land area of 1,412,000 ha, the total area of private freehold land is approximately 434,000 ha, or just over 30 per cent. The remainder of the land is within the CALM estate or other reserved land or Crown land. By Local Government area, Boyup Brook has 68.3 per cent private freehold land, Bridgetown-Greenbushes 47.0 per cent, Manjimup 17.3 per cent and Nannup 16.7 per cent.

The land resource has been assessed in terms of land capability, with particular attention to capability for annual and general horticulture. This assessment identified those land areas where more than 70 per cent of the land was either Class 1, 2 or 3 for annual and/or perennial horticulture. Map 4 indicates that there is a very high concentration of such soil capabilities around Manjimup and Pemberton, with moderate to high concentrations around Boyup Brook, Bridgetown, Greenbushes, Nannup and Northcliffe. The Scott Coastal Plain showed up poorly in this regard due to winter waterlogging, but when assessed in terms of summertime only horticulture, there was a very high concentration of high capability. The main constraints to land capability in the region include

salinity, steep slopes, erosion potential, nutrient export potential, waterlogging, acidification and climate.

The Blackwood Basin Group has identified the priority landcare issues within the Lower Blackwood as being eutrophication, siltation, river foreshore protection, weeds in native forests, and landscape scenic values. In the Middle Blackwood, the priority issues are listed as dryland salinity, wind and water erosion, siltation and eutrophication, remnant vegetation decline, stream



*Increasing salinity levels in streams pose threats to existing farm dams, potential farm water supplies, agricultural productivity generally and adjacent biodiversity values.*

degradation, and waterlogging. On the Scott Coastal Plain, general soil degradation potential is seen as a major issue.

For the Warren area (i.e. Donnelly, Warren, Shannon and coastal basins), the principal land care issues include soil salinity, waterlogging, erosion, fire risk and water quality and quantity, as well as protection of prime agricultural land, soil structure decline and soil acidification.

Another significant emerging issue is the introduction of genetically modified organisms and the potential for them to spread to adjoining crops and threaten local and export markets. Little information on this topic is currently available and it is difficult to address it rationally in the planning context at this stage.

### Trends and Implications

- It is obvious that past land management practices contributed to large-scale land degradation and a continuation on that path would have led to the demise of much of the productive land in the region, and along with it the waterways and wetlands, biodiversity and, ultimately, the livelihoods of the majority of the community. Much of this was the result of ignorance, and responsibility must be accepted

by all sectors of the community — rural and urban, country and city.

- Land management practices and actions have a direct impact on the surrounding vegetation and biodiversity values and the downstream waterways and wetlands.
- The majority of agricultural producers recognise the importance of sustainability and the protection of their environment and are making strong efforts to reverse the trends of degradation.
- The regional community is generally very understanding and supportive and actively involved in reversing the trends of the past.
- Information, education, incentives, equity and support are key ingredients to a partnership in landcare.
- Agricultural productivity depends even more on availability of sufficient quantities of good-quality water than it does on having good-quality soils available.
- Sustainable agricultural productivity is essential for the regional economy and community sustainability.
- Changes and intensification of rural land uses render the necessary changes in land management practices more feasible and affordable for landholders.

### 3.6 Water Resources

The region has been divided into six river basins for resource evaluation and management purposes. These basins are the Blackwood, Donnelly, Warren, Frankland, Collie, and a south coast grouping of a number of medium to small rivers, including the Shannon, Deep and Gardner. Each basin has then been divided into a series of sub-catchments for more detailed evaluation purposes. Those basins and sub-catchments are shown on Map 5.

The **Blackwood Basin** is the largest in the south-west of the State, stretching from east of Kukerin to the coast at Augusta, and covering the vast majority of the Shires of Nannup, Bridgetown-Greenbushes and Boyup Brook. With the majority of the middle to upper basin having been cleared and used for agriculture over a long period, waterway salinity levels have become brackish to saline in this area, but the water quality does improve as the river passes down through the more forested areas, where it is diluted by the inflow of fresher side streams (including the Yarragadee Aquifer). Much of the riparian environment is also degraded (moderately to severely) in the middle to upper basin.

Similarly, the **Warren Basin** is largely cleared and suffers from riparian degradation in the upper sections and this is reflected in the rising salinity levels and other water-quality decline. In the middle to lower sections, the riparian zone and adjacent area are mostly forested, which has a favourable impact on the quality of the water in the river. The eastern portion of the basin extends into adjoining parts of the Great Southern Region and the remainder is within the Shire of Manjimup.

The **Frankland Basin** also arises in the Great Southern Region and in its lower section forms the border between the Shires of Manjimup and Denmark. The riparian environment on the western bank is mostly in good condition. Water in both rivers is marginal to saline in the upper, cleared areas, but improves to marginal with the fresh stream inflows further downstream.

The **Donnelly Basin** is within the CALM estate, with the exception of the very upper section, which largely has been cleared for grazing, and the Manjimup Brook tributary, which has also been extensively cleared for horticultural and grazing activity. Water quality in the Donnelly River is fresh, but Manjimup Brook is marginal.

The **Collie Basin** extends into the northern portion of the Boyup Brook Shire. Although there are considerable concerns with rising salinity levels in the basin, and large sections of the Collie River South branch catchment have been cleared for agriculture, the water quality remains fresh.

In the **South Coast Basin**, the Deep River is one of the very few rivers in the State that remains in almost pristine condition. Similarly, the Shannon River catchment is almost entirely within national park and maintains fresh quality. The Gardner River is partially cleared in the upper section, but also remains fresh.

Each of the basins in the region has been broken down into sub-catchments representing significant tributary rivers and streams. Those sub-catchments have then been assessed in terms of water quality, mean annual flow, current yield and estimated environmental flow requirements to give an indication of the amount of water that may still be available for capture for agricultural use or diverted for other purposes. The DoE is responsible for water allocation and water resource management and will facilitate a program of community-based water allocation management planning to ensure fair and equitable allocation of available water and maximise the sustainable productive opportunities from that resource.

The only significant groundwater area in the region underlies the Scott Coastal Plain and Blackwood Plateau, to the west of the Darling Scarp. There is a complex of shallow and deep aquifers, dominated by the Yarragadee. It has been assumed by many that there are vast quantities of high-quality water available for extraction, but little research has been carried out into factors such as the hydrogeological structure and extent, recharge and discharge points and volumes, environmental requirements or sustainable yield. However, it is known that a number of groundwater-dependent environments rely on discharge from these aquifers, including the Leederville and Yarragadee (e.g. the Blackwood River receives high-quality fresh water from the Yarragadee and St John's Brook receives discharge from the Leederville). A number of local landowners on the Scott Coastal Plain have carried out various irrigated agricultural developments using licences to draw large quantities of high quality water from these aquifers, and there is scope for expansion with significant economic returns if further water supplies can be made available. As part of an assessment aimed at securing future water supply needs for the State, DoE is evaluating a number of factors in regard to these aquifers, including their extent, recharge and discharge rates, environmental requirements and potential sustainable yield.

There are extensive wetland suites in the region, with most having a reasonable degree of protection from inappropriate land uses and land management practices due to their location within the CALM estate. Two that are of special significance, but which have freehold land in close proximity are the Gingilup Swamp (national significance) on the Scott Coastal Plain and the Lake Muir-Unicup suite (Ramsar listed) in the far east of the Manjimup Shire. The current status, known condition and other relevant details of all wetlands in the region



Many of the river basins and stream catchments have been partially cleared, particularly in the upper sections, but the Deep River remains in near pristine condition throughout its catchment.

(Photo by courtesy Nicci Tsernjavski, CALM)

are summarised in *Waterways and Wetlands in the South West*. Considerable research has been undertaken and base data made available to assist in future decision-making.

The most significant issues associated with waterways, wetlands and water resources in the region are stream salinisation, nutrient transport and eutrophication, erosion and siltation, pollution (chemical, biological and litter), degradation of the riparian environment, weeds in waterways, land drainage, water quality and water availability.

Salinity is now being addressed seriously, particularly in the Collie and Warren Basins, which have been declared as recovery catchments. The DoE has worked together with community-based recovery teams to prepare strategic action plans for salinity management in each basin. These plans have established as targets a reduction in river salinity levels back to 500 milligrams per litre total dissolved salts by 2015 for the Collie and 2030 for the Warren. These plans have envisaged varying combinations of managing groundwater recharge through strategic planting of deep-rooted perennials and engineering options involving drainage and pumping of groundwater, according to the particular circumstances. The plans have stressed that these actions will not be forced on landholders, but rather will be carried out in partnership and through incentives and shared responsibilities.

As a result of recent changes in water law (*Rights in Water and Irrigation Act 1914*), property rights in water have been established in the Warren and Donnelly river systems. This means there is now a separation of water property rights from the land title, with a clear specification in terms of ownership, volume, reliability and tradability. However, this property right is expressed only as a licence to take water, from the DOE. Clearly specified on the licence is the annual water entitlement in kilolitres per annum. A portion of the annual water entitlement, or the licence itself, can be traded separately from the land title.

In using the Strategy to guide rural planning, it is important to realise the bearing this has on creating opportunities of buying in water to secure development or the restrictions that may result in properties not having water tied to land title. A licence to take water is by proclamation and control of watercourses. As indicated, only the Warren and Donnelly river systems have been proclaimed.

## Trends and Implications

- Appropriate land management is the most important factor in maintaining water quality in waterways and wetlands.
- Declining water quality adversely affects a wide range of community values and opportunities, including agricultural production, riparian vegetation, visual landscape, community facilities and infrastructure and tourism.
- Given the apparent scale of the identified aquifer systems, it is appropriate that there is an early full assessment of their potential as a State water resource, where that resource can be used, and how it can be shared among competing needs.
- The full extent of the environmental dependency on discharge from these aquifers must be considered and until that is known, any estimated sustainable yield from the systems should be assessed conservatively.
- The Scott Coastal Plain appears to have significant potential for agricultural expansion in a range of product areas based on irrigation waters drawn from these aquifers, and any access to the water resource should take into account the potential economic, social and ecological implications for the region and the State.
- The riparian environment plays a vital role in maintaining a waterway's functions and qualities and as a filter to the adjacent land uses, as well as playing a recreational and educational role for the community.
- The regional community is generally very supportive and strongly committed to waterways and wetlands care.
- Information, education, incentives, equity and support are key ingredients for a partnership in river care.
- The waterways and wetlands conservation values identified now need to be prioritised and community management requirements established.
- Community water allocation management planning needs to be acknowledged through the planning system and translated to regional and local strategic plans.
- The practice of tradable water rights already exists in the Warren and Donnelly River basins and there is a likelihood the concept will extend to other river basins or catchments in the future.

## 3.7 Biodiversity Resources

The vegetation types, vegetation associations, threatened ecological communities, reservation status, rare and priority flora and fauna are summarised in *Bush and Biodiversity in the South West*. That report describes the South West Botanical Province of Western Australia as a centre of mega-diversity on a global scale due to the exceptionally high number of species and high rate of endemism of its flora and some aspects of its



Land use activities on freehold land can have adverse effects on threatened species in remnant vegetation areas or within the adjacent conservation estate, as in the case of this *Wurmbea Sp.*, near Lake Muir.

(Photo by courtesy Roger Hearn, CALM)

fauna. The report provides a great deal of valuable base data to assist with future decision-making, but is not yet in a form whereby it can be used to effect the required conservation outcomes through the planning system.

Fortunately, much of the significant biodiversity values in need of protection are located within State forest or the conservation estate, which offers a moderate or high level of protection opportunity. The areas of most concern are those on or adjacent to freehold land. This is the land over which planning strategies have greater influence and where various actions and incentives to achieve conservation outcomes can be effected.

Some of the remnant vegetation remaining on freehold land has been degrading as a result of factors such as poor management, overgrazing, weed infestation and rising water tables and salinity levels.

The *Forest Management Plan 2004-2013* has proposed major changes and extensions to the conservation estate in order to protect old growth forests and other special ecological values. The extent of those changes is shown on Map 6.



## Trends and Implications

- The biodiversity conservation values identified in the *Bush and Biodiversity in the South West* Technical Report need to be prioritised and community management requirements established.
- Establishment of conservation lots or wildlife corridors or the like need to be considered in conjunction with incentives and sharing the costs and responsibilities equitably across the whole community.
- The proposed changes to the conservation estate resulting from the *Forest Management Plan 2004-2013* are likely to address many of the conservation issues raised in *Technical Report #2*, within the CALM managed lands.

### 3.8 Coastal Resources

The South Coast is a high-energy coastline due to the south-westerly to south-easterly onshore winds and the strong and persistent south-westerly swell. The Donnelly, Warren and Gardner Rivers empty to the Southern Ocean through seasonally open long, narrow estuaries, whereas the Shannon River flows into a lagoonal estuary at Broke Inlet and the Deep, Walpole and Frankland Rivers feed into the twin lagoonal estuaries of Walpole and Nornalup Inlets. This is described more comprehensively in *Coastal Environs in the South West Natural Resource Management Region*.

The South Coast is mostly remote and relatively inaccessible. The semi-wilderness landscape and environment is the identity of this area which is most prized by the local community and those who visit the area. To the west of Black Point, the beach is backed by a continuous line of large freehold lots, with no formal public access being available to the beach. From Black Point to Nornalup Inlet, the



Black Point is an isolated basalt outcrop within a long stretch of sandy coastline. Private landholdings to the west have many outstanding landscape features, but have an extreme wind erosion potential.

land adjoining the coast is contained within the D'Entrecasteaux and Walpole-Nornalup National Parks. The only private holdings within this area are three freehold lots and a pastoral lease between Black Point and the Donnelly River mouth and two freehold lots to the west of Point D'Entrecasteaux. The Windy Harbour settlement accommodates about 210 leasehold cottages on a Shire of Manjimup lease to the east of Point D'Entrecasteaux. There is no other settlement or accommodation facility along the rest of that 200km coastline from Augusta eastwards to Peaceful Bay (Walpole is located on the Walpole Inlet, with no vehicular access to the coast and very limited boat access to the ocean). Approximately 60 shacks were constructed in the past on the shores of the Donnelly River estuary and are allowed to remain by CALM on the basis of lifetime lease only. Several similar shacks exist in other parts of the D'Entrecasteaux National Park and are tolerated by CALM on the basis that they are open for public use.

The Northcliffe to Windy Harbour Road provides the only sealed road access to the coast for 200km (Augusta to Peaceful Bay). An unsealed two-wheel-drive road leads from Windy Harbour three kilometres to Salmon Beach, a similar eight-kilometer road provides access from the South Western Highway to Mandalay Beach, 20km west of Walpole and another unsealed road gives access to Conspicuous Cliff, east of Walpole (outside the study area). All other coastal access to that 200km coastal strip is restricted to a few informal four-wheel-drive sand tracks through the national parks. The Keep Our Coasts Open group has lobbied hard over the years to retain the informal four-wheel-drive access tracks to the coast within the national parks and has carried out various works to upgrade those tracks to prevent undue erosion of the dunes. The five freehold lots and the pastoral lease also are accessible only via similar sand tracks.

Effective management of the coastline adjoining the national parks is afforded by the national park management plans, albeit the foreshore is not formally part of the national parks. However, the coastal strip adjoining the freehold lots to the west of Black Point is unvested Crown land. The *Warren-Blackwood Regional Planning Strategy* and the *Coastal Environs in the South West Natural Resource Management Region* acknowledged the need for:

- a regional coastal strategy to be prepared for the coast between Walpole and Augusta focusing on access, recreation, tourism, accommodation and management principles;

- a district coastal management plan for the coast abutting the freehold land to the west of Black Point and addressing vesting and management responsibilities; and
- detailed management plans for specific properties or development nodes.

DPI on behalf of the WAPC has commenced work on the regional coastal strategy.

### Trends and Implications

- There is likely to be increasing pressure on the South Coast for access, recreation, tourism and accommodation as the population in the south-west of the State increases and other west and south coastal locations become more highly developed.
- The coastal freehold lots to the west of Black Point are coming under increasing pressure for subdivision and further low-key development.
- Further development of those freehold lots is being restricted by the unresolved coastal strip vesting and management issues.
- Development of the freehold lots also raises questions over the adequacy of the existing

“road” access, provision of services and fire management strategies, all of which are best addressed comprehensively rather than individually.

- Equitable options need to be considered for dealing with the freehold land enclaves within the national parks.

### 3.9 Land Tenure and Land Use

Map 7 indicates the dominance of the CALM estate in the land tenure of the region, particularly in the central, southern and western parts. There is a wide range of rural lot sizes existing across the region at this stage, as shown in Table 3, which includes all freehold land parcels within each local government area that are greater than one hectare. If a lot is severed it has been counted as two parcels.

In Nannup, a large majority of the land parcels are <40ha in area, but in percentage terms of total area, the vast majority of land area is in parcels >80ha. In comparison, in Boyup Brook a large majority of parcels are >40ha in area and the vast majority of the land area is in parcels >80ha. By contrast, in Bridgetown-Greenbushes, a large

**Table 3 — Rural Lot Sizes**

SHIRE	AREA CLASS (HA)	No. OF RURAL LOTS	% OF TOTAL RURAL LOTS	TOTAL AREA (HA)	% OF TOTAL RURAL AREA	AVERAGE LOT SIZE (HA)
<b>Manjimup</b>	1-4	664	21.3	1,496.4	1.3	2.3
	4-40	1,204	38.7	23,657.2	21.1	19.6
	40-80	1,007	32.3	53,512.7	47.7	53.1
	>80	239	7.7	33,594.1	29.9	140.6
	<b>TOTAL</b>	<b>3,114</b>	<b>100.0</b>	<b>112,260.4</b>	<b>100.0</b>	<b>36.1</b>
<b>Bridgetown - Greenbushes</b>	1-4	684	33.7	1,477.6	2.4	2.2
	4-40	729	35.9	12,420.3	19.9	17.0
	40-80	417	20.6	22,436.2	35.9	53.8
	>80	199	9.8	26,125.7	41.8	131.3
	<b>TOTAL</b>	<b>2,029</b>	<b>100.0</b>	<b>62,459.8</b>	<b>100.0</b>	<b>30.8</b>
<b>Boyup Brook</b>	1-4	136	6.1	352.4	0.2	2.6
	4-40	499	22.4	9,902.9	5.1	19.8
	40-80	824	37.0	45,954.8	23.8	55.8
	>80	767	34.5	136,647.1	70.9	178.2
	<b>TOTAL</b>	<b>2,226</b>	<b>100.0</b>	<b>192,857.2</b>	<b>100.0</b>	<b>86.6</b>
<b>Nannup</b>	1-4	277	31.4	710.7	1.5	2.6
	4-40	337	38.2	5,795.0	11.9	17.2
	40-80	165	18.7	9,122.6	18.8	55.3
	>80	104	11.8	32,889.3	67.8	316.2
	<b>TOTAL</b>	<b>883</b>	<b>100.0</b>	<b>48,517.6</b>	<b>100.0</b>	<b>54.9</b>
<b>TOTAL</b>	1-4	1,761	21.3	4,037.1	1.0	2.3
	4-40	2,769	33.6	51,775.4	12.4	18.7
	40-80	2,413	29.2	131,026.3	31.5	54.3
	>80	1,309	15.9	229,256.2	55.1	175.1
	<b>TOTAL</b>	<b>8,252</b>	<b>100.0</b>	<b>416,095.0</b>	<b>100.0</b>	<b>50.4</b>



majority of land parcels are <40ha (evenly spread between one and four hectares and four to 40ha), but the vast majority of land area is in lots >40ha (roughly evenly split 40-80ha and >80ha). Manjimup has only a small number of >80ha parcels (mostly lots are evenly split between four to 40ha and 40-80ha) and almost half of the freehold land area is in lots of 40-80ha.

For Nannup, the figures are somewhat distorted by the very large lots on the Scott Coastal Plain, which account for half of the freehold land area. Here, the land is predominantly used for tree plantations, annual horticulture (under large centre pivot irrigators), dairying and cattle grazing. Elsewhere, it is mostly tree plantations or grazing. Boyup Brook is mostly broadacre cropping and grazing, but with substantial areas of tree plantations, which is indicative of the larger land parcel sizes. Lot sizes in Bridgetown-Greenbushes were probably influenced by the past land uses of perennial horticulture and dairying, but the area is now mostly grazing and some tree plantations. Around Manjimup and Pemberton, there is a mix of annual and perennial horticulture and some dairying and grazing. Northcliffe has a mixture of annual horticulture, dairying, grazing and tree plantations, but the Walpole area is predominantly grazing. The smaller land parcels reflect the more intensive land uses.

Over the past 20-40 years, there have been significant changes in land uses, and more changes are likely in the future. In the Boyup Brook Shire, perennial horticulture (orchards) in the western sector has all but disappeared and the rich sheep stud and wool-producing properties in the east have been hard hit by the wool crisis over the past 10-15 years. With these major changes, technology advances, high labour costs, fluctuating commodity prices and a diminishing interest by younger generations in taking over the family farm, there has been a steady decline in the rural population generally across the broadacre agricultural region of the State for more than 20 years. Over the past 10 years, higher land prices being offered by tree plantation companies have seen a large number of traditional farmers opt to sell up and retire. Many have left the district, exacerbating the past population downturn and posing social implications for the town and throughout the district.

In Bridgetown-Greenbushes Shire, the social impacts of the significant changes over the past 20-40 years (outlined above) appear to have been offset largely by a growing interest in the area for rural lifestyle living. Around Manjimup and Pemberton, intensification of land uses has brought

with it greater economic growth and has underpinned population increases. This is likely to continue, but the impacts of the Regional Forest Agreement and the *Forest Management Plan 2004-2013* may not be apparent for some time. The most significant change in Nannup is the intensification of uses and production on the Scott Coastal Plain. Horticultural development, dairying and tree plantations replacing broadacre agriculture has brought significantly greater employment opportunities and local economic activity, but this does not appear to have had a significant impact on the local population at this stage.

### Trends and Implications

- Many of the changes occurring in the rural economy are beyond the scope of the planning system to resolve, such as commodity price fluctuations, changing demands, losing inter-generational continuity of farming families, and economic pressures.
- Broadacre rural farming areas have been losing population for many years. Tree plantations are not the initial cause of this, they are merely a symptom, but may facilitate population movement and compound the problem of population loss.
- Each of the four local government areas has a full range of rural lot sizes, as appropriate for the land uses. Further subdivision of the existing lots should be based on full justification to demonstrate agricultural benefit.
- There needs to be sufficient flexibility in the system to accommodate the needs of intensified agricultural production.

### 3.10 Transport Network

Transport in the region has traditionally focused on four product groups — timber, agricultural products, basic raw materials and general cargo. In the early years, there were three rail lines through the region, extending from Kojonup through Boyup Brook and on to Donnybrook, from Northcliffe through Manjimup and on to the port of Bunbury, and from Nannup to Busselton. The Nannup to Busselton line and the Kojonup to Donnybrook line have been closed and dismantled and the line from Northcliffe to Lambert Siding (south of Manjimup) is now used only occasionally and in part as a tourist tramway. The only operational freight railway in the region is from Lambert Siding to Bunbury, which is used solely by WA Plantation Resources to haul woodchips from the Diamond Chipmill to the port, generally on four trains per day, each hauling 19 wagons. There have been no

passenger rail services in the region for many years, although there have been recent calls to reopen the passenger service between Bunbury and Manjimup.

The road network focuses on South Western Highway as the regional trunk route, extending generally parallel to the South Western Rail line from Bunbury to Manjimup and on to Walpole and Albany. To the west, the Vasse Highway connects Busselton through Nannup to Pemberton and hooks back towards Manjimup. On the eastern side of the region, the Donnybrook-Boyup Brook Road connects those two towns and extends to Kojonup. The two main east-west trunk routes are the Brockman Highway, linking Augusta-Nannup-Bridgetown-Boyup Brook and further eastwards, and further south the Muir Highway connects Manjimup to Mount Barker in the Great Southern Region. Although it is outside the Warren-Blackwood Region, Sues Road is an important link road to the north and serving the western end of the region.

The other major roads in the regional transport network are shown in Figure 6 of the *Warren-Blackwood Regional Planning Strategy*. Figure 8 in that shows the regional road strategy and is accompanied by a series of recommended actions to address the major transport issues in the region.



Road transport is required to cart agricultural product from the farm, but there are a number of opportunities to transfer to rail en route to port.

## Trends and Implications

- The trend away from rail transport to road cartage is causing an increase in the number of large trucks using a road network that also has been forced to accommodate a rapid increase in the light domestic and tourism traffic.
- Native forest timbers were mostly carted on log-haul roads constructed within the State forests, whereas plantation timbers are transported along the public road system, and the impact of this is being magnified by the substantial shift from native forest harvesting to hardwood and softwood plantations.
- Lack of available funding for road construction, maintenance and repairs has seen a decline in the standard of the network of State and local roads in recent years.
- The viability of the South Western Rail line is threatened by the fact that it is used by only one operator and it falls short of modern freight rail standards.
- There is mounting community opposition to the increase in heavy haulage transport on the regional roads, the deteriorating standard of the road network and the perceived threat to the safety of local and tourism traffic.



Loaded woodchip train en route from Lambert Siding to the port of Bunbury.



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## **PART 2**

# **THE RURAL STRATEGY**

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## 4.0 VISION AND PRINCIPLES OF THE STRATEGY

### 4.1 A Rural Vision for the Region

A community vision can help to unite the various individual and group aspirations and focus the whole community on the direction and needs for their future. It is essential that the vision be developed by all the members of that community and represent an agreed conglomeration of disparate views. Above all, the community must have ownership of and commitment to that vision.

For the purpose of the Strategy, a vision for the region has been developed by the study management group based upon local knowledge, previously developed visions associated with other planning studies, and public participation exercises. This has assisted in gaining a focus for the Strategy, but should be seen only as a starting point. **The challenge for the community is to modify that vision or develop a new one to reflect accurately their aspirations and make it their own.**

A long-term vision for the Warren-Blackwood community (as suggested by the study management group) could be:

*“A rural community pursuing sustainable development of the region’s unique resources, maintaining a balance between economic, social and environmental objectives.”*

### 4.2 Objective of the Strategy

The primary objective of the Strategy is to facilitate ongoing rural development within the region on the basis of sustainability in terms of economic, social and environmental parameters and consistent with the opportunities and constraints of the region’s natural resources.

The Warren-Blackwood Region is well endowed with a wide range of natural resources and attractions. It is one of the richest regions of the State in terms of gross value of agricultural production and in the diversity of current and potential commodities. In addition, it is also subjected to the impacts of most of the rural issues and environmental degradation factors experienced in other areas. It has been subjected to enormous pressures for rural structural adjustment because of radical changes in the timber industry and the nation wide rural economic transition. This

Strategy endeavours to maximise the opportunities and minimise the adverse impacts under these circumstances.

To achieve that objective, there has been a close working partnership between local government representatives and State government agencies. The Strategy will set the framework and guidelines for implementation at the local government level, and at the same time will provide guidance for regional/State-level decisions. The four local governments involved have developed their own local planning strategies concurrently with the regional exercise to ensure maximum co-ordination between the two levels of government.

### 4.3 Sustainability

Within this Strategy, the concept of sustainability underpins all other principles, policies, strategies and actions. The issues and principles set out in the *Western Australian State Sustainability Strategy* have been adopted as the basis for the development of this Strategy, and the four associated local planning strategies. The official global strategy for sustainability, *Agenda 21*, provides the overall focus and universal goals for sustainability. This strategy provides a framework for all proposals for zoning, subdivision, development and use of land within the region to be measured against sustainability parameters.

### 4.4 Natural Resources Management Principles and Planning

Natural resources management is a relatively new concept and has not figured prominently in past strategic, regional or local planning exercises. The Strategy has been carried out using natural resources management principles and has translated the processes and outcomes associated with natural resources management through to the regional and local planning strategies. As a result, the planning process will become much more responsive to resource and environmental issues.

Traditionally, planning processes have been orientated towards urban development and issues and how to control them. With the more recent extension of planning processes to rural development and issues, there has been a tendency to apply similar urban-type principles and control concepts to the rural sector. This is proving to be largely inappropriate. A natural resources management approach will allow the planning system to be used efficiently and effectively and to make a positive contribution to rural land issues.



Of the seven recognised themes of natural resources management, the Strategy deals directly with the four of primary relevance to it — land, water, biodiversity and coast. The first three have such close interdependence, they cannot reasonably be dealt with in isolation. Each also closely interacts with the coast. The other three main themes of natural resources management — atmosphere, marine and mineral — have been dealt with in a more general way in this Strategy. As the knowledge and experience of natural resources management concepts spread, it will become more feasible to extend the planning process to cover natural resources management more comprehensively.

#### 4.5 Other Natural Resources Management Initiatives

The Strategy has linked into the strategies and actions recommended in other natural resources management and land rehabilitation initiatives to maximise co-ordination and consistency. These include:

- South West Catchments Council, which has provided good access to a natural resources management database through its *South West Regional Strategy for Natural Resource Management*;
- Blackwood Basin Group, which is the longest existing catchment group and most advanced in terms of developing its own strategies and implementation proposals;
- State Salinity Council, which has prepared and is implementing the *State Salinity Strategy* to address this major environmental and economic threat;
- LCDCs and other voluntary land rehabilitation groups, which make a significant contribution to these objectives;
- Natural Heritage Trust, which provides the funding necessary to support the national Landcare, Rivercare, Bushcare and Coastcare activities as well as South West Catchments Council, Blackwood Basin Group, State Salinity Council and others; and
- Other sustainability concepts, such as the *Kyoto Protocol*, *Agenda 21* and carbon sequestration.

#### 4.6 Balance

Strategic planning focuses on three main objectives — economic development, environmental protection and social opportunity (this is known as “the triple bottom line”). Successful implementation of the Strategy depends on gaining

the best balance between these objectives. There is a clear interdependence between each. An overemphasis on one aspect will be to the detriment of the other two and ultimately to the detriment of the community. The key aspect is to understand the nature of the interdependence in each particular situation and its relationship to the overall vision and Strategy. It also must be remembered that although economic and environmental factors are of vital importance, the community’s long-term interests must always be the governing consideration.

#### 4.7 Economic Development

The Strategy acknowledges that primary production (agriculture, forestry and mining) traditionally have been the foundation of the local economy and that this will almost certainly remain the greatest economic opportunity for the region well into the future. It promotes and facilitates the development of a broadly based, strong and resilient regional economy. Extending from the traditional timber and agricultural base, it is recognised that there is a wide variety of future opportunities from such a rich and diverse landscape. The local market can expand only marginally, but the export market, particularly to South-East Asia, is significant. The economic returns quite rightly accrue to the national and State economies, but the primary focus will be on the local economic benefits. With primary production remaining the basis of local economic opportunity, local returns will be maximised through downstream processing and value-adding prior to export from the region.

This Strategy contributes to the economic development of the region by ensuring efficient use of rural land and natural resources, minimising land use conflicts, assessing an appropriate regional transport system and service infrastructure and by making available suitable industrial land for downstream processing and manufacturing.

#### 4.8 Environmental Protection

The Strategy seeks to protect and maintain a healthy and resilient natural environment to ensure that while the current community prospers, there is similar opportunity for all future generations as well. In a global sense, the region is still relatively unpolluted and this can be a great advantage to the local community in marketing its product. It is also a major lifestyle attraction.



It focuses on sustainable development, effective management of land resources and appropriate levels of protection of waterways and wetlands, bush and biodiversity and coastal environs. Where current knowledge or data is insufficient to specify the full concept of protection, a process to address that situation has been established. Understanding the environment is a constantly evolving process for all and ongoing education and awareness are essential. These aspects of planning should be community driven, but government agencies can play a vital role as a data and information resource base.

#### 4.9 Social Opportunity

Rural communities are constantly being subjected to the vagaries of climatic cycles, international markets, developing technologies and changing community aspirations and expectations. Strategic planning needs to consider these. Where appropriate, they may be modified or manipulated to the community's advantage, but in other cases it is necessary to accept the facts and plan within those constraints. Life is forever evolving and planning must stay ahead if it is to be effective. It is recognised that there is significant social benefit in a community being in control of its own destiny, able to exert influence over external factors and taking responsibility for its actions and consequences.

The Strategy focuses on maximising the regional employment opportunities associated with future development and minimising the community stresses caused by dwindling rural populations. It also sets out to maintain and improve the quality and range of services and facilities available. Overall, the key social planning objective is to improve the quality of life of the community.

#### 4.10 Diversification/Intensification

Much of the existing rural economy has been built on production from broadacre cropping and grazing. While none of the recommendations or actions outlined in the Strategy will prevent or discourage their continuation, it clearly will facilitate and promote the sustainable diversification and intensification of productive agricultural land. This will foster a strong and resilient economy, maximise the returns achievable from land, extend a farmer's income streams, increase local employment opportunities, facilitate regional downstream processing and value-adding and help stabilise or invigorate rural communities. In addition, as the land uses change and greater

returns are achieved from the land, there is more opportunity to introduce better land management techniques and land rehabilitation activities.

#### 4.11 Protecting Productive Capacity

The high-capability land, good water availability and relatively low levels of land and water degradation make this region vital to the State's economy. In addition, agricultural production is the cornerstone of the local economy and has the capacity to remain the dominant economic factor well into the future. For this reason, protecting and maximising the productive capacity of agricultural land will remain the primary objective in considering zoning, subdivision and development issues in rural areas. Other uses and subdivision proposals should be considered, but not to the extent that they would compromise that primary objective.

#### 4.12 Efficiency and Effectiveness

Protecting the productive capacity of agricultural land and environmental values are primary planning objectives, but the traditional system of land use control is not the most appropriate mechanism for achieving those objectives in rural areas. The Strategy promotes a new system that is efficient for rural landholders and local government, while at the same time being effective for the regional community and the environment.

#### 4.13 Fairness and Equity

The majority of land and water degradation in the region has been caused by inappropriate land management practices on private and public rural land. However, those practices on private freehold land were often required by conditions of land release or were an outcome of recommendations by government agencies at the time. The economic benefits of those farming practices accrued to the whole State and the degradation which has occurred as a result affects the whole State. It is therefore appropriate that the costs and responsibility for rehabilitation are shared fairly and equitably by the whole community, not left to the landholder. The Strategy addresses this issue and promotes a range of options.

#### 4.14 Community Ownership

Past planning experience has shown that regional communities are somewhat cynical towards planning initiatives prepared in distant places with little or no local consultation or input. Those



strategies, which may have some good, strong recommendations and suggested actions, often have little effectiveness because the local community doesn't recognise or accept them. Without local support and participation, those strategies have little chance of successful implementation.

Regulation, controls and penalties have a backup role in achieving good land management, environmental protection or other planning objectives. However, willingness of landowners and local communities to implement natural resources management practices is the preferred approach. This was confirmed by the public responses to the *Warren-Blackwood Rural Strategy Issues Discussion Paper*. These submissions indicated that the local community has a good understanding of the key natural resources management issues in the region. They are looking for support in addressing the issues, but have fears of over-regulation or "bureaucratic interference". However, many respondents called on government agencies for resource support.

As a part of the community consultation component of the study, careful note has been made of the issues raised at previous community workshops. Opportunities and constraints associated with those issues and a range of options to address them were raised in the *Warren-Blackwood Rural Strategy Issues Discussion Paper*. The Strategy sets out a landuse concept based on those public responses.

Effective public consultation relies on achieving a balance between two conflicting demands — there is never adequate consultation at a local level on the one hand and rural producers don't have time for endless meetings and workshops on the other. A judgment has to be made about getting on with the project and producing a workable outcome within a reasonable time. No process will ever be perfect and all stakeholders must work on a system of continuous improvement.

Clearly, the most effective planning strategies will be those where there has been strong community input to addressing the issues and there is community ownership of the outcomes and a commitment to full implementation. Government agencies would still have a vital role to play as a resource for information, data and advice, as well as research and demonstration and funding supplementation. As far as possible, this Strategy has been developed along those lines.

### 4.15 Education and Awareness

Hand in hand with community consultation goes a need for continuing research and understanding of the issues to ensure that the community has a comprehensive appreciation of all aspects of their living environment. This will ensure that logical and well-balanced objectives are set, informed decisions are made and practical strategies are implemented. Such understanding is a necessity for all rural landholders and for all members of the wider community, including those living in the Perth metropolitan area. This Strategy acknowledges that need and strongly supports a system of ongoing education and awareness of issues, opportunities and constraints throughout the whole community.

### 4.16 Ongoing Refinement

In all planning strategies, it must always be realised that there will never be a situation where all information required is available, all issues have an ideal solution and all people are fully supportive of the recommendations. That is not practical, even if it was possible. However, the major issues facing the community will not wait while we seek perfection. Land will continue to degrade, water resources will continue to deteriorate and biodiversity will continue towards extinction unless urgent changes are made. For practical reasons, it is necessary to "get on with it" and develop the best possible strategies on the basis of known information. These strategies and the groups formulating them need to be flexible enough to allow for ongoing refinement as the need for modification becomes apparent.

With the Strategy, a conscious decision had to be made to recognise this dilemma and "have a go" at finding the best solutions. The process adopted has been to raise the issue, assess the opportunities and constraints, canvas the options, assess the responses, propose the most logical solution and apply it as a strategy rather than regulation where possible. This process will also require that the outcomes are analysed and the Strategy continually refined.

## 5.0 PRINCIPAL ISSUES AND STRATEGIES

As a progression from the resources and implications covered in Chapter 3 and the vision and principles in Chapter 4, this chapter develops the principal issues and strategies of the Strategy. The rationale for each is developed from the basic issue to implementation under the following headings:

- Issue
- Background
- Opportunities
- Constraints
- Community consultation responses
- Policy/strategy
- Implementation

These planning policies/strategies should be read in conjunction with the regional zonings set out in Chapter 6 and the area-specific objectives and criteria outlined for the individual planning units in Chapter 7.

The 12 planning/natural resources issues covered in this section are:

- Land management
- Water resource management
- Environmental protection
- Land use conflicts
- Coastal management and development
- Agroforestry vs tree plantations
- Rural subdivision
- Rural-residential
- Rural smallholdings
- Tourism development
- Regional transport
- Land valuations



**LAND**



**WATER**

Photo by courtesy Cliff Winfield, CALM



**BIODIVERSITY**

Photo by courtesy Roger Hearn, CALM



**COAST**



## 5.1 Land Management

### Issue

With significant change, diversification and intensification now taking place in rural land use activity, there is an increasing need for development of a system of land management/planning control that is efficient and effective.

### Background

- Traditionally, the planning system dealt with urban-type land uses and developments by way of assessing development applications and achieved a degree of planning control by imposing conditions on approvals. In rural areas, productive agricultural uses were generally considered an “as-of-right” use not requiring planning approval.
- As new crops and more intensive uses emerged and the environmental issues and land use conflicts arose, some councils began requiring planning approvals for some agricultural uses but not others. This resulted in a number of inconsistencies and a degree of confusion for landowners and developers.
- With rotational cropping now being a key component of management of intensive agricultural uses, it could technically have been necessary for a new application to be lodged for each change or rotation, i.e. maybe four or five separate applications per year. This would be impractical — inefficient for landowners and the local governments and ineffective in terms of environmental management.
- The challenge now facing the planning process is to devise a system that addresses sustainability of rural land uses and agricultural production in an economically efficient, environmentally effective and socially acceptable manner.

### Opportunities

- There is increasing knowledge of land management issues, pressures and practices, and greater community understanding of land degradation and support for land rehabilitation.
- Changing land uses and increasing product diversity present opportunities for improved land management practices and greater productivity and sustainability.
- Best management practice/code of practice guidelines now being prepared will assist all stakeholders in dealing with sustainable agricultural productivity.

- The plantation timber industry has developed the *Code of Practice for Timber Plantation in Western Australia* to guide growers and local governments in the sustainable management of tree plantations.
- Natural Heritage Trust requires South West Catchments Council and the basin management groups to develop biophysical and biological resource and management targets.
- Basin or catchment targets which are specific, measurable, achievable, realistic and which have identified indicators and a program of monitoring will complement best management practice/code of practice activities.



*New land management techniques, including surface water management and revegetating with deep-rooted perennials, can arrest and reverse existing land degradation.*

- Full community involvement in the development of these guidelines ensures greater community ownership of and support for the outcomes.

### Constraints

- There has been a tendency to “control” rather than “manage” new agricultural concepts or land use types, but traditional land uses have not been addressed.
- A requirement for formal approval applications for all new or changing rural uses could be very costly and time consuming for all parties.
- There is limited resources in local government to deal with an increase in applications.
- The traditional planning approval process allows for a “one opportunity only” system, with minimal ongoing powers to deal with issues.
- Generally, there has been no framework to guide proponents or local governments in how



to deal with new land management requirements.

- An inefficient and ineffective approval system presents economic, environmental and social consequences.
- Agricultural pests and weeds need better management.

### Community Consultation Responses

- The community strongly rejected the concept of tight land use controls that would result from extending the present urban planning system to rural uses.
- At the same time, there was strong support for a joint community/government agency effort to develop best management practice/code of practice guidelines and to use them to advise and educate rural landowners and agricultural producers about sustainable land management practices.
- Rural landowners supported all agricultural crops and uses being treated equally with landowners free to determine land uses on their land provided they comply with the guidelines set.
- The preferred option was *“Use land management techniques to achieve sustainable outcomes in most rural areas but identify specific circumstances, zones, locations or uses where specific approval may be required”*.

### Policy/Strategy

- Use land management principles rather than tight land use control to facilitate sustainable agricultural production and land uses in rural areas.
- Generally, all intensive and extensive agricultural uses should be permitted uses (not requiring formal planning approval) in the Agriculture and Priority Agriculture zones. The exceptions to this are feedlots, intensive animal husbandry, piggeries, poultry farms, rural industry and extractive industry in both zones, and tree plantations in the Priority Agriculture zone, each of which should be discretionary uses requiring formal planning approval from the local government. In the Rural Landscape Protection and the Rural Smallholdings zones, all productive agricultural uses should be discretionary uses requiring formal local government approval.
- In conjunction with the local community, landholders and agencies, develop appropriate best management practice/code of practice

guidelines for the relevant crop types, zones or circumstances.

- The local governments may choose to reflect the key planning issues and requirements from the best management practice/code of practice documents in their respective town planning schemes by cross-reference to give them the necessary head of power to require ongoing compliance with those provisions.
- Other relevant agencies to adopt and administer the key issues from best management practice/code of practice guidelines specific to their scope of responsibilities for existing and proposed developments/uses through implementation of or amendment to their legislation or regulations.
- Require all agricultural land use proposals not in compliance with the relevant scheme requirements to be the subject of a formal planning application.
- Establish criteria for assessing and determining those applications where planning approval is required due to the specific circumstances, zones, locations or uses of the development.
- In conjunction with the local community, landholders and agencies, develop relevant natural resources management targets (e.g. salinity and nutrient levels) for key land, water and biodiversity areas as a basis for preparing best management practice and code of practice documents, and for assessing the sustainability of land uses and land management practices.
- The local governments may choose to refer to these target levels in their respective town planning schemes by cross-reference to provide the necessary head of power to require ongoing compliance with those levels.
- Establish a process and a regime for monitoring the relevant areas or developments/uses to determine the degree of success in achieving the target levels set.
- Determine the actions that may be required to rectify any deficiencies in achieving those target levels, and identify what support (if any) may be required to ensure fairness and equity.
- Landholders and developers should accept responsibility for maintaining and managing their land uses and developments in accordance with the objectives of the best management practice/code of practice documents and the natural resources management targets set.
- Use established basin and catchment targets as a basis for developing and refining best management practice/code of practice proposals.



- Reflect basin and catchment targets in strategic planning, land management and decision-making.
- Regularly review best management practice/code of practice and basin and catchment targets to ensure full relevance and effectiveness.
- Strengthen the role of government as a support resource to community initiatives, especially in respect of research and marketing.
- Maintain agricultural pest and weed management in land management activities.

### Implementation

- WAPC/DPI to continue to assist with the development and refinement of best management practice/code of practice documents.
- Local government to incorporate the relevant aspects of the best management practice/code of practice documents into their local planning strategies/town planning schemes by cross-reference and to develop relevant criteria for the specific circumstances, zones, locations or uses.
- Government agencies and local government to continue to work with the rural community and rural industry groups to develop and refine the range and detail of best management practice/code of practice documents.
- South West Catchments Council and basin management groups to develop and monitor resource and management targets for the South-West Region and the respective basins and catchments.

## 5.2 Water Resource Management

### Issue

Agricultural production is heavily dependent upon having reliable access to a sufficient quantity of good-quality water to match soil capability, but water is a limited resource.

### Background

- Traditionally, farmers have been relatively unconstrained in their right to capture and draw whatever sources of water were physically available to them for productive agricultural purposes.
- With the expansion, intensification and diversification of land uses, there is increasing pressure on the water resource available and competition between users.
- In various parts of the Eastern States, river systems and aquifers have been harnessed beyond their sustainable capacity, causing environmental degradation downstream and requiring restriction on existing and future land uses to rectify the situation.
- Water availability can significantly influence the capacity of the land to produce sustainably to its soil capability and therefore has major planning implications for current and future land uses and infrastructure.
- The presence of aquifer systems, such as the Yarragadee, Leederville, Parmelia, Lesueur, Sue Coal and Cockleshell Gully, which underlie the Scott Coastal Plain and the Blackwood Plateau, to the west of the Darling Scarp, have been known for a number of years, but research has only recently commenced to ascertain their full extent, sustainable yield or environmental requirements.



*Retention and protection of riparian vegetation is a vital component of maintaining the environmental values of our waterways.*

*(Photo by courtesy Dr Luke Pen, WRC)*

### Opportunities

- At this stage, it appears that there are no water catchments or aquifers within the region that are being harnessed unsustainably and requiring harsh remedial measures.
- The flows required to maintain the ecological values of a waterway can be determined, allowing an assessment of the water yield that can be drawn sustainably from that system.
- DoE has prepared preliminary estimates for sub-catchments throughout the region as a component of the National Land and Water Audit undertaken as an initiative of the Natural Heritage Trust.
- The sustainable yield estimates are calculated conservatively and allow for revision and refinement as that level of draw is neared or reached and further research is undertaken.
- The parameters and criteria for water management can be determined by the local community to ensure that local needs and circumstances are recognised and protected.
- Rationalising water resource use, water harvesting and distribution infrastructure can be achieved through the development and implementation of sub-catchment strategies.
- The concept of tradable water rights can assist greatly in ensuring fair and equitable access to water for all landowners, in encouraging more efficient use of water resources and in facilitating sustainable diversification and intensification of agricultural production.
- Observance of best management practice/code of practice and other water-saving techniques can ensure the more efficient use of the current water resources and increase the development and production opportunities in each sub-catchment.
- Co-operatives could be established to manage sharing of water for irrigation crops.
- A number of water supply dams for urban supply purposes have been constructed in the region and some groundwater areas have also been tapped. Others are proposed for future supply purposes.
- Water availability is currently only a factor in the land valuation process to the extent that it influences market demand, but this may change if allocations of water become restricted due to sustainable yield limits being reached.
- A number of landowners on the Scott Coastal Plain have carried out various irrigated agricultural developments using licences to draw large quantities of high-quality water from these aquifer systems, and there is scope for



expansion with economic returns if further water supplies can be made available.

- Community groups, such as the Whicher Water Resource Management Committee, the Scott River-Lower Blackwood Water Users' Group, provide local input into water resource opportunities associated with these aquifer systems.
- Replanting of cleared farmland to trees, either in plantations, belts, groves or other configurations, assists with maintaining water quality by controlling groundwater recharge and waterlogging, preventing erosion and siltation and reducing salinity and nutrient levels.

### Constraints

- Over-exploitation of any water resource can lead to ongoing environmental damage and deterioration of water quality and may require future cutbacks on usage, at significantly higher social and economic cost, to rectify the situation.
- There are some inefficiencies in the current usage of water resources.
- The ecological needs of each waterway are not fully understood at this stage, and so only a conservative preliminary estimate of environmental flow requirements has been made initially.
- Refinement of the sustainable yield figures for a sub-catchment when the actual yield approaches that sustainable level requires considerably greater resources than the preliminary estimate.
- Catchments have been assessed and management levels proposed to minimise potential risks from local activities and land uses, and to maintain a high level of public health and amenity.
- The community is always concerned with the prospect of limitations on the use of existing resources.
- A number of groundwater-dependent environments rely upon these aquifers (e.g. the Yarragadee and Leederville Aquifers discharge to the Blackwood River and St John's Brook).
- As part of an assessment aimed at securing future water supply needs for the State, DoE is evaluating a number of factors in regard to those aquifers, including their extent, recharge and discharge rates, and social, economic and ecological values.
- Tree plantations can have an adverse impact on water availability for agricultural purposes by limiting surface water run-off and reducing superficial aquifer water levels.

### Community Consultation Responses

- The community agreed that management of the limited water resource is of paramount importance.
- There is a need for careful planning to protect the water resource, but caution is needed to avoid over-regulation.
- There could be greater efficiencies in the current usage of water.
- Farmers' rights to the use of water should not be infringed.
- Water from the region should not be allocated to Perth at the expense of the local farming community.

### Policy/Strategy

- Plan for the expansion, intensification and diversification of agricultural production within the limitations of the current preliminary estimates of the sustainable yield for each sub-catchment.
- Highlight those sub-catchments where future development may be restricted by the sustainable yield preliminary estimates and request DoE to devote sufficient resources to reassess and refine the environmental flow requirements to clarify the actual sustainable yield and any environmental constraint on future development.
- Assist the community and DoE in the assessment and preparation of a water allocation management plan for each sub-catchment, ensuring local "ownership" of those plans.
- Promote the identification, assessment and preparation of sub-catchment management strategies that address landcare, environmental rehabilitation, natural resources management, agricultural productivity and sustainability.
- Promote the concept of tradable water rights as an opportunity to ensure fair and equitable access to water for all landowners, to encourage more efficient use of water resources and facilitate sustainable diversification and intensification of agricultural production.
- Planning agencies and the local community need to be aware that tradable water rights may result in some properties not having water entitlements tied to land title.
- Assist the community with the development of strategies to improve efficiency in water usage, gain better returns from this resource and address and reverse the deteriorating water quality in some sub-catchments.

- Develop and implement appropriate best management practice/code of practice guidelines to prevent nutrient transport, eutrophication, siltation and other waterway degradation factors.
- Manage and protect the water resources in declared Public Drinking Water Source Areas in accordance with the priority classifications set out in the respective water source protection plans.
- Undertake an assessment of the impacts of tree plantations on surface water run-off and superficial aquifer water levels.
- Minimise restrictions on existing land uses and developments.
- All land uses and developments requiring capture of surface water should consider the environmental flow requirements of the waterway.
- Complete the current assessment of the Yarragadee Aquifer in terms of its role in the future water supply needs for the State.
- Maintain ongoing research, monitoring and active management to identify the sustainable yield of all aquifers and to implement appropriate sharing strategies.
- Ensure a close working relationship between DoE and local and regional community groups in the identification of “reasonable regional water resource needs”.

### Implementation

- DPI and local government to facilitate and support agricultural development within the limitations of the preliminary sustainable yield estimates and to highlight those sub-catchments where more detailed assessment and refinement of that sustainable yield may be required.
- DoE to carry out more detailed assessments of the environmental flow requirements for those sub-catchments where the current yield has reached the preliminary sustainable yield estimate, to refine the sustainable yield for those sub-catchments and to ensure an adequate legislative framework exists to prevent over-exploitation of the resource.
- DoE and Water Corporation to complete the development of water source protection plans for the declared Public Drinking Water Source Areas in the region.
- Local governments to reflect the various priority classification levels for Public Drinking Water Source Areas through their respective local planning strategies/town planning schemes.

- DoE to assess the impact of tree plantations on sub-catchment water resources.
- Await the outcome of studies currently being undertaken by the DoE into various aspects of the feasibility of the extraction of water from the aquifer systems in the Blackwood groundwater area for use, including taking water to the integrated water supply system.
- Local community to work with DoE and other relevant agencies to assess the water resources and to develop a water allocation management plan for each sub-catchment.



*Farm dams provide an ideal source of water for agricultural production in non-sandy areas. Future dam establishment may need to be regulated to maintain environmental flows.*





### 5.3 Environmental Protection

#### Issue

Various key environmental values have been identified and require further assessment for relative significance, prioritising and options for protection.

#### Background

- Currently, the system of identifying and protecting significant environmental values through the planning system is rather haphazard and there is little consistency in the process.
- As a component of the preparation of the *South West Regional Strategy for Natural Resource Management*, the South West Catchments Council had prepared *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* to assess and identify those key environmental values for the South-West catchments.
- That technical information, although highly significant, is not yet in a form whereby it can be clearly identified spatially and interpreted by the key stakeholders, such as local government, the local community and landholders.
- The State Government has produced the *Wetlands Conservation Policy for Western Australia*, *Foreshore Policy: Identifying the Foreshore Area* and *Waterways WA: A Policy for Statewide Management of Waterways in Western Australia*.
- The *Environmental Protection Amendment Act 2003* has introduced a new land clearing permit system and penalties for non-compliance, giving landowners a revised approval process intended to provide a more equitable system.
- The *Environment Protection and Biodiversity Conservation Act 1999*, introduces measures to protect threatened species and ecological communities and to provide for recovery planning.
- The *Forest Management Plan 2004-2013*, set out the parameters for sustainable forest management, the reduced levels of timber harvesting and the additional areas to be dedicated as national park or other conservation reserves (see Map 6).

#### Opportunities

- The *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* have set out a wealth of data and conservation values which will provide an excellent basis for

more detailed and focused assessment and evaluation.

- There is a range of options or a combination of options that could be used to ensure the appropriate level of protection of environmental values relevant to the particular circumstances, including total or partial acquisition, total or partial reservation under the district planning scheme, conservation covenants, voluntary protection by the landowner, community group protection, etc.
- There is also a range of funding options to support environmental protection proposals, including full or partial compensation payments, specific grants, tax incentives or tax breaks, rate concessions, revaluations, dollar-for-dollar subsidies, voluntary community effort or a landowner's personal commitment.
- Significant environmental rehabilitation and biodiversity conservation benefits can be achieved through the development and implementation of sub-catchment strategies.
- DoE has established a "needs assessment" to set management priorities for the State's waterways and will set up "expert panels" to use existing information and local knowledge in those determinations.
- Existing and proposed State Government policies on protection of wetlands and waterways and management of foreshores establish principles, objectives and policies to guide the conservation and management of those environmental resources.
- There is significant benefit in maximising community involvement and ensuring community ownership of assessment, planning and implementing of environmental protection proposals.
- Combining conservation and protection of the environment with opportunities for recreation can facilitate education and awareness of the environmental values and the benefits of their protection.

#### Constraints

- At this stage, the data used to identify regional natural resources management objectives is generally not specific enough to identify spatially and set relevant priorities for specific environmental protection needs.
- Priorities for protection need to be established to ensure that the limited funding opportunities (and community support) are dedicated to gaining the best return for the input and investment.



- The current data is not in a form whereby it can be easily understood and interpreted for use by local governments and the local community for the benefit of conservation and landscape protection.
- Conservation objectives can impose significant constraint on an agricultural enterprise.
- There needs to be a balance between conservation objectives and a landowner's capacity to generate a sustainable return from the land.
- Within the Shires of Manjimup and Nannup, approximately 80 per cent of the total land area is contained within uncleared Crown land.
- There is a general lack of funding or awareness of available funding for conservation objectives.

### Community Consultation Responses

- The community expressed great concern about the potential for over-regulation and the overall negative impacts associated with that.
- There needs to be a measure of fairness and equity for landowners in the quest for environmental conservation, with the wider community being prepared to contribute to the cost of protecting community values.
- There needs to be a balance between environmental needs and social impacts.

### Policy/Strategy

- Progress the exercise of identifying the important conservation values set out in *Waterways and Wetlands in the South West* and the *Bush and Biodiversity in the South West* to enable those conservation values to be given appropriate recognition in the planning system, by adopting the following process:
  - Identify spatially the location of water or vegetation ecological values (from the *South West Regional Strategy for Natural Resource Management*) in relation to freehold land (on or adjacent) and confirm their relative conservation values.
  - Confirm their respective scientific and community values and determine their relative priority for conservation.
  - Assess the most appropriate methods of protection, including tenure types and vesting.
  - Assess the most suitable options for implementing the selected form or forms of protection.
  - Investigate the opportunities for special incentives to support community and landowner involvement.

- Determine the most suitable methods for management and maintenance of the protection area.
- Translate the outcomes into suitable statements in the local planning strategy and provisions in the district planning scheme.
- Promote the identification, assessment, and preparation of sub-catchment management strategies that address landcare, environmental rehabilitation, natural resources management, agricultural productivity and sustainability.
- Within the Shires of Manjimup and Nannup (where approximately 80 per cent of the total land area is contained within uncleared Crown land) a less stringent limitation on land clearing can be considered, provided that the areas proposed for clearing do not compromise the criteria and values set out in the *Environmental Protection Amendment Act 2003*.

### Implementation

- DoE, CALM, DPI and other agencies to co-operate to progress the data contained in *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* to enable local government and local community assessment and determination of relative priorities, protection levels and options.
- DoE, CALM, DPI and other agencies to co-operate on implementation of State the policy on waterways protection and foreshore management.
- Local government to adapt the outcomes into suitable statements and provisions for the local planning strategy and district planning scheme.
- Local community to participate fully in the assessment of conservation values and setting of community priorities.



## 5.4 Land Use Conflicts

### Issue

Non-agricultural developments and uses in rural areas can create conflicts with adjoining land uses and can constrain productive agricultural activities.

### Background

- The gradual introduction of non-agricultural uses, such as tourism, recreation, rural lifestyle, rural-residential, urban fringe and even farmhouses, into rural areas has brought about conflicts due to the impacts of some bona fide agricultural activities, such as noise, dust, smells and spray drifts.
- Settlement of the conflict usually results in the rural activity being restricted or curtailed in favour of the newer or higher-value development (This has been a standard approach of authorities in the past).
- Where the non-agricultural development predates the offending rural activity, this restriction is understandable and may even be acceptable, but it is neither fair nor equitable where the non-agricultural development is introduced into a longstanding productive rural area.
- There is also a future restriction implicit where a non-agricultural development occurs adjacent to rural land, which is currently not being used productively or is being used below its sustainable capacity.
- Other conflicts can occur between one productive agricultural use and another on adjoining properties, e.g. the spraying of 2,4D on pastures can have a devastating effect on vineyards up to five kilometres away.
- These conflicts are often not considered when new development in rural areas is being considered.
- These restrictions on the current and prospective productivity of rural land can have significant implications for local, district and even regional economies.
- In a high-value agricultural region such as the Warren-Blackwood, this issue is even more critical.

### Opportunities

- It is feasible to accommodate most non-agricultural uses in rural areas without restricting or conflicting with adjacent productive agricultural uses simply by applying

appropriate standards and setbacks to those uses and implementing best management practice/code of practice for the agricultural uses.

- Acceptable standards of cross-boundary “nuisance” can be developed to address conflicting agricultural activities.
- Various notifications can be registered on land titles requiring landowners to acknowledge that they are living or developing in an agricultural area where bona fide farming activities may impinge on their quality of lifestyle and enjoyment in that area, but this action is often only partially successful.
- Planning controls can be developed to deal specifically with non-agricultural uses or uses requiring buffers.

### Constraints

- Setback requirements can create a lot of wasted land in rural areas.
- Creation of small rural lots can complicate the ability to provide adequate separation of conflicting uses on adjoining lots, due to insufficient lot dimension/depth for house, etc. construction on the smaller lots.
- Setback requirements and other conflict amelioration measures also can compromise agricultural productivity and the capacity to manage the farm effectively on the land where the non-rural development is proposed.
- The enforcement of environmental regulations that protect residential amenity can significantly affect on rural activities on surrounding land.
- Many conflict situations already exist and will be difficult to resolve by new policies or standards.

### Community Consultation Responses

- Rural community members were strongly opposed to inappropriate subdivision or development, which impinged on their right to farm on their land.
- There was concern at the prospect of over-regulation restricting private enterprise and creativity.
- Conflicting uses need to be avoided or carefully managed.
- Rural-residential developments should not be allowed to impinge on prime agricultural land.



### Policy/Strategy

- The primary policy associated with this issue is to recognise that agricultural production is the predominant use in the Agriculture zone and most particularly in the Priority Agriculture zone. All other uses must be considered as secondary uses only and should not impinge on or restrict the primary use.
- The boundary line between adjoining rural lots should be taken as the critical point or line for determining all “nuisance” or “pollution” conflict issues in rural areas.
- Establish criteria for acceptable levels of the various types of agricultural “nuisance” or “pollution” at a boundary in the Agriculture and Priority Agriculture zones (as a part of the best management practice/code of practice preparation process).
- Where a proposed use or development will create “nuisance” or “pollution” levels in excess of the acceptable boundary standard, it should be set back sufficiently from the boundary or take other acceptable amelioration steps to achieve that standard.
- Where a proposed use or development requires a higher standard or a lower level of “nuisance” or “pollution” impact than the acceptable boundary standard, it should be set back from its own boundary, or other amelioration steps should be taken on that land to achieve the required result, e.g. certified organic farms and aquaculture developments.
- These criteria for dealing with “nuisance” or “pollution” conflicts between adjoining rural lots should be incorporated into the best management practice/code of practice guidelines for the various agricultural uses.
- Setback criteria or policies on “nuisance” or “pollution” amelioration measures should be prepared by local governments to address the various circumstances for non-agricultural uses in rural areas.
- All non-agricultural uses, including houses, tourism developments and recreational facilities, should require formal planning approval and the local governments should apply these principles to determine appropriate siting, buffers and setbacks for those uses.
- Where rural-residential or urban fringe subdivisions and developments are approved there should be a requirement that the “nuisance” or “pollution” setbacks or amelioration measures take place on the subdivided land or at the expense of the new development.

- Where smaller or narrow lots or other peculiarities of subdivision are proposed, these criteria should be considered in determining the minimum acceptable sizes or dimensions.
- In assessing any of these situations, the adjoining rural land should always be considered according to its highest sustainable agricultural use, regardless of whether it is currently unused or under-utilised.
- All existing conflicts of this nature should be treated on their individual merits, but with these criteria being considered as desirable objectives.
- Ensure that the land uses and land management on properties abutting national parks, State forest, nature reserves and other conservation value areas are consistent with the conservation objectives for those areas and that actions are taken in respect of the freehold land to minimise any adverse impact on the visual quality, conservation values and management of those conservation areas.

NOTE: See guideline diagrams in Appendix 4.

### Implementation

- WAPC to take these principles and any endorsed criteria into account in determining all rural-type subdivisions.
- Local government to formulate relevant criteria to address these issues and apply them to all land use and development applications submitted for rural areas.
- Rural community, local government and government agencies to address these issues in the formulation of best management practice/code of practice guidelines.

## 5.5 Coastal Management and Development

### Issue

The coastal strip from Augusta to Walpole has long been a remote and largely inaccessible section, but growing pressure from an expanding State population with greater mobility is putting increasing pressure on the fragile environment and the remote, semi-wilderness landscape.

### Background

- National parks extend along the entire coastal strip from Nornalup Inlet to just west of Black Point (except for Windy Harbour Reserve and several isolated private lots) and the remainder of the coastline westwards to Hardy Inlet is backed by large freehold rural lots.
- Bitumen road access is available to Windy Harbour, with unsealed two-wheel-drive roads leading to Salmon Beach and Mandalay Beach. No formal public access to the coast is available through the freehold lots, and the only other passage to that coastline is by way of several four-wheel-drive tracks through the national parks.
- The foreshore strip along the entire coastal section is unvested vacant Crown land, which requires management resolution where it abuts freehold land.
- Very limited accommodation, tourist and permanent, is available being restricted to Windy Harbour and the freehold lots to the west of Black Point.

### Opportunities

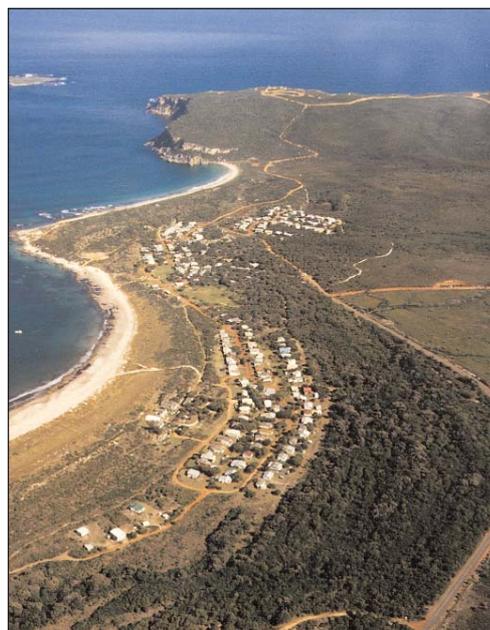
- CALM's review of the management plans for the two coastal national parks will address the conservation and land management issues for the section of the coast covered by those parks.
- The private lots fronting the coast to the west of Black Point preclude direct public access and afford a degree of protection to that section of the coast at this time.
- There are many opportunities for enjoying a "wilderness" type experience in large sections of the national parks.
- There is considerable potential for low-key, nature-based tourism developments on the freehold coastal land to the west of Black Point.
- There are options for trading land and development rights for the isolated freehold lots to consolidate the national park.

### Constraints

- There is increasing pressure for access, recreation and accommodation that needs to be assessed and addressed within a coastal strategy for the whole of the coastal strip from Augusta to Walpole (and on to Albany).
- Issues of vesting and coastal management for the foreshore strip adjoining the freehold lots to the west of Black Point need to be addressed.
- There is little technical data available on coastal processes along that section of the State's coastline.
- The soft sandy coastline and fragile dune systems are exposed to frequent severe Southern Ocean storms.
- Tourism development on the freehold land to the west of Black Point is constrained by the issues of foreshore vesting, lack of a management plan or planning framework, and substandard road access and service provision.

### Community Consultation Responses

- There is strong public opposition to the closure of any access tracks to the coast.
- The community acknowledges the need to protect the fragile coastal environment.



The Windy Harbour settlement, with approximately 210 cottages, provides the only accommodation node and bitumen road access on the coast between Augusta and Walpole.

### Policy/Strategy

- Assess the entire coastline in terms of coastal processes, tourism and recreational demands, access, development and settlement options, development trade-off and land swap options, tourist and recreational facilities and conservation and vesting, and develop an appropriate strategy (an Augusta-Walpole Coastal Strategy is in progress with estimated completion in late 2004).
- Assess the coastal strip abutting the freehold land to the west of Black Point in terms of public access, vehicle and pedestrian management, public facilities, beach and dune management, conservation requirements, visual landscape values and site management plan guidelines, and develop an appropriate management plan.
- Assess the road access and servicing requirements constraining future low-key tourism development on the freehold land to the west of Black Point and prepare a strategy to address those issues.
- Zone the whole dunal component of the freehold land between Scott River and the coast to the west of Black Point as Rural Landscape Protection zone, where agricultural land uses may be permitted provided they do not compromise the landscape and conservation values of the area.

### Implementation

- WAPC/DPI is undertaking a coastal strategy for the section of coast from Augusta to Walpole and will then assist the Shire of Nannup to develop a coastal management plan for the coastal area abutting the freehold land to the west of Black Point.
- Nannup Shire Council to develop a strategy for the road and servicing constraints for low-key tourism development for the freehold land to the west of Black Point.



Point D'Entrecasteaux.

(Photo by courtesy Nicci Tsernjavski, CALM)



## 5.6 Agroforestry vs Tree Plantations

### Issue

Broadscale tree plantations, driven by generous tax concessions, can provide economic, environmental and social benefits to the region. Agroforestry at a similar scale could provide significantly greater benefits, but is constrained by economic disparity and lack of appropriate incentives.

### Background

- Although pine plantations have been established on existing farmlands for most of last century, hardwood plantations began to emerge as a crop only in the late 1980s and offered an alternative to the use of native forests as a source of woodchips.
- Changing rural economics, a decline in returns from broadacre cropping and grazing and rising rural land prices have encouraged many farmers to turn to tree plantations as an economic alternative.
- There has been considerable interest in the ability of deep-rooted vegetation to have a beneficial impact on rising water tables, levels of salinity and other forms of land degradation.
- The DPI, in conjunction with key stakeholders, has developed a draft Farm Forestry Policy that proposes standard approval requirements and conditions for inclusion in town planning schemes.

### Opportunities

- There are significant economic, social and environmental benefits from farm forestry in the longer term.
- The greater flexibility of agroforestry allows for designing and placement of trees in the landscape to maximise the environmental and farm productivity benefits.
- Agroforestry provides greater opportunities for on-site employment and retention of the existing rural populations, thereby contributing greater population stability in rural and town areas.
- Agroforestry provides the potential for dual and increased returns from the one plot of land, i.e. timber and grazing incomes from the same piece of land, with the combined return being significantly greater than either of the single product returns.
- By introducing the ethos of tree planting and landcare as an integral component of farm planning, farmers will be rewarded by greater

sustainability of the farm environment and greater economic strength from a diversified product base.

- Agroforestry is more likely to be stable and productive in the longer term and less dependent on macro-economic influences.
- Agroforestry is more compatible with the planning and implementation of catchment management plans than are commercial plantations.
- Interim environmental incentives can assist farmers until the first harvesting of product, where the form of planting conforms to catchment environmental objectives.
- Current efforts by CALM, in conjunction with other government agencies, have provided much of the information and data required to assist farmers to get involved in viable agroforestry.

### Constraints

- Corporate commercial constraints can restrict the potential environmental benefits of tree plantations by requiring the trees to be planted in a tight formation on the most productive soils on a farm and in the most economically advantageous position in the district, rather than being spread across the landscape as required to serve the environmental parameters best.
- The local governments have raised considerable concerns about the impacts of log-haul trucks on the local and district road system and the potential effects on the viability of other agricultural activities resulting from a degraded road network.
- Tree plantations have a local adverse social impact in many cases by displacing the existing long-term occupier and often causing them to be lost to the district.
- The majority of the employment benefits arising from broadscale tree plantations grown for woodchipping accrue to the district where they are processed, which is often too distant to be of any benefit to the area in which they are grown.
- The full economic returns from agroforestry come after 25 years, compared with 10 years for woodchip tree plantations.
- There is a significant economy of scale disparity in favour of plantations, which may be as high as 20 per cent.
- There is currently a significant disparity in the tax incentives and investment opportunities favouring tree plantations.

- Lack of appropriate incentives has led to a slow uptake by farmers of growing trees for sawlogs, which may cause difficulties with market creation due to restricted product availability.
- Larger-scale tree plantations are another form of monoculture, presenting similar difficulties to other agricultural monoculture, such as annual and perennial horticulture and broadacre cropping.

### Community Consultation Responses

- Support for plantations remaining an as-of-right crop except in Priority Agriculture zones, but preference for agroforestry and the need to provide sufficient incentives for it to become a widespread use.
- Concern at the long-term viability of the plantation industry and the effect of tax incentives.
- Concern with plantation impacts on population, roads and fire protection, and the limited environmental benefits.

### Policy/Strategy

- Continue to acknowledge tree plantations as an agricultural crop and accept it as an as-of-right crop in the Agriculture zone (discretionary use in the Priority Agriculture zone), but at the same time promote and pursue agroforestry as a preferred application of commercial tree cropping in rural areas.
- Pursue with relevant agencies the options for creating and/or extending tax incentives, salinity/carbon credits, environmental credits, tax relief, subsidies, etc. to give agroforestry similar economic advantages and viability to tree plantations.
- Continue to research the appropriate species for plantings, most advantageous locations and patterns for plantings, best form of integration with agricultural production and best methods

of harvesting and marketing, and make the information freely available to all agricultural producers.

- Promote agroforestry as an integral component of farm management and incorporate it as a part of the comprehensive land and water management planning within each sub-catchment or planning unit.
- Extend the assessment of the impacts of log-haul trucks on the local and district road network to all rural product haulage and develop a fair and equitable formula for road upgrading and maintenance contributions from all rural product hauliers in proportion to their impacts on those roads.
- Local government and the community to consider visual impact guidelines for tree plantations to minimise any adverse impacts on the visual landscape of rural areas.

### Implementation

- CALM, DoAg and other State agencies to pursue, through appropriate Commonwealth agencies, the options for incentives, credits, subsidies, etc. to facilitate the widespread acceptance and adoption of agroforestry as a natural component of agricultural land use throughout the region.
- DPI to extend its log-haul road impacts assessment to all rural product hauliers.
- DPI to finalise the Farm Forestry Policy taking into account the above policy/strategy and work with local government in its implementation.
- Local government to continue to support the development of tree plantations as an acceptable agricultural crop.
- Rural community to adopt tree planting in the form of agroforestry as an automatic inclusion in any farm planning or farming operation.



Agroforestry can take a range of forms, such as widely spaced rows with grazing between, parkland spaced trees with grazing between, tree belts with cropping or grazing between or tree clumps surrounding intensive uses. (Photos by courtesy Richard Moore, CALM)



## 5.7 Rural Subdivision

### Issue

Rural subdivision has long been a contentious issue, with some landowners supporting the concept of having an inalienable right to subdivide their land as and when they choose, while others complain of adverse impacts on their bona fide agricultural activities by inappropriate adjacent subdivision and development. In accordance with *Statement of Planning Policy No. 2.5 Agricultural and Rural Land Use Planning Policy* and *Development Control Policy DC 3.4*, detailed subdivision criteria should be addressed in the regional and local planning strategies.

### Background

- There has been a long-held concept that all rural lots should be not less than 40ha in area, regardless of location, capability, constraints or other factors, although in recent years many have accepted smaller lot sizes for various intensive uses.
- DoAg has contended that the future of economic agriculture in this State rests with the export market, which requires large lot sizes for viability and capacity to sustain production (e.g. 200ha minimum for general agriculture and 80ha for high-capability land for intensive production).
- Many rural landowners have viewed their land as a “superannuation policy”, whereby they can subdivide and sell off a portion of their farm to give them financial security in retirement.
- Other rural landowners have viewed the option to subdivide part of their farm as a basis for generating the capital necessary to expand, diversify or intensify their productive activities.
- As indicated in Table 3, there is already a range of various lot sizes within each rural district to satisfy requirements for agricultural use.
- A number of local governments in areas of rural population decline have considered the option to subdivide existing farms to generate a “subdivision-led recovery”.
- There has been a number of suggestions that small family farms are more productive, more efficient and more environmentally responsive than larger corporate farms.

### Opportunities

- Financing retirement security or expansion of activities through subdivision can be a method of taking those steps, which may otherwise be unavailable to many rural landowners.
- Amalgamation and re-subdivision of existing farms consisting of multiple titles, to create one large operational farm title plus an equivalent number of small rural lots, can be a means by which viable farms are not broken up by selling off existing titles separately.
- Amalgamation and re-subdivision can allow adjoining neighbours to rationalise lot boundaries to follow topographic or man-made features or to allow for rational farming operations, rather than being controlled by rigid north-south or east-west survey alignments.
- *Statement of Planning Policy No. 2.5 Agricultural and Rural Land Use Planning Policy* provides specific criteria for the creation of homestead lots.
- Amalgamation and re-subdivision of existing farms can be a valuable tool in implementing sub-catchment strategies that seek to:
  - rationalise water resource use, water harvesting and distribution infrastructure;
  - facilitate more productive farming operations by aggregating suitable soil types and appropriate land areas;
  - facilitate biodiversity conservation;
  - arrest and reverse land degradation processes;
  - facilitate protection of landscape features; and
  - achieve other desirable outcomes.
- Setting up a pilot sub-catchment strategy and associated amalgamation/re-subdivision of the farms could be a valuable demonstration of the process and the significant benefits considered likely to be able to be achieved.
- Improving the productive capacity of a sub-catchment in this way can afford the opportunity of creating additional viable farming operations, and the proceeds of the sale of those new farms can form part of the funding arrangement towards implementing the sub-catchment strategy.
- The environmental and economic benefits resulting from a sub-catchment strategy can bring additional social benefits also, with an increased local population.
- Boundary rationalisations can be used to resolve access issues for landlocked rural lots.



Annual horticulture crops.

### Constraints

- Creating smaller lots for non-productive uses in a rural area can create conflicting land uses and be a constraint on agricultural production on adjacent lots.
- Ad hoc subdivision for non-productive purposes generally increases the land values in the area, which can render marginally viable farming operations unviable due to parallel rises in rates and taxes.
- Reducing farm lot sizes can constrain the productive capacity due to economy of scale, restrictions on large machinery (e.g. centre pivot irrigators) and workforce flexibility.
- Smaller farms are often not viable in this era of large-scale production for market share.
- Fragmentation of water supplies and high-capability land reduces the versatility of the land and the options for future diversification.
- Many smaller lots created don't make adequate allowance for the inclusion of a sufficient area of high-capability land, the capture and storage of a sufficient quantity of good-quality water, the siting of a residence in a location which does not constrain adjoining productive uses, and the retention of existing vegetation.
- The ongoing concept of subdividing a farm as a means of financing retirement or further development is not sustainable.
- Once subdivided and sold, it can be difficult and expensive to buy back and re-amalgamate traded portions of a farm to restore its original productive capacity.
- Increasing the number of smaller lots leads to greater infrastructure and servicing costs.
- In other countries, smaller farms often rely on government subsidies to maintain viability, but the Commonwealth Government has made it

quite clear that such subsidies will not be made available in Australia.

- Non-agricultural uses can sterilise the use of high-capability agricultural land for its “highest and best” use.
- Successful development and implementation of sub-catchment farm restructuring strategies will depend heavily on gaining overwhelming landowner support within that sub-catchment.
- Advice from DoAg indicates that at least a minimum of 30ha of high-capability land and additional land for farm infrastructure is required to provide a sustainable farming unit for a reasonable range of agricultural production activities.

### Community Consultation Responses

- There was strong opposition to the inappropriate subdivision and fragmentation of agricultural land and the introduction of incompatible land uses, but at the same time, some suggested rural landowners should retain the right to subdivide their land.
- There were several suggestions that subdivision might be used as an opportunity to intensify land uses and specialise in new crop types.
- A number of landowners expressed concern at over-regulation and the potential for excessive bureaucracy, which might restrict private enterprise and creativity.



Perennial horticulture crops.



## Policy/Strategy

The following subdivision criteria should be used as the basis for assessment of applications and as a guideline for detailed criteria to be incorporated into local planning strategies:

### 1. Agriculture and Priority Agriculture Zones:

In order to protect the productive capacity of agricultural land and the basis of State, regional and local economies, there is a general presumption against the further subdivision of land in the Agriculture and Priority Agriculture zones, except where it can be clearly demonstrated that the subdivision **will be beneficial** to viable and sustainable agricultural production and land management on the subject land and **will not be prejudicial** to similar production and management on adjoining lands. Subdivision approved under this criteria shall have a minimum lot size of 80ha.

**In addition**, in the case of subdivisions creating new or additional lots in the Agriculture or Priority Agriculture zones, new lots of less than 80ha will not be supported, except where the lot is a minimum of 40ha and all of the following criteria are met:

- An agronomist's report or similar demonstrates that each new lot will contain a minimum of 30ha of land with a high-capability rating (class 1 or 2) for annual or perennial horticultural production.
- A hydrologist's report or similar demonstrates that each new lot has long-term, secure access to a supply of water of a sufficient quantity and quality as applicable to the potential agricultural production on that land, and the Department of Environment is prepared to agree that the capture of that water is within the limits of an endorsed water allocation management plan or is within the sustainable yield for that sub-catchment.
- The total lot area incorporates the minimum area of 30ha of high-capability land, **plus** the water capture and/or storage area (as necessary), **plus** an area for farm infrastructure and buildings with sufficient setback from adjoining properties so as not to restrict potential agricultural productivity on those properties, setbacks from watercourses and wetlands, **plus** the retention of any remnant vegetation that should be protected from clearing.

### 2. Agricultural Trade Lots:

In providing for farm build-up, the creation of an Agricultural Trade Lot will be supported in the Priority Agriculture and Agriculture zones where:

- the lot is a minimum of 40ha;
- there is a statutory restriction imposed that prohibits the development of a dwelling on the lot and the lot does not contain an existing dwelling; and
- the lot is "tied" by title as an Agricultural Trade Lot.

### 3. Farm Restructuring:

In the case of farm restructuring or boundary adjustment, the principal issue of consideration in assessment will be improving the sustainability and long-term agricultural viability of the farming operation and observing the primary principle of protecting and enhancing the productive capacity of agricultural land. Where a farm consists of multiple titles and the proposal is to consolidate the main operation into a single title, consideration will be given to the creation of lots smaller than the outlined criteria, provided that:

- The smaller lots have sufficient size to allow for the construction of a dwelling and other small farm infrastructure and buildings with sufficient setback from adjoining properties so as not to restrict potential agricultural productivity on those properties.
- The smaller lots are located to have minimal adverse impact on the viability and sustainability of the main farming property.
- The total number of resulting lots is not greater than the original number of lots.
- In the case of lifestyle lots, the land is located within 10km of a major townsite.

For the purpose of this clause, a "lifestyle" lot is a lot that does not comply with the criteria outlined for subdivision of land designated Agriculture or Priority Agriculture in subdivision criteria 1.

Variations to this theme may be considered on their individual merits in line with these basic principles.

In the case of farm rationalisations, where boundaries are realigned along existing fence lines, contours, creek lines, ridge lines, other topographic features or similar, rather than along rigid survey alignments, subdivision is and will be supported where it can be clearly demonstrated that the changes will be beneficial

to viable and sustainable agricultural production and land management on the subject land and will not be prejudicial to similar production and management on adjoining lands. Special variations to these criteria may be stated for each planning unit according to the specific circumstances that apply within that planning unit. As stated in *Development Control Policy DC 3.4 Subdivision of Rural Land*, the Commission may approve subdivision of rural land where:

- the new boundaries reflect good environmental and land management practices;
- no additional dwelling entitlements are created or where the dwelling entitlements are removed or reduced; and
- the proposal is intended to facilitate the ongoing agricultural usage on all of the lots in the locality.

Rural-residential or rural smallholdings subdivisions will not be supported unless the land is designated for that purpose in the local planning strategy or rural strategy and until the land has been rezoned for that purpose.

#### 4. Rural Landscape Protection Zone:

Criteria for subdivision in the Rural Landscape Protection zone will vary in each planning unit according to the specific circumstances that apply within that planning unit and are to be detailed in the local planning strategies and town planning schemes.

#### 5. Specific Purpose Rural Smallholdings:

In providing for the development of specific precincts to facilitate intensive agricultural development through allowing subdivision to create lots of less than 40ha, a local government may identify land with specific characteristics for that purpose. This process should be undertaken as part of the development or revision of the local planning strategy, and the land designated as Rural Smallholding in that document, and will be required to be zoned for that purpose under the town planning scheme prior to subdivision being considered.

#### 6. Sub-Catchment Farm Restructuring:

Amalgamation and re-subdivision of existing farms within a sub-catchment will be supported where an endorsed sub-catchment strategy indicates clear benefits to landcare, environmental rehabilitation, natural resources management, agricultural productivity and

sustainability. The establishment of a suitable pilot sub-catchment strategy will be considered a priority.

#### Implementation

- WAPC to adopt these criteria and apply them in the assessment and determination of subdivision proposals within the rural areas of the region.
- Local governments to adapt these criteria to their local planning strategy/town planning scheme.
- WAPC and local government to continue to work with the rural community to refine these criteria to address community aspirations and principles of sustainability.
- WAPC, local government and relevant agencies to work together with the rural community and landcare groups to identify a suitable location for a pilot sub-catchment strategy.



*Broadacre grazing/cropping.*



## 5.8 Rural-Residential

### Issue

With the growth in popularity of rural lifestyle living, rural-residential development has flourished, but often to the detriment of the environment, rural resources, productive agricultural land and urban services.

### Background

- Over the past 30-40 years, increasing numbers of people have sought to move out of urban areas to seek the lifestyle advantages of living in a rural or bushland setting.
- Originally, those people rejected urban-type services and facilities (e.g. roads, power, water, phones), but subsequently rural-residential communities have been demanding such facilities, usually at a cost to the rest of the community.
- Rural-residential estates were often speculatively driven and consisted of a standard layout of one-or two-hectare lots in a pattern that gave little consideration to landscape or environmental values or existing agricultural activities.

### Opportunities

- There are opportunities to provide for these lifestyle options on generally unproductive land within proximity of urban services.
- Appropriate data is now available to assess and identify agricultural areas of State, regional or local significance to protect them from competing or conflicting land uses, such as rural-residential, simplifying the task of identifying suitable areas for rural-residential estates.
- A number of revolutionary design concepts have been developed in recent years, whereby landscape and features and environmental values, etc. have been protected and even enhanced by careful analysis and flexible designing.
- Clustering of lots can afford greater opportunity to protect landscape and features and environmental values, etc. and can facilitate more economical servicing of the estate.
- WAPC has expressed a desire to consider a range of options to improve the standard and function of rural-residential estates.
- Agriculture Western Australia (as it was formerly known) produced a practical guideline

booklet for owners of small rural landholdings in WA.

### Constraints

- Inappropriately located and designed rural-residential estates can have a significant detrimental effect on productive agricultural land and the district economy through factors such as taking over good-quality productive land, restricting adjacent productive activities through buffer requirements and introducing land management issues such as weeds, animals, diseases and fire hazards.
- Similarly, there can be unacceptable impacts on adjacent State forests, national parks and nature reserves through weeds, animals, fire management and increased people pressures.
- Ad hoc development of rural-residential estates on the fringes of towns can severely compromise or restrict townsite expansion options.
- Rural-residential estates can develop with a mix of conflicting uses and resident intentions, e.g. quiet lifestyle as opposed to truck storage or builder's yard.
- Regular one-or two-hectare subdivisions imposed on a visually attractive or environmentally sensitive landscape are often highly damaging to those existing values.
- Speculative land purchasing for prospective rural-residential estate development can create significant rises in values of farming land, further eroding the viability of economically vulnerable operations.
- Rural-residential estates can create future demands for services and facilities that are difficult and expensive to provide.
- Rural-residential developments are often based on speculative assessments rather than guided by a calculated demand analysis.

### Community Consultation Responses

- There was recognition of the need for choice of lot and housing types by allowing for some rural-residential development, but there was strong support for protecting productive agricultural land from conflicting land uses and developments.
- There needs to be careful planning and control provisions to avoid conflicts with agricultural land.
- Rural-residential estates should be located only in close proximity to urban areas, where adequate servicing is feasible and affordable.



## Policy/Strategy

A prerequisite to the endorsement of any local government strategy or policy that identifies Rural-Residential zones or policy areas will be an assessment of all rural land to identify the agricultural areas of State, regional and local significance. No Rural-Residential zones or policy areas will be supported within or adjoining those areas. In addition, it will be necessary for the local government to demonstrate a demand for the scale and type of rural-residential development proposed. Generally, all rural-residential development should be located within 5km of a significant urban area.

The general criteria for rural-residential subdivision is to provide lot sizes ranging from one to four hectares. It is necessary to produce lots large enough to satisfy the lifestyle, amenity and privacy expectations of the prospective owners, while at the same time not wasting the land resource or creating lots beyond the capacity of landowners to manage sustainably.

WAPC has a general presumption against the creation of further traditional uniform pattern rural-residential subdivisions, which pay little respect to the special landscape, topographical or environmental characteristics of the parent lot. However, it will favour the clustering of lots or other methods of conserving and enhancing the intrinsic features of the site and its setting. To this end, no specific minimum lot size will be set, but rather the expectations of conservation and enhancement are emphasised and the overall lot density limits will be stated.

The prerequisites to approval of a rural-residential subdivision are:

- identification of the land in an endorsed local planning strategy/town planning scheme;
- endorsement of a structure plan for the whole estate; and
- rezoning to Rural-Residential.

The required structure plan should address issues, including:

- identification and evaluation of the intrinsic topographic, landscape, environmental, visual, cultural and amenity features of the site and its setting and measures to protect and enhance those values;
- accessibility, connection to adjoining areas and movement patterns within the estate;
- road layout and lot configuration;
- provision of services, infrastructure and community facilities;

- availability of water supplies for household, firefighting, domestic garden and other purposes (NOTE: *Statement of Planning Policy No. 2.5* stipulates the mandatory provision of a reticulated potable water supply);
- buffer to existing and potential land uses and development on any adjoining agricultural land (NOTE: All buffer requirements shall be provided within the parent lot of the rural-residential estate, such that bona fide agricultural production on adjoining rural land is not compromised or restricted);
- tenure types, including strata titles; and
- permitted, discretionary and not permitted uses and development criteria.

In addition, the structure plan and provisions should ensure that rural-residential developments and land uses and land management on properties abutting national parks, State forest, nature reserves and other conservation value areas are consistent with the conservation objectives for those areas and that actions are taken in respect of the freehold land to minimise any adverse impact on the visual quality, conservation values and management of those conservation areas.

## Implementation

- WAPC to adopt these criteria and apply them in the assessment and determination of subdivision proposals within the rural-residential areas of the region.
- Local government to identify agricultural areas of State, regional and local significance and proposed Rural-Residential zones or policy areas in close proximity to urban areas where appropriate servicing is feasible and affordable and where there will be minimal impact on productive agricultural land.
- WAPC and local government to continue to work with the rural community to refine these criteria to address community aspirations and principles of rural sustainability and lifestyle choice.

## 5.9 Rural Smallholdings

### Issue

There are constant demands for the creation of more small farming lots for productive purposes, but these lots can fragment productive agricultural land and introduce non-agricultural uses which conflict with surrounding productive agricultural potential.

### Background

- In the original subdivision of rural land, some smallholding lots (i.e. four to 40ha) were created among the larger farming lots and further smallholding lots have since been created as a result of subsequent subdivision of larger lots.
- Some smallholding lots are operated as viable full-time farming operations, others are used as a part-time undertaking and some are used as a lifestyle option.
- Smallholding lots generally have not been concentrated into specific areas, but rather may occur randomly throughout rural areas.

### Opportunities

- Smallholdings can support the production of high-value niche market products (e.g. herbs, cherries).
- Smallholdings provide opportunities for part-time rural production.
- Selecting areas close to urban facilities can maximise the opportunities for part-time or niche market production while minimising the adverse impacts on other productive agricultural land.
- Commercial production from rural smallholdings can exceed the amount of production that would be generated by a similar area of larger farm holdings.
- Various methods can be used to ensure that a purchaser of property in a Rural Smallholdings zone is fully aware of the potential consequences of living in a rural production area.
- Agriculture Western Australia (as it was formerly known) produced a practical guideline booklet for owners of small rural landholdings in WA.

### Constraints

- Inappropriately located smallholdings can be a waste of good productive agricultural land and can cause restrictions on the productive potential of adjoining agricultural land.
- Smallholding lots are often too small to be viable production lots.
- Smaller lots can present difficulties for capture and storage of water and placement of a residence.
- Smallholding lots can generate subsequent demands for the supply of services and infrastructure.
- Smallholding lots may prove attractive as lifestyle lots, with subsequent potential for land use conflicts with surrounding lots and activities.

### Community Consultation Responses

- There was general support for the concept of allowing for smallholdings and hobby farming, but not at the expense of productive agricultural activity.



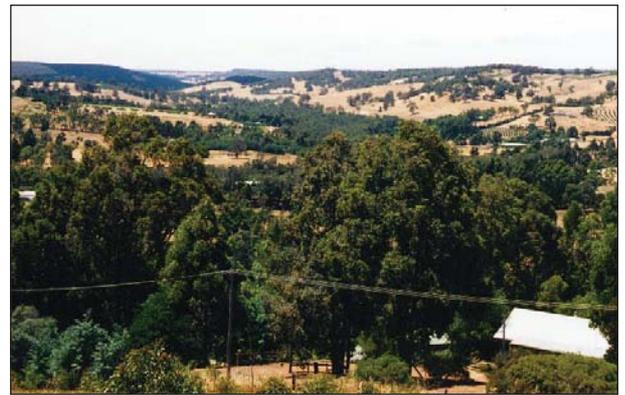
Rural smallholdings

### Policy/Strategy

- Assess and demonstrate the need, level of demand and type or theme of smallholdings intended and the perceived benefit to the district.
- Identify an appropriate area or areas generally within five kilometres of an urban area for development as a rural smallholdings area. Priority Agriculture land should not be considered for rezoning to Rural Smallholdings, and generally these estates should not occupy land that would otherwise be zoned as Priority Agriculture. However, it may be acceptable to include some high-capability agricultural land, provided there is minimal conflict or restriction placed on the productive capacity of adjacent agricultural land.
- Prepare and endorse a subdivision guide plan, addressing issues including road layout, lot sizes, service and infrastructure provision, protection of remnant vegetation, landscape features, waterways and wetlands, etc., proposals to maximise the productive capacity of the land and minimise land use conflicts, and provisions for home business, industry or tourism uses.

### Implementation

- WAPC to adopt these criteria and apply it in the assessment and determination of subdivision proposals within the rural smallholdings areas of the region.
- Local government to assess all rural land to identify the agricultural areas of State, regional and local significance and identify Rural Smallholdings zones or policy areas in close proximity to urban areas where appropriate servicing is feasible and affordable and where there will be no adverse impact on productive agricultural land.
- WAPC and local government to continue to work with the rural community to refine this concept to address community aspirations and principles of rural sustainability and lifestyle choice.



Rural smallholdings.



## 5.10 Tourism Developments

### Issue

In recent years, there has been an increasing trend to establish low-key tourist accommodation on farms to take advantage of the unique attractions of the region, but this has also created conflicts with adjacent agricultural activity.

NOTE: A full tourism strategy for the region was included in the *Warren-Blackwood Regional Planning Strategy*, where the economic significance of tourism to the region was acknowledged and fully supported. In this Strategy, it is only intended to deal with tourism uses in relation to rural land, agricultural production and natural resources management. This Strategy acknowledges and supports the potential economic and social benefits of tourism as an adjunct to agricultural production and diversification of farm activity and income.

### Background

- The unique natural landscape and environmental attractions, in conjunction with the agricultural activity and proximity to the metropolitan market, provide a basis for a strong regional tourism industry featuring low-key developments in conjunction with existing farming operations.
- Over the past 20 years, there has been increasing interest in becoming involved in rural tourism as a diversification of the farm activity and income.
- This development has also coincided with increasing conflicts between tourism uses and agriculture with resultant constraints on productive agricultural uses and activities on adjacent rural lots.
- The challenge is to be able to reap the rewards of farm-based tourism without creating adverse impacts on agricultural activity or the natural environment in the district.
- Some larger-scale tourism projects have been developed successfully in the region, and there is potential for more.

### Opportunities

- The region and its attractions offer considerable scope for further development of

tourism accommodation facilities, large-scale tourism projects and low-key farm-stay units.

- Farm-stay tourism offers potential for diversification of farm activity and economic income.
- The farm tourism industry also offers significant local and regional economic and employment benefits.
- Tourist chalets provide considerable flexibility for placement in locations where they can take maximum advantage of site attributes, but have minimal impact on landscape or environmental values or adjacent agricultural activity.
- Farm activity forms part of the attraction and tourist experience.
- Ecotourism and nature-based tourism activities can contribute significantly to biodiversity conservation and natural resources management objectives.

### Constraints

- Poorly located tourist facilities can create considerable conflict with adjacent agricultural activity and can severely constrain those operations, even when the adjacent agricultural activity predated the tourism development.
- Similar constraints can affect adjacent potentially productive agricultural land.
- Tourist facilities also can restrict the potential productivity on the same lot as the tourism uses.
- Poorly located and/or managed tourist facilities also can have negative impacts on adjacent State forest, national parks and nature reserves.
- Inappropriately located, designed or managed tourism development can diminish the intrinsic landscape, environmental or cultural values of the original attraction.

### Community Consultation Responses

- There was strong support for well-designed tourism and ecotourism developments in rural areas due to the local and regional economic and employment benefits.
- Tourism development should be permitted in rural areas only where it will not conflict with existing or potential agricultural uses.
- Clear policies and conflict-resolution mechanisms are required where rural conflict occurs.

## Policy/Strategy

Support the development of low-key tourist units (i.e. up to five chalets or similar) on rural land where this is compatible with and complementary to the natural resources management objectives set out in this Strategy.

- A development application should be required for all tourism development in rural areas, even where it is listed as a “permitted use” in that particular zone.
- Criteria to address location, access, setback, design, landscape protection, fire management, conflict avoidance, etc., to be developed by each local government to suit local and site circumstances.
- In addressing boundary setbacks and possible conflicts with adjacent agricultural activities, consideration must be given to existing and potential future productive uses on those lands.
- Specific criteria also to be developed by each local government for setbacks from, protection of, and minimising the adverse impacts on, adjacent State forest, national park or nature reserves or on-site or adjoining remnant vegetation.
- Ensure that tourism developments, land uses and land management on properties abutting national parks, State forest, nature reserves and other conservation value areas are consistent with the conservation objectives for those areas and that actions are taken in respect of the freehold land to minimise any adverse impact on the visual quality, conservation values and management of those conservation areas.
- Support also larger-scale tourism projects in appropriate locations where these are compatible with and complementary to the natural resources management objectives set out in this Strategy, subject to appropriate prior rezoning.
- Formulate a regional tourism development and management plan (as outlined in the *Warren-Blackwood Regional Planning Strategy*) and incorporate its outcomes into this Strategy and the local planning strategies.
- Assess and identify specific precincts in which tourism developments may be recognised as a (or the) primary use.

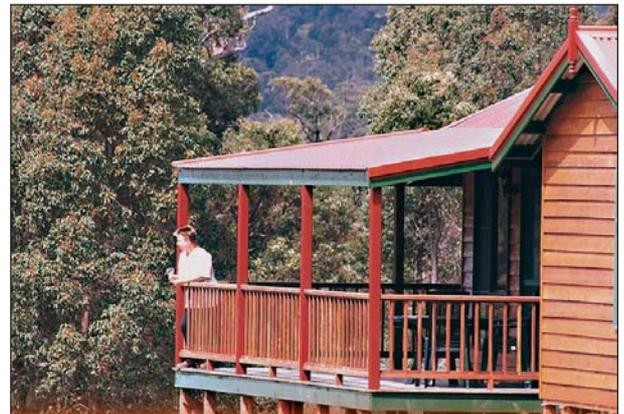
## Implementation

- Local government (with assistance from DPI and others) to develop guidelines and criteria for addressing rural tourism developments.
- Develop the regional tourism development and management plan (as outlined in the *Warren-Blackwood Regional Planning Strategy*).



(Photo by courtesy Diamond Farm Chalets)

*With careful planning, low-key tourist chalets can complement agricultural operations and natural landscape areas, providing additional local tourist accommodation, diversified farm income and a boost to the local economy.*



(Photo by courtesy Walpole Wilderness Resort)



## 5.1.1 Regional Transport

### Issue

Increasing rural production leads to increasing transport demands, which raises the conflict of heavy vehicles and light vehicles on a road system that has not necessarily been upgraded in accordance with those increases in traffic volumes and tonnages.

### Background

- The expansion, intensification and diversification of agricultural production in the future will increase the pressure on the road network by heavy haulage vehicles.
- The current levels of road funding are unlikely to lead to a substantial improvement in the general standard of the regional road network.
- The distances to markets and the port increase the pressures to use larger bulk transport vehicles.
- There is increasing pressure from transport companies and producers to allow for unrestricted access for road haulage.

### Opportunities

- The economics of rail transport are maximised where regular large tonnages are hauled over long distances from a point source to a fixed destination (e.g. as in the mining industry). Other benefits of rail over road are the increased safety for other road users, greater fuel efficiency and lesser environmental impacts.
- The principal advantages of road transport are its flexibility in terms of timing, direction and load type and its cost effectiveness under the current funding arrangements.
- Local processing of products from the region can reduce substantially the volume and weight of product to be transported and can present opportunities for combining road/rail transport if the processing plant or estate is located on or adjacent to an existing rail facility.
- Road-rail combinations can be effective if transfer stations are placed conveniently between the product source and the port (preferably close to the source) and where double handling of the product can be minimised or eliminated.
- Under its code of practice, the plantation timber industry has an arrangement for local roads whereby individual plantation owners

advise the local government of their harvesting intentions 18 months in advance, agree on a haulage route to be used, agree on any special restrictions, carry out any required road modifications prior to harvesting and repair the road to its previous standard at the completion of harvesting.

- The *Agricultural Economic Potential of the Warren-Blackwood Region* (as attached), carried out as technical background for the strategy, has produced a series of future development scenarios for each district which will assist in determining the future transport implications under each scenario.

### Constraints

- Due to the geographical spread of plantations and other broadacre agricultural activity, product from this source is not readily suited to collection by rail, but rather would require trucking to a rail transfer station, if rail was to be the primary form of transport.
- Rail transport does not have the same degree of flexibility as road transport to accommodate variables in product cartage (e.g. time, direction, etc.) and is at a disadvantage in terms of funding.
- The South Western Rail line has additional issues constraining its economic competitiveness, including steep grades (1:40) which require a second locomotive to assist for relatively short distances, inferior track and base engineering and geometry which restrict loads and speed of travel and the cost of maintenance and upgrading can be recovered only from the single line user at this stage.
- If road-rail transfer involves double handling of products, there are additional cost and time delays and greater likelihood of product damage.
- Road haulage has the disadvantages of cost of road construction, road improvement cost, damage to the road surface, road safety, traffic delays, discouragement to tourism traffic, social disruption to towns en route, lesser fuel efficiency and greater air pollution.
- The local governments have raised considerable concerns about the impacts of log-haul trucks on the local and district road system and the potential effects on the viability of other agricultural activities resulting from a degraded road network.
- Many products are exported or sent to Perth in their raw form, requiring greater tonnage and



volume to be transported and reducing the opportunity for road-rail transfer.

- Considerable emphasis is being given to the impacts of timber haulage trucks and the need for special contributions to be made for road upgradings, which may be inconsistent when the impacts of other traditional agricultural products is considered.
- There is a deficiency in the east-west linkages for truck transport between Scott Coastal Plain and Manjimup and from the Boyup Brook area to North Greenbushes.

### Community Consultation Responses

- There is growing concern at the amount of damage being done to the regional, district and local road system by heavy haulage vehicles and the impacts on other road users.
- There is insufficient funding allocated to maintain or develop the road network to an acceptable level and meet the growing demands from the various road users.
- Most people strongly prefer the use of rail transport wherever possible.

### Policy/Strategy

- Reassess the road infrastructure and upgrading requirements across the region, taking into account the impacts of heavy transport serving the plantation timber industry, other agricultural industry and industry generally.
- Review the regional road strategy in Figure 8 of the *Warren-Blackwood Regional Planning Strategy*.
- Identify the transport infrastructure funding priorities for the region.
- Assess specifically the need for improved east-west truck transport linkages, especially between Scott Coastal Plain and Manjimup and from the Boyup Brook area to North Greenbushes.
- Identify the opportunities for additional users of the rail line to Manjimup to spread the cost of rail maintenance and upgrade and ensure greater security for ongoing usage.
- Assess the potential for a sub-regional industrial processing estate to be established adjacent to the rail line to Manjimup to encourage downstream processing and maximise transport efficiency, including rail haulage from the processing area to the port.
- Assess the potential for a road-rail transfer facility to be established in conjunction with the industrial estate to encourage other unprocessed product to be transported to the port by rail.
- Examine the potential to utilise road-rail wagons or stacked product for easy, one-man reloading to minimise double handling inefficiencies with road-rail transfer.
- Wherever practical, upgrade existing log-haul roads within State forest or other less well used roads to minimise conflicts with general highway traffic.

### Implementation

- WAPC/DPI is currently carrying out a study to identify a suitable sub-regional industrial processing site adjacent to the South Western Rail line, including the potential for a road-rail transfer station.
- WAPC/DPI to review and integrate the southern province transport strategy with the *Warren-Blackwood Regional Planning Strategy*.



## 5.12 Land Valuations

### Issue

High rural land valuations related to speculative purchases create additional rating and taxation implications for bona fide agricultural producers and discourage voluntary conservation of land areas.

### Background

- Rural land in the region has become increasingly attractive as a lifestyle option, either as a speculative purchase in anticipation of approval to carry out rural-residential development, smaller lots subdivision, or as a lifestyle investment in its present lot configuration.
- Prospective purchasers with these concepts in mind are usually prepared to pay substantially higher prices for the land than can be achieved when selling for purely agricultural production purposes.
- Several higher-priced land sales in an area will raise the notional value of the surrounding lots to similar levels and this is used as the basis for State Government land valuations, which in turn is used as a basis for taxation and land rates.
- Agricultural producers become liable for higher taxation and land rates without increasing their returns from the land, threatening their viability and forcing some farmers off their properties.
- The main cause of speculative land values appears to be a lack of clear objectives, criteria and standards in planning schemes and regional strategies, which allows for such exploitation and leads to higher valuations.
- Valuations are based on the price the market is willing to pay for a property and according to the highest and best use for which the property could be developed.

### Opportunities

- Clear Sheme zonings with clearly stated objectives, use and development permissibility and subdivision criteria will minimise any development uncertainty and reduce speculative investment in rural land.
- Removing uncertainty and speculative influences would allow market values to reflect the true agricultural value and in turn

government valuations, taxation and land rates would adjust to a more appropriate level.

- Lower taxation and land rates would remove one of the economic constraints currently facing agricultural producers.
- Similar criteria could apply also to areas of freehold land proposed to be set aside for conservation or environmental purposes, where little or no income would be generated but the property is valued as a whole and taxation and land rates levied accordingly.
- Increasing the rates charged to other properties in the district to offset the reduced speculative valuation of farms and the proportionate valuation reduction for conservation/environmental areas on farms would ensure that the community shares the cost of the environmental, social or economic benefits it derives.

### Constraints

- Lack of clarity and certainty in planning schemes and government policies (e.g. subdivision) have facilitated speculation on rural land, with consequent impacts on valuations, taxation and land rates.
- Pursuing a situation of certainty within planning schemes and government policies can reduce flexibility to allow for variations for special circumstances.
- Speculation-induced high land values can reduce the economic viability of a farming operation and have spin-off impacts on local and regional economies if farms go out of production or are scaled back in productivity.
- Farmers will not be encouraged to set aside any parts of their landholdings for conservation or environmental purposes if they are still levied full taxation and land rates for that area without being able to earn full income from it.
- Local governments may have their rate base eroded by reduced land valuations and rating ability, leaving the remainder of the community responsible for picking up the shortfall through a higher rate on their own properties, unless these concessions can be covered by a corresponding increase in government grants or similar to local government.

### Public Consultation Responses

- The community raised concern at the impact rising land values and land rates were having on the viability of farming operations.



### Policy/Strategy

- Clearly identify and delineate all Agriculture, Priority Agriculture, Rural Landscape Protection and other specific purpose rural zones, set clear zone objectives, use controls and subdivision criteria and clarify that conflicting uses (such as rural-residential) are not permitted.
- Clearly identify and delineate all Rural-Residential, Rural Smallholdings and other specific purpose semi-rural/semi-urban zones and set clear zone objectives, use controls and subdivision criteria.
- Seek revaluation of rural areas according to those new zones, objectives, use controls and subdivision criteria.
- Apply differential ratings to the agricultural areas to ensure rate charges are proportional to the potential property income and viability level.
- Allow special taxation and land rate concessions for endorsed areas to be set aside for conservation/environmental purposes where conservation covenants have been established.
- Adjust the land rates levied on the balance of district properties to ensure that the community that benefits economically, environmentally and/or socially from the rural land or conservation areas, shares the cost burden.
- Seek special incentives, concessions or government grants to facilitate these objectives.

### Implementation

- WAPC and local government to identify the zones and develop the provisions and criteria necessary to achieve clarity of opportunities and constraints for rural areas, using the base established in this Strategy.
- Valuer General's Office to consider valuing rural properties strictly in accordance with the actual use and development potential set out in the town planning schemes, rather than any market-led speculative value, in all future rural revaluations.
- Community to accept a share of the cost of the environmental, social and economic benefits it receives from protecting the productive potential of agricultural land and protecting special conservation/environmental values on rural land within its district.





## 6.0 REGIONAL ZONINGS

### 6.1 Resource Assessment Process

The non-urban areas of the region have been analysed for agricultural significance, as detailed in the attached supporting report, *Areas of Agricultural Significance: Warren-Blackwood Rural Strategy*. In summary, this was achieved by identifying the areas of high land capability (70 per cent plus) for annual and perennial horticulture and intersecting that with the areas of high water availability. Water availability was calculated for each sub-catchment as the difference between the current use and the estimated sustainable yield. Where there was a significant concentration of high land capability and water availability or concentrations of current annual or perennial horticultural production, those areas were noted as having potential State or regional significance for agriculture.

In some areas, it was necessary to include some other factors to refine that assessment. This included the Scott Coastal Plain, where land capability for annual or perennial horticulture was generally low due to winter waterlogging, but high for summertime only annual horticulture. Combined with the high groundwater availability, this indicated the area as having State significance. In other areas, such as to the north and south of Boyup Brook, there were areas of some concentration of high land/water potential, but they were relatively small and isolated. Based on local consultation, these were not included. Other areas may be included in the local planning strategies as areas of local agricultural significance by the respective local governments.

Map 8 indicates the outcome of that assessment, with the areas of agricultural potential of State or regional significance highlighted.

### 6.2 Conceptual Rural Zonings

The areas of agricultural potential of State or regional significance were then translated into conceptual rural zonings, as depicted on Map 9. With some minor refinement, those areas of agricultural potential of State or regional significance became the Priority Agriculture zone and the remainder of the freehold rural land is shown as Agriculture zone, with the exception of several areas which were considered, because of special landscape or environmental factors, to be appropriate for a Rural Landscape Protection zone (or Special Control Area).

At the regional level, these conceptual zonings are deliberately shown in “blob” form, with no cadastral base, because the broadscale assessments of the Strategy do not allow for the resolution of detail to such a fine extent. Each area has been rounded off and some smaller or isolated lots may not be included in the regional zoning map. As a component of the local planning strategy assessment process, each local government has considered its own agricultural areas of local significance and has taken into account local topographic, infrastructure, social, economic and other factors to refine the broad regional zoning to local cadastral detail. Any discrepancies resulting from that process should be insignificant.

### 6.3 Zone Objectives

*Statement of Planning Policy No. 2.5 Agricultural and Rural Land Use Planning Policy* sets out two rural zones (Priority Agriculture and General Agriculture), which are to be used as the basis for all regional and local planning strategy and scheme rural zones. A key objective of the Strategy is to implement that policy. However, during the rural land and water assessment process, the study management group became concerned that these two terms, listed in the order they were, created a perception that Priority Agriculture represented the rural land of agricultural value and that General Agriculture was for rural land of little significance. The group stressed that all agricultural land within the region was considered to be of great importance to the local economy, social structure of the district, visual landscape and the identity of the region. It was the group’s resolution that the rural land should be zoned as Agriculture and it should be listed first to emphasise its primacy and importance. Priority Agriculture can then be seen as a subset of the Agriculture zoning, indicating that the area had special or superior qualities that warranted additional protection. The Priority Agriculture classification could be shown as an overlay Special Control Area on the Agriculture zoning, or it could be a separate zone in its own right. The Strategy has listed them as separate zones, but the alternative approach is also supported.

The three rural zones in the Strategy are:

- Agriculture
- Priority Agriculture
- Rural Landscape Protection



The broad objectives for those three zones are:

**Agriculture** — The **primary objective** of this zone is to protect the productive capacity of rural land.

**Other zone objectives** are to:

- protect the economic base, social structure, visual landscape and regional and local identity of the area;
- protect the land, water and biodiversity resource base;
- arrest and reverse land degradation;
- promote farm planning integrated and co-ordinated with the catchment/basin plan;
- facilitate sustainable diversification and intensification of agricultural production;
- limit and control conflicting or incompatible land uses and potential restrictions on surrounding productive capacity; and
- allow for other non-agricultural uses in appropriate locations where they will have minimal adverse impact on other objectives.

**Priority Agriculture** — The **primary objective** of this zone is to provide a higher level of protection to the productive capacity of the land and the key land and water resources that underpin it. **Other zone objectives** are to:

- protect the economic base, social structure, visual landscape and regional and local identity of the area;
- protect the land, water and biodiversity resource base;
- arrest and reverse land degradation;
- promote farm planning integrated and co-ordinated with the catchment/basin plan;
- facilitate sustainable diversification and intensification of agricultural production; and
- limit and control conflicting or incompatible land uses and potential restrictions on surrounding productive capacity.

**Rural Landscape Protection** — The **primary objective** of this zone is to protect and enhance the intrinsic landscape, environmental or cultural values of the area. **Other zone objectives** are to:

- allow for the continuation of existing or creation of new productive agricultural uses where this activity will be compatible with the primary objective of the zone;
- protect the land, water and biodiversity resource base; and
- allow for low-key tourism or similar developments where these are not incompatible with or detrimental to the primary objective of the zone.

NOTE: This “zone” may be incorporated into a town planning scheme as a Special Control Area overlay, if preferred.

Six areas have been shown with this zoning (or Special Control Area):

- Freehold lots along the coastal strip to the west of Black Point and to the south of the Scott River were identified in *Scott Coastal Plain — A Strategy for a Sustainable Future* for landscape protection. This was in recognition of the fragile dune system along the coast, exposure to the Southern Ocean storms, the generally low agricultural potential within the dunes, the attractive and varied coastal heath and woodland vegetation and the presence of a number of rare and endangered species.
- Freehold lots and a pastoral lease on the coast between Black Point and the Donnelly River mouth were also identified in the Scott Coastal Plain report. They had the similar characteristics to the lots to the west of Black Point, but occurred as an isolated pocket within the D’Entrecasteaux National Park, with road access restrictions as well.
- Freehold lots at Sandy Peak and Malimup Springs (to the north-west of Windy Harbour) also have similar characteristics to the lots to the west of Black Point and also occur as isolated pockets within the national park and have very restricted road access.
- Isolated freehold lots set among attractive forested and river foreshore areas within the Walpole-Nornalup National Park have been zoned to minimise their potential impact on the surrounding national park landscape and environmental values.
- The Ramsar listing of the Lake Muir wetlands area justified the need to acknowledge and continue the existing cooperative management of the land uses on the few surrounding freehold lots in that area.
- The lower Blackwood River Valley and the Nannup to Balingup tourism drive have long been recognised by the wider community as being icons of rural landscape value. With the clearing of existing pine plantations and the release of many CALM freehold lots in that area, there was seen to be a need to have a higher level of landscape/environmental awareness and protection.

Refer to the planning objectives, land use categories and subdivision criteria set out for each area in the relevant planning units in Chapter 7.



*Careful land management by landowners (with assistance from CALM) allows for farming activities adjoining Lake Muir to continue without adverse effect on the Ramsar listed wetland.*

#### 6.4 Other Rural Zones

The land use categories outlined for the individual planning units should be referred to as an indication of the primary and secondary uses that may be permitted. All other uses, including rural-residential, rural smallholdings and farm-stay tourism developments of more than five units should be the subject of a formal scheme rezoning.





## 7.0 PLANNING UNITS

### 7.1 Planning Unit Derivation

For the purpose of the Strategy, the region has been divided into 13 planning units, as used for the *Warren-Blackwood Regional Planning Strategy*. They represent the Natural Resources zones that were developed for the South-West by the then DEP, Curtin University and DoAg. Use of these planning units will allow the natural resources to be identified and described in a co-ordinated way and be linked to planning and land use issues.

The Warren-Blackwood Region consists of six major surface water basins, five of which extend into adjoining regions. Each basin is then divided into natural resources management units as set out in Map 10. The surface water basins are:

- Blackwood Basin
- Collie Basin
- Donnelly Basin
- Warren Basin
- Shannon (and coastal streams) Basin
- Frankland Basin

### 7.2 Planning Unit Function

The principal function of the planning units is to provide a convenient link between the natural resources data and management objectives and the planning issues and objectives. This is the most appropriate format to represent these factors at the regional level. The Strategy will provide the framework and guidelines for the preparation of the four local planning strategies/town planning schemes. The local governments may elect to use different planning units within their local planning strategies based on other criteria, more recognisable and relevant to local and community issues. However, the linkages between the two systems will be easy to translate.

Each planning unit is depicted on the regional outline to indicate its location within the region and is superimposed on a cadastral base to show its extent in more detail. The second map shows the Conceptual Rural zones, as set out in Map 9. The planning and natural resources strategies are developed for each planning unit under the sub-headings:

- Planning Unit Description
- Natural Resources Description
- Land Capability and Water Availability
- Major Issues
- Natural Resources Management Objectives
- Planning Objectives
- Land Use Categories
- Subdivision Criteria

The description of each planning unit contains estimates of the area of management categories of Crown land. These figures are accurate at March 2003 and may be modified by the *Forest Management Plan 2004-2013*.

Within the Conceptual Rural Zonings map, the following depictions have been used:

**Agriculture:**

- Within Planning Unit* 
- Outside Planning Unit* 

**Priority Agriculture:**

- Within Planning Unit* 
- Outside Planning Unit* 

**Rural Landscape Protection:**

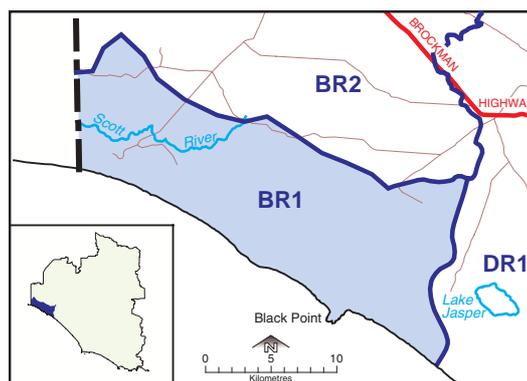
- Within Planning Unit* 
- Outside Planning Unit* 

Within the land use categories, the symbols have the following meanings:

- \* local government planning approval required
- # Environmental Protection Authority approval should be sought

## PLANNING UNIT BR1 SCOTT

Total area — 301sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes half of sub-catchment B5 — Scott River.
- Low to high dunes and sweeping sandy beaches front the south coast, punctuated by a basaltic outcrop at Black Point. Inland of the dunes lies a belt of wetlands, including Lake Quitjup, Gingilup Swamp and the Scott River. The remainder consists of palusplain.
- The coast and the plains are exposed to the strong south-westerly storms; temperatures are moderated by proximity to the ocean; average rainfall is about 1,000mm per annum.
- Large portions of the freehold land to the north of the river have been cleared for agricultural use, predominantly for grazing and dairying, but with large commercial tree plantations and centre pivot irrigated annual horticultural production being established in recent years. The remainder of the area is covered by a rich mosaic of wetland and dunal vegetation, with some areas of forest and woodland. Large freehold lots fronting the coast generally have little agricultural use.
- The planning unit contains minimal infrastructure, with just two constructed gravel roads across the plain, and one three-phase powerline. The nearest urban settlement (Nannup) is about 40 kilometres away by road.

### 2. NATURAL RESOURCES DESCRIPTION:

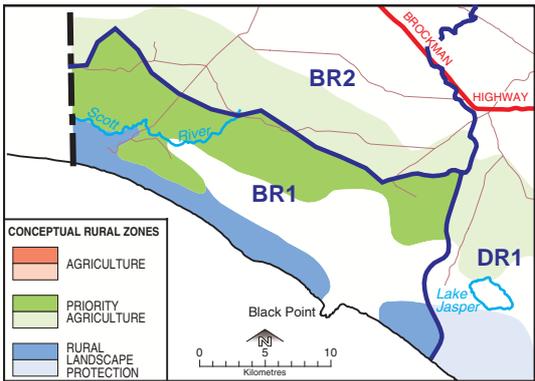
- Soils on the plain are typically poorly drained siliceous sands with dark organic topsoil over coffee rock at depth. In the dunal area, the sands are either siliceous or calcareous. Steep slopes occur among the coastal dunes, particularly towards Black Point. The coastal dunes are very vulnerable to wind erosion where the vegetation cover is disturbed. On the plain, there is potential for wind erosion of exposed soils and for water erosion of fine soil particles.
- The principal waterway is the Scott River, where the water quality is fresh, but there are concerns about nutrient enrichment. Major wetlands include Lake Quitjup and Gingilup Swamp. The whole area is underlain by the deep Yarragadee Aquifer, which has huge reserves of high-quality water, currently being tapped for annual horticultural production and mining and being considered as a possible water source for Perth metropolitan needs. The Leederville Aquifer sits above the Yarragadee and smaller aquifers are located about the fringes or superficially.
- The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 39% of unit
- State forest — 2% of unit
- Other non-freehold — 6% of unit
- Cleared land — 29% of unit
- Remnant vegetation on private land — 24% of unit
- Significant landscape features — rugged coastal landscape (especially Black Point), vegetated coastal dunes and Scott River environs.
- Some rare and priority flora exist on the coastal dunes and adjacent to Scott River.
- Heavy mineral sands deposits exist within the unit and are currently being mined at Jangardup.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- Very limited capability for perennial horticulture due to waterlogging in winter, but annual horticulture has significant capability for summertime only production in most parts. Grazing and commercial tree plantations have moderate capability. Dunal areas adjacent to the coast have low to very low capability for all forms of agriculture.
- There is ample availability of high-quality surface water available for agricultural usage, but the flat terrain and generally sandy nature of the soil render this resource insignificant for productive use. However, huge supplies of high-quality water from the underlying aquifers ensure that water availability is not a constraint to expanded agricultural production in this planning unit.
- There is considerable capacity for expansion of irrigated annual horticultural production (summertime only) on the plains area, using groundwater supplies.

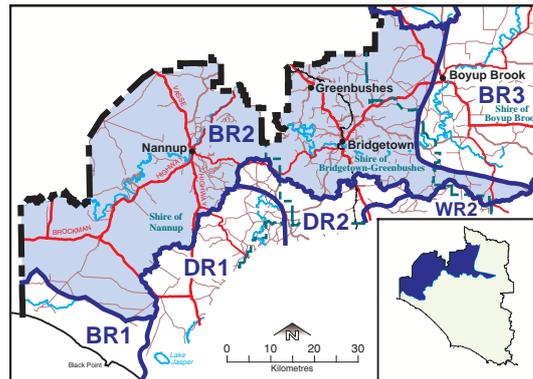
### 4. MAJOR ISSUES:

- Large lot sizes and flat terrain have facilitated economic development of large centre pivot irrigated annual horticultural developments on the plains area.
- Key land management issues associated with agriculture are soil acidification and phosphorus run-off linked to waterlogging and flooding.
- Potential nutrient enrichment of the Scott River system, Gingilup Swamp and Hardy Inlet.
- Water erosion potential and siltation of the Scott River system.
- Protection of the remaining areas of remnant vegetation on freehold land, existing vegetation on the fragile coastal dune system and areas of significant vegetation associations and threatened ecological communities.
- Tourism and recreational access to the coast, vesting of the coastal strip and management of the coastal fringe.
- Protection of the landscape values of the Scott River and the coastal strip.
- Upgrading of the road system to accommodate the transport of agricultural produce and tourism traffic (especially along the coastal road).
- Need for three-phase power supply for productive agricultural landholdings.
- Potential demands for an additional minor townsite to serve farm worker accommodation, sandmine workers and tourists/recreation visitors.

<p><b>PLANNING UNIT BRI SCOTT</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Protect and enhance existing dunal vegetation.</li> <li>• Support CALM management and protection of the Gingilup Swamp suite, Lake Quitjup, Lake Bolghinup and the Scott River within the Scott River National Park.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Establish nutrient load targets for the Hardy Inlet and manage nutrient loads within the catchment consistent with those targets.</li> <li>• Control drainage and surface water movement to minimise transport of phosphorus to adjacent waterways and wetlands at times of waterlogging or flooding.</li> <li>• Ensure availability and application of lime to soils to maintain an appropriate Ph level.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Protect and enhance the riparian values along the Scott River.</li> <li>• Develop and observe appropriate best management practices to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and waterlogging. Retain all remnant vegetation on freehold land wherever possible.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Priority Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters and large lot sizes.</li> <li>• In the <b>Rural Landscape Protection zone</b>, allow for low-key tourism development that is consistent with retaining the natural wilderness landscape appearance, for the land to the west of Black Point.</li> <li>• Finalise and implement the coastal strategy for the Augusta-Walpole strip and prepare a coastal management plan for the coastal strip adjoining the freehold lots.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining national park, nature reserve or fore-dune areas.</li> <li>• Upgrade the local road system as appropriate to accommodate the truck transport associated with the increased agricultural production and co-ordinate the upgrading of the coastal roads as necessary to serve the increasing tourism and recreational use of the coastal strip.</li> <li>• Monitor the need for an accommodation node to serve increasing tourism, recreation, agricultural worker and mining worker demands (initial assessment indicates a location south of the river adjacent to Millyeannup Coast Road may be most suitable).</li> <li>• Investigate options for amalgamation of isolated coastal freehold/leasehold lots into D'Entrecasteaux National Park, through acquisition, land swaps, transfer of development rights, incentives, etc.</li> <li>• Facilitate access to three-phase power supplies for all productive agricultural properties in the Priority Agriculture zone.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Priority Agriculture zone:</b>          Primary Uses:          Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses:          Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Rural Landscape Protection zone:</b>          Primary Uses:          Single house*, low-key tourism* (west of Black Point only).</p> <p>Secondary Uses (all west of Black Point only):          Annual horticulture*, perennial horticulture*, dairying*#, grazing*, agroforestry*, commercial tree plantations*, rural industry*, extractive industry*.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p><b>Priority Agriculture zone:</b>          To maintain the productive capacity of the land and the economy of scale of operations and to reduce the potential impacts of competing land uses, there is a clear presumption against any subdivision of the existing lots, regardless of their current size.</p> <p><b>Rural Landscape Protection zone:</b>          Subject to resolving the issue of vesting of the coastal vacant Crown land strip, the preparation and adoption of a coastal management plan for that section of coastline and the adoption of a road access and upgrading strategy, subdivision of existing lots down to a minimum size of 40ha may be considered. Further subdivision of land to smaller lot sizes for lifestyle purposes will not be considered unless and until urban-type services and facilities are provided in close proximity to the subject land (i.e. south of the river) and the required infrastructure has been appropriately upgraded.</p>

## PLANNING UNIT BR2 BLACKWOOD

Total area — 3,026sq.km



### I. PLANNING UNIT DESCRIPTION:

- Includes all of sub-catchments B13 — Milyeannup Brook, B12 — Red Gully, B17 — Carlotta Brook, B16 — Long Gully, B7 — Tanjannerup Creek, B4 — Ellis Creek, BB2 — Maranup Brook, BB3 — Mokerdillup Brook, BB4 — Rectory Creek, BB5 — Geegelup Brook, B3 — Dalgarup/Hester Brook and BB6 — Waterhole Gully; most of sub-catchments BV1 — Lower Blackwood, B11 — McAtee Brook, B9 — Gregory Brook, BB1 — Norilup Brook, B2 — Balingup Brook East and BB9 — Boyup Brook; part of sub-catchments B5 — Scott River, B10 — St John Brook, BV2 — Nannup-Bridgetown, B8 — Camp Brook, BV3 — Bridgetown-Boyup Brook and BB7 — Tweed River; and a small portion of sub-catchment B1 — Balingup Brook.
- The Blackwood River forms a major valley west of the Darling Scarp and a deeply incised valley to the east, each within a lateritic plateau with broad, swampy depressions; the Scott Coastal Plain is poorly drained with dunes and swampy depressions.
- Average rainfall ranges from 700mm-950mm per annum.
- The majority of the upper part of the planning unit has been cleared for agricultural use, whereas in the lower part of the planning unit, much of the northern part of the Scott Coastal Plain and the foothills and face of the Darling Escarpment have been cleared, along with scattered properties on the Blackwood River upstream and downstream of Nannup. The remainder is contained within State forest or various nature reserves.
- On the Scott Coastal Plain, there are several large annual horticulture developments and several hardwood tree plantations, with dairying or broadacre grazing on the rest of that area, but throughout the remainder of the planning unit, the uses are dominated by hardwood and softwood tree plantations and broadacre grazing, with some scattered dairying and annual and perennial horticulture.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- Significant portions of the planning unit have a high to very high-capability rating for annual or perennial horticulture, with the Scott Coastal Plain having mostly a low capability for perennial horticulture due to winter waterlogging, but a mostly high to very high capability for summertime only annual horticulture.
- East of the Darling Escarpment, most of the sub-catchments have a moderate availability of water, which is generally of good quality, for irrigation usage. West of the escarpment, there are very significant water reserves within the confined Yarragadee and Leederville Aquifers.
- Throughout the majority of the planning unit, there is a moderate capacity for expansion of irrigated horticultural production, but on the Scott Coastal Plain, that capacity is considerably increased due to water availability. Dry-land viticulture will be unrestricted by water availability.

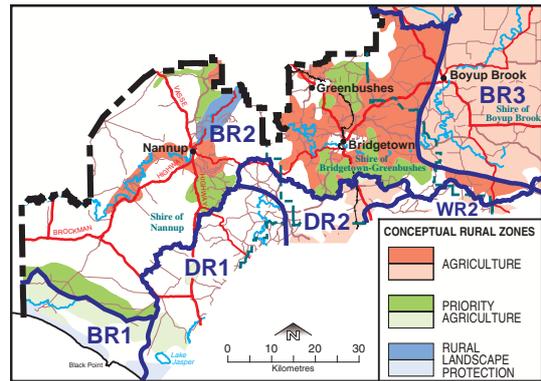
### 2. NATURAL RESOURCES DESCRIPTION:

- Soils consist of duplex sandy gravels, sandy and loamy gravels and deep sands and wet soils to the west of the Darling Scarp, with deep loams, loamy duplexes, loamy gravels, duplex sandy gravels, deep gravels, deep sands and wet and semi-wet soils on and to the east of the scarp, and duplex sandy gravels, deep sandy duplexes, loamy gravels and some wet and semi-wet soils in the east of the planning unit. There are very steep slopes along the Blackwood River valley and the sub-catchments east of the Darling Scarp, but easing slightly towards the east of the planning unit. There is a high water erosion risk on the steep valley slopes, with some wind erosion, waterlogging and salinity risk on the plateau areas.
- The principal waterway is the Blackwood River, which has brackish quality in the east but improving in the lower reaches as it is diluted by fresher side streams. Sub-catchments include Rosa, Milyeannup, McAtee, St John, Carlotta, Camp and Gregory Brooks, Red and Long Gullies, and Tanjannerup and Ellis Creeks, all of which are fresh quality. Further east, the sub-catchments of Balingup, Dalgarup/Hester, Norilup, Maranup, Mokerdillup, Geegelup and Boyup Brooks, Rectory Creek and Waterhole and Four Mile Gullies have generally marginal or brackish qualities. The extensive Yarragadee and Leederville Aquifers underlie the unit to the west of the Darling Scarp. The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and below the national target.
- Conservation reserves — 2% of unit
- State forest — 59% of unit
- Other non-freehold — 6% of unit
- Cleared land — 22% of unit
- Remnant vegetation on private land — 11% of unit
- Significant landscape features — Blackwood River valley and plateau areas, including land visible from the Brockman Highway and the Nannup to Balingup Road, plus Bridgetown townsite and the eastern environs of Nannup townsite.
- There are many occurrences of rare and priority flora within the planning unit, particularly within the Donnybrook sunklands area.
- Major deposits of tantalite, spodumene and tin exist and are currently being mined around Greenbushes townsite, but this has little impact on freehold land.

### 4. MAJOR ISSUES:

- Conflicting land uses and developments and ad hoc subdivisions restricting production potential of agricultural land.
- Scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Retention and protection of existing areas of remnant vegetation on freehold land.
- Clearing of existing softwood plantations along the steep slopes of the Blackwood Valley, leaving soils open and exposed to severe water and wind erosion and sedimentation of the waterways.
- Selling of CALM freehold land (previously used for softwood plantations), where lots of various sizes and configurations often lack legal road frontage and/or constructed road access and may have topographical or other constraints to future development.
- Protection and conservation of the Blackwood River riparian zone.
- Protection and conservation of the visual landscape within the Blackwood Valley.
- Increasing soil and waterway salinity levels in the upper parts of the planning unit.
- Nutrients leaching through the soils or entering waterways via enriched surface water layers or attached to particulate matter pose a significant threat, especially to the Scott River system and the Hardy Inlet.
- Land and water degradation risks due to water and wind erosion, siltation and nutrient transport.
- Social impacts of increasing numbers of broadscale hardwood plantations taking over existing farms.
- Large lot sizes and flat terrain have facilitated economic development of large centre pivot irrigated annual horticultural developments in the northern portion of the Scott Coastal Plain.
- \* Upgrading of the road system to accommodate the transport of agricultural produce and tourism traffic from the Scott Coastal Plain area.
- \* Need for three-phase power supply for productive agricultural landholdings on the Scott Coastal Plain.
- \* Downstream processing of regional products within the region to maximise the economic and social returns to the community which produced the primary items.

**PLANNING UNIT BR2  
BLACKWOOD (Continued)**



**5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:**

- Establish nutrient load targets for the Hardy Inlet and manage nutrient loads within the catchment consistent with those targets.
- Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.
- Retain all remnant vegetation on freehold land wherever possible and maintain rural landscape and amenity.
- Protect and enhance the riparian values along the Blackwood River.
- Establish and implement landscape management guidelines for the Blackwood River Valley.
- Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora.
- Develop and implement salinity management measures for the upper planning unit area, similar to those for the Warren and Collie Recovery Catchments, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).

**6. PLANNING OBJECTIVES:**

- In the **Agriculture zone**, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.
- In the **Priority Agriculture zone**, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters and large lot sizes (Scott Coastal Plain).
- In the **Rural Landscape Protection zone**, protect the visual landscape and environment and minimise adverse impacts on the valley slopes and allow for low-key tourism development that is consistent with retaining the natural landscape appearance.
- Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.
- Facilitate the downstream processing of regional primary products, especially farm forestry products, by ensuring the availability of a suitable industrial site in the region and addressing key issues such as zoning, buffers, service and infrastructure options, road and rail transport options and waste disposal (study in progress).
- Review the release and sale of CALM/Forest Products Commission freehold lots within the Blackwood Valley to address issues, including road frontage, road construction, lot development suitability, erosion potential, landscape impacts and zoning.
- Liaise with landholders, Blackwood Basin Group and the community to develop and implement a strategy to address land tenure options, conservation values, conservation incentives, rehabilitation measures, fencing requirements, funding options, public accessibility, recreational and educational opportunities and management and maintenance options for the Blackwood River riparian zone.
- Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.
- Manage conflicting land uses, particularly tourism uses within the Agriculture zone, to minimise restrictions on adjoining productive agricultural uses.
- Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement, reciprocal fire threat) within adjoining national park or State forest.
- Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.
- Upgrade Milyeannup Coast Road, Black Point Road, Fouracres Road and Governor Broome Road as appropriate to accommodate the truck transport associated with the increased agricultural production.
- Facilitate access to three-phase power supplies for all productive agricultural properties in the Priority Agriculture zone.

**7. LAND USE CATEGORIES:**

**Agriculture zone:**

Primary Uses:  
Grazing, dairying\*#, broadacre cropping, agroforestry, commercial tree plantations, single house\*, low-key tourism\*, rural industry\*.

Secondary Uses:  
Annual horticulture, perennial horticulture, farm worker accommodation\*, extractive industry\*, intensive animal husbandry\*#, feedlots\*#, piggeries\*#, poultry farms\*#.

**Priority Agriculture zone:**

Primary Uses:  
Annual horticulture, perennial horticulture, agroforestry, dairying\*#, grazing.

Secondary Uses:  
Single house\*, farm worker accommodation\*, commercial tree plantations\*, rural industry\*, extractive industry\*, low-key tourism\*, intensive animal husbandry\*#, feedlots\*#, piggeries\*#, poultry farms\*#.

**Rural Landscape Protection zone:**

Primary Uses:  
Single house\*, low-key tourism\*.

Secondary Uses:  
Annual horticulture\*, perennial horticulture\*, dairying\*#, grazing\*, agroforestry\*, commercial tree plantations\*, rural industry\*, extractive industry\*.

**8. SUBDIVISION CRITERIA:**

In the **Agriculture zone** and the **Priority Agriculture zone**, apply the standard subdivision criteria from chapter 5.7.

However, on the Scott Coastal Plain, to maintain the productive capacity of the land and the economy of scale of operations and to reduce the potential impacts of competing land uses, there is a clear presumption against any subdivision of the existing lots, regardless of their current size.

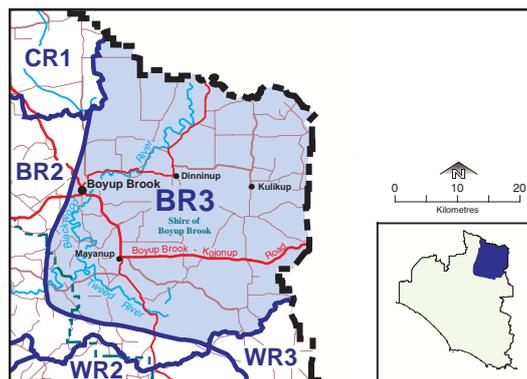
**Rural Landscape Protection zone:**

Criteria to be determined in conjunction with review and structure planning of the CALM/Forest Products Commission freehold lots and addressing the issues associated with them.



## PLANNING UNIT BR3 TWEED

Total area — 1,518sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes all of sub-catchments BB10 — Four Mile Gully, BB13 — Boree Gully and BB14 — Wattledale Tributary; most of sub-catchments BB8 — Gnowongerup Brook and BV4 — Upper Blackwood; part of BB7 — Tweed River, BV3 — Bridgetown-Boyup Brook, BB11 — Dinninup Brook and BB12 — Kichanning Brook; and small portions of sub-catchments BB9 — Boyup Brook and BB15 — Balgarup River.
- Lateritic plateau remnants with lakes and poorly drained flats and valleys with some rock outcrops.
- Average rainfall ranges from 550mm-700mm per annum.
- The vast majority of the planning unit has been cleared for agricultural use, with only small and scattered blocks of nature reserve or State forest or remnant vegetation on freehold land.
- The majority of the land is used for broadacre cropping or grazing, but a number of large-scale hardwood tree plantations have been established in recent years. Several small-scale viticultural developments have also been established.

### 2. NATURAL RESOURCES DESCRIPTION:

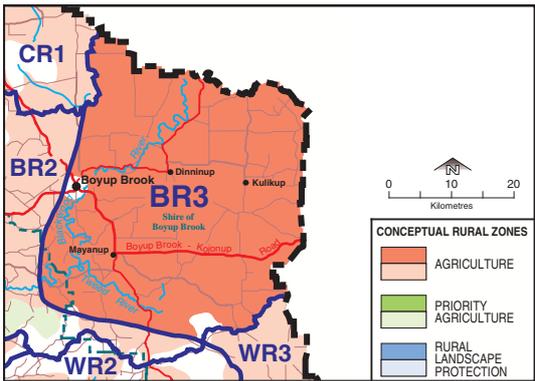
- Soils consist of loamy gravels, deep and duplex sandy gravels and deep loamy and deep sandy duplexes. There are some steep slopes along the river valleys. There is a high water erosion risk on the hills and along the valley slopes, with a waterlogging risk on the plateau areas and the whole area is potentially saline.
- The principal waterway is the Blackwood River and the sub-catchments are Tweed and Balgarup Rivers, Gnowongerup, Dinninup and Kichanning Brooks, Four Mile and Boree Gullies and Wattledale Tributary, all of which are brackish to saline quality. There are no significant wetlands or aquifers.
- The unit contains Beard type 4 and 992 (wandoo/marri forest) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 2% of unit
- State forest — 2% of unit
- Other non-freehold — 8% of unit
- Cleared land — 72% of unit
- Remnant vegetation on private land — 16% of unit
- Significant landscape features — nil
- There are scattered occurrences of rare and priority flora, particularly in the east of the unit.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- The majority of the planning unit has a high to very high capability for annual or perennial horticulture, with waterlogging and salinity being the two principal land degradation constraints.
- Moderate to large volumes of water are generally available for irrigation purposes within these sub-catchments, but these are small compared with the size of the sub-catchments and the quality of the water in the main streams is generally brackish or saline.
- Opportunities for development or expansion of irrigated horticultural uses are likely to be small scale and scattered due to the relatively restricted availability and the potential for high water table and salinity outbreaks.

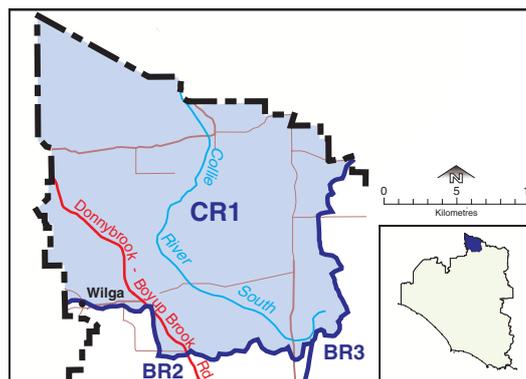
### 4. MAJOR ISSUES:

- Rising salinity levels across the broad river flats area and their impacts on agricultural productivity and water quality in the streams.
- Land and water degradation risks due to water and wind erosion, nutrient leaching and siltation.
- Social impacts of increasing numbers of broadscale hardwood plantations taking over existing farms.
- Retention and protection of existing areas of remnant vegetation on freehold land.
- Protection and conservation of the Blackwood River riparian zone.
- Conflicting land uses and developments and ad hoc subdivisions restricting production potential of agricultural land.

<p><b>PLANNING UNIT BR3 TWEED (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>Establish nutrient load targets for the Hardy Inlet and manage nutrient loads within the catchment consistent with those targets.</li> <li>Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>Develop and implement salinity management measures similar to those for the Warren and Collie Recovery Catchments.</li> <li>Retain all remnant vegetation on freehold land wherever possible and maintain rural landscape and amenity.</li> <li>Protect and enhance the riparian values along the Blackwood River.</li> <li>Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the wandoo/marri forest vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>Manage conflicting land uses, particularly tourism uses within the Agriculture zone, to minimise restrictions on adjoining productive agricultural uses.</li> <li>Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> <li>Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>

## PLANNING UNIT CRI COLLIE SOUTH

Total area — 340sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes sub-catchments C1 — South Branch and C — Collie River South.
- Lateritic plateau with broad, swampy depressions.
- Average rainfall ranges from 600mm-800mm per annum.
- Approximately half of this planning unit has been cleared for agricultural uses, with the remainder being contained within State forest/nature reserve or remnant vegetation on freehold land.
- The predominant land uses are broadacre grazing and cropping and hardwood and softwood tree plantations.

### 2. NATURAL RESOURCES DESCRIPTION:

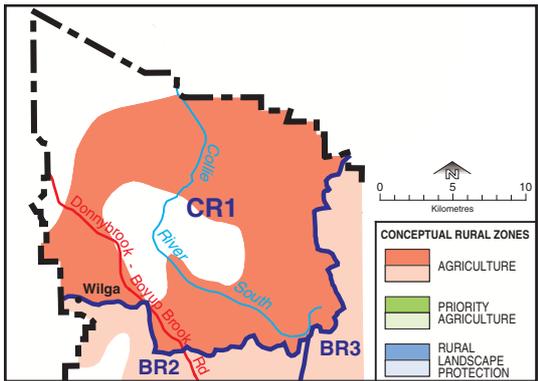
- Soils consist of duplex sandy gravels, loamy gravels, shallow and deep gravels, deep sands and wet and semi-wet soils. There are only minor occurrences of steep slopes. There is a waterlogging and salinity risk.
- The principal waterway is the Collie River South Branch, which is fresh water quality. There are no significant wetlands in the planning unit. Minor groundwater resources may be available from several palaeochannels.
- Conservation reserves — 1% of unit
- State forest — 36% of unit
- Cleared land — 40% of unit
- Remnant vegetation on private land — 23% of unit
- Significant landscape features — Collie River South is of moderate landscape value.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- There are scattered areas of high to very high- capability land for annual/perennial horticulture in the northern or lower area of the planning unit.
- There is good availability of good-quality water.
- The potential for establishment/expansion of irrigated horticulture is moderate.

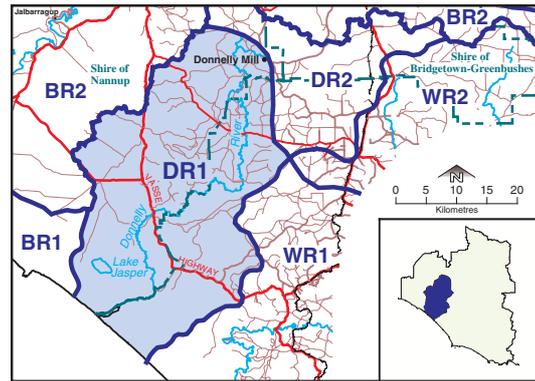
### 4. MAJOR ISSUES:

- Conflicting land uses and developments and ad hoc subdivisions restricting production potential of agricultural land.
- Retention and protection of existing areas of remnant vegetation on freehold land.
- Protecting the quality of water in the Collie River South and the Wellington Dam catchment.
- Social impacts of increasing numbers of broadscale hardwood plantations taking over existing farms.

<p><b>PLANNING UNIT CR1</b> <b>COLLIE SOUTH</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Carefully manage existing land uses in the Collie River South to maintain water quality in the Wellington Dam.</li> <li>• The <i>Salinity Situation Statement Collie River</i> water quality target is to reduce the salinity of the Collie River to a mean annual level of 500mg/L total dissolved salts (and with separate goals for the sub-catchments) by the year 2015.</li> <li>• Salinity recovery will require commitment to short-term actions and long-term goals by the whole community and will involve a range of activities to suit particular circumstances, including various mixtures of revegetation and engineering solutions.</li> <li>• Retain all remnant vegetation on freehold land wherever possible and maintain rural landscape and amenity.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora.</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• Manage conflicting land uses, particularly tourism uses within the Agriculture zone, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Manage land uses within the catchment area of the Wellington Dam to avoid practices that may compromise the quality of the water supply.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>

## PLANNING UNIT DRI DONNELLY

Total area — 1,258sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes sub-catchments D1 — Barlee Brook, D3 — Donnelly River, D4 — Donnelly River, D7 — Big Easter Brook, D8 — Donnelly River, D9 — Donnelly River, D10 — Carey Brook, D11 — Beedelup Brook and D12 — Fly Brook, and a small portion of sub-catchments D5 — Donnelly River and D6 — Manjimup Brook.
- The lower part of the Donnelly River Basin winds across the Scott Coastal Plain, with the middle section extending steeply incised valleys into the Darling Plateau. The coastline features flat, wide, straight sandy beaches backed by high vegetated dunes. The palusplain area includes three significant freshwater lakes — Jasper, Smith and Wilson.
- The coastal plain section is exposed to the strong south-westerly storms, but temperatures are moderated by proximity to the coast. Rainfall is about 1,000mm-1,200mm per annum.
- This planning unit is predominantly covered by national park or State forest, with isolated cleared agricultural areas as an eastward extension of the Scott Coastal Plain area, the middle section of Barlee Brook, upper part of Beedelup and Fly Brooks and part of the Donnelly River west of Manjimup. The Darling Plateau area is covered by high open forest/open forest, with a range of vegetation types on the coastal plain.
- Land uses include annual and perennial horticulture, grazing and commercial tree plantations.

### 2. NATURAL RESOURCES DESCRIPTION:

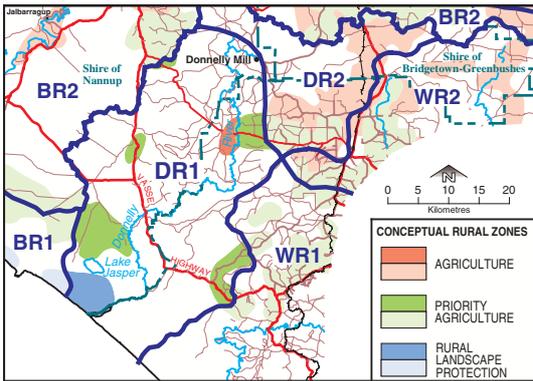
- The Darling Plateau area has predominantly loamy gravels, with some duplex sandy gravels and wet soils; sandy duplex soils and wet soils on the plain and deep sands on the coastal dunes. Steep slopes occur in the coastal dunes and particularly along the river valleys on the Darling Plateau. The coastal dunes are very vulnerable to wind erosion where the vegetation cover is disturbed. On the plain, there is potential for wind erosion of exposed soils and for water erosion of fine soil particles. Along the Manjimup Brook, the main threats are salinity and water erosion.
- The principal waterway is the Donnelly River, with sub-catchments being Barlee, Big Easter, Carey, Fly and Beedelup Brooks, where the water quality is fresh, and the Manjimup Brook, where the quality is marginal. Major wetlands include Lakes Jasper, Smith and Wilson. The area to the west of the Darling Scarp is underlain by the deep Yarragadee Aquifer, which contains high-quality water, currently being tapped for annual horticultural production and mining and being considered as a possible water source for Perth metropolitan needs. The Leederville Aquifer sits above the Yarragadee and smaller aquifers are located about the fringes or superficially.
- The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 14% of unit
- State forest — 72% of unit
- Other non-freehold — 6% of unit
- Cleared land — 5% of unit
- Remnant vegetation on private land — 3% of unit
- Significant landscape features — rugged coastal landscape, vegetated coastal dunes and karri forest along Vasse Highway west of Pemberton.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- The Scott Coastal Plain has mostly low capability for perennial horticulture but high capability for summertime only annual horticulture, with some areas having moderate to high capability for commercial tree plantations.
- Within the Darling Plateau area, surface water is relatively unconstrained. On the Scott Coastal Plain, the flat terrain and generally sandy nature of the soil render surface water insignificant for productive use, but huge supplies of high-quality water from the underlying aquifers ensure that water availability is not a constraint to expanded agricultural production in this planning unit.
- There is considerable capacity for expansion of irrigated horticulture.

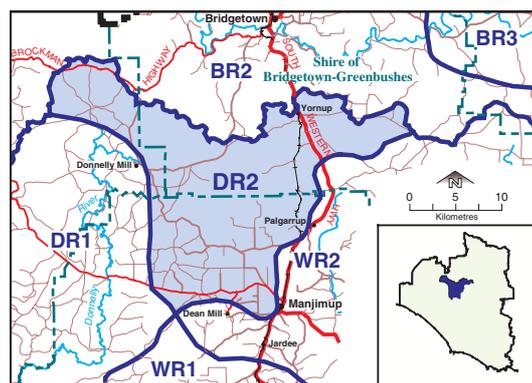
### 4. MAJOR ISSUES:

- Scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses), especially adjacent to Lake Jasper.
- Large lot sizes and flat terrain in the Scott Coastal Plain area have facilitated economic development of large centre pivot irrigated annual horticultural developments.
- Nutrients leaching through the soils or entering waterways via enriched surface water layers or attached to particulate matter pose a threat to the Donnelly River system and Lake Jasper.
- Wind and water erosion potential and siltation of the Donnelly River system.
- Protection of existing vegetation on the fragile coastal dune system and areas of significant vegetation associations and threatened ecological communities.
- Coastal landscape values are coming under increasing pressure.
- Little is known of the coastal processes affecting the south coast.
- There is increasing pressure for recreational access to the coast and accommodation in that vicinity, but that is currently very restricted and unco-ordinated.

<p><b>PLANNING UNIT DRI DONNELLY</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Protect and enhance existing dunal vegetation.</li> <li>• Support CALM management and protection of Lakes Jasper, Smith and Wilson and the Donnelly River estuary.</li> <li>• Protect and enhance riparian values along the Lower Donnelly River.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Support CALM management and protection of the coastal landscape, waterways and wetlands within the D'Entrecasteaux, Shannon and Walpole National Parks.</li> <li>• A current regional study of the south coast from Augusta to Walpole (being carried out by WAPC/DPI) will address issues such as recreation and tourism demands, access and accommodation opportunities, important coastal processes and coastal management principles.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• In the <b>Priority Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters (and large lot sizes on the Scott Coastal Plain).</li> <li>• In the <b>Rural Landscape Protection zone</b>, protect the visual landscape and environment and minimise adverse impacts on the adjoining D'Entrecasteaux National Park (only permissible development is a dwelling house).</li> <li>• Finalise and implement a coastal strategy for the Augusta-Walpole strip.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining national park, nature reserve or State forest.</li> <li>• Investigate options for amalgamation of isolated freehold/leasehold lots into D'Entrecasteaux National Park, through acquisition, land swaps, transfer of development rights, incentives, etc.</li> <li>• Facilitate access to three-phase power supplies for all productive agricultural properties in the Priority Agriculture zone on the Scott Coastal Plain.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Priority Agriculture zone:</b></p> <p>Primary Uses: Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses: Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, low-key tourism*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Rural Landscape Protection zone:</b></p> <p>Primary Uses: Vegetation and landscape protection.</p> <p>Secondary Uses: Single house*.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p> <p><b>Priority Agriculture zone:</b></p> <p>To maintain the productive capacity of the land and the economy of scale of operations and to reduce the potential impacts of competing land uses, there is a clear presumption against any subdivision of the existing lots on the Scott Coastal Plain, regardless of their current size.</p> <p>In other areas, apply the standard subdivision criteria from chapter 5.7.</p> <p><b>Rural Landscape Protection zone:</b></p> <p>No further subdivision permitted, except where this is specifically provided for in the finalised <i>Augusta-Walpole Coastal Management Strategy</i>.</p>

## PLANNING UNIT DR2 UPPER DONNELLY

Total area — 455sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes most of sub-catchments D5 — Donnelly River and D6 — Manjimup Brook.
- A gently undulating lateritic plateau with shallow valleys and broad swampy depressions.
- Average rainfall is 800mm-1,100mm per annum.
- Much of the Manjimup Brook sub-catchment has been cleared for agricultural purposes, as has parts of the Upper Donnelly River sub-catchment. The remainder is covered by karri, marri and jarrah forest within State forest, much of which has been either selectively logged or clear-felled and regenerated in the past.
- The Manjimup Brook sub-catchment supports a variety of intensive agricultural uses plus grazing, whereas the Upper Donnelly area is confined principally to grazing.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

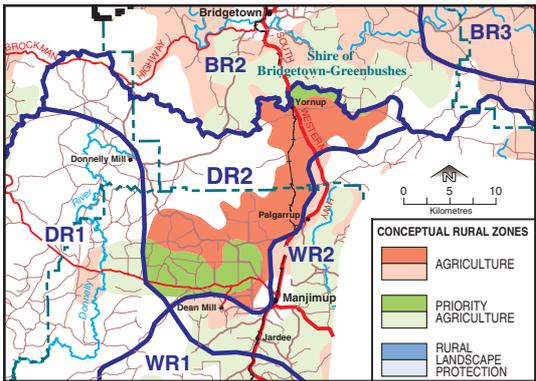
- Most of the Manjimup Brook sub-catchment has a high capability for annual and perennial horticulture, with sections along the main waterway being affected by salinity and some upper parts being restricted by waterlogging. The Upper Donnelly sub-catchment area is also affected by waterlogging and only small portions of the area have a high capability for horticulture.
- The Upper Donnelly sub-catchment has good availability of fresh water quality, and the Manjimup Brook sub-catchment has moderate to good availability of water for additional irrigation usage, but the water quality in the main stream is only marginal.
- There is a moderate capacity for expansion of irrigated horticultural uses.

### 2. NATURAL RESOURCES DESCRIPTION:

- Soils are duplex sandy gravels, loamy gravels and wet and semi-wet soils. Slopes are all slight to moderate. Land degradation factors include waterlogging and some salinity risk.
- The principal waterway is the Donnelly River, where the water quality is fresh, and the sub-catchment is Manjimup Brook, where the quality is marginal. There are no major wetlands or aquifers.
- Conservation reserves — 6% of unit
- State forest — 52% of unit
- Other non-freehold — 4% of unit
- Cleared land — 34% of unit
- Remnant vegetation on private land — 4% of unit
- Significant landscape features — moderately attractive State forest.

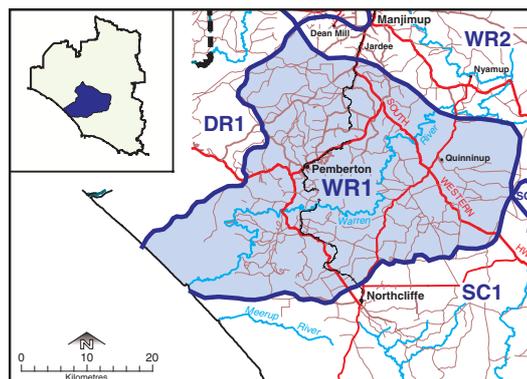
### 4. MAJOR ISSUES:

- Conflicting land uses and ad hoc subdivision and their impacts on the productive capacity of agricultural land.
- Potential degradation of water quality and environmental qualities in the Donnelly River system caused by sedimentation and nutrient transport within the upper catchment.
- The potential restriction on horticultural production in the Manjimup Brook sub-catchment through rising salinity levels in the main stream.

<p><b>PLANNING UNIT DR2 UPPER DONNELLY (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Prepare and implement a strategy to arrest and reverse the salinisation of the land and waterway in the Manjimup Brook sub-catchment.</li> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Protect and enhance the riparian values along the Donnelly River and Manjimup Brook.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora.</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• In the <b>Priority Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Manage conflicting land uses, particularly tourism uses, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining national park, nature reserve or State forest.</li> <li>• Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Priority Agriculture zone:</b></p> <p>Primary Uses: Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses: Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, low-key tourism*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b> and the <b>Priority Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>

## PLANNING UNIT WR1 WARREN

Total area — 1,376sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes sub-catchments W1 — Dombakup Brook, W12 — Warren River, W6 — Treen Brook, W8 — East Brook, W9/22 — Lefroy Brook, W20 — Big Brook Dam, W17 — Four Mile Brook, W10 — Diamond Tree Gully, W19 — Big Hill Brook, W18 — Quinninup Brook and W23 — Karri Lake Dam/Little Quinninup and portions of sub-catchments W24 — Upper Lefroy Brook, W2 — Smith Brook, W4 — Warren River and W16 — Tinkers Brook.
- High dunes fronting the coast, backed by a narrow swampy plain, with the majority of the area being shallow to deep valleys draining from a lateritic plateau.
- Average rainfall ranges from 900mm-1,250mm per annum.
- Towards the Northcliffe area, significant portions of the freehold land retain the remnant vegetation, but this proportion is reduced in the areas around Pemberton and towards Manjimup. The remainder of the area is covered by karri, marri and jarrah forest within national park or State forest (much of which has been either selectively logged or clear-felled and regenerated in the past).
- The freehold land areas around Pemberton and towards Manjimup are extensively developed with annual and perennial horticultural uses plus some commercial tree plantations, but these uses are sparser in the Northcliffe area.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

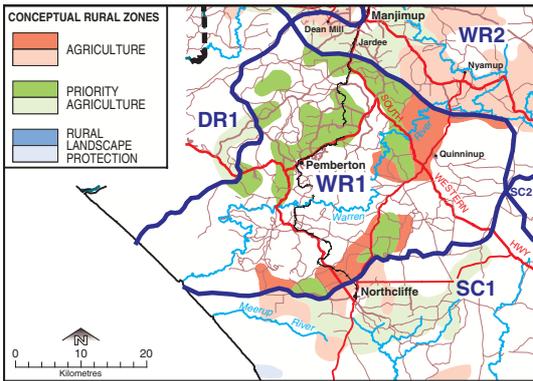
- Almost all the land around Pemberton and towards Manjimup has a high to very high capability for annual and/or perennial horticulture, but this is more scattered around Northcliffe due to waterlogging and poor drainage.
- All of the catchments have good to ample availability of good-quality water for additional irrigation usage, with the exception of sub-catchments W9/22 — Lefroy Brook and W24 — Upper Lefroy Brook, where the combined current yield for agriculture and the requirements for the Pemberton Weir equate to the preliminary sustainable yield.
- Apart from parts of the area around Northcliffe and the Lefroy Brook/Upper Lefroy Brook, this planning unit has significant potential for expansion and intensification of irrigated horticultural development. Dryland viticulture will be unrestricted by water availability.

### 2. NATURAL RESOURCES DESCRIPTION:

- Soils on the coastal dunes are deep sands, with predominantly loamy gravels, and some duplex sandy gravels and wet soils on the Darling Plateau. There are steep slopes within the coastal dunes and along the river valleys. Some of the area has a high water erosion risk under certain land uses and some of the area is subject to waterlogging.
- The principal waterway is the Warren River and the sub-catchments include Dombakup, Treen, East, Lefroy, Big, Four Mile, Big Hill and Quinninup Brooks, Diamond Tree Gully and part of Smith Brook, each of which contain fresh water quality. There are several moderately significant wetland and floodplain systems. No significant aquifers exist in the area.
- The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 12% of unit
- State forest — 61% of unit
- Other non-freehold — 6% of unit
- Cleared land — 14% of unit
- Remnant vegetation on private land — 7% of unit
- Significant landscape features — karri forest and agricultural landscapes around Pemberton, the Warren River and its environs south of Pemberton and the mobile coastal dunes.

### 4. MAJOR ISSUES:

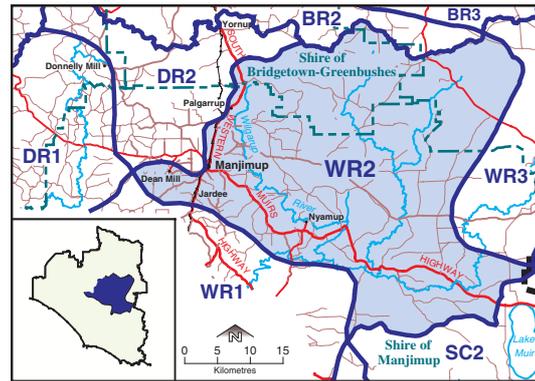
- Potential restriction on horticultural expansion in the Lefroy Brook/Upper Lefroy Brook sub-catchments resulting from full allocation of the preliminary sustainable yield.
- Land and water degradation risks due to water and wind erosion and nutrient transport.
- Conflicting land uses and developments and ad hoc subdivisions restricting production potential of prime agricultural land.
- Scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Retention and protection of existing areas of remnant vegetation on freehold land.
- Coastal landscape values are coming under increasing pressure.
- Little is known of the coastal processes affecting the south coast.
- There is increasing pressure for recreational access to the coast and accommodation in that vicinity, but that is currently very limited and unco-ordinated.

<p><b>PLANNING UNIT WR1</b> <b>WARREN</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Develop and implement a strategy to improve the efficiency of use of irrigation water in the Lefroy Brook/Upper Lefroy Brook sub-catchments.</li> <li>• Review and refine sustainable yield estimates for Lefroy Brook/Upper Lefroy Brook sub-catchments.</li> <li>• Carefully manage existing land uses in the Lefroy Brook/Upper Lefroy Brook sub-catchments to maintain water quality in the Pemberton Weir.</li> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Retention and protection of existing areas of remnant vegetation on freehold land.</li> <li>• Support CALM management and protection of the coastal landscape, waterways and wetlands within the D'Entrecasteaux and Walpole-Nornalup National Parks.</li> <li>• A current regional study of the south coast from Augusta to Walpole (being carried out by WAPC/DPI) will address issues such as recreation and tourism demands, access and accommodation opportunities, important coastal processes and coastal management principles.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• In the <b>Priority Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters, but within the Upper Lefroy Brook sub-catchment, protect the existing high-value land uses and production capacities.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Manage land uses within the catchment area of the Pemberton Weir to avoid practices that may compromise the quality of the water supply.</li> <li>• Manage conflicting land uses, particularly tourism uses, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining national park, nature reserve or State forest.</li> <li>• Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Priority Agriculture zone:</b></p> <p>Primary Uses: Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses: Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, low-key tourism*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b> and the <b>Priority Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>



## PLANNING UNIT WR2 PERUP

Total area — 1,623sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes sub-catchments W11 — Wilgarup River, W14 — Perup River, W15 — Yerraminnup River and W21 — Phillips Creek and Scabby Dam and parts of sub-catchments W4 — Warren River, W16 — Tinkers Brook, W2 — Smith Brook and W24 — Upper Lefroy Brook.
- Lateritic plateau with broad, swampy depressions and major valleys.
- Average rainfall ranges from 650mm-950mm per annum.
- The western segment of the planning unit is largely cleared for agriculture, but the remainder consists of dispersed small groupings of cleared agricultural lots, principally along the major valleys, within karri, marri, jarrah and wandoo forest/woodland.
- The more closely developed areas near Manjimup are predominantly used for annual and perennial horticulture, with the remaining scattered lots being used mainly for grazing, but with also some commercial tree plantations and a few areas of annual horticulture.

### 2. NATURAL RESOURCES DESCRIPTION:

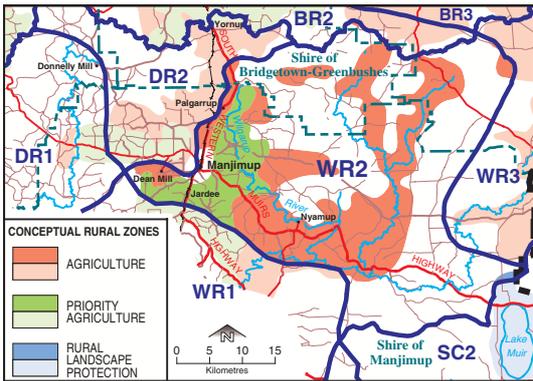
- Soils range from deep loams and loamy gravels to duplex sandy gravels and wet soils. There are steep slopes close to the river systems. There is a high risk of water erosion on the steep slopes and potential for waterlogging in some areas. Currently, salinity levels in the upper Warren River basin are about 900mg/L total dissolved salts and this is predicted to rise to 1,200mg/L, resulting in significant loss of agricultural potential if action is not taken to address the issue. This area is within the Warren River Recovery Catchment.
- Contains the Warren River sub-catchments of Perup, Tone, Yerraminnup and Wilgarup Rivers, where the water quality is marginal to brackish, plus parts of the Smith and Upper Lefroy Brook sub-catchments, where the water quality is fresh. There are several moderately significant lakes, swamps and wetlands. No significant aquifers exist in the area.
- The unit contains Beard type 4 (wandoo/marri forest) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 1% of unit
- State forest — 72% of unit
- Other non-freehold — 3% of unit
- Cleared land — 18% of unit
- Remnant vegetation on private land — 6% of unit
- Significant landscape features — moderate landscape value.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- The majority of the land around Manjimup (Wilgarup, Smith and Upper Lefroy) has a high to very high capability for annual and/or perennial horticulture, but significant portions of the Wilgarup sub-catchment have saline-affected land and marginal water quality. In the Upper Warren, Perup and Yerraminnup River sub-catchments, there is a greater mixture of high/very high-capability and low/moderate-capability land.
- Water availability and quality varies markedly across this planning unit. Within the Smith Brook sub-catchment, the water availability and quality are good, but the Upper Lefroy sub-catchment is restricted by full allocation of the preliminary sustainable yield (between existing agricultural usage and Pemberton Weir requirements). The Wilgarup sub-catchment is currently fully committed to its preliminary sustainable yield and the quality of the water in the main stream and some side streams is marginal. The Perup and Yerraminnup sub-catchments have reasonably good water availability for the limited areas of freehold farmland in each, but the water quality is brackish despite the largely forested nature of the sub-catchments.
- There is considerable capacity for expansion of irrigated horticultural production in the Smith Brook sub-catchment and some capacity in the Perup and Yerraminnup sub-catchments, subject to water quality. Dryland viticulture will be unrestricted by water availability.

### 4. MAJOR ISSUES:

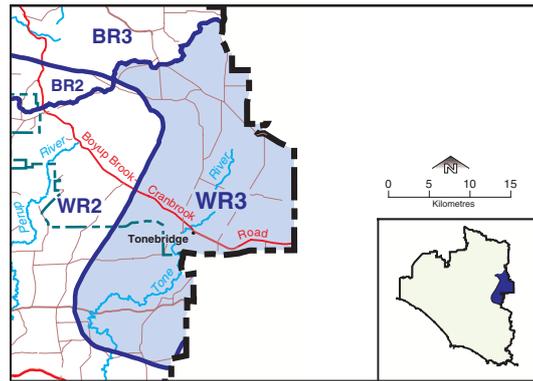
- Conflicting land uses and ad hoc subdivision and their impacts on the productive capacity of agricultural land.
- Potential restriction on horticultural expansion in the Lefroy Brook/Upper Lefroy Brook sub-catchments resulting from full allocation of the preliminary sustainable yield.
- Potential restriction on horticultural expansion in the Wilgarup River sub-catchment resulting from full allocation of the preliminary sustainable yield and from the declining quality of the water in the main stream.
- Land and water degradation risks due to water and wind erosion, nutrient transport and siltation.
- Rising salinity levels in the Yerraminnup and Perup River sub-catchments, despite the relatively small amounts of land clearing and agricultural activity.
- Scattered nature of the freehold land within the State forest areas and the increased impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Retention and protection of existing areas of remnant vegetation on freehold land.

<p><b>PLANNING UNIT WR2</b> <b>PERUP (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Develop and implement a strategy to improve the efficiency of use of irrigation water in the Lefroy Brook/Upper Lefroy Brook sub-catchments.</li> <li>• Review and refine sustainable yield preliminary estimates for the Lefroy Brook/Upper Lefroy Brook and Wilgarup River sub-catchments.</li> <li>• Carefully manage existing uses in the Lefroy Brook/Upper Lefroy Brook sub-catchment to maintain the quality of water for the Pemberton Weir.</li> <li>• Encourage more efficient use of water and planting less water-demanding crops to maximise the sustainable development potential in the Wilgarup River sub-catchment.</li> <li>• The DoE salinity management program water quality target is to reduce the salinity of the Warren River to a mean annual level of 500mg/L total dissolved salts measured at the Barker Road Gauging Station (and with separate goals for the sub-catchments) by the year 2030.</li> <li>• Salinity recovery will require commitment to short-term actions and long-term goals by the whole community and will involve a range of activities to suit particular circumstances, including various mixtures of revegetation and engineering solutions.</li> <li>• Wherever possible, retain all remnant vegetation on freehold land within the Lefroy Brook/Upper Lefroy Brook and Wilgarup River sub-catchments.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the wandoo/marri forest vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• In the <b>Priority Agriculture zone</b>, generally promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters, but within the Wilgarup River and Upper Lefroy Brook sub-catchments protect the existing high-value land uses and production capacities.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Manage land uses within the catchment area of the Pemberton Weir to avoid practices that may compromise the quality of the water supply.</li> <li>• Manage conflicting land uses, particularly tourism uses, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Priority Agriculture zone:</b></p> <p>Primary Uses: Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses: Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, low-key tourism*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b> and the <b>Priority Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>



## PLANNING UNIT WR3 TONE

Total area — 592sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes all of sub-catchment W13 — Tone River and a small portion of sub-catchment W4 — Warren River.
- Lateritic plateau remnants, undulating, low hills and broad valley floors with swampy depressions.
- Average rainfall ranges from 600mm-700mm per annum.
- About half of this planning unit is cleared for agricultural uses, with the other half retaining its original jarrah/marri/wandoo woodland vegetation cover.
- The predominant land uses have traditionally been broadacre grazing and cropping, but the area has become increasingly dominated by hardwood tree plantations in recent years.

### 2. NATURAL RESOURCES DESCRIPTION:

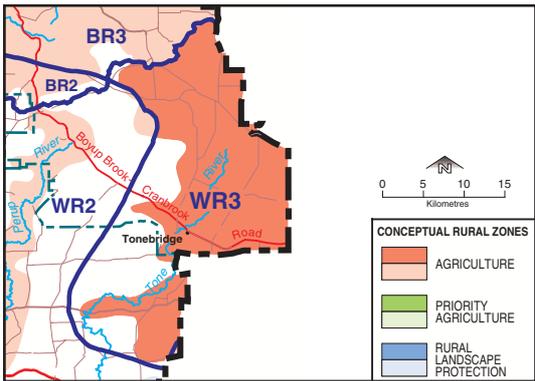
- Soils range from loamy and loamy gravels to duplex and deep sandy gravels and wet soils, with deep and duplex sandy soils and saline wet soils around the Unicup Lake and upper river systems. There are some steep slopes adjacent to the Tone River. There is a high risk of wind erosion throughout and potential for waterlogging in some areas. Currently, salinity levels in the upper Warren River basin are about 900mg/L total dissolved salts and this is predicted to rise to 1,200mg/L, resulting in significant loss of agricultural potential if action is not taken to address the issue. This area is within the Warren River Recovery Catchment.
- The principal waterway is the Tone River, which has brackish water quality. Major wetlands include the Tone River floodplain and the Unicup wetland system. No significant aquifers exist in the area.
- The unit contains Beard type 4 (wandoo/marri forest) and 992 (jarrah/wandoo medium forest) vegetation communities, which are now poorly represented and well below the national target.
- Conservation reserves — 9% of unit
- State forest — 27% of unit
- Other non-freehold — 17% of unit
- Cleared land — 29% of unit
- Remnant vegetation on private land — 18% of unit
- Significant landscape features — moderate landscape value.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- A significant proportion of this planning unit contains high to very high-capability soils for annual/perennial horticulture use, although there are increasing salinity levels on the broad river flats.
- There is a significant volume of water available for irrigation purposes, but the water quality is marginal. Water capture for irrigation purposes would be feasible only at levels higher in the landscape.
- There is limited potential for irrigated horticultural development unless Landcare/Rivercare programs and the Warren River Recovery Catchment project can succeed in reducing the saline groundwater table and the stream salinity levels.

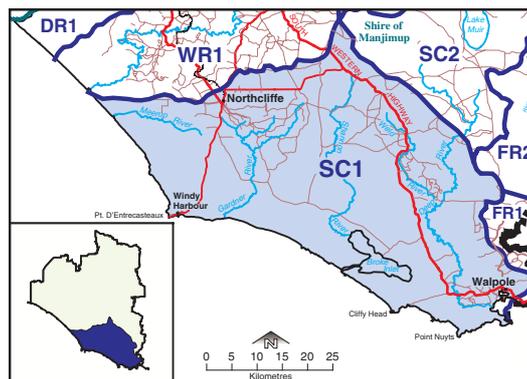
### 4. MAJOR ISSUES:

- Rising salinity levels across the broad river flats area and their impacts on agricultural productivity and water quality in the streams.
- Land and water degradation risks due to water and wind erosion, nutrient transport and siltation.
- Social impacts of increasing numbers of broadscale hardwood plantations taking over existing farms.
- Retention and protection of existing areas of remnant vegetation on freehold land.

<p><b>PLANNING UNIT WR3</b> <b>TONE (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from water and wind erosion, sedimentation, nutrient transport to adjacent waterways and wetlands and rising water tables, waterlogging and salinity levels.</li> <li>• Facilitate the development of agroforestry as an economic alternative to large-scale tree plantations, for its greater environmental and social benefits.</li> <li>• Wherever possible, retain all remnant vegetation on freehold land.</li> <li>• The DoE salinity management program water quality target is to reduce the salinity of the Warren River to a mean annual level of 500mg/L total dissolved salts measured at the Barker Road Gauging Station (and with separate goals for the sub-catchments) by the year 2030.</li> <li>• Salinity recovery will require commitment to short-term actions and long-term goals by the whole community and will involve a range of activities to suit particular circumstances, including various mixtures of revegetation and engineering solutions.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the wandoo/marri forest vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• Manage conflicting land uses, particularly tourism uses, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p>

## PLANNING UNIT SC1 SHANNON

Total area — 2,480sq.km



### I. PLANNING UNIT DESCRIPTION:

- Includes sub-catchments S20 — Meerup River, S17 — Blackwater Creek, S16 — Buldania Creek, S15 — Canterbury River, S14 — Boorara Creek, S13 — Gardner River, S12 — Gardner River, S3 — Weld River, S1 — Deep River, most of S10 — Shannon River and a small part of S2 — Deep River.
- High coastal dunes and rocky headlands, backed by flat, poorly drained plain with rocky rises and low, undulating terrain with swampy flats, and with lateritic plateau and shallow to deep valleys inland and hilly terrain with swampy flats and rocky outcrops around Walpole.
- Average rainfall ranges from 1,000mm-1,200mm per annum.
- Significant agricultural areas around Northcliffe and minor agricultural areas around Walpole have been partly cleared for agricultural usage, with the remainder of the land being contained within national parks or State forest (karri/jarra/marri forest, sedgelands and coastal heath). Several isolated freehold lots exist within the national parks, but these are mostly uncleared.
- Around Northcliffe, there is a variety of agricultural land uses, including annual and perennial horticulture, hardwood tree plantations, dairying, broadacre grazing, aquaculture and organic farming. Land uses around Walpole are restricted mostly to grazing.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

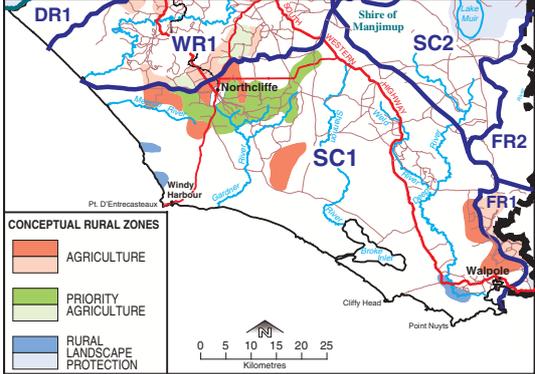
- Much of the agricultural land to the south and east of Northcliffe has a high to very high-capability rating for annual/perennial horticulture, but this is more restricted to the north and west, due mainly to soil types and waterlogging. Only a small proportion of the agricultural land around Walpole has a high to very high-capability rating.
- Each of the sub-catchments has ample water availability and high water quality.
- There is considerable capacity for expansion and intensification of productive agriculture around Northcliffe.

### 2. NATURAL RESOURCES DESCRIPTION:

- Soils range from deep sands on the coastal dunes, to wet and semi-wet, deep sands and loamy gravels on the coastal flats, to loams, loamy gravels, duplex and deep, sandy gravels and some wet soils and deep sands on the southern slopes. Steep slopes on the coastal dunes and in the upper river valleys. There is a very high wind erosion risk on the coastal dunes and areas of high wind and/or water erosion and waterlogging risks around Northcliffe.
- The principal waterways are the Gardner, Shannon and Deep Rivers, with the other sub-catchments being Meerup, Canterbury, Forth, Inlet, Weld and Walpole Rivers and Doggerup, Boorara, Buldania, Blackwater, Chesapeake, Butlers and Collier Creeks and Kingsman Brook, all of which have fresh water quality. The Deep River catchment is in near-pristine condition. Outstanding wetlands include Broke and Nornalup Inlets, the Gardner River Estuary and the Shannon and Deep River waterways. There are no significant aquifers in this area.
- The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 58% of unit
- State forest — 28% of unit
- Other non-freehold — 6% of unit
- Cleared land — 4% of unit
- Remnant vegetation on private land — 4% of unit
- Significant landscape features — rugged coastal landscape, vegetated coastal dunes, major granitic knolls and forest area between Gardner River and the Northcliffe to Windy Harbour Road.

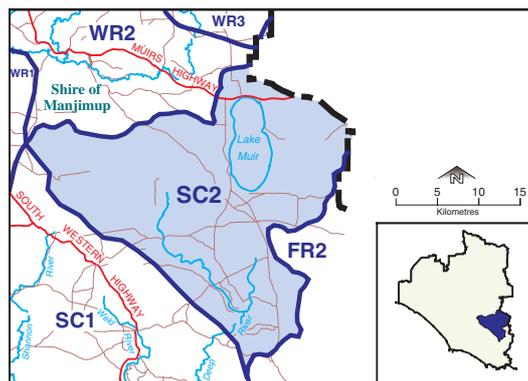
### 4. MAJOR ISSUES:

- Land and water degradation risks due to water and wind erosion and nutrient transport.
- Conflicting land uses and developments and ad hoc subdivisions restricting production potential of prime agricultural land.
- Scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Retention and protection of existing areas of remnant vegetation on freehold land.
- Coastal landscape values are coming under increasing pressure.
- Little is known of the coastal processes affecting the south coast.
- There is increasing pressure for recreational access to the coast and accommodation in that vicinity, but that is currently very limited and unco-ordinated.
- Windy Harbour settlement is lacking in water supply, power supply and effluent disposal services and infrastructure.

<p><b>PLANNING UNIT SCI SHANNON (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from wind and water erosion, siltation and nutrient transport.</li> <li>• Support CALM management and protection of the coastal landscape, waterways and wetlands within the D'Entrecasteaux, Shannon and Walpole National Parks.</li> <li>• Wherever possible, retain all remnant vegetation on freehold land within the Northcliffe and Walpole agricultural areas.</li> <li>• Manage existing uses in the Walpole River sub-catchment to maintain the quality of water for the Walpole Dam.</li> <li>• A current regional study of the south coast from Augusta to Walpole (being carried out by WAPC/DPI) will address issues such as recreation and tourism demands, access and accommodation opportunities, important coastal processes and coastal management principles.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>• In the <b>Priority Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production, especially that requiring irrigation waters.</li> <li>• In the <b>Rural Landscape Protection zone</b>, protect the visual landscape and environment and minimise adverse impacts on the adjoining national park and allow for low-key tourism development that is consistent with retaining the natural landscape appearance, for the land between Walpole and Broke Inlet.</li> <li>• Manage conflicting land uses, particularly tourism uses within the Agriculture zone, to minimise restrictions on adjoining productive agricultural uses.</li> <li>• Manage all intensive agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining national park or State forest.</li> <li>• Investigate options for amalgamation of isolated coastal freehold/leasehold lots into D'Entrecasteaux National Park, through acquisition, land swaps, transfer of development rights, incentives, etc.</li> <li>• Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b> Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*#.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Priority Agriculture zone:</b> Primary Uses: Annual horticulture, perennial horticulture, agroforestry, dairying*#, grazing.</p> <p>Secondary Uses: Single house*, farm worker accommodation*, commercial tree plantations*, rural industry*, extractive industry*, low-key tourism*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Rural Landscape Protection zone:</b> Primary Uses: Single house*, low-key tourism.</p> <p>Secondary Uses: Annual horticulture*, perennial horticulture*, dairying*#, grazing*, agroforestry*, commercial tree plantations*, rural industry*, extractive industry*.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b> and the <b>Priority Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p> <p><b>Rural Landscape Protection zone:</b> Subdivision of existing lots in the area between Walpole and Broke Inlet down to a minimum lot size of 40ha may be considered where it can be demonstrated that this would not be prejudicial to the objectives of preserving the intrinsic landscape values of the area and not create any adverse impacts on the adjoining national park or State forest and where this is consistent with the finalised <i>Augusta-Walpole Coastal Management Strategy</i>.</p>

## PLANNING UNIT SC2 MUIR

Total area — 709sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes all of sub-catchment SM — Lake Muir, most of sub-catchment S2 — Deep River and a small part of S10 — Shannon River.
- Lateritic plateau with broad, swampy depressions or hilly terrain with rocky outcrops and swampy flats leading down to poorly drained flats with lakes and low dunes around Lake Muir/Unicup.
- Average rainfall ranges from 750mm-1,000mm per annum.
- A narrow band of freehold agricultural land has been cleared on the western and southern fringes of Lake Muir as have several lots to the east of the lake. The remainder of the planning unit is either national park or State forest, parts of which have been logged in the past and regenerated.
- There is some annual horticultural use, several large hardwood and softwood tree plantations and the remainder of the land is used for grazing.

### 2. NATURAL RESOURCES DESCRIPTION:

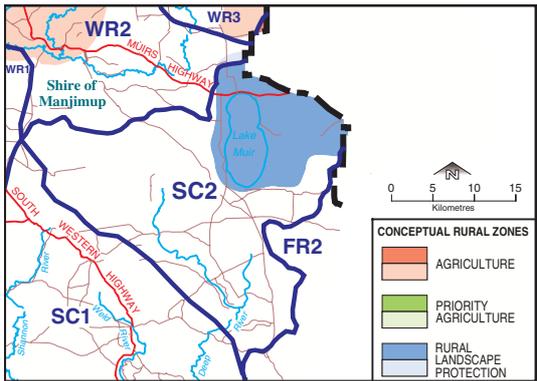
- Loamy and duplex sandy gravels and wet and semi-wet soils in the higher areas, with deep and duplex sands and duplex sandy gravels around the lake system. There are few steep slopes. There is a high wind erosion and waterlogging risk around the lake system.
- The only waterway of any significance is the Deep River, which becomes the overflow from Lake Muir on rare occasions. Lake Muir/Byenup Lagoon system is a Ramsar listed wetland. There is no significant aquifer in the area.
- Conservation reserves — 29% of unit
- State forest — 61% of unit
- Other non-freehold — 2% of unit
- Cleared land — 5% of unit
- Remnant vegetation on private land — 3% of unit
- Significant landscape features – Lake Muir is the significant landscape feature of the area.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- Most of the land has only low to moderate capability for annual or perennial horticulture.
- There is very little water availability for irrigation purposes.
- There is very limited potential for expansion of irrigated horticultural development.

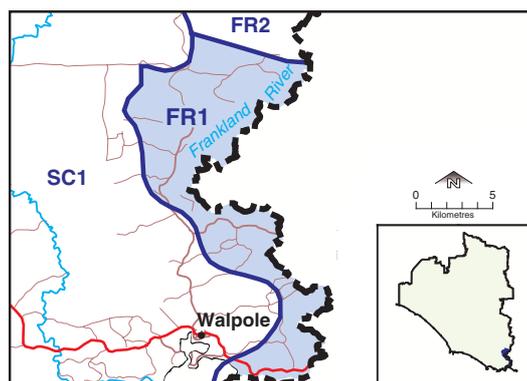
### 4. MAJOR ISSUES:

- Potential impacts of agricultural land uses, particularly nutrient transport, on the important ecological and visual landscape values of the Lake Muir wetland suite.
- Potential impacts of the mining of peat deposits in the vicinity of the wetland suite.
- scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Retention and protection of existing areas of remnant vegetation on freehold land.

<p><b>PLANNING UNIT SC2</b> <b>MUIR (Continued)</b></p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Support CALM management and protection of the Lake Muir wetland suite.</li> <li>• Wherever possible, retain all remnant vegetation on freehold land in the vicinity of the Lake Muir wetland suite.</li> <li>• Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from wind and water erosion, siltation and nutrient transport.</li> <li>• Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora.</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• In the <b>Rural Landscape Protection zone</b>, protect the visual landscape and environment and minimise adverse impacts on the adjoining Lake Muir wetland suite and allow for low-key tourism development that is consistent with retaining the natural landscape appearance.</li> <li>• Manage all agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> <li>• Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement) within adjoining wetlands, national park or State forest.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Rural Landscape Protection zone:</b></p> <p>Primary Uses: Single house*, low-key tourism*.</p> <p>Secondary Uses: Annual horticulture*, perennial horticulture*, dairying*#, grazing*, agroforestry*, commercial tree plantations*, rural industry*, extractive industry*.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p><b>Rural Landscape Protection zone:</b></p> <p>Subdivision of existing lots down to a minimum lot size of 40ha may be considered where it can be demonstrated that this would not be prejudicial to the objectives of preserving the intrinsic ecological and landscape values of the lake and its surrounding wetlands and not create any adverse impacts on the adjoining national park or State forest.</p>

## PLANNING UNIT FR1 FRANKLAND

Total area — 119sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes the whole of sub-catchment F2 — Lower Frankland and part of sub-catchment F1 — Frankland River.
- Hilly terrain with swampy flats.
- Average rainfall ranges from 1,150mm-1,250mm per annum.
- Approximately half of the planning unit has been cleared for agricultural uses, with the remainder being within national park or State forest.
- There are no urban areas within this planning unit, but Walpole townsite is immediately to the west and Nornalup townsite is on the banks of the Frankland River, just to the east of the study area boundary. The South Coast Highway passes through the planning unit and several gravel roads serve the agricultural lots.
- The agricultural lots are used for broadacre grazing purposes.

### 2. NATURAL RESOURCES DESCRIPTION:

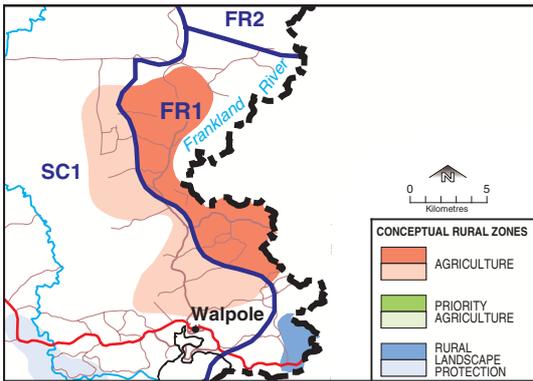
- Soils consist of loams, loamy gravels, deep loamy duplexes and duplex sandy gravels. There are many steep slopes throughout this area. High wind and/or water erosion risks throughout and waterlogging risk in some areas.
- The principal waterway is the Frankland River, which has a marginal water quality. The most significant wetland is the Nornalup Inlet. There is no significant aquifer in this area.
- The unit contains Beard type 23 (low jarrah/banksia on sands) vegetation community, which is now poorly represented and well below the national target.
- Conservation reserves — 31% of unit
- State forest — 33% of unit
- Other non-freehold — 7% of unit
- Cleared land — 18% of unit
- Remnant vegetation on private land — 11% of unit
- Significant landscape features — the Frankland River, Mt Frankland and the mosaic of vegetation communities.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- Only small, scattered portions of the agricultural land have a high to very high-capability rating for annual and perennial horticulture.
- There is a small amount of water available for irrigation purposes, but this is not a significant constraint given the high rainfall and relatively small area of freehold land in the planning unit.
- Limited potential for irrigated horticultural development, but dryland viticulture will be unrestricted by water availability.

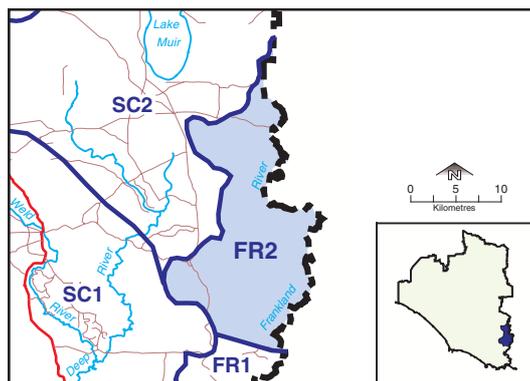
### 4. MAJOR ISSUES:

- Scattered nature of the freehold land areas in among the national parks and State forest areas increases the impacts of edge effects (such as weeds, domestic and farm animals and tourism and recreational uses).
- Nutrients leaching through the soils or entering waterways via enriched surface water layers or attached to particulate matter pose a potential threat to the Frankland River system and Nornalup Inlet.
- Wind and water erosion potential and siltation of the Frankland River system and Nornalup Inlet.
- Protection of the existing vegetation and landscape values.

<p><b>PLANNING UNIT FR1</b> <b>FRANKLAND</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>Establish nutrient load targets for the Nornalup Inlet and manage nutrient loads within the catchment consistent with those targets.</li> <li>Develop and observe appropriate best management practice/code of practice to minimise land and water degradation resulting from wind and water erosion, siltation and nutrient transport.</li> <li>Retain all remnant vegetation on freehold land wherever possible and maintain rural landscape and amenity.</li> <li>Protect poorly represented vegetation associations, threatened ecological communities and rare and priority flora, especially the low jarrah/banksia on sands vegetation community on freehold land (contact CALM for greater detail).</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>In the <b>Agriculture zone</b>, promote and facilitate the diversification and intensification of sustainable agricultural production within the capacity of the land, with some allowance for the inclusion of low-key tourism developments.</li> <li>In the <b>Rural Landscape Protection zone</b>, allow for low-key tourism development that is consistent with retaining the natural landscape appearance.</li> <li>Manage conflicting land uses, particularly tourism uses, to minimise restrictions on adjoining productive agricultural uses.</li> <li>Ensure that all rural-residential development is restricted to a specifically identified zone or policy areas.</li> <li>Manage tourism uses to minimise adverse impacts (e.g. domestic animals, uncontrolled pedestrian movement, reciprocal fire threat) within adjoining national park or State forest.</li> <li>Manage all agricultural production in strict accordance with best management practice/code of practice to minimise impacts on significant ecological values.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <p><b>Agriculture zone:</b></p> <p>Primary Uses: Grazing, dairying*#, broadacre cropping, agroforestry, commercial tree plantations, single house*, low-key tourism*, rural industry*.</p> <p>Secondary Uses: Annual horticulture, perennial horticulture, farm worker accommodation*, extractive industry*, intensive animal husbandry*#, feedlots*#, piggeries*#, poultry farms*#.</p> <p><b>Rural Landscape Protection zone:</b></p> <p>Primary Uses: Single house*, low-key tourism*.</p> <p>Secondary Uses: Annual horticulture*, perennial horticulture*, dairying*#, grazing*, agroforestry*, commercial tree plantations*, rural industry*, extractive industry*.</p>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <p>In the <b>Agriculture zone</b>, apply the standard subdivision criteria from chapter 5.7.</p> <p><b>Rural Landscape Protection zone:</b></p> <p>Subdivision of existing lots down to a minimum lot size of 40ha may be considered where it can be demonstrated that this would not be prejudicial to the objectives of preserving the intrinsic landscape values of the area and not create any adverse impacts on the adjoining national park or State forest.</p>

## PLANNING UNIT FR2 UPPER FRANKLAND

Total area — 267sq.km



### 1. PLANNING UNIT DESCRIPTION:

- Includes part of sub-catchment F1 — Frankland River.
- Lateritic plateau with broad, swampy depressions and hilly terrain and poorly drained flats with rocky outcrops and a major river valley.
- Average rainfall ranges from 800mm-1,150mm per annum.
- The whole of the planning unit is contained within national park/State forest.
- There is no infrastructure or agricultural uses within this planning unit.

### 2. NATURAL RESOURCES DESCRIPTION:

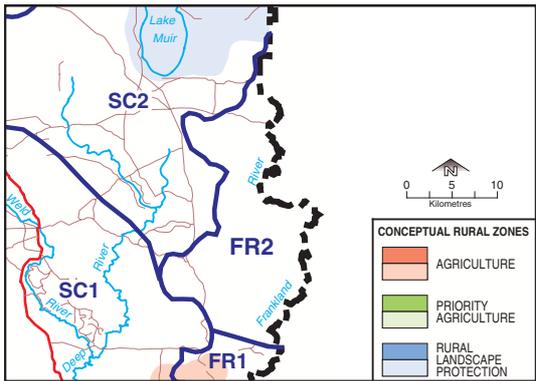
- Soils consist of loams, deep loamy duplexes, loamy gravels and duplex sandy gravels, with deep sands and wet soils in the lower areas. There are scattered steep slopes throughout the planning unit.
- The principal waterway is the Frankland River, which has a brackish water quality. There is no significant aquifer in this area.
- Conservation reserves — 28% of unit
- State forest — 72% of unit
- Other non-freehold — nil
- Cleared land — nil
- Remnant vegetation on private land — nil
- Significant landscape features — a key area of landscape value exists west of the Frankland River.

### 3. LAND CAPABILITY AND WATER AVAILABILITY:

- Not relevant within this planning unit.

### 4. MAJOR ISSUES:

- Preserving the ecological values of the existing vegetation.

<p><b>PLANNING UNIT FR2</b> <b>UPPER FRANKLAND</b> (Continued)</p>	
<p><b>5. NATURAL RESOURCES MANAGEMENT OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Support CALM's management of the ecological values.</li> </ul>	<p><b>6. PLANNING OBJECTIVES:</b></p> <ul style="list-style-type: none"> <li>• Not relevant within this planning unit.</li> </ul>
<p><b>7. LAND USE CATEGORIES:</b></p> <ul style="list-style-type: none"> <li>• Not applicable to this planning unit.</li> </ul>	<p><b>8. SUBDIVISION CRITERIA:</b></p> <ul style="list-style-type: none"> <li>• Not applicable to this planning unit.</li> </ul>



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## **PART 3**

# **IMPLEMENTATION**

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## 8.0 IMPLEMENTING THE STRATEGY

### 8.1 Functions of the Strategy

The function of the Strategy has been to develop a framework to guide, promote and facilitate the development of the region in the best interests of the community within a 25-year planning horizon. This has been achieved by way of a program of public consultation and a partnership between State and local government representatives. The result should be a mutually agreed Strategy supported by all.

The Strategy was started from the basis of the public issues and the natural resources management factors identified by the community for the region. This was then developed into a vision, objectives, principles, strategies and policies to address them. There has been a strong effort to maintain public involvement as far as possible to ensure public support and “ownership” of the final Strategy.

### 8.2 Process of Implementation

The Strategy has been reviewed and revised in line with submissions received during the advertising period. This final Strategy represents the planning policy of WAPC for the Warren-Blackwood Region. It will be incorporated within and implemented under *Statement of Planning Policy No. 1 State Planning Framework*. At a State Government level, it will define the role and level of involvement of the planning agency in the natural resources management agenda as well as providing a framework to assist the other agencies in their decision-making role in planning-related matters.

For local government, the concurrent development of this Strategy and the four local planning strategies will ensure consistency between the two levels and will engender State support for the stated local aspirations. Individual members of the general public will be able to use the regional and local planning strategies to assist with planning and developing their own projects and lifestyle in a manner compatible and consistent with the overall community vision and direction.

### 8.3 Relationship to Other Initiatives

This Strategy has used the *South West Regional Strategy for Natural Resource Management* as a baseline for translating the relevant principles, objectives and proposed actions of that strategy into a planning context for implementation through the planning system. It will work in parallel with the catchment strategies and business plans developed by the various basin/catchment groups (such as Blackwood Basin Group) and will give State and local government support for implementing the planning components of their objectives. Similarly, it will work in parallel with and be complementary to the initiatives of other State and local government agencies. In terms of government policies such as on sustainability and natural resources management, the Strategy will provide a vehicle for implementation and translation to the level of other planning documents. From a Commonwealth natural resources management aspect, it will provide an avenue for implementation of relevant Natural Heritage Trust objectives of Landcare, Rivercare, Bushcare and Coastcare through the planning system.

### 8.4 Relationship to Local Planning Strategies

The role of the Strategy is to establish the objectives, principles, broad strategies and guidelines and to provide regional co-ordination, consistency and continuity across boundaries. It is the role of the local planning strategies to adapt those guidelines to local circumstances and develop the appropriate level of detail for implementing through local decision-making. The particular benefit of developing the regional and local strategies concurrently and in partnership is that there is a greater opportunity for a clear and precise distinction between the two levels, while still maintaining consistency. It also makes it easier to introduce subsequent major amendments to both (such as to incorporate waterways and wetlands and bush and biodiversity conservation concepts when they are resolved) without upsetting the balance or consistency between the two levels.

### 8.5 Flexibility and Refinement

There is an ongoing dilemma for planning agencies in choosing the appropriate balance between certainty and flexibility in their planning documents. While landowners appreciate certainty, decision-makers' clarity and investors'



predictability in planning provisions, there is also a need to allow flexibility to accommodate new base data, changed circumstances, special cases or a shift in community focus. Past planning experience and strong community urging have indicated that the vast majority of these planning principles and strategies are best expressed through the regional and local planning strategies (rather than in statutory documents) and implemented through community commitment to them. Limited scheme provisions are appropriate to give backup powers when needed.

The full range of base information was not available to allow the regional assessment to be carried out to the desirable extent and detail. This Strategy represents the best outcome that could be achieved under the circumstances at the time (and this is common with strategic planning exercises). However, the regional and local strategies are not static blueprints, but rather are a continually evolving consensus of community views and aspirations. Local planning strategies should undergo constant refinement as new data, concepts and opportunities arise and where these have an impact at a regional level, so too should the Strategy be refined. There is a formal process for amending a local planning strategy, but minor refinements may be carried out by way of local government policies, provided appropriate allowance has been provided in this Strategy.

## 8.6 Major Modifications

Several major modifications should be anticipated during the life of the regional and local strategies. A regional coastal planning strategy is currently in preparation, water allocation management plans are to be co-ordinated by DoE and further assessment of the *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* report data to identify proposals for special protection is to be carried out, each of which would require major modification to both levels of strategy. Other unforeseen changes are also likely to arise and will need to be accommodated.

The *Waterways and Wetlands in the South West* and *Bush and Biodiversity in the South West* reports have presented a large amount of data that will provide a basis for addressing future conservation and protection goals in the region. However, before any action can be taken to implement those goals, CALM and DoE need to

prioritise the various conservation and protection goals and seek community prioritisation of management options.

The outcomes can then be reflected in the local planning strategies in terms of the range of reservation, conservation or management concepts. This will give clear opportunity to achieve the goals set up by all the research work that has been done.

## 8.7 Natural Resources Management Targets and Monitoring

Hand in hand with a land management system (as opposed to tight land use control in rural areas) and land rehabilitation goes a process of target setting and monitoring within catchments. Some such targets have already been set by the State Salinity Council and by salinity recovery catchments in regard to reducing salinity levels within the Warren and Collie River basins. In addition, the Blackwood Basin Group has established various targets to assist in catchment management within the Blackwood basin.

Targets should be identified through key stakeholders and community groups to define goals for each catchment. A system of monitoring will also need to be established to complement and validate the target setting. The outcomes of the monitoring program will indicate the level of success in achieving the targets set. It will also show where best management practice/code of practice may need to be reviewed. Established targets may need to be revised upwards or downwards, offending uses or developments modified, or other specific actions taken to remedy the situation.

Responsibility for carrying out the monitoring program should be clarified. The most logical choices would appear to be either DoE, DoAg and/or basin management groups.

## 8.8 Strategy Monitoring and Review

Despite refinement and major modification at various times, it will still be necessary to monitor the performance of the strategies at regional and local levels. After five years, each will need to be reviewed to assess the ongoing relevance of their objectives, principles and strategies and a major revision or new strategy prepared.

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## APPENDICES

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## APPENDIX I — STUDY MANAGEMENT GROUP AND TECHNICAL WORKING GROUP MEMBERSHIPS

The *Warren-Blackwood Rural Strategy* was funded by the Western Australian Planning Commission (WAPC) and was project managed by the Department for Planning and Infrastructure on behalf of the WAPC. A study management group was nominated by the partnership member agencies to advise and guide the development of the draft Strategy. Membership of that study management group consisted of:

AGENCY	REPRESENTATIVES
• Shire of Manjimup	Cr Keith Liddelow Cr Murray Curti Mr Matt Riordan
• Shire of Bridgetown-Greenbushes	Cr Laurie Bullied (1st part) Mr Tim Clynh
• Shire of Boyup Brook	Cr Les Bardoe Cr Kevin Moir Mr Will Pearce
• Shire of Nannup	Cr Barbara Dunnet Mr Leigh Guthridge
• Department of Agriculture	Mr Allan Johns (1st part) Dr Henry Brockman (2nd part)
• Department of Environment	Mr Mick Owens
• Department of Conservation and Land Management	Mr Chris Portlock (1st part) Mr Roger Hearn (2nd part)
• Department for Planning and Infrastructure	Mr Kevin Martin (Project Manager) Mr Richard Kay (1st part) Mr Shane Kirk (2nd part)

The study management group was supported by a technical working group representing the following community groups, landcare groups and government agencies:

South West Catchments Council	Department of Environment
Blackwood Basin Group	South West Development Commission
Blackwood Valley Landcare Group	Department of Aboriginal Affairs
Boyup Brook LCDC	Department of Commerce and Trade
Manjimup LCDC	Shire of Manjimup
Bridgetown-Greenbushes LCDC	Shire of Bridgetown-Greenbushes
Lower Blackwood LCDC	Shire of Boyup Brook
Bridgetown-Greenbushes Landcare Group	Shire of Nannup
State Salinity Council	Department of Agriculture
	Water and Rivers Commission
	Department of Conservation and Land Management
	Department for Planning and Infrastructure

The WAPC wishes thank all those people and organisations and to acknowledge the significant contribution they made.



## **APPENDIX 2 — LIST OF ABBREVIATIONS**

The following abbreviations have been used in this Strategy:

CALM	Department of Conservation and Land Management
DEP	Department of Environmental Protection
DoAg	Department of Agriculture
DoE	Department of Environment
DPI	Department for Planning and Infrastructure
ha	hectare
LCDC	Land Conservation District Committee
LGA	Local Government area
WAPC	Western Australian Planning Commission
WRC	Water and Rivers Commission

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## APPENDIX 4 — LAND USE AND CONFLICT DIAGRAMS

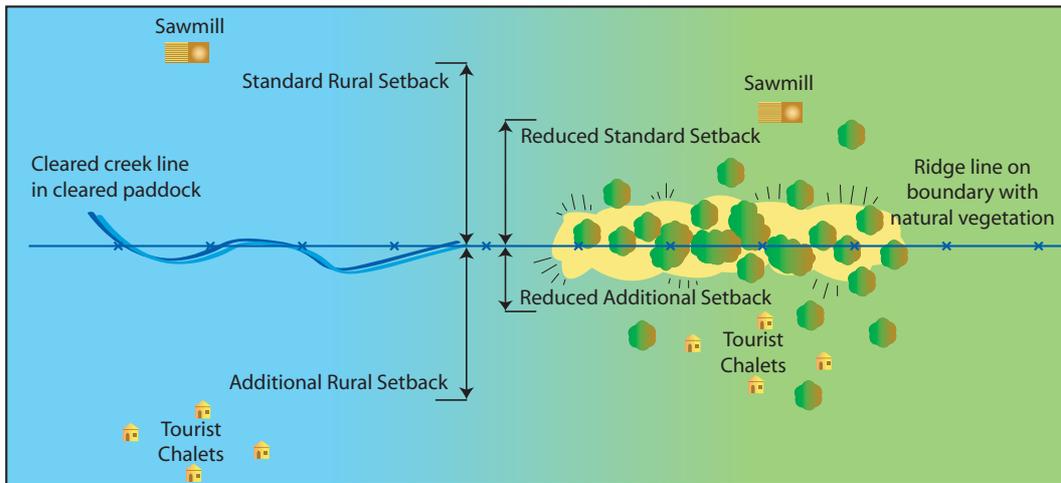
The key principle is to ensure that in all zones, the level of nuisance at a dividing boundary does not exceed a standard acceptable level for that particular Rural zone.

**Standard rural setback** is the distance a particular rural use should be set back from a boundary to an adjoining lot in flat, open country, to reduce the level of nuisance at that boundary to an acceptable standard for an adjoining agricultural use.

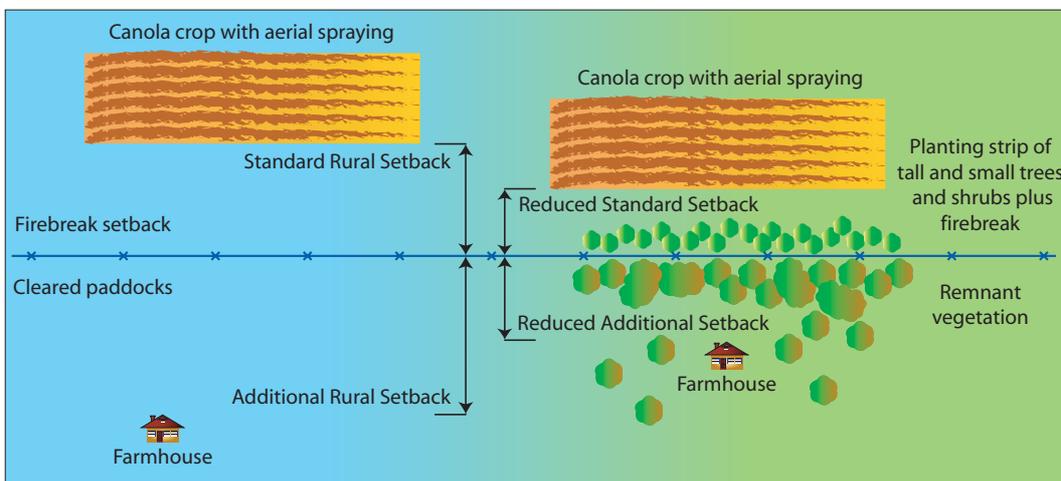
**Additional rural setback** is the additional distance a particular rural or new agricultural use should be set back from a boundary to an adjoining lot in flat, open country, to reduce further the level of nuisance for that particular use.

### Notes

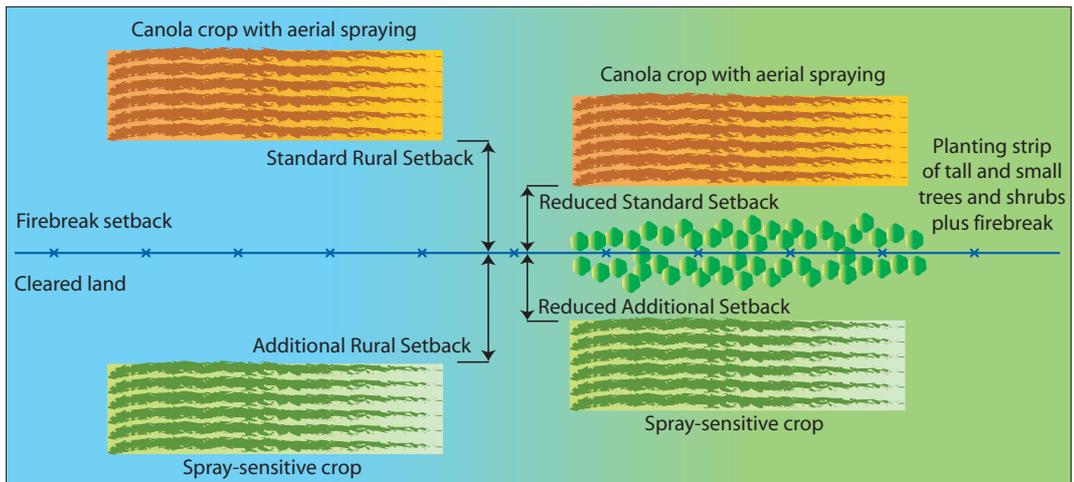
- Setbacks may be reduced where the nuisance is ameliorated by other factors, such as topography, natural vegetation, screen plantings, constructed barriers, etc.
- Setbacks should be considered and imposed for all developments/uses on Rural zoned land, regardless of whether or not the adjoining land is developed and/or used for a rural purpose at this stage.
- A council may require an owner/developer/occupant of a non-agricultural use in or adjoining a Rural zone to acknowledge that they are in a Rural zone and will accept standard rural levels of nuisance, and may also require a memorial to that effect to be registered on the title.
- Where a nuisance-causing use or development is to be located at a distance less than an acceptable rural setback, that proponent should compensate the adjoining owner/occupier for that nuisance.
- These are principles and guidelines only and are designed to address rural land use conflicts in a fair and equitable manner for all parties. It is the responsibility of the local government, community and other agencies to determine the acceptable nuisance levels and the manner in which they are administered.



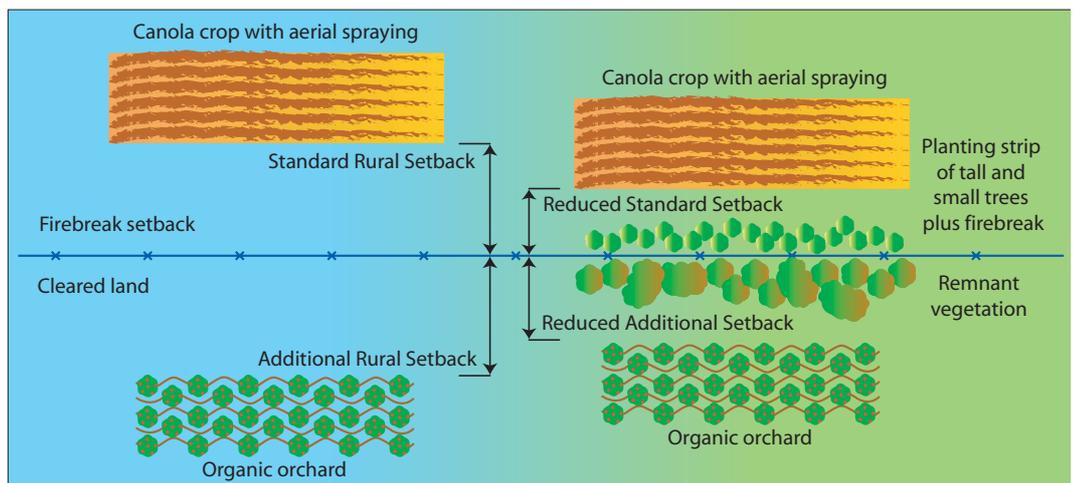
Example 1: Sawmill vs Tourist Chalets



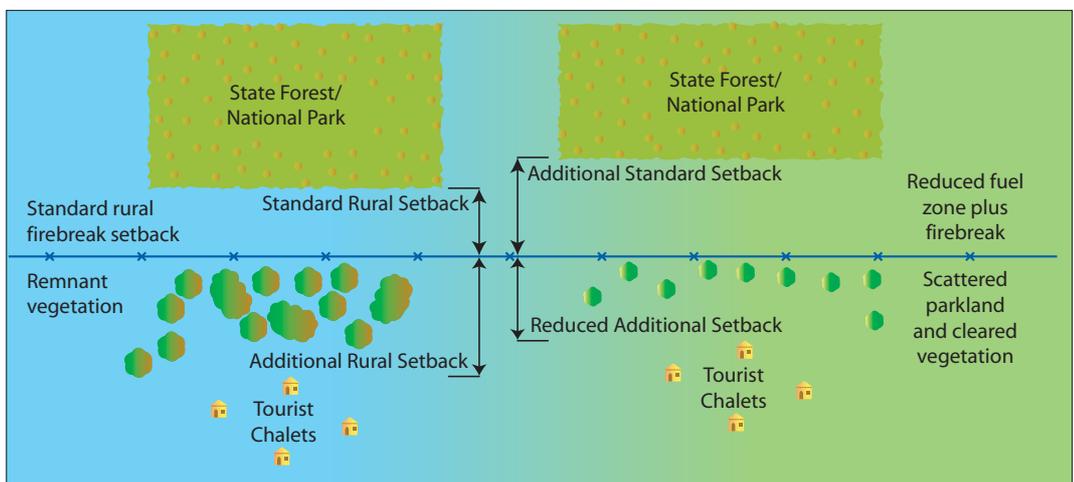
Example 2: Crop vs Farmhouse



Example 3: Agricultural Use vs Agricultural Use



Example 4: Agricultural Use vs Certified Organic Farm



Example 5: Tourist Chalets vs State Forest/National Park

