

Woodman Point Regional Park

Draft Management Plan

2002-2012



Conservation Commission
of Western Australia

Department of Conservation
and Land Management

Department of Sport and
Recreation

City of Cockburn



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PLANNING TEAM

This Plan was coordinated by a consultancy team led by CoastWise working closely with the managers of Woodman Point Regional Park – the Department of Conservation and Land Management, Department of Sport and Recreation and the City of Cockburn. The Planning Team prepared the plan for the Conservation Commission of Western Australia.

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What Do You Think?

We would like to know what you think of the proposals in this draft Management Plan, and encourage you to make a submission.

Why write a submission?

It is an opportunity to provide information, express your opinion, suggest alternatives and have a say on how we are proposing to manage the Woodman Point Regional Park over the next 10 years. If you prefer not to make your own submission, you could make a joint submission with others.

What makes an effective submission?

To ensure that your submission is as effective as possible:

- make it concise and clear;
- list your points according to the subject sections and page numbers in the Plan;
- say whether you agree or disagree with any or all of the objectives or recommendations, giving your reasons and sources of information; and
- suggest alternatives to deal with any issue with which you may disagree.

It is important to indicate those strategies and recommendations you agree with as well as those with which you disagree.

Give reasons for concerns and give support where appropriate. Information and constructive suggestions relating to your submission are most useful.

What criteria will be used in assessing your submission?

The draft management plan will be amended if a submission:

- provides additional resource information of direct relevance to management;
- provides additional information on affected user groups of direct relevance to management;
- indicates a change in or clarifies Government legislation, management commitment or management policy;
- proposes strategies that would better achieve management goals and objectives; or
- indicates omissions, inaccuracies or a lack of clarity.

The draft management plan will not be amended if a submission:

- clearly supports the draft proposals;
- offers a neutral statement or no change is sought;
- addresses issues beyond the scope of the Plan;
- makes points which are already in the Plan or were considered during Plan preparation;
- is one amongst several widely divergent viewpoints received on the topic and the recommendation of the Draft Plan is still considered the best option; or
- contributes options which are not feasible (generally due to some aspect of existing legislation or government policy).

What Happens To Your Submission?

All submissions will be summarised according to the topics discussed. The draft management plan will then be reviewed in the light of the submissions, according to criteria mentioned above. A summary of the submissions will be published along with the final management plan, including an indication of how the plan will be amended or not in response to the submission. If a submission is marked "CONFIDENTIAL" then the author will remain anonymous in the analysis of public submissions document.

Deadline

Submissions are welcome for three months after the date of release. For enquiries please ring the Department of Conservation and Land Management on (08) 9431 6500

Where to send your submission?

Written submissions should be sent to:

Executive Director
Department of Conservation and Land Management
PO Box 1535
FREMANTLE WA 6959

Attention: Regional Parks Coordinator;
Woodman Point Regional Park Management Plan

Where to obtain or view additional copies of this plan?

Conservation and Land Management
17 Dick Perry Avenue
Technology Park, Western Precinct
KENSINGTON WA 6151
(08) 9334 0333

Conservation and Land Management
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(viewing only)

Or visit the Department's NatureBase website at http://www.naturebase.net/national_parks

How to Use This Plan

This plan is divided into sections as set out in the table of contents. A goal is stated at the beginning of each section. Within each section are subsections. Each subsection begins with the objectives to be achieved by management, followed by a discussion of the main issues and then strategies, accompanied by the agencies responsible for achieving each objective and a priority rating. Priority ratings provide an indication of the relative importance of a strategy. The management agencies names have been abbreviated and a list of all abbreviations used and their meaning is listed in Appendix A. Key Performance Indicators are listed in the Plan and a Performance Audit Table outlining proposed timelines of key strategies is stated.

ACKNOWLEDGEMENTS

Numerous individuals and groups have contributed valuable ideas and information in the preparation of this draft management plan and their efforts are gratefully acknowledged, in particular, the members of the planning team from within the Department of Conservation and Land Management, the City of Cockburn and the Woodman Point Regional Park Community Advisory Committee - Mr Adrian Chegwiddden; Mr David Robertson; Mr John Smedley; Mr Cecil Forbes; Mr James Robinson; Mr Donald Wright; and Mr Ben Carr. Other contributors include Dr John Bollig; Mr Kevin Watts, Department of Sport and Recreation; and Mr Peter Dans, Mr Tony Eddleston and Mr Lyl Woods, Department of Conservation and Land Management. The CoastWise consultancy team comprised Mr Rory O'Brien, Ms Val O'Brien, Ms Barb Green, Mr Lindsay Stephens, Ms Barbara Stockton, Ms Sandra Krupa, Ms Amanda Maxwell, Ms Jacinta Christie and Ms Wendy Payne.

NOMENCLATURE

Inclusion of a name in this publication does not imply its approval by the relevant nomenclature authority.

THE CONSERVATION COMMISSION OF WESTERN AUSTRALIA AND THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT.

All national parks, conservation parks, nature reserves, and other similar reserves are placed in the care, control and management of the Conservation Commission of Western Australia. These reserves are managed on behalf of the Conservation Commission of Western Australia by the Department of Conservation and Land Management.

As the controlling body, the Conservation Commission of Western Australia is responsible for having management plans prepared for all lands that are vested in it. This plan is prepared by the Department of Conservation and Land Management and issued as a draft plan by the Conservation Commission of Western Australia for public comment prior to final approval by the Minister for the Environment and Heritage.

Preface

Regional parks are areas of Region Open Space that are identified by planning procedures as having outstanding conservation, landscape and recreation values. Regional parks provide the opportunity for a consortium of management agencies and private landowners to develop coordinated planning and management strategies.

Regional parks were first proposed in the Stephenson - Hepburn Report of 1955, which was the basis of the Perth Metropolitan Region Scheme in 1963. Since then, State planning agencies have been acquiring land in anticipation of the time when regional parks would be formally created.

In 1997, the State government announced a commitment to introduce legislation to give regional parks legal standing and vesting in the former National Parks and Nature Conservation Authority, now the Conservation Commission of Western Australia. Eight regional parks were recognised as formal identities with the coordination of their management progressively transferred to the Department of Conservation and Land Management.

This draft Management Plan is a commitment by the Department of Conservation and Land Management, Department of Sport and Recreation and the City of Cockburn to manage Woodman Point Regional Park. The role of the Department of Conservation and Land Management in managing the park is two-fold. Firstly, it is to manage the areas of the Park that are vested in the Conservation Commission of Western Australia. Secondly, it is responsible for coordinating the management of the Park. The latter is initiated through the preparation of this Plan. Department of Sport and Recreation will continue to manage the recreation camp and City of Cockburn will manage the reserves vested in it, in accordance with this Management Plan.

Woodman Point Regional Park is important, in terms of both the conservation values and the recreational opportunities it encompasses. It is intrinsically tied to the marine environments of Cockburn Sound and Owen Anchorage and provides access to these important water bodies for a large number of people. Its conservation value is recognised with a nature reserve located within the Park. While the Park has undoubtedly high ecological values and is a very popular recreation area, it is at the same time beset by a number of critical management problems such as vegetation degradation and loss, widespread weed invasion, fire risk, feral animal impacts and vandalism.

This Management Plan, which is based on previously prepared ecological, recreational and historical surveys and information collected during the study period, seeks to establish a clear vision as to how best to manage and protect Woodman Point Regional Park. The Plan cannot solve all of Woodman Point's problems, but it will contribute to the better understanding of the disturbances and impacts on the environment and the expectations and needs of the people who use the area.

The Woodman Point Regional Park Community Advisory Committee was established early in the planning process to provide input during the preparation of the Plan. The Plan, therefore, has been developed through access to a wide range of expertise from stakeholder groups and reflects their input to a large degree.

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A. INTRODUCTION

1. Purpose and Status of the Management Plan

PURPOSE OF THE PLAN

The purpose of this draft management plan ("the Plan") is to provide broad direction for protection and enhancement of the conservation, recreation and landscape values of Woodman Point Regional Park ("the Park"). It will do this by developing strategies aimed at conserving the special features of the Park and providing for future community requirements. The Plan will help ensure the Park is managed appropriately and is capable of sustaining its high nature conservation and cultural values as well as use by the community.

Given the strategic nature of this Plan, more detailed planning (referred to as subsidiary plans) will be required prior to operations taking place within the Park (Section 39). Examples of subsidiary plans proposed in this Plan include a weed management and rehabilitation plan and site development plans for specified Park areas.

STATUS OF THE PLAN

This Plan provides statutory direction for lands within the Park vested in the Conservation Commission of Western Australia and managed by the Department of Conservation and Land Management. The Plan will act as an "umbrella" document coordinating existing plans for specific areas of the Park. Implementation of existing plans will need to be consistent with the overall direction of this Plan. Additionally, future plans for areas within the Park will need to be written in a manner to complement the Woodman Point Regional Park Management Plan.

The Conservation Commission of Western Australia (CCWA) and Western Australian Planning Commission (WAPC) endorse this Plan and acknowledge that the Department has the responsibility for coordinating the management of the Park. In consultation with the Department, the WAPC will use this Plan to assist with the assessment of development proposals on lands within and adjoining Woodman Point Regional Park. The strategies contained in this Plan have not yet been formally endorsed by Department of Sport and Recreation (DSR) or the City of Cockburn (CC).

2. Regional Parks

WHAT IS A REGIONAL PARK?

Regional parks are areas of Region Open Space that are identified by planning procedures as having regionally significant conservation, landscape and recreation values. Regional parks are a land management system which provides the opportunity for a coordinated planning and management strategy by different land management agencies and private land owners.

Regional parks may comprise Crown lands placed in the care, control and management of State government agencies and local governments as well as private lands where the agreement of the landowner is obtained.

As such regional parks could be comprised collectively of lands with a variety of tenures and reserve purposes. They could be a package of multi-purpose, multi-vested reserves drawn together for coordinated management by the Department of Conservation and Land Management. Woodman Point Regional Park, for example, consists of land comprising Crown reserves vested in the City of Cockburn, the Conservation Commission of Western Australia and the Recreation Camps and Reserve Board.

It is intended that the overlaying regional park concept will be put in place while maintaining the high level of protection currently existing for lands already placed in the care, control and management of the Conservation Commission of Western Australia (such as nature reserves) that are found within regional parks.

THE REGIONAL PARK CONCEPT

The concept of Regional Open Space was first introduced to Western Australia by the Stephenson - Hepburn Report in 1955, which recommended a statutory region plan be prepared for Perth which reserved private land required for future public purposes. In 1963 the Perth Metropolitan Region Scheme (MRS) was established and land was reserved for "Parks and Recreation." This land (subject to amendments of the MRS) has been gradually acquired by State planning authorities with the intention to protect open space of regional significance for conservation and recreation.

The Environmental Protection Authority's (EPA) *Conservation Reserves for Western Australia, The Darling System - System 6* (Department of Conservation and Environment, 1983) identified areas with regionally significant conservation, landscape and recreation value. It also recommended areas of land to be managed as regional parks. A system of regional parks was envisaged which included the land reserved for "Parks and Recreation" in the MRS at Woodman Point, namely the Quarantine Station and Explosives Magazine Reserves (Locality M90 in the System 6 Report).

In 1989, the State government decided that the responsibility for regional park management be established within the Department of Conservation and Land Management, and that the responsibility for planning the acquisition of lands for regional open space be retained by the then Department of Planning and Urban Development (DPUD) (now Department for Planning and Infrastructure) on behalf of the WAPC.

In 1990, a task-force report was prepared by DPUD and the Department of Conservation and Land Management, outlining proposed administration, planning and management of regional open space (Regional Parks Taskforce, 1990).

The EPA's *Red Book Status Report* (Department of Conservation and Environment, 1993) describes the transformation of regional parks from concept to reality as being difficult because of the range of land tenure involved and the funding requirements for continual management of the parks.

In June 1997, the State government announced a commitment to introduce legislation to give regional parks legal standing and vesting in the former National Parks and Nature Conservation Authority (NPNCA) now the Conservation Commission of Western Australia (CCWA). The coordination of management of eight metropolitan regional parks would be progressively transferred to the Department.

REGIONAL PARK PLANNING

Planning for regional parks occurs at a number of levels. Regional park management plans are a part of a broad suite of planning undertaken by the relevant managing agencies. Figure 1 illustrates the planning levels typically undertaken for regional parks.



Source: ANZECC 2000.

Figure 1 - Regional Park Planning Hierarchy

3. Woodman Point Regional Park

Woodman Point Regional Park is currently one of eight regional parks in the Perth metropolitan area. It is located approximately 9 kilometres south of the City of Fremantle (Figure 2) and is located on the coastline within the municipality of the City of Cockburn. The Park can be accessed from Cockburn Road which is a main road linking Fremantle to Kwinana and Rockingham.

The Park covers an area of 272.5 hectares and is situated on a relatively narrow beach-ridge plain in the form of a peninsula or tombola which has formed as a result of sediment accumulation since the end of the Pleistocene period (Department of Conservation and Environment, 1980). Woodman Point separates Owen Anchorage, in the north, from Jervoise Bay, in the south, and also marks the northern boundary of Cockburn Sound. The Park is visually enclosed by a west-facing slope and dominant

north-south ridgeline of Tamala Limestone containing a lighthouse and residential development to the east.

The City of Cockburn coast is an important recreation resource in a sector of the Perth Metropolitan Region that is growing rapidly. Population projections for the City of Cockburn indicate growth to around 97,800 residents by 2016. The City's population was just over 60,000 in 1996 (Ministry for Planning, 2000). The Park provides the boating gateway to Cockburn Sound and Owen Anchorage and is therefore of immense recreational value in regard to aquatic activities.

The surrounding areas of the City of Fremantle and Town of Kwinana are also projected to grow in population, in the order of an additional 20,000 people by 2016 (Ministry for Planning, 2000). These areas are within a ten kilometre catchment area of Woodman Point, and the increased population will create greater demand for recreation facilities at the Park (Ecoscape/Coastwise, 1999).

The majority of Woodman Point has been under State and Commonwealth Government control since the Quarantine Station was built in 1886. As a result, significant areas of vegetation at Woodman Point are in excellent environmental condition and have considerable conservation values. The Park includes areas of undisturbed coastal vegetation, including significant stands of Rottneest Cypress, Rottneest Tea Tree and Tuart woodland.

The Park's regional focus attracts visitors from a broad area within metropolitan Perth, as shown by surveys of visitor use completed by Barnes in 1998 and Colmar Brunton in 2001 (Section 25). The pressures on the Park and challenges to the managing agencies will continue to grow over time. It will be the role of the Park managers, with support from the community, to implement this plan to effectively manage and counter those pressures.

ESTABLISHMENT OF WOODMAN POINT REGIONAL PARK

During the 1970s the State government, conscious of the need for an area for the construction and repair of larger ships in the environs of Perth, commissioned Maunsell-Yard to report on the matter. Reports were submitted in 1974 and 1975 which recommended development of suitable marine facilities for industry in Jervoise Bay. This development increased the importance of Woodman Point as the major regional recreational coastline between Fremantle and Rockingham (Woodman Point Community Taskforce 1988).

On the basis of a subsequent report in 1976 by the Department of Industrial Development titled *Proposed Rationalisation of Jervoise Bay for Marine-based Industries and Recreation*, State Cabinet resolved in 1978 that –

1. The State government will progressively acquire land at Woodman Point and reserve it for recreation substantially in accordance with the MRS.
2. Subject to the amendments to the MRS, make arrangements, as and when appropriate, for alternative areas and facilities for groups which are currently located immediately south of the Jervoise Bay ship building area.

Part A. Introduction

3. Request the Department of Main Roads to urgently examine alternative alignments for Cockburn Road.
4. Request State Treasury to provide funds for additional studies into the environmental impacts of the projected industrial development, the development for Woodman Point and the envisaged future land and water use of the area. (Woodman Point Community Taskforce, 1988).

In 1978, following the Cabinet decision, the former Metropolitan Region Planning Authority appointed T.S. Martin and Associates to coordinate planning and environmental studies in the area. The major proposals from these studies affecting the Park included:

- relocate existing recreational uses and clubs displaced by the industrial development;
- acquire Commonwealth land at Woodman Point; and
- incorporate an organisation for the development and maintenance of Woodman Point Park. (Woodman Point Community Taskforce 1988).

In 1979, Cabinet appointed the Jervoise Bay/Woodman Point Coordinating Steering Committee. The Committee prepared the *Woodman Point Regional Recreation Centre Design Concept* in 1981 which was approved by Cabinet in 1982. The report was intended only as a guide for future development. The former Department for Youth, Sports and Recreation, through the Recreation Camps and Reserve Board, was approved as an interim manager (with the proviso that the matter would be re-examined from time to time). The Department for Youth, Sport and Recreation already had responsibility for the management of the former quarantine station as a recreation camp (Woodman Point Community Taskforce 1988).

In 1984, State Cabinet established an Inter-departmental Committee to report on the future use and development of buildings and land at Woodman Point. The Committee noted that the 1981 Concept Plan did not require major re-appraisal and stated that the Government had not yet endorsed the 1981 Concept Plan. The Committee presented its report to Cabinet in 1985 with a number of localised land use amendments. (Woodman Point Community Taskforce 1988).

State Cabinet made further amendments to the Concept Plan in 1986/87 and in 1987 Reserve No. 40184 was vested in the Recreation Camps and Reserve Board.

In 1987 the Woodman Point Community Taskforce was established by the Minister for Sport and Recreation. The Taskforce proposed modifications to the 1981 and 1985 Concept Plans through a revised plan in 1988 which identified a three staged approach to developing and conserving Woodman Point. The staged development was partially completed.

In 1997, the State government announced that Woodman Point would be established as a regional park and that it would be provided legal standing and vesting in the former National Parks and Nature Conservation Authority (NPNCA) now the Conservation Commission of Western Australia. The Department of Conservation

and Land Management commenced the preparation of a management plan in 1998.

The Department of Conservation and Land Management established the Woodman Point Community Advisory Committee in 1999 as a regular forum for public opinion and the exchange of advice on regional park management issues.



Figure 2 - Park Location

PARK VALUE

Natural Environment Value

Woodman Point Regional Park has significant conservation value owing to the presence of remnant vegetation that would once have been widespread along the Perth metropolitan coastline but is now significantly cleared. Of particular importance are the stands of Rottneest Cypress (*Callitris preissii*) and Rottneest Tea Tree (*Melaleuca lanceolata*), recognised and listed by the Department of Conservation and Land Management as a "Threatened Ecological Community" (see Glossary). The occurrence of Tuart (*Eucalyptus gomphocephala*) woodland so close to the sea is also of significant environmental interest. Some parts of Woodman Point have not suffered fire disturbance for over 100 years and therefore remain as benchmark examples of the floristic composition that would have been present in the area before European Settlement in the early 1800s (Powell and Emberson, 1981).

Woodman Point Regional Park contains a wide variety of ecosystems from Coastal Shrubland, Heath and Scrub, to Quindalup Woodlands. The Seaside Community (*Cakile maritima*, *Spinifex longifolius* and *Spinifex hirsutus*), Cypress Belt (*Callitris preissii*), Tuart Woodland and Forest (*Eucalyptus gomphocephala*) and Heath and Scrub

Part A. Introduction

(*Melaleuca systema*, *Melaleuca huegelii*, *Acacia rostellifera*, *Spyridium globulosum* and *Santalum acuminatum*) can be found in the Park. This diversity of vegetation has high conservation value within the rapidly expanding urban setting of Cockburn.

The coastal foreshore of Woodman Point Regional Park also serves as a refuge for a diverse bird population, some of which are trans-equatorial migratory birds (How *et al.* 1996). The diversity of coastal habitats provides important local breeding grounds for shore-birds.

Woodman Point is also highly valued as a refuge for other wildlife including the Quenda (*Isodon obesulus fusciventer*), the Lined Skink (*Lerista lineata*) and the Peregrine Falcon (*Falco peregrinus*).

The flora and fauna of the Park are discussed further in Sections 15 and 16 respectively.

Recreation Value

Woodman Point Regional Park is one of Perth's most popular beachside areas and provides boating access to Cockburn Sound and Owen Anchorage. The area hosts many activities that are linked to the ocean including swimming, snorkelling, scuba diving, sailing and fishing.

The Park also offers picnic and barbecue facilities and many other land based recreational activities including bird watching, bushwalking, bike riding and heritage interpretation.

Major recreation nodes accessible within and from the Park include:

- John Graham Recreation Reserve, which contains grassed picnic areas, children's playgrounds and beach access;
- Woodman Point Beach, which contains the Ammunition Jetty and is popular for swimming, fishing, scuba diving and snorkeling;
- Coogee Beach, with a popular swimming beach and fishing jetty;
- Woodman Point Boat Launching Area, which contains four public boat launch ramps as well as the Cockburn Power Boats Association and Pleasure Boat Storage facility; and
- Woodman Point Headland, a popular fishing location and the Jervoise Bay Sailing Club is located nearby.

These are discussed further in Section 27.

Additionally, the recreation camp managed by Department of Sport and Recreation provides for overnight accommodation (dormitories and self-contained cottages). There are two caravan and camping parks offering accommodation within the Park - Woodman Point Holiday Park and Coogee Beach Caravan Park.

Cultural Heritage Value

Research indicates a large presence of Aboriginal people in the Cockburn district prior to European settlement in 1828. Artifacts and rock engravings found in the Cockburn district reflect the use of the land by Aboriginal people. Consultation with local Nyoongar Elders has revealed strong cultural connections with the Cockburn coast (Ecoscape / Coastwise, 1999).

One Aboriginal heritage site which adjoins the Park (Site S02169 'Indian Ocean') has been listed by the Department of Indigenous Affairs. It is important to note that other sites may exist in or adjacent to the Park that are not yet known to the Department.

Research undertaken by McDonald, Hales and Associates (1997) in consultation with local Aboriginal Elders suggests that two such sites with mythological significance exist in the vicinity of Woodman Point. The first relates to the limestone ridge that runs parallel to the coastline and ranges approximately 200m-400m inland, and the second relates to Woodman Point itself. These sites are described further in Section 22.

Woodman Point is also significant for the many historical remnants of European settlement including the former quarantine station; crematorium and gravesites; railway link to Fremantle; explosives magazines and jetty; as well as the naval shed and groyne. There are additional places of heritage value close to the Park, namely Coogee Hotel; Coogee Post Office; lime kilns; lighthouse; lighthouse keepers' houses and the magazine jetty. There are also two known shipwrecks to the west of the Park, the James Mathews (1841) and the Omeo (1905). A brief account of the European history of Woodman Point is outlined in Section 22.

Landscape Values

Woodman Point Regional Park provides significant landscape and amenity value to the region. The Park landscape provides strong visual connections both within the Park and into surrounding areas. Significant views of the coast, including the island landscapes of Garden Island and Rottnest, can be appreciated from many vantage points around the Park. These views are an important part of the Park's identity. The relationship of adjoining land uses to the Park landscape can have a significant impact on the overall amenity of the Park.

Many landscape character types contribute to the overall high visual quality of the Park ranging from coastal woodland areas, coastal foreshore dunes, sandy beaches which allow for extensive views of the ocean and well-maintained areas of grassed parkland.

4. The Management Plan and Community Involvement

The Management Plan for Woodman Point Regional Park will be prepared in five phases:

1. The first phase was aimed at identifying the relevant planning and management issues. This was achieved by undertaking a literature review, analysing the existing condition of the Park and organising a community workshop. Public involvement in this phase was encouraged through newspaper articles and canvassing key stakeholders for the community workshop.
2. The second phase was the preparation of the draft Management Plan. This involved identifying values and preparing planning strategies to protect those values and address the issues identified in phase one. Within this phase Department of Conservation and Land Management, the City of Cockburn, Department of Sport and Recreation and the Woodman Point Regional Park Community Advisory Committee provided advice on the development of the Plan.
3. The third phase involved presenting the draft Plan for public comment. Its availability for review has been widely advertised, the draft is open for public comment for a period of three months, after which public submissions will be analysed.
4. Phase four will cover the acknowledgement and analysis of public submissions.
5. The fifth phase will comprise the preparation of the final Management Plan incorporating issues or comments raised within the public submissions and comments State government agencies and the City of Cockburn. The revised Plan will be submitted for approval by the Minister for the Environment and Heritage.

B. PRINCIPAL MANAGEMENT DIRECTIONS

5. The Vision for the Park

The long-term vision for the Park is:

"The Woodman Point Regional Park will be a well managed coastal park supporting a diversity of habitats in a sustainable manner. The Park will provide for the conservation and preservation of heritage values as well as providing for the recreational needs of the community in a visually harmonious way."

GOALS

Goals have been set for each major part of the Plan, while objectives designed to achieve these goals have also been identified. The following management goals are proposed for the Park.

Conservation

Protect, conserve and enhance the Park's biota as well as its physical, cultural and landscape resources, especially the Threatened Ecological Community.

Recreation

Provide and manage for recreation, tourism and leisure in a manner that minimises conflict between visitors, and is consistent with other management objectives and Park values.

Commercial

Allow for appropriate commercial uses within the Park and manage them in a manner that minimises impact on other values and contributes to regional park management costs.

Research and Monitoring

Seek a better understanding of the natural, cultural and social environments, and the impacts of visitor use and Park management.

Community Relations

Promote informed appreciation of the Park's natural environment, cultural values and recreation opportunities and facilitate liaison with the community about its management.

Integration of Management

Develop and maintain integrated and coordinated management arrangements between the participating Park managers and planning authorities.

Strategy:

1. **Manage the Park for conservation and allow recreation and other uses of the Park to occur to the extent that they do not impair the values of the Park. (Department of Conservation and Land Management, CC) [High]**

6. Management Policies

The objective is to integrate the policies of the management agencies to complement and support the vision for the Park.

Conservation Commission of Western Australia and Department of Conservation and Land Management Policies

This plan is based on current Conservation Commission of Western Australia and Department of Conservation and Land Management policies. These policies derive from legislation, principally the *Conservation and Land Management Act 1984* and the *Wildlife Conservation Act 1950*, and associated regulations. The policies that relate to this Park cover aspects such as recreation, conservation and education. Policies are published and are available to the public on request.

City of Cockburn

The management actions of the City of Cockburn should reflect the intent of this Plan. The City of Cockburn will adopt the principles outlined in this Plan as policy for the future management of the Park.

Department of Sport and Recreation

The actions of Department of Sport and Recreation in managing the recreation camp should reflect the intent of this Plan. Department of Sport and Recreation will adopt the principles outlined in this Plan as policy for managing the camp.

Strategies

1. **Apply the Department of Conservation and Land Management and Conservation Commission of Western Australia policies that relate to recreation, conservation, community involvement, and research and monitoring in the Park. (Department of Conservation and Land Management) [Ongoing]**
2. **Prepare a local government policy statement for implementation by Cockburn City Council that reflects the principles outlined in this Management Plan. (CC) [High]**
3. **Prepare a policy statement for implementation by Department of Sport and Recreation that reflects the principles outlined in this Management Plan. (DSR) [High]**

7. Park Boundary and Land Tenure

The objective is to ensure that the values of the Park are protected by security of tenure and reserve purpose.

PARK BOUNDARY

The Woodman Point Regional Park boundary was determined by the former Ministry for Planning (now Department for Planning and Infrastructure) and it reflects the existing MRS, under which the entire Park is reserved as "Parks and Recreation". The Park boundary and land tenure at the date of this Plan is shown in Figure 3.

The boundary of Woodman Point Regional Park extends to the high water mark. Operationally, the City of Cockburn has the jurisdiction and resources for managing beaches abutting the Park. The City administers local laws, which can be used to address nude bathing and exercising dogs on the beaches. Management and planning for these beaches therefore requires strong interaction between the City of Cockburn and the Department of Conservation and Land Management.

Inclusion of other lands into Woodman Point Regional Park

The WAPC has jurisdiction for overall planning and the acquisition of lands for regional parks. The inclusion of additional areas into Woodman Point Regional Park is therefore the responsibility of the WAPC, in consultation with the Department of Conservation and Land Management.

The criteria for determining boundaries for a major regional park such as Woodman Point take into account not only land tenure and the planning context of the area, but also the condition and status of the conservation areas contained within it (Department of Planning and Urban Development, 1992). The park boundary must be manageable and include areas for conservation, recreation, and landscape protection. Other issues that must be considered include:

- acquisition of land, including cost and impacts on private landowners;
- adequate provision for recreational uses and future demands in a growing population area;
- fire safe boundaries which afford protection to adjacent homes, and the Park itself;
- adequate access for local residents and visitors from elsewhere in the region;
- the enhancement of views into and within the Park;
- provision of future services and roads.

In addition to the above factors, management resources need to be carefully considered when additional lands are being proposed to be included into the Park.

There may be opportunities for additional land to be included into the Park. These include:

1. the land east of Cockburn Road containing the Coogee Lighthouse and associated cottages; and
2. the southern portion of Reserve number 11430 which adjoins the park to the east. This reserve is

west of Cockburn Road and vested with the Minister for Planning and Infrastructure (see Figure 4).

Such opportunities should be further investigated and reviewed in relation to future road and rail land requirements.

LAND TENURE

Land within the Park consists of reserves administered under the *Land Administration Act 1997* and placed in the care, control and management of a number of State government agencies and the City of Cockburn.

This Plan seeks to amend the existing tenure arrangements and boundaries of selected Crown reserves within the Park. The tenure of these reserves will be amended in accordance with the management areas outlined in the Plan's park management zones (Section 9). They will be classified as "Class A" under the *Land Administration Act 1997* and will be afforded the purpose of conservation park. The tenure arrangement of the nature reserve is to remain unchanged.

The recreation camp at Woodman Point, which is currently managed by DSR, is to be excised from reserve 40184 and created as a new, separate reserve. The recreation camp will be retained within the regional park and will continue to be managed by DSR.

It is not the intent of this Plan to change the tenure arrangements of the Crown reserves which comprise the lease or licensed area of Cockburn Cement Ltd. This Plan acknowledges the rights of Cockburn Cement Ltd to remain at its present location within the Park in accordance with the *Cement Works (Cockburn Cement Limited) Agreement Act 1971*.

Cockburn Cement Ltd leases a portion of Lot 59 Woodman Point View from the Department of Land Administration that contains a shell washing plant. The company also has the right to construct and maintain an electricity supply, use roads, park vehicles, and construct and maintain pipelines for pumping water, sand or spoil at specified locations within the Park. Details of these locations are outlined in the *Cement Works (Cockburn Cement Limited) Agreement Act 1971*. For further information in relation to Cockburn Cement Ltd, refer to Section 33 – Leases and Licenses.

Other Crown reserves utilised for services, such as navigation beacons, will retain their existing reserve purpose and tenure arrangements. Road reserves considered unnecessary by planning and management agencies will be investigated for inclusion into the gazetted area of the Park and managed by the appropriate agency.

Should additional land be included within the boundary of the Park during the term of this Plan, its tenure arrangements will be consistent with the protection and enhancement of the Park's values.

Strategies

1. Adopt the Park boundary as shown on Figure 3. (DPI, Department of Conservation and Land Management, CC) [High]
2. Amend the land tenure arrangements of reserves within the Park using Table 1 and Figure 4 as a guide. (DOLA, CCWA, Department of Conservation and Land Management, RCRB, DSR) [High]
3. Retain the existing tenure arrangements for the operation of Cockburn Cement Ltd. in the Park in accordance with in the Cement Works (Cockburn Cement Limited) Agreement Act 1971. (DOLA) [Ongoing]
4. Investigate the closure of road reserves within the Park considered unnecessary by the planning and management agencies for inclusion into the gazetted area of the Park. (Department of Conservation and Land Management, CC, DPI) [Medium]
5. Investigate the inclusion of the undeveloped rail reserve that adjoins the eastern boundary of the Park into the gazetted area of the Park. (Department of Conservation and Land Management, CC) [Low]
6. Should the proposed Fremantle-Rockingham Controlled Access Highway proceed, investigate the inclusion of the area containing the Coogee Lighthouse into the gazetted area of Park. (Department of Conservation and Land Management, CC, DPI) [Low]

8. Legislative Amendments and Interim Management

The objectives are to provide for the long-term legislative protection of the Park and to ensure that interim management arrangements facilitate appropriate management of the Park.

INTERIM MANAGEMENT ARRANGEMENTS

Prior to the gazettal of the final Plan and transfer of lands to the appropriate managing agencies, there is a need to clearly define interim management arrangements between the land managing agencies involved in the Park.

The Department of Conservation and Land Management will coordinate the interim management of Woodman Point Regional Park by management agreements prepared for Crown reserves controlled by the Recreation Camps and Reserve Board.

The City of Cockburn will be responsible for managing lands vested in it, in accordance with the objectives of this plan. An overall integrated approach to the interim management of Woodman Point Regional Park will be coordinated by the Department of Conservation and Land Management.

LEGISLATIVE AMENDMENTS

The *Conservation and Land Management Act 1984* will need to be altered to specifically include the management of regional parks. The management of regional parks could be included as a function of the Department of Conservation and Land Management.

Strategies

1. Prepare an interagency management agreement for interim park management between the Department and the Recreation Camps and Reserve Board. (Department of Conservation and Land Management, DSR, RCRB) [High]
2. Amend the *Conservation and Land Management Act 1984* to provide for regional parks. (Department of Conservation and Land Management) [Medium]

9. Park Management Zones

The objective is to adopt a management zoning system that protects conservation values, provides for appropriate recreation and other uses, and provides for efficient management of the Park.

Management zones are a framework for protecting the Park by minimising existing and potential conflicts between uses and activities. They provide a broad guide to the public uses and management activities which are appropriate in certain Park areas and indicate which management objectives have priority in a given area. A clear zoning scheme will also help to communicate management intentions to the public.

The management zones and areas for the Park are illustrated in Figure 4. The zones provide a guide for the future vesting and tenure arrangements of Park areas. The zoning scheme does not affect the service and utility reserves in the Park. These are explained in Table 1.

Four zones have been identified for managing the Park:

- a) Conservation and Protection;
- b) Natural Environment Use;
- c) Recreation; and
- d) Special Use.

Refer to Table 1 for the management emphasis and acceptable uses and facilities within each zone.

Strategy:

1. Base future management of the Park on the zoning plan (Figure 4 and Table 1). (Department of Conservation and Land Management, DSR, CC) [Ongoing]



Figure 3 - Existing Land Tenure and Park Boundary

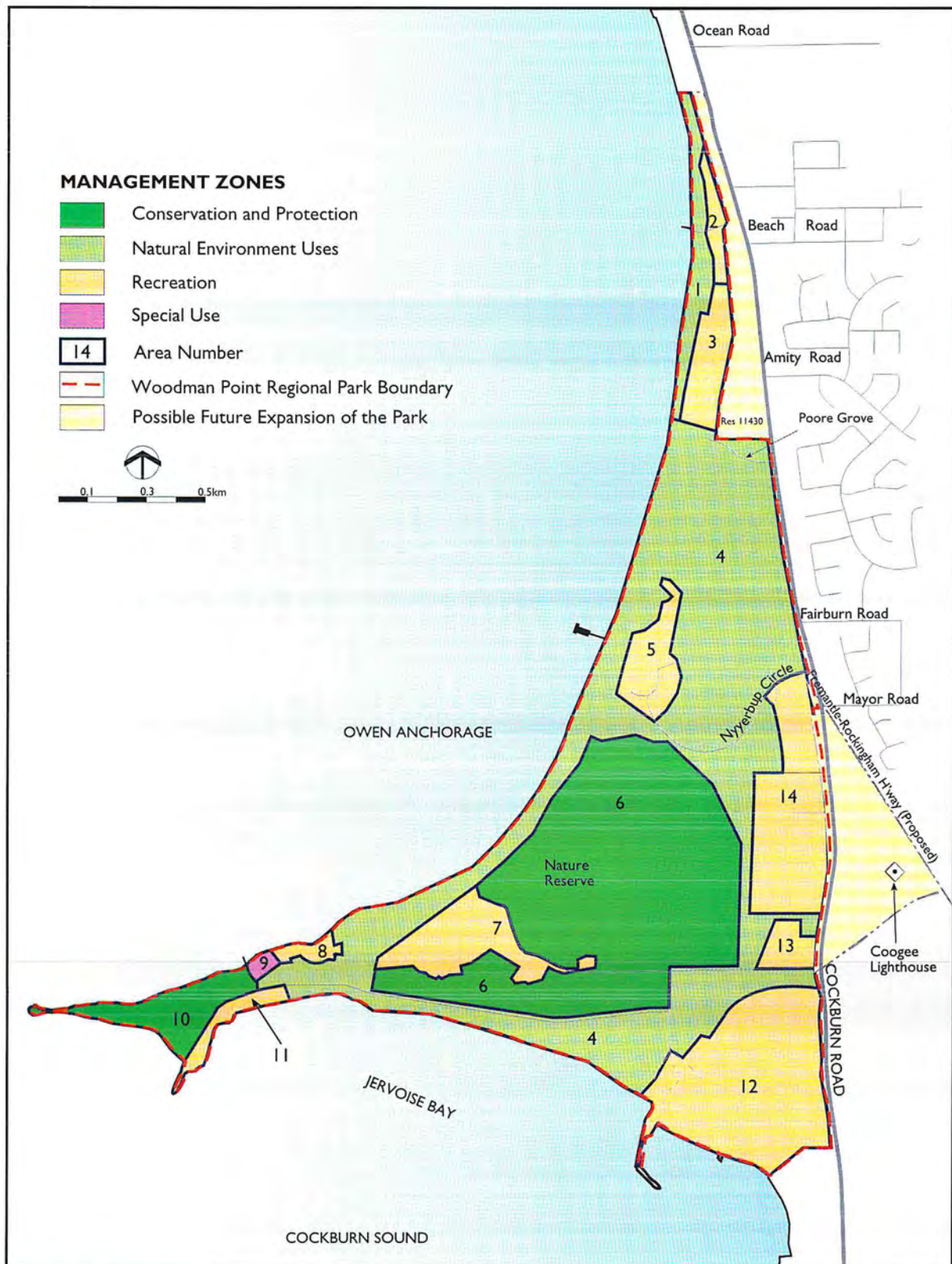


Figure 4 - Management Zones and Areas

Table 1 - Management Zones and Future Tenure Arrangements

Management Zone	Plan Areas	Management Agency	Reserve Purposes	Management Emphasis	Acceptable Uses and Facilities
Conservation and Protection	Area 6 Area 10	CALM CALM	Nature Reserve Conservation Park	The management emphasis of this zone is to protect and where possible enhance the conservation values (biota and heritage) as well as the landscape qualities of the Park. Priority will be given to restoring and maintaining the natural state of Conservation and Protection areas. Evidence of management will be minimal.	Restricted public access. Unauthorised vehicles prohibited. Development of facilities such as nature trails are acceptable in certain locations (see Section 26 - Recreation Masterplan). Rehabilitation of vegetation. Habitat protection, education, interpretation and research uses allowed.
Natural Environment Uses	Area 1 Area 4	City of Cockburn CALM	Recreation Conservation Park	The management emphasis is to provide for appropriate uses that do not adversely affect the natural environment. Areas will be managed jointly for public use, conservation and enhancement of flora and fauna, and improvement of landscape qualities. Public use must be compatible with the assigned purpose of the relevant reserve. Visible evidence of management may be moderate to high. Management will encourage uses and develop facilities that promote conservation and education.	Public access primarily by walking trails and cycle paths. Through access by vehicles along established roads is allowed. Some development of facilities necessary. These may include education nodes and facilities associated with visitor nodes. The provision of facilities will depend on the values of an area. Rehabilitation and habitat protection may be necessary.
Recreation	Area 2 Area 3 Area 5 Area 7 Area 8 Area 11 Area 12 Area 13 Area 14	City of Cockburn City of Cockburn CALM DSR CALM CALM CALM CALM CALM	Recreation Caravan Park Conservation Park Recreation and Conservation Conservation Park Conservation Park Conservation Park Conservation Park Conservation Park	The prime emphasis of management will be to provide a variety of recreation opportunities. The type and scale of facilities provided will depend on the values of any given area, community demand for recreation and the appropriate management of the Park. Management involves minimising the impact of visitor activities through the sensitive placement and provision of access and facilities as well as through the provision of information and interpretive material. Visible evidence of management may be high.	Public use may be high in these areas. Predominantly passive recreation pursuits, allowing for Park service and picnic facility development. Commercial concessions are considered appropriate within this management zone. Rehabilitation, landscaping and reticulation of areas may be necessary.
Special Use	Area 9	DOLA	Not Applicable	Management for purposes other than conservation, recreation or visitor services.	Private lease. No public access. Access for managing agencies as required.

10. Integrated Management of the Park

To provide for the effective involvement of both the managing agencies and the community in the management of the Park.

THE PARK MANAGEMENT STRUCTURE

The joint managers of the Park are the Department of Conservation and Land Management, Department of Sport and Recreation and the City of Cockburn. Their areas of responsibility are set out in the previous section on management zones. It is proposed that once this Plan is gazetted, management will be in accordance with the strategies outlined in this Plan.

The State Government considers the Department of Conservation and Land Management the most appropriate agency to provide a strong integrated framework for management of complex conservation and recreation areas. The Department is responsible for managing areas of the Park vested in the Conservation Commission of Western Australia and for the overall coordination of management. The Department of Sport and Recreation will manage the recreation camp and the City of Cockburn will manage areas of the Park vested in it, in accordance with the strategies outlined in this Plan.

Close cooperation is required by the management agencies and the community for this Plan to be implemented efficiently and effectively. Management decisions will involve input and negotiation between the land management agencies. Joint working parties comprising representatives from Department of Conservation and Land Management, the City of Cockburn and Department of Sport and Recreation will be established to facilitate the preparation of detailed subsidiary plans for the Park.

Responsibility for overall planning, such as changes to the MRS for regional parks, is retained by the WAPC.

A common management direction

The establishment of a management structure, common goals and agreement on priorities are necessary for safeguarding the Park where a number of management authorities, the general public and interest groups are involved. This Plan has been written in conjunction with the Park's managers, and comments are being sought from the public on the draft in order to establish a common management direction. Community involvement and community education are important components in achieving the management goals set out in this Plan.

Strategies

1. Establish, where appropriate, joint working parties representing the relevant managing agencies for specific implementation plans. (Department of Conservation and Land Management, DSR, CC) [High]
2. Consult with the City of Cockburn and Department of Sport and Recreation when preparing the annual works program and five year implementation plan. (Department of Conservation and Land Management) [High]

11. Key Performance Indicators

The objective is to set key performance indicators in order to measure the overall effectiveness or otherwise of management in relation to protection and enhancement of Park values.

Defining key performance indicators in management plans reflects the need for the Park managers to take an outcome-based approach from which the effectiveness of management can be assessed. Key performance indicators do not cover all objectives or strategies, but they have been selected to give a strategic indication of how well the values of the Park are being maintained. Key performance indicators therefore relate specifically to the key ecological and social values of the Park (see Table 2).

The key objectives and key performance indicators for Woodman Point Regional Park are also consistent with the Department of Conservation and Land Management's strategic directions, which are:

1. conserving biodiversity;
2. creating sustainable community benefits;
3. maintaining community involvement and support;
4. improving the way we do business (Department of Conservation and Land Management, 2000) (see Table 2).

Key management strategies have been identified as they establish baseline information to initiate the process of monitoring the key performance indicators.

Key performance indicators underpin the audit process of this Plan (see Section 42 - Performance Assessment).

Strategies

1. Establish baseline information to initiate the process of monitoring the Key Performance Indicators through implementation plans such as weed management and rehabilitation plans. (Department of Conservation and Land Management) [High]
2. Develop an integrated program of survey, research and monitoring within the Park, focusing on the key performance indicators. (Department of Conservation and Land Management, CC) [High]
3. Audit and measure the overall effectiveness of Park management based on the key performance indicators (see Section 11). (Conservation Commission of Western Australia, Department of Conservation and Land Management) [Ongoing]

Table 2 - Performance Assessment

Key Values	Key Objectives	Key Performance Indicators	Key Management Strategies Establish baseline information to initiate the process of monitoring the key performance indicators.	Timeline for Key Management Strategies
The diverse coastal habitats of Woodman Point support a variety of indigenous fauna.	To maintain the diversity of indigenous fauna species in the Park and, if feasible, reintroduce species lost from the Park. <i>(Department of Conservation and Land Management strategic direction 1)</i> .	<ul style="list-style-type: none"> Maintain the species diversity of indigenous fauna populations. 	16.1 Develop and implement a targeted and integrated monitoring program of fauna in the Park.	To be prepared prior to the mid-term audit.
<p>The presence of the Threatened Ecological Community.</p> <p>Vegetation communities in the Park are representative of communities once widespread on the Swan Coastal Plain but now significantly cleared.</p>	To protect, conserve, rehabilitate and restore local and culturally significant flora and vegetation in the Park, especially the Threatened Ecological Community. <i>(Department of Conservation and Land Management strategic direction 1)</i> .	<ul style="list-style-type: none"> Maintain the range of vegetation communities. Reduce abundance and distribution of priority weed species. Improve the status of the Threatened Ecological Community. 	<p>15.10 Develop and implement a targeted and integrated monitoring program of bushland condition, changes to vegetation communities with particular reference to the Threatened Ecological Community, and weed proliferation.</p> <p>17.1 Prepare and implement a weed management plan in accordance with the <i>Environmental Weed Strategy for Western Australia</i>. The plan will:</p> <ul style="list-style-type: none"> assess bushland condition; prioritise and control weed species according to invasiveness, distribution and environmental impacts; assess changes to vegetation communities; identify areas largely free of weeds, maintain these areas, and conduct weed control works out from these areas; specify appropriate control techniques and timing for removal; and integrate with the rehabilitation plan (Section 20). <p>20.1 Prepare and implement a rehabilitation plan for the Park prioritising proposed works.</p>	<p>To be prepared prior to the mid-term audit.</p> <p>To be prepared within 1 (one) year of the release of the Draft Management Plan.</p> <p>To be prepared within 1 (one) year of the release of the Draft Management Plan.</p>

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Table 2 (continued) - Performance Assessment

Key Values	Key Objectives	Key Performance Indicators	Key Management Strategies Establish baseline information to initiate the process of monitoring the key performance indicators.	Timeline for Key Management Strategies
Woodman Point Regional Park is one of Perth's most popular beachside areas, hosting activities including swimming, snorkelling, scuba diving, sailing and fishing.	To ensure that the level of visitor use and behaviour is sustainable and minimises conflict with other Park visitors and values. (Department of Conservation and Land Management strategic direction 2).	<ul style="list-style-type: none"> Increase visitor numbers while maintaining an overall positive trend of visitor satisfaction. 	<p>25.1 Develop and implement a visitor survey program to gain an understanding of visitor use, numbers and satisfaction within the Park. Use the Department of Conservation and Land Management's VISTAT as a basis for the program.</p> <p>25.2 Prepare a communication plan incorporating a sign system and sign plan as well as interpretive strategies and techniques. Interpretive material should be aimed at:</p> <ul style="list-style-type: none"> promoting visitor use and activities that are consistent with the protection and promotion of Park values and minimise conflicts between Park visitors; and providing information about the recreation and interpretation opportunities available in the Park. <p>26.1 Implement the Recreation Masterplan that allocates appropriate facilities and services to those areas of the Park best able to accommodate them in a sustainable manner.</p>	<p>To be prepared prior to the mid-term audit.</p> <p>To be prepared prior to the mid-term audit.</p> <p>Access and circulation aspects of the Masterplan to be completed prior to the end of term audit.</p>
The opportunity to recreate safely in the Park while experiencing the diversity of Park settings.	To take all reasonable and practical steps to ensure the safety of visitors in the Park. (Department of Conservation and Land Management strategic direction 2).	<ul style="list-style-type: none"> Remove or mitigate all identified high risk sites or facilities in the Park. 	<p>30.1 Prepare and implement a safety audit program to ensure procedures are developed to manage and monitor all known risks.</p>	<p>To be prepared prior to the mid-term audit.</p>
The Park's conservation, recreation and landscape values.	To provide for the effective involvement of both the managing agencies and the community in the management of the Park. (Department of Conservation and Land Management strategic directions 3 and 4).	<ul style="list-style-type: none"> Ensure appropriate land tenure arrangements for the new reserves within the Park. Ensure effective involvement of the community in the planning and management of the Park. 	<p>7.2 Amend the land tenure arrangements of reserves within the Park using Table 1 and Figure 4 as a guide.</p> <p>38.6 Maintain active liaison with community groups involved in the Park.</p>	<p>To be completed prior to the mid-term audit.</p> <p>Ongoing.</p>

C. CONSERVATION

12. Conservation Goal

CONSERVATION GOAL

To protect and conserve and enhance the Park's biota as well as its physical, cultural and landscape resources, especially the Threatened Ecological Community.

13. Landform, Geomorphology, Soils and Hydrology

The objective is to protect and conserve the existing geomorphological structure and soil associations of the Park.



LANDFORM

The landform of the Park is characterised by gently undulating coastal dunes and swales.

To the east of the Park, the north-south Tamala Limestone ridgeline has some steep slopes within a series of ridge and valley formations. The ridgeline comprises a superficial layer of limestone deposition over sand. To the west is Owen Anchorage which opens onto Cockburn Sound and to the south is Jervoise Bay.

GEOMORPHOLOGY

The coastal limestone forms a ridge just outside the eastern boundary of the Park, with a further degraded ridge of Tamala Limestone forming the Garden Island Ridge System offshore (Bastian, 1996).

The sea level rose from the low levels of the last glacial period to 2.5 metres higher than today about 7000 years ago. As the sea level gradually dropped to today's level and the Garden Island Ridge System degraded, gaps occurred through which the prevailing south-westerly swell could penetrate (Searle & Semeniuk, 1985). Sand deposited on the edge of the coast formed a small advancing triangular piece of land called a tombola, which has become known as Woodman Point. As the tombola advanced it has spread over the floor of Cockburn Sound and further extends as the marine geomorphic feature known as Parmelia Bank.

The Quindalup Dune System is the main geomorphic feature of the Park. A description of the geomorphology of the Swan Coastal Plain may be obtained from Seddon (1972).

SOILS

The soils of Woodman Point are termed Safety Bay Sands. The soil has shallow grey surface horizons slightly enriched by organic matter over relatively unaltered sand.

Erosion from Uncontrolled Access

Unrestricted vehicle and pedestrian access has created tracks and pathways (particularly throughout the coastal dunes) in unsuitable locations, making them susceptible to erosion.

"Blowouts" have formed in dunes south of Woodman Point View, where direct surface contact and trampling has led to the removal of vegetation cover, therefore exposing the dunes to predominant south-westerly winds. An enhancement plan will be prepared at this site to restrict vehicle access and re-direct pedestrian access through the dunes.

Uncontrolled access in the Park will be reduced by formalising and restricting access to areas at risk from erosion. The restriction of access is discussed in Section 28.

HYDROLOGY

The groundwater hydrology of Woodman Point is characterised by a freshwater lens in the Quindalup Sands. The groundwater is recharged from direct winter rainfall or seepage from the adjacent Tamala Limestone ridge. An interface exists between the ocean saltwater and the fresh groundwater, which changes its lateral location marginally from season to season depending on the relative amount of recharge.

Fluctuations in the level of water in hypersaline Lake Coogee, which correspond with tidal movements, indicate that there may be a direct link with the ocean via limestone caverns. Such movements may occur beneath the Quindalup Sands.

Strategies

1. Restrict access to areas at risk from erosion by implementing the Recreation Masterplan and site enhancement plans (Section 27) and by providing fencing, signs and information (Sections 29 and 38). (CC, Department of Conservation and Land Management) [Ongoing]

14. The Coast and Foreshore

The objective is to maintain and improve the ecological condition of the coast adjoining the Park to ensure the continuity of natural systems in the Park.



The western boundaries of Woodman Point Regional Park extend to the high water mark with the coast forming a framework to the Park.

The coastline adjoining Woodman Point Regional Park is continually exposed to a complex interaction of a number of natural processes that change with the seasons in an ongoing repetitive cycle. As a precursor to discussing the main coastal and foreshore management issues affecting the Park these natural processes, as well as impacts of man made structures in the coastal zone, are described below.

Wind

Winds from the south west are dominant in summer. In winter, winds are mainly from the north west, west and south west. Winds are the driving force behind waves and currents, and therefore affect sediment movement.

Waves

Waves that break on the beach are the most important mechanism in transporting sand in the littoral (shore) zone. Waves approaching the coast are influenced by nearshore bathymetry and reefs. At Woodman Point, the incoming swells are diffracted by Garden Island and Rottnest Island (Rogers & Associates, 1995), which reduce the wave energy.

Surface Currents and Tides

Surface currents are formed by the wind blowing over the surface of the ocean. South-westerly winds generate a northerly current, which interacts with wave energy to move beach sand in a northerly direction. There is a reversal of this in winter but not to the same extent. In the Woodman Point area, currents are considered to play a relatively minor role in coastal morphology.

The amplitude of tides in Cockburn Sound is relatively small; 0.3 metres during neap tides and 0.5 metres during spring tides. Surges usually associated with storms and cyclonic activity can raise water levels by as much as one metre.

Sediment Movement

The movement of sand on and off the beaches is the most obvious change that takes place on the coast over

time. In summer, relatively low energy waves deposit sand on the beaches. At the same time onshore winds transport beach sand onto the foredunes where it is trapped by dune vegetation.

Winter storms and summer cyclones may generate high energy swell and wind waves, which erode the beaches and foredunes, causing landward movement of the coastline. Sand deposited in longshore sand bars in winter during storms is returned to the beach during calmer periods (Oma, et al. 1992).

Artificial Structures in the Coastal Zone

The construction of marine engineering structures in the coastal zone may have a range of impacts on the movement of sediment.

The Coogee and Ammunition Jetties, which are piled structures, allow marine processes to continue underneath. They have little effect on sediment movement. Conversely, the rock revetments along the northern section of the Park, north of Coogee Beach, have had a negative effect on the coast. The effect of waves on the rock revetments causes beach sand to be scoured away. Such structures should be avoided unless required for essential services.

Groyne structures such as the Woodman Point Groyne and WAPET Groyne often accumulate sediment depending on the season and direction of sediment movement. At Woodman Point, the groynes have led to accumulation of sediment between the groynes and on the northern side of the point. There appears to be some resultant loss of sediment (recession) on the southern beaches.

Erosion and Accretion

The complex interaction of these natural processes, in conjunction with artificial structures in the coastal zone, can result in a beach sand cycle that is said to be unbalanced. This means that a particular portion of coastline either may recede or erode (loss of sand) or accrete (gain in sand).

Both the processes of erosion and accretion are currently occurring at the beaches adjoining the Park. Owing to the changes in sediment movement on the Woodman Point foreshore it is not possible to generalise on recession and accretion. An inspection of Shoreline Movement Maps (1942 to 1994) prepared by the Department for Planning and Infrastructure has provided the following trends at specific points:

- Coogee Jetty: 8m recession;
- Ammunition Jetty: 24m accretion;
- Woodman Point Recreation Camp (north track): 86m accretion; and
- Jervoise Bay (Western Beach): 48m accretion

(Department of Transport, Shoreline Movement Maps Drawing Numbers: 374-03-02, 374-04-02, 374-05-02). Figure 5 illustrates accretion at Woodman Point since 1942.

Erosion is also occurring presently on the eastern end of Jervoise Bay Beach adjacent to the breakwater for the Northern Harbour. Investigations by Rogers and Associates (1999) indicate that the coastline may be

returning to a former position, before 200 000m³ sand was placed on the beach in the 1970s in association with the construction of the *Ocean Endeavour* oil rig. Rogers and Associates (1999) also indicated that a contributing factor may be a rip current that flows along the extended wall of the breakwater. The breakwater is owned by the Department of Industry and Technology (DoIT), which has accepted the responsibility for determining the extent of mitigating works required in the area, as well as funding these works and ensuring public safety. All beach erosion mitigation works will be coordinated by DoIT in consultation with the Department of Conservation and Land Management. The City of Cockburn will be kept informed.

At this stage, mitigation works proposed by DoIT include:

- extending the limestone revetment downwards to -0.5m Australian Height Datum (AHD) and northwards (inland) to reduce the likelihood of undermining or eroding around the landward end of the breakwater;
- altering the alignment of the breakwater to change the angle of wave refraction and reduce beach scouring;
- restoring natural dune profiles and vegetation in the area where a dune scarp has formed. This will occur once the erosion has stopped and the beach has reached equilibrium; and
- continuing monitoring activities such as regular on-ground checks, hydro/land monitoring survey to assess shoreline movement and historical analysis of coastline photography.

In relation to accretion, while the short-term effects may not appear as dramatic or serious as erosion at Woodman Point, there is a need for park management to consider coastal accretion in planning for long-term recreation and conservation programs.



Figure 5 - Conceptual view of shoreline movement since 1942

Strategies

1. Undertake works to address beach erosion at the eastern end of Jervoise Bay Beach adjacent to the breakwater for the Northern Harbour. (DoIT) [High]
2. Prepare specific works plans for areas at risk from erosion prior to undertaking mitigation works. (Infrastructure Providers, CC, Department of Conservation and Land Management) [Ongoing]
3. Ensure long-term planning for the Park and developments within the coastal zone considers the likelihood of coastal erosion and accretion. (Infrastructure Providers, CC, Department of Conservation and Land Management) [Ongoing]

15. Flora and Vegetation

The objective is to protect, conserve, rehabilitate and restore local and culturally significant flora and vegetation in the Park, especially the Threatened Ecological Community.



Much of the vegetation along the coastline of the Perth metropolitan area has been altered or cleared owing to urban and industrial development.

The vegetation of Woodman Point has experienced some disturbances but it has survived as an example of a relatively intact coastal vegetation community. It now stands as an important benchmark for interpreting coastal vegetation that would have been present over much of the southern Perth metropolitan coastline before disturbances occurred (Powell and Emberson 1981).

The area has a history of uses such as a quarantine station for cattle, a quarantine station for humans and an ammunition storage area. The resulting enclosures have in the most part effectively protected the vegetation of the area owing to the restricted access that resulted. The recorded history of the enclosures suggests that fires have been infrequent (at least by modern standards) and the exclusion of people has kept much of the vegetation relatively intact.

The best examples of coastal vegetation are contained within the nature reserve (reserve number 42469). Some areas outside the reserve have been affected by road and infrastructure corridors that fragment the Park. Other disturbances and continuing weed invasion are steadily degrading natural ecosystems in the Park.

Gibson *et al.* (1994) classified the flora of the southern Swan Coastal Plain into vegetation communities. Community type 30 was later re-categorised into a number of sub-classifications (Government of Western Australia, 2000). The vegetation communities that occur at Woodman Point are shown in Table 3.

Vegetation Community
29a Coastal shrublands on shallow sands
29b <i>Acacia</i> shrublands on taller dunes
30a2 <i>Callitris preissii</i> and/or <i>Melaleuca lanceolata</i> forests and woodlands
30b Quindalup <i>Eucalyptus gomphocephala</i> and/or <i>Agonis flexuosa</i> woodlands
30c2 Woodlands and shrublands on Holocene Dunes

Table 3 - Vegetation Communities at Woodman Point (Government of Western Australia, 2000)

Woodman Point Regional Park has a representative example of most community types that occur on the Quindalup Dune System of the Swan Coastal Plain (Gibson *et al.* 1994). The presence of floristic groupings 30a2 and 30c2 within the Park makes this area regionally and nationally significant (Keighery *et al.* 1997).

Community type 30a2, comprised of Rottnest Cypress and Rottnest Tea Tree forests and woodlands, is restricted to a small area from Perth to Garden Island. Subsequent work has resulted in community type 30a2 being listed as a Threatened Ecological Community rated as "vulnerable" (English and Blythe, 1996; Government of Western Australia, 2000; see Glossary). Community type 30a has one of the lowest species diversity of all Quindalup community types owing to the high canopy density which limits light penetration.

Community type 30b is dominated by *Eucalyptus gomphocephala* and/or *Agonis flexuosa* and is found from the Leschenault Peninsula south to Busselton. Community type 30c2 contains *Eucalyptus argutifolia* and *Dryandra* scrub/thicket restricted to three plots on Holocene dunes (Gibson *et al.* 1994).

The two shrubland communities (type 29a and 29b) occur on shallow coastal sands from Seabird to Garden Island, neither of which have a single dominant species.

While there have been no species of Declared Rare Flora recorded in the Park, there are other taxa present in the Park that are considered significant (see Glossary for definitions):

1. *Dodonaea hackettiana* (Priority Four Taxa);
2. *Callitris preissii* (large population, many mature individuals);
3. *Diplolaena dampieri*, (most northern population); and
4. *Amyema miquelii* (one of the few remaining populations on the Swan Coastal Plain) (Government of Western Australia, 2000).

Fieldwork undertaken in the preparation of this management plan also identified the presence of *Leucopogon insularis* within the Park. This species is only known from a few localities on the Swan Coastal Plain and is thought not to occur within a conservation reserve (Keighery *et al.* 1997).

A survey of vascular flora of the Woodman Point Nature Reserve by G. Keighery (2001) found a total of 161 species.

Powell and Emberson (1981) also undertook an assessment of the vegetation communities of the area. Importantly their study describes the cultural and known fire history of Woodman Point and it provides a photographic account of the flora species present in the Park as well as its condition.

The main threats to the flora and vegetation of the Park are as follows:

- unplanned fire;
- weeds;
- plant diseases;
- insect borers; and
- urban interface issues and uncontrolled access by vehicles and pedestrians.

Unplanned fire

Increased urban development around the Park and greater visitor use of the Park are likely to increase the incidence of unplanned fire.

As stated by Powell and Emberson (1981) one of the important factors governing the appearance of vegetation is the length of time since it was last burnt. Rottnest Cypress (*Callitris preissii*) and Rottnest Tea Tree (*Melaleuca lanceolata*) woodland communities are particularly fire sensitive. A succession of fires at short intervals may exhaust the seed stock (Powell and Emberson, 1981).

Unlike many native trees, Rottnest Cypress has a determinate season of growth, and its trunk develops growth rings, from which its age may be estimated. Because it is vulnerable to fire and regenerates readily afterwards, the age of a cypress may indicate the length of time that has elapsed since the last fire (Powell and Emberson, 1981). Using this method it has been suggested that fire may not have occurred in areas of the nature reserve for at least 170 years (Powell and Emberson, 1981).

Fire is also an added stress to the Tuarts (*Eucalyptus gomphocephala*) in the Park. If fires are frequent the trees lack sufficient respite and are worse affected next time (Powell and Emberson, 1981).

Refer to Section 18 for the management of fire within the Park.

Weeds

Weeds are a major problem in the Park and require sustained and ongoing action by the managing agencies as they threaten the biodiversity of the Park. Weeds of particular concern at the Park are Bridal Creeper, (*Asparagus asparagoides*) and the Victorian Tea Tree (*Leptospermum laevigatum*).

As discussed in Section 17, other major weeds including Castor Oil (*Ricinus communis*), Japanese Pepper (*Schinus terebinthifolia*) Geraldton Carnation Weed (*Euphorbia terracina*) and Onion Weed (Strap Weed) (*Trachyandra divaricata*) are also common throughout the Park. The greatest densities occur along road and track edges or in clearings within the Park. Measures (including the preparation of an integrated Weed Management and Rehabilitation Plan) for the control of weeds in the Park are also discussed in Section 17.

Plant Diseases

Honey Fungus (*Armillaria luteobubalina*) occurs on coastal vegetation (coastal dunes and the Spearwood Dune System) and is the main plant disease in the Park. Up to 40% of coastal species are susceptible to Honey Fungus, including many of the dominant small trees and shrubs. Honey Fungus affects both the structure and composition of coastal dune vegetation (Shearer et al. 1998). The fungus denudes susceptible vegetation, leaving relatively open areas composed mainly of sedges or small shrubs and creepers, with more bare ground than nearby healthy vegetation. At Woodman Point, Honey Fungus threatens the geographically restricted Rottnest Cypress and its associated plant community.

Although Honey Fungus occurs naturally in the south-west of Western Australia, its normally slow rate of spread by direct root contact may be exacerbated by the movement of infected root material associated with soil disturbance. The characteristic fruiting bodies generally grow in clumps on tree bases, stumps or roots, and appear in June/July each year. There are no known controls of the disease, except clearing the site.

In comparison to Honey Fungus, Dieback (*Phytophthora cinnamoni*) is generally not found in the Quindalup Dune Systems on the coastal strip. *Phytophthora* Dieback is not thought to be an issue in this Park.

Insect borers

The native Tuart Longicorn Beetle (*Phoracantha impavida*) is a natural part of the Tuart ecosystem. This borer lays eggs in the upper branches of the Tuart and the larvae eat the cambium layer beneath the bark and thus ring-bark the branches leading to death of the limb. The tree can usually repair some damage by shooting from lower down, and by exuding sap, which engulfs the young larvae. Whilst a small level of insect attack is normal, repeated attack may ultimately cause the tree's death. Tuarts are more susceptible to borer attacks when they are stressed.

This beetle has become an increasing threat over the last few years; the primary cause is likely to be a combination of environmental changes, including climate and fire frequency. Further research is required to understand this phenomenon and to determine appropriate control mechanisms.

Urban interface issues and uncontrolled access

Maintaining the integrity of bushland in urban areas raises many issues such as weed invasion, uncontrolled access, and rubbish-dumping. These issues are addressed in Sections 17, 28 and 31 respectively.

All native flora is protected by the *Wildlife Conservation Act 1950*. Incidences of willful damage to vegetation in the Park will be investigated and appropriate action taken by the Department of Conservation and Land Management.

Strategies

1. Develop and implement a rehabilitation plan. The plan will include rehabilitation priorities and a detailed bushland condition assessment of the Park (Section 20). Special emphasis is to be placed on the Threatened Ecological Community in the Park. (CC, Department of Conservation and Land Management) [High]
2. Prepare and implement a weed control plan. This plan is to be integrated with the rehabilitation plan (Section 17). (CC, Department of Conservation and Land Management) [High]
3. Reduce the frequency of fire, utilising strategies set out in Section 18. (CC, Department of Conservation and Land Management) [Ongoing]
4. Provide information and interpretive material to the public that:
 - promotes an understanding and appreciation of the Park's flora and ecosystems; and
 - encourage the planting of local species in areas surrounding the Park (Section 38). (CC, Department of Conservation and Land Management) [Ongoing]
5. Investigate any willful damage to vegetation in the Park and take appropriate action. (CC, Department of Conservation and Land Management) [Ongoing]
6. Use local species for landscape and amenity plantings. If non-local species are required, they should not include invasive weed species. (Conservation and Land Management, CC). [Ongoing]
7. Reduce the risk of introducing and spreading plant diseases in the Park by limiting access to areas sensitive to infection and by ensuring appropriate hygiene standards for machinery when undertaking works within the Park. Soil introduced to the Park is to be free of disease. (CC, Department of Conservation and Land Management) [Ongoing]
8. Encourage the participation of volunteers, educational institutions and other organisations in research projects within the Park. (CC, Department of Conservation and Land Management) [Medium]
9. Establish a program to monitor the wood-boring beetle *Phoracantha impavida* and encourage research to understand the processes behind Tuart decline. (CC, Department of Conservation and Land Management) [Medium]
10. Develop and implement a targeted and integrated monitoring program of bushland condition, changes to vegetation communities with particular reference to the Threatened Ecological Community, and weed proliferation. (CC, Department of Conservation and Land Management) [High]

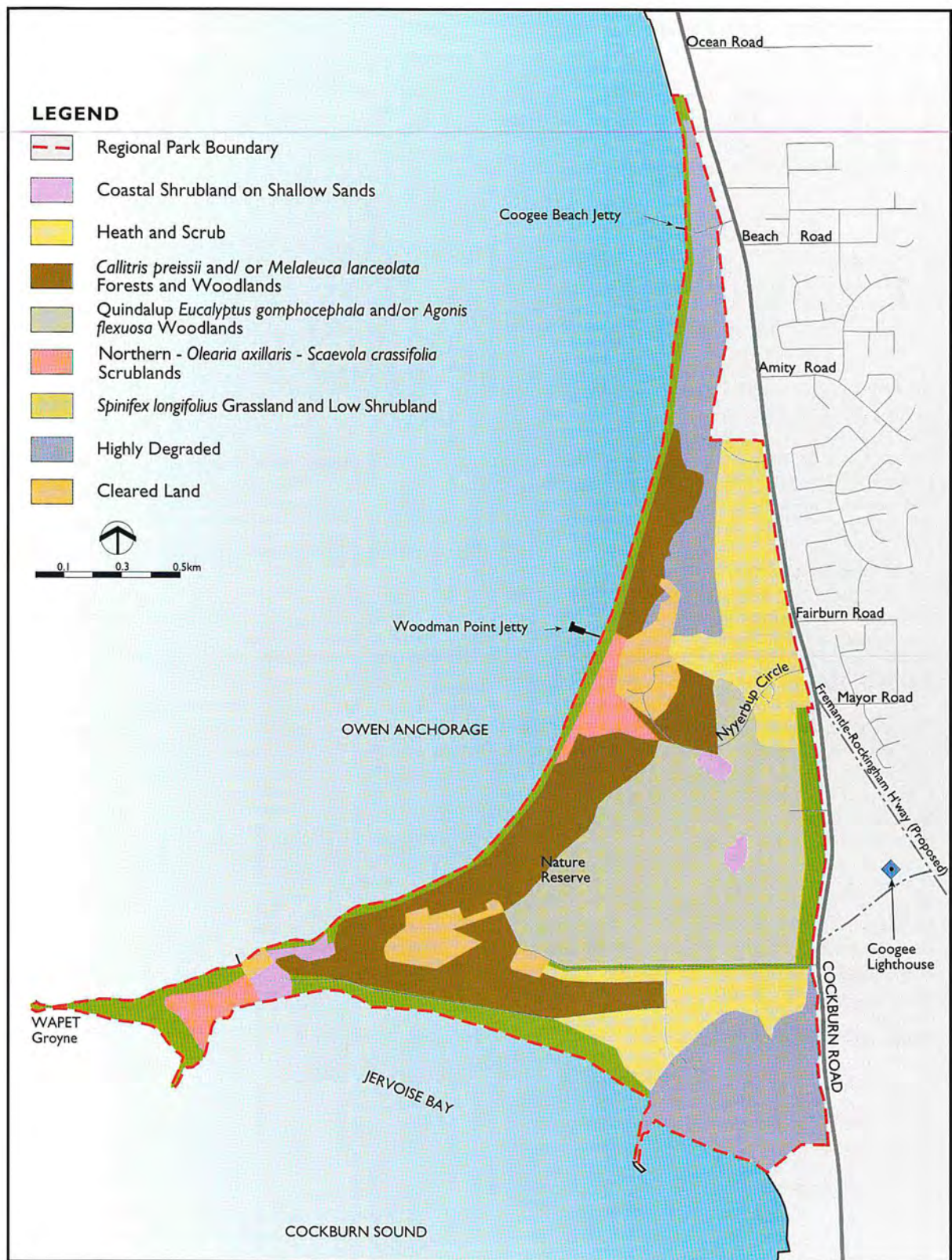


Figure 6 - Vegetation Distribution

16. Fauna

The objective is to maintain the diversity of the indigenous fauna species in the Park and, if feasible, reintroduce species lost from the Park.

The main threats to fauna within the Park are:

- the loss and fragmentation of habitat that could result from wildfire (Section 18);
- the invasion of weeds (Section 17);
- plant diseases (Section 15);
- competition and predation by introduced animals and pets (Section 19);
- inappropriate recreation activities (Section 27);
- the loss of native habitat surrounding the Park (Section 23); and
- the death or injury of native fauna on roads within and adjoining the Park.

Clearing of vegetation adjoining the Park is also considered a threat to the fauna within the Park. It is therefore important that Greenway corridors and other links between the Park and adjoining areas of ecological significance are retained and enhanced to maintain the diversity and vigour of the Park's ecological systems (Section 23).

There is not much recent research on fauna found in the Park. The following provides information on the known fauna of the area and discusses the likelihood of the presence of other species.

AVIAN FAUNA

The variety of coastal habitats at Woodman Point caters for a range of local and trans-equatorial migratory birds (How et al. 1996). The high structural diversity of vegetation in the Park also provides different habitats, and hence there is a diverse range of bush-bird species present (Newman et al. 1976).

A total of 93 bird species has been recorded at Woodman Point (Royal Australasian Ornithologists Union, 1996). Of these, 36 species are shore-birds and other waterbirds. The coastal foreshore serves as important shore-bird breeding grounds for local species with the western extremity of the Park used as a roosting and feeding area for these birds and many trans-equatorial migratory species (How et al. 1996).

The Department of Conservation and Land Management through the Jervoise Bay Conservation and Recreation Enhancement Plan will provide greater protection to these roosting sites by consolidating the existing parking at Woodman Point Headland, preventing vehicle access into the coastal dunes and rehabilitating existing tracks throughout area where birds breed (See Section 27).

Shore-birds and other waterbirds recorded at the Park include Caspian Tern (*Hydroprogne caspia*); Crested Tern (*Sterna bergii*); Fairy Tern (*Sterna nereis*); Bridled Tern (*Sterna anaethetus*); Pied Cormorant (*Phalacrocorax varius*); Little Pied Cormorant (*Phalacrocorax melanoleucos*); Darter (*Anhinga* sp.); Pied Oystercatcher (*Haematopus longirostris*); Sooty Oystercatcher (*Haematopus fuliginosus*); Sanderling (*Calidris alba*); Ruddy Turnstone (*Arenaria interpres*); and Australian Pelican (*Pelecanus conspicillatus*).

Bush-birds present in the Park include the Weebill (*Smicromis brevirostris*); Inland Thornbill (*Acanthiza apicalis*); White-browed Scrub Wren (*Sericornis frontalis*); and Splendid Fairy Wren (*Malurus splendens*). The population of Golden Whistlers (*Pachycephala pectoralis*) is very significant at Woodman Point owing to the scarcity of the species within urban bushland areas (How et al. 1996). The tall Tuart trees (*Eucalyptus gomphocephala*) present at the Park also provide nesting sites for Brown Goshawks (*Accipiter fasciatus*) which infrequently breed on the Swan Coastal Plain.

A number of migratory birds listed under the Japan-Australia Migratory Birds Agreement (JAMBA) and the China-Australia Migratory Birds Agreement (CAMBA) have been recorded at the Park. Australia is a signatory to these international agreements that support the conservation of migratory birds and their habitats. The intent of the JAMBA and CAMBA migratory bird agreements will be applied in the management of the Park.

The Peregrine Falcon (*Falco peregrinus*) is likely to be present in the Park. It is specially protected under the Wildlife Conservation Act 1950.

TERRESTRIAL FAUNA

Mammals

The Quenda (*Isodon obesulus fusciventer*) has been recorded in the Park and recent diggings indicate that it is present in relatively large numbers.

Other mammals that may once have occurred in the Park area include the Brushtail Possum (*Trichosurus vulpecula*), the Western Grey Kangaroo (*Macropus fuliginosus*), and the Western Brush Wallaby (*Macropus irma*) (How et al. 1996).

Reptiles and Amphibians

The Park has a relatively low species richness of reptiles and amphibians with only 14 reptile and 1 frog species sighted during a survey in 1996 (How et al. 1996). Three of the reptile species were only sighted at Woodman Point and two other survey locations in the metropolitan area, namely the Lined Skink (*Lerista lineata*), *Tympanocryptis adalaidensis* and *Varanus tristis* (How et al. 1996). The Lined Skink is significant as it is considered scarce with relatively localised distribution and is virtually confined to the Perth Metropolitan Region.

No fossorial (burrowing) snakes have been documented in the area but small fossorial lizards are quite abundant. Western Tiger Snakes (*Notechis scutatus occidentalis*) are present within the Park and the Dugite (*Pseudonaja affinis*) has become a common sight in all areas of the Park including below the high water mark on the beach. The Carpet Python (*Morelia spilota imbricata*) may also have once occurred in the Woodman Point area (How et al. 1996).

The presence of the Western Tiger Snake and other reptiles within the Park is important in conservation terms. Information on reptiles should be included in education programs and interpretive material, to help develop an appreciation for these animals. It is also acknowledged that the presence of the venomous

Western Tiger Snakes and Dugites are a concern to some Park visitors and local residents. It is therefore proposed to provide contact details of wildlife carers for the removal of dangerous or injured fauna.

Owing to the lack of permanent or semi-permanent fresh water within the reserve and surrounds, few amphibian species are likely to permanently inhabit the reserve. A number of species, however, may migrate through the reserve at different times of the year.

Invertebrates

There is a diverse range of insects and spiders in the Park with many of them restricted to this location or found in geographically similar regions. How et al. (1996) recorded 49 species of spider during a study period in 1994/1995. In addition, two pseudoscorpions (*Aldabrinis* sp. and *Chernitidae* genus A) were recorded. The *Aldabrinis* sp. is of particular interest as only two other species were previously known to exist, and this finding is the first and only record of this rare genus in Australia. *Chernitidae* genus A was collected only once, at Woodman Point, during the 1994/1995 survey of bushland remnants in Perth (How et al., 1996). A single specimen of *Gallieniellidae* was also recorded by How et al. (1996). This is the first record of the species on the Swan Coastal Plain and one of the first for Western Australia. Woodman Point therefore provides important habitat for invertebrate species.

Strategies

1. Develop and implement a targeted and integrated monitoring program of the fauna within the Park. (CC, Department of Conservation and Land Management, Educational Institutions, WA Museum, Birds Australia) [High]
2. Ensure recreation uses are consistent with the protection and management of fauna (e.g. dog walking Section 19). (CC, Department of Conservation and Land Management) [Ongoing]
3. Provide the contact details of wildlife carers for the removal of injured fauna from the Park or dangerous fauna from places where they constitute a significant risk to people. (Department of Conservation and Land Management) [Medium]
4. Develop and implement a strategy to minimise wildlife deaths from roads within and adjoining the Park. (CC, Department of Conservation and Land Management) [High]
5. Provide interpretive material which:
 - promotes an understanding and appreciation of the Park's fauna;
 - discourages the artificial feeding of birds;
 - supports volunteer groups involved with the Park; and
 - informs the public about the adverse impacts of feral animals and domestic pets on native fauna in the Park (Section 38). (CC, Department of Conservation and Land Management) [High]

17. Weeds

The objective is to minimise the impact of environmental weeds on biodiversity within the Park using methods compatible with the conservation of the natural environment.



Environmental weeds have been defined as plants that establish themselves in natural ecosystems (marine, aquatic, terrestrial) and proceed to modify natural processes, usually adversely, resulting in the decline of the communities they invade (Department of Conservation and Land Management, 1999). Weeds may originate from interstate or overseas and may or may not be declared under the *Agriculture and Related Resources Protection Act 1976*.

Many weeds, particularly grass species, grow fast and have abundant seeds that spread widely. Weeds compete for space, nutrients, water and sunlight, which often leads to a decline in native species diversity within native bushland.

The invasion of weeds is a major threat to the conservation values of the Park and it is vital that measures be introduced to limit or control the degradation processes. There are many reasons for the presence of weeds in the Park including:

- past land uses such as clearing;
- soil disturbance from vehicle access;
- construction of paths and other facilities which allow weeds to establish themselves;
- frequent fires that promote the growth of weeds;
- the dumping of garden refuse in the Park which introduces many plants that vigorously compete with local vegetation;
- invasive species from adjoining areas, road verges and gardens;
- transportation of weed seeds by birds;
- grasses planted for amenity purposes in parkland settings invading bushland areas; and
- invasive weed species that have spread from lease and adjacent areas.

Weeds appear to be spreading and are affecting on most native ecosystems in the Park. Keighery (2000) identified 63 species of weeds in the Park, the greatest densities of which were recorded at road and track edges or in clearings within the reserve.

Weeds of particular concern are Bridal Creeper (*Asparagus asparagoides*) and Victorian Tea Tree (*Leptospermum laevigatum*).

Bridal Creeper is widespread with greatest densities occurring in shaded areas associated with taller shrubs and Tuarts. This weed is considered an annual but it has a perennial root system. It constitutes a significant threat to the Rottnest Cypress community because the foliage dries out over summer and creates a fire hazard. The control of this species should be considered of paramount importance for the retention of the area's conservation values. In the past the Department of Conservation and Land Management has undertaken extensive and costly herbicide and manual control of Bridal Creeper in an effort to reduce its impact on native vegetation. In addition to mechanical and chemical control processes, the Department (in conjunction with the CSIRO) is also trialing the introduction of the Bridal Creeper Leafhopper insect and Rust Fungus, in an attempt to control the weed.

The Victorian Tea Tree has a strong hold within the Park. Cut branches of this species have in previous years been used for brushing of bare and eroding areas. This species has persistent fruit capsules that release their seed when dried. This has resulted in a large number of Tea Trees becoming established throughout the Park and competing with native vegetation regeneration. A program of manual removal has eradicated all Victorian Tea Trees from within the nature reserve. Removal and rehabilitation of other affected areas within the Park should also be considered a high priority.

Other weeds including Castor Oil (*Ricinus communis*), Japanese Pepper (*Schinus terebinthifolia*) Geraldton Carnation Weed (*Euphorbia terracina*) and Onion Weed (*Trachyandra divaricata*) are also common throughout the Park.

All methods of weed control (chemical, physical, or biological) need to be considered for their application in the Park. Ecological considerations place constraints on weed control, as side effects such as those on native plants or habitat, may rule out the use of some techniques. There are also financial constraints on the amount of weed control that can be carried out.

Guidance for weed management in the Park is provided by *Weeds on Department of Conservation and Land Management Land Policy Statement 14* (Department of Conservation and Land Management, 1986a) and the *Environmental Weed Strategy for Western Australia* (Department of Conservation and Land Management, 1999). It is recognised, however, that more detailed planning is required to develop an integrated and coordinated approach to weed management in the Park. The Department of Conservation and Land Management will prepare a weed management plan for the Park, which will be consistent with the above policy and strategy.

Planning for weed control will consider the following priorities:

- recognise weed potential;
- maintain areas of the Park that have vegetation in good condition; and
- control weeds impacting on threatened species and communities.

The Plan will also outline the most effective methods for controlling priority weed species within the Park.

It is important to discuss weed control with leaseholders and park neighbours to enable a more regional effort of weed control to be implemented. The planting of non-local plant species within the Park should be discouraged and discussions may be needed with the City of Cockburn and other stakeholders to ensure that species indigenous to the area are planted on the road verges surrounding and within the Park.

Weed control can greatly benefit from community involvement. The involvement of the community in park management is critical to the successful implementation of this Plan. Managing agencies have limited resources and weed control can be very labour-intensive. The managing agencies acknowledge the considerable efforts by the community in undertaking works to control weeds. Volunteer groups have successfully undertaken weed control projects within the Park for a significant time.

Although the overall coordination of weed control within the Park is the responsibility of the managing agencies, volunteer groups and the agencies should establish cooperative arrangements with agreed processes and outcomes when undertaking projects for specific weed control. Where volunteer groups initiate a project, discussion shall occur with the relevant managing agency to ensure that activities are consistent with the Park's annual works programme, implementation plans and monitoring processes.

Members of the community wanting to be involved in weed control programmes in the Park can do so by:

- joining the community volunteer groups within the Park; and
- participating in activities in the Park organised or coordinated by the managing agencies.

Strategies

1. Prepare and implement a weed management plan in accordance with the *Environmental Weed Strategy for Western Australia*. The plan will:

- assess bushland condition;
- prioritise and control weed species according to invasiveness, distribution and environmental impacts;
- assess changes to vegetation communities;
- identify areas largely free of weeds, maintain these areas, and conduct weed control works out from these areas;
- specify appropriate control techniques and timing for removal;
- integrate with the rehabilitation plan (Section 20). (Department of Conservation and Land Management) [High]

2. Set boundaries for grass areas used for recreation and control the spread of grasses outside these areas. (CC, Department of Conservation and Land Management) [High]

3. **Use interpretive and educational material to inform Park visitors, lessees and park neighbours about the effects of dumping rubbish and garden refuse in the Park. (CC, Department of Conservation and Land Management) [Medium]**
4. **Encourage volunteer community groups to become involved with weed control in the Park. (CC, Department of Conservation and Land Management) [Ongoing]**
5. **Coordinate community involvement in weed control works within the Park. (CC, Department of Conservation and Land Management) [Ongoing]**
6. **Monitor the extent, distribution and abundance of priority weeds in the Park as part of monitoring bushland condition. Relate results to previous studies to monitor weed spread. (Department of Conservation and Land Management) [Ongoing]**

18. Fire

The objective is to protect the biodiversity and cultural values of the Park as well as people and property, by minimising the impact of unplanned fire.

Wildfires should be avoided because they can threaten biodiversity, human life, property and cultural values of the Park. Increasing urbanisation and visitor use of the Park is likely to increase the incidence of unplanned fire, as is experienced in other bushland areas in the Perth metropolitan area. When a wildfire does occur, it must be controlled quickly. It is recognised that well controlled visitor access can reduce the incidence of unplanned fire (see Section 28).

The potential risk of fire in the Park is greatest within areas of high vegetation density and the understorey of weed species that dry in summer. Some parts of the Park have not experienced fire for over 100 years, indeed a study of the Rottnest Cypress community has suggested that parts of the nature reserve have not been affected by fire for 170 years (Powell and Emberson, 1981). The absence of successive fires within the nature reserve contributes greatly to its conservation value. The threatened Rottnest Cypress and Rottnest Tea Tree woodland community is particularly fire-sensitive as the overstorey will die if burnt. Care should be maintained to reduce the risk of fire events. A history of fire in the Park is detailed in Powell and Emberson (1981).

Selective prescribed burning may be considered for the protection of the Park and to enhance biological diversity, as well as to regenerate fire-sensitive plant species that reproduce after fire.

Fire suppression at Woodman Point Regional Park is the responsibility of the Fire and Emergency Service Authority (FESA) and in liaison with the managing agencies of the Park, because the Park is located in the gazetted fire district.

Pre-suppression works and post-suppression follow-up works in the Park are the land managers' responsibilities. An important consideration in these works is the protection of environmentally sensitive areas, and measures should be initiated to prevent the spread of plant diseases and weeds.

When managing fire, the Department of Conservation and Land Management is guided by the *Bushfires Act 1954* and *Fire Management Policy Statement No. 19* (Department of Conservation and Land Management, 1987).

A Fire Response Plan for the Park has been developed by the Department of Conservation and Land Management in conjunction with FESA and the City of Cockburn to help ensure effective response to unplanned fire by the responsible agencies and outlines practices such as:

- protecting environmentally sensitive areas from unplanned fire;
- undertaking pre-suppression activities including reducing fuel loads by mowing or slashing large open grassed areas. Mown or slashed areas should be delineated so that mowing practices do not adversely affect natural regeneration and fauna habitat;
- maintaining a fire record system of all fires in the Park including date and cause;
- ensuring an effective network of firebreaks is maintained.

Strategies

1. **Implement and periodically update the Park's Fire Response Plan. (CC, Department of Conservation and Land Management) [High]**
2. **Coordinate rehabilitation works with fire prevention requirements. Fire management will be considered in the preparation of the rehabilitation plan (Section 20). (CC, Department of Conservation and Land Management) [High]**
3. **Consider selective prescribed burning for the protection of the Park and to enhance the biological diversity. (CC, Department of Conservation and Land Management) [Ongoing]**
4. **Initiate measures in pre-suppression works and post-suppression follow-up works to minimise the spread of plant diseases and weeds in the Park. (CC, Department of Conservation and Land Management) [High]**
5. **Ensure that recreation planning takes into account fire prevention requirements. For example when constructing or upgrading paths in the Park consider building them to a standard that will carry fire control vehicles, so that access is improved for fire management (Section 28). (CC, Department of Conservation and Land Management) [Ongoing]**

19. Pets and Introduced Animals

The objective is to minimise the environmental and social impact of pets and introduced animals in the Park.

PETS

The presence of domesticated animals in close proximity to the Park has ramifications for the Park's management. Pets such as cats and dogs are impacting on the natural environment within the Park and their management needs to be strengthened.

Cats

Domestic cats from nearby residences hunt for birds, reptiles and other creatures. Cat owners should be encouraged to keep cats at home, especially at night, and have them de-sexed to help control feral populations.

The City of Cockburn should consider the introduction of a Local Law for controlling cats. The City of Stirling has introduced *The Keeping and Control of Cats Local Law (1999)*. The objectives of the Law are to:

- (a) control the number of cats kept on premises; and
- (b) protect native fauna.

The Keeping and Control of Cats Local Law (1999) enables Stirling City Council to declare:

- A Cat Prohibited Area by designating areas on which cats are prohibited from entering or remaining; and
- A Fauna Protection Buffer Zone which is land extending 200m from the boundary of a Cat Prohibited Area and includes all of the properties within that buffer zone. A person shall not keep more than one cat on any premises in a Fauna Protection Buffer Zone except in accordance with a valid permit in relation to those premises.

The implementation of a similar Local Law within the municipality of Cockburn is likely have significant benefits to the Park and the native fauna residing and breeding within the Park and nearby areas.

Dogs

The City of Cockburn is responsible for administering and enforcing the *Dog Act 1976* within its municipality. The Act states that a dog shall not be in a public place unless it is:

- (a) held by a person who is capable of controlling the dog; or
- (b) securely tethered for a temporary purpose,

by means of a chain, cord, leash or harness of sufficient strength and not exceeding the prescribed length.

A dog is exempt from the above requirements if it is in an area specified by a local government as a Dog Exercise Area. The City of Cockburn has designated Dog Exercise Areas under the provisions of the *Dog Act 1976*. Within a Dog Exercise Area, dogs are permitted off leashes so long as the owner is in reasonable proximity to the dog. The owner is also required to carry and be capable of attaching a leash for the purpose of controlling the dog.

Given the Park's high conservation value, the need to protect the Park's native fauna and the opportunity to exercise dogs off leads in other nearby reserves in the City (especially the dog beach at Port Catherine Reserve and Powell Reserve), it is considered appropriate that dogs will not be permitted in the Park. Exceptions to this are security dogs at leased premises within the Park and guide-dogs.

The City of Cockburn has power under the *Dog Act 1976* to specify places where dogs are prohibited absolutely. The City should consider making Woodman Point Regional Park a prohibited dog area.

INTRODUCED ANIMALS

Introduced animals such as cats, foxes, rabbits and others occur in the Park and all have a detrimental effect on environment values. The control and removal of these animals will help protect the Park's fauna and flora.

The managing agencies will need to determine the extent and impacts of introduced animals and then where appropriate, implement control options. The use of bait such as 1080 poison is not considered appropriate due to the close proximity of domestic pets in residential areas that would be susceptible to the poison. The Department of Conservation and Land Management is investigating control methods for introduced animals in the Park.

Strategies

1. Use interpretive material to inform the community about the adverse effects of pets and introduced animals on native fauna. Include information explaining restrictions on pet access and encouraging responsible pet ownership in interpretive material (Section 38). (CC, Department of Conservation and Land Management) [High]
2. Introduce a Local Law for controlling cats and protecting native fauna. Use the City of Stirling local law - *The Keeping and Control of Cats Local Law (1999)* as a model. (CC) [High]
3. Exclude dogs from the Park, unless they are security dogs at leased premises or guide dogs. (CC, Department of Conservation and Land Management) [Ongoing]
4. Review the current gazetted dog exercise areas and prohibited dog places within the City of Cockburn in consultation with CALM and in light of the above strategy (3). (CC) [High]
5. Develop and implement a strategy to control introduced animals within the Park. (Department of Conservation and Land Management) [High].

20. Rehabilitation

The objective is to restore degraded areas of the Park to a condition resembling the natural environment.



Environmental degradation is a major management issue in the Park. Wildfires, weeds, the provision of roads and access ways, utilities and service corridors have resulted in modifications to vegetation communities.

Rehabilitation methods and techniques will vary according to the level of degradation that has occurred, the proposed use of an area and the type of community to be reinstated. It is difficult to restore severely degraded sites to a natural habitat, however, considerable conservation gains can be made if a wide range of local overstorey and understorey species is used for revegetation.

Where possible, plant material used during rehabilitation should be sourced from within the boundaries of the Park including seeds, cuttings and brushings so as to maintain the genetic integrity of the area. Seed collection from within the Park will generally be permitted only for rehabilitation projects within, or directly impacting upon the Park. It is important that mulch and soil used in rehabilitation works does not contain unwanted weed seeds or plant disease.

A rehabilitation plan will provide a guide for the long-term restoration of degraded areas within the Park and will be developed in accordance with *Rehabilitation of disturbed land Policy Statement No. 10* (Department of Conservation and Land Management, 1986b). The plan will identify major disturbance sites within the Park and priorities for their restoration to a condition resembling the natural environment.

Ongoing issues of pests, erosion, infertile soils and unconsolidated sand dunes make rehabilitation challenging. Where rehabilitation works are undertaken in areas where rabbits are present, consideration should be given to the use of either rabbit-proof fencing or individual tree guards (see Section 19).

Local residents, community groups and education institutions should be encouraged to be actively involved in rehabilitation works. These activities are to be coordinated by the joint managers of the Park through the preparation of a rehabilitation plan for the Park.

The managing agencies acknowledge the considerable effort by volunteers in completing rehabilitation works

within the Park in the past. In undertaking rehabilitation projects volunteer groups should establish agreed processes and outcomes with the managing agencies. All activities should be consistent with the planning and operations for the Park.

Strategies

1. Prepare and implement a rehabilitation plan for the Park that prioritises proposed works. (Department of Conservation and Land Management, community groups) [High]
2. Coordinate rehabilitation works between the land managers and relevant community groups. (CC, Department of Conservation and Land Management) [Ongoing]
3. Coordinate rehabilitation with weed control, fire protection and recreation facility and trail development at the planning, design and implementation stages. (CC, Department of Conservation and Land Management) [Ongoing]
4. Use locally collected seed, where possible, for propagating plants or for direct seeding. Where local seed is not available, other seed should be obtained from nearby sources. (CC, Department of Conservation and Land Management) [Ongoing]
5. Encourage members of the local community and schools to participate in rehabilitation works and seek external funding to achieve these works where possible. (CC, Department of Conservation and Land Management) [Ongoing]
6. Ensure mulch and soil used in rehabilitation works does not contain unwanted seeds or plant diseases. (CC, Department of Conservation and Land Management) [Ongoing]
7. Where appropriate, allow licensed seed collection from within the Park for rehabilitation projects within, or directly affecting the Park. (CC, Department of Conservation and Land Management) [Ongoing]

21. Park Aesthetics and Landscape Amenity

The objective is to maintain and enhance the natural and cultural landscape qualities of the Park.



The management of the landscape is a key consideration in the overall management of Woodman Point Regional Park. The following guidelines provide a practical framework for the management of the landscape within the Park:

- Alterations to the natural landscape should be subtle, remaining subordinate to natural elements by borrowing extensively from line, form, colour texture and scale found commonly in the surrounding landscape.
- Site specific visual resource factors should be carefully identified and evaluated before any management activities are undertaken.
- Where appropriate, degraded landscapes such as disused access tracks should be rehabilitated.
- Roads, management tracks and firebreaks should follow the natural landform, or land use patterns.
- Prescribed burning operations (if required) should incorporate prescriptions and techniques that minimise the visual impact.
- Where structures are required they should be sympathetic in design, materials and colour to complement surrounding landscape elements and be carefully sited away from major natural focal points, out of viewer sight-lines and where vegetation or landform screening can be used.

The landscape description, landscape quality and landscape character of the Park are described in the following subsections.

LANDSCAPE DESCRIPTION

The Park lies within the Swan Coastal Plain landscape character type (Department of Conservation and Land Management, 1994). The landform of the Park is characterised by gently undulating coastal dunes and swales. The vegetation on these coastal dunes and swales ranges from coastal heath and scrub, to dense stands of Rottnest Cypress trees to Tuart woodlands and forests.

The natural coastal landscape of the Park is in contrast to lands and shoreline along Cockburn Sound, much of which has been developed for industry.

LANDSCAPE QUALITY

The Park landscape encompasses areas that can be described as being of high, medium, or low visual quality. These categories can be mapped using the Department of Conservation and Land Management's *Visual Landscape Management System* (1989). Once mapped, any modifications within and adjacent to the Park can be assessed according to the visual quality rating and the ability of the landscape to incorporate the proposed change.

There are many areas of high scenic quality. Most of these include natural areas such as the coastal dunes and the dense stands of Rottnest cypress and Tuart Woodlands. The backdrop to Owen Anchorage also enhances the Park's scenic quality.

Other areas of high scenic quality include well maintained parkland areas. A modified landscape such as the main grassed picnic area at John Graham Recreation Reserve is of high scenic quality. Non-local trees such as Norfolk Island Pines add a diversity of form and colour to the landscape, and are visually attractive providing reference points along the coastline.

Areas of low visual quality include large cleared areas, such as the unsealed parking area at the Woodman Point boat launching area, highly degraded areas (eroded or weed infested), built structures such as drainage outlets or cement works, and rubbish such as asbestos associated with the explosives magazines and railway line. A number of unnecessary fences and barriers throughout the Park are also of low visual quality. These structures detract from the enjoyment of the Park and need upgrading, replacing, screening or removing to contribute positively to Park amenity.

Other areas of the Park are visually impacted by incompatible adjacent land uses or disturbed by past land use and are in need of rehabilitation. Breakwaters such as WAPET Groyne have impacted greatly on the Park's landscape although rehabilitation costs require that these shall remain in their present form.

LANDSCAPE CHARACTER

Maintaining or improving the natural and cultural landscapes of the Park is an integral component of the effective management of the Park. While this means protecting natural areas, in other instances this involves rehabilitating modified landscapes of the Park. View corridors, incorporating the use of low vegetation, should be considered in rehabilitation planning. Planting only local plant species may not apply to historical sites provided that no invasive species are planted.

Strategies

1. Classify landscape features in the Park according to the Department of Conservation and Land Management's *Visual Landscape Management System* in order to assess the form and location of all facilities and services within the Park. (Department of Conservation and Land Management) [Low]

2. Identify and protect important landscapes within the Park. (CC, Department of Conservation and Land Management) [Medium]
3. Ensure recreation facilities and park furniture are of a high standard and suited to the surrounding landscape. Facility provision should be planned and agreed to by the joint managers of the Park. (CC, Department of Conservation and Land Management) [Ongoing]
4. Ensure that new infrastructure and developments within or adjacent to the Park are designed to minimise impacts on visual quality and include a landscape plan demonstrating integration with the surrounding area. Liaise with DPI, Water Corporation, and other infrastructure providers before works affecting the Park are undertaken. (CC, Department of Conservation and Land Management) [Ongoing]
5. Identify sites of low visual quality (e.g. unsealed parking areas and roads, as well as degraded and weed infested areas) and undertake appropriate remedial action. (CC, Department of Conservation and Land Management) [Low]
6. Review fencing and barriers in the Park and remove those considered unnecessary and unsightly. (Department of Conservation and Land Management) [Medium]
7. Consider view corridors when undertaking rehabilitation works within the Park. (CC, Department of Conservation and Land Management) [Ongoing]

22. Cultural Heritage

The objective is to identify, protect and appropriately manage sites with Aboriginal and non-Aboriginal cultural heritage value within the Park.



ABORIGINAL ASSOCIATION AND USE

Research suggests that there was a large Aboriginal presence in the Cockburn region prior to European settlement. Aborigines moved up and down the coast

from one estuary to another, and used the lakes and wetlands between Perth and Rockingham. The census of 1837 found thirty-nine Aborigines at Mangles Bay, at the southern end of Cockburn Sound (Powell and Emberson, 1981).

There has been no archeological evidence found of Aboriginal habitation at Woodman Point (Powell and Emberson, 1981), and there are no listed Aboriginal sites in the Park. However, local Nyoongar Elders have expressed the potential for archeological material, including burials, to be located in the dune systems along the coastline (McDonald, Hales and Associates, 1997).

The seabed of the Indian Ocean (Site S02169) has been listed as an Aboriginal site by the Department of Indigenous Affairs. Research undertaken by McDonald, Hales and Associates (1997), in consultation with local Aboriginal Elders, indicates the existence of two further sites in the vicinity of Woodman Point. Both are of mythological significance and are described below.

The first site relates to the limestone ridge which runs parallel to the coastline and ranges approximately 200m-400m inland. The myth concerns a sparrow and a hawk, that flew to the round hole in the earth where the moon rested (to the northeast of the Park). The birds stole fire from the moon in the form of a burning stick. They flew along the ridge where the bush caught fire. The moon called in its uncle, the ocean. The ocean rose to extinguish the fire. Nyoongars were drowned and the lakes were formed in the area, including Lake Coogee. This story has resonance with another myth that explains the origin of the offshore islands (McDonald, Hales and Associates, 1997).

The second site relates to Woodman Point itself and its important mythological significance associated with the origins of death. According to the local Nyoongar Elder consulted, there was no death for Nyoongars originally. Everyone was immortal. That state of affairs was maintained by a man who threw a boomerang, which returned to be thrown again. As long as the boomerang could be maintained in flight, there would be no death. His son begged the man for a chance to throw the boomerang. The man denied him for a long time but finally relented. The boy could not keep the boomerang in flight, and death began. The earth stood still. The dead henceforth traveled to *Kooranup*, the land of dead over the sea. The Aboriginal Elder consulted pointed out that Woodman Point is shaped like a boomerang. Another version of this myth is thematically similar, and relates to the area between Woodman Point and the mouth of the Murray River (McDonald, Hales and Associates, 1997).

Other Aboriginal sites may exist in, or adjacent to, the Park that are not yet known to the Department of Indigenous Affairs.

After European settlement, Woodman Point and Coogee were used for beach camping. Cobbler fishing and mussel gathering were popular activities at Woodman Point. Local Aboriginal Elders also indicated a strong concern for the vegetation in the Woodman Point area. Local plants from Woodman Point such as the Quandong (*Santalum acuminatum*) were used for

jam making and other plants were used for medicinal purposes.

A key issue in the management of the Park is to ensure that Aboriginal sites within the Park are protected from damage which may occur during maintenance operations or works projects. It is therefore the responsibility of the managing agencies to ensure that management obligations are fulfilled according to the *Aboriginal Heritage Act 1972* and the *Native Title Act 1993*, before any planning or public works take place.

Additionally, it is important that local Aboriginal people are provided the opportunity to be involved in projects and the management of the Park.

Native Title Act 1993

The lands that comprise Woodman Point Regional Park are subject to one native title claim. In accordance with the *Commonwealth Native Title Act 1993* public works constructed on all reserved lands and waters managed by the Department of Conservation and Land Management will need to be notified in writing. Parties that require notification are:

- representative Aboriginal bodies; and
- registered native title bodies (corporate) and registered native title claimants for Department of Conservation and Land Management land/waters on which the operations are to be carried out.

These parties need to be given the opportunity to comment on the proposed public works. A "public work" is defined in the *Native Title Act 1993* to include buildings, structures which are fixtures, roads, bridges, wells, bores and major earthworks constructed or established on behalf of the Crown. Additionally, a management plan for any national or state park intended to preserve the natural environment of an area must be notified in the same manner as for public works. The Act's intention to preserve the natural and cultural environment will probably cause conservation parks, regional parks, nature reserves conservation/recreation purpose Section 5(g) reserves, marine reserves and marine nature reserves to be included in this requirement.

Aboriginal Heritage Act 1972

Under the *Aboriginal Heritage Act 1972*, it is an offence to damage, alter or destroy any Aboriginal sites unless written consent has been obtained from the Minister for Indigenous Affairs. This includes sites not yet registered with the Department of Indigenous Affairs.

NON-ABORIGINAL HERITAGE

Governor Stirling named the area "Woodman's Point" in 1872, after Thomas Woodman, the purser of the HMS *Success* (Molyneux and Associates, 1995). The State Nomenclature Committee has since officially fixed the name of the place as "Woodman Point".

Thomas Peel arrived at the Swan Colony in 1829 to found a village community and, coming too late for land on the Swan River itself, he set up behind Woodman Point. His venture failed, however, and by the end of 1831 his settlement (named Clarence) lay deserted. In 1836 the townsite of Clarence was gazetted over an area of approximately 500 hectares, including Woodman

Point. The townsite extended 3.5 kilometres north-south and included land to the east of the limestone ridge to Lake Coogee. No lots were sold until the last quarter of the 19th century when the section east of Cockburn Road was developed for urban and rural purposes (Powell and Emberson 1981).

In 1833, the Colonial Secretary published a Bill concerning quarantine on all arriving ships and cargo. In 1876 a small area (about 8 hectares) at the tip of the peninsula was gazetted as a quarantine station for people, and the rest of the Clarence Townsite west of Cockburn Road (170 hectares) as a quarantine ground for stock. In 1892 part of the latter was excised to serve as the Fremantle Race Course (40 hectares, from Marmion Road to just north of the Clarence boundary). The remaining quarantine ground for stock was put to good use in 1897, when cattle diseases broke out in the Kimberley region in the north of Western Australia (Powell and Emberson 1981).

In 1903 and 1904 the quarantine station for people was expanded to 50 hectares (plus a 300m strip of the bordering sea). The rest of the peninsula behind it, together with the racecourse, became a reserve for explosives, the previous depot at Robb Jetty having long been considered unsafe. The railway was carried south from Robb Jetty, magazines laid out in lines, a large pier built at which the explosives should arrive and the reserve fenced (Powell and Emberson 1981).

Before the First World War a grandiose plan was adopted to turn the whole peninsula into the Henderson naval base. The Point was built out about 400m and thence extended a similar distance south-westwards (the Long Mole) the first part of its proposed 2000m. After five years' work, however, the project was abandoned in 1918 (Powell and Emberson 1981).

Meanwhile, in 1909, the Commonwealth had taken over the quarantine station. It was used to quarantine thousands of troops returning from the First World War, and thereafter intermittently for cases or possible cases of infectious disease, chiefly smallpox (Powell and Emberson 1981).

In 1942, during the Second World War, three munitions magazines were built to house explosive materials. The buildings still exist, located on Conservation Close. Each is surrounded by a distinctive barrier berm, built from a stack of concrete "pillows" designed to absorb the impact of a possible explosion (Heritage Council, 2001). The munitions magazines are particularly significant because they were used for the storage of cordite, used in the manufacture of munitions at a factory in Welshpool, and because no similar structures were built in Western Australia (Heritage Council, 2001).

During the 1950s, thousands of immigrants passed through the Station on their day of arrival in Australia, to have their clothes and luggage fumigated as a safeguard against the accidental introduction of foot-and-mouth disease (Powell and Emberson 1981).

The western end of Woodman Point was modified in 1967 by the construction of another lengthy mole, from

which West Australian Petroleum Pty (WAPET) drilled unsuccessfully for oil (Powell and Emberson 1981).

In 1971 Cockburn Cement Ltd. constructed a sand washing plant on the artificial end of the Point. A road allowing public access to the end of Woodman Point was constructed to service the sand washing plant.

A large basin was also excavated near-shore in the south east of the Park for the construction of the *Ocean Endeavour* oil-rig in 1973–74.

In 1979 the State Government purchased the Quarantine Station from the Commonwealth Government and closed down the operation. The buildings were considered suitable for a recreation camp and were vested in the Recreation Camps and Reserves Board. The former Department of Youth, Sport and Recreation and the former Public Works Department spent considerable funds renovating the existing buildings for use as a recreation camp.

Public boat launching facilities and private sailing clubs were established on the south coast after 1980. The Explosives Reserve was vacated in 1982, and in 1984 came under the interim management of the Department of Sport and Recreation.

Municipal Heritage Inventory

A Municipal Heritage Inventory (O'Brien Planning Consultants, 1997) was prepared for the City of Cockburn between 1995 and 1997. The inventory identified places considered by the community to have heritage value. The following places were identified within the Park (refer Figure 7):

- HP6 Coogee Beach and Jetty;
- HP14 Explosives Magazines;
- HP32 Magazine Jetty; and
- HP50 Quarantine Station.

Other heritage places located close to the Park are:

- HP7 Coogee Hotel;
- HP8 Coogee Post Office;
- HP31 Lime Kilns;
- HP29 Lighthouse;
- HP30 Lighthouse Keepers Houses.

In addition there are two known shipwrecks to the west of the Park boundary.

James Mathews (1841)

The site lies on the north side of Woodman Point in Owen Anchorage, adjacent to the Cockburn Cement Ltd Jetty and about 100m from the shore. The wreck lies buried in sand in 2 to 3 metres of water.

Omeo (1905)

The site lies in the nearshore zone adjacent to Ocean Road, Coogee. The wreck is visible from the shore and has formed a habitat for marine flora and fauna.

With respect to non-Aboriginal heritage sites, key issues that need to be addressed include the general maintenance and management of sites in the Park, as well as developing appropriate processes for parties interested in restoring and utilising sites of cultural

significance. The *ICOMOS Burra Charter*, adopted by the Australian International Council on Monuments and Sites, as revised in 1999, provides the basis for management of places of cultural significance. It defines conservation principles, processes and practises for application to places of cultural significance.

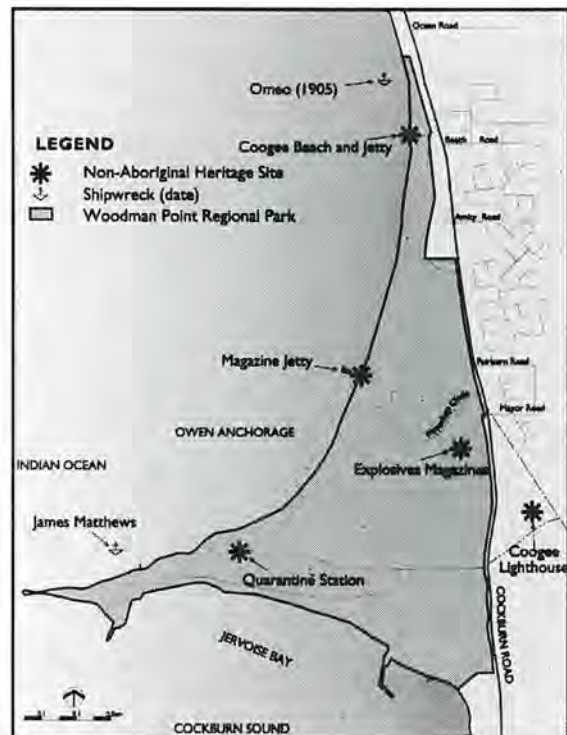


Figure 7 - Municipal Heritage Inventory Sites

Strategies

1. Ensure management obligations are fulfilled according to the *Aboriginal Heritage Act 1972* and the *Native Title Act 1993*, before any planning or public works take place. (CC, Department of Conservation and Land Management) [Ongoing]
2. Incorporate information on Aboriginal and non-Aboriginal history of the Park into interpretive material where appropriate (Section 38). (CC, Department of Conservation and Land Management) [High]
3. Liaise with Aboriginal and historic groups to determine their interests and possible involvement in the Park. (CC, Department of Conservation and Land Management) [Medium]
4. Nominate significant sites for heritage listing on either the relevant Municipal Heritage Inventory, or State and National Heritage Registers. (CC, Department of Conservation and Land Management) [Medium]
5. Develop management guidelines for historic sites in accordance with the *ICOMOS Burra Charter* and in consultation with other appropriate conservation bodies, such as the

WA Museum, National Trust, Australian Heritage Commission and historical societies. (CC, Department of Conservation and Land Management) [Medium]

23. Greenway Corridors and Links

The objectives are to manage the Park consistently with Greenway principles and to encourage appropriate management of corridors and links between the Park and other conservation or recreation areas.



The term "greenways" has been defined as "networks of land containing linear elements that are planned, designed and managed for multiple purposes including ecological, recreational, cultural, aesthetic, or other purposes compatible with the concept of sustainable use" (Ahern, 1995). It is a generic term that has been applied to a wide range of landscape planning strategies, concepts and plans (Tingay and Associates, 1998).

Woodman Point Regional Park is situated on the edge of the rapidly expanding southwest corridor of Perth. It is important to maintain and improve greenway corridors and other links between the Park and adjoining areas of ecological significance. This is necessary to help maintain the diversity and vigour of the Park's ecological systems and to help integrate the Park within the broader urban and industrial landscapes.

Cockburn Road is a major barrier that limits linkages between the Park and other areas of open space. In the regional context, there are a number of "green" areas within close proximity of the Park. To the east is Lake Coogee and to the southeast are Brownman Swamps, Lake Mount Brown and Mount Brown, all of which are parts of Beeliar Regional Park.

Should the State government proceed with the Fremantle-Rockingham Controlled Access Highway, the linkages between these areas of open space will be further diminished.

A study of Perth's Greenways has identified proposed greenway corridors linking the Park (see Figure 8). They are:

- Coastal Strip (link 1); and
- Stock Road (link 96).

The type of interface between the Park and adjoining land uses plays a major role in insulating the Park from, or exposing it to (as the case may be), undesirable impacts of those areas. The spread of invasive weed

species can be minimised by the creation of appropriate buffers where none exist, and by planting local species in existing areas and road reserves.

Strategies

1. Liaise with the landowners involved with proposed Greenways near Woodman Point Regional Park to develop a coordinated approach to management. (Department of Conservation and Land Management, CC, DPI) [Medium]
2. Encourage future providers of transport to adopt "wildlife friendly" designs, and management practices. (Department of Conservation and Land Management, CC) [Medium]
3. Develop a list of Park compatible plants to be provided to Park neighbours and infrastructure providers. Local plant species should be used in landscaping road reserves near the Park. (Department of Conservation and Land Management, CC) [Medium]



Figure 8 - Greenway Corridors and Links

D. RECREATION

24. Recreation Goal and Guiding Principles

RECREATION GOAL

Provide and manage for recreation, tourism and leisure in a manner that minimises conflict between visitors, and is consistent with other management objectives and Park values.

GUIDING PRINCIPLES FOR RECREATION

1. Preserving the Value of the Land Itself

Natural systems (including landscapes, particular sites and biota) should be able to sustain the recreation that occurs or is proposed. Recreation should be focused in public use areas of the Park. The intensity of recreation activities may need to be controlled to maintain the amenity of the Park and the enjoyment of visitors.

2. Consistency of Recreation with Reserve Purpose

Recreational activities should be compatible with the assigned purpose and management zoning of reserves within the Park. Reserves within the Park will be assigned an appropriate purpose for the protection and enhancement of Park values under the *Land Administration Act 1997*.

3. Equity

A range of activities consistent with a reserve's purpose should be allowed in the Park. However, uses that impair other forms of acceptable use or jeopardise the safety of other visitors should be specifically managed, directed to more appropriate places or not permitted. Priority will be given to low impact activities and those that increase awareness, appreciation and understanding of the natural environment.

4. Management

Activities and facilities must comply with the managing agencies' requirements. If effective management of recreational activities or facilities cannot be provided they should be restricted, relocated or removed from the Park.

5. Recreation Opportunities

A range of recreation opportunities should be provided for in a local and regional context thereby providing Park visitors with a choice of recreation activities and experiences which enhance the values of the Park. The Recreation Opportunity Spectrum (ROS) is a planning tool that enables managers to provide for the greatest possible range of opportunities in a given area, while limiting unintended incremental development (Stankey and Wood, 1982). Principles of the ROS have been utilised in developing the Recreation Masterplan.

25. Visitor Use

The objective is to ensure that the level of visitor use and behaviour is sustainable and minimises conflict with other Park visitors and values.



Surveys have been carried out into recreation use of Woodman Point by Ashton (1995), Barnes (1998), Ecoscape and CoastWise (1999) and Colmar Brunton (2001). The information presented in these reports provides a basis for understanding visitor requirements and demand in the Park.

Recreational activities that are popular at Woodman Point include:

- fishing;
- picnicking/barbecues;
- using playground equipment;
- relaxation;
- walking;
- exercise/jogging;
- swimming;
- snorkeling/ scuba diving;
- boat/jet-ski launching;
- golf.

Surveys were undertaken at two sites as part of the Colmar Brunton report: the Woodman Point Headland and John Graham Reserve. An estimated 50 000 visits to the Headland occur annually, and fishing is by far the dominant recreational activity. At John Graham Reserve, the provision of facilities such as barbecues, grassed areas, toilets and playground equipment promotes continued use by families. It was estimated that this site receives approximately 230 000 visits per year (Colmar Brunton, 2001).

In relation to visitor use, approximately half of the visitors to Woodman Point Headland lived locally with almost all of the remainder living within the Perth metropolitan area. Almost all visitors to the Headland (98%) used vehicles to access the area. In comparison, at John Graham Reserve, 28% of visitors lived locally, while 65% of visitors came from the Perth metropolitan area, indicating that the Park is an important regional

recreation destination. Again, most visitors access John Graham Reserve by car (83%).

The majority of Park users surveyed by Colmar Brunton (2001) visited the Park monthly at the Headland, and 2-5 times per year at John Graham Reserve. Eighty seven percent of users were repeat visitors, and the majority of visits were two hours or greater in length. Additionally, peak visitation times may be created by community events (see Section 33).

The estimated total number of visits to the Park is 500 000 per year (Colmar Brunton, 2001). This high level of visitation plus increasing residential development in the surrounding residential areas suggests that existing and future recreation facilities in the Park will continue to be in strong demand. As such specific visitor use surveys will be necessary prior to any significant recreation developments occurring in the Park.

Nude Bathing

A small number of people have been bathing nude on beaches adjoining the Park. The beaches are not gazetted for nude bathing and the City of Cockburn and the Department of Conservation and Land Management have received numerous complaints concerning the activity.

While operationally the beaches themselves are not contained within the Park, many visitors travel to the Park in order to access the beaches. Given the high levels of visitation and broad range of people and family groups who frequent the Park, the City of Cockburn and the Department of Conservation and Land Management believe nude bathing is not an appropriate activity at the beaches.

The City of Cockburn administers Local Laws that can be used to control nude bathing on beaches within its municipality.

Vandalism and other forms of antisocial behaviour

Vandalism, thefts from cars, illicit drug use and other forms of antisocial behaviour are predominant problems that have occurred at the Park in the past. The Department of Conservation and Land Management will need to undertake a range of actions to reduce the level of anti-social behaviour in the Park (refer to Strategy 4).

Strategies

1. **Develop and implement a visitor survey program to gain an understanding of visitor use, numbers and satisfaction within the Park. Use the Department of Conservation and Land Management's VISTAT (a quantitative system for recording and monitoring visitor levels) as a basis for the program. (CC, Department of Conservation and Land Management) [High].**
2. **Prepare a communication plan incorporating a sign system and sign plan as well as interpretive strategies and techniques. Interpretive material should be aimed at:**
 - **promoting visitor use and activities that are consistent with the protection and promotion of Park values and minimise conflicts between Park visitors; and**
 - **providing information about the recreation and interpretation opportunities available in the Park. (Department of Conservation and Land Management) [High]**

3. **Maintain the current non-gazetted of nude bathing at beaches adjoining the Park. (CC) [High]**
4. **Implement measures to reduce anti-social behaviour in the Park by:**
 - **improving vehicle and pedestrian circulation in appropriate areas of the Park;**
 - **upgrading the parking areas to improve the visibility of parked cars;**
 - **undertaking security patrols;**
 - **closing the entrance to Poore Grove and decommissioning the parking area;**
 - **consider the installation of video surveillance; and**
 - **consider restricting access to recreation areas within the Park at nominated times. (Department of Conservation and Land Management) [High]**

26. Recreation Masterplan

A Recreation Masterplan (Figure 9) has been prepared to help ensure that a variety of recreation opportunities are offered in the Park. The Masterplan will also help coordinate recreation developments within the Park and allocate appropriate facilities and services to those areas of the Park best able to accommodate them in a sustainable manner. Developments, where possible, will utilise already degraded sites.

The Masterplan reflects the management zones and land uses described in Section 9 of this Plan. The four management zones (Conservation, Natural Environment Use, Recreation, and Special Use) provide a guide to acceptable facilities and uses at a given site (see Table 1). The Recreation Masterplan considers access, internal circulation and the type of facilities to be provided within the Park.

The Conservation and Protection Areas of the Park will have access limited to nature trails with an emphasis being on the enjoyment of nature, interpretation, education and habitat protection.

The Natural Environment Use areas will have greater access primarily by walking trails and cycle paths. The provision of some facilities within these areas is anticipated as well as habitat rehabilitation.

The Recreation Areas will be the most intensively used and modified sections of the Park. The emphasis will be on providing well designed recreation areas without detracting from the natural or cultural values of the Park.

Strategy:

1. **Implement the Recreation Masterplan that allocates appropriate facilities and services to those areas of the Park best able to accommodate them in a sustainable manner. (Department of Conservation and Land Management, CC) [High]**

27. Recreation Sites and Facilities

The objective is to provide and manage a range of quality recreation sites and facilities that allow for a diversity of recreation opportunities without conflicting with other Park values.



Woodman Point Regional Park is of high recreation value as it provides for a range of active and passive recreation pursuits. The proposed urban expansion for Perth's South West Corridor will result in a substantial increase in the demand for recreation facilities in the area. It is important, however, that in planning for the increase in recreation demand that the nature-based experience that attracts many people to the Park be retained.

In the past there has been limited direction for the coordinated development of recreation sites within the Park. This has led to a proliferation of facilities in the Park some of which are poorly located, while others could be considered inappropriate or surplus to demand. Conversely, there are areas in the Park that could sustain greater public use provided appropriate facilities are developed. These include Woodman Point Headland, John Graham Recreation Reserve and the Jervoise Bay Sailing Club area. The enclosed nature reserve at Woodman Point also has some scope for interpretation facilities (refer to the Recreation Masterplan, Figure 9).

The provision of adequate shade at recreation sites is also a key consideration for Park management. In siting new recreation facilities under existing mature trees, management needs to be cognisant of safety issues such as falling branches. Additionally, when developing shade structures in conjunction with recreation sites, management needs to consider the potential effects that structures can have on the quality of visitor experience and landscape amenity.

SITE ENHANCEMENT PLANS

Site enhancement plans are to be prepared for five sites within the Park. They are:

1. John Graham Reserve;
2. Woodman Point View and Woodman Point Headland;
3. the Woodman Point boat launch area and surrounds of Cockburn Power Boats Association;
4. Jervoise Bay Sailing Club site; and
5. Woodman Point Nature Reserve Interpretation Trail.

The plans for John Graham Reserve and the Woodman Point View and Woodman Point Headland are to be compiled as part of the Jervoise Bay Conservation and Recreation Enhancement Plan. The site plans are discussed below.

1. John Graham Recreation Reserve

This reserve is the most visited recreation area within the Park. It is particularly popular for fishing and family activities as it provides a swimming beach, recreation jetty, playground and shaded picnic and barbecue areas. The existing recreation facilities are in strong demand from the large number of people using the site and the parking areas are degraded and in need of remodelling. To the north of the reserve, the Poore Grove parking area has inadequate security and is in a highly degraded condition.

The site plan for John Graham Reserve will focus on consolidating and improving the recreation facilities and parking areas. An improved parking layout will allow for an additional grassed picnic area to be developed. It is planned to close the Poore Grove entrance and decommission the parking area. There is the potential to establish a café or kiosk at John Graham Reserve. The feasibility of this will be investigated as part of the detailed site planning (for further information refer to Section 33).

2. Woodman Point View and Woodman Point Headland

Woodman Point View allows easy access to the beach and affords good views of Jervoise Bay and Rockingham. Woodman Point Headland is a natural terminating point and is a popular location for fishing. There are currently numerous informal parking areas off Woodman Point View and an informal, rough limestone parking area at the Headland. Unrestricted vehicle access is causing degradation of the coastal dunes and environment.

At both sites the main issues to be addressed as part of the site plan will be to provide better parking facilities for visitors, and to protect the surrounding coastal environment from unrestricted vehicle access. Restricting vehicles to designated roads and parking areas will assist in the rehabilitation of nearby degraded coastal vegetation.

3. Woodman Point Boat Launch Area and surrounds of Cockburn Power Boats Association

The Woodman Point boat launch area contains four public boat launch ramps as well as the Cockburn Power Boats Association and Pleasure Boat Storage facility. The existing vehicle and trailer parking facilities are

degraded and the site is currently not capable of accommodating the large demand. The site plan for the area will be aimed primarily at improving access to and from the boat ramps, upgrading the parking area which in turn will help alleviate the lack of secure parking in the area, and improving vehicle access to the site.

The introduction of parking fees for vehicles and trailers will be considered as part of the major improvements proposed in the site plan for the area. Visitors accessing the boat launch and associated parking will provide a means for recovering Park management costs. Income generated from the parking will be used in the management of the Park.

Improving pedestrian access at the Northern Harbour Breakwater will also be investigated in the site plan. Existing private vehicle access is not considered appropriate given the potential conflicts with pedestrians. Formalised parking arrangements and measures designed to restrict vehicle access to the Breakwater will be considered.

There is also potential to establish additional commercial operations in the boat launch area servicing the strong recreational boating demand. Further investigation into the feasibility of such operations and the requirements of visitors will be carried out as part of the preparation of the site plan. Rehabilitation of the degraded area between the existing parking area and Cockburn Road will also be a major consideration of the site plan.

4. Jervoise Bay Sailing Club Site

The Jervoise Bay Sailing Club is located at Woodman Point Beach adjacent to Cockburn Cement Ltd. The site offers shelter from the predominant south west summer winds, shaded picnic areas, and good views of Owen Anchorage and Fremantle.

The Club has requested that a formal lease agreement be prepared with the Department of Conservation and Land Management, to provide greater security of tenure for the Club. A consideration in establishing a lease for the site is public access requirements. The site will be natural focal point for people using the coastal dual use path when it is constructed (see Figure 9). The site plan for the Jervoise Bay Sailing Club Site will consider improving public access and providing additional recreation facilities, and will be prepared as part of the lease discussions with the Jervoise Bay Sailing Club. Jervoise Bay Sailing Club is also discussed in Section 33.

5. Woodman Point Nature Reserve Interpretation Trail

Woodman Point has a fascinating history and is of cultural significance to both Aboriginal and non-Aboriginal people. European heritage is evident by the presence of an animal quarantine station, a human quarantine centre and an ammunition storage area. These previous uses have also assisted in the preservation of a unique coastal vegetation community. This rich combination of cultural and natural history will be highlighted in the preparation of a site plan for the Woodman Point Nature Reserve, which will include a plan for an interpretation trail. A trail head area will be formed as part of the remodelling of the parking area at John Graham Reserve (this work will be undertaken as part of the Jervoise Bay Enhancement Plan

improvements). The interpretation trail will provide information on the unique coastal vegetation and Threatened Ecological Community, as well as the cultural remnants of the site, which include the crematorium, ammunition storage huts, cemetery, limestone road and the old quarantine buildings.

An explosives magazine and associated buildings also exist within the nature reserve, however these buildings are in very poor condition. It is planned to incorporate this magazine into the interpretive trail but a heritage assessment is necessary to determine whether it is feasible to upgrade the buildings or simply install interpretive panels.

Guided tours of the nature reserve are currently available, and there may be potential to expand this type of activity to enhance the education and interpretation value of the site.

OTHER RECREATION SITES

Coogee and Woodman Point Beaches

Coogee Beach has been a popular beach recreation destination in the Cockburn area for many years. The beach and adjacent caravan park will continue to be managed by the City of Cockburn.

Woodman Point beach is also popular. Beach shelters are available, however there are some issues involved with maintaining them. First, the existing shelters have been an ongoing target for vandalism and arson, resulting in high maintenance costs and increasing the threat of bushfires to the nearby vegetation. The design and location of the existing shelters are contributing factors to the overall high maintenance costs. Second, beach shelters can only cater for a small portion of beach users. Providing enough shelters for all users is not feasible and would detract from the natural, unobstructed character of the beach at Woodman Point. Third, there are many other forms of personal sun protection available to beach users, such as beach umbrellas and portable beach shelters. Fourth, maintaining the existing beach shelters or providing additional shelters may not be the most effective or efficient use of funding at Woodman Point Recreation Area. Given these issues, the Department intends to remove the beach shelters.

Woodman Point Jetty

Adjoining John Graham Reserve, the Woodman Point Jetty provides a focus for fishing, diving and swimming and is a popular destination for Park visitors.

The Department for Planning and Infrastructure currently licenses the jetty to the Fremantle Port Authority (FPA). The FPA has indicated that it no longer wishes to continue with the license and has approached the Department of Conservation and Land Management to take over the licence.

The jetty is in need of an upgrade in order to bring it up to an acceptable standard. Discussions will continue with the Fremantle Port Authority to determine what works are required and the possible transfer of the jetty license to the Department of Conservation and Land Management.

Woodman Point Recreation Camp

The Woodman Point Recreation Camp, which is located at the end of O'Kane Court, is managed by the Department of Sport and Recreation. The camp provides overnight accommodation with four dormitories and three fully self-contained cottages with a total accommodation capacity of 272 people. It also provides fully catered and self catered accommodation options (Recreation Camps and Reserves Board, 1997).

The camp remains popular with schools and community groups with the peak periods being November, February and March (Recreation Camps and Reserves Board, 1997). Owen Anchorage is easily accessible from the camp and many activities organised by the camp managers are water-based recreation activities. The camp also has a very rich cultural history, given it was a former Quarantine Station (see Section 22) and there is great potential for an array of interpretive activities and materials.

Strategies

1. **Prepare and implement site development plans for significant works within the Park.** (Department of Conservation and Land Management, CC) [Ongoing]
2. **Provide suitable and safe facilities to cater for existing and anticipated future demands.** (Department of Conservation and Land Management, CC) [Ongoing]
3. **Develop facilities and structures in a manner that is sympathetic to the surrounding landscape.** (Department of Conservation and Land Management, CC) [Ongoing]
4. **Seek funding for capital works at recreation sites within the Park.** (Department of Conservation and Land) Management [Ongoing]
5. **Remove beach shelters from Woodman Point Beach.** (Department of Conservation and Land Management) [High]

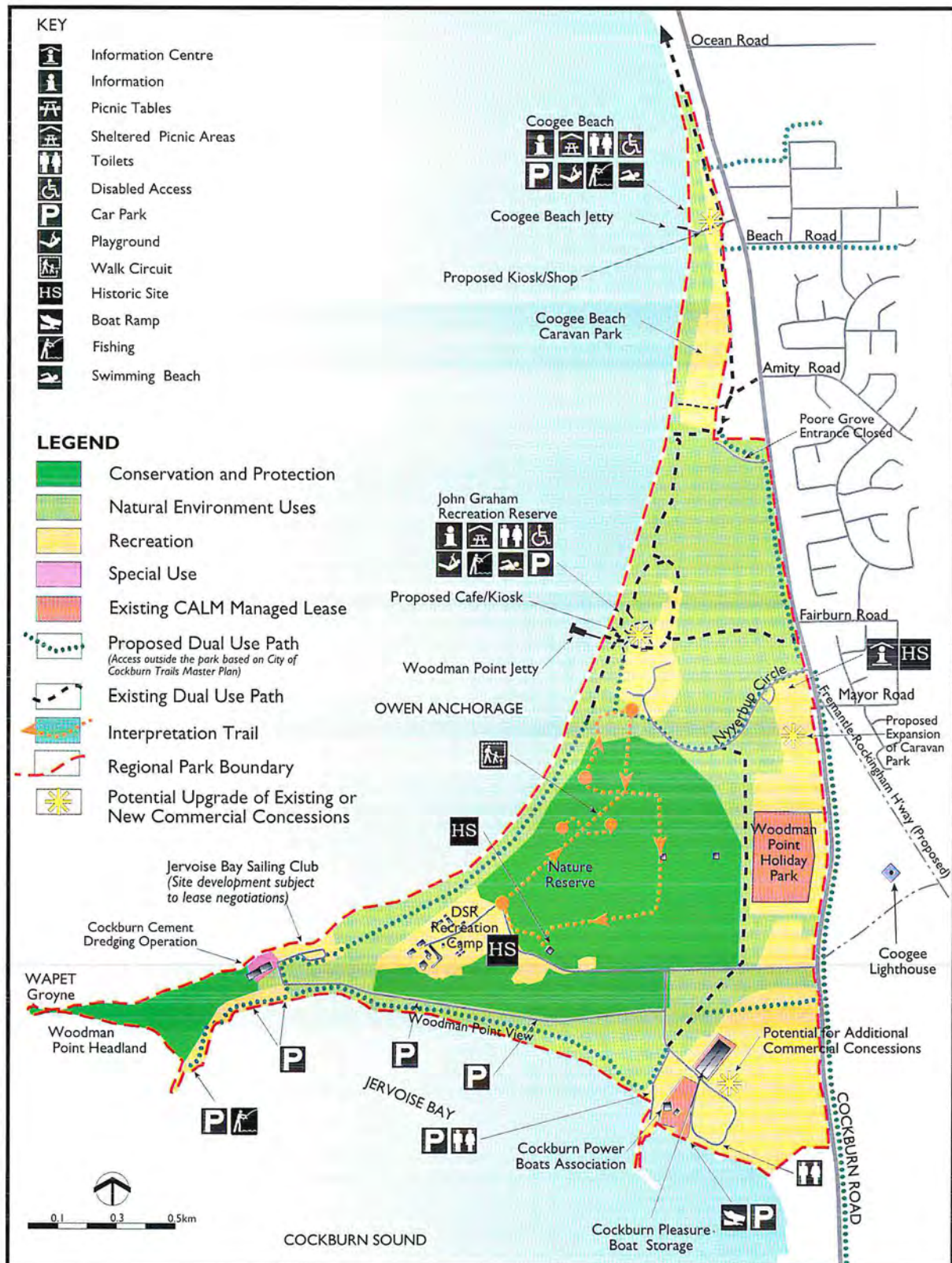


Figure 9 - Recreation Masterplan

28. Park Access and Circulation

The objective is to provide safe, convenient and structured access to and within the Park that is consistent with Park values.



Access to the Park is a major issue due to its proximity to urban areas and its popularity as a regional destination. Whilst access for recreation and education purposes is legitimate, uncontrolled vehicle and pedestrian access has severely degraded some areas (for example the Woodman Point Headland). Pedestrian access to Woodman Point Beach (from John Graham Recreation Reserve) and the beach at Jervoise Bay are key issues in protecting the sand dunes from further wind erosion and trampling.

Park access and circulation are key components of the Recreation Masterplan (see Figure 9).

ROAD ACCESS

Woodman Point is accessed via Cockburn Road, a major road linking Fremantle to Kwinana and Rockingham. Existing access from Cockburn Road into the Park occurs at the following locations:

- Powell Road;
- Poore Grove;
- Nyyerbup Circle;
- O'Kane Court; and
- Magazine Court (enters into the Woodman Point Caravan Park but only provides access to caravan park users).

As discussed in Section 27 – Recreation Sites and Facilities, it is planned to close the Poore Grove entrance into the Park and decommission the parking area.

Should the Fremantle-Rockingham Controlled Access Highway be constructed on the western boundary of the Park, there will be significant modifications to Nyyerbup Circle, O'Kane Court and Magazine Court entrances (refer to Section 31).

As a means of addressing the constant vandalism and antisocial behavior occurring within the Park, restricting access to recreation areas at nominated times may be considered in the future.

PARKING AREAS

Existing parking areas are located at Coogee Beach, Poore Grove, John Graham Recreation Reserve, the

Woodman Point boat launch and along Woodman Point View. Informal parking occurs at Woodman Point Headland and the Northern Harbour Breakwater.

Two key issues for the managing agencies to address at the park are:

1. reducing the undesirable effects of uncontrolled parking and access; and
2. reducing the level of antisocial behaviour in the park such as car theft and vandalism.

The provision of additional formal parking facilities as well as upgrading and redesigning the existing parking areas can help in addressing the above problems. Significant changes are proposed to the existing parking facilities within the Park. These changes will be implemented through the site enhancement plans discussed in Section 27. Major changes to the parking facilities in the Park include the following.

John Graham Recreation Reserve

The existing parking areas at John Graham Reserve will be redesigned to consolidate parking and improve access to recreation facilities. The improved parking area layout will allow for greater visibility of vehicles and the development of additional recreation facilities in close proximity. The works will be completed as part of the Jervoise Bay Conservation and Recreation Enhancement Plan.

Poore Grove parking area

It is planned to close the Poore Grove entrance and decommission the parking area. The existing parking area at the end of Poore Grove is in poor condition and suffers from high levels of vandalism due to its isolation and poor visibility from Cockburn Road. This is creating problems for residents at the adjacent Coogee Caravan Park. Additionally, the beach area adjacent to the parking area does not experience high levels of visitation.

As part of the Jervoise Bay Conservation and Recreation Enhancement Plan, the parking area will be removed and barriers installed to prevent access to Poore Grove. The existing road will be retained for possible future use.

Woodman Point View and Woodman Point Headland

There are currently numerous informal parking areas off Woodman Point View and an informal, rough limestone parking area at Woodman Point Headland. At both sites unrestricted vehicle access is causing degradation of the coastal dunes and environment.

The main issues to be addressed at the sites will be to provide better parking facilities for visitors, and to protect the surrounding coastal environment from unrestricted vehicle access. Restricting vehicles to designated roads and parking areas will aid rehabilitation of the degraded coastal vegetation.

Woodman Point Boat Launch Area

The existing vehicle and trailer parking facilities at the launch area require upgrading as they are in poor condition and not capable of accommodating existing demand. As discussed in Section 27 – the site enhancement plan for the area will be aimed primarily at

improving access to and from the boat ramps and upgrading the parking area.

The introduction of parking fees for vehicles and trailers will be considered as part of the site plan for the area. Visitors accessing the boat launch and associated parking will provide a means for recovering Park management costs. Income generated from the parking will be used in the management of the Park.

BICYCLE AND PEDESTRIAN ACCESS

A dual use path, which facilitates bicycle and pedestrian access, currently provides a link from the Park to Fremantle. This pathway provides access to Coogee Beach and Jetty, Poore Grove, John Graham Recreation Reserve and the public boat launch area at Jervoise Bay.

Informal pedestrian access, particularly to the beaches, has resulted in some degradation of sensitive dunes. The proposed path network should help address this problem by concentrating use on formed paths that are appropriately located and allow visitors to experience the diverse recreation opportunities and settings within the Park. It is proposed that the pathway network within the Park be extended to create a circuit, allowing visitors to travel around the coastal perimeter of the Park and facilitate better access to the beach (see Figure 9).

Existing pedestrian and vehicle access will be retained between the recreation camp (managed by the Department of Sport and Recreation) and Woodman Point Beach. Access will be retained with two walkways and a vehicles access track. For heritage and interpretive purposes an additional access way may be required in the future, where the original Woodman Point Quarantine Jetty met the beach and a small railway track led to the Isolation Hospital within the camp.

Future planning may also involve the extension of the pathway further to the south to link with the Henderson Region of Beeliar Regional Park. Future pedestrian and cycle access to the Park will be based on the City of Cockburn's Trails Master Plan (Maher Brampton, 1999).

ACCESS FOR ALL

Access for people with disabilities is currently limited to dual use paths and some facilities at John Graham Reserve. The Woodman Point Jetty is accessible by wheelchair, although the access pathway leading to the jetty may not meet relevant standards. Additionally, the condition of path surfaces within the Park is poor in sections and inhibits access for people with disabilities.

Where required, path surfaces will be upgraded to allow for improved disabled access. Appropriate pathways and ramps will need to be provided to allow those with disabilities to experience the diverse settings within the Park. All paths within the Park will be designed in accordance with Australian standards.

PRIVATE VEHICLE AND MOTORBIKE ACCESS

The unauthorised driving of vehicles on pathways, grass areas, beaches and other recreation areas needs to be

managed. Private vehicle access will be restricted to designated parking areas and access roads. Access outside these areas may endanger other Park visitors, cause damage to the landscape and adversely affect wildlife.

Access to Northern Harbour Breakwater

Of particular concern is the driving of private vehicles on the Northern Harbour Breakwater. Private vehicle access is not considered appropriate for safety reasons, given that the area is accessible by pedestrians. Formalised parking arrangements and measures designed to restrict private vehicle access to the breakwater will be investigated as part of the site plan for the Woodman Point boat launch area (see Section 27).

Beach Access for Commercial Fishing

Department of Fisheries has allocated nine licenses to professional fishers to catch bait fish in Cockburn Sound under the *West Coast Beach Bait Managed Fishery Program*.

The main method of fishing used by the bait fishers at Cockburn Sound is beach seine operations. Nets are tied to an anchor point on the beach and to non-motorised dinghies. The fishers row around the school of fish and the nets are then hauled ashore to retrieve the catch.

The fishers have been accessing the southern beaches of Woodman Point for the past 35 years. Vehicle access to the beach is important to the fishers for unloading and loading of dinghies, nets and catch. The fishers only access the beaches when bait fish have been sighted in close proximity to the shoreline and when ocean conditions are calm.

Given the limited and infrequent beach access requirements of the fishers, the opportunity to further control beach access through designated access points and the fact that the fishing activities are occurring under a licensed fishing program of the Department of Fisheries, the Department of Conservation and Land Management will continue to allow beach access at designated points for licensed professional fishers only. Access will be permitted at Jervoise Bay Beach and the beach south west of Cockburn Cement Ltd sand-washing plant adjoining Owen Anchorage.

The Department may restrict access provided to the fishers at specified times to help ensure there is minimal conflict with other Park visitors and beach users. A lack of compliance with access restrictions may result in the Department of Conservation and Land Management further restricting or closing designated beach access points.

ACCESS FOR MAINTENANCE VEHICLES

Boundary access for maintenance vehicles is provided at many points throughout the Park. Vehicle use within the Park must be justified and appropriately controlled. Where possible, maintenance vehicles should use existing pathways.

BOAT LAUNCHING

Both commercial and recreational fishers, plus other boat users, make use of the facilities available at the

Woodman Point boat launching area. This area is visited by charter operators from Fremantle and Rockingham and is considered a safe, all-weather facility. The boat launch ramp at Jervoise Bay is one of the most valued in Perth, offering excellent access to Cockburn Sound and nearby islands.

Management of the boat launch area is the joint responsibility of the Department for Planning and Infrastructure and the Department of Conservation and Land Management. The ramp falls below the mean water line and is managed by the Department for Planning and Infrastructure, while the parking and other facilities are situated on land managed by the Department of Conservation and Land Management. The Cockburn Power Boats Association provides private launching facilities and trailer parking to its members. The Jervoise Bay Sailing Club, located on the northern side of Woodman Point, caters for small sailboats and provides facilities for members only. Section 27 describes site enhancement plans for these areas.

The Department for Planning and Infrastructure is responsible for safety and navigation in the waters surrounding the Park. All boats are restricted to a speed of 8 knots within 100 metres of the shore around Woodman Point.

The Woodman Point boat launch will be the only boat launch with in the Park promoted for public use as it is the only launch providing appropriate deep-water access. Other informal launch areas, for example, the launch at the western end of Jervoise Bay Beach will be closed, as it does not meet relevant Australian Standards for public boat launches. Additionally, Park visitors will be warned of the hazard of shallow water around the Park and risk posed to water-based recreationalists.

HORSES AND OTHER ANIMALS

Unauthorised riding of horses or other animals is considered to be in conflict with the conservation purpose of the Park and is not permitted.

Strategies

1. Implement the Recreation Masterplan, that will:
 - coordinate access and circulation allowing visitors to move safely and conveniently throughout the Park. Park access should be integrated with surrounding community and regional path networks;
 - provide appropriate recreation facilities and services;
 - provide adequate parking facilities at major recreation nodes; and
 - help restrict private vehicles to designated parking areas and access roads. (CC, Bikewest, Department of Conservation and Land Management) [High]
2. Allow for emergency response within the Park and where appropriate, ensure new paths provide emergency and management

vehicle access (Section 27). (CC, Department of Conservation and Land Management) [High]

3. Rehabilitate existing informal trails that are identified as unsuitable for access. (CC, Conservation and Land Management) [Low]
4. Prohibit unauthorised animal and trail bike riding in the Park. (CC, Department of Conservation and Land Management) [Ongoing]
5. Where appropriate, provide access for people with disabilities in accordance with Australian Standards. (CC, Department of Conservation and Land Management) [Ongoing]
6. Continue to allow designated beach access for the licensed professional fishers at Jervoise Bay Beach. (Department of Conservation and Land Management) [High]
7. Upgrade parking facilities at John Graham Recreation Reserve, Woodman Point Headland, Bay View Road and the Woodman Point Boat Launch. (Department of Conservation and Land Management) [High]
8. Consider the introduction of parking fees for vehicles and trailers when upgrading the parking facilities at Woodman Point Boat Launch. (Department of Conservation and Land Management) [High]
9. Close the Poore Grove entrance into the Park and decommission the parking area. (Department of Conservation and Land Management) [High]
10. Restrict private vehicle access to the Northern Harbour Breakwater. (Department of Conservation and Land Management) [High]
11. Consider restricting access to recreation areas within the Park at nominated times, as a means of addressing the constant vandalism and antisocial behavior. (Department of Conservation and Land Management) [High]
12. Close informal boat launch areas within the Park that do not meet appropriate Australian Standards. (Department of Conservation and Land Management) [High]

29. Signs

The objective is to provide a system of signs that communicates the location of the Park features, provides orientation assistance, identifies hazards, leads to appropriate use of the recreation areas and helps communicate information about the Park.



Signs play an important role in notifying visitors about access and use, and communicating information about the Park's identity and values. Signs need to be designed and located to provide messages in a consistent way and without compromising the quality of the area in which they are sited.

The Department of Conservation and Land Management has prepared a sign system and a sign plan for the Park to help ensure signs are designed and located appropriately. The sign system has been prepared for all regional parks and will be implemented at Woodman Point Regional Park according to the park-specific plan.

Sign System

The sign system will form part of the overall Department of Conservation and Land Management sign manual and will outline the design specifications of all signs provided in the Park. It is important that the signs be of a high standard, robust and have a consistent style. Existing sign styles vary between those located in areas under the management of the City of Cockburn and those managed by the Department of Conservation and Land Management. The sign system will provide a consistent system of signs which are clearly identifiable with the Park.

Sign Plan

The sign plan will direct the placement of signs within the Park. Informative, directional and interpretive signs will be placed at prescribed locations within the Park.

Recognition of the Park will also be enhanced by the use of a park logo on all signs installed by the management agencies.

Strategies

1. Develop and implement a sign system and sign plan for the Park. The sign system will outline the design of all signs provided in the Park and will form part of Department of Conservation and Land Management's Sign Manual. The sign plan will direct the placement of informative, directional and

interpretive signs within the Park. (Department of Conservation and Land Management, CC) [High]

2. Liaise with other authorities which have jurisdiction within the Park to ensure consistency of signs within the Park. (Department of Conservation and Land Management, CC) [Ongoing]

30. Visitor Safety

The objective is to take all reasonable and practical steps to ensure the safety of visitors in the Park.

There is always an element of risk in outdoor recreation activities. Nevertheless, all reasonable and practical efforts will be taken to minimise risks to visitors.

Visitor safety will be promoted through information and education about potential problems and dangers. Visitor safety will also be considered in the design of recreation sites and facilities. Management actions to reduce safety hazards should, if possible, be consistent with the values of the Park and should not intrude unduly on the experience of visitors. Visitor safety will be an integral component in undertaking maintenance and capital developments within the Park.

As discussed in Section 28, informal boat launch areas, will be closed as they do not meet relevant Australian Standards for public boat launches. Additionally, Park visitors will be warned of the hazard of shallow water and the risk posed to water based recreationalists.

When managing risk, the Department of Conservation and Land Management is guided by *Visitor Risk Management Policy Statement 53* (Department of Conservation and Land Management, 1996).

Strategies

1. Prepare and implement a safety audit program to ensure procedures are developed to manage and monitor all known risks. (Department of Conservation and Land Management, CC) [High]
2. Ensure visitor safety and risk management are an integral component in undertaking works programs and capital developments within the Park. (Department of Conservation and Land Management, CC) [Ongoing]
3. Provide information to visitors that highlights potentially hazardous areas, activities and appropriate preventative actions and emergency procedures. (Section 38). (Department of Conservation and Land Management, CC) [Medium]

3.1. Utilities, Park Services and Infrastructure Proposals

The objective is to provide cost-efficient, effective and safe services and utilities within the Park in a manner that minimises environmental impact.



SERVICES

Services such as electricity, water, sewerage, gas and telephone are available at various locations in the Park. Future recreational, commercial, educational or management facilities may require services at additional locations within the Park.

SEWERAGE OUTLETS

The Water Corporation manages two sewerage pipes that run through the southern portion of the Park and dispose effluent (in an emergency overflow capacity only) into the ocean. The first outlet is the Woodman Point Ocean Outlet, which extends approximately one kilometre into Cockburn Sound. The second emergency outlet discharges approximately 50 metres into Jervoise Bay.

The Water Corporation is to be notified of any planned developments or works that will cross the pipeline easement, and approval is to be gained prior to commencement of works.

PARKLAND SERVICING AND MAINTENANCE

Parkland and recreational areas need regular maintenance, which is the responsibility of the managing agency that controls each area. The collection of rubbish, maintenance and provision of toilet facilities and general maintenance operations within the Park requires regular access.

Existing and proposed toilets within the Park are illustrated in Figure 9.

The provision of bins will be minimised and visitors encouraged to take their rubbish home. The dumping of rubbish has been a management issue in some areas of the Park. This will require the enforcement of Local Laws relevant to rubbish dumping.

ROADS

Roads will only be constructed in the Park if they are for management purposes or as part of recreation, educational or commercial development. Where possible, facilities should be located close to existing parking areas or near the Park boundary to reduce the need to place roads within the Park. Management vehicles should, where possible, use paths to limit the need for additional roads and to minimise the impact on the natural environment.

POWER LINES

To minimise the visual impact of power supply within the Park it is advocated that all new power lines be placed underground. Mains power lines should be placed so that there is minimal visual impact. Where feasible, power supplies should be from alternative energy sources, for example solar power.

INFRASTRUCTURE PROJECTS ADJOINING THE PARK

Proposed Fremantle-Rockingham Controlled Access Highway

The proposed Fremantle-Rockingham Controlled Access Highway would be a strategic link servicing the industrial areas in the south-west metropolitan area of Perth. The alignment of the proposed road is identified in the MRS. A "controlled access highway" means that there will be no property access from the highway.

The State government review of the freight movement network in the Perth metropolitan area may have implications for road access to the Park. The review will consider whether the proposed Fremantle-Rockingham Controlled Access Highway will proceed.

The current alignment of the road reserve in the MRS adjoins a section of the eastern boundary of the Park. Should the proposal proceed, impacts on the Park such as protection of flora and fauna, recreation use, Aboriginal heritage as well as noise and visual amenity will need to be addressed. Such impacts can be reduced by seeking appropriate environmental and town planning conditions be placed on the development.

Should the highway proceed, there will be significant modifications to Nyverbup Circle, O'Kane Court and Magazine Court entrances to the Park. Additionally there may be potential to incorporate the land east of Cockburn Road containing the Coogee Lighthouse, and associated cottages, into the Park.

Port Catherine

The proposed Port Catherine marina development adjoins the northern boundary of the Park. The proposal involves the rehabilitation of a former noxious industrial area in South Coogee to a marina and residential development, which is aimed at facilitating economic and social development in the area.

Port Catherine will be developed as a joint venture between the Western Australian State Government and Port Catherine Developments Pty Ltd in accordance with the provisions of a comprehensive Project Agreement.

An Environmental Review has been undertaken for the development (Bowman, Bishaw, Gorham, 2001). Should development of a marina proceed, the likely environmental impacts that will affect Woodman Point Regional Park are disruption of coastal processes in Owen Anchorage and potential for reduction in marine water quality. However it is difficult to quantify these changes and the extent of impacts on the Park. Additionally, the marina development is likely to increase visitors to the region, and consequently, to the Park.

Strategies

1. **Where appropriate, ensure a detailed rehabilitation program accompanies service works, which occur in the Park. (Section 20). (Department of Conservation and Land Management, CC) [Ongoing]**
2. **Educate people of the need to take rubbish home. (Department of Conservation and Land Management, CC) [Medium]**
3. **Construct roads within the Park for approved recreation or management purposes only. (Department of Conservation and Land Management, CC) [Ongoing]**
4. **Place power lines to facilities and amenity lighting underground to improve the aesthetics of the Park. (Department of Conservation and Land Management, CC) [Low].**
5. **Request that appropriate conditions (which help protect the values of the Park) are placed on the proponents of infrastructure developments when they are seeking planning and environmental approvals (CC, Department of Conservation and Land Management) [Ongoing].**

E. COMMERCIAL CONCESSIONS

32. Commercial Goal and Guiding Principles

COMMERCIAL GOAL

Allow for appropriate commercial uses within the Park and manage them in a manner that minimises impact on other values and contributes to regional park management costs.

COMMERCIAL GUIDING PRINCIPLES

1. Consistency of Commercial Use with Reserve Purpose

Commercial activities should be compatible with the assigned purpose of reserves within the Park and should be of service to Park visitors. Reserves within the Park will be afforded an appropriate purpose for the protection and enhancement of Park values under the *Land Administration Act 1997* (Table 1).

2. Preservation of the Values of the Land Itself

Commercial use should not compromise the natural and cultural values of the Park. Future developments should be of a character and arrangement that do not detract from the natural settings, landscape amenity and conservation values of the Park. Through the tendering process proponents of significant developments within the Park will be required to assess the environmental impacts of the proposed commercial use.

3. Equity

Commercial use within the Park should be of a nature that promotes multiple use by Park visitors. Commercial uses which impair other forms of acceptable use or jeopardise safety of other visitors should be specifically managed, directed to more appropriate places or not permitted. All development applications will be assessed in terms of the overall commercial requirements for the Park.

4. Leased or Owned by the Managing Agencies

Commercial use of areas within the Park will be either through a lease or licence arrangement. Alternatively, the managing agencies may own and operate the facility or development.

5. Financially Viable

Through the tendering process proponents of significant developments within the park will be required to document the financial viability of the proposed commercial use. Revenue generated by commercial use within the Park will be used to help meet the overall cost of managing regional parks.

6. Management

Activities and facilities must comply with the managing authorities requirements. An open and transparent tendering process for proponents of commercial concessions within the Park will be applied by the managing agencies.

If effective management of commercial facilities or activities cannot be provided they should be restricted to appropriate levels, relocated or removed from the Park.

33. Leases and Licences

The objectives are to ensure that leases and licences are consistent with the values of the Park, enhance visitor satisfaction and help offset regional park management costs.



Given its urban location and potential to accommodate commercial activities, the Park will continue to be subject to a variety of commercial proposals.

Commercial concessions (leases and licences) may be granted on lands within the Park to provide appropriate facilities and services for visitors. A lease allows the lessee to occupy a particular area of land, whereas a licence allows the licensee to enter and use the land.

Leases and licences provide a mechanism to bring additional facilities and management expertise into visitor services. Concessions need to be carefully designed and managed, or they may detract from the conservation and landscape values of the Park. Appropriate concessions can generate income to help offset regional park management costs and can significantly enhance public access and enjoyment of the Park.

The Department of Conservation and Land Management and the City of Cockburn, as managers of the Park, shall assess leasing and commercial operations according to the goals and objectives set out in this Plan.

According to the *Conservation and Land Management Act 1984*, the Executive Director of the Department of Conservation and Land Management may grant a lease on land vested in the Conservation Commission of Western Australia. The Executive Director may apply terms and conditions as appropriate and the term of the lease may not exceed 21 years, but may include an option for renewal. The lease must be tabled before

each House of Parliament within 14 sitting days of its execution by all parties to the grant or renewal.

Under the same Act, the Executive Director of the Department of Conservation and Land Management may grant a licence in writing to any person to enter and use certain land.

Commercial concessions must be consistent with the purpose of the reserve and the protection of its values. All commercial concessions within the Park will be established and managed in accordance with *Recreation, Tourism and Visitor Services Policy Statement No. 18* (Department of Conservation and Land Management, 1991). The tendering process for proponents of commercial concessions within the Park will be consistent with State and local government tendering processes. Leases for recreation clubs and associations are not subject to the same tendering processes.

Leases and licences pertaining to City of Cockburn land require approval from the City of Cockburn.

Advertising within the Park requires the approval of the relevant managing agency.

The locations of existing and potential sites for commercial visitor services are illustrated in Figure 9 - Recreation Masterplan.

EXISTING CONCESSIONS FOR VISITOR SERVICES

Existing concessions for visitor services (including recreation clubs) within the Park are as follows:

- Cockburn Pleasure Boat Storage;
- Cockburn Power Boats Association;
- Coogee Beach Holiday Park;
- Jervoise Bay Sailing Club; and
- Woodman Point Holiday Park.

In accepting the responsibility for managing the Park, the Department of Conservation and Land Management has agreed to manage the existing leases executed by the Recreation Camps and Reserves Board. The above organisations (with the exception of the Jervoise Bay Sailing Club) hold leases that have been executed by the Recreation Camps and Reserves Board and are currently managed by the Department of Conservation and Land Management. Whenever any portion of a current lease is renegotiated, it will be conditional upon the lease being converted to a standard the Department of Conservation and Land Management format. This will help ensure that the leases are contemporary documents and reflect the land management principles of the Department.

Cockburn Power Boats Association

The Cockburn Power Boats Association was first established in 1961 at Clarence Rocks. It was then known as the Cockburn Sound Small Boat Owners Association. In September 1980, State Cabinet agreed to relocate the Club and public boat launching facilities from the area set aside for the off-shore petroleum industry to the current site in the Park. The present clubhouse was officially opened in 1983 with extensions completed in 2000. Membership has reached its capacity

of 1000 and there is a waiting list of membership applications.

Facilities offered by the club include five boat ramps, five short term boat pens, boat preparation bays, boat wash down bays and extensive parking for motor vehicles and boat trailers. There is no permanent boat storage on the site. The clubrooms have a 200-person capacity and include a bar operating under a limited club liquor licence. Security on the premises is reinforced by the presence of a live-in caretaker. Cockburn Sea Rescue operates from the site free of charge.

The Association currently has a lease over the site until 2016 and given the high demand for recreation boating in the region, the current use of the leased site is considered appropriate within the Park.

The Department of Conservation and Land Management has received a request from the Association to expand its facilities to the northwest, to provide additional parking for members. The proposal has merit given the degraded condition of the area which is currently used for informal parking. Additionally, the extra parking would provide the Association with the scope to increase membership. Any proposal to expand the lease area of the Association will need to consider public access requirements through the preparation of a site development plan.

Cockburn Pleasure Boat Storage

Located close to the Woodman Point boat ramp and the Cockburn Power Boats Association, Cockburn Pleasure Boat Storage utilises the former Commonwealth Naval Shed and surrounding yard. The business provides undercover and outdoor boat storage, boat maintenance services, petrol, fast foods, bait, fishing tackle and boating accessories. Security is provided for by a live-in caretaker.

Given the high demand for recreation boating at the Park, commercial boat storage is considered an acceptable visitor service within the Park. The current lease for the Cockburn Pleasure Boat Storage will expire in June 2002. In accordance with State government tendering processes for commercial leases, public expressions of interest will be sought to operate a boat storage service.

Further discussion of boat storage and other boating support services is contained in Opportunities for Commercial Visitor Services (see below).

Jervoise Bay Sailing Club

The Jervoise Bay Sailing Club was relocated from the shipyard area in Jervoise Bay to a site adjacent to the Cockburn Cement Ltd sand-washing plant in Owen Anchorage.

Facilities offered by the Club include a launching ramp, secured and unsecured boat storage, tool storage and parking for vehicles and boat trailers. The Club operates a bar on a restricted liquor license. Within the clubroom compound is a separate secure area which houses the club rescue boat and a locked shed containing club sailing, racing and safety equipment. The club has a resident caretaker who lives in a caravan at the rear of the members' area. The perimeter of the site is fenced to prevent unauthorised vehicle access.

The Club has been occupying a site at the northern side of Woodman Point Headland for approximately 20 years without a lease for the area. Agreement was reached with the Department of Sport and Recreation (as the previous land manager) to enter into a lease which provides the club with an area set back from the beach for a club house and boat storage as well as a licensed area to enable public access to the beach front. The club has exclusive use of a boat ramp for the purpose of hand-launching boats from the beach (Woodman Point Community Taskforce, 1988).

The Club has requested that a formal lease agreement be prepared with the Department of Conservation and Land Management to provide greater security of tenure for the Club. The Department considers that a lease for Jervoise Bay Sailing Club is appropriate, however an important consideration is public access requirements. The boundary and extent of the lease area is to be discussed between the Department of Conservation and Land Management and the Sailing Club. A site plan considering public access areas will be required.

The Club has also expressed an interest to operate mooring facilities adjacent its clubhouse at Owen Anchorage. For the moorings to be approved, the Sailing Club requires a sea bed lease from the appropriate authorities (namely the Department for Planning and Infrastructure and the Fremantle Port Authority as both agencies have jurisdiction in the area).

The Club would also need to ensure the surrounding land managers agree with the moorings and that they will not impinge upon their activities. In the past, the Department of Conservation and Land Management as well as the Cockburn Cement Ltd raised a number of concerns with the application. Additionally, the Department of Sport and Recreation (as manager of the recreation camp) has also recently raised concern with the proposal.

Furthermore the Club would need to consider any restrictions placed over the navigable waters of the proposed moorings area by the Department for Planning and Infrastructure. The Department for Planning and Infrastructure has advised that a para-sailing area and a water ski area are present at the inshore areas of Owen Anchorage.

Woodman Point Holiday Park

Woodman Point Holiday Park is operated by Fleetwood Parks Pty Ltd and occupies approximately 7.94 hectares adjacent to Cockburn Road. The Holiday Park has operated in its current location since 1988 and the current lease expires in 2023. The lease provides for both short stay accommodation and permanent residents.

Fleetwood Parks has proposed to expand the Holiday Park to Nyyerbup Circle to the north and a small strip to the west, at the southern end of the existing lease. The proposal is for Fleetwood Parks to provide low key camping opportunities. This would allow visitors to the Holiday Park to have a wide range in choice of accommodation from permanent facilities, to caravans to nature based camping. The proposal will also allow for the conversion of two dilapidated former explosives magazines to visitor facilities (including a Park

information centre) and the construction of other recreation facilities such as swimming pools and play areas.

The proposal also considers changing the main access to Fleetwood Parks from Magazine Court to Nyyerbup Circle. This may provide for improved security measures at the main entrance to the Park.

For the proposal by Fleetwood Parks to proceed, a site development plan will need to be prepared. As part of planning for the site environmental considerations such as vegetation and flora will need to be assessed as well as public access requirements. Additionally, the existing lease between Fleetwood Parks and the Department of Conservation and Land Management will need to provide for the proposed extension.

A house adjoining the eastern boundary of the Holiday Park (which was formerly a staff residence) has the potential to be included into Fleetwood's operations.

Coogee Beach Holiday Park

Coogee Beach Holiday Park is located in the north of the Park and is also operated by Fleetwood Parks Pty Ltd. The land is leased from the City of Cockburn until 31 May 2011 and occupies approximately 4.09 hectares adjacent to Cockburn Road. Fleetwood Parks may exercise options to extend the lease until 31 May 2016 or 31 May 2021. The Holiday Park accommodates both short term and long term residents and is considered an appropriate land use within the Park.

NEW OPPORTUNITIES FOR COMMERCIAL VISITOR SERVICES

Boat Launch Area

There is also potential to establish additional commercial operations in the boat launch area servicing the strong recreational boating demand.

As discussed in Section 27, a site development plan will be prepared by the Department of Conservation and Land Management outlining proposed concepts for the public boat launch area.

Once the site development plan has been completed, expressions of interest will be sought to facilitate development of the site through the State government tendering process. An assessment of environmental impact, feasibility study and a business plan would be required for any development to proceed.

Mobile Food and Bicycle Hire Outlets

Businesses such as ice cream vans, mobile food outlets or bicycle hire may operate in the Park, subject to the issuing of an appropriate licence by the managing authorities. Such activities must comply with the managing authorities' requirements, including Council's health and building requirements, and be compatible with the Park's values.

Café, Kiosk or Shop

Two sites, John Graham Recreation Reserve and Coogee Beach have been identified as possible sites for a café, kiosk or shop.

The sensitive siting and design of buildings at John Graham Recreation Reserve and Coogee Beach would

promote greater Park visitation without significant impacts upon the conservation values of the Park. Planning for the establishment of two facilities in the Park needs to consider the potential market for each facility so as to avoid the duplication of resources and to attract a range of visitors. The facilities should offer a variety of services. Revenue generated from lease arrangements will be used to assist in the management of the Park.

For the development of a café, kiosk or shop to proceed, expressions of interest would be sought through an appropriate government tendering process. An environmental assessment, social survey and business plan would be required before the development could proceed.

Both sites and potential opportunities are discussed below.

1. John Graham Recreation Reserve

John Graham Recreation Reserve is a well established and highly visited site within the Park. The high number of visits to the area, estimated in the vicinity of 250 000 per year (Colmar Brunton 2001), illustrates a strong demand for the area as a recreation node. John Graham Recreation Reserve is easily accessible by bicycle and pedestrian pathways and by vehicle, and it contains extensive parking. Mobile food outlets have operated successfully at the reserve, indicating a demand for services. An opportunity exists to refurbish the existing Department of Conservation and Land Management office and operations base to create a café, or kiosk.

2. Coogee Beach

In May 2001, the Cockburn City Council resolved to call for expressions of interest to construct and enter into a lease for the establishment of a kiosk or shop at Coogee Beach. An architect was commissioned by the City to investigate various options in establishing the facility. The preferred option, at this stage is that the facility would be constructed within the road reserve (therefore outside the Class A reserve) and through the dune corridor leading to the beach and jetty. The building would be orientated to obtain best protection from prevailing winds whilst still getting wide ranging ocean views. This siting would not impede access to the beach and jetty.

The building can be designed to be sympathetic to the natural coastal environment and still promote the civic qualities of the City of Cockburn. Roof and landscape treatments can ensure that the building blends in with the natural coastal environment and has no impact on the long-term stability of the dune system. This option requires the demolition of the existing slope once the building is finished.

The alternative options of renovating the existing shop building or using the existing shop site were considered inferior. The architect considered that renovating the existing shop building would be too expensive. The use of the existing site offers no views and has no connection to the beach. It may be largely hidden from the coastal road traffic and would involve a loss of service and income through the construction phase because the existing building would have to be demolished prior to the start of construction.

Community and Special Events

There is a significant demand for using sites at Woodman Point, particularly John Graham Reserve, for community and special events.

The appropriateness of community or special events within the Park will be assessed by the managing agency controlling the respective area. Gatherings requiring sole use of a site will require a booking. A concession arrangement (licence or permit) may be required between the event-organiser and the managing agency for the right to use a site and to cover the operational and administrative costs incurred by the managing agency.

Management agencies should use the guiding principles established for recreation and commercial uses as a means of determining the appropriateness of proposed activities. The Department of Conservation and Land Management should be consulted in the assessment of community events, as the coordinating agency for regional parks. The City of Cockburn's requirements must also be met.

CONCESSIONS FOR PURPOSES OTHER THAN VISITOR SERVICES

Commercial concessions for purposes other than visitor services are generally not considered appropriate within the Park unless there is a considerable benefit to the Park or they comprise a historical land use.

Cockburn Cement Limited

Cockburn Cement Ltd manufactures cement and lime at its works in Munster, producing approximately 1.3 million tonnes per annum. The company is the largest lime producer in Australia. Lime is an essential raw material for Western Australia's mineral processing industry, especially alumina and gold processing (Cockburn Cement Ltd, 2000).

Calcium carbonate is the sole raw material for lime production and the main raw material used for the production of cement. Cockburn Cement Ltd obtains this raw material from dredging shell sand from Success and Parmelia Banks in Owen Anchorage off Woodman Point under the *Cement Works (Cockburn Cement Limited) Agreement Act 1971*.

The Act gives Cockburn Cement Ltd the right to extract shellsand until the year 2011, with rights of extension to 2021 (Cockburn Cement Ltd, 2000).

Additionally the Cement Works Agreement states –

"If and when it should become impracticable for the Company to obtain shellsand pursuant to this clause, the State will use every endeavour to find other shellsand within a reasonably economic distance from the jetty, and if other shellsand is not available, then other equivalent material" *Cement Works (Cockburn Cement Limited) Agreement Act 1971.*

Under current operations at Cockburn Cement Ltd, the shellsand is dredged and loaded onto barges for transport to shore. It is then deposited on the seabed along-side the reclaimer jetty at Woodman Point, before being pumped through to the washing plant where the seawater is removed and replaced with freshwater. This

sand/water mixture is then pumped seven kilometres through a pipeline to a sand stockpile at the Munster works (Cockburn Cement Ltd, 2000).

As discussed in Section 7, Cockburn Cement Ltd leases a portion of Lot 59 Woodman Point View from the Department of Land Administration (DOLA) which contains the shell washing plant. Cockburn Cement Ltd also has the right to construct and maintain an electricity supply, use roads, park vehicles, and construct and maintain pipelines for pumping water, sand or spoil in specified locations within the Park. The access road (Lots 52 and 55) along Jervoise Bay constitutes part of the land controlled by DOLA, and is set aside for Cockburn Cement Ltd access (Woodman Point Community Taskforce, 1988).

The *Cement Works (Cockburn Cement Limited) Agreement Act 1971* confers a number of rights and obligations on both the Company and the State. Importantly the Act states –

"The company will pay to the Lessor the whole or equitable part of the cost of making good any damage to or deterioration of the roads and ways as may be reasonable required by the Lessor having regard to the use of those roads and ways by others" *Cement Works (Cockburn Cement Limited) Agreement Act 1971*.

This management plan acknowledges the rights of Cockburn Cement Ltd to remain at its present location within the Park in accordance with the *Cement Works (Cockburn Cement Limited) Agreement Act 1971*. Under the Park's zoning (see Section 9) the area is identified as Special Use, which allows management of the area for purposes other than conservation, recreation or visitor services. Additionally the area is identified as a private lease with no public access.

Strategies

1. Establish and manage any commercial operations in accordance with Department of Conservation and Land Management *Policy Statement No 18, Recreation, Tourism and Visitor Services*. Concessions in the Park may be permitted if they are consistent with the purpose of the Park and approved the Minister for the Environment and Heritage. Proceeds from commercial operations are to be used for regional park management and infrastructure. (Department of Conservation and Land Management, CC) [Ongoing]
2. Ensure any commercial activities are consistent with the commercial guiding principles, conditions are fulfilled by concession holders and an appropriate fee is paid that contributes an income to regional park management. (Department of Conservation and Land Management, CC) [Ongoing]
3. Ensure proponents of major commercial activities complete an appropriate expression of interest. (Department of

Conservation and Land Management, CC) [Ongoing]

4. Assess community and special events in relation to the guiding principles for commercial use of the Park. (Department of Conservation and Land Management, CC) [Ongoing]
5. Explore sponsorship opportunities with local businesses. (Department of Conservation and Land Management, CC) [High]
6. Where appropriate, allow provisions for community organisations and clubs that are consistent with the reserve purpose. (Department of Conservation and Land Management, CC) [Ongoing]
7. Develop management guidelines for advertising within the Park. (Department of Conservation and Land Management, CC) [Medium]
8. Seek further information from Fleetwood Parks Pty Ltd (such as site development plans) for the proposed extension to their lease area. (Department of Conservation and Land Management) [High]
9. Prepare a lease with the Jervoise Bay Sailing Club to operate a sailing club and provide security of tenure at their existing location. (Department of Conservation and Land Management) [High]
10. Investigate the feasibility of locating a café or kiosk at the John Graham Recreation Reserve and Coogee Beach (subject to lease negotiations). (Department of Conservation and Land Management, CC) [Low]
11. Ensure Cockburn Cement Ltd complies with the obligations of the *Cement Works (Cockburn Cement Limited) Agreement Act 1971*. (DOLA) [Ongoing]

34. Mining and the Extraction of Basic Raw Materials

The objective is to protect the Park's values from exploration, mining and the extraction of basic raw materials.

There is a strong presumption against mining and the extraction of basic raw materials in Woodman Point Regional Park.

EXTRACTION OF BASIC RAW MATERIALS

Depending on the land tenure involved there are different legislative requirements for extraction or mining of basic raw materials.

Basic raw materials sought on land managed by the Department of Conservation and Land Management or crown land will be processed under the *Mining Act 1978*. Any proposals to access basic raw materials on conservation reserves for "public works purposes" will be considered by the Department in accord with the Conservation Commission of Western Australia's *Basic Raw Materials Policy Statement No. 5* (Conservation Commission of Western Australia, 1994).

Extraction of basic raw materials from within the Park is unlikely to be environmentally acceptable and such proposals will be referred to the EPA.

MINING

Applications for mining within the Park will be processed in accordance with:

1. the *Mineral Exploration and Development Memorandum of Understanding* between the Environmental Protection Authority and the Department of Minerals and Energy (now Department of Mineral and Petroleum Resources [DMPR]) (1995) for applications occurring in any conservation reserves in the Park (refer Department of Minerals and Energy, 1986); and
2. the Regional Park Mining Protocol currently being developed by the Department of Conservation and Land Management and Department of Mineral and Petroleum Resources for all other land tenure in the Park including unallocated Crown land, local government reserves and other crown reserves vested in authorities other than the Department of Conservation and Land Management.

Mineral exploration in Class A nature reserves, national parks and conservation parks (South West of Western Australia) is subject to the concurrence of the Minister for the Environment and Heritage and the Minister for State Development. The Conservation Commission of Western Australia may refer proposals causing significant environmental disturbance to the EPA. Approval for mining will require the consent of both Houses of Parliament and the EPA.

Strategies

1. Finalise the Regional Park Mining Protocol. (Department of Conservation and Land Management, DMPR) [High]

2. Assess all requests to access basic raw materials within the Park according to Department of Conservation and Land Management and CCWA policies; the Regional Park Protocol and the DMPR and EPA Memorandum of Understanding (Department of Conservation and Land Management, CCWA) [Ongoing].

F. RESEARCH AND MONITORING

35. Research and Monitoring Goal

RESEARCH AND MONITORING GOAL

Seek a better understanding of the natural, cultural and social environments, and the impacts of visitor use and Park management.

36. Research and Monitoring

The objective is to further develop and maintain knowledge in regard to visitor use, natural processes and other external influences on the Park.

RESEARCH

There are many opportunities for research within the Park and a great need for these studies to be integrated.

Since accepting management responsibility for the Park, the Department of Conservation and Land Management has undertaken two studies into visitor use of the Park – Barnes (1998) and Colmar Brunton (2001).

Other research specifically related to the Park includes a flora and vegetation study by Powell and Emberson (1981) and an assessment of the cultural heritage significance of the Woodman Point Recreation Camp (Molyneux and Associates 1995).

Two floristic survey plots are located within the nature reserve at Woodman Point. Gibson *et al* (1994) used these plots as part of the *Floristic Survey of the Southern Swan Coastal Plain*. Keighery (2000) prepared a flora list for the Woodman Point Nature Reserve and has used survey plots to study the effects of fire on Rottneest Cypress (*Callitris preissii*).

The involvement of educational institutes, community groups and individual researchers should be encouraged so as to promote community ownership while also gaining valuable knowledge for use in the management of the Park. The involvement of such groups also reduces the cost of research and monitoring for the managing agencies and enables important projects, which possibly would not be given priority or consideration, to be undertaken.

MONITORING

The priorities for monitoring in the Park have been defined by the key performance indicators (Section 11). The key performance indicators for Woodman Point Regional Park are:

- maintain the species diversity of indigenous fauna populations;
- maintain the range of vegetation communities;

- reduce abundance and distribution of priority weed species;
- improve the status of the Threatened Ecological Community;
- increase visitor numbers while maintaining an overall positive trend of visitor satisfaction;
- remove or mitigate all identified high risk sites or facilities in the Park;
- ensure appropriate land tenure arrangements for the new reserves within the Park;
- ensure effective involvement of the community in the planning and management of the Park.

Individual sections of this Plan provide strategies concerning research and monitoring that is required.

Community groups can play a valuable role in research and monitoring and should be encouraged and trained in environmental practices.

All research and monitoring undertaken in the Park is to be coordinated by the Department of Conservation and Land Management. A process for authorising access to the Park is to be established by the managing agencies in an effort to ensure an integrated approach to research and monitoring.

Strategies

1. **Develop an integrated program of survey, research and monitoring based on the Key Performance Indicators (Section 11). (Department of Conservation and Land Management, CC) [High]**
2. **Support and where possible seek grant applications to encourage scientific research and monitoring within the Park. (Department of Conservation and Land Management, CC) [Ongoing]**
3. **Encourage the participation of volunteers, educational institutions and other organisations in research projects within the Park and promote research programs that address the Key Performance Indicators. (Department of Conservation and Land Management, CC) [High]**

G. COMMUNITY RELATIONS

37. Community Relations Goal

COMMUNITY RELATIONS GOAL

Promote informed appreciation of the Park's natural environment, cultural values and recreation opportunities and facilitate liaison with the community about their management.

38. Information, Interpretation and Education

The objectives are to increase the community's awareness, appreciation and understanding of the Park's values, to gain support for management practices and to involve a wide range of public participation in implementing this Management Plan.



An effective communication program is essential to achieve the goals and objectives of the management of the Park. It informs the public of attractions, facilities and recreation opportunities available within the Park and provides an avenue to promote an appreciation and greater understanding of the natural environment. Additionally, it fosters appropriate behaviour so that adverse impacts on the environment are minimised.

A communication plan and program for the eight regional parks in Perth, including Woodman Point Regional Park, will be completed by the Department of Conservation and Land Management. The communication plan and program will have three integrated parts:

- information – providing an overview of opportunities and details of facilities, activities and regulations;
- interpretation – explaining natural and cultural features; and
- education – providing detailed materials and programs designed to facilitate learning, focussing on target groups (e.g. school groups, community groups).

Mechanisms for facilitating the communication program include signs, displays, publications (such as brochures and Park notes) and guided activities.

An interpretation plan will also be completed for Woodman Point Regional Park. Visitors will require information to help plan their visit, to enhance enjoyment and appreciation of the Park's values and to assist them to recall their experience when they depart. The Park offers many opportunities for developing an enriching body of interpretive material. Key areas for interpretation and education within the Park include:

- recreational opportunities;
- flora and fauna;
- cultural influences (both Aboriginal and non-Aboriginal peoples);
- the regional park entity, its management and evolution; and
- responsible use of the Park.

Of special significance are the interpretation values associated with the former human quarantine centre, the crematorium, ammunition storage huts, cemetery, and limestone roads as well as the unique coastal vegetation of the area. As discussed in Section 27, this rich combination of cultural and natural history will be highlighted in the preparation of a site plan for an interpretation trail within the Woodman Point Nature Reserve.

The development of interpretive material should be undertaken in a coordinated way to ensure the most effective use of available resources and to present a well integrated, consistent body of information about the Park.

Involvement of the community in Park operations, ongoing liaison with community groups and the provision of interpretive and educational materials will be important for maintaining the values of the Park and to maximise its use as an educational resource.

Park Information, Interpretation and Education

At present there is little interpretive material available. Two information boards have been erected on Nyyerbup Circle and O'Kane Court showing a map of the area with roads, walkways and destinations of interest within the Park.

There may be the opportunity to incorporate interpretive material and other Park information within the one of the former explosive magazines should Fleetwood Parks gain planning approval for the expansion of their site north to Nyyerbup Circle (see Section 33).

Guided tours of the Nature Reserve are currently available, and there may be potential to expand this type of activity to enhance education and interpretation value of the site.

The Department of Conservation and Land Management will develop further opportunities for Park information to be presented, consistent with the communication plan for regional parks and the interpretation plan for Woodman Point Regional Park.

Woodman Point Community Advisory Committee

The Woodman Point Community Advisory Committee provides a forum at which issues affecting the Park are openly discussed. A call for nominations to the committee was advertised during October 1998, and established in February 1999. The committee consists of community members, and representatives from the Department of Conservation and Land Management, the Department of Sport and Recreation and the City of Cockburn. The committee's role is to assist in the development of the management plan and to provide advice in regard to the ongoing management of the Park. The existing Community Advisory Committee's role, composition and structure will be reviewed periodically.

Strategies

1. Develop and implement a communication plan for Perth's regional parks. (Department of Conservation and Land Management) [High]
2. Develop and implement an interpretation plan for Woodman Point Regional Park. (Department of Conservation and Land Management) [High]
3. Continue to liaise with all interest groups to ensure a coordinated approach to interpretation and education on and adjacent to the Park. (Department of Conservation and Land Management, CC) [Ongoing]
4. Investigate providing a Park Information Centre as part of Fleetwood Park's proposal to expand north to Nyverbup Circle (Department of Conservation and Land Management, CC) [High]
5. Develop an interpretive trail within the existing nature reserve that includes information on the natural and cultural values of the area. (Department of Conservation and Land Management) [High]
6. Maintain active liaison with community groups involved in the Park (Department of Conservation and Land Management, CC) [Ongoing]
7. Encourage and support the activities of community groups, schools and associations interested in the Park (Department of Conservation and Land Management, CC) [High]

H. PLAN IMPLEMENTATION

39. Priorities, Funding and Staff

The objective is to manage the Park according to the priorities developed for implementation.

PRIORITIES AND TIMELINES

The priorities for managing the Park have been established by the joint managers of the Park and appear in brackets behind each strategy in the Plan. They represent the priorities at the start of the planning process and will be reviewed in reference to changing circumstances during the term of the Plan. There are many strategies outlined in this Plan, while some are guidelines others are prescriptions for specific actions. The City of Cockburn and the Department of Conservation and Land Management will implement this Plan within the framework of available resources.

The Key Management Strategies and timelines listed in Table 2 represent those strategies with the highest priority in the Plan. A timeline for completing these Key Management Strategies is provided in Table 2.

Subsidiary plans and implementation programs

In implementing the priorities of the Plan, more detailed subsidiary plans will be prepared prior to significant works taking place within the Park (see Section 2).

Subsidiary plans to be (or have been) prepared as part of the Woodman Point Regional Park planning process include:

- a Weed Control Plan (Section 17);
- a Fire Response Plan (Section 18);
- a Rehabilitation Plan (Section 20);
- a Visitor Survey Program (Section 25);
- a Recreation Masterplan (Section 26);
- Site Enhancement Plans (Section 27);
- a Sign System and Sign Plan (Section 29);
- a Safety Audit Program (Section 30);
- a Regional Park Mining Protocol (Section 34);
- a Communication Plan for Regional Parks (Section 38);
- an Interpretation Plan; and
- a Volunteer Information Package (Section 40).

Additionally, a five-year implementation program and annual works program will be prepared to guide the implementation of this Management Plan.

The City of Cockburn and other agencies involved in the management of the Park will be consulted by the Department of Conservation and Land Management in the preparation of the Park's annual works program and five-year implementation program.

STAFFING

The City of Cockburn currently manages Council reserves within the Park using staff from the Parks

Department and Environmental Management Section, and contractors as required. The Department of Conservation and Land Management services its management obligations with staff from the Regional Parks Unit and contractors.

FUNDING ARRANGEMENTS

The City of Cockburn and the Department of Conservation and Land Management will finance and manage their respective land areas (Figure 4). The Department of Conservation and Land Management has been allocated a recurrent budget for the maintenance of regional parks from State Treasury.

Strategies

1. Prepare and implement a five-year implementation program and annual works program, taking into account the priorities identified in this plan. Consult with the appropriate management agencies involved in the Park when preparing these programs. (Department of Conservation and Land Management, CC) [High]
2. Seek corporate sponsorship and other funding arrangements for the Park. (Department of Conservation and Land Management, CC) [Ongoing]

40. Community Involvement

The objective is to actively encourage as much community involvement as possible in implementing this Plan.



Community Involvement in the preparation of the Management Plan

The community was made aware of the preparation of this Management Plan through liaison, newspaper advertising, articles and publications produced by the Park's managing agencies.

A community workshop was held in March 1999 as part of the management planning process. The workshop was attended by people representing broad community interests as well as representatives from the City of

Cockburn and the Department of Conservation and Land Management.

Liaison between the Department of Conservation and Land Management and the City of Cockburn has also taken place and will continue.

The Department of Conservation and Land Management undertook specific consultation in the preparation of the plan, with key stakeholder groups such as the Cockburn Sound professional fishers and each of the lessees within the Park. The Woodman Point Community Advisory Committee commented on the draft plan prior to release for public comment.

Community involvement in the implementation of this Management Plan

The public is formally involved in the implementation of this plan through membership of the Woodman Point Regional Park Community Advisory Committee. The committee's role is to assist in the development of the management plan and to provide advice in regard to the ongoing management of the Park.

It is very important that the community is actively involved in implementing the Management Plan. This encourages a sense of ownership of the Park by the community and encourages interested people to become involved in the Park's future planning and management. To facilitate the community involvement in the Park the Department of Conservation and Land Management has prepared a Regional Park Volunteer Information Package.

Residents who live in close proximity the Park can have a great impact on the Park. It is important to seek the cooperation and involvement of nearby landowners to protect the values of the Park. This can be done through educational programs, which promote responsible use of the Park and inform the community of management roles and responsibilities.

There are a number of different ways members of the community can be involved in assisting with the implementation of this Plan including:

- joining community volunteer groups;
- joining the Department of Conservation and Land Management's Bush Rangers Program;
- contacting members of the Woodman Point Regional Park Community Advisory Committee;
- reporting problems and issues to the managing agencies;
- involvement in clean-up days (e.g. Clean-up Australia Day); and
- using the community service program to assist in Park management.

It is important that all works carried out are carefully planned and coordinated by the managing agencies. Activities need to be consistent with the planning and operations of the managing agencies. Volunteer works should be developed in consultation with community groups and need to be consistent with the Park's annual works program and five year implementation program.

Strategies

1. Continue to encourage, promote and support the local volunteers with essential resources to carry out their activities. (Department of Conservation and Land Management, CC) [Ongoing]
2. Facilitate community involvement in the Park by implementing the Regional Park Volunteer Information Package. (Department of Conservation and Land Management) [Ongoing]
3. Promote responsible use of the Park and keep the community and other organisations informed of management actions, programs and developments within the Park. (Department of Conservation and Land Management, CC) [Ongoing]
4. Promote community groups involved in the implementation of this management plan and subsidiary plans (Department of Conservation and Land Management, CC) [Ongoing]
5. Coordinate all activities of volunteers in the Park in liaison with community groups. (Department of Conservation and Land Management, CC) [Ongoing]
6. Provide opportunities for the community to be involved in developing subsidiary and implementation plans for the Park. (Department of Conservation and Land Management, CC) [Ongoing]

41. Term of the Plan

This plan will help progress the Park towards its long-term vision (see Section 5). In doing so it will be subject to a series of conditions and reviews to ensure its appropriateness and effectiveness.

The term of this plan will be ten years. If the Plan does not require revision after ten years, it will continue to provide management direction. Section 61 of the *Conservation and Land Management Act 1984* provides for the Plan to be amended as required. If major changes to the Plan are proposed, the revised Plan will be released for public comment.

42. Performance Assessment

The Conservation Commission of Western Australia has overall responsibility for monitoring the implementation of the Plan. The effectiveness of the Plan will be reviewed through a formal auditing and review process, assessing the key performance indicators outlined in Table 2.

The Plan will be subject to:

- an annual review; and
- a mid-term (five year) and end-of-term (ten year) audit.

The difference between the two processes is described below.

Annual review

The purpose of the annual review is to assess the implementation progress of the Plan prior to preparing the operations program for the following year. The annual review will be undertaken by Park management and the Park's Community Advisory Committee, and should identify which strategies have been achieved since the last review and facilitate target setting for the next year. Major milestones and achievements should be noted for updating the Plan and informing the Conservation Commission of Western Australia.

Mid-term and end-of-term audit

The Plan will be audited mid-term and towards the end of its ten year term by the Conservation Commission of Western Australia. This will include a re-assessment of the overall direction of the Plan (including the need for a replacement management plan) in light of what has been achieved, changes in surrounding land uses, community aspirations, funding and relative priorities.

Strategies

1. Review the implementation of the management plan annually to identify strategies that have been achieved and to what degree any new information may affect management. (Department of Conservation and Land Management, CC, Community Advisory Committee) [Ongoing]
2. Audit the management plan mid-term and towards the end of its 10 year term. (Department of Conservation and Land Management, Conservation Commission of Western Australia) [Ongoing]

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APPENDICES

Appendix A - Abbreviations used in this Plan

AHD	Australian Height Datum
CALM	Department of Conservation and Land Management
CAMBA	China Australia Migratory Bird Agreement
CC	City of Cockburn
CCWA	Conservation Commission of Western Australia
DEP	Department of Environmental Protection
DMPR	Department of Minerals Petroleum Resources
DoIT	Department of Industry and Technology
DOLA	Department of Land Administration
DPI	Department for Planning and Infrastructure
DPUD	Department of Planning and Urban Development
DSR	Department of Sport and Recreation
EPA	Environmental Protection Authority
FESA	Fire Emergency Service Authority
ICOMOS	The International Charter for the Conservation of Monuments and Sites. The Burra Charter was adopted by the Australian ICOMOS in 1981.
JAMBA	Japan Australia Migratory Bird Agreement
MRS	Metropolitan Region Scheme
WAPC	Western Australian Planning Commission
WAPET	West Australian Petroleum Pty

Appendix B - Glossary

Declared Rare Flora	<p>Declared Rare Flora is generally referred to as threatened flora; plant species which are declared rare under Section 23F of the <i>Wildlife Conservation Act 1950</i> as flora likely to become extinct or which are rare or otherwise in need of special protection. To be declared rare, plant species must meet well-defined criteria, which include the thoroughness of searches for the species, its rarity and the danger of extinction. A number of criteria are used to define Declared Rare Flora. These are related to the taxon being well defined and readily identifiable and the extent to which the taxon's distribution in the wild has been recently determined by competent botanists. The status of a threatened plant in cultivation has no bearing on the matter.</p> <p>(Government of Western Australia, 2000)</p>
Priority Four Taxa	<p>Priority Flora are taxa that are under consideration for declaration as 'rare flora' but are in need of further survey or continued monitoring (see Declared Rare Flora). A 'Declared Rare Flora and Priority Flora List' is published each year by the Department of Conservation and Land Management. The list recognises four categories of Priority Flora.</p> <p>Priority Four Taxa - Rare Taxa refers to taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5 - 10 years.</p> <p>(Government of Western Australia, 2000)</p>
Threatened Ecological Community	<p>The Western Australian Threatened Species and Communities Unit (Department of Conservation and Land Management) has developed a procedure for identifying "Threatened Ecological Communities". Ecological communities are defined as "naturally occurring biological assemblages that occur in a particular type of habitat". Threatened Ecological Communities are those that have been assessed and assigned to one of four categories related to the status of the threat to the community. The categories are:</p> <ul style="list-style-type: none"> • presumed totally destroyed; • critically endangered; • endangered; • vulnerable. <p>The Threatened Ecological Community in Woodman Point Regional Park is the Rottnest Cypress and Rottnest Tea Tree forests and woodlands, which has been classified as "vulnerable". This category refers to an ecological community which has been adequately surveyed and found to be declining and/ or has declined in distribution and/ or condition and whose ultimate security has not been assured and/ or a community which is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.</p> <p>(Government of Western Australia, 2000)</p>

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