



Augusta-Walpole Coastal Strategy

JULY 2009



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Foreword

The outstanding landscape, ecological and recreational values of the coast between Augusta and Walpole are important to the Western Australian community.

Population increase in the region and the popularity of beautiful wilderness areas for recreation are placing increased pressure on the sensitive and remote coastal environment.

The area is rich in biodiversity, recreational and tourism opportunities, mineral resources, and scenic beauty. Corresponding with these diverse resources are many uses, interests and points of view. Striking a balance between these is essential to maintaining the value of the area.

The Augusta-Walpole Coastal Strategy provides guidance on how various issues affecting the coast can be managed. It addresses coastal tenure and management, settlement, tourism, coastal access, infrastructure, subdivision, development, and the protection of the environment and biodiversity.

It also provides detailed planning direction to local governments for updating planning schemes to ensure subdivision and development in the area does not threaten the environmental and landscape values of the coast. It promotes a coordinated approach by the three shires responsible for the area and provides a comprehensive framework for land use planning decisions.

The strategy is the result of a thorough planning process involving many organisations and individuals. The shires of Augusta-Margaret River, Nannup and Manjimup, key state government agencies, and community members were actively involved in the strategy's formulation.

The Augusta-Walpole Coastal Strategy provides a broad framework for management of this exceptional part of Western Australia. It will be a valuable tool for planners, developers, conservationists, and the general public.



A handwritten signature in black ink, appearing to read 'Gary Prattley'.

Gary Prattley
Chairman, Western Australia Planning Commission

Executive summary

One of the principal recommendations of the *Warren-Blackwood Regional Planning Strategy* and the *Scott Coastal Plain – A Strategy for a Sustainable Future* report, was that a separate coastal strategy should be prepared for the Augusta-Walpole coastal area to address a broad range of coastal management issues.

This strategy encompasses the coastal area between Augusta and Walpole. Its northernmost boundary follows the Scott River; the boundaries of the Gingilup Swamps Nature Reserve and the Walpole-Nornalup National Park, and it includes a majority of the D'Entrecasteaux National Park. The area includes the lower reaches of rivers, wetlands and estuaries, private freehold land and a large proportion of Department of Environment and Conservation (DEC) managed estate. The study area includes land in the shires of Augusta-Margaret River, Nannup and Manjimup.

The strategy sets out the State Government's broad planning policies and strategies for the Augusta-Walpole coast and provides a framework for coastal planning and management and sustainable use of the coast. It recommends a number of actions with the aim of achieving the objectives listed in the following paragraph and addressing the many issues that require resolution through strategic land use planning.

Objectives

The main objectives of the strategy are to:

- protect and where possible restore the high-value terrestrial and marine natural environment and biodiversity of the Augusta-Walpole coast;
- maintain, protect and sustain water sources for the social, economic and environmental benefit of the area;
- ensure appropriate vesting and management of terrestrial and marine environments along the Augusta-Walpole coast;
- provide for sustainable agriculture and other primary industry pursuits;
- ensure that future development, including public infrastructure, is environmentally sustainable;

- support sustainable development opportunities for the environmental, social and economic benefit of local communities;
- ensure that development complements the natural landscape and wilderness experience;
- provide opportunities for sustainable and responsible tourism and recreation;
- ensure strategic basic raw materials are available for community use and benefit;
- provide adequate and safe public access to the Augusta-Walpole coast;
- provide appropriate infrastructure while ensuring that the environmental, heritage, social and cultural values of the coast are protected; and
- promote and improve environmental and cultural research, monitoring and knowledge and awareness of the coast.

Issues

The main purpose of developing the strategy is to address key issues affecting the region, including:

- tourism, recreation and coastal access;
- resolution of tenure issues and creation of appropriate management arrangements for unallocated Crown land;
- development along the south coast - the future of East Augusta, White Point, Black Point, Windy Harbour, Camfield, Walpole and private enclaves in national parks;
- retention and protection of the environmental values and wilderness qualities of the coast;
- mining; and
- Aboriginal and European heritage.

Principles

The strategy is guided by principles broadly grouped under the headings of:

- sustainable development and management of natural resources;
- community aspirations and economic development;
- protection of biodiversity remoteness and high conservation values; and
- cumulative impacts and the precautionary principle.

Community engagement

Development of the strategy has included substantial community and stakeholder engagement through varied consultation methods. Public information displays, targeted stakeholder meetings and the establishment of a steering committee and a community reference group provided valuable views and input to the development of the draft strategy. Submissions received during the public comment period also assisted in further amendment and refinement to produce the final Augusta-Walpole Coastal Strategy.

Settlement and coastal tourism hierarchy

The strategy proposes a settlement and recreation site hierarchy, including:

- recommendations for existing coastal settlements;
- consolidation and expansion of existing settlements;
- retention of existing character in settlements such as East Augusta and Windy Harbour; and
- suggestion of level of recreational use at popular coastal recreation locations.

Coastal access

The strategy identifies four potential public coastal access locations between East Augusta and Black Point based on suitable topography, existing informal tracks and historic use. The

four locations are currently on private freehold land, and the provision of public coastal access is likely to be facilitated through subdivision or development.

Coastal tenure and management

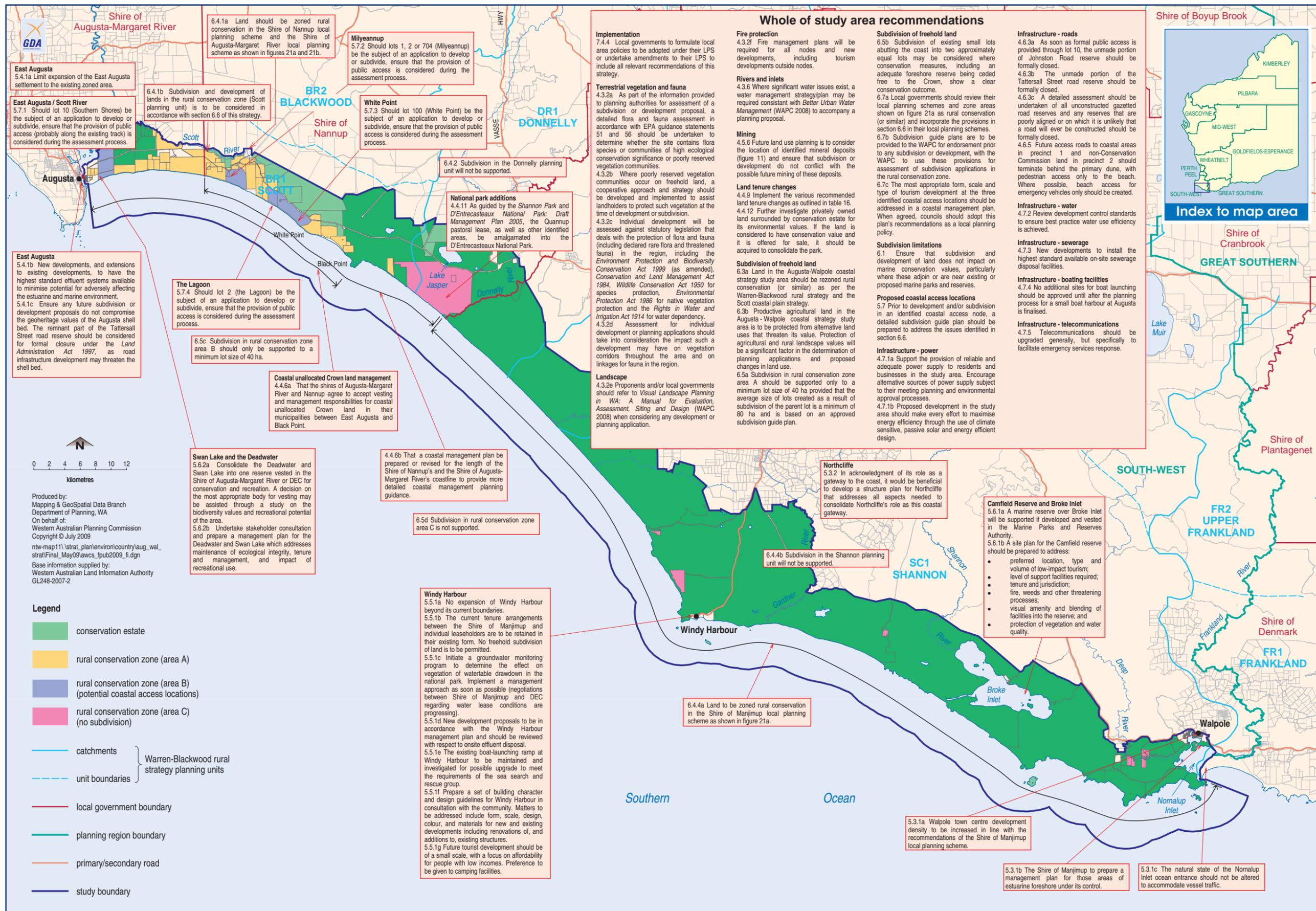
The strategy recommends that the coastal strip of currently unallocated Crown land be vested in the relevant local government as the first preference, or in the Conservation Commission of Western Australia as the second preference. Dividing vesting between the local government and Conservation Commission is also discussed. Management of this land should be in accordance with a more detailed coastal management plan, which is the next step from this strategy.

Protection of the environment and biodiversity

The study area has many unique and valuable environmental features of significant aesthetic, conservation and recreation value. Community consultation throughout the strategy's development has emphasised the value of these features. The study area is within a national and international biodiversity hotspot incorporating high species richness, diversity, endemism, threatened species and poorly reserved vegetation types. Biodiversity values are protected within the conservation estate; but other Crown land and freehold land in the Scott coastal plain and adjoining coastal area also have significant value.

Infrastructure

Settlements throughout the study area have differing levels of infrastructure, from reticulated power, water and sewerage to septic tanks, generators and rainwater tanks. Development adjacent to environmentally significant estuaries and the marine environment requires the best available and sustainable wastewater treatment solutions with the least possible impact on the surrounding environment and water quality.



The lack of adequate service infrastructure to cater for town growth and the prohibitive cost of providing it are important constraints on the development and expansion of settlements in the study area. Innovative approaches to the provision of power, water and sewerage services in remote settlements may be the only realistic solution to the lack of infrastructure. Alternative power generation in isolated areas may include solar and wind power, provided the infrastructure is consistent with the surrounding landscape and does not affect the visual amenity.

Subdivision and development

Limited subdivision of certain lots in the study area may be supported after coastal unallocated Crown land has been vested in an appropriate body for management responsibility, and it can be demonstrated that the highly valued environmental features of the Augusta-Walpole coastline will not be adversely affected.



Broke Inlet mouth

The strategy proposes a change of land zoning for certain coastal lots to rural conservation, and presents provisions for insertion into local planning schemes to accompany this zone.

Implementation

The Augusta-Walpole Coastal Strategy has been adopted by the Western Australian Planning Commission and will be used to guide decision making within the strategy area. Implementation of the strategy's recommendations will occur through various mechanisms. These include:

- local planning schemes;
- local planning strategies;
- local planning policies;
- subdivision and development applications; and
- state and local government core business.

The strategy has a planning horizon of 15 years. A number of ongoing studies have particular relevance to this region and strategy, and they will be an important consideration at the time of review.

Summary of recommendations

The strategy makes broadly categorised recommendations, set out in figure i, which also appear in chapter 7 of the document with more detail on their priority, the implementation mechanism and the responsible implementation bodies.

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I Introduction

I.1 Background

The south coast of Western Australia from East Augusta to Walpole is significant for its environmental, landscape, heritage and wilderness values. The region, particularly the coastal strip, has long been considered remote and largely inaccessible and this has provided a degree of protection.

The growth and increased mobility of the state's population are resulting in more visitors to the area and a corresponding impact on the fragile environment and the remote semi-wilderness landscape. There is increasing competition for the use of the coastal land for recreation, agriculture, mining and tourism. Activities associated with these uses can result in coastal degradation if they are not properly managed.

As a result of this increasing pressure, the primary planning issues for the area are the determination of an appropriate level and type of development, access, use and appropriate management of the coast that is compatible with the retention of the area's unique environmental and wilderness values.

The Augusta-Walpole Coastal Strategy has been developed in response to these planning issues. The 1997 *Warren-Blackwood Regional Planning Strategy* and the 2001 *Scott Coastal Plain – A Strategy for a Sustainable Future* report identified the need for a separate coastal strategy for the Augusta-Walpole coastal area.



Point Nuyts

I.1.1 Study area

The study area extends from the edge of the Hardy Inlet at East Augusta to the Frankland River near Walpole (figure 1). Its northernmost boundary follows the Scott River to the boundary of the Gingilup Swamps Nature Reserve. It continues along the northernmost boundaries of the Gingilup Swamps Nature Reserve and the adjoining D'Entrecasteaux National Park, running along Chesapeake Road and Broke Inlet Road until it meets the South Western Highway. It then continues to meet the Walpole-Nornalup National Park northern boundaries, ending at the Shire of Manjimup

boundary where the South Coast Highway crosses the Frankland River. The study area includes the western and central portions of the Scott coastal plain, and the lower reaches of many rivers, wetlands and estuaries and private freehold land. A significant proportion of the study area is conservation estate managed by the Department of Environment and

Conservation (DEC). The southernmost boundary is three nautical miles offshore.

It is important to note that a large proportion of the study area is in the D'Entrecasteaux and Walpole-Nornalup national parks, state forest and timber reserves and other nature reserves vested in the Conservation Commission of Western Australia. These are managed by DEC. It is also recognised that DEC's planning process is set out in the *Conservation and Land Management Act 1984*. This strategy has been prepared by the Western Australian Planning Commission through the *Western Australian Planning Commission Act 1985* and it does not replace or override any plan developed or being developed by DEC for the management of these lands. Rather, it seeks to complement the strategic importance of the national park and nature reserves. Through the inclusion and input of DEC representatives on the steering committee, it is anticipated that future planning for parks and reserves under its management will take into account relevant aspects of this strategy in the planning processes. Ideally, the strategy should be reviewed after five years.

The strategy's main focuses are the settlements and the freehold land to the western end of the study area. For this reason many of the maps throughout the strategy are confined to the extent of the freehold land between East Augusta and Black Point.

1.1.2 Purpose

This strategy has been developed in response to increasing pressure to determine an appropriate level of development, access and use of the Augusta-Walpole coast that is compatible with the retention of the area's unique wilderness values. It is a result of one of the primary recommendations in the *Warren-Blackwood Regional Planning Strategy* and the *Scott Coastal Plain – A Strategy for a Sustainable Future*, that a separate coastal strategy was needed for the Augusta-Walpole coastal area.

The strategy sets out the State Government's broad planning approach to the Augusta-Walpole coastal area over the next 15 years. It will assist the WAPC and local governments in making decisions about future land use and local coastal planning in the region. The strategy therefore provides a planning link between the State Government's strategic directions for coastal planning and the management and local planning of management strategies.

1.1.3 Vision for the coast

In order to determine a focus for the strategy, while considering the many values of the study area, a long-term vision for the Augusta-Walpole coastline has been developed in consultation with the steering committee and community reference group.

The vision statement, which forms the basis of the strategy, is:

'the unique environment and wilderness values of the Augusta-Walpole coast are protected and conserved with sustainable use occurring for the wellbeing of present and future generations.'

In the context of this vision statement, the term sustainable use refers to the Western Australian state sustainability strategy definition of sustainability:

'sustainability is meeting the needs of current and future generations through integration of environmental protection, social advancement and economic prosperity.'

The objectives and management approach for the strategy have been developed in accordance with this vision.

1.1.4 Objectives

The main objectives of the strategy are to:

- protect and where possible restore the high value terrestrial and marine natural environment and biodiversity of the Augusta-Walpole coast;
- maintain, protect and sustain water sources for the social, economic and environmental benefit of the area;
- ensure appropriate vesting and management of terrestrial and marine environments along the Augusta-Walpole coast;
- provide for sustainable agriculture and other primary industry pursuits;
- ensure that future development, including public infrastructure, is environmentally sustainable;
- support sustainable development opportunities for the environmental, social and economic benefit of local communities;
- ensure that development complements the natural landscape and wilderness experience;
- provide opportunities for sustainable and responsible tourism and recreation;
- ensure strategic basic raw materials are available for community use and benefit;
- provide adequate and safe public access to the Augusta-Walpole coast;
- provide appropriate infrastructure while ensuring the environmental, heritage, social and cultural values of the coast are protected; and
- promote and improve environmental and cultural research, monitoring and knowledge and awareness of the coast.



Index to map area



Indian Ocean

Southern Ocean



0 5 10 15 20
kilometres

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Base information supplied by:
Western Australian Land Information Authority
GL248-2007-2

Legend

- local government boundary
- planning region boundary
- primary/secondary road
- study boundary
- national park
- nature reserve

Figure 1: Locality plan

1.1.5 Issues

The strategy aims to address issues affecting the region, including:

- coastal access;
- resolution of tenure issues and creation of appropriate management arrangements for unallocated Crown land;
- future development along the south coast - the future of East Augusta, White Point, Windy Harbour, Camfield, Walpole and private enclaves in national parks;
- retention and protection of the environmental values and wilderness qualities of the coast;
- tourism and recreation;
- Aboriginal and European heritage; and
- limited research on shoreline movement, dune stability and the processes of the south coast.

A comprehensive list of all of the issues considered during the strategy's development is presented in table 4 in chapter 3.

1.1.6 Principles

The strategy is guided by the following broadly grouped principles:

- sustainable development and management of natural resources;
- community aspirations and economic development;
- protection of biodiversity, remoteness and high conservation values; and
- cumulative impacts and the precautionary principle.

Chapter 3 of the strategy provides an expanded list of the principles underpinning the strategy and its recommendations.

1.2 Strategy management

The strategy has been project managed by the Department of Planning (DoP) on behalf of the WAPC. The Coastal Planning and Coordination Council oversaw the strategy's development. The council is a prescribed committee of the WAPC established under the *Planning and Development Act 2005* to advise the WAPC on matters relating to sustainable coastal planning and management of the state's coast. The council has community representation, including links to regional natural resource management groups. Members also include senior officers of key government agencies to ensure the better integration and coordination of government activities in planning and managing the coast. The council chairman, an independent person with appropriate skills and experience in the field of coastal planning, is also a member of the WAPC.

1.2.1 Steering committee

The preparation of the strategy was guided by a steering committee that reported to the Coastal Planning and Coordination Council. Membership of the steering committee includes representatives from the following organisations:

- Department of Planning (DoP);
- Department of Environment and Conservation (DEC);
- Department of Indigenous Affairs (DIA);
- Department of Mines and Petroleum (DMP);
- Department of Water (DoW)
- Fisheries WA;
- Shire of Nannup;
- Shire of Manjimup;
- Shire of Augusta-Margaret River;
- South West Catchments Council (SWCC);
- South West Development Commission (SWDC);
- Department of Sport and Recreation (DSR);

- Disabilities Services Commission (DSC); and
- Tourism Western Australia (TWA).

It should be noted that the Department of Conservation and Land Management and the Department of Environment were amalgamated and formed DEC on 1 July 2006.

I.2.2 Community reference group

The steering committee was assisted by a community reference group to ensure the wide range of community views on the future use and development of the coastline were accurately represented. The group reported to the steering committee with information about community attitudes towards the use of the study area.

The WAPC endorsed the composition of a community reference group as a mixture of interested individuals and those who had a specific history in certain key areas. Members did not represent a particular interest group. The membership was based on a selection process in response to advertisements in local newspapers.

The community reference group members were:

Mr Alan Miles	Dr Catherine Watten
Ms Felicity Bradshaw	Mr Paul Owens
Mr Bill Ipsen	Mr David Tapley
Ms Maja Plante	Mr Bill Shephard
Dr Beth Schultz	Mr Chris Davies
Ms Vicki Hart	Mr John Towie
Mr Jim Challis	Ms Maja Plante
Ms Sue Juniper	Mr Jason Smith

An environmental consultant was commissioned by the WAPC in September 2003 to assist in drafting the strategy.

I.3 strategy development process

Throughout the development of the Augusta-Walpole Coastal Strategy there has been a strong emphasis on community consultation and ongoing involvement of key stakeholders. This has allowed the comprehensive identification of key community issues and has assisted in the development of recommendations to address them. This inclusive process should maximise public support for, and ownership of, the strategy, which will assist in its implementation. This section outlines the various development components of the strategy as depicted in figure 2.

I.3.1 Background papers

Prior to consultants starting work, the DoP conducted a desktop review of documents and past studies carried out in the area to gather existing knowledge in relation to key issues, including:

Economic characteristics - including tenure, native title, income and housing, employment, industries in or adjacent to the study area and infrastructure;

Environmental characteristics - including climate, geology, geomorphology, coastal processes, hydrology, hydrogeology, vegetation and fauna (terrestrial and marine);

Governance characteristics - including global, national and state governance and community organisations; and

Social characteristics - including history (indigenous, European and maritime), demographics and recreation.

Although the desktop study was not exhaustive, information from it was compiled and reported in the *Augusta-Walpole Coastal Strategy: Background Information* document. The report was released for public comment in November 2003.

Figure 2: Strategy Development Process



The steering committee acknowledges that there are many gaps in knowledge about specific issues in the study area, particularly:

- coastal processes;
- tourist and recreational demands and facilities;
- marine environment;
- access; and
- development and settlement options.

The report allows general conclusions to be drawn about the nature of the area and it has facilitated the development of a strategy that reflects the environmental assets and limitations of the area, as well as the social and economic aspirations of the community.

1.3.2 Community and stakeholder engagement

Consultation with the community and stakeholders was an important step in the development of the strategy and it was done in accordance with an agreed consultation process to gain an understanding of their responses and ideas. An outline of the major components of the consultation strategy is provided here.

The consultation process identified those stakeholders likely to be interested in taking part in the development of the strategy. A stakeholder database was prepared identifying contact details for interest groups and individuals. This was based on information obtained from the DoP, the steering committee and community reference group members. The steering committee and community reference group members were invited to submit contact names for the database. Initial enquiries were made to confirm interest in the consultation activities and during this process additional contacts were identified and included in the database. In addition, participants who registered for the focus groups requested that others be allowed to attend and additional participants accompanied those who had registered. Genuine attempts were made to clearly identify, include and accommodate all participants and interested parties.

The first round of consultation in November 2003 involved a variety of activities. Two teams had face-to-face meetings over three days.

The *Augusta-Walpole Coastal Strategy: Background Report* (see section 1.3.1) was sent to all members of the steering committee and the community reference group. Copies were also made available on the WAPC website and at local government offices, libraries and telecentres. A summary of the background paper was included in all invitations to focus group meetings and one-on-one meetings.

A leaflet for the study was prepared by the DoP and distributed to residents in the study area through local newspapers, local government offices, libraries and telecentres. Copies were also made available at the public displays. The leaflet provided a background to the study, details of the community reference group, the development steps of the strategy and a consultation timetable. A reply-paid feedback sheet was also included.

Focus group sessions were held with the steering committee and community reference group in Nannup and with community representatives in White Point, Manjimup, Northcliffe, Augusta, Walpole and Windy Harbour. An additional meeting was held in Perth. Key stakeholders in the relevant geographic area were invited by letter to the focus groups. Between 10 and 20 people were invited to each focus group, and attendances varied between three and 20. The purpose of the focus groups was to identify a vision, values, key issues and necessary management actions and strategies for the study. Each session went for about two hours.

One-on-one meetings with key individuals from the steering committee were held, by request. Individuals were invited by telephone and a letter was sent to confirm the meeting. Again, the purpose of these meetings was to discuss key issues and required management actions and strategies for the study area. An additional meeting was held in Perth with the Conservation Council of Western Australia.

Public display evenings were held at Augusta, Nannup, Walpole, Windy Harbour and Manjimup. Advertisements and flyers in the *Busselton-Margaret Times*, *Manjimup-Bridgetown Times* and *Walpole Weekly* invited the general public to the public displays, which included maps of the study area, an explanation of the scope and purpose of the study, a summary of issues identified to date and an explanation of the consultation and strategy preparation time.

In addition to the meetings, a briefing by DEC personnel was conducted in parallel with the community reference group and steering committee workshop. In recognition of the substantial area managed by DEC, the purpose of this briefing was for DEC personnel to give information on conservation areas, wilderness areas and national parks in or adjacent to the study area.

The draft *Augusta-Walpole Coastal Strategy* was released for a two-month public comment period in August 2007. Advertisements were placed in local newspapers and a series of information sessions were held in towns in and around the study area. Landowners in the study area were sent letters inviting submissions, and hard copies of the draft strategy were sent to previously-identified stakeholders.

A total of 69 submissions were received. Following analysis of the submissions, a submissions report was produced recommending amendments be made to the draft document. The report was considered by the project steering committee prior to finalisation of the strategy. The final strategy was endorsed by the South-West Region Planning Committee (under delegation from the WAPC) in March 2009.

1.3.3 Implementation and action

A key issue for the success of the strategy will be the level of commitment in resources and funding to the implementation of the recommendations in this report. The Augusta-Walpole coastline has many values and the opportunity to protect or enhance these values may be lost if actions are not taken.

Implementation is not solely the responsibility of the WAPC or the DoP. The breadth of representation on the steering committee and the range of issues covered in the strategy are clear indicators of the need for integrated management. A proposed implementation schedule forms the last section of the strategy.

1.3.4 Review

It will be important to monitor and review the proposed implementation program regularly to ensure that actions continue to be relevant and timely. It is anticipated that the strategy will be reviewed after five years to assess the continued relevance of the vision, objectives and management strategies.

1.4 Key findings from community and stakeholder engagement

At the conclusion of the first round of consultation, a report was prepared which documented the outcome of the consultation undertaken and summarised the feedback obtained at focus groups, one-on-one meetings and public display evenings.

The report demonstrated that there is significant interest in the study area and the strategy. There is a range of views about the important values of the region but the intrinsic value of the environmental and wilderness nature of the coastline is recognised by all stakeholders. Many agreed that any new coastal access roads in precinct 1, between East Augusta and Black Point, should terminate at a parking area behind the primary dune with pedestrian-only access to the beach. There appears to be a high level of agreement that the coastline should be protected and conserved for the future.

It is also apparent that there are divergent views on:

- whether the conservation and protection of the natural values can be achieved in parallel with development (from basic infrastructure for access, waste management, and communications through to more intensive development for accommodation, agriculture or mining);
- where development is perceived to be appropriate, the sort of development and the appropriate level of intensity; and
- whether in any development there should be access for day visits only or infrastructure that would permit overnight stays.

A wide range of suggestions and information has been provided that may assist in resolving these potentially conflicting issues. In particular, it appears that there is general support for providing access to the coast in only two or three locations and that this access should be of a high standard and cater for most types of vehicles.



Augusta-Walpole Coastal Strategy Community Reference Group

indicated that a number of infrastructure, management and communication issues need to be addressed. This is necessary to ensure that the values of the study area are protected and that any development, if it is deemed appropriate, is in accordance with these values.

It was also suggested there is a need to ensure that infrastructure is adequate in local communities. Key concerns are power supplies to Windy Harbour (although there are divergent views among leaseholders), road access to the coast at White Point, potable water supplies at Windy Harbour, and boating facilities at Windy Harbour and other non-residential access points along the coast. A number of location-specific management plans have been developed with community input, and these provide a basis for the development of recommendations on these issues. These

include the *Hardy Inlet Management Plan*, *Windy Harbour Management Plan 2007-2017*, *Shannon Park and D'Entrecasteaux National Park: Draft Management Plan 2005* and the *Walpole-Nornalup National Park Management Plan 1992-2002*.

In general, there is a lack of agreement on whether various locations in the study area are suitable for tourist accommodation. Those who thought tourist accommodation would be acceptable preferred low-impact accommodation in locations that already have some development and infrastructure. The following locations were suggested: Donnelly River, Broke Inlet, Black Point, White Point, Windy Harbour and Northcliffe.

Residents at White Point, Windy Harbour and Northcliffe have differing views on what would constitute appropriate development in their communities, although there is very little support for intensive developments that are not in keeping with the environmental values of the area. At the same time, stakeholders clearly



2 Planning context

2.1 Introduction

The coastal environment of the Augusta-Walpole area is valued for many reasons, and as a range of human activities have the ability to threaten these values, management of potential impacts represents a great challenge. The *National Cooperative Approach to Integrated Coastal Zone Management* report provides a framework for national cooperation in managing coastal issues and achieving ecologically sustainable development outcomes in coastal zones over the next decade.

Key issues to consider in response to these challenges include:

- developing an understanding of future trends and implications nationally, regionally and locally;
- developing effective mechanisms to reduce uncertainty for investment, economic development; and
- encouraging environmental stewardship by industry and community.

Managing the effective allocation of coastal resources in line with the various principles listed in chapter 3 will require a range of tools, both regulatory and non-regulatory, as well as an enhanced capacity to achieve a balance between environmental, economic and social objectives for the coast.

Strategies developed for the Augusta-Walpole region are subject to the provisions and intent of policies and legislation at the Commonwealth, state and local levels. The coastal elements of the study area and the significant environmental features mean that a significant number require consideration during the development of management strategies. Key legislation, policies and plans are described in the following sections, with an indication of the implications for this strategy.

2.2 Commonwealth legislation and policies

Many Commonwealth policies and pieces of legislation relate to this strategy and the study area, but only the most relevant have been included and elaborated on in the strategy.

2.2.1 Legislation

Environment Protection and Biodiversity Conservation Act 1999 (as amended)

The overarching environmental legislation at the national level is the *Environment Protection and Biodiversity Conservation Act 1999*. The Act identifies the following matters of national environmental significance:

- World Heritage properties;
- National Heritage places;
- Ramsar Convention wetlands of international significance and other wetlands of national significance;
- nationally listed threatened species and ecological communities;
- listed migratory species;
- Commonwealth marine areas; and
- nuclear actions (including uranium mining).

Any action that is likely to significantly affect a matter of national environmental importance is subject to a rigorous assessment and approval process. The Act also provides for the preparation of recovery plans, threat abatement plans and wildlife conservation plans to protect listed species and communities and to protect critical habitat.

There are several matters of national environmental significance in the study area, including the D'Entrecasteaux area, the Black Point geological site, Lake Jasper, declared rare flora and fauna and the Augusta shell bed. There are also areas of high species richness that are valued for their high endemism, disjunct and relictual species. Any development proposed

for these and other areas of national environmental significance would be subject to a rigorous Commonwealth assessment and approval process.

Native Title Act 1993

On 1 January 1994 the Commonwealth *Native Title Act 1993* commenced operation. The Act is part of the Commonwealth's response to the High Court's decision in *Mabo v Queensland (No. 2)*. The Act adopts the common law definition of native title. Native title is defined as the rights and interests that are possessed under the traditional laws and customs of Aboriginal people and Torres Strait Islanders in land and waters, and that are recognised by the common law. In summary, the *Native Title Act 1993*:

- recognises native title rights and sets down some basic principles in relation to native title in Australia;
- provides for the validation of past acts which may be invalid because of the existence of native title;
- provides for a future act regime in which native title rights are protected and conditions imposed on acts affecting native title land and waters;
- provides a process by which native title rights can be established and compensation determined, and by which determinations can be made on future grants and acts done over native title land and waters; and
- provides for a range of other matters, including the establishment of a national Aboriginal and Torres Strait Islander land fund.

2.2.2 Policies and strategies

National Strategy for Ecologically Sustainable Development

The *National Strategy for Ecologically Sustainable Development* provides a framework and broad strategic direction for governments to ensure environmental, social and economic values are integrated into policy and decision-making. Australia's three tiers of government – Commonwealth, state and local – adopted the national strategy in December 1992 at a meeting of the heads of government of each jurisdiction.

At the national level, implementation of the national strategy has involved the development of a range of detailed policies that reflect the intent of the document. For example, national policies have been developed for greenhouse gases, forests, waste management and biodiversity. At the state and local government levels, planning and development legislation increasingly reflects a commitment to the principles of the national strategy for ecologically sustainable development. Environmental, social and economic parameters have been addressed in the development of the Augusta-Walpole Coastal Strategy. The national strategy for the conservation of Australia's biological diversity is the framework strategy for biodiversity protection in Australia. The framework sets out strategies for the identification and conservation of biological diversity and for the integration of biodiversity conservation and natural resource management to ensure sustainable exploitation. The strategy is based on several key principles and those principles that require consideration in the development of the Augusta-Walpole Coastal Strategy are:

- biological diversity is best conserved in situ;
- although all levels of government have clear responsibility, the cooperation of conservation groups, resource users, indigenous people and the community in general is critical to the conservation of biological diversity;

- it is vital to anticipate, prevent and attack at source the causes of significant reduction or loss of biological diversity;
- processes for and decisions about the allocation and use of Australia's resources should be efficient, equitable and transparent;
- lack of full knowledge should not be an excuse for postponing action to conserve biological diversity;
- central to the conservation of Australia's biological diversity is the establishment of a comprehensive, representative and adequate system of ecologically viable protected areas integrated with the sympathetic management of all other areas, including agricultural and other resource production systems; and
- the close, traditional association of Australia's indigenous people with components of biological diversity should be recognised, as should the desirability of sharing equitably benefits arising from the innovative use of traditional knowledge of biological diversity.



Long Point

- involving the Australian people in wetlands management;
- working in partnership with state and territory and local governments;
- ensuring a sound scientific basis for policy and management; and
- international actions.

The study area contains wetlands considered to have national value, in particular Lake Jasper and the Gingilup system. These wetlands lie in Crown land and are vested in the Conservation Commission but given their national value they are required to be managed in accordance with the wetlands policy of the Commonwealth Government. This strategy must therefore provide for the ongoing protection and conservation of these wetlands.

Australia's Oceans Policy

Australia's Oceans Policy was launched in December 1998 to address international obligations relating to Australia's marine jurisdictions. The policy aims to facilitate the increased understanding

and protection of Australia's oceans. The policy also seeks to promote the sustainable development of marine resources and to encourage internationally competitive marine industries, while ensuring the protection of marine biological diversity. Implementation of Australia's Oceans Policy will translate into an increase in the direct involvement of the Commonwealth in the day-to-day planning and management of the marine environment in the Augusta-Walpole study area.

Wetlands Policy of the Commonwealth Government of Australia

The *Wetlands Policy of the Commonwealth Government of Australia* was developed in 1997 to provide a framework for the development of national wetland policies and strategies. The policy has six strategies to provide for the conservation, repair and wise use of wetlands:

- managing wetlands on Commonwealth lands and waters;
- implementing Commonwealth policies and legislation and delivering Commonwealth programs;

Natural Heritage Trust

The Natural Heritage Trust was set up by the Australian Government in 1997 to help restore and conserve Australia's environment and natural resources. The aim of the trust is to provide funding for environmental and natural resource management projects at the community, regional and national and state levels.

Across Australia, there is a move towards regionally based natural resource management strategies. Ensuring the ecologically sustainable management of Australia's natural resources is a critical issue if the health of the environment and biodiversity are to be conserved. The study area falls into the region covered by the South West Catchments Council. Its coastal and marine officer has been involved in the development of this strategy.

The Natural Heritage Trust funds and implements a number of programs aimed at protecting and conserving the environment and natural resources and encouraging the sustainable management of the country's natural resources. Funds from the Natural Heritage Trust are also divested through four programs.

- The Landcare program invests in activities that contribute to reversing land degradation and promoting sustainable agriculture.
- The Bushcare program invests in activities that contribute to conserving and restoring habitat for native flora and fauna.
- The Rivercare program invests in activities that contribute to improved water quality and environmental conditions in river systems and wetlands.
- The Coastcare program invests in activities that contribute to protecting coastal catchments, ecosystems and the marine environment.

These funds can potentially be accessed as a mechanism for implementation of strategies recommended in this study. Access to this funding avenue for coastal protection and enhancement will be greatly enhanced through the development of partnerships between coastal managers and community groups.

2.3 State legislation

2.3.1 Legislation

Environmental Protection Act 1986

The *Environmental Protection Act 1986* is the principal environmental statute in Western Australia. The Act provides for the prevention, control and abatement of environmental harm and for the conservation, protection and management of the environment.

Sections of the Act of relevance to the strategy include:

- the formal environmental impact assessment process set out in the Act requires that the environmental impacts of statutory planning schemes and development proposals be assessed to ensure the environment is protected;
- any clearing of vegetation in the study area may require a permit, in the issuing of which DEC will take into account the impact of clearing on biodiversity, water and soil resources, salinity and other environmental issues; and
- persons or corporations who cause environmental harm can be prosecuted, resulting in fines up to \$1 million or a jail sentence.

Planning and Development Act 2005

The *Planning and Development Act 2005* brought together three separate planning acts - the *Western Australian Planning Commission Act 1985*, the *Metropolitan Region Town Planning Scheme Act 1959* and the *Town Planning and Development Act 1928* - into one consolidated Act, in a rewritten form.

The Act sets out the legislative framework for planning and development of land for the purposes of urban, suburban and rural use in Western Australia. The Act describes the significant town planning processes, their relationship to Crown land and alienated land, the review process and other miscellaneous provisions relevant to town planning and development in the state.

Local planning schemes are prepared by local governments, under the virtues and powers set out by the Act. A local planning scheme is a statutory planning instrument guiding future development in a local government area. Statements of planning policy that come into effect under section 5AA of the *Town Planning and Development Act 1928* continue under section 3 of the *Planning and Development Act 2005* and are renamed state planning policies.

Aboriginal Heritage Act 1972

Aboriginal heritage and culture is managed through the *Aboriginal Heritage Act 1972*. This includes the maintenance of the register of sites and support for the operations of the Aboriginal Cultural Material Committee, which provides advice on the protection and management of sites. The site register currently has more than 20,000 entries. Section 5 of the Act contains the definition of a site, and sections 16, 17, 18 and 19 contain provisions for the protection of sites, the definition of an offence, permits to disturb a site and the creation of protected areas.



Augusta-Walpole Coastal Strategy Steering Committee

Bush Fires Act 1954

The *Bush Fires Act 1954* provides for diminishing the dangers resulting from bushfires, for the prevention, control and extinguishment of bushfires.

Conservation and Land Management Act 1984

The *Conservation and Land Management Act 1984* provides for the use, protection and management of certain public lands and waters and associated flora and fauna. Public lands and waters include state forests, timber reserves, national parks, conservation parks, nature reserves, marine nature reserves, marine parks, marine management areas and any other lands or waters vested in the Conservation Commission or the Marine Parks and Reserves

Authority. DEC is subject to the provisions of the Act in terms of managing public lands and waters. Management plans prepared under the *Conservation and Land Management Act 1984* are statutory documents. The provisions of the *Conservation and Land Management Act 1984* affect a significant proportion of the study area since it contains the D'Entrecasteaux National Park, Scott National Park and Walpole-Nornalup National Park and nature reserves that are managed by DEC.

Rights in Water and Irrigation Act 1914 (as amended)

The *Rights in Water and Irrigation Act 1914 (as amended)* provides for the management of water resources to ensure their sustainable use.

It ensures protection of ecosystems and the environment in which water resources are situated. It promotes the orderly, equitable and efficient use of water resources and requires development proposals to have a sustainability assessment and ongoing monitoring of natural water resources.

The *Rights in Water and Irrigation Act 1914* sets out the legislative framework for

authorisation for landowners' rights and lawful abstraction of both groundwater and surface water in Western Australia. This Act also provides for the development of state, regional and local management planning frameworks. These management plans are statutory instruments that guide sustainable water resource use.

The Act also provides for an assessment process with the objective of sustainable water resources management, management of the community's interactions with the water resources, and the social, recreational, ecological and economic benefits to the State.

Land Administration Act 1997

The *Land Administration Act 1997* and the associated *Acts Amendment (Land Administration) Act 1997* were passed by Parliament on 18 September 1997 and commenced on 30 March 1998. The intervening time was used for development and implementation of policies, procedures, regulations, information systems, structures and community awareness programs.

This is the State's legislation dealing with the disposition of Crown land. The Act covers a wide range of functions, including the administration and management of the Crown estate, planning, acquisition of land for government public works, administration of the legal framework of the State's reserves and road systems, the leasing of Crown land and the granting of other tenures.

Mining and resource extraction legislation

The *Mining Act 1978* sets out the broad controls for mining in the state. It establishes the rights of ownership to minerals and clarifies miners' rights. It sets out different rules for mining activity on different classes of land and any compensation provisions that might apply. The Act also establishes the ground rules for the various types of mining tenements that can be applied for.

The *Petroleum Act 1967* covers all onshore areas of the state, including its islands and, in certain circumstances, areas of submerged lands internal to the State (that is, those waters landward of the base line), other than subsisting permit areas under the *Petroleum (Submerged Lands) Act, 1982*.

The Western Australian *Petroleum (Submerged Lands) Act 1982* applies to Western Australia's territorial sea, including the territorial sea around state islands and, under certain circumstances, some areas of internal waters.

The *Petroleum (Submerged Lands) Act 1967* applies to the submerged lands of the continental shelf beyond the territorial sea, which are in the area designated as adjacent to Western Australia.

Both the *Petroleum Act 1967* and the *Petroleum (Submerged Lands) Act 1982* are administered solely by Western Australia, while the Commonwealth Act for the Western Australian adjacent area is administered by a joint authority, comprising the Commonwealth and State Ministers responsible for petroleum administration. The division of state and Commonwealth waters occurs at the three nautical mile mark.

Local Government Act 1995

The objectives of the *Local Government Act 1995* are:

- to provide for the constitution of elected local governments in the state;
- to describe the functions of local governments;
- to provide for the conduct of elections and other polls; and
- to provide a framework for the administration and financial management of local governments and for the scrutiny of their affairs.

Wildlife Conservation Act 1950

This Act provides for the protection of flora and fauna across the state, including private lands. Except to the extent to which the Minister declares by notice published in the *Government Gazette* pursuant to the provisions of section 14, all fauna is wholly protected throughout the whole of the state at all times. The legislation regulates the picking or harvesting of indigenous flora. Provisions for management of the trade in wildflowers and other specific activities are also controlled by DEC in accordance with a management program approved by the Commonwealth Minister for the Environment.

Fish Resources Management Act 1994

The objective of the *Fish Resources Management Act 1994* is to conserve, develop and share the fish resources of Western Australia for the benefit of present and future generations. The Act aims to achieve this by:

- conserving fish and protecting their environment;

- ensuring that the exploitation of fish resources is carried out in a sustainable manner;
- enabling the management of fishing, aquaculture and associated industries, aquatic ecotourism and other tourism reliant on fishing; and
- fostering the development of commercial and recreational fishing and aquaculture.

Although the strategy has its boundary at the three nautical mile offshore mark and therefore does not have direct implications for marine fish stocks, recommendations relating to coastal management, provision of access for fishing, boating facilities and use of inland waterways may have implications. The objectives of the *Fish Resources Management Act* are considered in this context.

Country Areas Water Supply Act 1947

The objective of the Country Areas Water Supply Act 1947 is to allow for the construction, maintenance and administration of reticulated supplies of water to country areas and to safeguard water supplies.

The Act identifies the Warren River water reserve catchment, which lies just inside the study area boundary on the Warren River and which contains a priority 1 and priority 2 public drinking water source area. Public drinking water source areas are proclaimed to protect these water sources against contamination from chemicals, nutrients, waste litter, bacteria and other microbes.

By-laws under the Country Areas Water Supply Act 1947 enable the Department of Water to control potentially polluting activities, regulate land use, inspect premises and take the necessary steps to prevent or ameliorate pollution.



Broke Inlet mouth

Clearing in these catchments has been controlled since the mid-1970s. This was implemented to protect the quality of existing and potential water supply catchments that were prone to salinisation.

2.3.2 Plans and strategies

State Sustainability Strategy

Hope for the Future: The Western Australian State Sustainability Strategy 2003 provides a framework for a whole of government

approach to the State's development in accordance with sustainability objectives.

The strategy is designed to influence government decision-making processes and the formulation of policies and plans, but some sections have relevance to individuals, communities and industry. Stakeholder engagement is an important part of the implementation of the

strategy. The strategy outlines priority areas for action based on the following headings.

- Sustainability and governance: this action focuses on a government response to sustainability with a focus on sustainability assessment, research and development, regional development, indigenous community development, partnerships and planning.
- Contributing to global sustainability: priority responses for global sustainability suggest a focus on oil vulnerability, greenhouse and climate change, biodiversity and environmental technology.
- Sustainable natural resource management: this priority area recommends the sustainable management of Western Australia's key resource production such as fisheries, forestry, mining and energy production.

In addition, the growth of sustainable tourism and the protection of water sources and coastal and marine areas are targeted.

- Sustainability and settlements: the plan recommends a range of priority areas to improve the liveability of settlements into the future. Key areas for management are identified as revitalisation, urban design, integrated land use and transport, freight management, air quality, waste management, cultural heritage and sustainable building.
- Sustainability and community: community development in terms of sustainability should be focused on education, multiculturalism, culture and the arts, sustainable housing and health.
- Sustainability and business: priority areas for the interaction of business in sustainability include training, financial reform, the development of eco-efficiency and industrial ecology and corporate social responsibility objectives. Of these parameters, two are particularly applicable to the development of the strategy:
 - i) Sustainability and governance: this priority area includes development of a process that can enhance the sense of place in regional areas of Western Australia. The study area's natural features help to define its sense of place and, as such, should be protected and enhanced; and
 - ii) Sustainable natural resource management: this priority area identifies natural resources that should be sustainably managed, including fisheries and aquaculture, forestry, and coastal and marine environments, all of which are found in the study area.

State Planning Strategy

The *State Planning Strategy* is the strategic guide for land use planning throughout Western Australia until 2029. The aim of the strategy is to develop a land use planning system that helps the State achieve a number of key goals, including generating wealth, preserving and enhancing the environment, and building a

more vibrant and safer community. The strategy also provides regional strategies and actions which are of particular relevance to the study area. The strategy identifies the need to assist in the development of regional Western Australia by consideration of its special assets and accommodation of the individual requirements of each region. The strategy identifies a series of actions, and those considered to be of importance to this study are summarised in table 1.

Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998

The purpose of the policy is to prevent the further degradation of valuable wetlands and to promote the rehabilitation of wetlands in the south-west agricultural zone of the state. The policy established a register of protected wetlands and beneficial uses and environmental quality objectives for them. It sets out a program for protection and restrictions on certain activities.

State Planning Policy 2 Environment and Natural Resources Policy

The environment and natural resources policy was prepared by the WAPC under section 5AA of the *Town Planning and Development Act 1928 (as amended)*. This policy sets out the broad environment and resource management policies for sustainability, including measures to:

- safeguard and enhance areas of environmental significance on the coast, including the marine environment;
- ensure use and development on or adjacent to the coast is compatible with its future sustainable use for conservation, recreation and tourism in appropriate areas; and
- consider the potential impacts from changes in the climate and weather on human activities and cultural heritage, including coastal and urban communities, natural systems and water resources.

The policy was endorsed by the WAPC and gazetted on 10 June 2003. This strategy takes into consideration the measures set out in this policy.

Table I: State Planning Strategy - relevant actions

<p>Infrastructure</p> <ul style="list-style-type: none"> • Coordinate the provision of regional infrastructure areas identified under the Country Land Development Program; • ensure social and service infrastructure provision is adequate to support a range of lifestyles in small regional towns; and • monitor town growth and population distribution to ensure infrastructure meets the demographic profile of regional areas.
<p>Land use</p> <ul style="list-style-type: none"> • Ensure land identified for future urban development is included in each local government local planning scheme; • promote nodal settlement patterns in agricultural areas separated by agricultural/greenbelts; • identify in regional strategies areas of future urban growth and prohibit this land from being subdivided or fragmented into special rural lots; • identify and protect prime agricultural land (state or regional significance) suitable for intensive and/or irrigated uses; • ensure prime agricultural areas are protected from rural residential uses; • encourage farm forestry to improve land and water quality, and to provide sustainable resource crops; • ensure strategic regional plans facilitate tourism development that will have low impact on the environment and landscape values, especially in the Leeuwin-Naturaliste and Warren-Blackwood areas; and • recognise tourism as a legitimate land use compatible with a range of existing land uses and incorporate into future regional planning strategies and local planning schemes.
<p>Environmental protection</p> <ul style="list-style-type: none"> • Introduce policies requiring rehabilitation of degraded land on change of land use; • develop and promote Landcare and Farmcare programs; • implement the south-west agricultural zone wetlands environmental protection policy, the purpose of which is to prevent the further degradation of valuable wetlands and to promote the rehabilitation of wetlands in the south-west agricultural region of the State; • protect priority groundwater areas and surface catchment areas by catchment gazettal and, if necessary, in local planning schemes; • identify areas that could be protected as regional open space under statutory region schemes; • investigate alternative methods of protecting valuable natural environments; and • protect culturally significant places through local planning schemes.
<p>Planning approach</p> <ul style="list-style-type: none"> • Conservation Commission's regional management plans and coastal management strategies to be used in preparing regional planning strategies and statutory region schemes; • regional planning strategies and statutory region schemes must consider marine and terrestrial land uses to provide an integrated planning approach to coastal areas; and • identify environmentally significant areas, where surrounding land uses should be restricted in local planning schemes.

State Planning Policy 2.6 State Coastal Planning Policy

The state coastal planning policy was prepared by the WAPC under section 5AA of the *Town Planning and Development Act 1928 (as amended)*. This policy should be read and applied in the context of the draft coastal zone management policy for Western Australia and the environment and natural resources policy. This policy provides appropriate measures for preparing local and regional planning strategies, structure plans, schemes, subdivisions, strata subdivisions and development applications, as well as other planning decisions and instruments relating to the coast. It identifies the processes involved in the preparation of a coastal planning strategy and/or foreshore management plan. The policy was endorsed by the WAPC and gazetted on 10 June 2003.

The state coastal planning policy provides guidance on how foreshore reserves should be determined. One element of this is the consideration of physical processes. Setback calculations for this are explained in detail in schedule 1. Foreshore reserves must also allow for recreational use by the public and for the preservation of environmentally significant features. Each reserve to be created must consider the unique nature of each site.

Application of this policy between Augusta and Walpole will require consideration of the influence of the near-shore reefs and limestone headlands, especially in the determination of the allowance for storm event erosion. In addition, careful examination and assessment will be required in fragile areas, such as locations with steep and/or mobile dune systems.

Development Control Policy 6.1 Country Coastal Planning Policy

The country coastal planning policy was designed to provide a uniform approach to land use planning, development and subdivision of coastal areas of the state, particularly outside the Perth region. This policy is intended to assist local government, developers and planning consultants with a set of general guidelines for development applications and subdivisions. The policy sets out general development principles, land use priorities, coastal land tenure, ecology of the coastline, visual amenity, land preservation, soil protection, water quality,

pedestrian access, and road and parking requirements. This policy has direct implications for areas in the strategy boundary that have been recommended as appropriate for further development.

State Planning Policy 2.5 Agricultural and Rural Land Use Planning

The agricultural and rural land use planning policy was prepared by the WAPC under section 5AA of the *Town Planning and Development Act 1928 (as amended)*. Land use and rural residential development is guided by the WAPC's *Development Control Policy 3.4 Subdivision of Rural Land* (May 1992). The aim of this policy was to establish a framework that set out local and state government responsibilities for ensuring orderly and proper planning and development of rural lands.

In 1994, the State Government adopted a position statement to recognise the need to identify and plan for sustainable development of agricultural land. In 1997, a number of workshops and comprehensive questionnaires were conducted, and direct consultation took place with state agencies, local government, key stakeholders and the general public. This culminated in the preparation of a discussion paper by the WAPC and the Department of Agriculture in November 1997, titled *Planning for Agricultural and Rural Land Use*. This was released in October 1999 for public comment. Following consideration of the submissions received, the WAPC adopted this policy.

The objectives of this policy are to ensure that the State's priority agricultural land resource is protected, and that rural settlement opportunities are provided which are sustainable and benefit the community, minimise land use conflict and carefully manage the state's natural resources. The policy was endorsed by the WAPC and gazetted in March 2002.

Regional Development Policy

The Western Australian Government's regional development policy 2003, *Regional Western Australia – A Better Place to Live*, provides a framework for the development of the State's non-metropolitan regions to achieve social, economic and environmental progress in a sustainable way. The policy establishes a set of

priorities for regional development. The following key priorities and strategies are of relevance to the development of the strategy:

- **Improved environmental management**

Improved environmental management requires improved assessment, a reduction in greenhouse gas emissions, increased use of renewable energy, the sustainable use of water and the reduction of wastes.

- **Sustainable natural resource management**

The policy recommends the development of a state monitoring and evaluation framework to measure and report on the performance of natural resource management. Priority areas are agricultural techniques and administration, the coastal zone, fisheries management and the role of indigenous people.

- **Conservation and restoration of our State's natural and built heritage**

The state biodiversity strategy and state heritage register are tools for the conservation of natural and built heritage, but the policy recognises the need for legislative change to offer greater protection to both built and natural heritage elements in the regions.

- **Skilled communities**

Employment generation for local residents is central to the sustainable development of regional areas. The policy recommends skills development and training, and targeted programs for indigenous and minority groups to ensure local labour is available for new resource projects.

- **Improved regional infrastructure**

A needs assessment is required, using sustainability principles to determine current deficiencies in infrastructure provision in the regions.

- **Diversified regional economies**

A diverse economy provides a greater range of job opportunities. The policy endorses new regional industries and encourages partnerships with government.

- **Enhanced regional investment**

Increased investment in regional Western Australia requires promotion in the state, in Australia and overseas. Strategically, this requires better export readiness for local companies and the provision of an adequate land supply for a range of uses.

Coastal Zone Management Policy for Western Australia



Mandalay Beach

The draft *Coastal Zone Management Policy for Western Australia* was released for public submission in January 2001. The aim of the policy is to strike a balance between conservation and development along our coastline. The policy provides a broad policy framework for planners, developers, managers and users, as well as agency plans and

policies, which will be developed and implemented. The policy focuses mainly on the Government's efforts to provide for the most appropriate use and enjoyment of the state's coastal resources, for the short and long term.

The Augusta-Walpole Coastal Strategy seeks to achieve the objectives of this policy by balancing the competing demands for coastal access and protection, while recognising the overriding need to provide for the long-term sustainability of the coast.

State Squatter Policy

The State Government's squatter policy was developed and endorsed by Cabinet in the late 1980s to deal with the escalating problem of illegal coastal squatter shacks creating environmental issues. The then Department of Planning and Urban Development developed the policy as a method by which the shacks

could be phased out. The policy facilitated local governments to collect a fee for the occupation of coastal land by people living in illegal shacks. This income was to be injected back into the area through improved coastal management and the administration of a shack removal scheme. The policy enabled local governments to enter into an agreement with each shack owner. Shacks belonging to owners who would not enter into such an agreement were to be demolished immediately.

The State's squatter policy was successful in removing shacks along the mid-west coastline and in some other areas of the state. The policy is invoked in the state coastal planning policy, which states that planning instruments and decisions relating to the coast should support the removal of existing unlawful squatter shacks on coastal Crown land in accordance with the State Government's squatter policy. The existence of shacks on DEC managed land is addressed in the relevant national park management plan and has been taken into account in this strategy.

Regional marine planning initiative

The State Government has commenced a regional marine planning process for the south coast (Cape Leeuwin to the South Australian border). Regional marine planning provides a framework for the integration of current and future sectoral planning and management of biophysical marine regions according to an agreed vision for sustainability.

Through a partnership with government, community, and stakeholder groups, the aim of regional marine planning is to establish and promote a scientifically robust framework that enhances cooperation and integration between sectors; recognises the importance of the social, cultural and economic values the marine environment can provide for current and future generations; and protects and maintains ecological and biological diversity.

The process will lead to the production of a regional marine strategic plan for the south coast of Western Australia. This plan will be a high level document that focuses on processes and approaches, rather than specific management actions. It will deal with matters such as fishing (commercial, recreational, and marine aquaculture), shipping and ports, recreation and tourism, marine conservation,

cultural interests, petroleum and mineral development, education, and research. It will also incorporate the need for integration and management of adjacent lands (coast and islands) and adjacent waters (Commonwealth and South Australia).

A stakeholder group, the South Coast Regional Marine Planning Advisory Group, is working with the Western Australian Government throughout the planning process, seeking input from the natural resource management sector and marine users more broadly to develop the regional marine strategic plan.

2.3.3 Regional planning context

Warren-Blackwood Regional Planning Strategy

The *Warren-Blackwood Regional Planning Strategy* was released by the WAPC in December 1997. The purpose of this strategy was to address the major issues concerning the region and to provide an ongoing framework for both state and local governments to manage and promote sustainability principles in land use over the next 20 to 25 years. This strategy was supported by five specific planning strategies covering urban and infrastructure, rural land use, resource development, conservation and coastal.

The vision for this strategy is to protect and strengthen the special identity of this region. It should ensure that future growth and development is encouraged that contributes to the region's economic base and social wellbeing of the residents, as well as maintains the unique visual landscape, cultural heritage and environmental characteristics and lifestyles of those people living in the region.

Warren-Blackwood Rural Strategy

The *Warren-Blackwood Rural Strategy* was released by the WAPC in August 2004. The key objectives of the strategy are:

- to introduce natural resource management principles and activities into the planning system at both the regional and local levels;

- to ensure that the principle of sustainability has been considered at all levels during the strategy, developing a balance between economic, environmental and social needs; and
- to incorporate the initiatives being undertaken by other agencies and groups using natural resources management principles.

This strategy designates broad regional zonings for its study area, and most of the coastal freehold land identified is in the rural landscape protection zone. Agricultural areas are included in both the priority and general agricultural zones. The Augusta-Walpole Coastal Strategy study area includes part of four of the planning units identified, and broad planning objectives and preferred land uses are identified for each area. The role of the Augusta-Walpole Coastal Strategy in determining future planning for the coastal areas is recognised.



Windy Harbour settlement

The strategy sets out the State's rural planning objectives for the region and has guided the respective local governments in the development of their individual local planning strategies.

Scott Coastal Plain strategy

The *Scott Coastal Plain – A Strategy for a Sustainable Future* report identified opportunities for large-scale agriculture. It also identified key environmental and coastal values in recommended zonings for the area. Implementation was to be through the application of zonings to be applied by local governments in their local planning schemes and landowners adopting best management practices for irrigation production. The assessment and approval process for new irrigation development is handled through the Department of Water for groundwater licensing under the *Rights In Water and Irrigation Act 1914 (as amended)*, and for clearing native vegetation under the *Environmental Protection Act 1986*. A coastal management plan was a

recommendation of this strategy. Another recommendation was that this strategy needed to be reviewed over time. This is particularly important as regional planning needs to be adaptive to new knowledge and increased understanding of issues such as climate change.

With the application of the Water Corporation for major abstraction from the Yarragadee aquifer in the Blackwood plateau, the then Department of Environment undertook a major allocation management planning process for the Blackwood groundwater area. This management plan will be completed shortly and a groundwater allocation management strategy was endorsed by the department and has a

focus of determining abstraction impacts on the environment, other existing users and future regional water needs.

South West Catchments Council strategy

The South West Catchments Council prepared the *South West Regional Strategy for Natural Resource Management* to provide integrated

strategic direction for sustainable management of the region's land, water, biodiversity, marine, coastal, air and climatic resources.

The strategy focused on five general goals, each of which was 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; and
- community development.

Plans covering land and waters adjoining the study area

A number of plans and strategies cover lands and waters directly outside the Augusta-Walpole Coastal Strategy study area. These include but are not limited to the following.

State Planning Policy 6.1 Leeuwin-Naturaliste Ridge

The Leeuwin-Naturaliste Ridge state planning policy applies to all lands and waters bounded by the near-shore waters of Cape Naturaliste to Cape Leeuwin and inland to Bussell Highway and the eastern extent of towns along the highway.

The purpose of the policy is to provide the strategic planning framework for the policy area for the next 30 years by providing greater vision, guidance and certainty of land use. It promotes sustainable development, conservation, and land and resource management. It seeks to provide assistance to those managing land use change, enable greater consistency between the relevant local governments, give clear regional level advice to proponents of development and provide a reference to guide development and conservation by improving the information available to the community.

Hardy Inlet Management Plan

The *Hardy Inlet Management Plan* includes all foreshore lands adjoining the high watermark of the lower reaches of the Blackwood River from the river mouth to Fisher Road north of Molloy Island, and the water body itself, incorporating West Bay, North Bay, the Deadwater and Swan Lake.

The plan is a management tool that brings together the available land use, land capability and natural resource management information for the study area. It identifies the key changes taking place and key issues arising from these changes, and develops an overall vision for the ongoing management and development of the Hardy Inlet.

Southern Shores 2001-2021 - A Strategy to Guide Coastal and Marine Planning and Management in the South Coast Region of Western Australia

The study area stretches along the coast from Nornalup Inlet to Eucla at the Western Australia-South Australia border. The northern boundary approximates at the South Coast Highway from Denmark to Esperance and the

Eyre Highway from Norseman to Eucla, with primary focus being on the 5 km coastal area from low watermark landward and seaward to the three nautical mile state limit.

The document presents a strategic look at the existing pressures on the coastal and marine environments, how the coast has been developed and managed to date, and the future direction for planning and management. It provides a vision on which to focus planning and management efforts, to facilitate cooperative involvement between the community, Commonwealth, state and local governments, and relevant organisations in solution seeking and issue resolution. The strategy also provides guiding principles, strategic objectives and actions, upon which future planning and management can be based.

Lower Great Southern strategy

The study area covers 12 local governments in the southern portion of the State, from Frankland River to Fitzgerald River.

The purpose of the *Lower Great Southern Strategy* is to guide matters of regional significance and provide strategy direction for up to the next 30 years. The primary objectives are to provide regional level guidance for all land use, assist local governments in the preparation and implementation of local strategies, schemes and other local planning and development matters, identify land required for public purposes of regional significance, and ensure land required for important regional infrastructure, agricultural land, water sources and basic raw materials is set aside.

2.3.4 Local plans and strategies

Three local governments have jurisdiction in the strategy area; the shires of Augusta-Margaret River, Nannup and Manjimup. Each of them has a local planning scheme and other planning strategies to govern land use.

Local planning schemes set out the way land is to be used and developed. The scheme classifies areas for land use and includes provisions to coordinate land use and development in a locality. Schemes also include controls to ensure long-term planning

Table 2: Local government schemes and strategies

TPS/LPS	Status
Shire of Augusta-Margaret River	
District planning schemes (5 in total)	The draft schemes and strategy documents have been returned to the shire from the Minister for Planning and Infrastructure with clear instructions on amendments required prior to re-advertising. Following advertising, submissions in relation to the documents will be considered and alterations incorporated, and they will then be forwarded to the Minister for Planning for final endorsement.
Draft local planning strategy	
Shire of Nannup	
Town Planning Scheme No 3	Gazetted in December 2007
Local planning strategy	WAPC endorsement December 2007
Shire of Manjimup	
Draft Town Planning Scheme No 4	The TPS has been approved for public advertising by the Minister for Planning
Local planning strategy	Completed November 2003 and now in operation

objectives are achieved, and they identify the authority responsible for administering the scheme. Local planning schemes are required to be reviewed and can be altered via the process of a scheme amendment at any time.

Local planning strategies are now a required component of a local planning scheme. 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 cooperation. 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 resource management objectives, in which case formal scheme provisions are required. Achieving the appropriate balance between this, the community position and state policy requirements is the role of the respective local government when preparing its scheme documents.

At the time of publication of the draft strategy, the status of the three local governments' schemes and plans varied; some had been completed, some were being developed, and some had been finished and were awaiting approval. The status of each scheme or strategy is shown in table 2.

Local planning policies are formulated by local government to provide guidance on planning, land use and development matters. They provide more flexibility than statutory provisions and can be formulated to relate to specific planning matters and/or specific regions of the municipality. A local planning policy could be used to guide subdivision and/or development in a recommended coastal node.

Local governments also develop plans for specific locations. A relevant example is the *Windy Harbour Management Plan*, which was developed to provide guidance to the Shire of Manjimup and the leaseholders of Windy Harbour across a range of areas. This includes, but is not limited to, vegetation management, infrastructure supply and management of waste, recreational use and access, and visitors. The plan has had a high level of support from the Windy Harbour leaseholders. It is currently being finalised, concurrent with the development of this strategy.

2.3.5 Planning for national parks and reserves

National parks are vested in the Conservation Commission and managed by DEC in accordance with the *Conservation and Land Management Act 1984*. Section 54(3)(a)(i) of the Act requires that management plans be prepared for all lands by the controlling body (Conservation Commission) through DEC.

Table 3: Status of management plans for conservation estate in the study area

Park	Plan	Current status
D'Entrecasteaux NP	1987	Revised plan is awaiting ministerial approval, release and (plan) gazettal
Shannon NP	1987	Revised plan is awaiting ministerial approval, release and (plan) gazettal
Proposed Capes Marine Park	In preparation	The indicative plan was released for public comment on 6 September 2006. The marine park is expected to be established in 2008
Leeuwin-Naturaliste Ridge, Scott National Park and Gingilup Swamps Nature Reserve	In preparation	A draft management plan that covers these parks and reserves will be released for public comment in the near future
Leeuwin-Naturaliste Ridge NP	1989	Replaced by above plan when released
Proposed Walpole and Nornalup Inlets Marine Park	In preparation	The indicative management plan was released for public comment in August to December 2006. The marine park is expected to be established and the management plan finalised in 2008
Walpole Wilderness	Existing plan for Walpole-Nornalup NP was approved in 1992	New plan is awaiting ministerial approval, release and (plan) gazettal

NB: Management plans must go through several stages in order to be gazetted. For example, a plan approved by the Minister does not come into effect until notice of the relevant approval has been published in the Government Gazette (CALM Act s.60(4)). A management plan for a terrestrial reserve is to be prepared as soon as possible after declaration. An indicative management plan for a marine reserve must be prepared before reservation takes place.

Section 55(1) of the Act states that such management plans are to contain a statement of planning policies or guidelines which must be followed in managing the area of Crown land. A summary of the operations proposed to be taken over the life of the plan is also required. Each management plan is required to be reviewed by the Conservation Commission within at least five years of gazettal and, where necessary, a new plan prepared within 10 years. If a plan is still considered to be valid after 10 years, it will remain in force until a new plan is written. Gazetted plans may be amended as governed by the Act, but this would always involve a public consultation process. Table 3 shows the status of the management plans for the conservation estate in the study area.

It is important to note in the context of this strategy, that the *Shannon Park and D'Entrecasteaux National Park Management Plan 1987-1997* is being implemented by DEC over the land it manages. An updated plan is being developed, and once approved by the Minister for Environment and gazetted it will replace the 1987 plan. This strategy will

therefore recommend that these areas be managed in accordance with this management plan. Similarly, the local shires in the study area will be responsible for managing land in accordance with their statutory plans identified in table 2 and the recommendations on this strategy.



Figure 3: Warren-Blackwood planning units

2.4 Planning framework

2.4.1 Coastal management

The strategy sets out the State Government's broad planning approach to the coastal region over the next 15 years. It is recognised that the coastline between Augusta and Walpole is unique and as such this strategy needs to address a number of key issues affecting the coastline. In particular, the strategy needs to be developed in the context of *State Planning Policy 2.6 State Coastal Planning Policy*, which applies to coastal areas throughout the state and includes the coastal seabed, near-shore marine waters and land use and development abutting the coast. Clause 5.1 sets out policy measures and clause 5.2 sets out more detailed requirements for coastal strategies and management plans.

2.4.2 Planning units

The *Warren-Blackwood Regional Planning Strategy* identified 13 planning units across the Warren-Blackwood region. The units are generally based on river catchments and are aimed at providing a sound environmental basis for considering the region in more detail.

As shown in figure 3, the study area for the coastal strategy falls across four of these planning units:

- **BRI Scott;**
- **DRI Donnelly;**
- **WRI Warren;** and
- **SCI Shannon.**

BRI Scott - Land use in this planning unit is predominantly grazing and Crown land for national parks and nature reserves.

DRI Donnelly - This planning unit includes an area of the Scott coastal plain, Darling plateau and Blackwood plateau landform units. The majority of the unit is state forest with some grazing on the Scott coastal plain.

WRI Warren - This planning unit contains areas of the Scott coastal plain and the Darling plateau. All the coastline is in national park.

SCI Shannon - This planning unit contains numerous river catchments and the Broke, Nornalup and Walpole inlets. The largest tenure in the unit is national park and the land use is conservation and recreation.

Although these units were extremely useful for the Warren-Blackwood region as a whole, it is difficult to directly apply them in the Augusta-Walpole Coastal Strategy because the study area for this strategy is much smaller than that of the Warren-Blackwood regional plan for which the units were developed. As a finer scale was needed, a framework of precincts, settlements and nodes were developed for this strategy. These are outlined and discussed in chapter 3.

3 Conceptual foundation for the strategy

3.1 Guiding principles

The following guiding principles will be used to assess all future planning and development of the Augusta-Walpole coast to ensure the protection and sustainable use of the environment for future generations.

i) Sustainable development

All planning and development must meet the needs of current and future generations through appropriate land use and planning policies and practices that integrate environmental protection, social advancement and economic prosperity in the interests of sustainable development.



Basalt columns at Black Point

ii) Community aspirations

Future planning and decision making must be consistent with the vision for the Augusta-Walpole coast, including equity of access for a range of visitor experiences in different settings for all people, from those seeking a remote and natural experience along the coast to those requiring infrastructure and services in towns such as Walpole.

iii) Indigenous heritage

All planning and development must provide for the ongoing protection of indigenous heritage (if there are direct impacts), especially relating to the marine environment, and the continuation of indigenous use and stewardship of the land. Where relevant, it should also

provide the opportunity for the development of culturally appropriate tourism through the interpretation of indigenous heritage.

iv) Economic development

All planning and development should actively assist in the creation of regional wealth, support the development of new industries and encourage economic activity as long as those activities are in accordance with sustainable development principles. Planning and development must also support the provision and maintenance of infrastructure based on sustainability principles to service regional

communities, and develop and upgrade tourism infrastructure to improve the attractiveness of the region as a natural and remote place to both visitors and residents alike.

v) Interdependence

Development must not significantly interfere with current natural ecological processes. Ecological processes include

physical and biological systems, which are interconnected strongly. Changing one part of the environment may affect other parts.

vi) Limits of acceptable change

Development must be within limits of acceptable change. The limits of acceptable change are defined as the degree of change a system can accommodate or buffer while still sustaining or returning to its desired characteristics. The limits may be defined by environmental, social or economic concerns. What is acceptable or appropriate will be determined by consultation with local governments and communities, as well as by legislation and regulations. The limits of acceptable change establish the maximum level of alteration for a resource that society is prepared to accept.

vii) Precautionary principle

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation. In applying this principle in planning and development, the following steps must be followed:

- The onus is on any proponent to show that development does not pose any likelihood of serious or irreversible harm of the environment.
- If the proponent cannot demonstrate there is no likelihood of such harm, the onus is on the development proponent to show that the harm can be managed.
- If the proponent cannot demonstrate that the harm will be managed, the development should not go ahead.

viii) Cumulative impacts

All planning and development must consider its cumulative impact. The demand for and subsequent provision of tourism or recreational development along the coast may result in cumulative impacts as each new development proposal is added to existing development. The ad hoc establishment of developments along the coast has the potential to erode the wilderness and environmental values of the area over time and also may affect the economic viability of individual development projects. If there is an unacceptable cumulative impact, the development should not go ahead.

ix) Protection of high conservation values

Planning must be based on the protection of high conservation areas such as the Shannon, D'Entrecasteaux, Scott and Walpole-Nornalup national parks, Gingilup Swamps Nature Reserve, Black Point, Capes Hardy Inlet, and the Walpole-Nornalup inlets marine park and surrounds. These areas are rare and irreplaceable natural assets with outstanding scenic, recreational and scientific value. Development must not significantly interfere with these values.

x) Protection of remoteness values

Remoteness is a dynamic concept, rather than a static one. It varies from place to place, through time as society's values change, and from person to person. Therefore it is useful to describe remoteness in terms of relative values, rather than provide a definition. Future development on the Augusta-Walpole coast should address specific issues that may affect remoteness values, such as emission of noise (for example, power generation, vehicles and boats), light, smoke or dust, waste disposal (for example, refuse disposal site, public toilets, evaporation ponds and pipe outfalls), visual impact (for example, buildings and roads) or odour (for example, sewage treatment). Development must not significantly interfere with any identified remoteness values.

xi) Protection of biodiversity

Biodiversity underpins the processes that make life possible. Healthy ecosystems are necessary to maintain and regulate atmospheric quality, climate, fresh water, marine productivity, soil formation, cycling of nutrients, and waste disposal. Biodiversity is intrinsic to values such as beauty and tranquillity. Australians place a high value on native plants and animals, which contribute to a sense of cultural identity, spiritual enrichment and recreation. Biodiversity is central to the cultures of Aboriginal and Torres Strait Islander people. Australian plants and animals attract tourists and provide food, medicines, energy, and building materials. Our biodiversity is a reservoir of resources that remains relatively untapped. Planning must consider biodiversity, and development must not significantly interfere with the biodiversity in a particular area.

3.2 Sustainability

At the state level, planning initiatives have been developed in response to particular state issues. The most recent is the State Government's response to an increased global awareness of and commitment to encourage sustainable development.

Hope for the Future: The Western Australian State Sustainability Strategy was released in November 2003. The strategy aims to coordinate development across the State,

in accordance with the principles of sustainability. It puts sustainability on the agenda and defines it as:

'Meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity.'

The strategy provides the benchmark for decisions to be made by government and its agencies. It provides a long-term agenda for the ongoing global goal of protecting the environment and raising the quality of life of all citizens. The sustainability strategy aims to address:

- the management and use of natural resources;
- the planning and building of settlements;
- the important contribution of the community, business and industry; and
- the State's ability to contribute to the overall global effort for sustainability.

The Augusta-Walpole Coastal Strategy's recommendations have been developed with these principles in mind to assist local governments to interpret and integrate these ideas in the regional context.

3.2.1 Sustainability foundation principles

The state sustainability strategy recognises the following foundation principles for sustainability.

i) Long-term economic health

Sustainability recognises the needs of current and future generations for long-term economic health, innovation, diversity and productivity of the earth.

ii) Equity and human rights

Sustainability recognises that an environment needs to be created in which all people can reach their full potential and lead productive lives, and that significant gaps in sufficiency, safety and opportunity endanger the earth.

iii) Biodiversity and ecological integrity

Sustainability recognises that all life has intrinsic value and is interconnected, and that biodiversity and ecological integrity are part of the irreplaceable life-support systems on which the earth depends.

iv) Settlement efficiency and quality of life

Sustainability recognises that settlements need to reduce their ecological footprint (that is, less material and energy demands and reduction in waste), while they simultaneously improve their quality of life (health, housing, employment, community).

v) Community, regions, sense of place and heritage

Sustainability recognises the significance and diversity of community and regions for the management of the earth, and the critical importance of sense of place and heritage (buildings, townscapes, landscapes and culture) in any plans for the future.

vi) Net benefit from development

Sustainability means that all development, and particularly development involving extraction of non-renewable resources, should strive to provide net environmental, social and economic benefit for future generations.

vii) Common good from planning

Sustainability recognises that planning for the common good requires equitable distribution of public resources (such as air, water and open space) so that ecosystem functions are maintained and a shared resource is available to all.

3.2.2 Process principles

i) Accountability, transparency and engagement

Sustainability recognises that people should have access to information on sustainability issues, that institutions should have triple-

bottom-line accountability, that regular sustainability audits of programs and policies should be conducted, and that public engagement lies at the heart of all sustainability principles.

ii) Precaution

Sustainability requires caution, avoiding poorly understood risks of serious or irreversible damage to environmental, economic and social capital, designing for surprise and managing for adaptation.

iii) Hope, vision, symbolic and iterative change

Sustainability recognises that applying these principles as part of a broad strategic vision for the earth can generate hope for the future, and consequently it will involve change as part of successive steps that will continue over generations.

iv) Measuring a more sustainable future

A key initiative of the state sustainability strategy was the need for planning to identify indicators of change that can be measured. These measurable indicators monitor whether the principles of sustainability are working for the region. Sustainability indicators should be developed through the public consultation process to monitor the outcomes of the strategy.

3.3 Strategic framework

3.3.1 Approach to strategy development

The key steps in the development of this strategy and the management recommendations have been:

- the identification of key values and region issues relevant to coastal planning;

- the identification of a vision for the Augusta-Walpole coastal area articulating the values of the region now and in 30 years;
- the identification of objectives that respond to the key issues facing the region and provision for the creation of management responses that contribute to the achievement of the vision; and
- the development of recommendations to guide future planning and management of the region.

3.3.2 Key issues and objectives

Key issues

Table 4 summarises the key issues described in detail in the following chapters.

Objectives

A number of broad objectives have been developed for the strategy and are listed in table 5. These fall into the four broad categories of environment, social, economic and governance. The objectives are aimed at providing a consistent approach to the management strategies for the Augusta-Walpole coastal region and ensuring that the management strategies deliver the outcomes expressed in the objectives.

3.4 Approach to development of management strategies

3.4.1 Overview

For the purpose of the strategy, the study area has been divided into two precincts according to differences in land uses and planning issues. During the initial strategy development four coastal settlements and 17 activity nodes were identified for the Augusta-Walpole coastline. Four potential coastal access nodes have also been identified in precinct I. This information

Table 4: Key issues table

Key issues
<p>Protection of environmental values</p> <ul style="list-style-type: none"> • Significant environmental and conservation values in the study area must be preserved and protected; • increase in the potential for development to affect the biodiversity, conservation and significant environmental values of the area; • diverse environmental and cultural values include geoheritage, Aboriginal heritage, biodiversity, flora, fauna, landscape and wilderness values that need integrated management; • significant potential for wind and wave erosion along the coastal strip between Augusta and Walpole; • increased and uncontrolled access to the study area would represent a threat to biodiversity and increase the risk of fire, introduction of weeds, dieback, disease, feral animal species and erosion; • the importance of the environmental values of the area for tourism and recreation; and • risk of acid sulfate soils in the western portion of the study area which could adversely affect soil and water quality, biodiversity and human health.
<p>Land tenure</p> <p>Private land and leases surrounded by national parks:</p> <ul style="list-style-type: none"> • existence of private lots in national parks may create a demand for access which could lead to associated issues of increases in fire, disease and weed risk; • pastoral leases still exist in national parks - a use that is generally incompatible with the conservation purpose of national parks; • coastal settlements wholly surrounded by national park, such as Windy Harbour and Walpole could have a significant impact on the conservation values of these parks unless appropriately managed; • capacity to accommodate residential and tourist pressure generated by national park visitation; and • existence of the national park has implications for the management of settlements. <p>Unallocated Crown land:</p> <ul style="list-style-type: none"> • unallocated Crown land is largely along the coastal foreshore of precinct 1 where no clear management responsibilities having been identified, which means that fire, vermin, weeds public access, off-road vehicles and illegal access potentially are not being managed; • resolution of management of unallocated Crown land is required prior to determination of application for subdivision on private lots fronting unallocated Crown land; and • clear management direction is required. <p>Squatter huts:</p> <ul style="list-style-type: none"> • squatter shacks are located at Gardner River, Donnelly River and Broke Inlet (Camfield). The Donnelly River shacks are being managed by DEC under lease but no arrangements have been negotiated for the Broke Inlet shacks. Some squatter shacks are also in national parks; and • some squatter shacks have been identified as having heritage value; other shacks may have similar values. <p>Native title:</p> <ul style="list-style-type: none"> • native title claims exist over the study area (including two separate claims) which are currently being managed by the South West Aboriginal Land and Sea Council; and native title to some extent is assumed to exist over unallocated Crown land.
<p>Land use - agriculture</p> <ul style="list-style-type: none"> • need for recognition of the priority agriculture and general agriculture zones on Scott coastal plain; • land capability and suitability mapping undertaken by the Department of Agriculture and Food suggests that fair capability exists in the area around Woodarburrup, Scott River and Milyeannup roads for agriculture only; • future potential for aquaculture developments in the study area; and • risk of wind erosion of dune systems is a significant issue in precinct 1.

Land use - coastal settlements

East Augusta:

- significant environmental values in areas adjacent to or near the town of East Augusta, including the Hardy Inlet, the Deadwater and Swan Lake;
- existing residential development is of low intensity but the area is heavily used during peak holiday and tourism times;
- infrastructure provision in the area is limited and is likely to continue to limit development;
- possible provision of a public coastal access location and the potential for a tourism facility in some form; and
- a commercial marina is being considered for Augusta, generating some community concerns about potential environmental impacts.

Northcliffe:

- restructuring of the timber industry has had a negative impact on the economy of Northcliffe and the town is seeking alternative economic development opportunities; and
- Northcliffe is the gateway to Windy Harbour and Point D'Entrecasteaux and offers some opportunities to relieve pressure on these areas by setting back population growth and tourist visitation from the fragile coastal environment.

Windy Harbour:

- implications for existing infrastructure, including boat-launching ramp, parking and roads, from significant day-use pressure;
- potential expansion of the settlement area;
- water use by Windy Harbour residents has only recently been metered and there are concerns about potential impacts on the surrounding national park;
- lack of formal effluent and rubbish disposal systems has the potential to affect the settlement and the significant environmental values of areas surrounding the A class reserve; and
- differing views on the nature of any future development of Windy Harbour, controlled by the Windy Harbour management plan.

Walpole:

- the town has limited capacity for expansion as it is surrounded by national park and is located adjacent to many scenic attractions and significant waterways.

White Point vicinity (potential)

- Increased development through subdivision and provision of tourism facilities is proposed by landowners in the White Point area;
- management of environmental, conservation and landscape values of this area would be required with any development, and the terrestrial vegetation, wetland and biodiversity values in particular would need to be recognised;
- development should be consistent with existing strategies and plans such as Warren-Blackwood regional planning strategy, state coastal planning policy and others listed in the report; and
- increased development in this area has the potential to generate increased access to Black Point, Lake Jasper and the national park to a level that may place pressure on the values of these areas.

Black Point

- Proposals for redevelopment of existing recreation facilities;
- high and increasing demand for recreational use;
- implications for significant environmental and indigenous heritage values of the area; and
- difficulty in providing infrastructure to this isolated location.

Land use - tourism and recreation

- Protection of the region's remote and natural appeal is important for the wilderness experience it offers;

- limited tourism accommodation in the Augusta-Walpole region;
- integration of tourism and recreation facilities on privately owned land with activities existing or proposed for national parks; and
- finding a balance between encouraging visitors to conservation lands and managing potential environmental and social impacts.

Land use - mining

- The study area has potential for limestone extraction, peat or coal mining, sand and gravel extraction and petroleum;
- implications of mining activities for environmental and conservation values of the area are significant; and
- mining activities contribute to upgrades of infrastructure which benefit the community.

General access

- There are only a limited number of locations along the coast where the public can gain access and many of these are seasonal or require 4WD vehicles;
- lack of public access to the coast between East Augusta and Walpole offers protection to this area on the one hand, but restricts access for emergency and recreation purposes on the other;
- disturbance to dunes and beach systems and an increase in hazards from direct access to the beach by vehicular traffic;
- any access tracks, roads and associated infrastructure need to be prioritised for maintenance due to funding constraints;
- uncontrolled access in the region is resulting in environmental damage through the creation of new tracks or 4WD vehicles in dune areas;
- limited funding for road construction and maintenance is already a major problem that may be made worse with a significant increase in new roads;
- there are a range of informal tracks through private properties providing access to the coast, which are used by some members of the public – in some cases this has resulted in degradation to vegetation and dune stability;
- there are a number of unmade road reserves in the national park and surrounding areas that could be considered for rationalisation;
- any increase in the intensity of land uses in precinct 1 would require consideration of the requirement for upgraded 2WD access; and
- access for people with disabilities must be considered in the planning process.

Access to Black Point:

- existing access is limited to 4WD vehicles and this offers a level of protection to the significant conservation values at this location; and
- there are opposing views about whether access to Black Point should be upgraded to accommodate 2WD vehicles, and funding would be a major issue.

White Point:

- possible provision of public access and some type of tourist facility to the coast in this location.

Other areas in the Shannon-D'Entrecasteaux national park:

- a range of access is provided in the park and DEC is currently reviewing the access recommendations of the previous plan.

Boat launching

- Limited boating infrastructure is available in the region, with the exception of Walpole;
- limited locations for safe launching facilities;
- existing boat launching facilities are largely in locations that can be difficult to launch boats from in inclement weather (for example, Windy Harbour) and alternatives are extremely limited or non-existent;

- inability to launch boats has implications for effective emergency response; and
- proposed marina at Hardy Inlet is intended to provide safe boat launching access.

Telecommunications

- Lack of telecommunications in remote parts of the study area, such as Black Point and White Point; and
- slowness of data services in the study area.

Power

- Power supply to the Scott River area is limited by the capacity of the Margaret River system to provide back-up – any significant increase in load would require significant upgrading of power supply infrastructure;
- Windy Harbour is not connected to the power grid and relies on local generators – this will limit any further development of the settlement;
- provision of above-ground power to Windy Harbour is not acceptable to DEC because of the effect it would have on the landscape and conservation values of the national park; and
- power supply to Walpole is limited and the current supply has no capacity to service growth in the area.

Water supply

- Proposals to extract groundwater from areas of national park have the potential to affect environmental water use and values;
- proposals to extract water from the Yarragadee aquifer have attracted strong community opposition due to future water needs of the South-West region; and
- projected drop in rainfall due to climate change is a long-term issue.

Water supply

- Only preliminary technical studies on coastal processes and shoreline movements in the study area have been undertaken. Further studies on coastal processes are required to fully assess the potential impacts associated with any further development in the coastal areas;
- mapping of the various land attributes has not been done for private land in the study area;
- dieback represents the most significant threat to plants in the study area;
- a number of areas have not been adequately studied and require further investigation, including terrestrial fauna, biodiversity, marine environment, including marine fauna, and coastal processes;
- there is a need to secure adequate funding to undertake further research and education;
- there are many threats to biodiversity and the risk of fire, introduction of weeds, dieback, disease, feral animal species and erosion is high in the study area – further education and management of these threats is required; and
- social data is also lacking; for example, visitor numbers to popular areas and tourism demand data.

has been refined into a settlement and use hierarchy which is discussed in detail in chapter 5. These form a basis for developing generic and specific management strategies for the identified areas in response to the unique nature of the study area. Figure 4 depicts these areas.

Development of the precincts has taken into account the significant portion of the coastline that is national park vested in the Conservation Commission and managed by DEC. The

precincts represent areas along the coastline, which are similar in terms of the key issues and the predominant land use in the area. The two precincts are:

Precinct I – Scott River

This precinct contains all the land within the study area between East Augusta and Black Point. Land use in this precinct is predominantly grazing, Crown land for national parks and

Table 5: Objectives

Protect and where possible restore the high value terrestrial and marine natural environment and biodiversity of the Augusta-Walpole coast.
Maintain, protect and sustain water sources for the social, economic and environmental benefit of the area.
Ensure appropriate vesting and management of terrestrial and marine environments along the Augusta-Walpole coast.
Provide for sustainable agriculture and other primary industry pursuits.
Ensure that future development, including public infrastructure, is environmentally sustainable.
Support sustainable development opportunities for the environmental, social and economic benefit of local communities.
Ensure that development complements the natural landscape and wilderness experience.
Provide opportunities for sustainable and responsible tourism and recreation.
Ensure strategic basic raw materials are available for community use and benefit.
Provide adequate and safe public access to the Augusta-Walpole coast.
Provide appropriate infrastructure while ensuring the environmental, heritage, social and cultural values of the coast are protected.
Promote and improve environmental and cultural research, monitoring and knowledge and awareness of the coast.

nature reserve, freehold land and some unallocated Crown land. This precinct contains the settlement of East Augusta. It is adjacent to a portion of the proposed Capes marine park area which extends to the three nautical mile state waters limit.

Precinct 2 – Black Point to Walpole

This precinct encompasses the remaining land in the study area between Black Point and Walpole. This precinct is predominantly national park, but it also contains two coastal settlements at Windy Harbour and Walpole, some private property enclaves and a number of activity nodes used for recreation and tourism. This precinct includes the whole of the proposed Walpole and Nornalup inlets marine park.

In each of these precincts coastal settlements and nodes have been defined.

3.4.2 Precinct values

The core values or purpose of the precincts have been summarised in table 6. Strategy recommendations have been developed to address the key issues and preserve the core values.

3.4.3 Settlements

Three coastal settlements in the study area have been identified as having individual key issues that require specific management strategies. A fourth settlement, Northcliffe, although outside the study area, will potentially play an important role in accommodating residential, tourism and recreational development and it is also considered in discussion of management strategies. For the purposes of this strategy, a coastal settlement has been defined as an area of residential and tourism development along the coast that is recognised as a gazetted townsite or settlement.

The four settlements are:

- **East Augusta:** The East Augusta settlement is in precinct 1: Scott River. This settlement is located at the end of the long, mainly unsealed, Scott River Road and is not easily accessible. Residential development is restricted to some 50 lots, houses are restricted to one-storey in height and most of the pre-European vegetation remains. East Augusta also has two important wetlands; Swan Lake and the Deadwater. The town is surrounded by poorly reserved vegetation types and important fauna habitat.

Table 6: Precinct values and objectives

Precinct	Value statements
<p>Precinct 1: Scott River</p>	<p>Core Values:</p> <ul style="list-style-type: none"> • high environmental and cultural values - contains vegetation types and complexes that should be preserved, including threatened flora, threatened ecological communities, vegetation poorly represented in the study area, high species richness, endemism, disjunct and relictual flora, as well as significant wetland areas; • differences of land use and high level of freehold ensure diversity of economic uses, including agriculture, horticulture, mining and tourism; • coastal foreshore values associated with dune systems and remoteness; and • presence of important recreational values. <p>Primary objectives:</p> <ul style="list-style-type: none"> • provide for protection and conservation of environmental values; • allow for appropriate land use on private land that is sustainable; • create opportunities for managed and sustainable tourism and recreational uses; and • provide infrastructure that is appropriate to the proposed level of development in the settlements while protecting the environmental values of the area.
<p>Precinct 2: Black Point to Walpole</p>	<p>Core Values:</p> <ul style="list-style-type: none"> • largely comprises national parks and nature reserves and as such is recognised for its high environmental, recreational and cultural values. <p>Primary objectives:</p> <ul style="list-style-type: none"> • continued management of land use in national parks and nature reserves by DEC; • provision of access for sustainable tourism and recreational purposes which reflects the need to protect and conserve the environmental and cultural values of the area; • provision of infrastructure that is appropriate for the proposed level of development in the settlements while protecting the environmental values of the area; and • management of private enclaves in the Shannon and D'Entrecasteaux national parks should be consistent with the values of the national parks.

- **Windy Harbour:** This settlement falls in precinct 2: Black Point to Walpole. Windy Harbour is an A-class reserve surrounded by national park. One portion of the reserve is for short-term accommodation, and the remainder is under a management order for conservation protection and recreation. Windy Harbour is currently under the management of the Shire of Manjimup.
- **Walpole:** Walpole is in precinct 2: Black Point to Walpole. Walpole overlooks the Walpole and Nornalup inlets and national parks and nature reserves completely surround the town and inlets. The town is gazetted and is in the jurisdiction of the Shire of Manjimup.

It plays a role as a small district service centre. It is also a centre for tourism and arts and crafts, and it offers a unique lifestyle.

- **Northcliffe (outside the study area):** Northcliffe is located on Wheatley Coast Road, and traffic to Windy Harbour and between Augusta and Walpole would pass through the town. It has suffered negative economic and social impacts from a restructuring of the timber industry. The Shire of Manjimup and community representatives are seeking opportunities to improve the social and economic wellbeing of the town.



Figure 4: Coastal waters and land use plan

3.4.4 Coastal recreation nodes

A significant portion of the study area is either national park or privately owned land used for agricultural purposes and this has had the effect of limiting access and use of the study area for recreation or tourism. However, there are several locations in both precincts where these activities do occur and for which guidance on the form and intensity of activity is required. These nodes are described in chapter 5 and shown on figure 4. They include:

- Swan Lake and the Deadwater (precinct 1);
- Black Point (precinct 2);
- Lake Jasper (precinct 2);
- Jasper Beach (precinct 2);
- Donnelly River mouth (precinct 2);
- Yeagarup Beach (precinct 2);
- Warren River mouth (precinct 2);
- Malimup (precinct 2);
- Gardner River (precinct 2);
- Coodamurrup (precinct 2);
- Fish Creek (precinct 2);
- Broke Inlet/Camfield (precinct 2);
- Banksia camp (precinct 2);
- Mandalay Beach (precinct 2);
- Point D'Entrecasteaux (precinct 2);
- Salmon Beach (precinct 2); and
- Long Point (precinct 2).

For the purposes of this strategy, a node refers to an area of concentrated activity, but not in a formal context, in the study area. For example, the node may be popular with tourists, for recreation activities (walking, fishing) or may be an area that requires protection or restoration. Each of the identified nodes is considered to have specific issues and hence requires tailored and specific management strategies to meet the objectives of this strategy. The bulk of these nodes are in DEC estate but they are listed to show recreational use as a whole.

3.4.5 Coastal access points

The strategy identifies four potential coastal access points that are currently on freehold title property. These locations, which are described in further detail in chapter 5, are:

- East Augusta/Scott River (precinct 1);
- Milyeannup (precinct 1);
- The Lagoon (precinct 1); and
- White Point (precinct 1).

There are currently several coastal access points in precinct 2. These locations are subject to future DEC management plans for the relevant national parks.

4 Regional characteristics, coastal planning issues and recommendations

4.1 General description and characteristics

The Augusta to Walpole coastal region includes the western and central portions of the Scott coastal plain, the lower reaches of many rivers, wetlands and estuaries, private freehold land and a very large proportion of DEC managed estate.

The Conservation Commission has responsibility for control and management planning of state forest and the conservation estate. This includes adopting management plans for the estate and then auditing DEC implementation of the plans. DEC, as manager of forests and the conservation estate on behalf of the Conservation Commission, is required to implement forest management plans, which are assessed by the Environmental Protection Authority. DEC is also a key provider of expert advice on conservation and biodiversity issues generally, and particularly during the environmental assessment process.

National parks extend along the entire coastal strip from just west of Black Point to Nornalup Inlet (except for Windy Harbour reserve, Camfield reserve and several isolated private

lots). Large freehold rural lots back the remainder of the coastline westwards to Hardy Inlet. The southernmost boundaries are three nautical miles offshore from the coast. There are three settlements in the coastal region:

- East Augusta;
- Windy Harbour; and
- Walpole.

In addition, there are squatter shacks in the coastal region, including those at the Donnelly River settlement and Broke Inlet (Camfield). The town of Northcliffe is located outside the study area but is partially included as part of this strategy given its importance as a settlement node for the surrounding coastal region and gateway to Windy

Harbour and Point D'Entrecasteaux.

There are a number of activity nodes located outside these developed areas, predominantly in the national parks. A node usually refers to an area in which activity takes place on the coast but in which there are no structures that house permanent or holiday populations; for

example, a popular fishing spot or favourite swimming beach. These are described below and shown in figure 5.

- Swan Lake and the Deadwater: A popular recreation node for uses such as fishing and boating. Located in a very sensitive area, it has been identified as a potential marine reserve.
- Black Point: A popular recreation node, especially for camping and day uses such as fishing and surfing, located in a sensitive environment at the westernmost point of the D'Entrecasteaux National Park. Commercial fisheries also operate in this area. It has also been identified as a potential marine reserve.



Warren Beach

- Lake Jasper: Located in the national park. The lake is listed in the directory of important wetlands (Commonwealth listing) and is of high significance to indigenous people. Camping at this node is a popular recreational activity, as are swimming and other water-based activities, especially fishing and water-skiing. It is also a popular day-use location.
- Jasper Beach: Located in the national park, this node is popular for recreational activities, especially fishing.
- Donnelly River mouth: Located in the national park, the Donnelly River mouth is a popular recreation node, especially for camping, swimming and other water-based activities. There are also a number of informal squatter shacks at this node.
- Yeagarup Beach: Located in the national park, this node is an important coastal recreation site for fishing, camping, 4WDs, bushwalking, and sightseeing. It is particularly popular for 4WDs.
- Warren River mouth: Located in the national park, this node is popular for recreational pursuits such as fishing, camping, 4WDs, bushwalking and sightseeing. It has also been identified as a potential marine reserve.
- Malimup: Located in the national park, this is a popular recreation node for fishing, camping, 4WDs, bushwalking and sightseeing.
- Gardner River: Located in the national park, this area is favoured for fishing, camping, 4WDs, bushwalking and sightseeing.
- Coodamurrup: Located in the national park, this is a popular recreation node, especially for camping.
- Fish Creek: Located in the national park, the area is valued especially for beach fishing and camping.
- Broke Inlet: A local government managed reserve located in the national park. The boundary of the reserve is located at the high watermark. There are currently a number of informal squatter shacks at this activity node, which provide holiday opportunities for a small

number of people. The node is a low-key fishing location at certain times of the year and also supports commercial fishing.

- Banksia camp: Located in the national park, this is a low-key recreational node for fishing and camping, especially popular with local people.
- Mandalay Beach: Located in the national park, this node is popular with local people and tourists for recreational-based pursuits and its scenic quality. Swimming is not safe in this location. It is also a popular walking destination.
- Long Point: Located in the national park this is a recreational node, especially noted for its natural elements and scenic quality.

4.4.1 Climate

The study area lies in the wettest part of Western Australia. In global terms, the climate is classified as Mediterranean. In general, the study area experiences a shorter and cooler summer than other parts of the South-West region. Correspondingly, winters are more extended. Rainfall ranges between 1,000 mm and 1,400 mm annually, and evaporation is around 1,100 mm. Rainfall can generally be relied upon between 160 and 260 days a year during the winter. Summer temperatures vary between the low to mid-20s as a maximum, and the minimum is around 15°C. In winter, the average daily mean temperature is 17°C and it drops to 11°C at night. The south coast is generally known for its windiness. Data from the Cape Leeuwin meteorological station shows that in winter the wind is mostly from the west. It swings between north-west and south-west and has average wind speeds of 40 km/h. For the rest of the year the pattern changes with most wind coming from the south-east, particularly in summer and autumn. Spring shows most variability in wind direction, ranging from north-west to south-east.

Climate change

The climate of the study area and the world as a whole is predicted to change, with increasing concentrations of greenhouse gases in the atmosphere. This results in more heat being trapped in the atmosphere and contributes to a warming of the earth's surface. There is

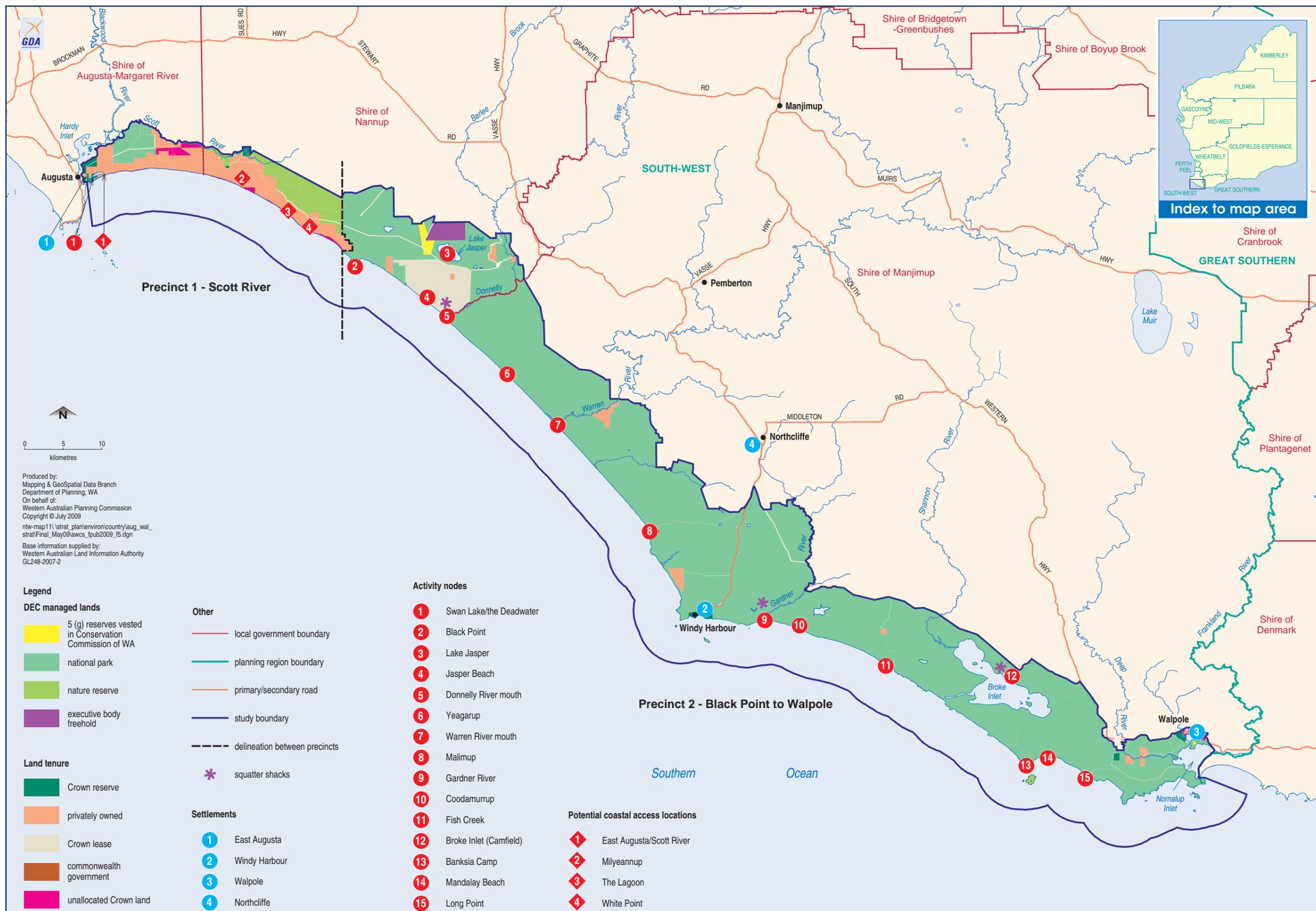


Figure 5: Precincts, settlements, nodes and potential coastal access locations

worldwide scientific agreement that this is already causing higher average air temperatures in the lower atmosphere, changed rainfall patterns and rising sea levels.

Australia's coastal zone is vulnerable to the impacts of climate change resulting from sea level rise, increased surface temperature, increased storm intensity and frequency, ocean acidification and changes to rainfall, run-off, wave size and direction, and ocean currents. The framework and implementation plan for a national cooperative approach to integrated coastal zone management adopted by the Natural Resource Management Ministerial Council has a strong focus on managing issues that are of national scale and scope (including the potential impacts of climate change and sea level rise) and where jurisdictions can work together under national arrangements. In particular, it assigns priorities for an integrated and coordinated national assessment of the vulnerability of Australia's coastal systems to climate change, involving all jurisdictions and major sectors. The objective is for data that is currently available to be brought together to assist decision-makers in determining coastal areas that are particularly vulnerable and require further data capture. A national digital elevation model and nationally consistent mapping in the coastal zone are currently being prepared to assist with this process.

Australian average temperatures have risen by approximately 0.7°C during the last century. This warming trend has affected rainfall, in the south-west of Western Australia, particularly in the past 50 years. The reason for a decrease in rainfall is a combination of natural variability and the enhanced greenhouse effect, and the depletion of the stratospheric ozone causing a southward shift of westerly winds and their associated rainfall systems.

Species of flora and fauna of Australia survive in limited ranges of climate. The ecosystems that support the flora and fauna are often vulnerable to climate change, in that they are dependent on rainfall and they are vulnerable to loss of species with decreasing water availability or invasion by exotic animals and plant species. Many species of flora and fauna are currently living near the upper limit of their temperature range and are hence very susceptible to climate change.

If the climate changes as expected, Western Australia is likely to experience a wide range of negative impacts stemming from decreased rainfall and rising sea levels. For example, increased evaporation and possible decreases of rainfall in many areas would adversely affect water supply, frequency of bushfires, agricultural production and the survival and reproduction of key species. Water quality may also be affected due to increased soil erosion following drought, lower flows and higher water temperatures, leading to more eutrophication and algal blooms.

Impacts of climate change are complex and relatively uncertain, but foresight of climate change will enable us to optimise the future through planned adaptation and mitigation with regard to the issues in the south-west of Western Australia.

4.1.2 Coastal processes

Currents and bathymetry

The study area is characterised by the flow of the Capes current, which flows from east of Cape Leeuwin and extends north to Rottnest. This is a narrow, 20 km wide northward flow of relatively cold water with a high phytoplankton content. Driven by south-south-west winds, it has a daily mean speed of 30-50 cm. It is fed by a nutrient rich upwelling of water, which is believed to be drawn from the outer shelf and from beneath the thermocline at depths of more than 50 m. It replaces the Leeuwin current in summer and can reach as far as Busselton in spring and summer with onshore winds. The extent to which the Capes current penetrates close to shore requires further investigation. In addition, fine-scale oceanography of Flinders Bay and the interaction of the Leeuwin and Capes current on sedimentation have yet to be studied in any great detail.

The offshore bathymetry of Flinders Bay is characterised by two terrace-like shelves in the 50 m and 200 m isobaths. Apart from this, there is little information on oceanography in the study area.



Figure 6: Shoreline movements

Storm surge and wave action

The south coast is well known for its winter storm waves due to its exposure to the circumpolar seas and the associated roaring forties storm belt. Of particular concern are king waves which result from the occasional combination of two wave trains to form an extremely high wave peak. These waves are normally long period with high wave energy and travelling at high velocity, so they emerge rapidly from near-shore water and break high on the land. King waves, which can be life threatening but are intermittent, are a problem mainly on rocky headlands where the near-shore water is deep.

The high wave energy environment on the south coast also causes many strong rips, which are strong currents running out to sea. Rips usually occur when a channel forms between the shore and a sandbar where large waves have built up water, which then returns to sea, causing a strong current. Rips are dangerous as they can carry a weak or tired swimmer into deep water.

Storm waves can lead to erosion if combined with a storm surge and onshore winds. The extent of erosion will depend on the duration of the storm surge.

Sandy shores subject to storm surge and wave uprush erode and accrete annually under the normal summer-winter weather cycles. Less regularly (once or twice in a decade), the extent of erosion reaches the fore dune and removes vegetation. Occasionally (every third or fourth decade), erosion consumes the entire fore dune face under the natural cycle of storm severity. There is high probability that the whole fore dune will be eroded each century. Statistically this event could occur at any time.

Shoreline stability

The variation in shoreline movement and permanent vegetation lines detailed in figure 6 highlights that the south coast of Western Australia is prone to coastal erosion, chiefly wind erosion. In recognition of the largely unknown nature of this coastline, a shoreline stability study was commissioned on the advice of the Department of Transport's (DoT) New Coastal Assets branch. The focus was on the area between the Hardy Inlet mouth and Black Point. It was the view of the DoT's coastal engineers that this area was most prone to

erosion. The settlement of Windy Harbour was also mapped. The sizes of selected dune blowouts between Hardy Inlet and Black Point have also been mapped since 1976. Prior to 1976 there were difficulties with the mapping process. Technical difficulties and the expense of the exercise also caused gaps in the shoreline movement and horizontal setback datum mapping.

Shoreline movement mapping serves several purposes. It enables a pictorial representation of erosion and accretion over time from a selected baseline. It can also assist in identifying a line from which to delimitate an appropriate setback.

The actual permanent line of vegetation was mapped over a 50-year period using aerial photographs. The area that has been most variable over time is the far western section around Swan Lake and the Deadwater, where the Blackwood River used to empty into Flinders Bay. The location of the river mouth often varies naturally. This variability becomes an issue for permanent boating access. The dynamic nature of the Blackwood River's discharge to Flinders Bay may one day result in the incorporation of Swan Lake and the Deadwater into the Hardy Inlet.

General conclusions that can be reached from the studies to date are:

- all the blowouts are oriented towards the south-west;
- blowouts are substantial in size - in the order of hundreds of square metres;
- there has been no detailed assessment of the value of some rehabilitation methods trialled; and
- the shoreline appears to be fairly stable, showing neither marked gains nor losses in the sand budget.

The study concluded that the major issue along this stretch of coast is wind erosion, not shoreline erosion.

Coastal land that is the subject of existing, and/or prone to future, coastal erosion should be ceded to public ownership whenever an opportunity arises (for example, subdivision or development) under the objectives of the state coastal planning policy. In addition to placing land the subject of existing or likely coastal erosion in public ownership, the state coastal

planning policy recommends that the final delineation of the coastal foreshore reserve take into consideration ecological values, landscape, seascape, visual amenity, indigenous and cultural heritage, public access, public recreation needs and safety to lives and property. These aspects should be specifically addressed in any future development or subdivision proposals on or adjacent to the coast.

Shoreline movement and dune stability are fundamental factors affecting land use, development and access along the coast from Augusta to Walpole. This coastal zone contains a wide range of dune environments and levels of dune stability. It is a high-energy, dynamic environment that is constantly subjected to a strong wind and wave regime; and consequently is highly susceptible to disturbance and erosion. This ranges from active blowouts both attached to, and detached from, the modern shoreline. There are also dunes with varying amounts of vegetation cover.



Swan Lake and Augusta in the background

Between Augusta and Black Point there is approximately 40 km of high-energy sandy coastline subject to considerable natural forces. Waves, generally originating from south-westerly swell, continually pound this part of the coast.

Discontinuous submerged limestone, which occurs immediately offshore for much of the beach line, offers little protection from the erosive capacity of wave attack. In many instances it may accentuate movement of sediment by setting up currents in near-shore channels and in holes that develop where gaps in the reef occur. The entire length of the study area is open and exposed to these marine processes. Beaches are consequently narrow and steep with coarse, soft sand for much of the time. Beach width and form can change in a short period of time.

The impact of wind and waves on this part of the coast results in an environment that is at all times susceptible to change. Only at Black Point and other rocky headlands is there resistance to

the erosive capacity of the natural elements. At this point a basalt headland presents hard coast on a long stretch of sandy beach and provides partial protection of a bay on the south-east side. The characteristics of the coastline in the study area contribute to the wilderness feel of the area, highly valued by the community. It also means that the coast can be dangerous for fishing and boating users and difficult to access during emergencies.

Sea level rise

It is generally agreed that during the last ice age maxima (approximately 15,000 years ago) the sea level was 120 m lower than present and rose 120 m to close to the present level (between 11,000 and 4,000 years ago). There is less agreement on its level in more recent times as changes have been relatively small and have differed from place to place. For the south-west of Western Australia there is a range of evidence that the sea is higher relative to the land (by about one metre) than it was 2,000-3,000 years ago.

The rise in sea level over the past century has been linked to global temperature increases responding to increases in greenhouse gas emissions. As temperatures get warmer, the sea level is predicted to rise further and this will have implications for coastal planning and management.

Coastal planning in Western Australia takes into account sea level rise through implementation of the *State Planning Policy 2.6 State Coastal Planning Policy* that prescribes development setbacks. The policy currently requires a coastal setback distance of 38 m (based on a vertical change prediction of 0.38 m between 2000 and 2100) for sea level rise, which is combined with a setback allowing for both acute erosion and the historic erosion trends.

The vertical change in sea level has been translated to horizontal shoreline retreat for the purposes of the state coastal planning policy following the Bruun rule. The Bruun rule nominates a horizontal recession of 100 times

the vertical change, based on the assumption that on sandy coasts a one centimetre vertical change in sea level corresponds to a one metre horizontal change in shoreline (Bruun 1962).

The current 38 m setback allowance will be reviewed following the recent release of the fourth Intergovernmental Panel on Climate Change (IPCC) assessment report. Such review may also consider scientific evidence and reports on climate change and predicted sea level rise available from other sources at that time. It is acknowledged that the IPCC assessment and the Bruun rule are open to scientific challenge, but for the purposes of coastal planning, climate change experts have agreed that, based on current evidence, the fixed setback distance of 38 m to allow for potential sea level rise during the planning period of 100 years is adequate.

4.1.3 Landscape

The study area falls into the Scott coastal plain landscape character type, stretching from East Augusta to just past Albany. This landform type presents an overall impression of rugged headlands and swampy lowlands. Headlands consist of granite and limestone formations, with bulbous granite outcrops and rare columnar outcrops of basalt. There are prominent cliffs, rounded hills and horizontal sand plains. Dune formations in the coastal areas consist of windswept parabolic dunes, crescent shaped dunes and parallel ridges. Distinct shorelines, horizontal wave cut platforms and curved beaches are common aesthetic lines in the landscape where the ocean meets the coastline. The U-shaped valleys contain swampy corridors. High rainfall and drainage patterns contribute to the seasonal and permanent swamps that form these wetland corridors.

4.1.4 Social and economic characteristics

The Augusta-Walpole Coastal Strategy study area encompasses a small coastal section of land across three local government areas in the South-West region. Given the irregular nature of the coastal study area, it is difficult to extract demographic information that directly relates to the coastal region. Therefore, care should be taken when interpreting the following

information as the data are based on population figures and projections for individual local government areas. It should also be noted that most of the people who have an impact on the study area live outside it, as a large percentage of people travelling to the coastal region visit from adjoining and other regions of the south-west (a historical trend that continues to this day) as well as from the metropolitan area.

The following information has been extracted from the WAPC's Western Australia Tomorrow document, in which demographers from DoP have calculated population projections for each local government area in the state. The projections are compatible with official population projections produced by the Australian Bureau of Statistics. The methods used to produce the projections have been shown to be reliable, with details set out in section 7 of the document. The projections do not purport to be a prediction but rather are a likely scenario given current fertility and mortality rates and a continuation of existing migration levels to Australia.

Local government was given the opportunity to comment on draft projections. The typical response from shires was that the projections were too low; only a couple suggested they were too high. If the input from local government was taken at face value, there would have to be massive changes to the assumptions underpinning the projections. Although there is debate about these assumptions, the size of the changes proposed by local government is very unlikely. It is apparent that the ageing of the population and the increasing number of deaths compared with births have not been considered by local communities that are currently experiencing boom times due to the migration of baby boomers to coastal regions. However, in the lifetime of these projections it is likely that the mortality of baby boomers will significantly affect future population growth.

It is likely that most shires will be very disappointed when the population growth they anticipate does not eventuate. Although a small number will probably exceed all their expectations. The publication gives details of specific strengths and weaknesses of the projections in chapter 5. The document is available at:
<http://www.planning.wa.gov.au/Publications/723.aspx>.

Table 7: Population projections for selected local government areas in the South-West region (2005 ERP¹, 2006-2021)

Local government	ERP 2005	2006	2011	2016	2021	Projected annual growth rate 2006-2021 (%)
Boyup Brook	1501	1600	1500	1500	1400	-0.89
Bridgetown-Greenbushes	4001	4100	4100	4100	4000	-0.16
Manjimup	9736	10 000	10 100	10 000	9900	-0.07
Nannup	1236	1200	1200	1200	1200	0
W-B shires total	16 474	16 900	16 800	16 800	16 600	-0.12
Augusta-Margaret River	11 689	11 900	13 400	15 000	16 600	1.99
South-West	140 846	141 200	153 900	165 400	175 000	1.44
Western Australia	2 010 113	2 048 500	2 210 400	2 376 400	2 534 600	1.43

Source: Western Australia Tomorrow (WAPC 2005)

¹ Population figures used in this publication are conceptually compatible with the Australian Bureau of Statistics' estimated resident population figures, which is the official measure of population of Australia. It is based on the concept of residence and refers to all people, regardless of nationality or citizenship, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months. It excludes overseas visitors who are in Australia for less than 12 months. The estimated resident population for an area refers to people who live in that area for 6 months of the year or more.

4.1.5 Population projections

Between 1997 and 2007 the Shire of Augusta-Margaret River's estimated resident population grew from 8,562 to 11,360, an average annual growth rate of 2.8 per cent. In 2005 the shire's average annual growth rate between 2006 and 2021 was projected to increase at a rate of 1.99 per cent over the 15-year period, arriving at a total resident population of 16,600 by 2021 (table 7). Although this population projection is less than the average annual growth rate experienced by the shire over the past 15 years, the projected population growth rate is the highest of all the local government areas throughout the Augusta-Walpole study area.

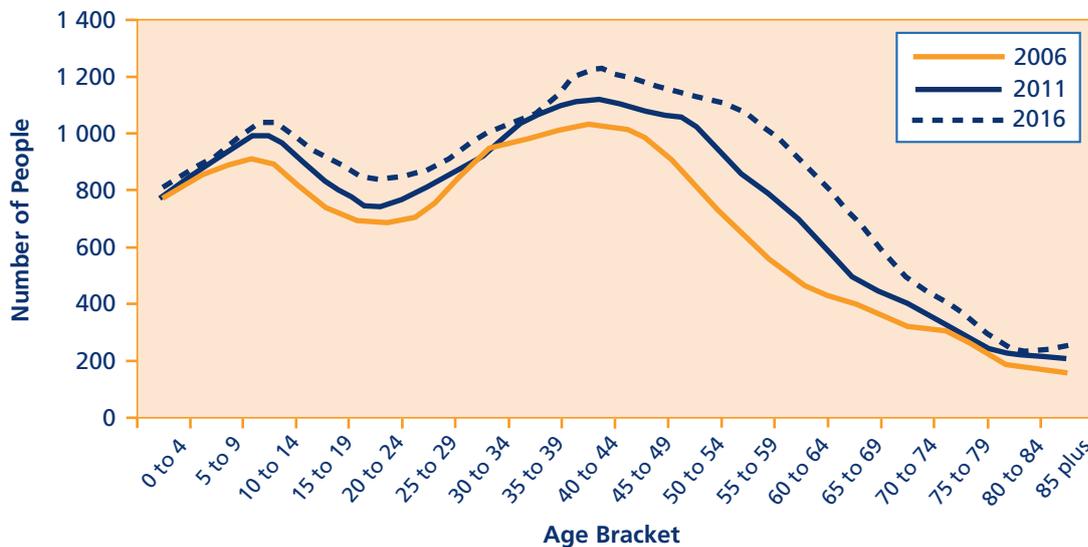
The projected average annual growth rate for the Shire of Augusta-Margaret River is also higher than that of the South-West region and the state, which are expected to experience growth rates of 1.44 per cent and 1.43 per cent respectively between 2006 and 2021. Although a significant percentage of the projected population growth for the Shire of Augusta-Margaret River is expected to occur in and around the Margaret River townsite, the sustained levels of strong population growth

in the shire will have implications for the demand for residential land and essential infrastructure provision in the town of Augusta and surrounding coastal region.

In contrast to the Shire of Augusta-Margaret River, the shires of Nannup and Manjimup in the Warren-Blackwood region are expected to experience zero or negative population growth between 2006 and 2021 (table 7). Given the relatively low population base of the Warren-Blackwood region, any fluctuations in population and/or visitor numbers will have implications for current infrastructure systems. The forecast negative population growth in the Warren-Blackwood region can also be attributed to high population growth rates in the neighbouring shires of Augusta-Margaret River, Dardanup and Busselton.

Figure 7

Projected population profile by age
Shire of Augusta-Margaret River 2006 - 2016



Source: Western Australia Tomorrow (WAPC 2005)

4.1.6 Demographic profile by shire

Projected population statistics represented in figure 7 suggest that the Shire of Augusta-Margaret River will continue to support relatively high numbers of families with dependent children. This trend can be explained by the high proportion of the population aged 29-49 years, as well as large numbers of children below the age of 15.

The 15-24 age group is also expected to increase in the Shire of Augusta-Margaret River over the next 10 years. Given that this is the age at which most people are attending some form of educational training, growth in this sector of the

population will have implications for the provision of secondary and further education facilities in the shire. Furthermore, the presence of quality post-secondary educational facilities will help reduce the number of young people leaving the town in search of higher education.

Another projected trend illustrated in figure 7 and table 8 is the increasing proportion of people aged 45-64. In 2006, it was predicted that 24.57 per cent of the Augusta-Margaret River population would be in the age group 45-64. This figure is projected to rise to 28.45 per cent by 2016. Similar proportional increases are expected to occur for the over-65 age group during the same 10-year period. Furthermore, the median age in the town of Augusta, which is

Table 8: Projected proportions of population by age. Shire of Augusta-Margaret River (2006-2016)

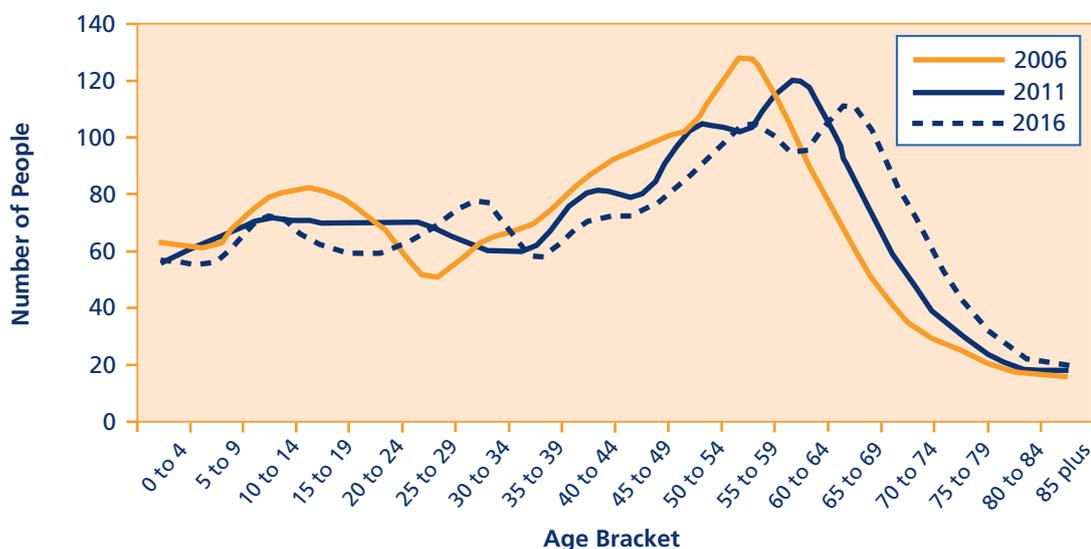
Age Bracket	2006	2011	2016
<15 (%)	21.27	19.87	18.4
15-24 (%)	11.99	11.78	11.72
24-44 (%)	30.86	29.09	27.51
45-64 (%)	24.57	27.14	28.45
65+ (%)	11.31	12.11	13.91
Total Population	11 898	13 401	14 996

Source: Western Australia Tomorrow (WAPC 2005)

Figure 8

Projected population profile by age

Shire of Nannup 2006 - 2016



Source: Western Australia Tomorrow (WAPC 2005)

the largest establishment in the Augusta-Walpole study area, is 16 years higher than the average for the shire, which suggests that Augusta is a popular location for retirees.

Similar to the Shire of Augusta-Margaret River, the most noticeable demographic trend in the Shire of Nannup is the strong increase in the number of people over the age of 65. In 2006, 12.71 per cent of the population residing in the Shire of Nannup were over the age of 65 but by 2016 this figure is expected to rise by 78 per cent to 22.65 per cent of the population. This will certainly have implications for the provision of aged care facilities in the shire.

Another significant demographic trend projected for the Shire of Nannup is a reduction in the proportion of the population aged between the 15-24 (figure 8 and table 9). The 45-64 age bracket is also expected to decline considerably as a percentage of the shire's population.

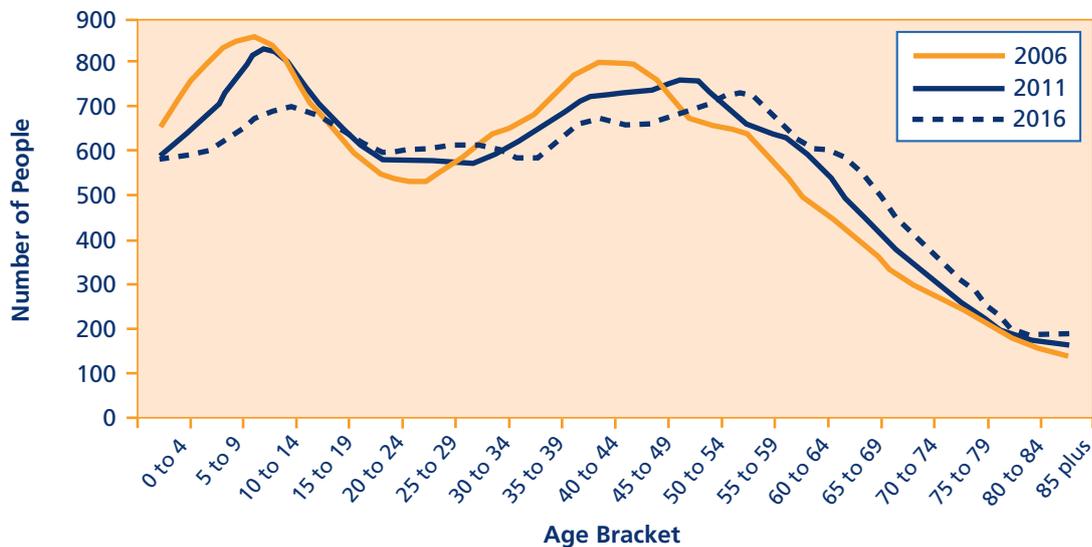
Table 9: Projected proportions of population by age. Shire of Nannup (2006-2016)

Age Bracket	2006	2011	2016
<15 (%)	16.97	15.85	15.27
15-24 (%)	12.54	11.45	9.88
24-44 (%)	22.32	22.32	22.4
45-64 (%)	35.45	33.53	29.79
65+ (%)	12.71	16.85	22.65
Total Population	1196	1205	1205

Source: Western Australia Tomorrow (WAPC 2005)

Figure 9

Projected population profile by age
Shire of Manjimup 2006 - 2016



Source: Western Australia Tomorrow (WAPC 2005)

Projected population forecasts illustrated in figure 9 and table 10 suggest that between 2006 and 2016 the number of families with dependent children will decrease in the Shire of Manjimup. Given that the estimated resident population is not expected to grow over the next 10 years, the proportion of people under the age of 15 will decrease from 23.13 per cent to 18.77 per cent of the population between 2006 and 2016. Furthermore, the proportion of the population in the 25-44 age bracket, who are likely to start a new family, is expected to decrease from 26.07 per cent to 24.63 per cent between 2006 and 2016.

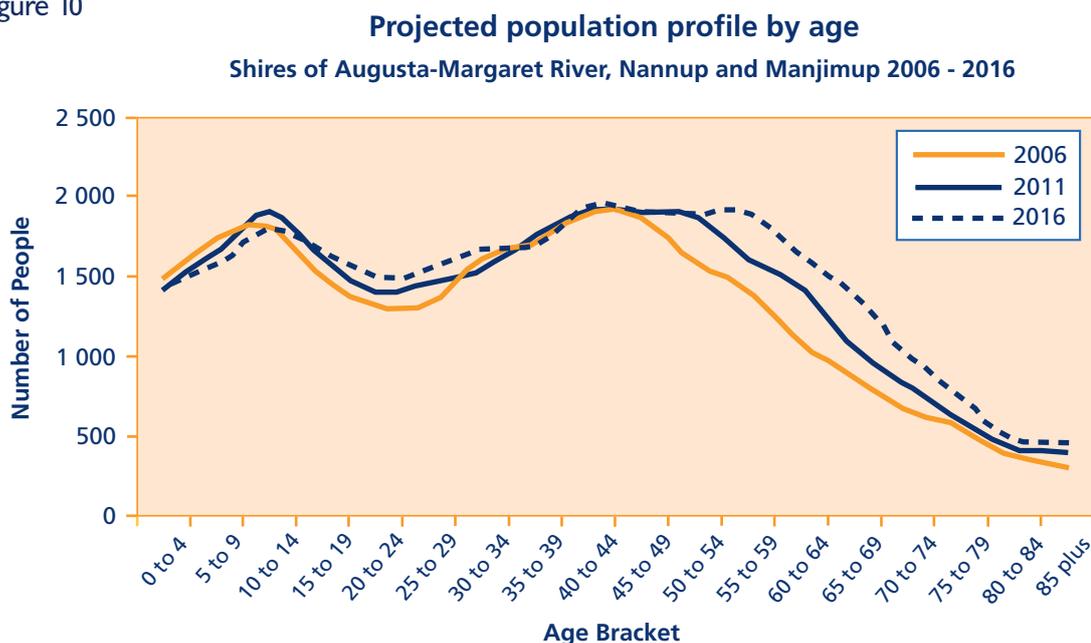
The proportion of the population aged 15-24 is expected to increase marginally, as is the proportion of people aged 45-64 but, similar to the shires of Augusta-Margaret River and Nannup, the most noticeable demographic trend in the Shire of Manjimup is the proportion of the population who are more than 65 years old. For example, in the Shire of Manjimup the proportion of the population aged 65 and above is expected to increase from 12.6 per cent to 16.89 per cent over the next 10 years.

Table 10: Projected proportions of population by age. Shire of Manjimup 2006-2016

Age Bracket	2006	2011	2016
<15 (%)	23.13	20.87	18.77
15-24 (%)	12.28	12.73	12.73
24-44 (%)	26.07	24.79	24.63
45-64 (%)	25.92	27.31	26.98
65+ (%)	12.6	14.42	16.89
Total Population	10 003	10 103	10 000

Source: Western Australia Tomorrow (WAPC 2005)

Figure 10



Source: Western Australia Tomorrow (WAPC 2005)

The final section of the demographic analysis represented in figure 10 and table II illustrates projected population trends across all three shires of the Augusta-Walpole study area. As mentioned previously, the most notable demographic trend across all three shires in the coastal region is the proportion of the population who will be more than 65 years of age between 2006 and 2016. This figure is expected to rise from 12.21 per cent to 17.82 per cent of the population over the next 10 years. The implications of an ageing population on the economic sustainability of the South-West region will include the need to provide specialised training opportunities and facilities to replace the people retiring from the local work

force. Existing aged care facilities will have to be upgraded, or new facilities constructed throughout the major urban centres in the region. Retirees will also have access to significant superannuation funds, and should therefore be presented with options to invest locally.

It appears people with dependent children under the age of 15 will continue to dominate the population across the study area, but raw growth across these age brackets is not expected over the next 10 years (figure 10). Another interesting trend is the projected number of people in the 15-24 age bracket. Although table 8 illustrates that the proportion

Table II: Projected proportions of population by age. Shires of Augusta-Margaret River, Nannup and Manjimup (2006-2016)

Age Bracket	2006	2011	2016
<15 (%)	20.46	18.86	17.48
15-24 (%)	12.27	11.99	11.44
24-44 (%)	26.42	25.4	24.85
45-64 (%)	28.62	29.33	28.41
65+ (%)	12.21	14.42	17.82
Total Population	23 097	24 709	26 201

Source: Western Australia Tomorrow (WAPC 2005)

of people aged 15-24 will not increase between 2006 and 2016, table II shows that raw population growth is expected over the next 10 years. This is a promising sign for the prosperity of the region, but local educational and employment opportunities will be important to retaining young people in this area.

Not many indigenous people live in the three shires. In 2001 the Shire of Augusta-Margaret River had the lowest percentage of indigenous people, only 0.7 per cent of the total population. Two per cent of the population in Nannup identified themselves as being indigenous. In Manjimup, 183 people or 1.9 per cent of the population identified themselves as being indigenous.

4.1.7 Tourism demand

Tourism is fast becoming a major element of the regional economy, with tourists being attracted by the peaceful rural feel of the area and its outstanding scenic beauty and natural attractions. Tourism Western Australia figures show that in 2006, visitors spent \$756 million in the South-West region (Tourism Research Australia). This expenditure was distributed unevenly throughout the south-west; more money was spent in the western coastal areas than in the southern coastal areas, which are in the study area.

The south-west area is attractive as a destination for several reasons. It can provide a variety of experiences, which in general are both accessible and affordable. The study area has the potential to provide secluded and scenic nature-based experiences.

In 2006/07, Tourism Western Australia recorded total visitor expenditure from international and domestic tourists in Western Australia as \$5 billion. In the same year the Western Australian tourism industry was also responsible for providing approximately 72,000 jobs. Given the industry's economic importance and its potential to generate local employment opportunities, it is considered that the tourism industry will continue to feature prominently in land use and infrastructure planning decisions throughout the South-West region of the State.

The South-West region is one of Western Australia's premier tourism destinations, and in 2003 was the second most visited tourism region in the State. The region's tourism

attractions include a variety of nature-based activities such as walking in national parks, surfing, swimming and fishing. Cultural activities are also a significant attraction in the south-west, as large numbers of people visit the region to experience internationally recognised vineyards and quality local cuisine. Large-scale events, such as the Margaret River pro surfing contest, also generate considerable tourism dollars for the region. Research conducted by Carlsen and Wood in 2004 found that 80 per cent of visitors to the Warren-Blackwood area rated the natural environment as the primary reason for their visit.

More specifically related to the Augusta-Walpole study area are the towns of Augusta, Walpole and Windy Harbour. The town of Augusta is the largest urban establishment in the study area and is a popular family holiday destination during the summer months. The townsite is also strategically located and is a comfortable drive from popular tourist destinations such as Margaret River, Leeuwin-Naturaliste National Park, Yallingup, Dunsborough, Busselton, Pemberton, Manjimup and Bridgetown. Therefore, any significant tourism developments in the South-West region are likely to affect tourism numbers in the town of Augusta. Furthermore, the Augusta Visitor Centre recorded an increase of more than 100 per cent in the number of people who entered the centre between 1999 and 2005 (Augusta Visitor Centre 2006).

The town of Walpole is also a popular tourism destination in the study area, as people go to the region primarily to visit the Walpole-Nornalup National Park. After the construction of the tree top walk in September 1996, the annual number of visitors to the Walpole Visitor Centre increased from 31,581 to 74,704 in 2005, which is an average annual increase of more than 10 per cent (Walpole Visitor Centre 2006). In 1994, before the construction of the tree top walk, only 18,609 people went to the visitor centre. It should also be noted that the annual number of visitors to Walpole peaked at 84,317 in 2003, but since then the number has declined. Similar trends in tourism numbers were experienced at the Augusta Visitor Centre during the same period (Augusta Visitor Centre 2006). These statistics suggest that investment in ecotourism infrastructure in the town of Walpole has contributed considerably in attracting a 450 per cent increase in tourism numbers over a 10-year period (Walpole Visitor

Centre 2006). The tree top walk attracts approximately 200,000 visitors a year, and almost certainly has increased tourism in Walpole.

The small coastal town of Windy Harbour is primarily used for holiday accommodation during the Christmas and Easter periods. The town also experiences moderate tourism activity on long weekends during the warmer months of the year. The seasonal nature of tourism activity in Windy Harbour, combined with limited local services, suggests an informal and relaxed tourism experience.

Approximately 88 per cent of all visitor expenditure in the Warren-Blackwood region can be attributed to national parks. DEC estimates that the Black Point area receives around 5000 visitors a year. Available information suggests that there may be a lack of tourism accommodation in the towns in the Warren-Blackwood region. Apart from the area being rich in natural beauty, the information also suggests that road infrastructure in the region is

extremely important, as a significant percentage of visitors are accessing national parks in private vehicles or as part of tour groups.

There is the opportunity for a regional coastal walking trail, in addition to the Cape to Cape trail and the Bibbulmun Track, to be established in the study area. This would entail planning at a strategic level and it needs to be considered when planning for the establishment of a foreshore reserve. The alignment of this track would require detailed assessment and consultation with the community, local government and the State Government.

4.1.8 Tourism projects

Table 12 identifies a number of recently completed and proposed tourism and infrastructure related projects that are likely to have an impact on the Augusta-Walpole study area.

Table 12: Tourism projects in the South-West region

Project	Description	Completion Date	Status
Walpole Accommodation	Investigate the establishment of additional accommodation outlets in the Walpole area	To be determined	Requires investigation
Walpole Wilderness Discovery Centre	Develop orientation centre for Walpole wilderness. Three centres will be developed at the Valley of the Giants, Mount Frankland and at Swarbrick Block. \$2.5 million	2009	Works in progress
Augusta marina and jetty	Build a marina near Augusta that includes facilities for whale watching tourism boats	To be determined	Planning
D'Entrecasteaux National Park – site development and seal key roads	Ongoing road sealing, toilets and pathways	Ongoing	Ongoing
Southern Forests accommodation	Investigate the establishment of additional or upgrade of existing accommodation outlets and conference facilities within the Southern Forests area	Ongoing	Ongoing
Southern Forest sculpture walk	Establish a purpose built 1.2 km walk trail through the forest featuring original contemporary artworks from nationally and internationally renowned artists	Ongoing	Ongoing

Source: Australia's South West Destination Development Strategy - An Action Plan Approach, Update, 2007-2017 (Tourism Western Australia 2007)

4.2 Overview

Many issues require consideration in the context of the Augusta-Walpole Coastal Strategy. These have been identified through a review of previous studies and reports and through consultation with stakeholders. Each issue is discussed in detail in this strategy. If the issue is of relevance to a specific geographic area, this is identified in the text.

This and the following sections have been developed to provide guidance for future land use planning decisions relating to the Augusta-Walpole coastal area; that is, identification of suitable locations for urban settlement expansion, provision of public coastal access, recommendations for tenure and management of coastal unallocated Crown land, and potential intensification of tourism activity. This has been done while acknowledging local features such as shoreline movement, dune instability, strong winds and tides, remoteness, continued improvements in road condition, minimal opportunities for intensification of community or infrastructure services (outside existing towns), environmental values and constraints, and accessibility to the Southern Ocean coastline.

The following sections should be read in conjunction with figures 4 and 11. Figure 4 establishes a settlement hierarchy (section 3.4.3) for the various settlement and activity nodes throughout the study area and those outside the study area that have a direct influence on the coast. Figure 11 depicts known areas of environmental significance and other land information to be taken into consideration during land use planning. It is important to note that, although they are not depicted in this figure, other environmental characteristics need to be considered at the time of proposed land use changes.

4.2.1 Structure for recommendations

The management strategies that follow discussion of the key planning issues have been developed in recognition of the vision and objectives developed as part of the study. These have been further defined at the precinct, and settlement hierarchy levels described in later chapters. For each of the precincts a set of core values has been specified (table 6), reflecting

the key issues and objectives discussed in previous chapters. The establishment of the core values for each precinct is followed by the recommendations that apply across precincts, and then in subsequent chapters for each settlement or node in its place in the hierarchy. It is recommended that all recommendations in this document be reviewed after five years.

4.3 Protection of environmental values and characteristics

Protection of environmental values across the entire Augusta-Walpole region is of paramount importance. DEC's review of the management plans for the two coastal national parks in the study area (the D'Entrecasteaux National Park and Walpole-Nornalup National Park) will address the conservation and land management issues for the section of the coast covered by those parks. It is important that the statutory status of these management plans be recognised when there is an interaction with the strategy. DEC management plans have statutory effect once they are gazetted. Part V (as well as section 14) of the *Conservation and Land Management Act 1984* sets out the process for the development of indicative management plans (marine) and management plans (terrestrial) respectively.

A wide range of issues for areas outside the parks must be considered and these have been identified in the literature, and are summarised in this strategy. The region's environmental characteristics are highly valued and, as such, are significant on local, national and global scales.

The Augusta-Walpole area is within a region identified as one of the world's 34 biodiversity hotspots, with high species richness. It has a diverse range of shrublands, woodlands, forests and nationally significant wetlands. The Lake Jasper and Gingilup systems contain many species of endemic, disjunct and relictual flora. DEC is currently preparing management plans for the Scott National Park and the Gingilup Swamps Nature Reserve which support highly diverse flora and fauna species. The region's environmental values are an essential component of both the wilderness and

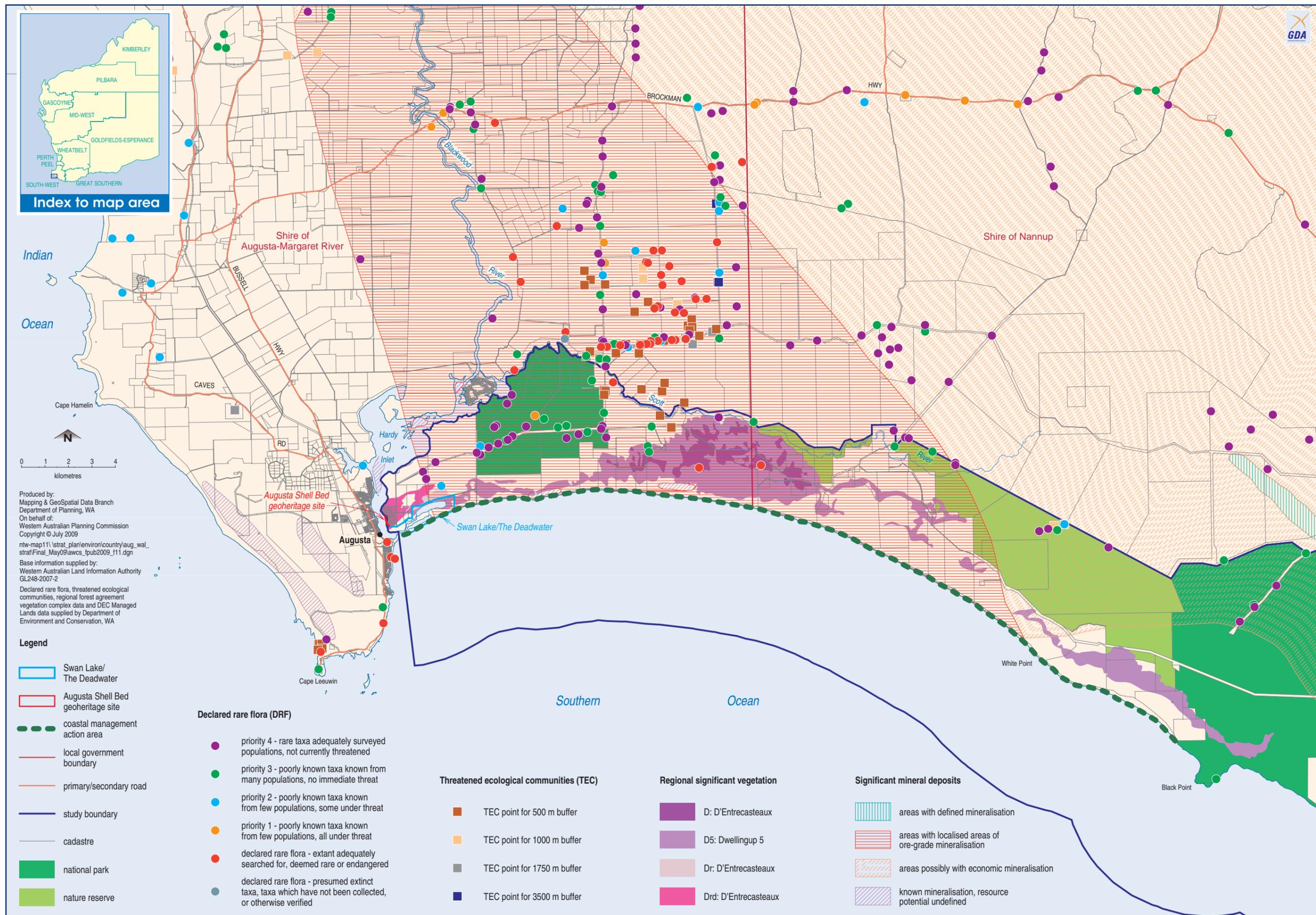


Figure II: Areas of environmental management priority

heritage values described in this section and accordingly there is a strong desire among stakeholders to protect the integrity of environmental characteristics.

4.3.1 Areas of environmental management priority

The category of areas of environmental management priority has been prepared to identify freehold land with environmental value or significance which should be managed to protect or use the area's environmental values in future land use planning decisions. It includes land that existing planning tools do not currently acknowledge, reserve or reflect the environmental constraint or benefit. This does not include land proposed to be added to the conservation estate (addressed below). This category has been used to identify a variety of environmental features and constraints, which require consideration to ensure sustainable development and use of the study area over the next 15 years. Shown in figure II, it is made up of the following environmental features, which are discussed in the sections below:

- Threatened ecological communities;
- declared rare flora and priority flora;
- rare or poorly reserved vegetation complexes of the Scott coastal plain limited to:
 - D'Entrecasteaux (D)
 - D'Entrecasteaux (Dr)
 - D'Entrecasteaux (Drd)
 - D'Entrecasteaux (D5)
- the Deadwater and Swan Lake in the East Augusta-Scott River area;
- Augusta shell bed; and
- Department of Mines and Petroleum identified titanium mining opportunities that require protection from land use conflict.

The areas of environmental management priority will also include the physical coastal processes setback as yet to be determined by the DoP in compliance with the *State Planning Policy 2.6 State Coastal Planning Policy*. In future subdivisions and development of

freehold lots abutting the coast this setback distance will be incorporated into a foreshore reserve.

There are several more environmental attributes requiring consideration but due to their general nature or capture through other planning or protection mechanisms they have not been included in the mapping. They include but are not limited to:

- The strategy endorses the precautionary principle: when there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.
- This plan supports the land use and sustainable protection of agricultural land but further specific detail on this may be found in the *Scott Coastal Plain - A Strategy for a Sustainable Future* report (June 2001) and it is guided by state planning and development control policies of the WAPC.
- The Scott coastal plain strategy also identifies sensitive landform mapping but this is not of sufficient detail to justify inclusion in areas of environmental management priority.
- The study area also contains environmentally sensitive areas that cannot be cleared under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. These regulations list a number of different clearing activities that normally do not require a permit to clear, but if the area to be cleared is listed as an environmentally sensitive area, there may be a need to apply for a permit even if it is listed in the regulations as an activity that does not require a permit.
- Acid sulfate soils have been acknowledged as potentially existing in parts of the study area by relationship with the Scott coastal plain. Further information on the development and investigation of acid sulfate soils is in *WAPC Planning Bulletin 64/2009 Acid Sulfate Soils*.

4.3.2 Terrestrial

Vegetation

The terrestrial vegetation in the study area has significant conservation and environmental protection values. The area between East Augusta and Black Point contains vegetation types and complexes that should be preserved, including threatened flora, threatened ecological communities and vegetation poorly represented in the study area. Dense and healthy vegetation is critical to the functioning of coastal ecosystems because it stabilises dune systems. There is a strong need for visitor management and planning to protect vegetation, to avoid the need for rehabilitation.

The private lots fronting the coast to the west of Black Point preclude direct public access to a large extent and afford a degree of protection to that section of the coast at this time, but some of those private landowners have indicated a desire to develop their properties. There is potential for conflict between the environmental values and the type of development that may be proposed in this location.

The terrestrial vegetation of the study area is characterised by a rich mosaic of shrublands, woodlands and forest, combined with areas of wetland and dunal vegetation associations that vary from small pockets to broad zones. Key features of precinct 1 are shown in figure 12. The Scott coastal plain is identified as one of two main areas that have:

- national estate significance for high species richness;
- unusually high diversity of vegetation complexes;
- a concentration of rare, restricted and threatened communities;
- narrowly endemic plants;
- relict (primitive or Gondwanic) plants;
- plants with disjunct populations;

- wetlands of national importance; or
- natural landscapes (national estate identification and assessment in the South-West region of Western Australia 1998, as part of the regional forest agreement process).

The south-west corner of Australia has been identified as one of the world's 34 biodiversity hotspots and it is the only area characterised as such in Australia. A biodiversity hotspot is exceptionally rich in plant and animal species, particularly many endemic species, and is under immediate threat from impacts such as land clearing, development pressures, salinity, weeds and feral animals.

The Scott River plain to the east of East Augusta has been identified as having areas of

exceptional species richness with high levels of endemic, relictual and disjunct flora species. These areas of very high species diversity occur on both DEC managed land and land in private ownership.

The Interim Biogeographic Regionalisation of Australia categorises the Australian continent into regions of similar geology, landform,

vegetation, fauna and climate. There are 80 such regions throughout Australia and 26 of them are in Western Australia.

The study area is in the Warren IBRA region, which is described as dominated by dissected undulating country of the Leeuwin complex and Albany orogen with loamy soils supporting karri forest, laterites supporting jarrah-marri forest, leached sandy soils supporting paperbark sedge swamplands, and Holocene-aged marine dunes with *Agonis flexuosa* woodlands.

The boundaries of the IBRA regions in Western Australia are broadly compatible with the earlier Beard's phytogeographic regions – a hierarchical system of provinces composed of botanical districts and subdistricts. The Warren IBRA region is approximately equivalent to the Warren botanical subdistrict defined by John Beard in 1990. Beard describes the Warren botanical subdistrict as typically containing tall



D'Entrecasteaux National Park

forest of karri (*Eucalyptus diversicolor*) on deep loams, forest of jarrah-marri (*E. marginata-Corymbia calophylla*) on the leached sands, and extensive paperbark (*Melaleuca*) and sedge (*Carex*) swamps in valleys. Although the karri forest popularly illustrates the vegetation of this subregion, karri is not universal and it has a very patchy distribution.

The Warren IBRA region and the Warren botanical subdistrict can be further broken down into smaller and more distinct vegetation types. A total of 831 vegetation associations are recognised in Western Australia; of these 704 are individual units and 127 are mosaics consisting of one or more of the individual units. Thirty vegetation associations occur in the study area, one of which is a mosaic unit and three of which are bare areas associated with lakes and sand dunes, which are sparsely vegetated units that are considered to support unique vegetation but in relatively limited amounts. More than 20 per cent of the study area is composed of shrublands of peppermint (*Agonis flexuosa*) association. Forests and woodland dominated by jarrah are also common.

Currently the vegetation in the Warren IBRA region is 86.6 per cent of the pre-European extent. Thirty per cent of the vegetation of the Warren IBRA region is currently protected. Protection includes conservation parks, conservation reserves (5g), nature reserves and national parks. Some 15.8 per cent of the remnant vegetation is in private ownership and one third of this is the most common vegetation association shrubland, peppermint scrub.

Fifty-seven threatened flora species have been recorded in the study area, of which 41 occur in the Scott coastal plain, but it should be noted that systematic flora surveys have not been conducted across the whole study area. Eight of the threatened flora in the study area are declared rare flora (figure 12), are listed and are protected under the state *Wildlife Conservation Act 1950*. Declared rare floras are automatically listed at the national level under the *Environment Protection and Biodiversity Conservation Act 1999 (as amended)*. It should be noted that although DEC managed land has been the subject of significant flora surveys, coastal freehold land has not been surveyed.

The study area contains several threatened ecological communities (figure 12), which are defined as rare and threatened naturally occurring biological assemblages that occur in particular types of habitat. Various environmental and planning legislation, as outlined, can protect these vulnerable communities. One of the most significant threatened ecological communities in the region is the Scott River ironstone heath and shrublands. This threatened ecological community is a winter-wet shrubland that occurs on skeletal soils over the massive ironstone on the Scott coastal plain. Ironstone soils are extremely restricted in distribution and are believed to have been formed by the precipitation of iron from groundwater. Heath and shrublands are variously dominated by moonah (*Melaleuca preissiana*), *Hakea tuberculata*, *Kunzea micrantha*, or *Melaleuca incana subsp gingilup* depending on the degree of waterlogging. The understorey is dominated by *Loxocarya magna*. All occurrences except the long inundated wetlands and dense thicket have very large and diverse annual flora of *Stylidium spp*, *Centrolepis spp*, *Schoenus spp* and *Brizula spp*. The soil is red clay to clay loam. The ironstone is often massive. This community also contains a number of endemic and restricted flora such as *Darwinia ferricola* (endangered), *Grevillea manglesioides subsp ferricola* (P2), *Lambertia orbifolia subsp Scott River plains* (endangered), and *Melaleuca incana subsp gingilup* (P2).

Another two threatened ecological communities are in the study area. Perhaps one of the rarest is the tufa community at Black Point. This was formerly known as the Augusta microbial community because it was first identified around Augusta. The tufa communities are stromatolitic and ill-defined structures formed by inorganic precipitation of a mineral phase with microbial control over morphology. Three types of structure may occur in these communities, rimstone pools, nodular incrustations, and drapes and carbonates in caves. The communities at Black Point are particularly vulnerable to changes in water flow or drainage and also to foot traffic.

The other community is known as the Reedia swamp, and it occurs in six different locations in the D'Entrecasteaux National Park, and goes down to Walpole. These communities are peat paluslopes or sandy mud floodplains and the

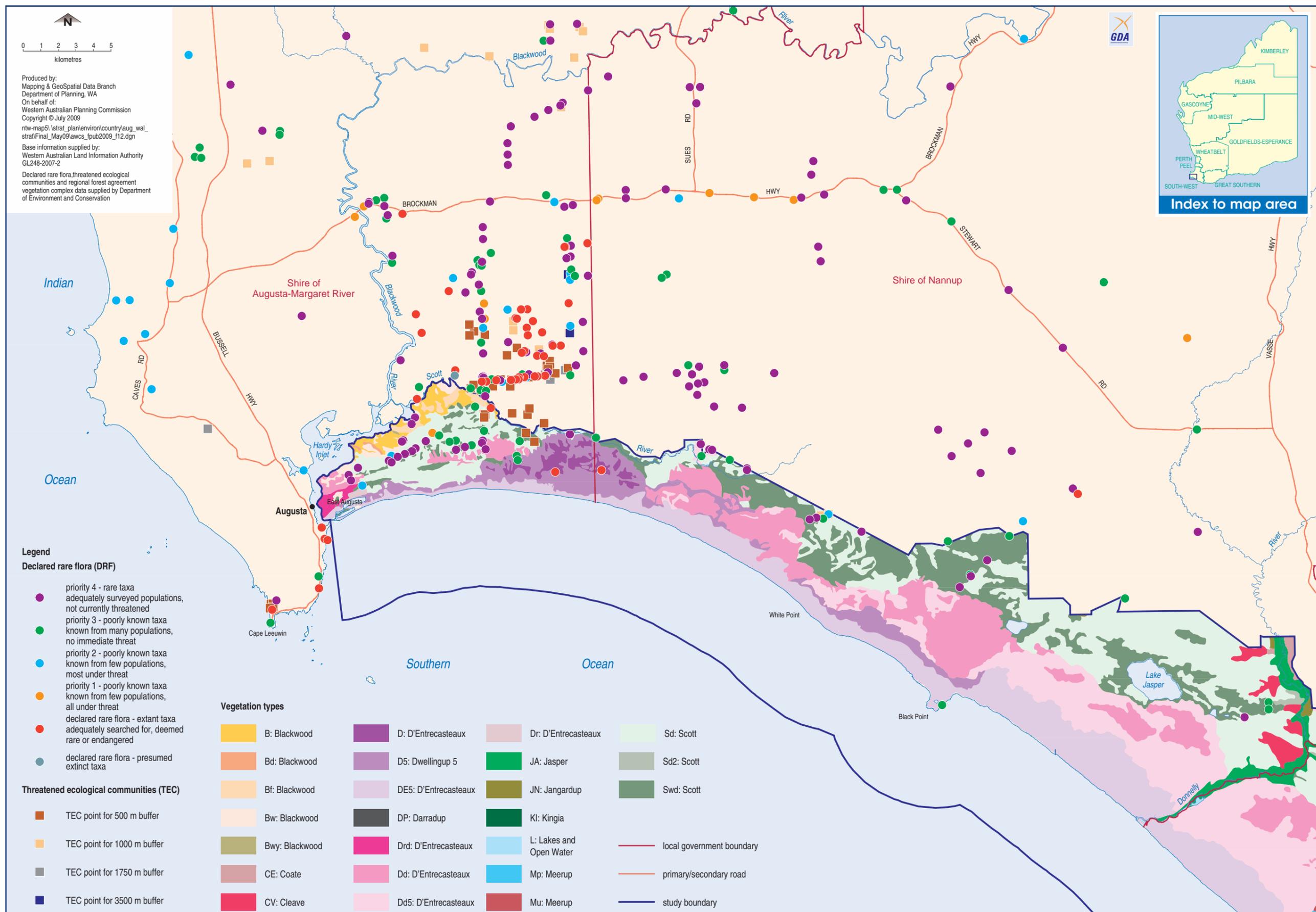


Figure I2: Terrestrial vegetation

three most significant species are *Reedia spathacea* (P4), *Empodisma gracillimum* and *Schoenus multiglumis*, all of which are endemic. At least three other priority species are known to occur in these swamps. The swamps are classified as endangered and are known to be vulnerable to trampling by introduced species, inappropriate fire regimes, changes to the hydrological regime, changes to water quality and the potential for invasion of weeds.

The most significant disease threat to plants in the Augusta-Walpole Coastal Strategy study area is dieback, which is caused by the microscopic pathogen *Phytophthora cinnamomi*. It is likely that this disease exists in areas adjacent to the park. Access in various forms increases the potential for this disease to be spread.

Much of the freehold land in the study area is yet to be surveyed and it is possible that other vegetation communities may be discovered when these are undertaken.

Poorly reserved vegetation communities

The Scott Coastal Plain – A Strategy for a Sustainable Future document report highlighted several rare or poorly reserved vegetation complexes. These complexes are generally only found in the study area and do not exist naturally elsewhere. They are representative of the significant biodiversity of the south-west of Western Australia. Where these complexes occur in the study area every effort should be made to retain any existing remnant vegetation in reasonable condition. This strategy does not support the clearing of rare or poorly reserved vegetation complexes for subdivision or development purposes.

The State Government has a commitment to the retention in secure reserves of a proportion of every vegetation community in Western Australia. The Scott coastal plain is one area that is considered to have poorly reserved communities.

Fauna

Terrestrial fauna in the study area is the least studied of all environmental components in the region. It is important to acknowledge this lack of information and research when making any decisions about changes to land use, access or management.

The Shannon and D'Entrecasteaux national parks draft management plan suggests that there are at least 21 species of mammals, 123 species of birds, 30 species of reptiles, 15 species of amphibians, eight species of freshwater fish and an as yet undetermined number of invertebrates in both parks. The Warren-Blackwood regional plan suggests that there are six endangered animals in the area: chuditch (*Dasyurus geoffroii*); western ringtail possum (*Pseudocheirus occidentalis*); red-eared firetail (*Stagonopleura oculata*); Baudin's black cockatoo (*Calyptorhynchus baudinii*); peregrine falcon (*Falco peregrinus*); and the carpet python (*Morelia spilota*). The draft Shannon and D'Entrecasteaux national parks management plan lists six threatened vertebrate fauna in the park: quokka (*Setonix brachyurus*); chuditch; Australasian bittern (*Botaurus poiciloptilus*); mallee fowl (*Leipoa ocellata*); Baudin's black cockatoo; and Carnaby's black cockatoo (*Calyptorhynchus latirostris*).

A further 16 species of vertebrate fauna in the park are priority listed, and further survey work is required to assess their conservation status. Threats to priority fauna species include predation, alteration and fragmentation of habitat through a range of processes such as fire, and competition with other species.

The assessment of wetlands and waterways undertaken by Dr Luke Pen suggests that the wetlands of Lake Jasper and the Gingilup system have high faunal values, including fish, frogs and water birds. Lake Jasper has seven of the exclusively freshwater fish species of the south-west and has no introduced species. At least eight frog species have been found, and the lake is the fifth most important to waterbirds between Cape Naturaliste and Albany.

Recent research undertaken for the national land and water resources audit shows approximately 26 mammals, native and introduced, in the study area. These include species of kangaroo, wallaby, bat, mouse and rat. DEC believes that there are at least 104 species of native birds in the park, and places a particular emphasis on water birds. A survey of Lake Jasper for example shows 27 species are present. The bobtail (*Tiliqua rugosa*) and the bungarra (*Varanus gouldii*) are two of the larger, more common lizards in the coastal areas. At least 10 species of skink and 11 species of snake, including the venomous dugite

(*Pseudonaja affinis*) and tiger snake (*Notechis scutatus*) also inhabit the coastal dunes. Further surveys should be undertaken for the freehold land component of the study area.

Recommendation 4.3.2a: As part of the information provided to planning authorities for assessment of a subdivision or development proposal, a detailed flora and fauna assessment in accordance with EPA guidance statements 51 and 56 should be undertaken to determine whether the site contains flora species or communities of high ecological conservation significance or poorly reserved vegetation communities.

Recommendation 4.3.2b: Where poorly reserved vegetation communities occur on freehold land, a cooperative approach and strategy should be developed and implemented to assist landholders to protect such vegetation at the time of development or subdivision.



D'Entrecasteaux National Park

Environmental linkages and protection of landscape

Strips of vegetation that act as an ecological corridor by joining two or more larger areas of similar wildlife habitat are very important for the maintenance of ecological processes as they allow for the movement of animals and the continuation of viable populations. By providing landscape connections between larger areas of habitat, corridors enable migration, colonisation and interbreeding of plants and animals. Corridors can consist of a lineal strip of vegetation or intermittent stepping-stones across the landscape, such as paddock trees or wetlands. Habitat loss and fragmentation are the two main contributors to the continuing decline of biodiversity across the landscape, and a holistic approach is required across both public and private lands to protect and manage natural ecosystems and ensure connectivity between remaining habitats.

Recommendation 4.3.2c: Individual development will be assessed against statutory legislation that deals with the protection of flora and fauna (including declared rare flora and

threatened fauna) in the region, including the *Environment Protection and Biodiversity Conservation Act 1999 (as amended)*, *Conservation and Land Management Act 1984*, *Wildlife Conservation Act 1950* for species protection, *Environmental Protection Act 1986* for native vegetation protection and the *Rights in Water and Irrigation Act 1914* for water dependency.

Recommendation 4.3.2d: Assessment for individual development or planning applications should take into consideration the impact such a development may have on vegetation corridors throughout the area and on linkages for fauna in the region.

Landscape

Protection of landscape quality is an important part of planning, because of the high value the community places on visual amenity. Because the study area has a low level of development, it

therefore has a very high level of natural landscape amenity. In recognition of this community value, the WAPC has been working on developing tools to assist local governments and proponents to incorporate consideration of landscape quality into their own processes.

Recommendation 4.3.2e: Proponents and/or local governments should refer to *Visual Landscape Planning in WA: A Manual for Evaluation, Assessment, Siting and Design* (WAPC 2008) when considering any development or planning application.

Fire protection

Although the retention of native vegetation provides many benefits to the region, it is also a fire risk. Appropriate planning should minimise the risk to life and property. The guidelines *Planning for Bush Fire Protection* was produced jointly by the then DPI and the Fire and Emergency Services Authority, and was published by the WAPC in December 2001. Fire management and protection should also meet current standards for planning and bushfire protection, including the construction of protection zones and hazard separation zones.

Recommendation 4.3.2f: Fire management plans will be required for all nodes and new developments, including tourism developments outside nodes.

Declared rare flora and threatened fauna

All native flora and fauna in Western Australia are protected under the *Wildlife Conservation Act 1950*. Taxa that are presumed to be extinct in the wild or likely to become extinct or rare are given special protection by being declared rare flora or threatened fauna under the same Act.

4.3.3 Marine

To date there is a lack of characterisation of the marine environment along the entire coast. Seagrass and reef communities are known to occur in this region and there is limited understanding of marine ecosystems in the area. Further survey of marine habitats and other research is therefore recommended. Ideally, any future studies should be framed with reference to DEC's generic approach to resource assessment which will support later work to establish marine parks and reserves.

In particular, knowledge of marine flora within the study area, especially outside the proposed marine parks, is poor and marine geomorphology is, in general, poorly understood. A number of reports have noted this lack of knowledge and understanding but to date there has been no systematic effort to rectify this situation. More recently, further investigation has taken place in the westernmost portion of the study area as a result of its inclusion in the proposed Capes marine park.

DEC coordinates the reserve planning process to establish marine parks and reserves which are vested in the Marine Parks and Reserves Authority. DEC is also responsible for the implementation of marine parks and reserves management plans in liaison with other agencies, such as the Department of Fisheries, to ensure objectives for biodiversity conservation, nature appreciation, public enjoyment, education and sustainable use are achieved.

Marine and estuarine vegetation

Phytoplankton makes only a small contribution to primary production in the Blackwood River. It is thought that this is attributable principally to the relatively low nutrient levels and the large tidal volume of the lower estuary. Zooplankton is also sparse in the estuary. The only species at all common is *Gladioferens imparipes*. The number of species of macroscopic algae occurring in the estuary is small. Only two species are abundant, the filamentous green alga (*Rhizoclonium*) and the charophyte (*Lamprothamnium*), both of which belong predominantly to freshwater groups. Diatoms and other microscopic algae of the surface sediments are important primary producers in shallow water and are eaten both by benthic invertebrates and some species of fish. In the Blackwood, the euryhaline species sea tassel (*Ruppia maritima*) dominates the lower estuary, but it is replaced by the less salt tolerant fennel pondweed (*Potamogeton pectinatus*) in the upper estuary and around Molloy Island during the fresh phase. The plants are confined to shallow water and the best growth is in locations with relatively restricted flow such as Swan Lake, the Deadwater and embayments along the tidal river. Rush beds form a large part of the margin of the lower estuary, dominated by sea rush (*Juncus kraussii*) but with the sedge bare twigrush (*Baumea juncea*) also present near the water's edge. Bacteria, fungi, spirochaetes, flagellates, diatoms, ciliates and other protista are present in vast numbers. There are about 40 species of *Foraminifera* in the inlet region, but only three species in an area measured in the tidal river.

A study of south-western Australian seagrasses in 1996 nominated Flinders Bay for inclusion in the Register of the National Estate but a search of the database shows that the nomination did not proceed. The resource assessment lists four species of seagrasses in Flinders Bay: sea nymphs (*Amphibolis antarctica*, *Amphibolis griffithii*), sea wrack (*Halophila ovalis*) and eelgrass (*Heterozostera tasmanica*).

Macroalgae are the predominant form of flora in the area closest to Flinders Bay, and they are described in the marine park resource assessment. On low relief limestone reef there are large fleshy macroalgae; for example, bull kelp (*Ecklonia radiata*, *Cystophora spp.*), and

macroalgal turf (red, green and brown algae). In sheltered areas, *Sargassum spp.* are the dominant macroalgae. This habitat is associated with a wide range of invertebrate life such as ascidians (*Pyura spp.*), calcareous sponges and gastropods.

High relief limestone reef is covered in the same fleshy macroalgae as low relief areas but with the addition of *Scytothalia sp.* and *Platythalia sp.* and macroalgal turf (red, green and brown algae). This habitat is characterised by caves and overhangs, which support a diverse range of sessile invertebrate life such as colonial ascidians (*Aplidium spp.*, *Clavelina spp.*, *Herdmania spp.*, *Didemnum spp.*), sponges (*Echinoclathria spp.*, *Thorecta spp.*, *Mycale spp.*), octocorals (*Mopsella sp.*) and soft corals (*Capnella spp.*, *Sinularia spp.*). Mobile invertebrates such as seastars (*Nectria spp.*, *Echinaster spp.*), sea urchins (*Heliocidaris erythrogramma*, *Holopneustes sp.*), crustaceans (*Panulirus cygnus*) and many gastropods are associated with this habitat. The Walpole

Inlet supported seagrass growth in the summer during the 1950s and 1960s but following the increase in boating a dredging program was conducted to prevent the seagrass clogging up the propellers. The aim of the dredging was only to make a channel for boats, but the seagrass has not returned to the entire basin since the mid-1970s. It is thought that the seagrass was *Ruppia megacarpa*, which supported a good recreation fishery for blue manna crabs.

Marine and estuarine fauna

The study area crosses two interim marine and coastal regionalisation of Australia zones: the Leeuwin-Naturaliste bioregion, which takes in the section from Augusta to Black Point, and the Western Australia south coast bioregion from Black Point onwards. The Leeuwin-Naturaliste bioregion is characterised by a high-energy, heavy swell affected shore, a narrow continental coast, and a cold inshore current running counter to the warm offshore Leeuwin

current. The Leeuwin current brings tropical flora and fauna southwards. For example, nine of the 308 tropical prosobranch gastropods are known to occur at Cape Leeuwin, and five of the nine inhabit the south coast in the study area. It is also thought that the Leeuwin current influences both the southern bluefin tuna (*Thunnus maccoyii*) and western rock lobster (*Panulirus Cygnus*) fisheries. The presence of the nutrient rich waters of the Capes current promotes the presence of phytoplankton. The fauna that lives in the sand includes various types of meiofauna (between 0.1 mm and 1 mm in size). There is also macrofauna such as polychaetes (segmented worms), crabs, molluscs, echinoderms and bivalves.



Augusta, Swan Lakes and the Deadwater

The sand shoal habitat (principally in the Hardy Inlet) is characterised by mobile medium coarse sands, which are typically vegetated and located in the lower intertidal zones, seaward of coastal habitats. These habitats support bivalves (*Arthritica spp*, *Katelsysia spp*) and various gastropods. They also provide important feeding grounds for

migratory waders such as bar-tailed godwits (*Limosa lapponica*) and curlew sandpipers (*Calidris ferruginea*). Three varieties of whales are known to visit the proposed marine park study area, which intersects the study area for this project. These are the humpback (*Megaptera novaeangliae*), the southern right (*Eubalaena australis*) and the blue whale (*Balaenoptera musculus*). Bottlenose dolphins (*Tursiops truncatus*) are also regular inhabitants of the area. Several other species have been sighted or stranded, but they are not common.

The great white shark (*Carcharodon carcharias*) is listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2008(2)* under Schedule 1 – Fauna that is rare or is likely to become extinct. It is occasionally sighted in the near-shore areas of the Geographe Bay-Capes to Hardy Inlet region. The shark is fully protected under the *State Fish Resources Management Act 1994* and under Commonwealth legislation. Flinders Bay is known as the most westerly breeding colony

for New Zealand fur seals (*Arctocephalus forsteri*). Their range extends from the Recherche Archipelago off Esperance to beyond Cape Leeuwin. Australian sea lions (*Neophoca cinerea*) also are known in the area although no breeding sites have been discovered. They range from the Houtman Abrolhos to South Australia. Both species are mostly known on the islands adjacent to Cape Leeuwin which lies just outside the study area.

There is little population data regarding birds in the area. St Alouarn Island is the only known place where the little penguin (*Eudyptula minor*) breeds regionally. Hardy Inlet is an important refuge for migrating shorebirds. It has been estimated that the 26 km coastline (inshore 50 m) between Busselton and Dunsborough could provide an important spawning and nursery habitat for at least 13 recreationally and commercially important fish. These include the prized sportfish Western Australian salmon (*Arripis trutta*), herring (*Arripis georgianus*), and King George whiting (*Sillaginodes punctatus*). Furthermore, the remaining 16 km (west) coastline of Geographe Bay, together with the 9 km of Flinders Bay surveyed, collectively offer another 12 km of small embayment shoreline that is also an ideal nursery habitat. The Hardy Inlet supports a rich variety of fauna such as polychaete and nematode worms, molluscs (*Nassarius spp.*) and estuarine shrimp (*Palaemonetes australis*).

Of the 55 benthic invertebrate species found living in the estuary, approximately 40 are probably confined mainly to estuarine environments. Only 13 species form the great bulk of the invertebrate fauna. There are six species of true estuarine fish. The great majority of the fish that use the estuary spawn in the sea, and they enter the estuary as juveniles or adults. About half of the non-resident fish species are believed to be stenohaline-marine species which do not tolerate salinities of less than 30 parts per thousand. The remaining 24 species can be regarded as euryhaline marine species, in that they are observed to tolerate lower salinities of at least 15 parts per thousand, and 18 species will tolerate down to 3 parts per thousand. Up to 96 varieties of echinoderms occur in the south-west. There are 115 species of crustaceans, which occur between the Cape and the Western Australian border.

4.3.4 Wilderness values

In 1998, the comprehensive regional assessment for the regional forest agreement provided an assessment of wilderness for the State's south-west forest region. This assessment used the national wilderness inventory methodology developed by the Australian Heritage Commission, which is designed to identify wilderness quality across the Australian landscape. This methodology produced a database of wilderness quality across the region and described the variation in quality using the four wilderness quality indicators:

- Remoteness from settlement – how remote a site is from permanent human occupation. Includes permanently occupied places and built up areas.
- Remoteness from access – how remote a site is from established access routes. Includes all classes of road and vehicle tracks, railways, aircraft landing grounds and other access infrastructure.
- Apparent naturalness – the degree to which a site is free from permanent structures associated with modern technological society. Includes all built infrastructure.
- Biophysical naturalness – the degree to which a site is free from biophysical disturbances caused by the influence of modern technological society. Includes a variety of human and biophysical landscape attributes.

The State Government identified the Walpole wilderness area as a key group of reserves in its *Protecting our Old Growth Forests* policy. Walpole-Nornalup National Park is part of the Walpole wilderness area. Several large areas in the D'Entrecasteaux National Park have high levels of remoteness and naturalness, including Pingerup, Chudalup, Malimup and Yeagarup, and these areas and values will be further assessed.

Notwithstanding the technical classifications for wilderness areas, there is a perception among local and possibly other stakeholders that the Augusta-Walpole region contains areas that have the characteristics described above to a large degree. There is also a desire to protect and conserve the wilderness feel and associated environmental and conservation values.

4.3.5 Wetlands

The study area has a high proportion of palusplain (flat seasonal waterlogging) wetlands, together with numerous small lakes and sumps. The wetlands are a major source of biological diversity in the study area. They also perform critical ecosystem functions such as sediment trapping. Most of these are in the D'Entrecasteaux National Park. Key terrestrial water features in the study area are shown on figure 13.

The major impact of development on wetlands is the effect of nutrients and other pollutants from rural and other intensified activities. The Scott coastal plain strategy provides comprehensive guidance on the most appropriate methods of development for agricultural pursuits in the Scott coastal plain, which are intended to address these issues.

The major area of interest for this strategy is the section between East Augusta and Black Point, particularly the private lots. Unlike the coast to the east, this section does not have many wetlands between the dunes, but beyond the older dune systems some of the study area is known for its seasonal inundation, the extent of which can affect land use. Its current zoning as rural in both the relevant local planning schemes gives partial recognition to these constraints. The main system comprises the wetlands associated with the Scott River which forms the northern boundary of the study area. The entire system is approximately 20,000 ha, mostly seasonal swamp and floodplain but with some permanent areas. As it lies mostly in cleared farmland, its overall condition is relatively poor. Gingilup Swamps Nature Reserve is noted for its national significance, as is Lake Jasper.

Wetlands such as Lake Jasper are popular recreation areas for a variety of pursuits including sailing, canoeing, swimming and fishing.

The key issues associated with the wetlands in the study area are related to their ongoing protection and management in the context of their conservation significance and the demand for agricultural and recreational uses in the catchment areas of these wetlands. In particular, the interaction of these uses and wetlands highlights the potential for degradation, spread of weeds and diseases, incidence of fire, and impacts on sites of heritage significance. At the same time, low impact tourism or recreational use may have positive economic, social and community education effects.

4.3.6 Rivers and inlets

There are a number of river systems in the study area, which reflects the high rainfall. These are highly significant for their heritage, social, environmental, recreational, economic and spiritual values, and they require protection. Poor or inadequate catchment management practices are having an effect on many of these rivers in the Augusta-Walpole region.



Frankland River

Some of the larger rivers in the study area are experiencing salinity and nutrient impacts, largely through land uses in their catchment areas. The consultation process has highlighted a desire on the part of stakeholders for improved monitoring and management of these river systems.

Waterways also function as ecological corridors. There is scope to encourage the creation of an east-west link along the Scott River between the Hardy Inlet and the Gingilup wetland systems.

Broke Inlet is the most regionally significant inlet in the study area, and it achieves very high grading for ecological integrity. There are also inlets at the mouths of the Donnelly, Warren, Meerup, Doggerup and Gardner rivers, as well as the Walpole and Nornalup inlets in the easternmost portion of the study area. The rivers and inlets in the study area are the focus for many of the recreational activities in the region. In addition to the catchment

management issues described that have implications for water quality, there are also issues associated with human activity on and adjacent to the waterways, including:

- uncontrolled access to boat launching or recreational areas is a general concern across the study area; and
- litter resulting from irresponsible waste disposal or inadequate facilities.

Any proposal for development should pay particular attention to any potential impact on waterways or water bodies in the application area and should clearly demonstrate how they will be managed.

The locality of the Deadwater and Swan Lake is recognised as a regionally significant environmental feature. In recent years, because of its known biodiversity, an application has been made for it to be listed on the Ramsar list of wetlands of international importance. The mouth of the Hardy Inlet and Blackwood River has swayed several hundred metres since European settlement of Augusta in the 19th century. Furthermore, it is noted that the wetland area is separated into two different tenures, one being public reservation and the other being private freehold. Any future development or use of the freehold land should be assessed to ensure conservation of the site's natural assets.

It is a recommendation of this strategy that the Deadwater and Swan Lake be consolidated in one reserve vested in the Shire of Augusta-Margaret River or the Conservation Commission for conservation and recreation. Consultation should be undertaken with DEC, the Shire of Augusta-Margaret River and the landowner to identify possible ways to achieve this. The decision on the most appropriate body for vesting may be assisted through a study on the biodiversity values and recreational potential of the area.

Recommendation 4.3.6: Where significant water issues exist, a water management strategy/plan may be required consistent with *Better Urban Water Management* (WAPC 2008) to accompany a planning proposal.

4.3.7 Geology and geoheritage

The underlying geology of the study area is divided by the Darling fault which trends roughly north-south between the Warren River mouth and Malimup. The Darling fault forms the present-day escarpment at the edge of the Darling Range. To the east of the Darling fault are ancient rocks of the Albany-Fraser orogen. The age and origin of the oldest gneisses are uncertain but they could be up to 3,100 million years old. Younger granites in this area have been dated at about 1,180 million years old. To the west of the Darling fault lies the Pinjarra orogen which is between 500 and 1,600 million years old. These rocks are mainly buried at great depth, except near Augusta where anorthosite (an intrusive feldspar-rich rock) of the Leeuwin complex outcrops.

The area to the west of the Darling fault, the Pinjarra orogen is mostly overlain by up to about seven kilometres of sedimentary rocks that form the southern part of the Perth basin. They range from about 420 million years to about 50 million years old, and were mainly formed in ancient river systems and lakes. These include the Sue Coal Measures, the Yarragadee aquifer and thin peaty coal seams in the Leederville formation. Part of this sequence of rocks includes the Bunbury basalt which formed from volcanic eruptions about 136 million years ago and was related to the rifting and separation of greater India and Australia.

Overlying all the rock types and forming a large part of the present land surface of the study area are limestone and sand dune deposits that formed at or near fossil shorelines less than two million years ago. These include the Tamala formation which hosts the Augusta shell bed.

Geoheritage sites are defined as geological features of the earth that are considered to be unique and of outstanding value in Western Australia and to have significant scientific and educational values. Geoheritage sites are protected from mining activity by the Department of Mines and Petroleum and it is anticipated that formal geoheritage sites will be protected from other activities by relevant government agencies. These sites offer important information on, or insight into the formation or development of the continent, or can be used for research and teaching or as a reference site. Sites of geoheritage in the Shannon and D'Entrecasteaux national parks were identified as part of the assessment of



Figure 13: Terrestrial water features

values for the regional forest agreement for the south-west forest region of Western Australia but still await nomination to the state list. Geoheritage sites in the parks include granite outcrops at Mount Chudalup, caves and karst areas at Point D'Entrecasteaux and Bunbury basalt areas at Black Point. The shell bed at East Augusta is also classed as geoheritage.

The Augusta shell bed, 1.7 m high and extending for some 220 m, is a marine sequence of the predominantly aeolian Tamala formation comprising grey richly fossiliferous limestone overlain by a locally shell-rich calcarenite incorporating a thin band of black mineral sand and well-sorted mollusc shells and occasional corals. The actual extent of the shell bed is unknown and its precise location and extent cannot be determined without further detailed assessment. Currently, the outcropping is the most valuable and researched section of the shell bed. More than a hundred species of molluscs, three corals and an echinoid have been identified. Several species of the molluscs and coral lie well outside their known geographic ranges. One mollusc is believed to be a species of *Perna*, a genus not known to be living in any other part of Australia. This shell bed probably accumulated during the final interglacial period approximately 100,000 years ago when the minimum sea temperature was a little higher than at present, and it is the most southern example of its type in Western Australia.

This strategy requires that no future subdivision or development proposals in the vicinity of the Augusta shell bed should compromise its geoheritage value. Furthermore, the remnant part of the Tattersall Street road reserve should be formally closed as any road infrastructure development may threaten the shell bed. It is important to note that some of the geological and landform features are susceptible to damage if inappropriately used. The protection and appropriate management of these sites is a key issue for the strategy.

Figure 15 shows some of the potential mineral resources that have been identified by the DMP. The department will want to ensure that the WAPC does not support any subdivision leading to significant developments, such as housing, industry, or valuable infrastructure (such as a wind farm) that may conflict with the possible future mining of these deposits. Many of these deposits are not likely to be mined (such as those at Hardy Inlet, Ledge Point, Swan Lake).

These have no implications for planning, but are useful features of interest because they exist as part of the natural environment. The extent of these mineral deposits is likely to change over time with further exploratory work.

The key geological characteristics and features of the study area are shown in figure 14.

4.3.8 Geomorphology

Closest to the coast, the study area is characterised by a quaternary dune belt. This can be further subdivided into dunes of two separate ages. The Holocene dunes are the youngest, most unstable and closest to the coast. They formed up to 10,000 years ago. Pleistocene dunes in contrast tend to be more heavily vegetated, less prone to movement and somewhat consolidated. The major exceptions to this are the Meerup and Yeagarup dunes, which are inland mobile dune belts of considerable size. These lie in the national park. By far, the bulk of known archaeological sites of Aboriginal heritage significance are found in the blowouts of these dune systems.

Behind the dune systems lies a broad and swampy plain, the Scott coastal plain. It is characterised by numerous wetlands and drainage lines which are discussed more fully in following sections. This plain is formed by estuarine, lagoonal and lacustrine deposits which overlie the bedrock and are occasionally seen as outcrops throughout the study area. The major differences from this general pattern form around the river systems, which are predominantly recent alluvium in channels and floodplains.

The study area also contains acid sulfate soils, the general term for sediments or soil containing pyrites, or iron sulfide. When exposed to air, the pyrites oxidise to produce sulfuric acid and iron minerals. Iron sulfide layers were formed under swamp, riverine or near coastal lagoonal conditions, so they are found in the low-lying areas near the coast (Western Australia Acid Sulfate Soils Working Committee). The WAPC *Planning Bulletin 64/2009 Acid Sulfate Soils* provides advice and guidance on matters that should be taken into account in the rezoning, subdivision and development of land that contains acid sulfate soils. Acid sulfate soils mapping for the western portion of the study area is available in the planning bulletin or through DEC.

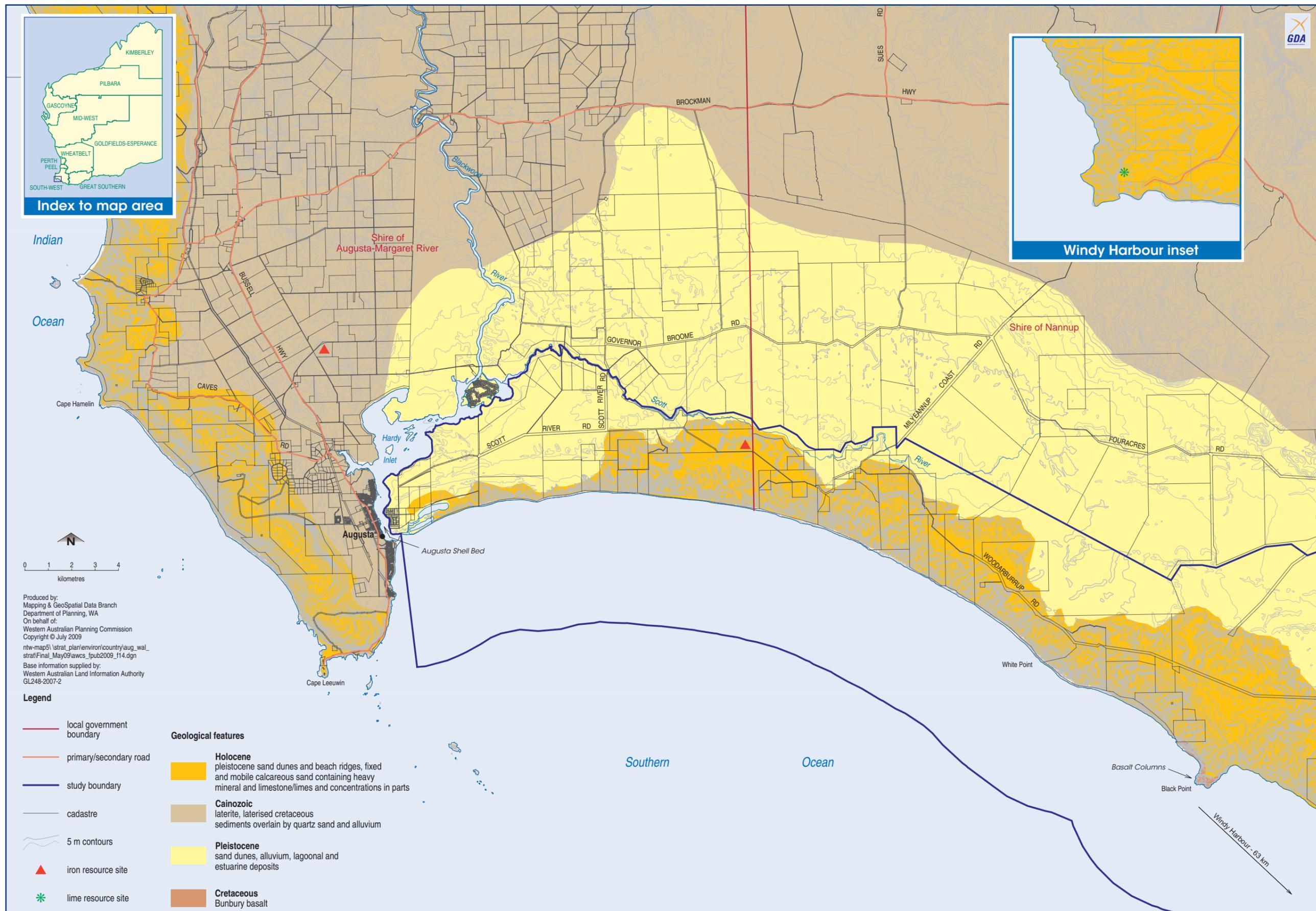


Figure I4: Generalised geological features

There are a number of estuaries and inlets of significance in the study area. Broke Inlet is the most regionally significant, and it achieves very high grading for ecological integrity. There are also inlets in the mouths of the Donnelly, Warren, Meerup, Doggerup and Gardner rivers. Broke Inlet, the biggest of them, is an elongated lagoonal estuary fed by the Shannon River. It is significant because it is the only estuary whose catchment is almost totally in conservation reserves. The inlet lies behind a field of Holocene dunes, and flows to the sea seasonally during the winter months if there has been sufficient rainfall. Fed by three relatively fresh rivers, the water remains brackish in the summer. The history of sea level changes has influenced the formation of the Hardy Inlet and other estuaries. They were formed approximately 7,000 years before present by sea-level rise caused by polar and continental icecap melts.

Marine geomorphology is in general poorly understood. The basement rock is classified as Phanerozoic basement, with Flinders Bay and Hardy Inlet consisting of quaternary sands overlain by cretaceous sediments. Some of these sands are consolidated into low-relief limestone reefs, which are the substrate for macroalgae beds. Warren Beach has a two-bar system, which means an outer bar parallel to the coast and an inner transverse bar and rip system. Extending further south, the seabed drops gently.

4.3.9 Groundwater aquifers

Groundwater in the South-West region is in high demand. Population and industry water needs are increasing while a drying climate is reducing the volume of water recharging groundwater systems. These factors are increasing the demand and competition for water resources.

The DoW is responsible for determining how much water should be available for consumption (including agriculture and industry, stock and domestic use, and public water supply) and how much should remain in the environment to maintain ecological, cultural and social sites of significance that are dependent on water. DoW undertakes water management planning and licensing in the south-west groundwater areas in order to manage water resources effectively.

The study area falls mainly within the Blackwood groundwater area and includes the confined Leederville, Yarragadee, Lesueur, and Sue aquifers, and the unconfined Superficial aquifer and fractured rock. As illustrated in table 13 the Yarragadee, Superficial and Leederville aquifers have the greatest allocation limits. The allocation limit of the Lesueur aquifer includes a 1,000,000 kL/yr allocation for Augusta's public water supply, and the Sue aquifer is unlikely to be utilised due to the nature of its hydrology.

Table 13: Summary of available water in the Blackwood Groundwater Area (kL/yr)

Groundwater Area	Aquifer	Allocation Limit	Licensed entitlements*	Public Water Supply Reserve	Water available
Blackwood	Superficial	5,900,000	750,925	750,925	Water available
	Fractured Rock#	50,000	13,000	13,000	Limited availability
	Leederville	5,550,000	1,124,250	1,124,250	Not applicable
	Yarragadee	15,500,000	8,845,000	8,845,000	Limited availability
	Lesueur	4,000,000	2,901,000	2,901,000	Water available
Fractured Rock is allocated based on abstraction impacts and actual water availability on a site by site basis. Allocation limits are notational and for accounting purposes only. Superficial includes both the superficial and surficial aquifers.					

Source: Department of Water 2008, Reviewing the allocation limits for the South West Groundwater Areas, Government of Western Australia, Perth. *Licensed entitlements are correct for November 2007 only.

The Yarragadee aquifer has the highest allocation and licence entitlements in the Blackwood groundwater area. The allocation of water licensed in the Yarragadee aquifer across the south-west is 40 per cent for public water supply, 20 per cent for mining, 16 per cent for horticulture and 13 per cent for pasture production.

The south-west Yarragadee aquifer is the largest fresh groundwater body in the south-west, and is one of the region's and Western Australia's most important water resources. The aquifer has been an important source of water for south-west communities since the early 1900s. There are widespread concerns over plans to export water from the Yarragadee aquifer to the integrated water supply which provides water for Perth, the wheatbelt, some south-west towns and the goldfields. These include the predicted ecological impacts, including a drop in groundwater levels leading to a possible loss of ecological integrity in groundwater dependent ecosystems. The State Government has decided to proceed with a second and renewably powered desalination plant rather than proceed with the Yarragadee option to boost Perth's drinking water supply.

Continual monitoring of the groundwater networks in the study area will assist to ensure that water allocation limits are managed to allow for sustainable use. Further information on groundwater management, use and allocation is on the DoW website: www.water.wa.gov.au.

4.3.10 Indigenous and European heritage

Archaeological evidence indicates that indigenous people have occupied the southern coastal areas of Western Australia for at least 6,000 years. Evidence of 50,000 years'

occupation has been recorded just outside the study area and this is likely to be a more accurate indicator of Aboriginal occupancy of the area.

Aboriginal people moved about this country and used it according to the seasons and resources that it offered. Life in particular concentrated on wetlands and waterways that provided a wide range of resources and also were of spiritual importance. Waterways also provided important links between different areas in which Aboriginal people had traditional rights. The areas were managed with skills developed over thousands of years, including selective burning practices that both refreshed the land and kept open access to key locations. There are many publications providing various

historical perspectives of Aboriginal inhabitation and use of the area. Some of these also outline the changes brought about by early European settlers in the area.

The main group of Aboriginal people who were most closely associated with the study area were the Pibelmen. It is thought that the whole Warren-Blackwood region was

the home of at least three groups, including the Pibelmen. The Kaneang were associated with the upper Blackwood area, while the Minang were thought to have their approximate western boundary near Nornalup.

Indigenous occupation of the south coast of Western Australia is inadequately recorded but is evident from discarded artefact materials and middens of shells of edible marine creatures. Some of the most important known indigenous sites in the D'Entrecasteaux National Park have been identified, and recommendations have been made for their management. Some work has been undertaken to protect these sites, although in some places further work is still required. Some of the important Aboriginal sites include Broke Inlet, Black Point, Meerup dunes, Yeagarup Beach, Dombakup silcrete quarry and Dombakup 24. Artefacts continue to be uncovered as a result of erosion, road building and vegetation clearing. Lake Jasper in the



Foreshore walkway at East Augusta

D'Entrecasteaux National Park is of considerable archaeological and cultural significance to indigenous people and it is currently vulnerable to disturbance and change in water levels. These are a result, in part, of human activities. The lake is popular with recreational users for boating, fishing and swimming and there is a need to ensure that these activities are compatible with the environmental and conservation values of the lake.

There has been renewed interest from local Nyoongar people in being involved in the management of conservation estate in the south-west and an interest in re-establishing cultural ties to the land. DEC is working with the indigenous people to establish a joint management agreement for the parks that provides indigenous representation and participation in management of the parks. The issue of competing native title claims in the area requires resolution before significant progress can be made. All Aboriginal sites are protected under the *Aboriginal Heritage Act 1972*, whether or not they are recorded. Aboriginal people should be consulted and involved in the ongoing management of all areas of heritage significance as required by state planning policy 2.6.

Bruny D'Entrecasteaux gave his name to Point D'Entrecasteaux during his search for La Perouse in 1792. The Hardy Inlet was the site of one of the earliest settlements in Western Australia.

The Warren-Blackwood region was largely unexplored until the 1850s. In that decade a half-dozen or so families took up residence around the district focusing on the Nannup, Manjimup and Pemberton areas, and established pastoral properties. In the west of the study area, the first settlement at Augusta was soon abandoned and the families resettled at Vasse. There were a few notes among settlers or explorers that suggested a large pre-contact indigenous population.

Walpole and its surrounding farmland were more firmly established during the 1930s under the group settlement scheme, in which unemployed families were selected to clear bushland for farming. In 1930 a small cluster of tents and tin and bush pole shanties were established, marking the beginning of the Nornalup land settlement scheme which was later to become known as Walpole. The settlement at Windy Harbour dates from World

War II but it was well known and patronised by locals much earlier than that. Colonial officials first saw Broke Inlet in 1831. There are a number of heritage listings relevant to the study area, some of which may overlap. These listings include sites of cultural and environmental value and include:

- Register of the National Estate – nine listings in Augusta, Nannup and Manjimup;
- Department of Indigenous Affairs – 22 listings in Augusta, Nannup and Manjimup;
- geological sites – four listings;
- municipal heritage inventories of local governments; and
- DEC's cultural heritage sites database.

It should also be noted that although the Department of Indigenous Affairs has 22 Aboriginal sites listed, there is a strong likelihood of many more sites in the study area, as there have been very few systematic surveys to date.

Due to the significant value of indigenous culture and heritage in the study area, any development or change in land use must be accompanied by an Aboriginal heritage assessment (see section 6.6 and Environment Protection Authority guidance statement 41). The *Native Title Act 1993* may also need to be considered as it sets out processes and obligations when dealing with land or water that is subject to a native title claim. This refers only to land to which native title already applies or could be applied in the future; namely, unallocated or unvested Crown land and pastoral leases. More guidance may be required from the Department of Indigenous Affairs.

4.4 Land tenure

4.4.1 Unallocated Crown land

Overview

Existing land tenure is shown in figure 15. Although there are parcels of fee simple land in the study area, Crown land is the prominent form of tenure. The majority of the Crown land is already managed either under the *Conservation and Land Management Act 1984*

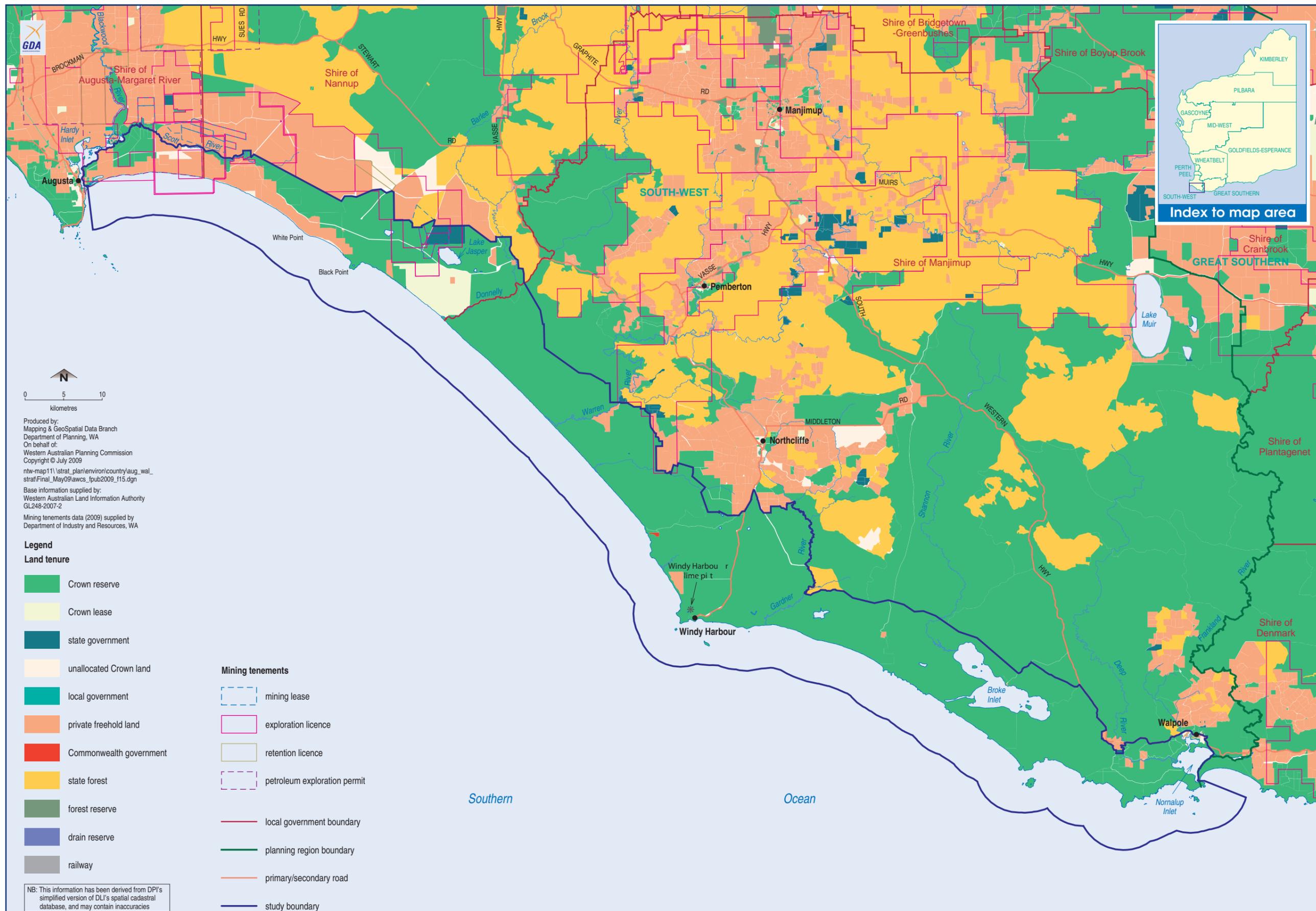


Figure 15: Land tenure

or by management orders under the *Land Administration Act 1997* granted to local governments for particular purposes. Those managed under the *Conservation and Land Management Act* include the D'Entrecasteaux National Park, Walpole-Nornalup National Park, Scott National Park, the Gingilup Swamps Nature Reserve and a proposed marine conservation reserve at Walpole and Nornalup inlets. DEC's review of the management plans for the national parks will address the conservation and land management issues for the sections of the coast covered by those parks.

The coastal section extending from East Augusta to the western boundary of the D'Entrecasteaux National Park contains fee simple land; and the private lots fronting the coast have boundaries to the low water mark. Coastal fee simple land in the study area has title which stops between 50 m and 100 m into the dunes, creating a long thin strip of unallocated Crown land. DEC is responsible for fire pre-suppression, weeds and feral animal control on unallocated Crown land outside the metropolitan area and towns.

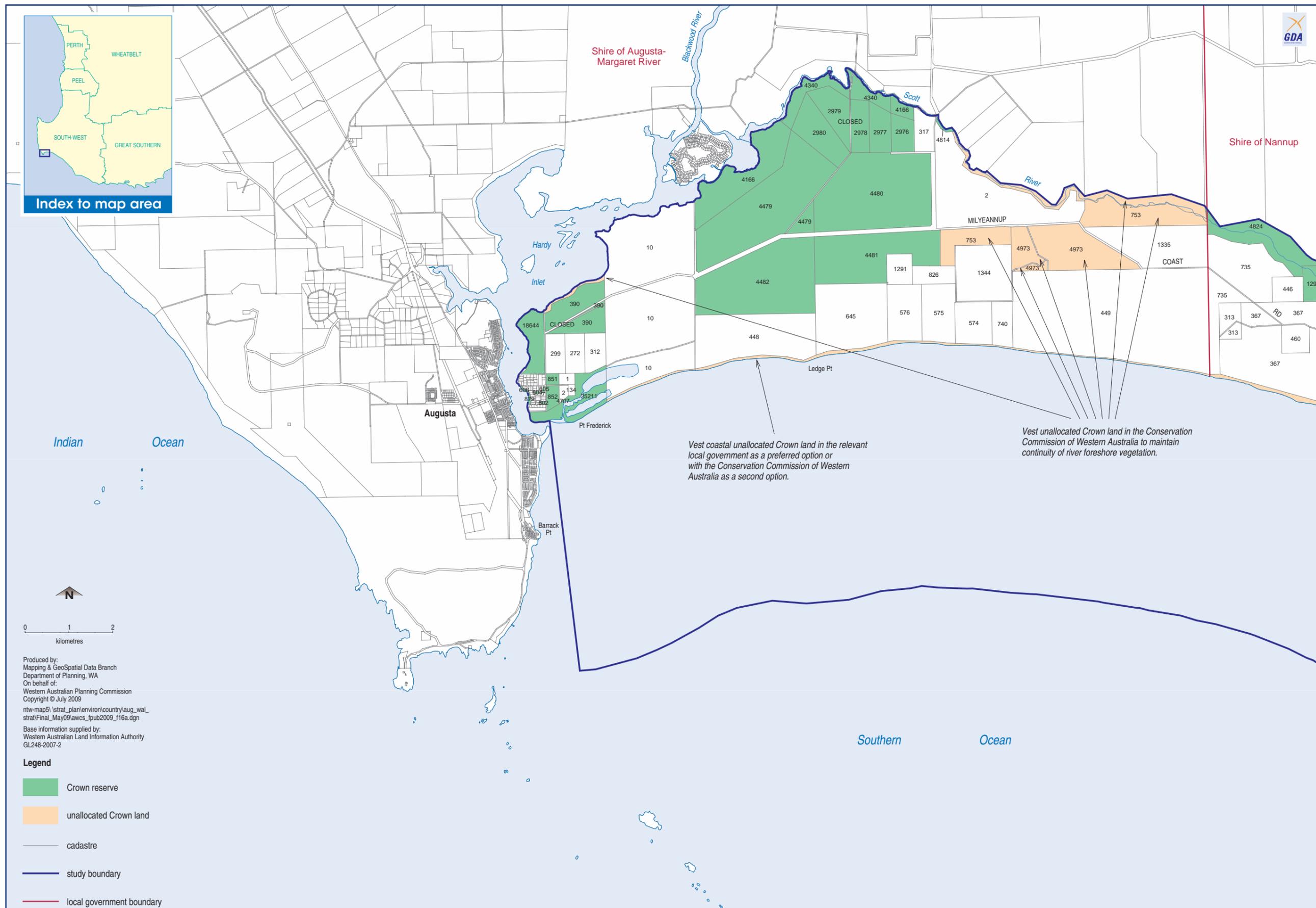
Some private land is in enclaves in the D'Entrecasteaux National Park. One remaining pastoral lease (Quannup) over Crown land forms an enclave of 4,352 ha in the D'Entrecasteaux National Park. This pastoral lease will expire in 2015. The current management plan for the national park states that all pastoral leases will be cancelled, purchased or not renewed and the land will be reserved as national park. Several reserves, such as Windy Harbour and Camfield at Broke Inlet, are currently vested in the Shire of Manjimup and these also have boundaries to the high watermark. The Shire of Manjimup has the power to lease for the western portion of the Windy Harbour reserve, which provides accommodation for fishermen and holidaymakers at the site. The new management plan recommends the shire seek the power to lease over the eastern portion of the reserve. In contrast, the Shire of Manjimup does not have the power to lease at Camfield and the future of a number of shacks is yet to be determined.

There are 60 squatters' shacks in D'Entrecasteaux National Park, which are mainly used for private purposes. The majority of the shacks are located at the mouth of the Donnelly and Gardner rivers with two shacks

within the Quannup pastoral lease. These shacks were built on Crown land without legal tenure by pastoralists who brought cattle to the coast for summer grazing or by the former Forests Department for staff involved in forest assessment or manning fire lookouts before the park was declared. DEC believes that the shacks affect the conservation and aesthetic values of the national park, pose a public safety risk and/or are not consistent with the principles of equitable use of the national park. Management of the shacks within the national park needs to be in general accordance with government policy. Therefore, existing occupants of the shacks will be allowed to stay for up to six years from the gazettal of the Shannon and D'Entrecasteaux national parks draft management plan if they take up a lease under the *Conservation and Land Management Act*. Some shacks may need to be removed earlier due to public safety concerns. Some shacks may be retained in the longer term and/or modified and upgraded by DEC for public recreational use or for heritage reasons.

Although it extends substantially outside the strategy boundary, there are plans under way to establish the Walpole wilderness area. This 363,000 ha area of largely intact native vegetation, coupled with the existing D'Entrecasteaux National Park (which is in the Augusta-Walpole Coastal Strategy boundary), represents nearly 500,000 ha of continuous national parks stretching from Augusta in the west to Denmark in the east. It is intended that this area will be nominated as a World Heritage area in the near future, but this will depend on priority-setting at state and national levels. Proposed sites are assessed by an international panel against a list of ten criteria. Further information can be obtained from the DEC website:
<http://www.dec.wa.gov.au/parks-and-recreation/key-attractions/world-heritage-areas.html>.

Suggestions have been made previously for government to consider the option of trading land and development rights for the isolated freehold lots to consolidate the national park. The Shannon and D'Entrecasteaux national parks draft management plan 2005 recommends the acquisition of private property in the national parks if and when it becomes available. The Shire of Nannup has no recognised towns or settlements in the study



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Western Australian Land Information Authority
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- Legend**
- Crown reserve
 - unallocated Crown land
 - cadastre
 - study boundary
 - local government boundary

Figure 16a: Recommended land tenure changes in the Shire of Augusta-Margaret River

area. In contrast, the Shire of Manjimup has three recognised nodes: Windy Harbour, Broke Inlet and Walpole. The inlets are currently Crown land with no vesting, but the current management plan for the D'Entrecasteaux National Park recommends compatible management of Broke Inlet with the same purposes and management as for the D'Entrecasteaux National Park and supports the creation of a Broke Inlet marine park. DEC has recently proposed the establishment of marine reserves at the Capes, and Walpole and Nornalup inlets. A planning process for Walpole and Nornalup inlets is currently under way. The draft Geopraphe Bay and Capes marine park plan includes Hardy Inlet and may include a portion of the study area near Swan Lake and the Deadwater.

The settlement of East Augusta has a number of existing dwellings. Although most of the land zoned residential development has been used, some lots remain undeveloped. The Augusta-Margaret River land release plan identifies areas that may be suitable for further expansion.

The Augusta-Walpole Coastal Strategy study area contains several areas of unallocated Crown land as shown in figure 15, and figures 16a-16c. The following sections detail the issues relating to and the management options available for the unallocated Crown land in the study areas.

One of the key issues addressed by the Augusta-Walpole Coastal Strategy is the ongoing management and vesting of unallocated Crown land between East Augusta and Black Point. The foreshore strip between the fee simple boundaries and the low watermark along the section of coast east of White Point is currently unallocated Crown land. This is a major issue affecting planning and management of this coastal region, particularly for those landowners with properties adjacent to the unvested land.

In recent years there have been a number of applications for subdivision in this area, and determination of these has been deferred pending resolution of coastal management issues. Subdivision proposals have been generally for conservation and lifestyle purposes.

4.4.2 Native title

Native title describes the rights held by Aboriginal people and Torres Strait Islanders, in relation to land or waters that arise under their traditional laws and customs. It includes the right to traverse land. It may include comprehensive rules relating to subsistence, ceremonial, access and control rights. Native title cannot take away anyone's valid rights, including home ownership, a pastoral lease or a mining lease.

Native title may exist on unallocated Crown land, some national parks, forests and public reserves, some types of pastoral lease, some land held for Aboriginal communities, beaches, oceans, seas, reefs, lakes, rivers, creeks, swamps and other waters that are not privately owned. Native title can encompass a very diverse set of rights. Where native title rights and the rights of another person conflict, the rights of the other person always prevail.

Native title must be assumed to exist in relation to Crown land – except where there are or have been certain acts or tenures recognised as having extinguished native title. In addition, section 104 of the *Land Administration Act 1997* secures a right to the state's Aboriginal inhabitants to have access over unfenced, unimproved parts of pastoral leases for traditional hunting. Aboriginal people therefore have special rights to use unallocated Crown land for traditional purposes, except to the degree restricted by any valid law.

Prior to any arrangement to create a reserve or other tenure arrangement consideration must be given to any requirements under the future act provisions of the Commonwealth *Native Title Act 1993*.

The Augusta-Walpole study area is roughly bisected by two claims for native title. The South West Aboriginal Land and Sea Council is currently working with all native title claimants in the south-west to consider merging individual claims into a single claim. This strategy's recommendations relating to vesting and management of unallocated Crown land would require an agreement under the Native Title Act before any land use changes were enacted.

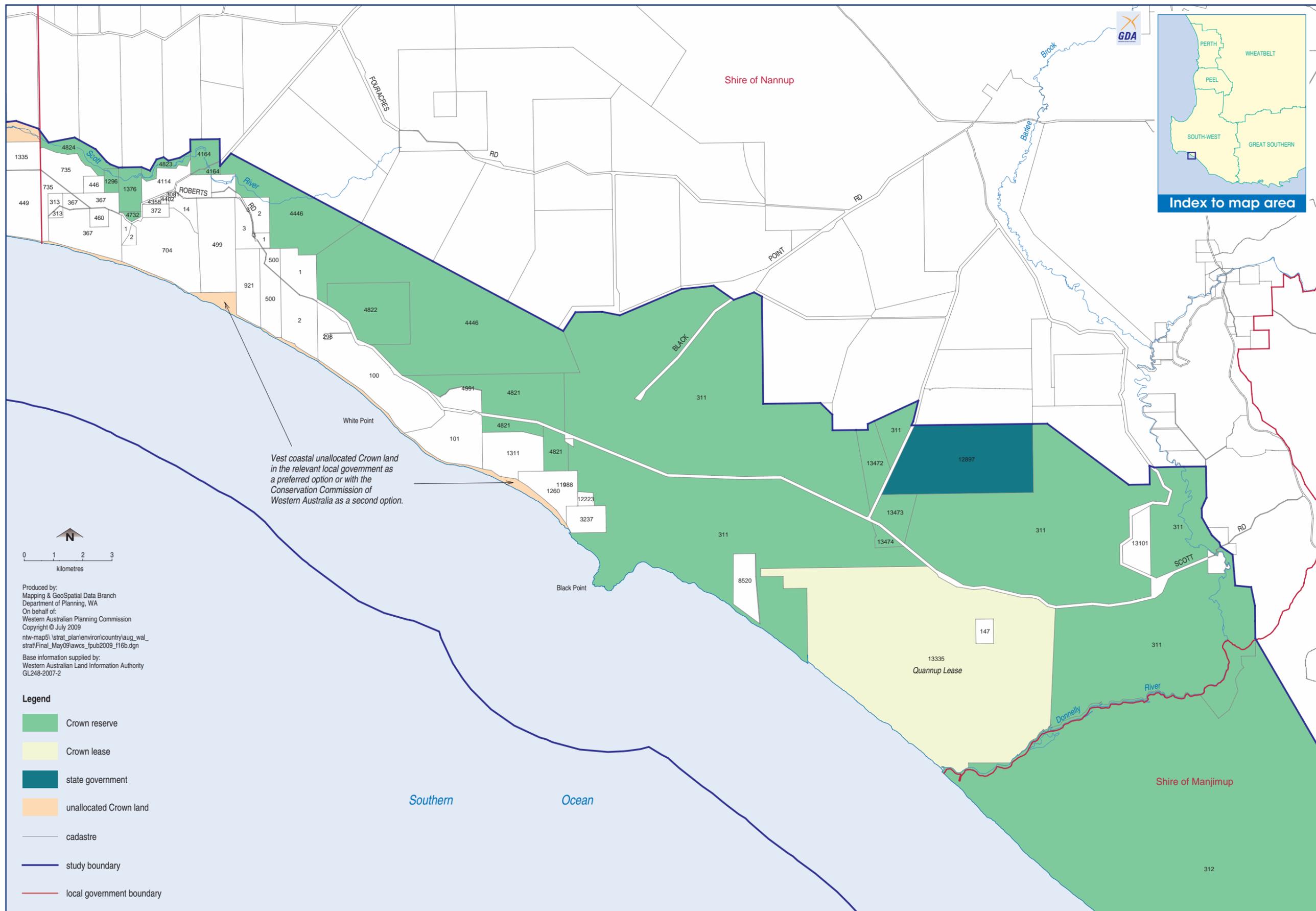


Figure I6b: Recommended land tenure changes in the Shire of Nannup

Table 14: Principles considered by the DoP when creating a reserve

Crown land required for operational use for the delivery of government services or for commercial operation should not be reserved
Commercial activities that restrict the free use and enjoyment of a reserve for its purpose are not appropriate
In many cases, the creation of a reserve remains a valid option for the disposition of Crown land, with leasehold also being an appropriate option under certain circumstances
Land should generally be reserved only when it has an intrinsic community value. In some instances, this element may be difficult to determine
Where there is doubt as to whether a parcel should be reserved or leased for the purpose of creating a reserve, any decisions made should generally be for the benefit of the community
Any secondary interests granted or approved over a reserve should not compromise, and should preferably enhance, the fulfilment of the purposes for which the land is reserved
Where land is required exclusively for a substantially commercial venture, the creation of a reserve of that land should not be considered. Leasehold or freehold tenure (at market value) should be the appropriate tenure considered
Large areas of land used on a relatively low-intensity basis may be appropriately reserved, especially if the land is also used for other purposes (for example, water catchments and state forests). The extent of intrinsic, non-monetary community values (for example, conservation, strategic location, long-term community requirements) will be the primary determinant of tenure in such cases, especially where there is unfettered public access to the land
As a general rule, reservation of large areas of operational land should be acceptable only when the public has unrestricted right of access, but reservation and leasing may be an appropriate tenure arrangement, depending on the circumstances
Applying reserve tenure to sites with special historical, social or cultural significance is not appropriate if the property has a potential commercial or operational use. In such cases sale in freehold may be possible, subject to the imposition of heritage or restrictive covenants
The purpose of creating a reserve, and any decisions made regarding a reserve, should usually be for the benefit of the community

4.4.3 Factors considered in creation of reserves

Under the *Land Administration Act 1997* there are two types of reserves that cover this area or that could be considered for Crown land in the strategy boundaries. These are:

- Reserves: created to reserve a parcel of Crown land for one or more specific purposes in the public interest.
- Class A reserves: the most highly protected reservation of Crown land in Western Australia, Class A reserves can be created in both land and marine areas.

Where a reserve is requested or is proposed to be created, the DoP will take into consideration principles that include, but are not limited to, those listed in table 14.

4.4.4 Management of unallocated Crown land

Decisions regarding the appropriate management and tenure of land follow assessment of physical and environmental characteristics of land. Historic patterns of use are also relevant in determining which organisation is most appropriate to manage land and for what purpose the land should be managed. The bulk of recommendations relate to reallocation of land to facilitate a more active management presence and to safeguard particular environmental qualities. One of the principal reasons for some of the changes is to achieve continuity of vegetation corridors, or to maintain particular ecosystems in one management framework. Tenure changes associated with national parks are usually detailed in national park management plans.

Unallocated Crown land in the study area is potentially the subject of native title claims. This strategy proposes a number of changes to unallocated Crown land for which it will be necessary to consider the rights and responsibilities of indigenous people.

The WAPC has historically refused subdivision applications along the coast in this area where there is a lack of suitable management arrangements for the coastal unallocated Crown land. This strategy makes recommendations for the management of the coast, based on current WAPC policy, but management responsibilities must be accepted voluntarily. It is the WAPC's preference that local government should accept management of the coastal unallocated Crown land because the land in question is not adjacent to any national park or conservation reserve. Should management responsibilities continue to be refused, the WAPC will continue its practice of refusing subdivisions. This is on the ground that subdivision represents an intensification of use of the coast and that it would be irresponsible to allow such intensification without management.

The WAPC is cognisant of the fact that responsibility for coastal land is perceived by some rural local governments in the state as undesirable because of the increased resourcing required and liability issues. For this reason the commission has established a small grants program, the Coastal Management Plan Assistance Program, which assists with developing detailed plans for coastal areas, and in turn increases the opportunities to gain funds for on-ground management. A more detailed coastal management plan is the next logical step (and a separate process) after this strategy, and it will provide more detail to guide the coastal manager.

Most grant funds for on-ground works require a management plan to guide works. The WAPC can also assist local governments with forming local coastal groups, and with brokering agreements between such groups and the shire for responsibility for regular maintenance through its on-ground grants scheme, Coastwest.

Management of unallocated Crown land requires consideration of the following issues:

Illegal occupation of Crown land

Section 267 of the *Land Administration Act 1997* specifies a range of trespassers in relation to Crown land. It is, for instance, an offence to reside on any public land or erect any structure on public land, including camping, and the Act provides a penalty for such an offence.

Offences on Crown land

It is an offence to clear, cultivate, enclose or remove anything from public land (for example, native plants) without the consent of the Minister for Lands. Furthermore, rubbish, noxious waste and disused vehicles may not be deposited on public land; nor may bores, wells or dams be constructed without the consent of the Minister.

Off-road vehicles

The *Control of Vehicles (Off-road Areas) Act 1978* makes it an offence to drive vehicles such as dune buggies and trail bikes on Crown land off public roads, except in those areas specifically set aside for that purpose.

Fire hazard control

Although there is no legal requirement for the State to abide by the requirements of the *Bush Fires Act 1954*, the DoP seeks to be a good neighbour and to fulfil its management responsibilities. Funds are budgeted annually for fire abatement programs and for combating fires that occur on Crown land. DEC is responsible for fire preparedness on unallocated Crown land outside the metropolitan area and townsites.

Vermin and weed control

Vermin and weed control on non-metropolitan, non-townsite unallocated Crown land and unmanaged reserves is managed by DEC. Management priorities for these lands and reserves are complementary to DEC objectives for biodiversity protection and conservation and aim to achieve sustainable and multiple land use benefits.

4.4.5 Management options for unallocated Crown land

The consultation process for this strategy has highlighted options for the management of unallocated Crown land, including:

- vesting in the Conservation Commission (management by DEC);
- vesting in or management control by the Marine Parks and Reserves Authority;
- management by local government;
- dividing vesting between local government and the Conservation Commission;
- management by a community-based management group;
- management by individual landowners; or
- retention as unallocated Crown land.

With regard to management by a local government, it should be noted that this can often be supported and carried out in conjunction with a community group such as a 'friends of' group. Given the isolation of the area and the sparse population, it is likely to take some time before an active coastal community group could be formed to be involved in coastal management responsibilities. This option provides a less legalistic option for community involvement in coastal management. Any management arrangement for the unallocated Crown land should be subject to an approved management plan with a much finer level of detail than can be presented in this strategy. It should also be noted that a decision to take on vesting of unallocated Crown land should recognise that the area may increase as a result of subdivision of adjoining freehold land. A summary of advantages and disadvantages associated with these options is presented in table 15.

4.4.6 Coastal unallocated Crown land between East Augusta and Black Point - preferred option

The majority of the coastal strip of the study area is unallocated Crown land. The *State Planning Policy 2.6 State Coastal Planning Policy* supports the vesting of the coastal foreshore reserve in the relevant local government for the purposes of foreshore management and recreation. The policy further states that where land has significant conservation value, vesting should be with the state body responsible for the conservation estate.

The Augusta-Walpole Coastal Strategy Steering Committee resolved to support the vesting of coastal unallocated Crown land between East Augusta and Black Point in the relevant local governments as the preferred option.

This will require management by the shires of Augusta-Margaret River and Nannup. The steering committee is aware that the Shire of Nannup is still in the process of determining whether it will take on vesting of the unallocated Crown land owing to a lack of resources and capacity. The Shire of Augusta-Margaret River has decided, in principal, to take on vesting of the unallocated Crown land pending further guidance provided by this strategy. Generally, coastal management responsibilities are detailed in a foreshore management plan prepared to the satisfaction to the relevant local government as a condition of either subdivision or development approval where the proposal is likely to change or have an impact on the existing coastal environment.

A wider management perspective may be provided through a coastal management plan, which usually covers an entire shire's coast. To assist remote, resource constrained local governments manage their coastline, the WAPC offers assistance with the preparation of coastal management plans through the Coastal Management Plan Assistance Program. This grant application process allows a relevant coastal manager to receive up to \$20,000 to assist in the preparation of a coastal management plan.

Table 15: Advantages and disadvantages of unallocated Crown land management options

Option	Advantages	Disadvantages	Other comments
1. Conservation Commission of Western Australia	<ul style="list-style-type: none"> Provides security of tenure for conservation values Increases conservation estate May increase representation of under-conserved communities Provides public control over foreshore 	<ul style="list-style-type: none"> Requires additional management resources Does not abut conservation estate Conservation values not clearly determined although there are no barriers to this being resolved quickly No gazetted public access 	Land can be vested in the Conservation Commission for different purposes. Conservation values need to be ascertained before making decisions on vesting land with the Conservation Commission.
2. Marine Parks and Reserves Authority	<ul style="list-style-type: none"> Provides security of tenure for conservation values Increases conservation estate Provides public control over foreshore 	<ul style="list-style-type: none"> Requires additional management resources Does not abut conservation estate Conservation values not clearly determined Usually manage to the high water mark 	
3. Local government	<ul style="list-style-type: none"> Supported by coastal policy Achieves local level planning and management Provides potential for close engagement with local landowners 	<ul style="list-style-type: none"> Requires additional management resources Uncertainty about shire willingness 	
4. Dividing vesting between the Conservation Commission and local government	<ul style="list-style-type: none"> A combination of 1 and 3 Two vesting bodies can bring additional skills and capacity The Conservation Commission may provide additional guidance and support for local governments Resource sharing 	<ul style="list-style-type: none"> A combination of 1 and 3 Two separate management bodies may result in different levels, and focus, of management As two organisations are involved, the establishment process may be more complex and lengthy 	It is a more desirable situation to have one management organisation, than two
5. As above with local landowner management through formally organised group and implemented through management order	<ul style="list-style-type: none"> Achieves some objectives of coastal policy Achieves local level management 	<ul style="list-style-type: none"> Potential difficulties if landowners do not agree to participate Potential future problems with unauthorised access/development Reduced public control Provides landowners with unrestricted access and extra land 	Management orders (which place reserves in trust on behalf of the public but do not constitute an interest in the land) have not been granted to private landowners but could be to community group. There is uncertainty about the liability/insurance associated with this model which has cost and management implications.
6. Individual landowners			This would be a highly unusual step; management of foreshore reserves usually happens with subdivision to create a public buffer to development. Very little information on circumstances where this might occur/be appropriate.
7. Retain as unallocated Crown land		<ul style="list-style-type: none"> Does not resolve the issue 	

The Shire of Augusta-Margaret River has taken advantage of the Coastal Management Plan Assistance Program and endorsed its coastal management plan in March 2005. The plan supported the retention of the coast between East Augusta and the eastern shire boundary as an isolated natural coastline area, with the fundamental management consideration being the maintenance and integrity of the coastal environment and dune system and surrounding diversity as well as minimising access to and public use of this portion of coastline.

The Shire of Manjimup has also taken advantage of the Coastal Management Plan Assistance Program to review the *Windy Harbour Management Plan* and the new version was finalised in late 2007.

The Shire of Nannup was successful in gaining funds for a coastal management plan due to be released in July 2009. The management plan investigates vesting arrangements, public coastal access and low key development and management options.

The shires of Augusta-Margaret River and Nannup have sought guidance in confirming the functions and responsibilities for managing this coastline. At this stage it is difficult to speculate on the level of detail in management responsibility, as the width of the foreshore reserve is likely to change over time depending on subdivision and development activity adjacent to the coast.

Recommendation 4.4.6a: That the shires of Augusta-Margaret River and Nannup agree to accept vesting and management responsibilities for coastal unallocated Crown land in their municipalities between East Augusta and Black Point.

Recommendation 4.4.6b: That a coastal management plan be prepared or revised for the length of the Shire of Nannup's and the Shire of Augusta-Margaret River's coastline to provide more detailed coastal management planning guidance.

4.4.7 Coastal unallocated Crown land between East Augusta and Black Point - second option

Due to the ongoing reluctance of local governments to manage this coastline, the steering committee has resolved to make an alternative recommendation in the event that either or both shires continue to decline vesting responsibilities. The Conservation Commission is the second preference for vesting of the coastal foreshore (with management by DEC) between East Augusta and Black Point.

The Conservation Commission has been approached to ascertain its position on coastal unallocated Crown land vesting. The commission indicated it would be willing to accept vesting of the coastal strip of unallocated Crown land between East Augusta and Black Point in the event one or both of the shires formally refused to accept vesting.

Should the relevant local governments formally decline to accept vesting of the coastal unallocated Crown land (after further consideration of the various management implications) the Conservation Commission will be formally approached with a proposal for the unallocated Crown land to be vested in it.

4.4.8 Coastal unallocated Crown land between East Augusta and Black Point – third option

A third option is to divide vesting between the local government and the Conservation Commission. This may be considered in circumstances where the local government is unable to accept vesting and management of the entire foreshore reserve, for example due to resource constraints.

This option allows areas requiring active management, such as the access points in rural conservation zone area B, to become the responsibility of the local government while the remainder of the foreshore reserve is vested in the Conservation Commission.

Table 16: Recommended changes for land tenure

Reserve	Approximate location	Current vesting	Proposed vesting and purpose	Reason
UCL	Ocean front land running in a thin strip between East Augusta and Black Point	Nil	Vest unallocated Crown land between the high water mark and the low water mark in local government for the purpose of foreshore management and recreation	State Planning Policy 2.6 notes preference for management by local government
UCL	Along the Scott River between the Scott NP and the Gingilup Swamps NR	Nil	Conservation Commission	To maintain continuity of river foreshore vegetation and provide links to other conservation reserves
18644	East Augusta	Timber for road board and settlers' requirements	Retain current vesting	Retain current status to allow for a variety of future uses
UCL 4973	Lies between UCL 753 and the Scott River	Nil	Conservation Commission	To maintain continuity of river foreshore vegetation and provide links to other conservation reserves
UCL 753	Adjacent to Scott River	Nil	Conservation Commission	To maintain continuity of river foreshore vegetation and provide links to other conservation reserves
Part of Lot 10 (Southern Shores)	Swan Lake and the Deadwater	Split between private ownership and local government	On approval for development of the private land, the remaining portion of the lake should be consolidated into the existing reserve. The local government vested portion of this wetland system is a proposed addition to the Geographe Bay/Leeuwin-Naturaliste/Hardy Inlet Capes marine park	To achieve consolidated management for the wetland systems
	Broke Inlet	Nil	Marine Parks and Reserves Authority	To ensure that the boundary of the marine park meets the surrounding national park
	Walpole and Nornalup inlets	Vested in the Conservation Commission under the CALM Act	Marine Parks and Reserves Authority	To protect and improve the unique natural biodiversity, aesthetic qualities and cultural values of the inlets
Several parcels of UCL	Within and surrounding Walpole town	Nil	Various purposes ranging from inclusion in conservation estate to town expansion to car parking (figure 19c)*	Land suitability and compatibility for different vesting options

* The Shire of Manjimup provided detail in figure 16c and proposed changes to tenure arrangements have been endorsed by the council.

4.4.9 Recommended land tenure changes

The strategy makes several recommendations for changes to current land tenure arrangements. The bulk of the changes recommended are to facilitate better management of this land for public recreation and conservation outcomes. Table 16 sets out the recommended changes and figures 16a-16c show the proposed vesting for unallocated Crown land (UCL) in the study area. Recommendations relating to the addition of lands to existing conservation estate are discussed in section 4.4. Further investigations may need to take place regarding future vesting arrangements, especially in relation to preserving under-represented vegetation types and threatened flora and fauna. Some reserves in the study area make up important parts of vegetation corridors with conservation value.

Recommendation 4.4.9: Implement the various recommended land tenure changes outlined in table 16.

4.4.10 Creation of foreshore reserves

Any subdivision abutting the coast would be subject to providing a foreshore reserve in accordance with *State Planning Policy 2.6 State Coastal Planning Policy*. This policy aims to uphold the historic trend of retaining up to 97 per cent of the coast in public ownership to provide a foreshore for public use and enjoyment, and to protect, conserve and enhance coastal values.

The creation of a foreshore reserve as outlined in state planning policy 2.6 will provide for both physical processes and take into consideration additional factors such as ecological values, landscape, seascape, visual amenity, indigenous and cultural heritage, public access recreation and safety.

The thin strip of unallocated Crown land running from East Augusta to just west of Black Point is unlikely to constitute an adequate foreshore reserve. Subdivision of landholdings abutting the coast will require the ceding of additional land free of cost to the Crown to create an adequate foreshore reserve. This land would be vested in the appropriate management body.

Accordingly, the strategy recommends that the foreshore reserve to be created as a result of subdivision and/or development of lots abutting the coast include:

- a) the area now designated as unallocated Crown land (the strip of land between the property boundaries and the low watermark along the coast); and
- b) a yet to be determined quantity of land within areas proposed to be subdivided to achieve the appropriate overall coastal processes setback (as stipulated in state planning policy 2.6); and
- c) factors in addition to physical processes (as stated above) including areas of environmental management priority.

The study area also includes lots abutting waterways and estuaries that may be the subject of development and/or subdivision. There is a requirement that these developments and/or subdivisions also provide adequate buffers. The buffer width required will be dependent upon the type of waterbody (waterway, wetland or estuary), the conservation significance of the waterbody and the purpose of the buffer. Where appropriate, site specific planning should be undertaken to provide more detail on buffer requirements and land management. Guidance for the determination of appropriate buffering of waterways and estuaries is defined in schedule 2 of *State Planning Policy 2.9 Water Resources*.

Determining an adequate foreshore reserve

Foreshore reserves are calculated from an agreed horizontal setback datum. On most stretches of coast, the horizontal setback datum is relatively easy to establish. The presence of a relatively unbroken line of vegetation provides this line on a stable or accreting coast.

However, in precinct 1 the presence of many blowouts makes the determination of the horizontal setback datum more difficult. Therefore it is critical to distinguish between erosion caused by sea action, and that caused by other means. The WAPC has undertaken shoreline movement mapping that shows that the shoreline is relatively stable. It might go a couple of metres one way one year, and a few

the other way in the following year but there does not appear to be any consistent trend towards long-term accretion or erosion. On this basis, the DoT coastal engineers have provided an interpretation of the horizontal setback datum (based on aerial photography taken in January 2004) which will attempt to normalise the vegetation line. The line will not follow the shape of the blowouts, as it is considered that the blowouts are not caused by sea action. It is proposed to use this line from which to apply the physical coastal process setback.

Although the study area shows signs of active wind erosion, it shows no evidence of a chronic erosion trend of the shoreline. The setback line for protection from physical processes is therefore likely to be around 100 m. Naturally this will vary according to the topography and the practicalities of foreshore reserves, and it will also take into account other land characteristics, including steep topography, susceptibility to erosion and dune blowouts, near continuous vegetation cover of coastal heath, and high landscape value and visual amenity. For example, it would make no sense to establish the boundary on the top of a dune ridge.

In addition to the setback for physical processes, the proponent may be required to provide a further setback to address additional factors. These include, but are not limited to, ecological, landscape and seascape values, visual amenity, indigenous and cultural heritage, public access, recreational and safety factors, and areas of environmental management priority.

As stated in section 4.3.1, areas of environmental management priority are those areas of freehold land with environmental value, sensitivity or significance that require protection from future land use change and land use conflict. These areas may include: threatened ecological communities; areas of rare flora and priority fauna; rare or poorly reserved vegetation complexes; the Deadwater and Swan Lake (East Augusta-Scott River); the Augusta shell bed; areas of possible mining opportunities; some erosion-sensitive landforms and any other areas of value and/or significance.

It must be noted that each situation requiring the creation of a foreshore reserve will differ and will be assessed on a case-by-case basis.

The WAPC will require the proponent to include the above information as part of the subdivision guide plan application, which will need to be endorsed by the WAPC prior to an application for subdivision. Section 6.6 will guide proponents on the information that should be included in a subdivision guide plan and subsequently provide for an adequate foreshore reserve.

Furthermore, a foreshore management plan will be required as a condition of subdivision approval. Such a plan should address the relevant sections of state planning policy 2.6 and should be prepared to the satisfaction of the WAPC and the local government.

4.4. II National parks

Existing reserves

The Shannon, D'Entrecasteaux, Walpole-Nornalup and Scott national parks, Gingilup Swamps Nature Reserve and other proposed conservation estates are managed by DEC though implementation of management plans (or draft plans in preparation) and are supported by this strategy. The relevant DEC management plans require approval by the Minister for Environment under the *Conservation and Land Management Act 1984*. This strategy does not override recommendations for DEC managed lands but attempts, where possible, to provide integration with surrounding reserves and freehold land tenure in the study area.

Proposed reserves

This strategy acknowledges and includes reference to and support for all proposed extensions to the existing Shannon and D'Entrecasteaux national parks as outlined in the *Shannon Park and D'Entrecasteaux National Park: Draft Management Plan 2005*. This applies specifically to the following locations:

- the 5(g) reserve (400 ha) near Lake Jasper;
- the proposed Cable Sands land addition (1083 ha) near Lake Jasper;
- the proposed pastoral lease additions to the parks (Quannup 4480 ha); and

- land to be added to the parks under the forest management plan (2004) (two parcels totalling 1600 ha).

This strategy also supports the purchase of private property in the national parks when it becomes available, according to the conservation value of the areas and available funding.

Recommendation 4.4.II: As guided by the *Shannon Park and D'Entrecasteaux National Park: Draft Management Plan 2005*, the Quannup pastoral lease, as well as other identified areas, be amalgamated into the D'Entrecasteaux National Park.

Marine reserves

In 1994, a Government report entitled *A Representative Marine Reserves System for Western Australia* was released. The report has been an important information source which identified more than 70 candidate areas for marine parks and reserves planning. In some cases, it is still the best information available to inform proposals for future marine parks and reserves. However, more recent and comprehensive information is used when it is available.

In the south coast region, several areas were identified within the coastal strategy study area:

- Hardy Inlet (extending from Cape Leeuwin);
- D'Entrecasteaux (the entire length of the D'Entrecasteaux National Park); and
- Walpole-Nornalup (the entire areas of the Walpole and Nornalup inlets).

Two marine parks are currently proposed in the coastal strategy's study area:

- Walpole and Nornalup inlets marine park; and
- Capes marine park.

Establishment of these marine parks is expected in 2008. Further information on marine parks and reserves can be found at <http://www.dec.wa.gov.au/>.

4.4.12 Enclaves of land in national park

Precinct 2 of the study area is dominated by national park but there are pockets of land with differing tenures throughout the precinct. One large property close to Black Point is a pastoral lease. This section deals with those areas not identified as a settlement or coastal recreation node.



Banksia at Black Point

The bulk of the private land surrounded by conservation estate is zoned rural under the relevant local planning scheme. In some cases the land is not cleared and is likely to have high environmental values. Other lots are working rural properties.

The *Shannon Park and D'Entrecasteaux National Parks Draft Management Plan* makes several recommendations relating to tenure changes and incorporation of appropriate lands and waters into conservation estate. The following recommendations will assist in the preservation and enhancement of national park values and help to extend the national reserve system.

- Incorporation of the proposed additions, as listed, in the D'Entrecasteaux National Park.
- The purchase of private property within enclaves in national parks when they become available after an assessment of the conservation value of the land and determination of purchase price.
- Negotiation with state and local government agencies to add important conservation and recreation reserves under their control to existing parks.

- Negotiation with relevant bodies to ensure road reserves to private enclaves are best located to protect environmental and landscape values while satisfying owner access requirements.
- Cancellation of unnecessary road reserves in the park and inclusion in the conservation estate.
- Acquisition of areas adjoining national parks with significant conservation or recreation value to extend the national reserve system.
- Extension of the boundaries of the D'Entrecasteaux National Park to the low watermark along the Donnelly, Gardner, Shannon, Forth and Inlet rivers.
- Promotion of compatible management of Broke Inlet with the purposes and management of D'Entrecasteaux National Park and support for the creation of a Broke Inlet marine park.

Recommendation 4.4.12: Further investigate privately owned land surrounded by conservation estate for its environmental values. If the land is considered to have conservation value and it is offered for sale, it should be acquired to consolidate the park.

4.5 Land use

4.5.1 Horticulture

Horticulture relates to the science and business of small-scale cultivation of fruits, vegetables, flowers or ornamental plants and it can also include turf production. Horticulture is a major land use on the Scott coastal plain as a whole, of which the study area takes in only a portion. It has been recognised in the *State Planning Strategy* as an agricultural area of state and regional significance, but the strategy also notes the limitations of the area because of waterlogging and wind erosion. Some 5,000 ha of land have been identified as suitable for summer production. Vegetables have been the major crop, grown on pivot irrigation. One of the major producers of seed potatoes in the state is located in Nannup. Manjimup derives the bulk of its horticultural income from vegetables, followed by fruit even though the bulk of land is taken up by grazing. Figure 17

shows the horticultural capability of the land in the study area, as assessed by the Department of Agriculture and Food. More detailed land capability assessments may yield different levels of horticultural and agricultural land capability than those depicted in figure 17; for example, the summertime capability for horticulture may be higher on the Scott coastal plain. There has also been an unprecedented growth in the number of dairies in the region following deregulation of the dairy industry.

4.5.2 Agriculture

Agriculture relates to the science and business of large-scale cultivation of soil, producing crops, and raising livestock. Agriculture is and has historically been an important part of economic life in the region, particularly in the Manjimup area. Agricultural land uses are of high significance to the region and areas important for agricultural production will be protected from encroachment from other uses.

Nannup has emerged in recent years as a centre for cut flowers. The area around Pemberton has been forging a reputation for cool climate wines, and the area now has several wineries. Grain crops are considered likely to expand, given support from DAF for trialling new varieties of grain, as well as crops such as hemp.

This is one of a limited number of cool climate agricultural areas in the state. It has historically been used for grazing, when animals were brought down to the coast for summer grazing. In the Shire of Manjimup grazing ventures are the biggest land uses in the shire. The Shire of Nannup is home to major dairying enterprises. Currently there are seven major dairies in the area, including the four largest in the state. DAF has also undertaken land capability and land suitability assessments for grazing (figure 18). Plantation forestry is another emerging form of agriculture in the region.

4.5.3 Forestry

The forestry industry was one of the first industries established in the south-west, and it has been an economic mainstay for towns such as Manjimup and Nannup and their surrounding smaller settlements. In 2001, the State Government's policy on protecting old-growth forests resulted in the cessation of logging in



Figure 17: Horticultural capability

old-growth native forests and created 29 new national parks, seven new nature reserves and 10 new conservation parks in the south-west of Western Australia. Implementation of this policy has made a range of environmental, social and economic changes in the region. The industry is now going through a major readjustment and will focus on value adding and plantations to supply timber markets. Plantations are currently a very significant land use on the Scott coastal plain. The Scott River area contains 30 per cent of the south-west blue gum plantations. Other statistics indicate that there are 74 tree farms spread evenly throughout the Manjimup shire, the general size of which is 40 ha.

Careful planning is required when establishing plantations due to potential impacts on water use, water balance, acid sulfate soils and soil health. Local governments in the study area have some zones in which plantations are not permitted and other zones in which plantations are permitted subject to a development application being submitted and approval being granted.

4.5.4 Fishing

Fishing represents an important regional industry. The main commercial catches are rock lobster, abalone, salmon, shark, crab, whiting, mullet and black bream. The beach value (that is, with no further processing) of the catch is estimated to be around \$4.1 million and the industry directly employs approximately 60 people. The locations in which commercial fishers are based and fish include Augusta, Windy Harbour and Broke Inlet.

Recreational fishing is very popular and constitutes one of the major pastimes for local residents and tourists. Issues relating to recreational fishing are the same as for all pastimes that require coastal access. There are also issues of personal safety, especially for rock fishing. Recreational fishing also contributes to the regional economy. Fisheries WA in 2004 summarised research on recreational fishing in a report on the future of recreational fishing on the south coast. It reports that a survey in 1991 of participation and expenditure patterns of recreational fishers in Western Australia estimated that recreational fishing activity was responsible for direct expenditure of \$205 million in 1989-90, and indirect expenditure of \$184 million, giving an aggregate expenditure of

\$389 million. It also provided 5,700 full-time jobs. The state economic impact was updated by a repeat survey in 1998, based on a state population of 1.755 million and a participation rate of 36 per cent. Direct expenditure associated with recreational fishing was estimated at \$299 million in 1995-96, giving an aggregate expenditure of \$569 million, and it provided 7,000 full-time jobs.

Commercial fishing represents an important regional industry, although compared with the rest of the state it is relatively small in both catch and value. The major locations of commercial fishers are Augusta, Windy Harbour, Broke Inlet and the Walpole-Nornalup inlets. The main commercial catches are rock lobster, abalone, salmon, shark, crab, whiting, mullet and black bream. The beach value of the catch is estimated to be around \$4.1 million and the industry directly employs approximately 60 people. There are also additional indirect employment benefits through the support of businesses such as fuel suppliers and boat repairs.

4.5.5 Aquaculture

Aquaculture is not a highly developed industry in the region. By far the most prevalent form is land-based aquaculture in inland areas. Although there are currently no applications for aquaculture developments in the study area, development applications have been received which include aquaculture components.

4.5.6 Mining

A number of areas along the Augusta-Walpole coastal region (within 10 km of the coast) have been recognised as containing mineral resources. One major heavy mineral sands operation owned by Cable Sands was located at Jangardup but operations ceased in 2003. The Jangardup South deposit is likely to be proposed for mining in the future but it will be subject to environmental assessment under the *Environmental Protection Act 1986*. Mining start-ups are governed by a combination of granting of mining and environmental approval and the impact of current commodity prices. Prior to problems that developed with processing, a mine was operated by BHP Billiton at Beenup.

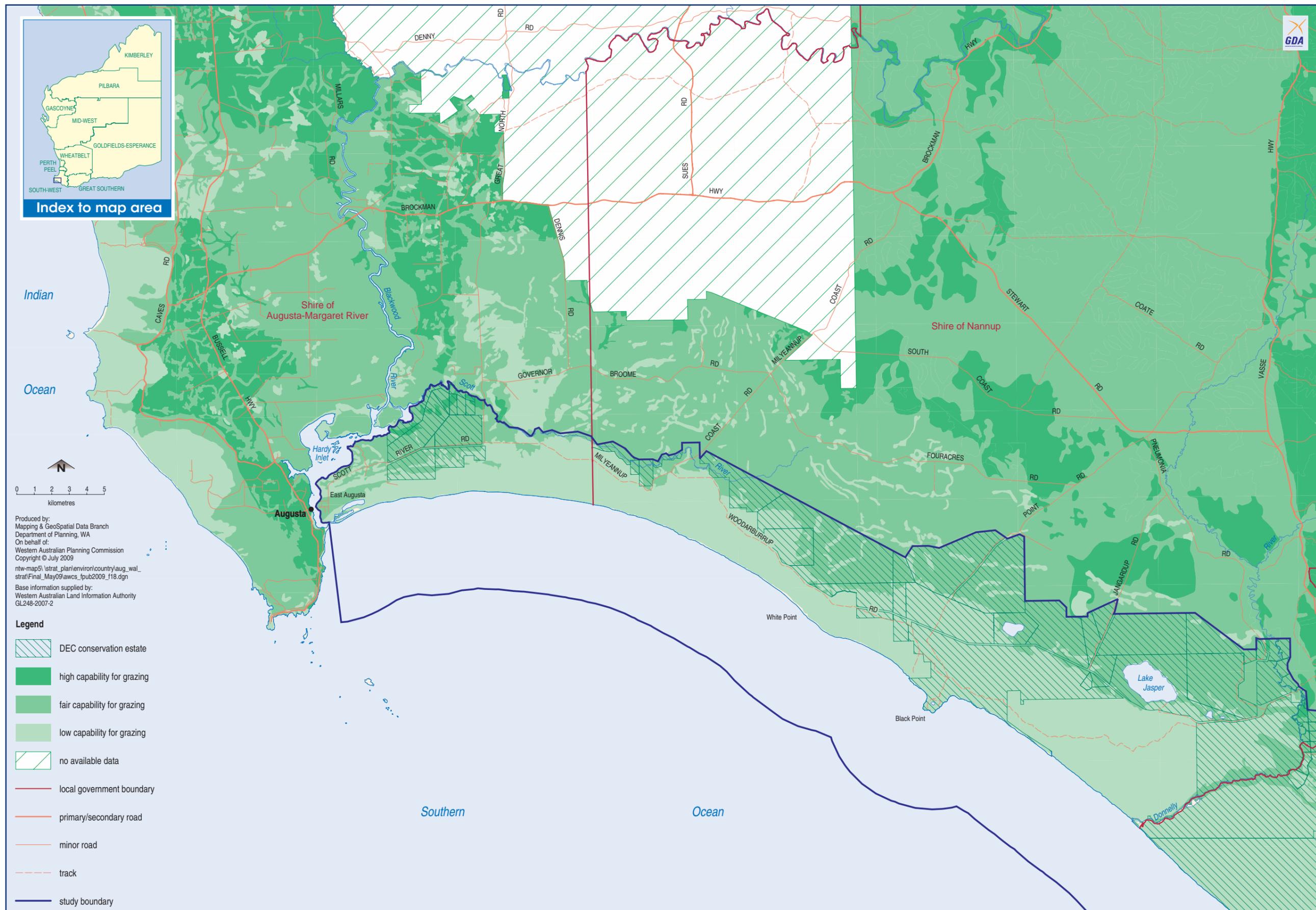


Figure 18: Grazing capability

Mineral and petroleum exploration and development on lands and waters managed by DEC are subject to the *Mining Act 1978*, the *Petroleum Act 1967*, the *Environmental Protection Act 1986*, the *Wildlife Conservation Act 1950* and various state agreement Acts. The mining and petroleum Acts take precedence over the CALM Act. Mining can be undertaken in national parks and class A nature reserves, subject to the concurrence of the

Minister for Environment and the consent of both Houses of Parliament (the Conservation Commission provides advice to the Minister for Environment).

Mineral and petroleum exploration and development are also subject to state government policy. There would be no presumption for approval of applications for access to national parks and A-class nature

Table 17: Mining tenements and petroleum exploration licences in the study area

Tenement	Holder	Tenement status	Legal area	Measurement unit	Target resource
Mineral exploration licences					
E 70/2441	Lando Pty Ltd	Pending	27	Block	Heavy mineral sands (titanium-zircon)
E 70/2342	Lando Pty Ltd	Pending	23	Block	Heavy mineral sands (titanium-zircon)
E 70/2372	Metal Sands Pty Ltd	Live	37	Block	Heavy mineral sands (titanium-zircon)
E 70/2534	Metal Sands Pty Ltd	Pending	16	Block	Heavy mineral sands (titanium-zircon)
E 70/3042	Metal Sands Pty Ltd	Pending	48	Block	Heavy mineral sands (titanium-zircon)
E 70/589	Cable Sands (WA) Pty Ltd	Live	177	ha	Heavy mineral sands (titanium-zircon)
E 70/588	Cable Sands (WA) Pty Ltd	Live	239	ha	Heavy mineral sands (titanium-zircon)
E 70/398	Cable Sands (WA) Pty Ltd	Live	583	ha	Heavy mineral sands (titanium-zircon)
E70/3198	Archeoptryx Resources Pty Ltd	Pending	32	Block	
E70/3606	R, Zuks	Pending	179	Block	
Mineral claim (under <i>Mining Act 1904</i>)					
MC 70/13595	DM, GJ, HF, HH and KE Jackson	Live	1.295	ha	Limestone
Mining leases					
M 70/48	DM, GJ, HF, HH and KE Jackson	Pending	1.29	ha	Limestone
M 70/974	Cable Sands (WA) Pty Ltd	Pending	581.4	ha	Heavy mineral sands (titanium-zircon)
M 70/993	Cable Sands (WA) Pty Ltd	Pending	431.6	ha	Heavy mineral sands (titanium-zircon)
Petroleum exploration licences					
EP 446	Red Mountain Energy Pty Ltd	Active			Petroleum and gas
11/07-8 EP	ERM Gas Pty Ltd	Pending			Petroleum and gas

* Block = graticular block, approximately 3 sq km

reserves and if approved, these applications would be expected to include contributions to reserve management in accordance with the principle of environmental offsets. In addition, DEC's position is that the costs of follow-up rehabilitation of mining and petroleum operations should be borne by the organisation/s responsible for the activity.

The major potential for additional mining in the Augusta-Walpole coastal region is limestone extraction. The Pleistocene dunes in the privately held land may represent an economic resource in the future. Further work is required to determine limestone resource areas and this is one of the primary objectives of the state lime supply strategy. Coal, ferricrete gravel, sand and peat have also been identified as potential resources in this region, although peat appears to be the only economically viable option. Additional deposits exist but, in general, companies are not considering mining because of the severe environmental implications. Table 17 shows current tenements in the study area, which are also shown on figure 15.

The Department of Mines and Petroleum has released details of locations for possible future mining opportunities in the study area. To ensure appropriate recognition of mining resources, the identified area will be included in this category. Further information relating to titanium-zircon mining should be directed to the DMP.

Recommendation 4.5.6 Future land use planning is to consider the location of identified mineral deposits (figure 11) and ensure that subdivision or development do not conflict with the possible future mining of these deposits.

4.5.7 Coastal development

There is increasing pressure for settlement and development to provide more access, recreation and accommodation along the coastal strip from Augusta to Walpole. A key component of the strategy requires the

determination of an appropriate level of development and use of the coast that is compatible with the retention of the area's unique environmental and cultural values. In the past, new residential and rural residential development has been directed towards the main towns in the greater South-West region but also, in some cases, to smaller towns and settlements around former and existing timber mill establishments. Some of the key settlements identified in local planning strategies as potential areas for further developments are shown in figure 4. Chapter 6 presents a settlement hierarchy that describes the settlements and provides guidance for future planning.

4.5.8 D'Entrecasteaux National Park



Point D'Entrecasteaux

As the vesting organisation, the Conservation Commission is responsible for determining the future use of all shacks in the national park, and it has formalised the existence of the shacks at the mouth of the Donnelly River through life-leasing arrangements with shack owners. Shacks managed by DEC located on the eastern

side of the mouth of the Broke Inlet, Coodamurrup and at the Gardner River mouth are not private and are available for use by the general public.

Broke Inlet is adjoined by two reserves: Camfield reserve 19787 is presently zoned for camping and vested in the Shire of Manjimup for care, control and management with no power to lease, and reserve 40482 is zoned for parks and recreation with the same status. The council has requested a change to the management order to allow it to lease land before deciding what might be included in some sort of management plan that it will prepare.

The people who use the shacks at Camfield have no lease on the land or the buildings. The Shire of Manjimup would like to formalise the

existence of the shacks on the Camfield reserve through leasing arrangements and the preparation of a management plan. The council is unable to initiate this because the current vesting orders do not give the power to lease. The previous management plan for the Shannon and D'Entrecasteaux national parks allowed life-time leases to the shack dwellers, but these leases have no legal status. Licences were issued for a period of seven years to 30 June 1997, with a further option of renewal to 2007, and these will continue until the new management plan is gazetted.

Subdivision and development of the private enclaves in the national park pose a number of planning and management issues, such as: provision of access roads and services (power and telephone lines) to isolated enclaves through DEC estate, and associated impacts on national park values through weed and disease introduction, alteration of the visual landscape, diminishing environmental values, effects on fauna, erosion, fire risk and domestic animals entering the parks.

Options for rationalising the boundaries of the park include the purchase of individual enclaves that have significant conservation or recreational values, and land exchange. Land exchanges would be subject to completion of an assessment of environmental and heritage values, owner desire, valuations and protracted negotiation and approval processes. They are notoriously difficult to achieve.

4.5.9 Tourism and recreation

In the future the demand for tourism and recreational development in the study area will undoubtedly increase. The major appeal of this region is the outstanding scenic beauty and the natural attractions that provide visitors with a unique natural and remote experience. The biggest attractions of the region are the various opportunities for experiencing nature; for example, the tall karri forests, hiking in natural areas, fishing and surfing. As a basis for any future planning of settlement expansion, a determination of the current and predicted level of demand is required and then an assessment of the capability and suitability of settlements such as Windy Harbour to accommodate growth. It is important to note that according to the state planning policy, consolidation of existing centres is preferable

to development of new centres. At present, there is very limited tourist accommodation in the Augusta-Walpole region. With the increasing growth in tourism, there is likely to be considerably more emphasis on tourism development opportunities. A key issue to address as part of the Augusta-Walpole Coastal Strategy is the identification of specific locations or nodes where tourism development is deemed appropriate.

Consideration of tourism development provides an opportunity for surrounding landholders and communities to take advantage of the proximity of the D'Entrecasteaux National Park by providing a range of services or experiences that cannot be accommodated in the park. This naturally needs to be considered in conjunction with the progression of the revised management plan for the park. Publications, such as the WAPC *Planning Bulletin 83 Planning for Tourism*, are available to guide decision-making by the WAPC and local government on subdivision, development and scheme amendment proposals for tourism purposes.

Tourist opportunities for day-use developments are encouraged by the Shire of Manjimup throughout rural areas, but care must be taken with overnight accommodation to avoid conflict with surrounding agricultural uses and conservation requirements. Tourism accommodation is encouraged in and around the towns and other settlements, together with an identified area along the Pemberton-Northcliffe Road out to the Old Vasse Road. The Shire of Manjimup has recently identified several privately owned chalets at Malimum Springs, private shacks located on DEC managed estate, private land and a reserve vested in the Shire of Manjimup (Camfield at Broke Inlet) as potential areas for accommodation. The use of shacks in DEC managed estate must be in accordance with state government policy and the *Shannon Park and D'Entrecasteaux National Parks Draft Management Plan 2005* when gazetted. Recommendations for tourism development are found in chapter 5.

Limited tourism accommodation (for example, four chalets per lot in the Nannup shire) may be permitted under current schemes for which only a development application is required. Should councils receive such an application on

a lot abutting the coast, it is strongly recommended that it be referred by the Council to the WAPC for advice on foreshore management implications.

White Point

White Point has been identified previously as a potential node for future low-level tourism in the Augusta-Walpole region. Tourism development on this freehold land is constrained by the issues of foreshore vesting, lack of a management plan and sub-standard road access and service provision.

Black Point

There is mixed interest in the community in the establishment of tourist facilities at Black Point. Around a decade ago considerable interest was shown by the Shire of Nannup in establishing public coastal access along the Nannup coast but no plans were ever adopted or implemented.

Stakeholder consultation has reinforced the need to protect the significant environmental and conservation values of Black Point, and suggestions for the site include:

- better managed 4WD access and maintenance of camping facilities; and
- provision of better track management and parking for 4WD access (this is particularly important for emergency services).

It is unlikely that significant development in this area would be supported by environmental agencies and many stakeholders.

It was considered an advantage that Black Point was located near the western boundary of the D'Entrecasteaux National Park but for the following reasons there will be numerous difficulties to overcome if any of these developments are to take place:

- it has been recognised as an important site for Aboriginal heritage;

- it contains threatened flora;
- it is an important geoheritage site; and
- it would be difficult to ensure public safety.

Further detailed planning will be undertaken by DEC and it will examine recreational activities and facilities in this area in specific detail.

Northcliffe

Future demand for small-scale development related to recreation and tourism could be accommodated, and would be appropriately located, at existing settlements such as Northcliffe, where some existing infrastructure

is in place. Although it does not have a coastal location, Northcliffe offers forest and farm-based tourism accommodation and is also a gateway to the D'Entrecasteaux National Park.

Windy Harbour

Windy Harbour is the biggest tourist and recreational site in terms of formalised use. It is a site with long-standing use and a

strong history of community management. The current arrangements allow for the purchase of leases and there is also a caravan park to cater for other visitors. It is popular for fishing, as an access point into the park and for its unique character.

The *Windy Harbour Management Plan 1999* (reviewed in 2007) aimed to address key management issues such as: foreshore and coastal management; land use and management of the D'Entrecasteaux National Park; appropriate infrastructure; future development; and land tenure options. The 2006 review has provided local government and the community with a strategy plan for the future planning, management and conservation of Windy Harbour until 2017.



Entry to Northcliffe

National parks

Tourism development in national parks will be considered as part of the management plan review process. A draft management plan for the Shannon and D'Entrecasteaux national parks was recently released.

Generally, D'Entrecasteaux has a remote and natural feel, and recreation and tourism opportunities will be low key to protect significant environmental and cultural values. Nevertheless there are unique opportunities for recreation and tourism.

DEC is currently developing management plans for the Scott National Park and Gingilup Swamps Nature Reserve.

Walpole

Creation of the Walpole wilderness area is considered to be an added attraction for tourists in the south-west, along with associated interpretive experiences such as the proposed Walpole wilderness discovery centre. Tourism attractions such as the Gloucester tree and the tree-top walk, together with the marketing of the Walpole wilderness area, will ensure the continuing value of national parks to the South-West region's local economy.

4.6 Road access

4.6.1 Overview

The provision of a well planned road network is important for the long-term access and transport needs of the region and for its connectivity with the rest of the state. The existing road network reflects the pioneering history of the area and provides sufficient and equitable, if somewhat limited, access throughout the study area based on the existing and proposed population of the area. Currently road construction and maintenance in the study area operate in a variety of ways.

The only primary/secondary roads in the study area are Windy Harbour Road and parts of the South Western Highway skirting the northern boundary of the study area near Walpole. The ongoing management of these roads is recommended to ensure appropriate regional access.

The *Roads 2020* strategy proposed a coastal route in the study area. This costly and unbudgeted new road is not supported by this strategy. The proposal would require a bridge over the Hardy Inlet. Such a major proposal would additionally need to be formally assessed under the *Environmental Protection Act 1986*, and the considerable clearing of poorly reserved vegetation and internationally significant biodiversity values is unlikely to be approved.

With the deletion of this proposal, it is therefore important to retain and, where appropriate, upgrade the Milyeannup Road and Woodarburp Road connection.

Local governments in the region are responsible for development and maintenance of the local road network of the Augusta-Walpole region, except in the national park. Dedicated public roads are those that have their own reserve that is managed either by local government or Main Roads Western Australia, such as the South Western Highway, Windy Harbour Road and Broke Inlet Road. Road maintenance requires considerable resources, and a number of local governments do not have sufficient resources to meet all road access needs. Local governments allocate resources to their local roads through a prioritisation process. Future coastal development would increase local government's financial responsibilities. It is common for any intensification of use of an area (such as a development or subdivision) to require a contribution for upgrading access roads to adequately address the increase in usage. The costs of road-making raw materials may also increase in the future as supplies become more expensive to locate or produce. Most roads in the study area are not bituminised and the standard is variable. When considering options for providing coastal access in this region it is of paramount importance to evaluate the physical environment. This is a high-energy, dynamic coast subject to the erosive effects of strong winds and wave attack. The beach and dune environment is vulnerable to change at all times. Where access to the coast has been provided in the past through private property, environmental deterioration in the form of dune blowouts and sand drift has often resulted. These problems are exacerbated when off-road vehicle use is not confined to defined access tracks.

The majority of roads in the conservation estate (such as Mandalay Beach Road and most of Black Point Road) are managed by DEC under the CALM Act and vested in the Conservation Commission. They do not have their own road reserve, but are in the surrounding conservation reserve. There are also roads and tracks on the conservation estate that have management access, as well as those that are closed (permanently, seasonally or temporarily) to the public.

A key constraint to the creation of an adequate road network is the need for road-making materials. These materials are also used for the construction of pedestrian access ways. Subject to the usual approvals, the development of sources of road-making materials in the study area is supported.



Coastline east of East Augusta looking east

roads should be undertaken as part of the implementation of this strategy to determine the relevance or likelihood of road construction based on current trends. Where unconstructed gazetted roads are inappropriately located due to environmental constraints, are likely to require excessive engineering works or construction costs, and do not serve a substantial community benefit, they should be formally closed. There is a requirement for all freehold property to have legal access and alternative arrangements will need to be made, with agreement from the landowner, prior to formal closure of any made or unmade road reserve.

Through the development of this strategy, the following roads have been identified as suitable for formal closure under the *Land Administration Act 1997*:

4.6.2 New and additional roads

This strategy supports a status quo position on road development and does not support the construction of new roads in the study area.

Construction of the new coastal road as proposed in *Roads 2020* would not be realistic and is not supported by this strategy because of the cost involved and the lack of demonstrated need. This strategy supports the status quo on roads and discourages the construction of new roads unless supported by appropriate justification (generally at the discretion of the relevant local government). Incremental sealing of existing roads that provide access for existing residents in the study area is encouraged on a needs basis, when economical, environmental and social factors offer justification and support.

4.6.3 Unconstructed gazetted roads

Where roads have been partially constructed to facilitate legal access to a parcel of freehold land, this legal access must remain, but a detailed review of all unconstructed gazetted

- **Johnston Road, East August/Scott Plain:** the unmade portion of this road south of the access point to lot 448 is heavily undulating and contains remnant vegetation. The construction of a road at this location would entail significant road construction costs and minimal community benefit.
- **Tattersall Street road reserve, East Augusta:** the unmade portion of the Tattersall Street road reserve affects the shell bed in East Augusta.

Recommendation 4.6.3a: As soon as formal public access is provided through lot 10, the unmade portion of Johnston Road reserve should be formally closed.

Recommendation 4.6.3b: The unmade portion of the Tattersall Street road reserve should be formally closed.

Recommendation 4.6.3c: A detailed assessment should be undertaken of all unconstructed gazetted road reserves and any reserves that are poorly aligned or on which it is unlikely that a road will ever be constructed should be formally closed.

4.6.4 Disabled access

It is important that any future accesses consider the provision of adequate facilities for disabled persons, including but not limited to road and beach accesses and lookouts.

4.6.5 No direct beach access for private vehicles

In general, the beach along precinct 1 is considered to be unsuitable for 4WDs. The beach sand is soft and variable with tides subject to fluctuation. Local residents report regular incidents requiring the rescue of stranded vehicles due to the absence of local emergency services. This strategy discourages direct vehicular access onto the beach. All coastal access points should be in the form of spur roads that terminate behind the primary dune at appropriate locations. Any variation to this should be assessed and determined under the *Control of Vehicles (Off-road Areas) Act 1978* at the discretion of the relevant shire.

Vehicular access to the beach in precinct 2 is addressed through DEC management of the conservation estate, as most of the precinct 2 land is included in national parks, and subsequently addressed by the relevant DEC management plan.

Recommendation 4.6.5: Future access roads to coastal areas in precinct 1 and non-Conservation Commission land in precinct 2 should terminate behind the primary dune, with pedestrian access only to the beach. Where possible, beach access for emergency vehicles only should be created.

4.6.6 Improved road construction

An upgrade of Milyeannup Coast Road and Woodarburrup Road is recommended to service visitors entering the national park from the west.

Subject to the appropriate environmental and planning approvals, the extraction of basic raw materials for road making is supported.

4.6.7 Traffic bridges

Constructing and maintaining vehicular bridges is expensive for both state and local government agencies. Where new bridges are proposed or existing ones are repaired and maintained, consideration of the infrastructure cost versus community benefit is required in conjunction with any environmental constraints or features of the site. All agencies should review their infrastructure budgeting processes to take account of the need to upgrade and replace ageing bridges.

The cost of construction and maintenance of bridges is considerable. There are several instances in the study area where bridges have passed their life span and remain in possibly an unsafe condition. The traffic using these bridges is often generated by visitors to the national parks, in addition to the permanent residents who live nearby. A cooperative approach between local government and DEC is required which recognises both tourism and local access needs in suitable road infrastructure investment.

4.6.8 Hardy Inlet crossing

Strong community opinion has been expressed both for and against a crossing over Hardy Inlet to connect East Augusta with Augusta. The option of construction of a bridge is presently unrealistic on the basis of community benefit and construction and maintenance costs. The retention of the reserve is recommended so this option may be further investigated and reviewed in the future as technology and community aspirations change.

Discussion on an alternative means of crossing the inlet includes the option of a vehicle barge, which may be more economically achievable even though it would require environmental assessment if it were to be considered.

4.6.9 Coastal access

Potential public coastal access nodes

Coastal access is a major issue of concern that requires consideration in the development of this strategy. It is particularly important to consider this issue carefully as any changes to the type of access provided in the region will



Figure 19a: Potential coastal access location - East Augusta/Scott River

definitely affect the level and type of use of that area. There is a general feeling among the community that the current level of access along the Augusta-Walpole coast could be improved for the following reasons:

- there is no public coastal access point between East Augusta and Black Point despite growing public interest in accessing this area for recreational purposes such as beach fishing and sightseeing;
- access to the coast in the study area is largely restricted to 4WD vehicles, except at Walpole and Windy Harbour (including Salmon Beach and Point D'Entrecasteaux), which limits vehicular access for most of the public;
- many existing 4WD tracks require maintenance and improved management; and
- a lack of public access has led to an increase in trespassing and creates liability and insurance issues.

In addition, numerous community members have expressed concern over the environmental damage caused by 4WD vehicles (such as track widening), particularly in popular areas such as Black Point. The following comments have been made:

- 4WD access on the coastal areas should be managed by designating 4WD areas (and non-4WD areas);
- the increased use of 4WD vehicles in Western Australia is placing pressure on existing 4WD tracks (for example, hundreds of 4WDs use tracks to access Black Point each day during busy periods); and
- the spread of tracks and the creation of new makeshift tracks by 4WD users require improved managements.

Providing legal public access to Augusta-Walpole beaches and coastline is a primary objective of this strategy. Currently, no legal public access to the Southern Ocean exists between East Augusta and Walpole outside the existing conservation estate in or adjacent to freehold land. Provision of access should be controlled and guided by appropriate planning to ensure that any resulting development is sustainable. For this reason, and in recognition of the

locality's dangerous coastline, remoteness, lack of infrastructure and historical coastal use and beach access, only a small number of locations are suitable for the provision of public access. In addition, the present remoteness of the area has assisted in reducing public demand for access; therefore, this strategy recommends minimal growth.

As the provision of public access to these areas will most likely be facilitated by some form of development and/or subdivision, careful consideration of proposed uses should be undertaken by local government and, where relevant, state agencies. For this reason the strategy does not propose to support any intensification of land use not already existing or proposed in an endorsed local planning scheme or local planning strategy for the life of the strategy.

In order to ensure controlled sustainable tourism development, this strategy recommends limiting tourism development in this area to addressing only presently-identified needs such as catering for existing informal camping or the introduction of limited camping. Any additional development, such as tourist chalets, should be formally assessed by the relevant shire in compliance with planning scheme requirements. The protection of visual amenity, by requiring all development to be set back outside visual lines from any public road, beach or off the coast, should address harsh environmental conditions and must protect the remote character of this area.

Further to this, the strategy only approves the provision of formed (not sealed) 2WD, and in some cases 4WD, access roads to a parking area in walking distance to the beach, and in some cases formalisation of existing commercial access to the coast (for example, commercial fishers). Individual lots may also require coastal access points to the beach, such as pedestrian access ways. These access points should be minimal, and shared access points between two or more lots is desirable. A detailed subdivision guide plan will provide more detail on the alignment, type and form of the required access points.

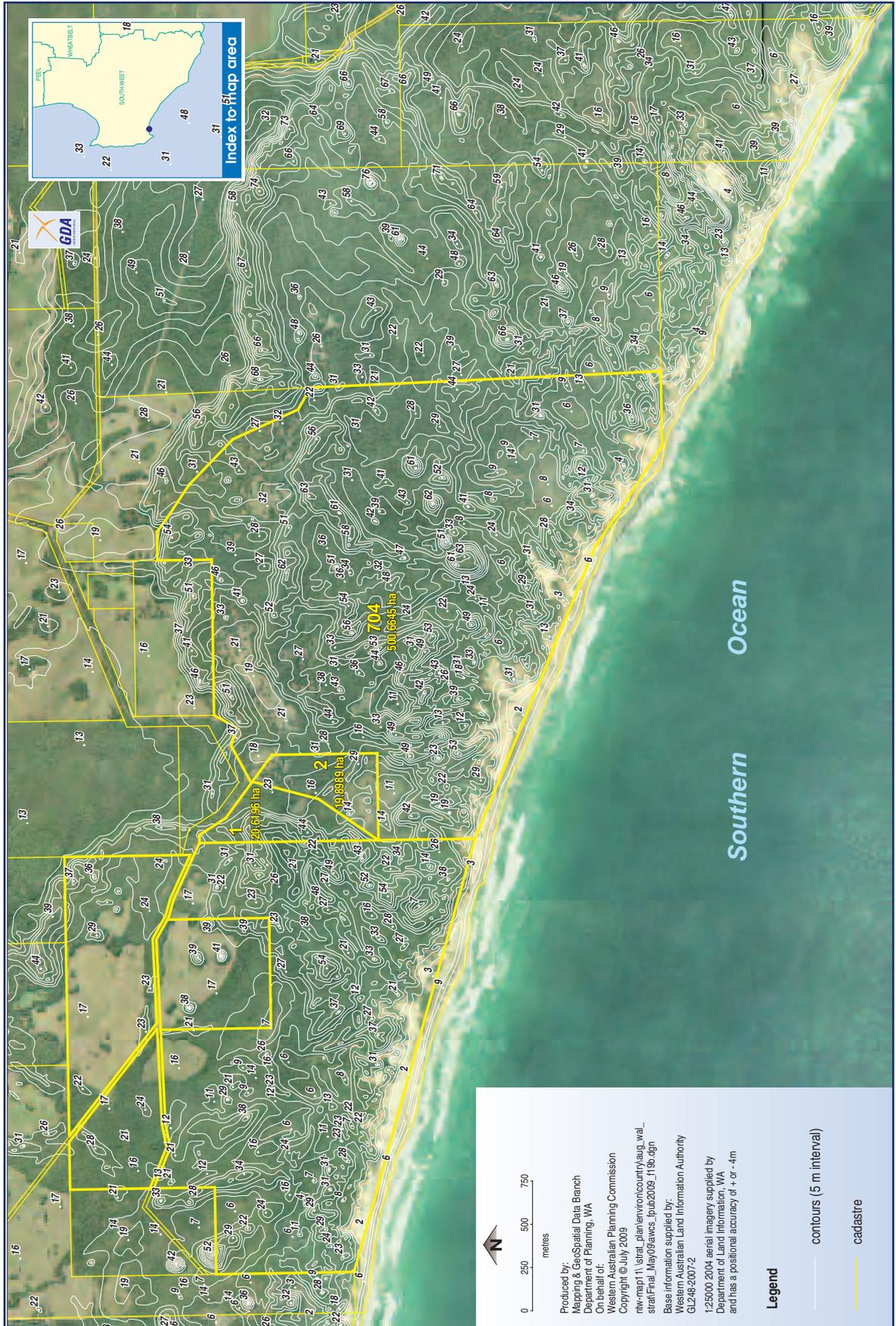


Figure 19b: Potential coastal access location - Milyeannup

The relevant local government and the WAPC, subject to the endorsement of a subdivision guide plan, may consider subdivision of the specific lot recommended for the provision of public access. The selected public coastal access nodes have not been assessed as suitable for rural residential, special rural or other forms of subdivision due to the lack of available services and infrastructure.

The steering committee has identified four locations in the study area at which to formalise public coastal access, in keeping with the objectives of the state coastal planning policy. Although four locations have been identified there may be other constraints that lead to perhaps only one of these access points being created during the life of this strategy. Figures 19a-19c show the specific lots identified as suitable for the provision of public coastal access. The four locations recommended for public coastal access are East Augusta; Milyeannup; the Lagoon; and White Point.

The future planning direction for these locations is discussed in more detail in the settlement hierarchy. This access is not intended to allow vehicular access to the beach but consideration of access for emergency vehicles is encouraged.

To ensure the proper and orderly planning of the identified public coastal access nodes, any future subdivision of these areas should address the rural conservation zone provisions in this strategy (section 6.6). The exact alignment of the future access roads should follow detailed assessment of the all relevant factors (topography, vegetation assessment) that will result in the best possible location for the road.

Construction of any future vehicular coastal access roads should terminate behind the primary dune with beach ingress and egress limited to pedestrians only.

4.6.10 Windy Harbour

Bitumen road access is available to Windy Harbour, with parking available behind the primary dune, and to nearby Salmon Beach. Boating access is also available for trailer-able craft.

4.6.11 D'Entrecasteaux National Park

Access in the D'Entrecasteaux National Park is intentionally restricted in order to manage and control the areas that are accessed by the public, as well as maintain a sense of naturalness and remoteness for visitors to this region. A major issue of community concern when the D'Entrecasteaux and Shannon national parks were established in the 1980s was that vehicle access through the parks to the coast would be progressively reduced over time. This concern still exists in the community today, particularly as access to a number of 4WD tracks in the park has been restricted and/or closed over the past two decades.

It must be acknowledged that road access throughout the park is particularly difficult to manage for a number of reasons. Some of the existing roads are constructed through sensitive landforms, infected by or susceptible to dieback, seasonally inundated, easily eroded, or cross indigenous sites. This necessitates limited access on these roads. In response to these issues, an access strategy was developed by the then Department of Conservation and Land Management.

In addition, the type of access provided affects the level and type of use of an area. DEC has planned access for the park on a continuum from pedestrian access to sealed roads for 2WD vehicles. Where vehicle access is indicated to remain, generally one good track or road to end-point destinations will be provided rather than multiple access roads and tracks. Before upgrading or improving access, planning and funding must also be available to establish end-point facilities that are able to cope with increased use. There is an opportunity to contribute to the proposed vehicle access strategy in the park as the most recent management plan for the park has not been finalised and is due to be released for public comment in the near future. Currently there is sealed 2WD access into the park via D'Entrecasteaux Drive.



Figure 19c: Potential coastal access locations - White Point and The Lagoon

4.7 Infrastructure

A summary of existing infrastructure is presented in figure 20 and is described in the following sections.

4.7.1 Power supply

East Augusta and the Scott River area

The main supply for the Scott River distribution network is from Western Power's Beenup substation just north of the corner of Payne Road and Scott River Road. This was constructed as a result of the establishment of the Beenup mine, which is now closed. The Beenup substation has only one transformer and one feeder circuit and is in turn supplied via a radial 132 kV transmission line. With the outage of either the feeder circuit, transformer or radial 132 kV transmission line, a supply must be provided from Western Power's Margaret River substation. The supply from Margaret River substation is limited due to its distance from the Scott River area. Margaret River substation is approximately 40 km to the north-west of Beenup substation. The main load for the Scott River distribution network is the Jangardup mine, approximately 45 km to the east of Beenup substation. Most of the other customers connected to the network are involved in primary production and use the network to supply power for pivot irrigation or just the farmhouse.

Windy Harbour

Windy Harbour is not connected to the power grid. Previous proposals for an aboveground option to connect Windy Harbour to the nearest link point to the grid at Northcliffe failed to gain the necessary approval because of its visual impact and risk of the spread of dieback. An underground option would be substantially more expensive and was considered uneconomic at the time. The Windy Harbour management plan concludes that the provision of reticulated power to the settlement is cost prohibitive as it would require an underground connection through the national park. There may be scope for a community power scheme to be provided on Nelson location I3304, subject to addressing cost,

management and visual impact issues. Any power supply needs to be designed and managed to not detract from the area's amenity, particularly in noise and landscape values. Where possible, the use of alternative energy sources is encouraged.

Walpole

Power to Walpole is supplied via a 22 kV transmission line from Denmark on a single radial feed (Denmark has a double feed from Albany). The single feed requires shutdowns for any maintenance. The current supply has no capacity to service growth in the area. Expansion of the town of Walpole, however small, will not be possible until action is taken to establish an upgraded power supply.

A number of different sustainable energy technologies are being developed by a range of companies in Western Australia; for example, wind, solar and biomass technologies. Hydro-energy is also used in WA, and wave power is currently under development in Australia. Wind is one of the cheapest renewable energy options in Western Australia and the south-west has an excellent wind resource.

The Augusta-Walpole coastline has the attributes required for successful use of wind energy and it is therefore important in the State's response to climate change. Locally, wind farming can provide significant sustainable employment with very little environmental impact. Although a wind farm typically has a 28-year lifetime and its building requires some land disturbance, such disturbance is small and the facility can be removed without significant legacy environmental damage. Proposals to develop alternative energy generation would be subject to the usual assessment and approval processes.

There has been one large scale proposal for a wind farm on the Scott coastal plain. This site, although not ideal in terms of wind generation, had the benefit of being close to the Beenup transformer site which would have allowed a quality link to the south-west grid. With the greater emphasis on sustainability and the need to mitigate against the impacts of climate change, further proposals can be expected for wind power generation around the Western Australian coast.



Figure 20: Infrastructure

Precinct I has been identified in Western Power's rural improvement program. This program, which is designed to run over four years, will undertake upgrades to improve the reliability of power supplies to all consumers.

This strategy encourages the use of alternative power generation in the region. The two most technically feasible sources are solar power and wind power. Wind power has greater potential to create contention because of its visual impact. During the community consultation processes that accompany such a proposal, it will be important for the community to collectively weigh up the potential long-term consequences of not managing greenhouse gas emissions against the visual impact.

Proposals for wind farm development should take into consideration the information provided in WAPC's *Planning Bulletin 67 Guidelines for Wind Farm Development*.

Recommendation 4.7.1a: Support the provision of reliable and adequate power supply to residents and businesses in the study area. Encourage alternative sources of power supply subject to their meeting planning and environmental approval processes.

Recommendation 4.7.1b: Proposed development in the study area should make every effort to maximise energy efficiency through the use of climate sensitive, passive solar and energy efficient design.

4.7.2 Water

Water supply and quality are extremely important factors to consider as part of the strategy. The south-west of Western Australia has experienced drought in recent times. In the summer of 2002-03, the water supply situation in the Perth region had become extremely serious, with dam levels falling below 20 per cent capacity. Proposals to extract water from the Yarragadee aquifer are being considered but residents in the study area have expressed their concerns about the ecological sustainability of such measures.

Generally, water supply in the study area is the responsibility of individual landholders, especially those outside gazetted urban areas. As this area has some of the highest rainfall in the state, water supply has not traditionally been a

problem but predictions of climate change and an associated decrease in rainfall will have an impact. Local governments are encouraged to review this during their development control assessment. Sufficient water must also be stored for fire fighting.

Windy Harbour has an adequate supply of potable water. The Shire of Manjimup undertook a groundwater study for Windy Harbour. The report defined the nature and extent of aquifers at Windy Harbour, evaluated the effect of groundwater extraction on wetlands and made a preliminary yield estimate. The modelled impacts on the environment are expected to be minimal.

The Walpole water supply scheme draws water from a weir on Walpole River which is treated at the nearby treatment plant and transferred to the service tank above the town. Water from this tank gravitates into the town reticulation. The Water Corporation has recently commenced investigations on future water supplies for Walpole.

The Water Corporation anticipates that an upgrade of the treatment and delivery capacity of water will be required, and sources of augmentation will commence in the short term. Monitoring of annual flow in Walpole River and Butler Creek is being undertaken to facilitate planning and scheduling of future upgrades.

Recommendation 4.7.2: Review development control standards to ensure best practice water use efficiency is achieved.

Except where public drinking water is supplied to local residents, as in the town of Walpole, residents in the East Augusta and Scott coastal plain are required to provide their own water from shallow groundwater, surface water or rainwater capture.

Windy Harbour

The shire currently provides potable drinking water at Windy Harbour via an existing reticulated water system, with source water from groundwater borefields in the adjacent D'Entrecasteaux National Park. Individual private bores and rainwater tanks in the leases supplement this supply. The current borefields and infrastructure in the national park have no formal tenure approval from DEC, although there have been informal agreements to allow

this water supply system to continue. The Shire of Manjimup is proceeding with a proposal to obtain security for this arrangement and will need to resolve issues of legislative compliance, environmental impact and sustainability prior to approval.

Walpole

The Walpole water supply scheme comprises a weir, emergency supply dam, transfer pumping stations, treatment plant, holding tank, ground level tank and a network of pipes. Water from Butler Creek (primary water source) and Walpole (River) weir is treated for colour and stored in a holding tank located at the treatment plant. From here it is chlorinated and pumped into the 2250 cubic metre ground level tank. Water from this tank gravitates into the town reticulation. The catchments for these water sources have not been gazetted as catchment areas, but their protection is currently recommended in the *Draft Walpole Weir and Butler's Creek Dam Catchment Areas Drinking Water Source Protection Plan*.



Walpole townsite and Walpole and Normalup Inlets

4.7.3 Sewerage

Neither East Augusta nor Windy Harbour is connected to centralised sewerage treatment systems. Depending on the age of the buildings, they rely on a mixture of either septic tanks or more modern alternative treatment units.

Walpole's scheme consists of two reticulation areas, two pumping stations and a treatment plant which has a capacity of 200 kilolitres per day. This is capable of servicing 335 connections. As at November 2002, there were 129 connections, which indicates that there is substantial spare capacity. Much of this capacity may already be committed to developments approved subsequent to this figure being obtained. Future upgrades of the wastewater treatment plant will depend on upgrades to Walpole's power supply. A planning and consultation process for the Walpole sewerage upgrade is under way.

With respect to a re-use capacity, works are under way for a tree lot irrigation system to be used as an alternative for wastewater disposal. This was started in 2004.

As the improper disposal of human waste can have severe environmental effects on receiving waters, it is important that this matter be appropriately regulated. The *Health Act 1911* provides the statutory background to local government regulations. All local governments have systems in place to provide assessments on the appropriate level of treatment. New developments should be encouraged to install the highest standard available on-site sewerage disposal facilities, such as aerobic treatment units and effluent disposal systems or alternative effluent treatment and disposal systems, to minimise inputs of nutrients to the environment and to protect environmental values.

Recommendation

4.7.3: New developments to install the highest standard available on-site sewerage disposal facilities.

4.7.4 Boating

Boating infrastructure in the East Augusta to Walpole coastal region is limited. Launching and mooring facilities

for recreational and commercial boats along this coast are mainly located at Flinders Bay, Hardy Inlet, Windy Harbour and Walpole. Boats are also launched from the beach at other more isolated locations, such as Camfield (Broke Inlet), or from relatively rudimentary boat-launching ramps (such as at Lake Jasper and Deep River). Walpole has five different launching areas for boats in the inlet. This appears to be adequate for the current demand for estuarine boating but provides no solution to the issue of ocean access. Similarly, ocean access across the bar at the mouth of the Blackwood River is difficult depending on the season, the current conditions, the type of boat, and the skill of the sailor.

The Hardy Inlet boating channel is a navigable channel through the Hardy Inlet linking Augusta to the Blackwood River. It was constructed in 1956 and undergoes infrequent dredging to maintain it. It is hydrographically surveyed every three years.

The steering committee received substantial comment on the inadequacy of facilities at Windy Harbour. Wind and wave conditions are often difficult and parking facilities are inadequate. Any proposed changes to the boating arrangements at Windy Harbour need to be considered in the context of the potential growth of the town. A range of different boating options have been considered as part of the boat ramp options study, but no decision has been made on this.

Windy Harbour is also an important location from a regional search and rescue perspective, as it is the only recognised landing place between East Augusta and Walpole. The provision of safe boating access along the entire south coast is problematic because of the strong, rough conditions. Any attempt to provide safe access requires major infrastructure at considerable expense, and fundamental alteration to the shoreline is considered unsuitable.

The Shire of Augusta-Margaret River recommended the construction of a small boat harbour just outside the study area, slightly to the south of Augusta. It is generally inaccessible, it is exposed and it is complicated by the extent of national park tenure. The study concluded that this boat harbour was required principally for safety reasons, given the variability of conditions at the Blackwood River mouth, and that enduring access to the ocean was unavailable elsewhere in the region. In recent times a number of boating incidents have caused the shire to renew calls for this project to be taken to the next stage. The DoT New Coastal Assets branch has been working with the shire and has provided technical assistance with site investigations. The shire has sought comment from the public on a site that may be suitable. It has recently submitted an environmental referral document to the EPA seeking assessment for a small boat harbour located at Flat Rock in Flinders Bay.

The south coast is problematic for the provision of boating facilities. At present there is no all-weather sheltered anchorage between

Busselton and Albany. The proposed marina at Flat Rock, Augusta would provide sheltered anchorage just outside the study area. Until this process is brought to a close it would be premature to make recommendations on additional sites.

Recommendation 4.74: No additional sites for boat launching should be approved until after the planning process for a small boat harbour at Augusta is finalised.

4.7.5 Telecommunications

The South West Development Commission sponsored the production of an analysis of telecommunications infrastructure in the whole South-West region. The report showed that compared with other rural areas around Australia, the region is relatively well serviced. The report also found that the community did not perceive that the level of infrastructure and access was satisfactory. This was particularly in regard to mobile phone coverage in the southern sections and the speed of electronic data services. The south coast is more remote and does not have the same level of service as that enjoyed in the remainder of the South-West region. New towers erected in Walpole and Northcliffe have significantly improved the mobile network, and television and radio reception in those areas, but there are still substantial sections of the study area without any digital services and very limited mobile coverage. Some areas along the beach, such as Flinders Bay to Augusta, have mobile coverage. The CDMA network has been phased out to be replaced by the Next G network.

Depending on the location chosen for telecommunications infrastructure, there may be significant issues relating to landscape impacts. Proponents and/or local governments should refer to *Visual Landscape Planning in Western Australia: A Manual for Evaluation, Assessment, Siting and Design* for guidance to mitigate landscape impacts from telecommunication towers, and *State Planning Policy 5.2 Telecommunications Infrastructure*.

Recommendation 4.75: Telecommunications should be upgraded generally, but specifically to facilitate emergency services response.

5 Settlement and coastal tourism hierarchy recommendations

5.1 Introduction

The previous chapters have supported an existing settlement and use hierarchy and detailed strategies and responses for issues that apply across the whole study area. This chapter provides guidance for the identified locations in the settlement and use hierarchy.

Although the hierarchy has been applied across the region, this has been done solely to show the regional context for the study area. For places at higher levels in the hierarchy that fall outside the study area, this strategy refers to other plans.

As this is a coastal strategy, its recommendations are particularly focused on the various interfaces between people and their use of coastal, marine and estuarine ecosystems.

Planning for Augusta should proceed as identified in the:

- *State Planning Policy 6.1 Leeuwin-Naturaliste Ridge*
- Shire of Augusta-Margaret River local planning scheme
- Shire of Augusta-Margaret River local planning strategy.

Planning for Nannup should proceed as identified in the:

- *Warren-Blackwood Regional Planning Strategy*
- *Warren-Blackwood Rural Strategy*

- Shire of Nannup local planning strategy
- Shire of Nannup local planning scheme

Settlement hierarchies are a recognised planning tool that provides a framework for future planning, provides certainty in land use and recognises the varying functions of settlements and related servicing and access requirements. A general settlement hierarchy does not exist for Western Australia, which is reflective of the diversity of landscapes, settlement histories and activities across the state. The document that comes closest in fulfilling that function is the *State Planning Strategy*, but because of its wide scope it does not have the level of detail required in this strategy. The hierarchy in this strategy reflects the broad designations of the *State Planning Strategy*; has been developed taking into account existing settlement and land

use; and recognises the influence of settlements located outside the formal study area.

The defined settlement hierarchy takes into account:

- the need to ensure the long-term integrity of the coastal environment;
- the desirability of greater economic diversity in the region;
- the key values and issues associated with the coastline (as described);
- the current informal or formal use of many of the nodes along the Augusta-Walpole coastline; and
- the existing and projected recreation and tourism demand in the area.

The hierarchy should inform decision makers undertaking local strategic planning and assessing development and subdivision proposals. The hierarchy therefore provides the planning context for the role and function of settlements and nodes along the Augusta-Walpole coast.

As per *State Planning Policy 3 Urban Growth and Settlement*, new settlements are discouraged throughout Western Australia due to associated infrastructure and servicing costs.



Entry to Windy Harbour

This provides guidance for the settlement hierarchy in that the urban development or growth should only be directed toward Walpole in the study area and to existing regional centres and district towns adjacent to the study area in the region. An objective of State Planning Policy 3 is:

‘to build on existing communities with established local and regional economies, concentrate investment in the improvement of services and infrastructure and enhance the quality of life in those communities’.

Furthermore, for the regions, the state planning strategy promotes the consolidation and expansion of existing settlements to make regional communities sustainable in the long term.

5.2 Regional centre

A regional centre generally has a population of up to 10,000 and provides significant residential, commercial, and retail uses for the wider region.

Expansion to cater for regional growth in population and land uses should be focused on existing regional centres. These centres have the highest level of infrastructure and provide a wide range of services, and are not always coastal. This includes the services associated with an urban population, government offices, and a wider variety of consumer goods and services than those offered at a local centre. Growth and expansion should be encouraged in the regional centres, and barriers to development should be removed or addressed.

5.2.1 Manjimup

Manjimup is located outside the study area. The *State Planning Strategy* designates Manjimup as a regional centre. Planning should proceed for Manjimup as identified in the:

- *Warren-Blackwood Regional Planning Strategy*
- *Warren-Blackwood Rural Strategy*
- Shire of Manjimup local planning strategy
- Shire of Manjimup local planning scheme

5.3 Local service centres

Local service centres provide for the daily needs of the local population as well as some government services, usually of a community nature, such as libraries and health services. In the study area and the wider region there is a range of local service centres which reflects the historical origins and the spread of population over time.

The *State Planning Strategy* designates Augusta, Nannup and Walpole as local service centres, with populations of up to 5,000. This strategy proposes the addition of Denmark, Northcliffe and Pemberton to this level of the hierarchy to reflect that these towns have community facilities, such as primary schools, and the range of services provided by local government.

Subject to the resolution of servicing and infrastructure constraints, expansion of the local service centres listed below is supported by this strategy:

- Walpole
- Augusta (out of study area)
- Denmark (out of study area)
- Nannup (out of study area)
- Northcliffe (out of study area)
- Pemberton (out of study area)
- Margaret River (out of study area)

5.3.1 Walpole

Walpole has a major function along this stretch of coast by virtue of its main road location and its accessibility to Denmark and Albany. Located roughly halfway between Denmark and Augusta, it has a major role to play as a service centre for residents and surrounding rural businesses, and also for the tourism industry. The creation of the Walpole wilderness area will strengthen the tourism focus in coming years. This is well recognised in the Manjimup shire’s local planning strategy, which is supported by this strategy.

Walpole, like the rest of the study area, has a fascinating history. Every effort should be made to conserve and interpret heritage at all levels of planning. The appropriate use and interpretation of heritage sites provides depth

of meaning to places for both residents and visitors alike, and is a key factor in drawing visitors. Because of its location on an inlet and the surrounding national park, Walpole has very high landscape value. Although limited growth may be accommodated and indeed is desirable from an economic point of view, careful attention needs to be paid to how that is handled in order to preserve the visual amenity of the town. Future expansion of the town will be subject to the availability and capacity of water and sewerage services and other community services.

Walpole has a limited town expansion area and is planned to remain an enclave in the surrounding national park servicing the tourist, recreation and leisure and agricultural industries. Negotiations are

continuing for the retention of a small portion of a parcel of Crown land to the east of the Walpole town to allow for future town expansion. Walpole is surrounded by highly sensitive natural environments which are held in high esteem by many in Western Australia. Particular attention needs to be paid to potential impacts on the estuaries from recreational use. Specifically boating is highlighted, as increased boating use leads to great demands for facilities and changes to natural systems. As mentioned previously, no new boating facilities are proposed for this area. Specifically, this strategy recommends that there be no artificial alteration to the inlet sandbar at the mouth of the Nornalup Inlet to facilitate boating.



Rest Point, Walpole Inlet

There are still some vacant lots available in the existing Boronia Ridge development. The final stage of Boronia Ridge is being redesigned and it will contribute to several years' supply of single residential lots. In the old townsite a reticulated sewerage system meant the development density could be increased in the western half of the residential area, which allows for additional units to be constructed on each lot or complete redevelopment. The Shire of Manjimup is now negotiating with DEC and the Department of Regional Development and

Lands on a large area of unallocated Crown land abutting the eastern edge of the existing residential area. Evaluation of the topographical constraints and biodiversity and landscape values will determine how much of that area may be suitable for residential uses and which parts may be more appropriately added to the park.

The local planning strategy mentions the desirability of a denser town centre. The provision of reticulated sewerage would enable the current density of R10 (average lot size of 1,000 sq m) to be upzoned. The state coastal planning policy encourages the concentration of development around existing centres rather than the creation of new centres. This strategy, in lending support for a modest upzoning of

Walpole, is in concert with the state planning policy. Additionally, assessments are under way of unallocated Crown land east of the town and its suitability for residential development.

It is recommended that the shire prepare a foreshore management plan for the areas of estuarine foreshore under their control, focusing on managing

the recreational impact of additional residents and visitors. Such a management plan should be developed jointly with DEC to ensure integration between the marine park, the surrounding national park and the local government reserves. Section 5.2 of *State Planning Policy 2.6 State Coastal Planning Policy* sets forth guidelines for the content of such a plan.

Recommendation 5.3.1a: Walpole town centre development density to be increased in line with the recommendations of the Shire of Manjimup local planning scheme.

Recommendation 5.3.1b: The Shire of Manjimup to prepare a management plan for those areas of estuarine foreshore under its control.

Recommendation 5.3.1c: The natural state of the Nornalup Inlet ocean entrance should not be altered to accommodate vessel traffic.

5.3.2 Northcliffe

Northcliffe is technically not in the study area for this strategy but during the process of developing the strategy it became apparent that Northcliffe has a key role to play. The relationship between Northcliffe and Windy Harbour is critical for managing coastal use. For reasons outlined later in this chapter, Windy Harbour is placed further down the settlement and use hierarchy, with higher order functions to be placed in Northcliffe.

As Northcliffe is at the intersection of Wheatley Coast Road and the Pemberton-Northcliffe Road, it is the gateway for visitors to the D'Entrecasteaux National Park and Windy Harbour. As this strategy does not propose the large scale development of Windy Harbour, Northcliffe is the recommended base for visitors.

The main constraints for further development in Northcliffe are related to drainage, power, water supply and wastewater management. This may limit urban expansion and the town's ability to act as a visitor base for the D'Entrecasteaux National Park. The Manjimup local planning strategy notes the need for a study of drainage systems throughout the whole town, in order to manage potential effects of urban development. This strategy supports such a study, as it would provide some clarity to both the shire and residents on future directions for development.

Northcliffe has been particularly affected by job losses in the timber industry, and some residents have had to leave the town in search of new employment opportunities. The town also has limited opportunities for the creation of new residential lots on land zoned for this purpose due to restrictions associated with a high watertable, drainage problems and lack of a reticulated sewerage system.

To provide future options for Northcliffe, the shire is now considering the prospect of creating residential lots on vacant land, and/or developing the former Bunnings/Sotico mill for tourist and/or residential purposes. Rural residential land is designated immediately north of the town adjacent to existing hobby farms where high quality remnant vegetation can be retained. Rural small holdings (from 4 ha to 40 ha) are planned on farming land west of town.

It is recommended that a structure plan to guide the development of Northcliffe as a long-term settlement and visitor gateway be undertaken.

Recommendation 5.3.2: In acknowledgment of its role as a gateway to the coast, it would be beneficial to develop a structure plan for Northcliffe that addresses all aspects needed to consolidate Northcliffe's role as this coastal gateway.

5.4 Coastal village

5.4.1 East Augusta

East Augusta (the eastern remainder of Augusta town) is on the eastern side of the Hardy Inlet, remote from Augusta. By virtue of its geographical split, East Augusta has a quieter low-key feel, which is its main appeal. Currently only residential development is permissible. Other holiday style developments must be advertised and approval is granted at the discretion of the Augusta-Margaret River shire council. The town has land titles that are yet to be developed. Development of existing titles will provide some impetus to growth while disallowing further development, and subdivision will ensure that important environmental features of the area, such as remnants of poorly reserved vegetation types and the Augusta shell bed, are not subjected to a large increase in use.

A picture of future community aspirations for settlement and development of the greater Augusta area (affecting East Augusta) is provided in the *Hardy Inlet Management Plan*. This strategy will consider these recommendations during its formulation. This plan considers:

- the Hardy Inlet's value for tourism purposes, bearing in mind that the population is expected to increase, which will require effective environmental management;
- the management plan requires long-term sustainable use and development as a strategic asset of the environment (social, environmental, economic);
- the principal fish breeding areas associated with Hardy Inlet include North Bay, Scott River basin, Swan Lake and the Deadwater;

- the Blackwood River and Hardy Inlet are considered to be under-used assets during non-peak periods;
- heavy use areas associated with peak holiday periods include Ellis Street, Point Ellis to Seine Bay, Molloy Island channels, the Sticks navigation channel and the Deadwater;
- the risk of flood damage is considered to be moderate and the relative capacity to manage those waters through Hardy Inlet is considered to be reasonable without loss or damage to the built or natural environment; and
- there are considerable public lands held as Crown reserve, with obligations on the responsible vesting authority to undertake consultation with and negotiations for the settlement of native title with representatives of the traditional custodians.
- augmentation with a management plan for Point Irwin through to the Deadwater and Swan Lake because the area is predicted to be subjected to future high impact;
- an audit of marine structures and navigation hazards with Hardy Inlet environs to define risk management and remedial management action;
- an audit of public and private jetties in the Augusta channel to include licence status, structural condition, periodic use, condition of fringing vegetation and water quality;
- native title requires consideration and resolution with respect to all future acts; and



Sunrise over East Augusta and the Hardy Inlet

The plan makes a number of recommendations, including:

- in the absence of further development (restricted sewerage system, residential development and land subdivision) the provision of a bridge access to East Augusta is unjustified;
- it is considered essential to undertake an environmental review of the Hardy Inlet/Blackwood River catchment (to the extent of the tidal marine water surge) to document flora and fauna assembly and species habitat sustainability;
- there should be collaboration between local, state and national government agencies together with private enterprise to procure an enduring environmental management framework that is localised as much as possible to Augusta;

- protection of the geoheritage site is required.

This strategy proposes maintenance of the current day use by tourists at East Augusta, cognisant of the limited infrastructure available in the town. Hence, the flow-on from this recommendation means a greater need to put into place specific strategies to ensure the long-term sustainability

of this area. The section relating to East Augusta makes a formal recommendation that a management plan be prepared for the area that addresses a variety of topics. The recommendation is reinforced in this section, as Swan Lake and the Deadwater are important day-use sites for Augusta residents and tourists to the area.

Recommendation 5.4.1a: Limit expansion of the East Augusta settlement to the existing zoned area.

Minimal servicing infrastructure such as formed (unsealed) roads, electricity and landline telephone is provided currently. Mains water and reticulated sewerage are presently unrealistic options for this location and, therefore, this strategy does not support the

expansion of East Augusta. It is recognised that there is no legal public access near the Hardy Inlet and, therefore, beach access for recreation, tourism and commercial purposes is required.

The *Augusta-Margaret River Coastal Management Plan* confirms that this area is unsuitable for further expansion through the following recommendation:

'the East Augusta Sector shall be retained as an isolated natural coastline area and Council shall continue to manage public use of the site so as to minimise access to, and use of, this portion of coast.'

Recommendation 5.4.1b: New developments, and extensions to existing developments, to have the highest standard effluent disposal systems available to minimise potential for adversely affecting the estuarine and marine environments.

Recommendation 5.4.1c: Ensure any future subdivision or development proposals do not compromise the geoheritage values of the Augusta shell bed. The remnant part of the Tattersall Street road reserve should be considered for formal closure under the *Land Administration Act 1997*, as road infrastructure development may threaten the shell bed.

5.5 Coastal holiday lease node

5.5.1 Windy Harbour

Windy Harbour has a long history as a place for low-cost, family focused holidays by the coast. The Windy Harbour reserve is under the management of the Shire of Manjimup and it does not contain any freehold titles. The remote location and environmental and servicing constraints at Windy Harbour confirm that the site is not suitable for long-term freehold titles for residential, commercial, tourism or other purposes.

The future planning for the reserve is guided by the *Windy Harbour Management Plan 2007-2017* which was prepared in 2006 on behalf of the Shire of Manjimup. Consultation was completed in April 2006 and the shire is currently considering submissions before re-

advertising and finalising the plan. The plan was developed with the aim of determining an appropriate scale of development and how this development should be managed. The plan recognised the unique environmental and social values associated with the area and made recommendations aimed at balancing these.

Windy Harbour is an important tourist and recreational focus for locals and visitors to the area. The local planning strategy of the Shire of Manjimup recognises its important strategic coastal location for both vehicular access and safe anchorage. Its future role will be guided by the findings of State-level planning (for example, the *Augusta-Walpole Coastal Strategy* and the *Warren-Blackwood Regional Planning Strategy 1997*), the local management plan and the ability to finance services for water, power and sewerage at an appropriate and sustainable level.

It is apparent that Windy Harbour is experiencing significant recreation and development pressure because of its coastal location, sealed road access, boat-launching ramp, holiday cottage accommodation and camping ground. Windy Harbour has the potential to expand but a number of significant issues, including, but not limited to, the provision of power supply, effluent disposal and rubbish disposal, require resolution. The *Windy Harbour Management Plan 2007-2017* examines the possibility of creating a limited number of new leases to generate revenue to fund other services and improvements at the settlement. Areas addressed by the management plan include realignment of entry and access roads for safety, relocation of the existing Windy Harbour waste disposal site, and the resolution of infrastructure issues. Other remaining recommendations revolve around retaining the character and experience of Windy Harbour.

Members of the community at Windy Harbour express differing views about the level of servicing (such as drainage, sewerage, water, electricity) appropriate for the area. While many acknowledge the need for some services to be upgraded, particularly drainage, there is concern that the introduction of services could lead to substantial increases in costs and charges and a potential loss in the character and amenity of the settlement.

The strategy supports the provision of a public power supply to Windy Harbour. It is understood that this issue is the subject of much debate among the community. In considering this strategy, the community should be aware that the decision to support the provision of power to Windy Harbour is based on the principle of equitable issue. All settlements throughout Western Australia are entitled to a safe and reliable source of power. Additionally, there are no technical or planning grounds for refusing to extend power to the settlement. It is generally accepted that reticulated power is unlikely to be provided in the near future and that instead of the town being connected to the south-west grid power supply, alternatives should be examined. Discussions between Windy Harbour leaseholders, the shire and a power provider may achieve a suitable power delivery method at a reasonable cost. In line with the vision of this strategy, it is recommended that alternative sources of power, such as wind power, be investigated further.

Drinking water for Windy Harbour is supplied from a borefield in the D'Entrecasteaux National Park. Arrangements between the council and DEC to secure and guarantee future water supplies incorporating land tenure, bore sites and infrastructure are being finalised and should be in place in mid-2007. The final agreement is expected to have conditions attached, one of which is likely to involve the monitoring of vegetation near the bore to ensure the water extraction is not adversely affecting the values of the national park.

The safe disposal of wastewater is also a critical issue. Currently, the disposal via septic systems means that the impact on groundwater is unknown. This needs to be quantified. The establishment of a baseline will then help guide decision-making. Until the disposal of wastewater is resolved to the satisfaction of the Department of Health and is within safe limits

for human and environmental health standards, no further approvals for the construction of new cottages should be allowed.

One of the primary attractions at Windy Harbour is fishing and boating. As discussed in section 4.74, boating safety is a major issue all along the south coast. Currently Windy Harbour is a base for volunteer sea search and rescue services. As the only open water access in the study area, Windy Harbour has a key strategic role to play. The Windy Harbour boat-launching ramp requires upgrading, primarily to provide better sea search and rescue facilities. Careful design work in consultation with the sea search and rescue volunteers and the community needs to be undertaken to ensure the least possible disruption to coastal processes.



Shacks at Windy Harbour

Windy Harbour has a unique built character, especially in the original section. This character is defined by the use of simple materials and style of construction. This gives Windy Harbour both a sense of difference and a sense of connection through time to its founders. It is important to ensure that this simplicity is not overtaken. It would be

ideal to prepare design guidelines to ensure that new development is in keeping with the general style of the settlement.

As Windy Harbour is envisaged to be primarily for holidaymaking and recreation, it needs to provide further facilities to enable this. An example might be shade shelters for picnickers. One of its important features has been its affordability for families. Detailed planning for the settlement should include a strong focus on camping, as this is a very affordable proposition for families. The development of day-use facilities to support day trippers based in Northcliffe is also desirable. The type and location of such facilities is more appropriately handled at the site management level, rather than at the regional strategic level.

Recommendation 5.5.1a: No expansion of Windy Harbour beyond its current boundaries.

Recommendation 5.5.1b: The current tenure arrangements between the Shire of Manjimup and individual leaseholders are to be retained in their existing form. No freehold subdivision of land is to be permitted.

Recommendation 5.5.1c: Initiate a groundwater monitoring program to determine the effect on vegetation of watertable drawdown in the national park. Implement a management approach as soon as possible (negotiations between the Shire of Manjimup and DEC regarding water lease conditions are progressing).

Recommendation 5.5.1d: New development proposals to be in accordance with the Windy Harbour management plan and should be reviewed with respect to onsite effluent disposal.

Recommendation 5.5.1e: The existing boat-launching ramp at Windy Harbour to be maintained and investigated for possible upgrade to meet the requirements of the sea search and rescue group.

Recommendation 5.5.1f: Prepare a set of building character and design guidelines for Windy Harbour in consultation with the community. Matters to be addressed include form, scale, design, colour, and materials for new and existing developments including renovations of, and additions to, existing structures.

Recommendation 5.5.1g: Future tourist development should be of a small scale, with a focus on affordability for people with low incomes. Preference to be given to camping facilities.

5.6 Coastal recreation nodes

These nodes were identified through background research, the input of the community reference group and the direction of the steering committee. The coastal recreation nodes do not have any potential for freehold subdivision except where it complies with existing WAPC policy, but many are located in existing conservation estate.

For this reason, public access, safety, recreational infrastructure, vehicle parking and environmental management are the main aspects to consider in future planning. This should be the basis for further detailed planning for individual nodes.

This strategy notes the recreation sites provided by other agencies, particularly DEC in the D'Entrecasteaux National Park and the Walpole-Nornalup National Park, which are managed through statutory management plans created under the *Conservation and Land Management Act 1986*. The sites for overnight accommodation within the parks are listed in section 5.6.1. DEC is currently reviewing the Shannon and D'Entrecasteaux national parks management plan, and some of these sites may change.

5.6.1 Camping and day use

Overnight accommodation sites are intended to be low-impact small sites to cater for the overnight or weekend camper, with no provision for a permanent residential population. No freehold subdivision of land is encouraged at these nodes. They need to provide a minimal level of infrastructure (mainly associated with adequate basic services of water, waste treatment, power) which is directed to minimising environmental impacts from camping; for example, interpretive signs, appropriate toilet facilities or arrangements for firewood supplies to prevent clearing. These matters should be addressed in a foreshore management plan, which is required under the provisions of *State Planning Policy 2.6 State Coastal Planning Policy*. It is acknowledged that overnight accommodation sites will also encompass day-use characteristics. The Manjimup shire is seeking power to lease with a view to allowing overnight accommodation at Camfield.

Black Point (in national park) – Camping area. Access by 4WD. A mostly natural setting with low-key facilities. Has day-use facilities, camping, vista point, surfing and fishing. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Lake Jasper (NP) – Camping area. Access by 4WD. A mostly natural setting with low-key facilities. Has camping, boating, swimming, informative signage and day-use facilities. The Gingilup-Jasper wetland system is listed as nationally important and is an example of a near-pristine extensive system of freshwater lakes, marshes and shrub swamps. Lake Jasper is the deepest freshwater lake in the south-west, and it is a major nursery for native freshwater fish species. There are a number of registered indigenous heritage sites. Lake Jasper is of particular archaeological and cultural significance to Aboriginal people. Numerous Aboriginal stone artefacts are found on the lake bed, and a number of these sites are at the edge of the lake and are vulnerable to disturbance and changes in water levels. Recreation focused on water bodies and scenic viewpoints.

Jasper Beach – Beach camping and basic campsites. Access by 4WD. A predominantly natural area with basic facilities.

Donnelly River mouth – Camping area. Access only by boat. A mostly natural setting with low-key facilities. Has built and camping facilities. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Yeagarup Beach (NP) – Beach camping. Access by 4WD. A predominantly natural area with basic facilities. Has camping and fishing on beach, day-use facilities and toilets at Lake Yeagarup. Camping is also available at Leaning Marri, in close proximity to Lake Yeagarup. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available. Yeagarup beach block (part of the Yeagarup Beach dune system) has been identified as a candidate wilderness area – the final management plan will determine if it will be gazetted. Illegal use of off-road vehicles occurs through the park.



Broke Inlet

Warren River mouth (NP) – No formal camping, but camping and fishing do occur on the beach. The Warren River provides access by canoe to parts of the park that are otherwise inaccessible. There is only 4WD vehicular access to the Warren River mouth.

Malimup – Beach camping. Access by 4WD. A predominantly natural area with no facilities. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Gardner River (NP) – Camping area. Access by 4WD. A concentrated area of modified environment with a natural background with basic facilities. Has camping at mouth, built facilities and walks along river. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Coodamurrup (NP) – Beach camping. Access by 4WD. A predominantly natural area with basic facilities. Camping and fishing. Also has Coodamurrup shack and built accommodation.

Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Fish Creek (NP) – Basic camping. Access by 4WD. A natural environment with a range of facilities, including camping and single squatters' shacks. Has a number of registered indigenous heritage sites. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Camfield Reserve and Broke Inlet (reserve under shire management) – Camfield reserve provides built accommodation (developed shacks) and camping with 2WD access on a formed gravel road. The Broke Inlet wetland system is listed as nationally important and provides all the lifecycle requirements for populations of the endemic black-striped

minnow, salamander fish and Balston's pygmy perch. Both the reserve and inlet have a number of registered indigenous heritage sites. Recreation activities focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreational opportunities are available. Broke Inlet is the only estuary in Western Australia with an almost fully forested catchment, which is of enormous value to science for its ability to act as a potential benchmark to monitor change.

Given this critical role, it is important that any development abutting the inlet be to the highest possible standard. The threat of fire is high and a fire management plan should also be developed for this site.

Currently there are squatter shacks on the reserve, and this strategy supports the implementation of the state squatter policy. As part of the removal of squatter shacks, a reserve plan needs to be developed which would plan for the future recreational use of the reserve and prescribe measures to be taken to mitigate any impacts on the estuary.

The strategy recognises Camfield reserve and Broke Inlet as a valuable recreational resource.

Recommendation 5.6.1a: A marine reserve over Broke Inlet will be supported if developed and vested in the Marine Parks and Reserves Authority.

Recommendation 5.6.1b: A site plan for the Camfield reserve should be prepared to address:

- preferred location, type and volume of low-impact tourism;
- level of support facilities required;
- tenure and jurisdiction;
- fire, weeds and other threatening processes;
- visual amenity and blending of facilities into the reserve; and
- protection of vegetation and water quality.

Banksia Camp (NP) - Camping area. Access by 4WD. A mostly natural setting with low-key facilities. Built accommodation (developed shack), fishing and camping. Recreation activities

focused on coastal areas and the park's rivers – areas of high scenic value and where a combination of recreation opportunities are available.

Long Point (NP) - Camping. Built accommodation (basic three-sided shelter on the Bibbulmun Track) and walking. Mostly natural setting with low-key accommodation and facilities.

5.6.2 Day use only

Day-use sites recognise areas that are valued for particular characteristics - for example, good swimming area or excellent views - but are not suitable for overnight use due to their sensitive environment. Major day-use sites should provide a lower level of facilities than an overnight site but should still be designed to manage human impact in a sustainable way. An appropriate level of management should be provided by way of a foreshore management plan to ensure sustainable use of the area.

Swan Lake and the Deadwater

Swan Lake and the Deadwater are already highly popular sites for recreation. These are much used, especially during the summer holiday season. Their proximity to Augusta and East Augusta means that this level of use is unlikely to diminish.

The Deadwater and the part of Swan Lake in public ownership, which is already much used by residents and visitors, requires a detailed level of planning for it to be sustainably managed in the long term. It would also be ideal to consolidate the whole chain of water features into one public reserve. The draft boundary for the proposed Geographe Bay and proposed Capes marine park plan includes the Crown land portion of Swan Lake and the Deadwater.

Recommendation 5.6.2a: Consolidate the Deadwater and Swan Lake into one reserve vested in the Shire of Augusta-Margaret River or DEC for conservation and recreation. A decision on the most appropriate body for vesting may be assisted through a study on the biodiversity values and recreational potential of the area.

Recommendation 5.6.2b: Undertake stakeholder consultation and prepare a management plan for the Deadwater and Swan Lake which addresses maintenance of ecological integrity, tenure and management, and impact of recreational use.

Mandalay Beach (NP) – Basic shelter. 2WD access on formed gravel road. Beach access by walking. A mostly natural setting with low-key accommodation and facilities. Recreation activities are focused on coastal areas of high scenic value and where a combination of recreation opportunities are available.

Point D’Entrecasteaux (NP) – Access via a sealed 2WD road. Facilities include wheel chair access, vista points and an information bay. Walking trails are provided along the coast with access to the beach.

Salmon Beach (NP) - Access via a sealed 2WD road. Facilities are provided for general day use, such as vista location, picnic areas and ablutions. Access to the beach is provided for walking and surfing.

Mt Chudalup (NP) – Access via a sealed 2WD road on the way to Windy Harbour. There is a walk trail from the picnic and barbecue site to the summit.

Donnelly boat landing (NP) – Located on the Donnelly River with 2WD drive access provided on an unsealed road. Recreational activities focus on the river and surrounding natural environment. Facilities include boat access location, picnic areas and ablutions.



Point D’Entrecasteaux looking towards Windy Harbour

5.7 Proposed coastal access locations

Currently there is no legal public access to the coast between East Augusta and Black Point. Some coastal users gain access to the beach through private land by agreement with landowners, but increasing demand for coastal access has resulted in a rise in unauthorised and unmanaged access to the coast with public liability implications for landowners seen as a significant issue.

The identification of environmentally acceptable coastal access locations and routes is a major issue for resolution in this strategy. Strategic analysis of the coastline in the western portion

of the study area has resulted in four locations being proposed as potentially suitable for public coastal access to satisfy increasing community and tourist demand for legal access to the coast between East Augusta and Black Point. The identified locations of Milyeannup and White Point have been used for informal camping for years through evolving recreational trends, and

are suitable for public access locations due to the favourable local conditions. The number of coastal access nodes needs to be kept to a minimum to retain wilderness areas and minimise the inherent dangers and management implications associated with the coastal area. Further details on the identified locations can be seen on the maps in figures 19a- 19c.

Formal public access to the coast will assist reducing indiscriminate illegal access and associated environmental degradation and management implications. It is envisaged that the four coastal access locations will also allow for some form of low-key tourism facility, possibly chalets or camping, on sites set well back from the coast and in locations that satisfy environmental and other development criteria referred to in section 6.6.

It is anticipated that provision of coastal access in the identified locations will be facilitated through subdivision. It is also likely that a more substantial foreshore reserve will be required to accommodate any infrastructure or amenity that accompanies the access point (section 4.4.10). Developers of these locations will be expected to provide the access road and associated infrastructure including, but not limited to, car parking and vehicle management infrastructure, fencing, signage or tourism facilities, all in accordance with an approved coastal management plan. Greater subdivision potential is subject to further restrictions above and beyond those applicable to all lands in the rural conservation zone, as set out in section 6.6.

Recommendation 5.7: Prior to development and/or subdivision in an identified coastal access node, a detailed subdivision guide plan should be prepared to address the issues identified in section 6.6.

5.7.1 East Augusta/Scott River

After taking into account features of the coastal land use plan and reviewing historical informal beach access, the vicinity of East Augusta/Scott River has been identified as a suitable public coastal access location. This location, shown in figure 19a, is seen as one of the most suitable future coastal access points by virtue of its proximity to the town of East Augusta, the existence of cleared land and suitable topography.

Because of the fragile and ecologically important wetland system near this proposed coastal access location this site is suited to day use only.

Recommendation 5.7.1: Should lot 10 (Southern Shores) be the subject of an application to develop or subdivide, ensure that the provision of public access (probably along the existing track) is considered during the assessment process.

5.7.2 Milyeannup

This area, shown in detail in figure 19b, is near the junction of Milyeannup Coast Road and Woodarburrup Road. The locality of Milyeannup has been identified as a potential coastal access

node as it is roughly in the centre of precinct 1, and because of the existing and potential surrounding land uses and its potential for low-key accommodation.

Further assessment through a coastal management plan will determine whether Milyeannup can support some low-key tourism facilities or is better suited to day use only.

No subdivision of the coastal access location at Milyeannup will be supported until the exact location of the coastal access road, associated infrastructure, cost and land contributions are resolved, because a number of privately owned lots have been identified as having potential for a coastal access road.

Recommendation 5.7.2: Should lots 1, 2 or 704 (Milyeannup) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.

5.7.3 White Point

White Point is a well known and highly valued recreation spot along the coast. Shown in figure 19c, it has its origins as a camping spot for pastoralists. Currently, access to the point is by private arrangement with the landowner.

The potential for low-key, nature-based tourist developments on the freehold coastal land to the west of Black Point was formally recognised in the Warren-Blackwood regional planning strategy in 1997. The potential exists for low-intensity developments complementary to D'Entrecasteaux National Park, such as chalets, camping grounds, and caravan parks on private land, provided the vesting is resolved and access to and servicing of lots can be achieved. Any development should only be permitted on the proviso that it will not have a detrimental effect on landscape values and will not require modification of flora and fauna conservation values through clearing, including for access fencing and fire protection purposes.

It is envisaged that White Point will become a publicly accessible recreation node that provides overnight facilities. This should primarily be in the form of camping, in keeping with its current and historic use and feel. A small number of chalets to cater for those with mobility issues or who have young families is also considered appropriate.

The location of any development or tourist facilities will need to be the subject of detailed planning. There is some concern about the need for clearing to provide a site of adequate size. Although from the visitors' perspective, a site amid native vegetation provides a more beautiful experience, from a planning perspective adequate thought needs to be given to the safety of visitors and campers in the event of wildfire.

Recommendation 5.7.3: Should lot 100 (White Point) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.

Recommendation 5.7.4: Should lot 2 (the Lagoon) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.

5.7.4 The Lagoon

The Lagoon, located between White Point and Milyeannup (figure 19c), is a sandy basin protected by a solid reef line extending approximately 50 m offshore and running parallel to the coast for several hundred metres. With depths up to about four metres, it is used for swimming, fishing and anchorage for small- to medium-sized boats during favourable conditions.



Augusta-Walpole Coastal Strategy Steering Committee at White Point

Strong currents may occur at each end of the lagoon during high tides and larger swells. Currently, access to the Lagoon is through private land, by arrangement with the landowner.

As the Lagoon appears to provide a suitable recreation spot, it is recommended that 2WD access be provided. It is recommended that access be via lot 2, and development be permitted only if it does not adversely affect landscape values and flora and fauna conservation values through clearing, including for access fencing and fire protection purposes. The exact location of the coastal access road, plus additional recreational facilities, will be detailed in a site specific coastal management plan or foreshore management plan.



6 Subdivision of freehold land in the strategy study area

Subdivision is the division of land to create new lots and it requires the approval of the WAPC, which uses various policies to ensure subdivision is carried out in a manner that represents sound planning and is in the best interests of the entire community. Subdivision in the study area is currently constrained by the lack of management of unallocated Crown land that abuts the coast. Historically the WAPC has refused subdivision applications on the grounds that intensification of population in the area would lead to greater use of the coastal zone, and that it would be unwise and unsustainable to allow this without proper management. The WAPC recognises that no organisation can be compelled to accept the responsibility for management. Until such time that management of unallocated Crown land is determined, the scheme provisions in section 6.6 of this strategy cannot be adopted and, therefore, the WAPC may continue to refuse subdivision.

The land in the study area currently comprises a number of lots of various sizes ranging from tens of hectares to hundreds of hectares. Due to the instability of the coastal dunes and the presence of significant environmental constraints, there is limited opportunity for subdivision of these lots. Subdivision proposals for suitable areas will be considered where they can demonstrate compliance with the following requirements.

6.1 Subdivision limitations

Subdivision and the subsequent creation of lots can have a negative impact on the environment, including the clearance of vegetation for building envelopes, access and firebreaks, increased traffic movements and fragmentation of vegetation. Subdivision will be supported only when it clearly will not compromise the highly valued environmental and landscape qualities of the Augusta-Walpole coastline.

The number of new lots created in the study area should be minimal to avoid creating an unsustainable new settlement or community, with demands for additional services and infrastructure, including health and education facilities that will not become available at these locations in the foreseeable future. *State Planning Policy 3 Urban Growth and Settlement* promotes the consolidation and expansion of existing settlements to make regional communities sustainable in the long term. This is to ensure that the State and local governments are not pressured in the short-to-medium term to provide additional services to these remote coastal areas, placing further strain on already limited resources.

Conservation and enhancement of the outstanding environmental and landscape values of the Augusta-Walpole coastline are strongly supported by the community and visitors to the area, and they are among the primary objectives of this strategy. If subdivision and further development does take place in the study area, it is vital that it not compromise the values of the coast and result in environmental degradation. It is also important to avoid the creation of new rural settlements that may conflict with existing surrounding land uses.

Subdivision and development adjacent to a marine park may also have adverse impacts on marine conservation values. Potential impacts include:

- increased recreational pressure on the marine environment;
- requirement for additional infrastructure related to sea use and associated planning issues and;
- indirect sewage disposal in the marine environment affecting water quality;

Recommendation 6.1: Ensure that subdivision and development of land does not impact on marine conservation values, particularly where these adjoin or are near existing or proposed marine parks and reserves.

6.2 Potential subdivision benefits

Although subdivision is often negatively perceived as having an adverse effect on environmental and landscape values, if well planned, subdivision can offer the following environmental or recreational benefits to an area:

Public coastal access: Subdivision can help to facilitate the creation of new authorised public coastal access locations.

Foreshore reserve creation: For lands abutting the coast or rivers, State Government policy requires an adequate foreshore reserve to be ceded free of cost to the Crown at the time of subdivision or development. The past practice of retaining foreshore reserves in public ownership through ceding at the time of subdivision or development has been upheld in court when challenged. Creation of this foreshore reserve can assist in vegetation conservation, protection of ecological values and creation of recreation areas.

Conservation: The subdivision process may provide encouragement for landowners to apply conservation covenants to protect the nature conservation values of their land. Conservation covenants can be created under the *Soil and Land Conservation Act 1945*, the *National Trust of Australia (W.A.) Act 1964*, or the *Transfer of Land Act 1893*.

A conservation covenant is a voluntary, legally binding agreement that has provisions restricting activities that might threaten the land's conservation values. The conservation covenant is individually negotiated between DEC and the landowner, and aims to maintain the conservation values of the bushland while allowing for flexibility to reflect the landowner's wishes for the land.

Conservation covenants may provide benefits such as tax concessions, rate relief, ongoing conservation advice and a sense of satisfaction for the landowners, knowing they are protecting an area of natural bushland and its associated wildlife for the long term.

The subdivision process may also provide a means for applying a restrictive covenant to the land. A restrictive covenant restricts the landowners' use of the land by prohibiting

activities such as clearing land, grazing stock or keeping certain pets. A restrictive covenant is registered against the certificate of title and is transferred with the land to any new owner.

Reservation of environmentally significant areas: Subdivision can potentially allow for areas of high environmental or recreational significance to be brought into public ownership and placed in secure conservation reserves for the future. Consolidation of all of Swan Lake (in the western end of the study area) and associated wetlands into one reserve is an example of a desirable conservation outcome that may be possible through subdivision.

Clustered development: The clustering of development created as a result of subdivision can provide an alternative arrangement whereby, for example, high conservation areas and unstable landforms can remain unaffected by subdivision and development.

The advantages of a clustered arrangement of subdivision may include:

- reduced fragmentation and dispersed development across the landscape and opportunities to retain large continuous natural areas and associated conservation values;
- shared service provision;
- improved infrastructure and access provision;
- improved fire and emergency services management; and
- restriction on the spread of weeds, disease, and feral animals.

Land or farm management: Amalgamation and re-subdivision of adjoining properties to follow natural or man-made boundaries may allow for an improvement in farming operations and more efficient land management.

Community care: With increasing population in an area comes the potential for the creation of community groups with objectives that enhance and protect the surrounding natural area into which they moved.

6.3 Zoning

The *Warren-Blackwood Rural Strategy* identifies freehold land in the study area as either agricultural land or land worthy of landscape protection. The rural strategy provides a high level of guidance on the circumstances in which the WAPC may approve the subdivision of rural or agricultural land. The *Scott Coastal Plain - A Strategy for a Sustainable Future* shows that the western end of the study area has locations that should be zoned for agriculture, and that other areas are more suited to being zoned rural landscape and conservation.

The Augusta-Walpole Coastal Strategy confirms the direction of past planning documents in delineating areas of high agricultural value from those that are more appropriately zoned for conservation, and recommends land be zoned appropriately in local planning schemes as either agriculture/priority agriculture or rural conservation (or similar) as shown at figure 21a.



Augusta-Walpole Coastal Strategy Steering Committee at Woodarburrup Spring

Recommendation

6.3a: Land in the Augusta-Walpole Coastal Strategy study area should be rezoned rural conservation (or similar) as per the *Warren-Blackwood Rural Strategy* and the Scott coastal plain strategy.

Rural/agriculture zone

The subdivision of agricultural land is to have due regard to the requirements of the *Warren-Blackwood Rural Strategy* and all relevant policies of the WAPC.

State Planning Policy 2.5 Agricultural and Rural Land Use Planning outlines a presumption against further subdivision of rural land for non-agricultural purposes. This policy highlights the need for proper settlement planning, protection of agricultural land, supporting infrastructure for new communities and the need to protect sensitive environmental areas.

Development Control Policy 3.4 Subdivision of Rural Land presently guides subdivision for rural, conservation or specific purposes.

Recommendation 6.3b: Productive agricultural land in the Augusta-Walpole Coastal Strategy study area is to be protected from alternative land uses that threaten its value. Protection of agricultural and rural landscape values will be a significant factor in the determination of planning applications and proposed changes in land use.

Rural conservation zone

This strategy supports a change in zoning of coastal lands to rural landscape protection as recommended by both the Warren-Blackwood

Rural Strategy and the Scott coastal plain strategy (figures 21a and 21b) but in recognition of issues broader than just landscape protection and acknowledgment of the continuation of existing rural uses, a more appropriate title for the zone is rural conservation.

The Scott coastal plain strategy designated this area for rural landscape and conservation in

recognition of the fragile dune system along the coast, exposure to the Southern Ocean storms, the low agricultural potential in the dunes, the attractive and varied coastal heath and woodland vegetation and the presence of a number of rare and endangered species.

Objectives of the rural conservation zone

The *Warren-Blackwood Rural Strategy* established this zone with the primary objective of protecting and enhancing the intrinsic landscape, environmental and cultural values of the area. Other zone objectives are to:

- ensure protection of the primary/secondary dune system via the control of clearing of natural vegetation and control over the use of dune blowouts that form part of the dynamic natural coastal system;

- 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 natural areas, including naturally vegetated or non-vegetated areas such as water bodies (generally rivers, lakes and estuaries), bare ground (generally sand or mud) or rock outcrops, and biodiversity;
- allow for low-key tourism or similar developments where these are not incompatible with or detrimental to the primary objective of the zone;
- consider development that is compatible with, and will enhance, the landscape and environmental qualities of the locality; and
- provide an opportunity to offset development and subdivision with environmental enhancement and protection of significant environmental features through actions such as ceding land that has high biodiversity values and foreshore areas to the Crown, fencing and revegetation.

Areas to be zoned rural conservation

As shown on figure 21a, areas to be zoned rural conservation are located throughout the study area. These include the following areas.

- Freehold lots along the coastal strip between East Augusta and Black Point and to the south of the Scott River.
- Freehold lot/s and a pastoral lease on the coast between Black Point and the Donnelly River mouth were also identified in the Scott coastal plain strategy. They have similar characteristics to the lots to the west of Black Point, are surrounded by the D'Entrecasteaux National Park and have restricted road access.
- Freehold lots at Sandy Peak and Malimup Spring (to the north-west of Windy Harbour) also have similar characteristics to the lots to the west of Black Point, and are isolated pockets in the national park with restricted road access.

- Isolated freehold lots set among attractive forested and river foreshore areas in the Walpole-Nornalup National Park have been zoned to minimise their potential impact on the surrounding national park landscape and environmental values.

6.4 Planning units

Land identified for rural conservation is located in three of the four Warren-Blackwood Rural Strategy planning units in the study area; Scott, Donnelly and Shannon (figure 21a).

Applications for subdivision are to be considered against the objectives of the rural conservation zone, the recommendations applicable to each planning unit, and the provisions outlined in section 6.6.

6.4.1 Scott

The *Warren-Blackwood Rural Strategy 2004* states that:

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 40 ha 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 (that is, south of the river) and the required infrastructure has been appropriately upgraded.

This strategy supports limited subdivision in the Scott planning unit where it is consistent with the subdivision objectives outlined above. Subject to the resolution of vesting of coastal unallocated Crown land, subdivision of lands in this planning unit will need to satisfy the requirements for subdivision outlined at section 6.6.

Recommendation 6.4.1a: Land should be zoned rural conservation in the Shire of Nannup local planning scheme and the Shire of Augusta-Margaret River local planning scheme as shown in figures 21a and 21b.

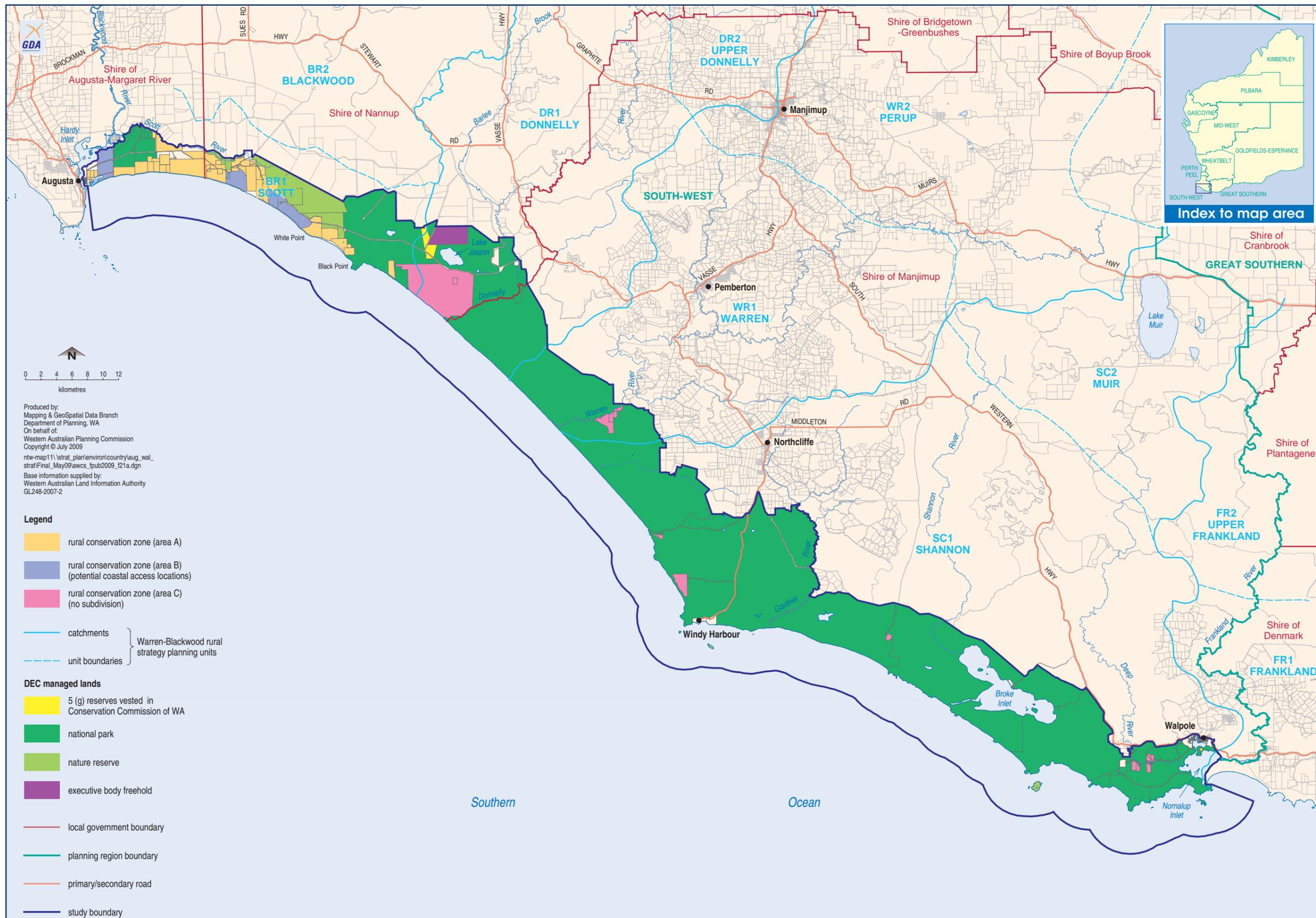


Figure 21a: Land to be zoned rural conservation

Recommendation 6.4.1b: Subdivision and development of lands in the rural conservation zone (Scott planning unit) is to be considered in accordance with section 6.6 of this strategy.

6.4.2 Donnelly

The *Warren-Blackwood Rural Strategy 2004* states that:

'No further subdivision permitted, except where this is specifically provided for in the finalised Augusta-Walpole Coastal Management Strategy.'

This strategy confirms the position that further subdivision in the Donnelly planning unit is not supported. This will assist in maintaining visual landscape integrity, minimising environmental degradation through reducing pedestrian and vehicular movements in the area and assist in achieving the ultimate goal of amalgamating coastal lands in this zone into the D'Entrecasteaux National Park.

Recommendation 6.4.2: Subdivision in the Donnelly planning unit will not be supported.

6.4.3 Warren

The *Warren-Blackwood Rural Strategy* has not designated any land in the Warren planning unit as rural landscape protection. This zone is predominantly state forest and national park, with some small freehold lots.

6.4.4 Shannon

The *Warren-Blackwood Rural Strategy 2004* states that:

'Subdivision of existing lots in the area between Walpole and Broke Inlet down to a minimum lot size of 40 ha 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 Augusta-Walpole Coastal Management Strategy.'

The Augusta-Walpole Coastal Strategy supports rezoning of those lands identified in the *Warren-Blackwood Rural Strategy* as suitable for rural landscape protection zoning. It is noted that the Shire of Manjimup, in its draft local planning scheme has extended the coverage of zoning (rural conservation) to cover other landholdings in the Shannon planning unit.

It is noted that between Walpole and Broke inlets, none of the existing freehold lots is bigger than 80 ha (the minimum lot size that would facilitate subdivision under the proposed minimum lot size suggested by the *Warren-Blackwood Rural Strategy*). As such, this strategy does not support further subdivision in the Shannon planning unit.

The Shannon planning unit also contains several large landholdings, such as Sandy Peak, west of Broke Inlet. Although subdivision of these lots is not supported, there may be potential for low-key tourism development. Development of these lots is governed by the provisions of the Shire of Manjimup's local planning strategy. Tourism development on these lots, as well as other lots in the Shannon planning unit, may be approved after submission of appropriate plans to the council.

Recommendation 6.4.4a: Land to be zoned rural conservation in the Shire of Manjimup local planning scheme as shown in figure 21a.

Recommendation 6.4.4b: Subdivision in the Shannon planning unit will not be supported.

6.5 Subdivision minimum lot size

The *Warren-Blackwood Rural Strategy* suggested a potential minimum lot size of 40 ha for coastal lands to be zoned rural landscape protection, subject to compliance with several requirements and after further investigation in the development of the Augusta-Walpole Coastal Strategy. A minimum lot size of 40 ha is considered inadequate in most of the zone because of concerns about the effect of subdivision on the environmental and landscape values of the area.

It is acknowledged that a thorough land capability study would assist in the determination of minimum lot sizes but in the absence of this study, a precautionary approach

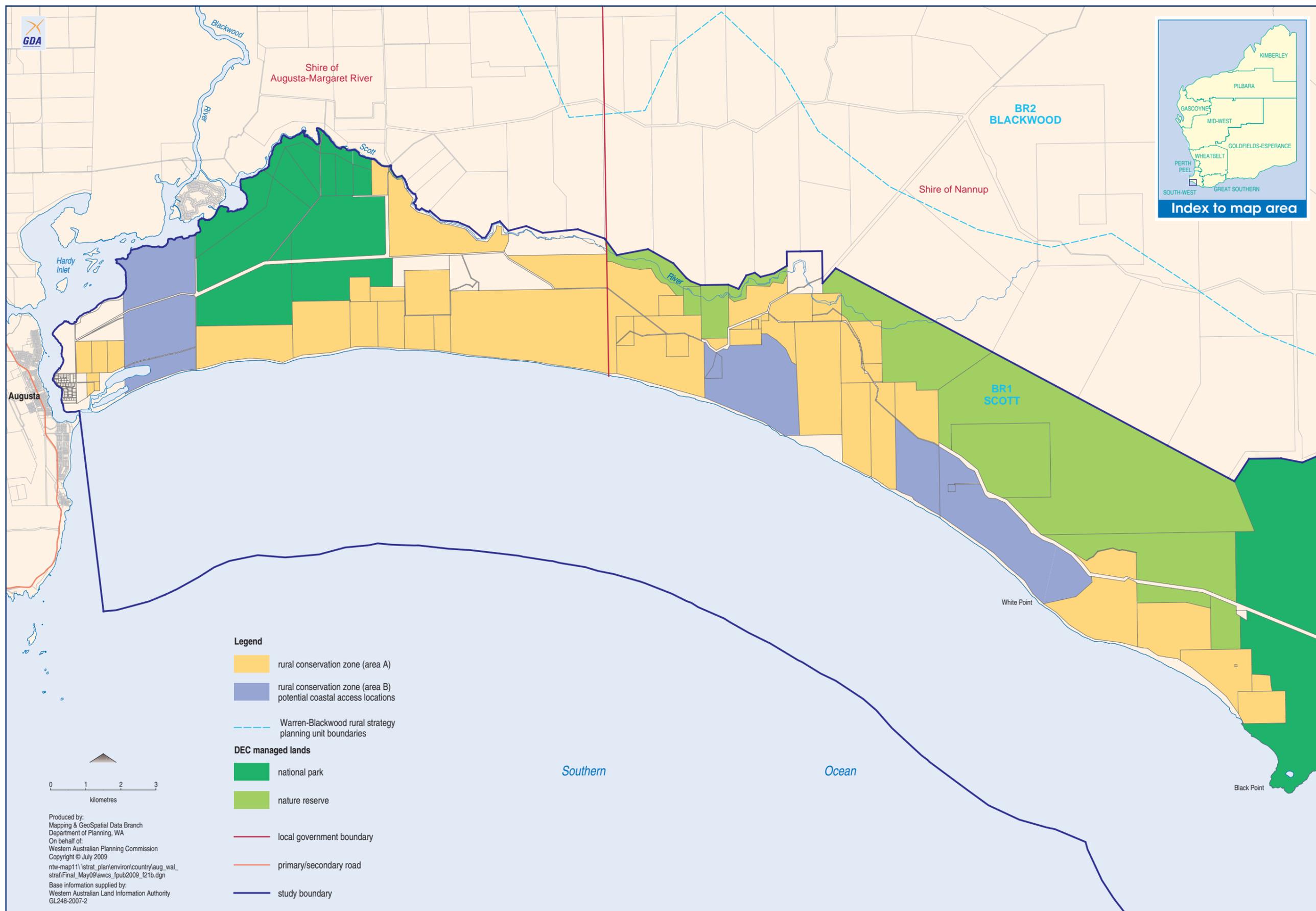


Figure 21b: Land to be zoned rural conservation - Scott planning unit

has been taken. Detailed assessment of the various environmental constraints of the land subject to a subdivision application may require lot sizes to be bigger than the recommended minimum values to ensure protection of environmental values. A detailed subdivision guide plan will provide the detailed information needed for this thorough assessment.

Following detailed consideration by the Augusta-Walpole Coastal Strategy Steering Committee of freehold lands and coastal access requirements of the proposed rural conservation zone, the zone has been divided into three sub-areas, A, B and C, to reflect the selection of future potential coastal access locations, as shown on figure 21a. Further background to the selection of these sites can be seen in section 5.7.

Rural conservation zone area A

For continuity of land use in the Augusta-Walpole Coastal Strategy study area and cognisant of the previously outlined constraints of rural conservation zone area A, a minimum lot size of 40 ha will be supported only where there is an average lot size of 80 ha following subdivision of the parent lot. Subdivision of lots down to this size must be accompanied by a subdivision guide plan and associated land capability assessment. In some circumstances consideration will need to be given to adjoining lots to resolve matters such as, but not limited to, legal frontage to a gazetted road.

An average lot size is calculated by dividing the total area of the parent lot by the number of new lots to be created, and in this area the average lot size must be 80 ha or more.

An average lot size of 80 ha in rural conservation zone area A will provide a distinction between the potential lot yields that can be achieved in the coastal area generally (80 ha), as opposed to those in the coastal access nodes (40 ha) and will ensure landscape and environmental values of the area are retained.

The study area includes several very large lots with subdivision potential, that could result in the creation of a number of lots of 40 ha and one larger lot which would enable the average lot size of 80 ha to be achieved. To ensure the objectives of subdivision limits and environmental protection are met, subdivision

should be in accordance with an endorsed subdivision guide plan incorporating the requirements in section 6.6 with no further subdivision permitted thereafter. The incremental subdivision of large landholdings will generally not be supported as it would be contrary to the intent and purpose of the Augusta-Walpole Coastal Strategy unless it is in accordance with an endorsed subdivision guide plan.

Recommendation 6.5a: Subdivision in rural conservation zone area A should be supported only to a minimum lot size of 40 ha provided that the average size of lots created as a result of subdivision of the parent lot is a minimum of 80 ha and is based on an approved subdivision guide plan.

Lands in the rural conservation zone area A can be broadly divided into those lots required to cede a coastal foreshore reserve to the Crown at the time of subdivision and those that do not.

- i) Not abutting the coast: For those freehold lots not abutting the coast, the average minimum lot size should be 80 ha.
- ii) Abutting the coast: For subdivisions that require foreshore reserve to be ceded, this strategy supports calculation of the number of new lots to be based on the size of the parent lot prior to assessment of an adequate foreshore reserve area (and subsequent reduction in total parent lot area). This could potentially result in an average minimum lot size slightly less than 80 ha. This approach is seen as acceptable as land to be ceded for a large foreshore reserve where required will not factor into the potential lot yield.

The proposed rural conservation zone area A contains a small number of small lots abutting the coast with no subdivision potential as they are currently smaller than 160 ha. It is suggested that the average lot size not apply to these lots. As it is desirable to create a continuous coastal foreshore reserve, consideration will be given to subdividing these small lots into two approximately equal-sized new lots provided an adequate foreshore reserve is ceded free of cost to the Crown to facilitate a clear conservation outcome.

Recommendation 6.5b: Subdivision of existing small lots abutting the coast into two approximately equal lots may be considered where conservation measures, including an adequate foreshore reserve being ceded free to the Crown, show a clear conservation outcome.

Rural conservation zone area B

The delineation of area B in the rural conservation zone reflects the possible suitability of four areas for future public coastal access. Subdivision of lands in the four potential public coastal access locations identified in this strategy may be supported to a minimum lot size of 40 ha (with no average minimum lot size). This smaller minimum lot size will be subject to compliance with specific requirements relating to these identified areas, in addition to generic requirements both of which are listed below.

The smaller minimum lot size in area B is in recognition of the environmental constraints of these areas and the existence of areas not suitable for subdivision or development but more suited to be put into managed reserves at the time of subdivision negotiation. These areas may include, but are not limited to:

- environmentally significant wetlands, including Swan Lake and others in the Southern Shores lot;
- foreshore area abutting the Blackwood River;
- ecological corridors;
- declared rare flora, priority flora and other vegetation complexes; and
- dune systems and blowouts to be incorporated in a managed foreshore reserve.

Additional capital and infrastructure commitments will be required of subdividers in this area, which will help to provide improved public access to the coast and improvements to and management of the foreshore area.

Recommendation 6.5c: Subdivision in rural conservation zone area B should only be supported to a minimum lot size of 40 ha.

Rural conservation zone area C

Rural conservation zone area C includes those lots that are in the Donnelly, Warren and Shannon planning units where subdivision is not supported under the Warren Blackwood rural strategy.

Recommendation 6.5d: Subdivision in rural conservation zone area C is not supported.

Potential population increase

Subdivision to create smaller lots usually results in an increase in resident population of an area. Table 18 presents indicative figures showing the possible increase in lot numbers in rural conservation zone should all lots in this zone be subdivided to the minimum lot size.



Mandalay Beach

If existing landholdings eligible for subdivision are subdivided to an average lot sizes of 80 ha in area A and 40 ha in area B, there is the potential for a maximum number of 83 new lots in the rural conservation zone across the study area.

The WAPC's *Tomorrow's Dwellings and Labour Force in Western Australia 2002* report shows that an average of 2.8 people live in each dwelling in the south-west region of Western Australia. Assuming one dwelling is built on each new lot created and 2.8 people inhabit each dwelling, there is the potential for approximately 233 additional residents in the study area. It should be noted that this area is remote from service centres and employment, and a high level of absenteeism is likely.

Table 18: Subdivision potential for freehold land in the proposed rural conservation zone

Planning unit	Rural Conservation Zoning	Total freehold land area to be zoned RC (hectares)	Lots large enough to yield one or more new lots of the minimum lot size of 80 ha (area A) and 40 ha (area B)	Potential maximum lots (existing at minimum lot size)	Potential net lot number increase	
Scott	A	6180 ha	60	15	50 new 80 ha lots	35
	B	2229 ha	9	6	51 new 40 ha lots	45
Donnelly	0 ha	0	Subdivision not supported	0 new lots	0	
Warren	0 ha	0	Subdivision not supported	0 new lots	0	
Shannon	661 ha	10	Subdivision not supported	0 new lots	0	
Total					80	

This table has been populated assuming creation of lot sizes of 80 ha in area A and 40 ha in area B to give an indication of potential new lot numbers if all landowners in the rural conservation zone subdivided to these lot sizes. Hence figures and estimates are indicative only.

These figures only take into account subdivision of lots currently able to yield one or more additional lot of the prescribed minimum lot size (that is, those bigger than 160 ha). No consideration is given to the possible amalgamation of lots prior to subdivision that may slightly increase the number of new lots to be created. Estimates of potential new lots do not take into consideration land requirements for roads, public open space or coastal or riverine foreshore reserves.

Disclaimer: These figures have been included to demonstrate the likely impact of subdivision in the rural conservation zone and to assist in the assessment of possible services required in the area. Numbers are a guide only as some land may not be suitable for subdivision given various constraints.

6.6 Subdivision and development requirements - rural conservation zone and coastal access nodes

In the rural conservation zone, protection of environmental and landscape values will be paramount. Only land uses compatible with the conservation of these values will be permitted, and only when a suitable zone and other mechanisms have been put in place to ensure their ongoing protection.

Any applications for subdivision and/or development in the rural conservation zone will be assessed against the following scheme provisions. It is recommended that local planning schemes incorporate these provisions to strengthen their statutory weight.

The following provisions have been drafted for inclusion in local government local planning schemes. The nature of the provisions assumes local planning schemes are based on the model scheme text (appendix B – *Town Planning Regulations 1967*) and are intended to complement existing provisions.

The three shires in the study area have existing local planning schemes and local planning strategies that govern land use over the proposed rural conservation zone, and they are considerably different. It is the intention of the Augusta-Walpole Coastal Strategy to bring a consistent planning approach with the following provisions developed to complement the shires' existing provisions.

Subdivision and development provisions (zones A, B and C)

The following are recommended scheme provisions. Please note, with respect to the use class table, it is recommended that councils use their discretion in determining the uses considered permissible in their shire. Planning bulletin 37 also provides guidance on how to prepare a structure plan.

1.0 Rural conservation zone

The rural conservation zone is divided into areas A, B and C. All provisions for this zone apply to both areas unless otherwise stated.

I.1 Objectives

- a. To protect environmental and landscape values.
- b. To ensure that development is compatible with and sympathetic to these values.
- c. Where development is proposed, to seek the:
 - i. ceding and/or enhancement of environmental values; and
 - ii. integration of development with landscape and scenic values.
- d. To accommodate existing rural uses.

variation is desirable and will not detrimentally affect the objective for the zone or the amenity of the area generally.

- b. No development and/or clearing of vegetation will be permitted outside the building envelope unless it is for a strategic firebreak, bore or service corridor and is approved by council.
- c. Clearing of remnant vegetation for the construction of buildings in the defined envelope shall not exceed 3000 m² without prior approval of council, except where required for bushfire protection.
- d. If no building envelope exists, setbacks are to comply with the provisions of the rural zone.

I.2 Development standards

I.2.1 Building

- a. All buildings and structures:
 - i. shall be constructed from materials and colours in a form that does not detract from the visual amenity of the locality;
 - ii. shall harmonise with the landscape in siting and design with particular regard to scale, height, colours and materials in a form that does not detract from the visual amenity of the locality; and
 - iii. council may require the submission and approval of a schedule of materials and finishes for any proposed building in the zone as part of an application for development.
- b. All buildings intended for residential use must include provision for the storage of water in tanks of a capacity determined by council unless satisfactory arrangements have been made for connection to a reticulated water supply provided by a licensed water provider. Council may permit a reduction in the size of storage tanks if the quality of water on site meets, or is treated to, potable water standards.

I.2.3 Second dwellings

- a. The local government may grant approval for up to two dwellings, including any approved caretaker's dwelling, in the total on any lot provided the lot exceeds 60 ha in area, where the land is managed for agricultural production, tourism or education purposes and where the occupants are engaged in those specified predominant land uses or activities.
- b. Approval for, or the existence of, a second dwelling on one title is not to be construed as justification for the subdivision of the land under either the *Planning and Development Act 2005* or the *Strata Titles Act 1985*.

I.2.4 Livestock management

- a. With the intention of preventing overstocking or other practices detrimental to the amenity of the zone and to prevent land degradation and nutrient export, the keeping of livestock shall not be permitted without approval in writing from the council on advice from the Western Australian Department of Agriculture and Food.
- b. If a building envelope exists, council will restrict the livestock within the envelope and this may include a requirement for suitable fencing.

I.2.2 Building envelopes

- a. Development will be permitted only in the areas identified as building envelopes. Council may vary the boundaries of such envelopes if it is satisfied that such

1.2.5 Environmental management plan

Management of the lot shall be in accordance with the approved environmental management plan adopted with either a subdivision guide plan or a development approval. An approved environmental management plan should contain detailed assessments which include, but are not limited to: acid sulfate soils; flora and fauna (poorly represented, declared, and/or threatened); land capability; fire management; landscape and visual amenity; environmental linkages; hydrology, water use and management; sensitive landforms; geotechnical information; and environmental risks and constraints. The development of an environmental management plan should be in accordance with the EPA *Guidance Statement No. 33 – Environmental Guidance for Planning and Development* that can be viewed at www.epa.wa.gov.au/.

1.2.6 Development

- a. All development shall meet the objectives of the zone.
- b. For development other than a single dwelling, outbuildings or home occupation, a development plan must be submitted to assist council to determine whether the proposed development meets these objectives.
- c. The development plan must address the requirements of a subdivision guide plan as set out in clause 1.3.2.

1.3 Subdivision

1.3.1 Lot sizes and development

- a. In area A:
 - i. Subdivision will not be supported for those lots that are less than 160 ha.
 - ii. Where lots are equal to or greater than 160 ha, the minimum lot size will be 40 ha with an average of 80 ha.
 - iii. For lots that are smaller than 160 ha that abut the coast, consideration will be given to supporting subdivision into two lots that are of approximately equal size if adequate foreshore reserve is ceded free of cost.
- b. In area B: The minimum lot size will be 40 ha.

- c. Subdivision and development in areas A and B shall be in general accordance with a subdivision guide plan that is adopted by the shire and endorsed by the WAPC and any approved modifications thereto.
- d. In area C: No subdivision will be supported.

1.3.2 Subdivision guide plan

A subdivision guide plan for rural conservation zones A and B is to address:

- a. lot sizes, dimensions and identification of building envelopes;
- b. identification of all environmental attributes;
- c. description of adjoining land(s) and their uses;
- d. the preparation of a land capability study, geotechnical assessment and assessment of acid sulfate soils;
- e. areas to be set aside for conservation or foreshore reserve that will be ceded free of cost;
- f. protection, enhancement and rehabilitation of any part of the environment that is outside building envelopes;
- g. the preparation of an environmental management plan to ensure the long-term viability of natural areas;
- h. the impact of the subdivision, including the proposed location of building envelopes, on landscape and visual amenity and any measure or measures necessary to minimise this impact;
- i. the preparation of a fire management plan that includes strategic firebreaks, emergency vehicle access and firefighting water supplies;
- j. best-practice wastewater management;
- k. protection and identification of sites of indigenous, historical, cultural, recreational, and environmental significance, and geoheritage sites;
- l. where relevant, determination of coastal setbacks;

- m. identify those lots that may have a covenant attached, because the landowners want it, or it is a requirement of local government or WAPC, to assist in the management of natural areas;
- n. how the subdivision/development has been clustered (if appropriate);
- o. any other matter deemed relevant by council or the WAPC.
- p. In addition, lots abutting the coast should also address:
 - (i) preparation and implementation of a foreshore management plan that includes the provision of, but is not limited to, a strategic public access route to the coast, constructed to a standard to the satisfaction of council and which precludes vehicle access to the beach; and
 - (ii) details regarding developer contributions, including foreshore management and infrastructure provision and/or upgrading.

Recommendation 6.7c: The most appropriate form, scale and type of tourism development at the four identified coastal access locations should be addressed in a coastal management plan. When agreed, councils should adopt this plan's recommendations as a local planning policy.

6.7 Implementation

It is envisaged that local governments throughout the Augusta-Walpole Coastal Strategy study area will incorporate the guidance and direction of this section in their local planning schemes as the most effective control of subdivision and development to protect the outstanding environmental values of the Augusta to Walpole coastline.

Along with rezoning of areas to rural conservation, councils should revise their use class table to further define what constitutes appropriate development in this zone.

Recommendation 6.7a: Local governments should review their local planning schemes and zone areas shown on figure 2I a as rural conservation (or similar) and incorporate the provisions in section 6.6 in their local planning schemes.

Recommendation 6.7b: Subdivision guide plans are to be provided to the WAPC for endorsement prior to any subdivision or development, with the WAPC to use these provisions for assessment of subdivision applications in the rural conservation zone.



7 Implementation

7.1 Function of the strategy

This strategy has been developed in response to increasing pressure to determine an appropriate level of development, access and use of the Augusta-Walpole coast that is compatible with the retention of the area's unique wilderness values. It is a result of the primary recommendations identified in the *Warren-Blackwood Regional Planning Strategy* and the *Scott Coastal Plain – A Strategy for a Sustainable Future*, which recommended the need for a separate coastal strategy for the Augusta-Walpole coastal area.

The strategy sets out the Government's broad planning approach to the Augusta-Walpole coastal area over the next 15 years. It will assist the WAPC and local authorities in making decisions about future land use and local coastal planning in the region. The strategy therefore provides a planning link between State strategic directions for coastal planning and the management and local planning of management strategies.

The strategy can also be used as a framework or reference to guide the activities of other agencies in their planning and management of the coast in the region. The management of the coast requires a holistic approach, with involvement from many state, regional and local bodies, with multiple associated statutes, policies and plans. Although the formulation of this strategy has taken into consideration the policies of other agencies (Chapter 2), it could also be used to assist other agencies in their formulation of new policies.

The strategy began from the basis of the public issues, environmental opportunities and constraints identified by the community and other stakeholders in the region. Development of this strategy has an agreed vision and the objectives form the basis of a strategic response to the various issues raised. There has been a strong effort to maintain public involvement during the strategy's development to ensure public support and ownership of the final strategy.

7.2 Process of implementation

Implementation of the coastal strategy for the Augusta-Walpole region will be undertaken primarily by the relevant local government, the WAPC and the DoP in conjunction with other stakeholders, including other state government departments, regional and local organisations, and the community. Implementation will occur through a variety of mechanisms as outlined below.

The strategy has been reviewed and revised in line with submissions received during the public comment period. The strategy will represent the planning policy of the WAPC for the coastline between Augusta and Walpole. It will also define the role and level of involvement of other agencies and bodies and assist in their decision-making role in planning related matters.

7.2.1 Implementation mechanisms

The Augusta-Walpole Coastal Strategy has established guiding principles, objectives and broad strategies that allow consistency and continuity across boundaries. Implementation of the strategies and guidelines can occur through local planning strategies and the adaptation of strategic guidance to local circumstances for implementation through local decision-making.

Many of the strategy's recommendations can be put into effect through local planning strategies and schemes of local governments. Many of the strategies and actions rely on local government in the study area to coordinate localised planning and decision-making. The objectives of the strategy may also be implemented by other organisations; for example the Conservation Commission of Western Australia and DEC in the management of the conservation estate and safeguarding environmental values.

Given the 15-year time frame of the strategy, it is acknowledged that in the short term, not all recommendations can be implemented through local planning strategies and schemes.

Local planning schemes

Local planning schemes set out the way land is to be used and developed. The local planning scheme clarifies areas for land use and includes provisions to coordinate land use and development in the locality. Local governments are responsible for the preparation and administration of local planning schemes. The local planning scheme is the statutory mechanism through which some recommendations relating to land use and development in this strategy can be implemented. Recommendations relating to zoning and development control are implemented through the local planning scheme. As a strategy of the WAPC, local government local planning schemes will be required to give consideration to this strategy when they amend their schemes.

Table 2 shows that draft local planning schemes for the local governments in the study area are awaiting ministerial approval. Ideally, current amendments to these local planning schemes should give consideration to this draft strategy.

Local planning strategies

The local planning strategy provides the planning context of local planning schemes and enables them to express more clearly the strategic vision, policies and proposals of the local government. They provide the link between strategic planning in the local government and the state and regional planning context. They apply state and regional policies relevant to the local government area. The local planning strategy is reviewed every five years and is able to respond to changes in state government policy.

Local planning policies

Local planning policies are formulated to provide guidance on planning, land use and development matters. They provide more flexibility than statutory provisions and can be formulated to relate to specific planning matters and/or specific region or regions of the municipality. A local planning policy could be used to guide subdivision and/or development in a recommended coastal node.

Subdivision or development applications

Recommendations that are not easily implemented through a local planning scheme or local planning policy usually relate to a proposed change in or intensification of land use by subdivision and/or development. For example, detailed flora and fauna surveys or the production of fire and nutrient management plans can only realistically be required following a trigger such as a planning application, and they can then become a condition of approval.

This important mechanism for implementation will be the method of realising some key recommendations of the strategy, including provision of public coastal access in precinct 1 and the ceding of a public coastal foreshore reserve. For the realisation of recommendations such as these, it is vital that bodies responsible for the assessment and determination of planning applications give regard to the content of this strategy.

Other implementation mechanisms

The management of the coastal strategy study area involves multiple organisations, extending beyond state and local planning organisations and the associated planning legislation, policies, and strategies. The extent of this involvement is outlined in chapter 2 of the strategy and includes, but is not limited to, involvement from DEC, DoW, natural resource management groups, heritage organisations, private organisations such as Verve Energy, and the community. As such, the implementation of the strategy will include involvement from multiple organisations and bodies through their own legislation, policies and strategies. The following is a selection of implementation mechanisms for some of the parties involved to outline the multifaceted approach to the strategy's implementation.

- 1) Regional Natural Resource Management Groups

Natural resource management groups, such as the South West Catchments Council, through their own strategies and implementation actions, will contribute to achieving some of the objectives of the

strategy. It will provide guidance and support to natural resource management groups in the formulation of additional policies and strategies. The strategy will also provide supporting rationale for on-ground actions proposed by regional and local natural resource management groups such as the South Coast Management Group.

2) Conservation Commission of Western Australia

A very large proportion of the study area is in national parks and is vested in the Conservation Commission of Western Australia. The Conservation Commission establishes management plans to provide mechanisms for the protection of environmental values in these areas. These management plans are implemented by DEC.

3) The Department of Water

DoW will undertake regional planning to provide water balance information to support strategic planning for the management of sustainable use of water resources. Water allocation planning provides statutory protection for the environmental values of water resources and certainty to other water users. The DoW also undertakes drinking water source protection planning, and provides statutory protection to surface and groundwater resources.

7.3 Funding arrangements

Major funding opportunities for strategy implementation include:

- Internal state and local government agency funds assigned to strategy recommendations as part of agency programs.
- External funds sought from Commonwealth sources specifically for strategy implementation.

- Funds sought by community groups from a range of government and private sources to undertake community based activities consistent with the recommendations of this strategy.
- Funds and resources contributed by the private sector as part of commercial involvement in planning and management of the coast.
- Levies or contributions from identified stakeholders in the coastal and marine environment to assist in planning and management.

7.4 Coordination of implementation

7.4.1 General

The implementation of the coastal strategy will include a holistic approach that will take into consideration all organisations' relevant statutes, policies, strategies and management plans, as detailed in chapter 2. The implementation of the strategy will also require the WAPC and the DoP to collaborate with other state government agencies, local governments, regional councils, such as the South West Catchments Council, and the community, to ensure the primary objectives of the strategy are achieved.

The general responsibilities of the DoP, DEC and local authorities are detailed below.

7.4.2 Department of Planning - coastal planning

The DoP was responsible for preparing the strategy for endorsement by the WAPC to guide statutory decision-making on coastal planning issues in the region.

The DoP and the WAPC will have due regard to the policies, strategies, management plans, and management strategies that have been identified and outlined in chapter 2 of this strategy. The DoP will provide ongoing advice to local governments, developers and community groups on coastal planning issues

and ensure that the management recommendations in this strategy are adopted and considered when making decisions about future land use in the region.

7.4.3 Department of Environment and Conservation

A very large portion of the study area falls in the D'Entrecasteaux and Walpole-Nornalup national parks, which are vested in the Conservation Commission of Western Australia and managed by DEC. DEC is therefore responsible for the management of these areas through the implementation of the Shannon and D'Entrecasteaux national parks draft management plan and the 1992 Walpole Nornalup national park management plan (which will be succeeded by the management plan for the Walpole wilderness area and adjacent parks and reserves). This strategy seeks to be consistent with these plans.

Marine parks are proposed to be established for the Capes, Walpole and Nornalup inlets supported by gazetted management plans, and the regional marine planning process for the south coast is under way.

7.4.4 Local governments

The local governments in the study area have an important role in the local planning and management of the Augusta-Walpole coastline. They are responsible for capital works and the formal management of public lands vested in local government, and for the preparation and implementation of local coastal plans and foreshore management plans. In addition, the local governments assess and approve land use and development on and affecting the coast.

Local governments prepare coastal management plans for specific areas, with the intention of integrating economic, social and environmental factors and guiding decisions about development in a balanced way. This strategy will assist the local governments to achieve this. Specific recommendations have been made that are considered to be the responsibility of the local authorities in the study area.

Recommendation 7.4.4: Local governments to formulate local area policies to be adopted under their LPS or undertake amendments to their LPS to include all relevant recommendations of this strategy.

7.4.5 Community and landowners

Landowners in the study area as well as members of the public will be able to use the final strategy to assist with planning and developing their own project, initiatives and lifestyle in a manner compatible and consistent with the community's vision for this area.

This strategy encourages the involvement of private landowners in management of waterways, remnant vegetation, coastal dune management and rehabilitation.

The potential also exists for the formation of 'friends of coastal management groups to undertake general management (that is, rehabilitation, education, litter removal) of coastal foreshore areas. Such groups are able to apply for funding assistance from a range of federal and state administered programs, such as Coastwest.

7.5 Summary of management recommendations

The management recommendations of this strategy are summarised in table 19. This includes a statement of responsibility, priority, proposed time frame and implementation responsibilities for each management strategy. The table also indicates the mechanism by which the recommendation will be best implemented. This forms the basis for implementing the management strategies identified in this strategy. Of key importance in the implementation of the management strategies will be the ability to seek and secure appropriate funding arrangements.

Table 19: Implementation of management strategies (refer to the end of the table for acronym interpretation)

Recommendation	Status	Priority	Timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Implementation						
7.4.4 Local governments to formulate local area policies to be adopted under their LPS or undertake amendments to their LPS to include all relevant recommendations of this strategy.	Proposed	High	O	LPS	LG	
Terrestrial vegetation						
4.2.2a As part of the information provided to planning authorities for assessment of a subdivision or development proposal, a detailed flora and fauna assessment in accordance with EPA guidance statements 51 and 56 should be undertaken to determine whether the site contains flora species or communities of high ecological conservation significance or poorly reserved vegetation communities.	Proposed	High	O	SA, DA	LO	DEC, LG
4.2.2b Where poorly reserved vegetation communities occur on freehold land, a cooperative approach and strategy should be developed and implemented to assist landholders to protect such vegetation at the time of development or subdivision.	Current	High	O	SA, DA	LO, DoP, DEC	LG
4.2.2c Individual development will be assessed against statutory legislation that deals with the protection of flora and fauna (including declared rare flora and threatened fauna) in the region, including the <i>Environment Protection and Biodiversity Conservation Act 1999 (as amended)</i> , <i>Conservation and Land Management Act 1984</i> , <i>Wildlife Conservation Act 1950</i> for species protection, <i>Environmental Protection Act 1986</i> for native vegetation protection and the <i>Rights in Water and Irrigation Act 1914</i> for water dependency.	Ongoing	High	O	SA, DA	DEC, DoP	LG
4.2.2d Assessment for individual development or planning applications should take into consideration the impact such a development may have on vegetation corridors throughout the area and on linkages for fauna in the region.	Ongoing	High	O	SA, DA, LPS	DoW	DEC, LG, DoP
Landscape						
4.3.2e Proponents and/or local governments should refer to <i>Visual Landscape Planning in WA: A Manual for Evaluation, Assessment, Siting and Design (WAPC 2008)</i> when considering any development or planning application.	Proposed	High	O	SA, DA	LG	DoP

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Fire management						
4.3.2f Fire management plans will be required for all nodes and new developments, including tourism developments outside nodes.	Proposed	Very High	O	SA, DA	LG, LO	FESA, Volunteer Bushfire Brigade
Rivers and Inlets						
4.3.6 Where significant water issues exist, a water management strategy/plan may be required consistent with <i>Better Urban Water Management</i> (WAPC 2008) to accompany a planning proposal.	Ongoing	High	O	SA, DA	LD, LO	DEC, DoW
Coastal unallocated Crown land management						
4.4.6a That the shires of Augusta-Margaret River and Nannup agree to accept vesting and management responsibilities for coastal unallocated Crown land in their municipalities between East Augusta and Black point.	Proposed	Very high	I	LG	LG	DoP
4.4.6b That a coastal management plan be prepared or revised for the length of the Shire of Nannup's and the Shire of Augusta-Margaret River's coastline to provide more detailed coastal management planning guidance.	Proposed	High	I	LG	LG	DoP DEC, NLG, DoW, TWA
Land tenure changes						
4.4.9 Implement the various recommended land tenure changes outlined in table 16.	Proposed	Medium	O	SG, LG, DEC	LG, DEC, DoP	
National park additions						
4.4.11 As guided by the <i>Shannon Park and D'Entrecasteaux National Park: Draft Management Plan 2005</i> , the Quannup pastoral lease, as well as other identified areas, be amalgamated into the D'Entrecasteaux National Park.	Proposed	Medium	L	DEC	DEC	DoP
4.4.12 Further investigate privately owned land surrounded by conservation estate for its environmental values. If the land is considered to have conservation value and it is offered for sale, it should be acquired to consolidate the park.	Proposed	Low	O	PO	DEC	LO

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Mining						
4.5.6 Future land use planning is to consider the location of identified mineral deposits (figure 11) and ensure that subdivision or development do not conflict with the possible future mining of these deposits.	Proposed	High	O	SA/DA	LG, DoP	DMP
Infrastructure – roads						
4.6.3a: As soon as formal public access is provided through lot 10, the unmade portion of Johnston Road reserve should be formally closed.	Proposed	Med	M-L	LG	LG	DoP, DEC
4.6.3b: The unmade portion of the Tattersall Street road reserve should be formally closed.	Proposed	High	M-L	LG	LG	DoP, DEC
4.6.3c: A detailed assessment should be undertaken of all unconstructed gazetted road reserves and any reserves that are poorly aligned or on which it is unlikely that a road will ever be constructed should be formally closed.	Proposed	Low	M-L	LG	LG	DoP, DEC
4.6.5: Future access roads to coastal areas in precinct 1 and non-Conservation Commission land in precinct 2 should terminate behind the primary dune, with pedestrian access only to the beach. Where possible, beach access for emergency vehicles only should be created.	Proposed	High	O	SA	LG	LG, DoP
Infrastructure – power						
4.7.1a Support the provision of reliable and adequate power supply to residents and businesses in the study area. Encourage alternative sources of power supply subject to their meeting planning and environmental approval processes.	Current	Medium	O	SA/DA	VE, LO, LD	LG
4.7.1b Proposed development in the study area should make every effort to maximise energy efficiency through the use of climate sensitive, passive solar and energy efficient design.	Current	Medium	O	SA/DA	LD, LG	DoP

Recommendation	Status	Priority	Timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Infrastructure – water						
4.7.2 Review development control standards to ensure best practice water use efficiency is achieved.	Current	Low	L	LG	LG	
Infrastructure – sewerage						
4.7.3 New developments to install the highest standard available on-site sewerage disposal facilities.	Under way	Medium	O	DA	LD	LG
Infrastructure – boating facilities						
4.7.4 No additional sites for boat launching should be approved until after the planning process for a small boat harbour at Augusta is finalised.	Proposed	Low	O	DA	LG, DoP	
Infrastructure – telecommunications						
4.7.5 Telecommunications should be upgraded generally, but specifically to facilitate emergency services response.	Current	Medium	O	TI	TI, SWDC	
Walpole						
5.3.1a Walpole town centre development density to be increased in line with the recommendations of the Shire of Manjimup local planning scheme.	Proposed	Low	L	LPS	LG, DoP	
5.3.1b The Shire of Manjimup to prepare a management plan for those areas of estuarine foreshore under its control.	Proposed	Medium	M	LG	LG	DEC, DoW
5.3.1c The natural state of the Normalup Inlet ocean entrance should not be altered to accommodate vessel traffic.	Current	Medium	O	DoP	DoP, LG	

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Northcliffe						
5.3.2 In acknowledgment of its role as a gateway to the coast, it would be beneficial to develop a structure plan for Northcliffe that addresses all aspects needed to consolidate Northcliffe's role as this coastal gateway.	Proposed	Medium	M	LG	DoP, LG	TWA
East Augusta						
5.4.1a Limit expansion of the East Augusta settlement to the existing zoned area.	Current	High	O	LPS	LG, DoP	
5.4.1b New developments, and extensions to existing developments, to have the highest standard effluent disposal systems available to minimise potential for adversely affecting the surrounding estuarine and marine environments.	Ongoing	High	O	DA	LG	DEC
5.4.1c Ensure any future subdivision or development proposals do not compromise the geoheritage values of the Augusta shell bed. The remnant part of the Tattersall Street road reserve should be considered for formal closure under the <i>Land Administration Act 1997</i> , as road infrastructure development may threaten the shell bed.	Proposed	High	O	SA/DA	LG, DoP	DMP
Windy Harbour						
5.5.1a No expansion of Windy Harbour beyond its current boundaries.	Current	High	O	LPS	LG, DoP	DEC
5.5.1b The current tenure arrangements between the Shire of Manjimup and individual leaseholders are to be retained in their existing form. No freehold subdivision of land is to be permitted.	Current	Medium	O	LPS	LG	DoP
5.5.1c Initiate a groundwater monitoring program to determine the effect on vegetation of water table drawdown in the national park. Implement a management approach as soon as possible (negotiations between the Shire of Manjimup and DEC regarding water lease conditions are progressing).	Proposed	High	I	LG, DEC	DoW	DEC, LG
5.5.1d New development proposals to be in accordance with the Windy Harbour management plan and should be reviewed with respect to onsite effluent disposal.	Current	High	O	LG	LG	DoW

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
5.5.1e The existing boat-launching ramp at Windy Harbour to be maintained and investigated for possible upgrade to meet the requirements of the sea search and rescue group.	Current	Medium	O	LG, DoP	DoP	LG
5.5.1f Prepare a set of building character and design guidelines for Windy Harbour in consultation with the community. Matters to be addressed include form, scale, design, colour, and materials for new and existing developments including renovations of, and additions to, existing structures.	Proposed	Low	L	LG	LG	
5.5.1g Future tourist development should be of a small scale, with a focus on affordability for people with low incomes. Preference to be given to camping facilities.	Current	Medium	L	LG	LG	DoP, TWA
Camfield Reserve and Broke Inlet						
5.6.1a A marine reserve over Broke Inlet will be supported if developed and vested in the Marine Parks and Reserves Authority.	Proposed	High	M	DEC	DEC	LG
5.6.1b A site plan for the Camfield reserve should be prepared to address: <ul style="list-style-type: none"> • preferred location, type and volume of low-impact tourism; • level of support facilities required; • tenure and jurisdiction; • fire, weeds and other threatening processes; • visual amenity and blending of facilities into the reserve; and • protection of vegetation and water quality. 	Proposed	Medium	M	LG	LG	DEC, TWA
Swan Lake and the Deadwater						
5.6.2a Consolidate the Deadwater and Swan Lake into one reserve vested in the Shire of Augusta-Margaret River or DEC for conservation and recreation. A decision on the most appropriate body for vesting may be assisted through a study on the biodiversity values and recreational potential of the area.	Proposed	Medium	M	SA/DA	◆	DEC, LG, LO, DoP

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
5.6.2b Undertake stakeholder consultation and prepare a management plan for the Deadwater and Swan Lake which addresses maintenance of ecological integrity, tenure and management, and impact of recreational use.	Proposed	Medium	M	LG, DEC	◆	DEC, LG, LO, DoP
Proposed access locations						
5.7 Prior to development and/or subdivision in an identified coastal access node, a detailed subdivision guide plan should be prepared to address the issues identified in section 6.6.	Proposed	High	O	SA/DA, LPS		DoP, LG, LO
East Augusta / Scott River						
5.7.1 Should lot 10 (Southern Shores) be the subject of an application to develop or subdivide, ensure that the provision of public access (probably along the existing track) is considered during the assessment process.	Proposed	High	O	SA/DA		LG, DoP, LO
Milyeannup						
5.7.2 Should lots 1, 2 or 704 (Milyeannup) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.	Proposed	High	O	SA/DA		LG, DoP, LO
White Point						
5.7.3 Should lot 100 (White Point) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.	Proposed	High	O	SA/DA		LG, DoP, LO
The Lagoon						
5.7.4 Should lot 2 (the Lagoon) be the subject of an application to develop or subdivide, ensure that the provision of public access is considered during the assessment process.	Proposed	High	O	SA/DA		LG, DoP, LO

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
Subdivision limitations						
6.1: Ensure that subdivision and development of land does not impact on marine conservation values, particularly where these adjoin or are near existing or proposed marine parks and reserves.	Proposed	High	O	SA/DA	DoP, LG	DEC
Subdivision of freehold land						
6.3a Land in the Augusta-Walpole Coastal Strategy study area should be rezoned rural conservation (or similar) as per the Warren-Blackwood rural strategy and the Scott coastal plain strategy.	Proposed	High	M	LPS	LG	DoP
6.3b Productive agricultural land in the Augusta-Walpole Coastal Strategy study area is to be protected from alternative land uses that threaten its value. Protection of agricultural and rural landscape values will be a significant factor in the determination of planning applications and proposed changes in land use.	Current	High	O	SA/DA, LPS	DoP, LG, LO	
6.4.1a Land should be zoned rural conservation in the Shire of Nannup local planning scheme and the Shire of Augusta-Margaret River local planning scheme as shown in figures 21a and 21b.	Proposed	High	M	LPS	LG	DoP
6.4.1b Subdivision and development of lands in the rural conservation zone (Scott planning unit) is to be considered in accordance with section 6.6 of this strategy.	Proposed	High	O	LPS, SA, DA	LG, DoP	LO
6.4.2 Subdivision in the Donnelly planning unit will not be supported.	Ongoing	High	O	LPS	LG	DoP
6.4.4a Land to be zoned rural conservation in the Shire of Manjimup local planning scheme as shown in figure 21a.	Proposed	High	M	LPS	LG	DoP
6.4.4b Subdivision in the Shannon planning unit will not be supported.	Ongoing	High	O	LPS	LG	DoP
6.5a Subdivision in rural conservation zone area A should be supported only to a minimum lot size of 40 ha provided that the average size of lots created as a result of subdivision of the parent lot is a minimum of 80 ha and is based on an approved subdivision guide plan.	Proposed	High	O	LPS, SA	DoP, LG	LO

Recommendation	Status	Priority	timeframe	Implementation mechanism	Responsibility	
					Lead	Support
6.5b Subdivision of existing small lots abutting the coast into two approximately equal lots may be considered where conservation measures, including an adequate foreshore reserve being ceded free to the Crown, show a clear conservation outcome.	Proposed	High	O	LPS, SA	LG, DoP	LO
6.5c Subdivision in rural conservation zone area B should only be supported to a minimum lot size of 40 ha.	Proposed	High	O	LPS	LG, DoP	LO
6.5d Subdivision in rural conservation zone area C is not supported.	Current	High	O	LPS	LG, DoP	LO
6.7a Local governments should review their local planning schemes and zone areas shown on figure 21a as rural conservation (or similar) and incorporate the provisions in section 6.6 in their local planning schemes.	Proposed	High	M	LPS	LG, DoP	
6.7b Subdivision guide plans are to be provided to the WAPC for endorsement prior to any subdivision or development, with the WAPC to use these provisions for assessment of subdivision applications in the rural conservation zone.	Proposed	High	O	SA/DA, LPS	LO, DoP, LG	DEC, DoW
6.7c The most appropriate form, scale and type of tourism development at the three identified coastal access locations should be addressed in a coastal management plan. When agreed, councils should adopt this plan's recommendations as a local planning policy.	Proposed	High	M	LPS, DA, SA	LG, DoP	DEC, LO, DoW, TWA

◆ The lead role for implementation these recommendations is yet to be determined.

Abbreviations:

- DEC Department of Environment and Conservation
- DoH Department of Health
- DoW Department of Water
- DoP Department of Planning
- FESA Fire and Emergency Services Authority
- LD Land developers
- LG Local government
- LO Land owners
- LPS Local planning scheme
- NILG Neighbouring local government
- PO Purchase opportunity
- SA/DA Subdivision application/Development application
- SG State Government
- SWDC South West Development Commission
- TI Telecommunications industry
- TWA Tourism Western Australia
- VE Verve Energy

Timeframe:

- II Immediate term – in the next year
- M Medium term - in the next 5 years
- L Long term – 5+ years
- O Ongoing – as required

7.6 Associated and ongoing studies

The Shannon and D'Entrecasteaux national parks management plan is currently under review by DEC. A revised management plan is being developed and it is anticipated that this plan will be released in the near future. The management strategies identified in this strategy for DEC managed areas will need to be checked against this plan once it is released. In addition, a number of local plans and strategies in the study area are currently awaiting gazettal, or are under review. It should be noted that the *Windy Harbour Management Plan* has recently been revised. The *Warren-Blackwood Rural Strategy* was finalised in 2004.

Indicative management plans for the proposed Walpole and Nornalup inlets marine park and the proposed Geographe Bay/Leeuwin-Naturaliste/Hardy Inlet/Capes marine park were recently released for public comment for a period ending in December 2006.

A draft management plan for the Walpole wilderness area and adjacent parks and reserves was released for public comment in August 2006 and the final plan is awaiting ministerial approval and gazettal. A draft management plan for Scott National Park and the Gingilup Swamps Nature Reserve is also in development.

7.7 Modification and refinement

It is common for strategic planning exercises to have to rely on baseline data that are less than complete. Although the full range of information was not available, this strategy represents the best outcome that could be achieved under the circumstances.

Regional coastal strategies are not static blueprints; they substitute evolving plans in line with changing scientific understanding and community views and aspirations.

It is anticipated that modifications will be made to this strategy and its planning direction prior to its formal review. Outcomes of related studies and increased scientific understanding of

issues such as biodiversity and water availability may lead to a change in priority of certain goals. Unforeseen circumstances may also arise that will need to be addressed.

7.8 Monitoring and review

As highlighted in this strategy, it will be important to monitor and review the implementation of the management strategies regularly to ensure that actions continue to be relevant and timely. It is recommended that this strategy and the associated management recommendations be fully reviewed after a period of five years. The review should include, but not be limited to:

- an inventory of the management recommendations of this strategy and a statement of their effectiveness measured against defined performance indicators;
- a review of information and additional research and monitoring that may have resulted in a change in the characteristics of the Augusta-Walpole coastline and associated key issues;
- a review of the state and regional strategic framework in which the strategy operates to determine whether there have been any changes that may affect the management strategies and implementation of the strategy; and
- a review of the administrative framework in which regional and local decisions are made to identify and account for any changes that may affect the strategy.

At the end of a 15-year horizon, the strategy will be reviewed with full public consultation and it will be submitted to the WAPC for endorsement.

Abbreviations

CALM	Department of Conservation and Land Management (amalgamated in 2006 with the Department of Environment to form the Department of Environment and Conservation)
DAF	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DMP	Department of Mines and Petroleum
DoH	Department of Health
DoIR	Department of Industry and Resources
DoP	Department of Planning
DoT	Department of Transport
DoW	Department of Water
EPA	Environment Protection Authority
FESA	Fire and Emergency Services Authority
IBRA	Interim Biogeographic Regionalisation of Australia
IPCC	Intergovernmental Panel on Climate Change
LPS	Local planning strategy
MPRA	Marine Parks and Reserves Authority
NP	National Park
SWCC	South West Catchments Council
SWDC	South West Development Commission
TWA	Tourism Western Australia
UCL	Unallocated Crown land
WAPC	Western Australian Planning Commission
VE	Verve Energy
2WD	two-wheel-drive
4WD	four-wheel-drive

Reading List

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