

Matilda Bay Reserve

Draft Management Plan

November 1991



Department of Conservation
and Land Management



National Parks and Nature
Conservation Authority

MATILDA BAY RESERVE

DRAFT MANAGEMENT PLAN

NOVEMBER 1991

PLANNING TEAM

Jacqueline Pontré
Gordon Graham
Jim Williamson

Department of Conservation and Land Management
for the
National Parks and Nature Conservation Authority
Perth, Western Australia, 1991

PREFACE

Conservation reserves in Western Australia such as national parks, conservation parks, nature reserves and other reserves are vested in the National Parks and Nature Conservation Authority (NPNCA), and managed by the Department of Conservation and Land Management (CALM).

The NPNCA is responsible for the preparation of management plans for all lands which are vested in it. These plans are prepared by CALM and released as drafts for public comment. After consideration of public comment, the NPNCA submits the revised plans to the Minister for the Environment for approval.

This document is the Draft Management Plan for Matilda Bay Reserve.

ACKNOWLEDGEMENTS

The planning team was assisted by Richard Hammond, Robert Powell, Allan Padgett, Neville Marchant, Matt Cavana, Rae Burrows, Leon Griffiths, members of Planning Branch and other CALM staff. The advice provided by the Department of Marine and Harbours, the University of Western Australia and the Western Australian Museum is gratefully acknowledged. Many other interested people and groups have also contributed.

The efforts of CALM's Land Information Branch in preparing the maps, and Debbie Bowra in typing the manuscript are much appreciated.

SUMMARY

Values of Matilda Bay

Matilda Bay Reserve is a thin strip of land between Hackett Drive and the Swan River in the Perth suburb of Crawley. The Reserve extends from Mounts Bay Road, just north of Cygnet Hall, south to the windsurfing ramp past Pelican Point, but does not include the nature reserve.

Most of the Reserve is located within the City of Subiaco with a smaller portion at the northern end in the City of Perth. The gazetted purpose of the Reserve is Recreation.

A key value of the Reserve is its accessibility to both locals and tourists. This ease of access, peaceful parkland views, and visual harmony with the adjacent University of Western Australia, provide the essential values of the Reserve.

Management Goals

Recreation

Provide opportunities and facilities for appropriate public recreation in a manner that is consistent with management objectives, and to minimise conflict between users.

Conservation

Protect and conserve the physical, cultural and scenic resources of the Reserve.

Information, Interpretation and Education

Promote an understanding of the history of the Reserve and natural environment, and an awareness and appreciation of its values.

Research and Monitoring

Promote and undertake studies on the social values and natural processes of the Reserve.
Monitor the impacts of visitor use and management.

KEY ISSUES

- Recreational opportunities
- Facilities
- Awareness and appreciation of values and resources
- Parking
- Sponsorship
- Visual harmony between the Swan River, Matilda Bay Reserve and the University of Western Australia
- Link between Matilda Bay Reserve and Pelican Point Nature Reserve.

PROPOSED RECREATION STRATEGIES

Matilda Bay Reserve is a popular recreation destination providing for a range of both water and land-based opportunities. These include sightseeing, picnicking, windsurfing, swimming, prawning and boating. Visitors are attracted to the unique parkland setting alongside beaches and swimming areas protected by the bay, with stunning views across the water past yachts to the city skyscrapers.

Up to 400 000 people per year visit Matilda Bay Reserve. This figure includes people using the Reserve for passive recreation, and those visiting the restaurant and yacht clubs.

The Draft Management Plan proposes to retain the atmosphere that now exists on the Reserve and to improve the quality of recreational opportunities by upgrading facilities, including the provision of access for disabled people.

CONTENTS

	Page
PREFACE	i
ACKNOWLEDGEMENTS	ii
SUMMARY	iii
PART A. INTRODUCTION	
1. Overview	3
2. Index to Recommendations	5
PART B. PRINCIPAL MANAGEMENT DIRECTIONS	
3. Purpose and Tenure	9
4. Surrounding Waters and Adjacent Land	10
5. Policies and Goals	12
PART C. RECREATION	
6. Principal Recreation Directions	17
7. Visitor Use	17
8. Master Development Plan	19
9. Access	24
10. Services and Utilities	26
11. Leases	27
12. Commercial Operations	31
PART D. CONSERVATION	
13. Principal Conservation Directions	35
14. Cultural Resources	35
15. Visual Resources	37
16. Vegetation	39
17. Erosion	44
18. Pests	44
19. Fire	45
20. Pets	46
PART E. INFORMATION, INTERPRETATION AND EDUCATION	
21. Information, Interpretation and Education	49
PART F. RESEARCH AND MONITORING	
22. Research and Monitoring	53
PART G. IMPLEMENTATION	
23. Priorities, Funding and Staff	57
24. Community Liaison	61
25. Term of the Plan	61
REFERENCES	62

MAPS										Page
Map 1.	Locality Map	...	...	...	...	...	...	...	...	4
Map 2.	Reserve Map	...	...	...	...	...	...	...	...	11
Map 3.	Proposed Recreation	...	...	...	...	...	...	...	...	20
Map 4.	Individual Leases...	...	...	...	...	...	...	...	...	29
Map 5.	Naturally Occuring Plants...	...	...	...	...	...	...	...	...	43

TABLES

Table 1.	Reserve Visitors by Day Type	...	...	...	...	...	...	...	18
Table 2.	Satisfaction With Parking Facilities	...	...	...	...	...	...	...	25
Table 3.	Matilda Bay Reserve Leases	...	...	...	...	...	...	...	28
Table 4.	Naturally Occurring Plants : Matilda Bay Area	...	...	...	...	...	...	...	41
Table 5.	Naturally Occurring Plants : Pelican Point Area...	...	...	...	...	...	...	...	42
Table 6.	Matilda Bay Reserve Recommendations, Priority and Ease of Implementation	...	...	...	...	...	...	...	58

PART A. INTRODUCTION

1. Overview
2. Index to Recommendations

1. OVERVIEW

Matilda Bay Reserve is a thin strip of land between Hackett Drive and the Swan River (Map 1). The Reserve extends from Mounts Bay Road, just north of Cygnet Hall, south to the windsurfing ramp past Pelican Point. Its gazetted purpose is for Recreation and it extends to low water mark.

The Reserve, like national parks, nature reserves and other reserves in Western Australia, is vested in the National Parks and Nature Conservation Authority and managed by the Department of Conservation and Land Management. Matilda Bay Reserve is an 'A' class reserve with an area of 20.6 ha. An 'A' class reserve is one which requires the consent of both Houses of Parliament for any changes to occur in either purpose, or boundaries. Most of the Reserve is located within the City of Subiaco with a smaller portion at the northern end in the City of Perth (Map 2).

During weekdays, the Reserve is used mainly by people from the University of Western Australia for passive recreation. Visitors at weekends and on weekday evenings in summer are mainly family and social groups.

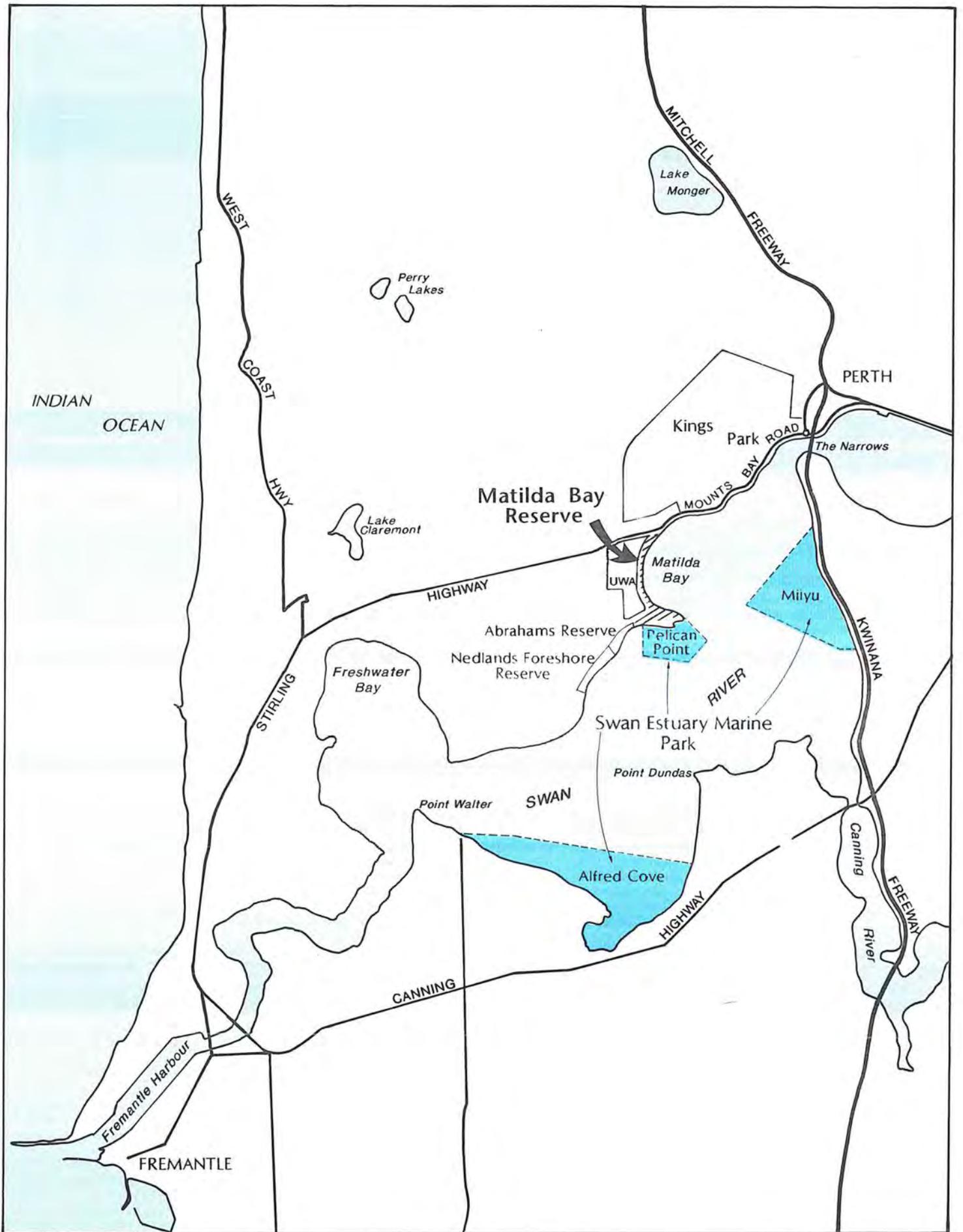
There are a number of leases on the Reserve. These include three sailing clubs, two rowing clubs, the Pelican Point Sea Scouts, a kiosk and a restaurant. The Reserve contains two CALM offices and provides for car parking for users of the Reserve as well as CALM staff. A well used bicycle path and footpath traverse the Reserve. A boat ramp is available for public use.

The Reserve is managed by CALM and has a part-time maintenance worker.

Matilda Bay Reserve has significant values:

- its parkland setting and scenic qualities are valuable tourist resources which have attracted visitors from the Perth metropolitan area, the country, interstate and overseas for nearly a century
- it provides a major recreational resource for the area with opportunities including picnicking, walking, swimming and boating.

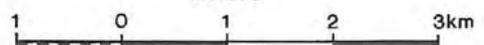
A specific characteristic of Matilda Bay Reserve is that it provides a link between the University of Western Australia and the Swan River. Together they form an harmonious landscape and visual resource.



LOCALITY MAP
 MAP 1
 Matilda Bay Reserve



Scale



2. INDEX TO RECOMMENDATIONS

References are shown as the page number followed (in brackets) by the recommendation number.

SUBJECT	REFERENCES
Aboriginal History	36(1-4)
Access	23(4, 5), 24(12, 16), 25(1-6), 31(7)
Australia II Drive	23(4, 9)
Barbecues	24(11)
Boat Ramp	25(6)
Commercial Operations	31(1), 32(2-4)
Community Liaison	61(1)
Development	12(2), 23(1-10), 24(11-21), 36(2)
Disabled Access	23(1-3), 25(2, 3)
Drainage	27(3)
Electric Power	27(1, 2)
Erosion	44(1, 2)
European History	37(1)
Ferry	23(10)
Fire	45(1, 2)
Implementation	57(1-3), 61(1, 2)
Information/Interpretation and Education	36(3), 37(1), 50(1-8)
Jetties	23(10), 24(15, 17)
Kiosk	24(12, 13)
Leases	30(1-2), 31(3-8), 32(3)
Lighting	27(10)
Monitoring	53(1, 2)
Parking	23(6, 7), 24(12, 16, 19), 25(1, 4-6)
Path	24(14)
Pests	45(1, 2)
Pets	46(1-3)
Radio Antenna	27(11)
Research	53(1, 2)
Reticulation	27(5, 6)

Part A. Introduction

SUBJECT

REFERENCES

Rubbish Disposal	27(7, 8)
Signs	50(5, 6)
Silver Gulls	45(1)
Sponsorship	57(3)
Swan River Trust	12(3), 27(3)
Tenure	9(1-3)
Term of Plan	61(1, 2)
Toilets	23(1-3), 25(3), 27(4)
University of Western Australia	12(2), 25(4, 5), 31(5), 32(4)
Vegetation	40(1-7)
Visitor Use	18(1), 19(2)
Visual Resource	38(1-3)
Volunteers	53(2)
Water Authority of W.A.	27(3)
Weeds	40(4)
Western Australian Tourism Commission	50(3)

PART B. PRINCIPAL MANAGEMENT DIRECTIONS

3. Purpose and Tenure
4. Surrounding Waters and Adjacent Land
5. Policies and Goals

3. PURPOSE AND TENURE

The objective is to ensure that the values of Matilda Bay Reserve are adequately protected by its gazetted purpose and by its security of tenure.

BACKGROUND

Under the Conservation and Land Management Act 1984, (CALM Act) there are eight categories of reserve: nature reserve, national park, conservation park, marine nature reserve, marine park, State forest, timber reserve and miscellaneous reserves (those that do not fall into a specific category).

Matilda Bay Reserve is an A class reserve (17375) covering 20.6 ha. The Reserve extends to low water mark with a gazetted purpose of Recreation.

Whilst the Reserve has been known for years as the Matilda Bay Reserve, it has not been formally named.

Values and Purpose

The existing purpose of Matilda Bay Reserve reflects its present use. It is used by approximately 400 000 visitors each year. Matilda Bay Reserve has traditionally been used for passive and active recreation by families and other groups, and individuals of all age groups, for a wide range of activities, some of which have ceremonial significance such as weddings.

A key value of the Reserve is its accessibility to both locals and tourists, and its proximity to the city. These features, together with its visual qualities and harmony with the adjacent grounds of the University of Western Australia, provide the essential values of the Reserve.

There are a number of developments on the Reserve including a restaurant and three yacht clubs. Further major developments, such as the declaration of further lease areas, would be inconsistent with the existing values of the Reserve and would almost certainly receive considerable opposition from the community.

RECOMMENDATIONS

- 1. Formally name the Reserve "Matilda Bay Reserve".*
- 2. Protect the visual qualities and the landscape of the Reserve.*
- 3. Ensure that the character of Matilda Bay Reserve is retained and that further development is kept to a minimum, and aimed at improving facilities.*

4. SURROUNDING WATERS AND ADJACENT LAND

The objective is to ensure that management of Matilda Bay Reserve is integrated with management of the surrounding waters and adjacent land.

BACKGROUND

The surrounding waters and adjacent land of relevance to Matilda Bay Reserve include the University of Western Australia, the Swan River, Pelican Point nature reserve, part of the Swan Estuary Marine Park, Abrahams Reserve and the Nedlands Foreshore Reserve (Maps 1 and 2). Management considerations for the Matilda Bay Reserve must ensure compatibility and linking with these adjoining uses.

The University of Western Australia

The Crawley campus of the University is a classified reserve open to the public. The University has always considered the river foreshore as a natural extension to its landscaped grounds. This understanding is shared and respected by CALM. CALM's objective is to maintain visual harmony between the University of Western Australia and the Reserve.

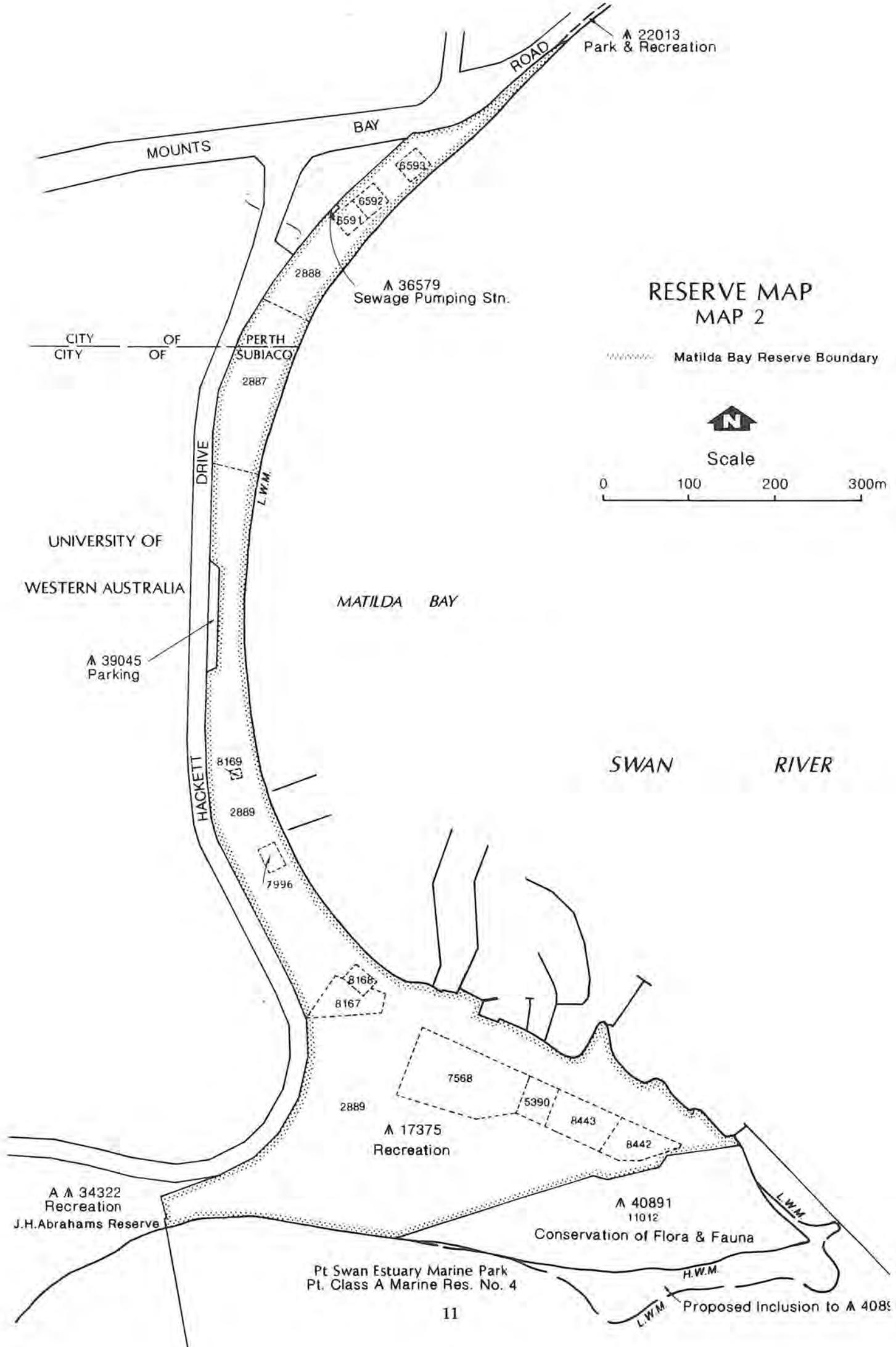
The Swan River

The Swan River Trust, which was set up on 1 March 1989 under the Swan River Trust Act 1988, is responsible for planning, managing and protecting the Swan River Trust Management Area which includes the waters of the Swan-Canning River system and adjoining Metropolitan Region Scheme Parks and Recreation Reservations. The Swan River Trust is responsible to the Minister for the Environment.

Matilda Bay Reserve falls wholly within the Swan River Trust Management Area. This means that any developments, including a change of use, must be approved by the Minister for the Environment under Part V of the Swan River Trust Act. The Swan River Trust assesses such applications and makes a recommendation to the Minister who determines the application.

The Swan River Trust may advertise any significant developments that fall within its management area. CALM has a responsibility to advertise draft management plans, proposed changes to approved management plans and the creation of new reserves. It may be possible to combine these advertising periods.

Once the management plan is gazetted, CALM will be able to implement it, subject to clearing of design details with the Swan River Trust. If the Swan River Trust considers that CALM's implementation proposals differ from the intention of the management plan, then the Trust would treat this as a separate development application requiring public comment. CALM and the Swan River Trust are currently preparing a "Memorandum of Understanding" outlining how the two organisations will work together to streamline consideration of development applications. The memorandum will include advertising of significant developments, liaison between CALM field staff and Swan River Trust inspectors and the implementation of CALM management plans.



Part B. Principal Management Directions

The Nature Reserve and Marine Park

The Pelican Point Nature Reserve and part of the Swan Estuary Marine Park, located adjacent to the south end of the Reserve (Map 1), are not addressed in detail in this management plan. The complete Swan Estuary Marine Park also encompasses mudflats adjacent to the Alfred Cove Nature Reserve and Milyu Nature Reserve in South Perth. The Marine Park will be the subject of a separate management plan.

Abrahams Park

Abrahams Park is adjacent to the Pelican Point windsurfers ramp and is managed by the City of Subiaco. Abrahams Park is managed in a similar way to Matilda Bay with minimum commercial concessions (City of Subiaco, pers. comm., 1991). The Park is used mainly for group picnics and as a take off point for windsurfing.

Nedlands Foreshore Reserve

The Nedlands Foreshore Reserve runs along the River just past Abrahams Park, to the Jetty Restaurant and incorporates the Nedlands Yacht Club and the Perth Flying Squadron Yacht Club. This foreshore area is very popular with cyclists, picnickers, and kite flyers.

RECOMMENDATIONS

- 1. Ensure that integration of management between adjoining land users is maintained and promoted.*
- 2. Ensure that modifications to existing developments complement, as much as possible, the architecture and visual attributes of the University of Western Australia.*
- 3. Where appropriate, combine the public comment periods required by CALM and the Swan River Trust.*

5. POLICIES AND GOALS

NPNCA AND CALM MANAGEMENT POLICIES

This plan is based on current NPNCA and CALM policies (September, 1991). These policies derive from legislation, principally the CALM Act (1984) and the Wildlife Conservation Act (1950), and associated regulations. Policies are published and distributed throughout CALM as policy statements. They are available to the public on request. These policies, as they relate to this Reserve, cover aspects of the promotion of recreation, conservation and education.

MANAGEMENT GOALS FOR MATILDA BAY RESERVE

The following management goals for Matilda Bay Reserve are based on those applicable to lands managed by CALM throughout Western Australia and on concerns specific to the Reserve.

Recreation

Provide opportunities and facilities for appropriate public recreation in a manner that is consistent with management objectives, and to minimise conflict between users.

Conservation

Protect and conserve the physical, cultural and scenic resources of the Reserve.

Information, Interpretation and Education

Promote an understanding of the history of the Reserve and natural environment, and an awareness and appreciation of its values.

Research and Monitoring

Promote and undertake studies on the social values and natural processes of the Reserve.
Monitor the impacts of visitor use and management.

Management objectives for specific issues are provided throughout the plan.

PART C. RECREATION

6. Principal Recreation Directions
7. Visitor Use
8. Master Development Plan
9. Access
10. Services and Utilities
11. Leases
12. Commercial Operations

6. PRINCIPAL RECREATION DIRECTIONS

RECREATION GOAL

Provide opportunities and facilities for appropriate public recreation in a manner that is consistent with management objectives, and to minimise conflict between users.

The objectives are to:

- 1. Ensure recreation is in accordance with the CALM recreation policy and guidelines.**
- 2. Promote recreational experiences for the public use areas of the Reserve which are:**
 - based on enjoyment and appreciation of the Reserve
 - equitable
 - non-disruptive
 - consistent with the conservation imperatives of the Reserve.
- 3. Integrate recreation experiences with interpretation and education programs.**
- 4. Continue the traditional uses of the Reserve.**

RECREATION STRATEGY

The strategy for recreation management is to encourage non-disruptive use of the Reserve, based on the special qualities of Matilda Bay. Activities which result in conflict between users will be discouraged.

A plan for improved recreational facilities has been developed based on consultation with leaseholders, the public, data obtained from a visitor survey, submissions received so far for this plan and policies of CALM. The plan includes picnic areas, barbecues and upgraded toilet facilities (Section 8. Master Development Plan).

7. VISITOR USE

Matilda Bay Reserve is a popular destination providing for a range of water- and land-based recreational opportunities, including sightseeing, picnicking, windsurfing, swimming, prawning and boating. The natural features attracting visitors are the Reserve's unique parkland setting alongside beaches and swimming areas protected by the bay, with views across the water past yachts to the city skyscrapers.

It is estimated that up to 400 000 people visit the Reserve each year. This figure includes people who visit the restaurant (approximately 50 000/yr), the yacht clubs (approximately

250 000/yr) as well as visitors using the Reserve for passive recreation (approximately 100 000/yr). Peak days for visiting the Reserve are Australia Day, Easter Sunday, Mothers' Day and Boxing Day. Other public holidays in the summer and autumn months are also very busy when 1 000 - 2 000 people visit the Reserve. In addition the Reserve becomes a focus for special events such as the 96FM skyshow and regattas.

A visitor survey was conducted to assess visitor use, to obtain visitors' attitudes towards facilities as well as to seek opinions on how the Reserve could be improved (Pontre and Cavana, in prep). The survey was conducted over a four week period during April and May, 1991.

The survey period included a school holiday period, weekends and normal week days; 267 visitors were surveyed. As shown in Table 1 the weekday visitor pattern is significantly different from the weekend pattern. During normal weekdays when the University of Western Australia is in term, 67% of the visitors are associated with the University compared with 16% during the weekend. When school holidays coincide with University term 60% of visitors are associated with the University.

TABLE 1. RESERVE VISITORS BY DAY TYPE

	WEEKDAY % (No.)	WEEKEND % (No.)	SCHOOL HOLIDAYS % (No.)	TOTAL (No.)
Associated with University	67.3 (33)	16.0 (15)	60.0 (74)	122
Not associated with University	32.7 (16)	84.0 (79)	40.0 (50)	145
TOTAL	100 (49)	100 (94)	100 (124)	267

The Reserve is also used by corporate organisations for staff parties mainly during the summer months. These parties vary in size, ranging up to 300 or so people. Organised events such as marathons occasionally use the Reserve as a stop point.

Most visitors to Matilda Bay are from the Perth metropolitan area, but there is substantial tourism from country areas and from interstate. Five percent of visitors are from overseas. Thus the Reserve is a valuable tourist asset for the State and the facilities provided need to be of a corresponding standard.

RECOMMENDATIONS

1. *Provide and maintain satisfactory facilities and services to cater for high levels of visitor use.*

2. *Maintain the booking system for use of the Reserve by organised groups and, where exclusive use is provided, an appropriate fee will be set.*

8. MASTER DEVELOPMENT PLAN

The objective is to adopt a master plan that facilitates recreational opportunities and reduces the conflicts and issues that currently exist on the Reserve.

BACKGROUND

The Master Plan was developed following extensive consultation with Reserve users, leaseholders, the University of Western Australia, CALM, local government (Perth and Subiaco) and the Swan River Trust. This widespread consultation revealed a range of problems.

There is desire and expectation for attention to be given to:

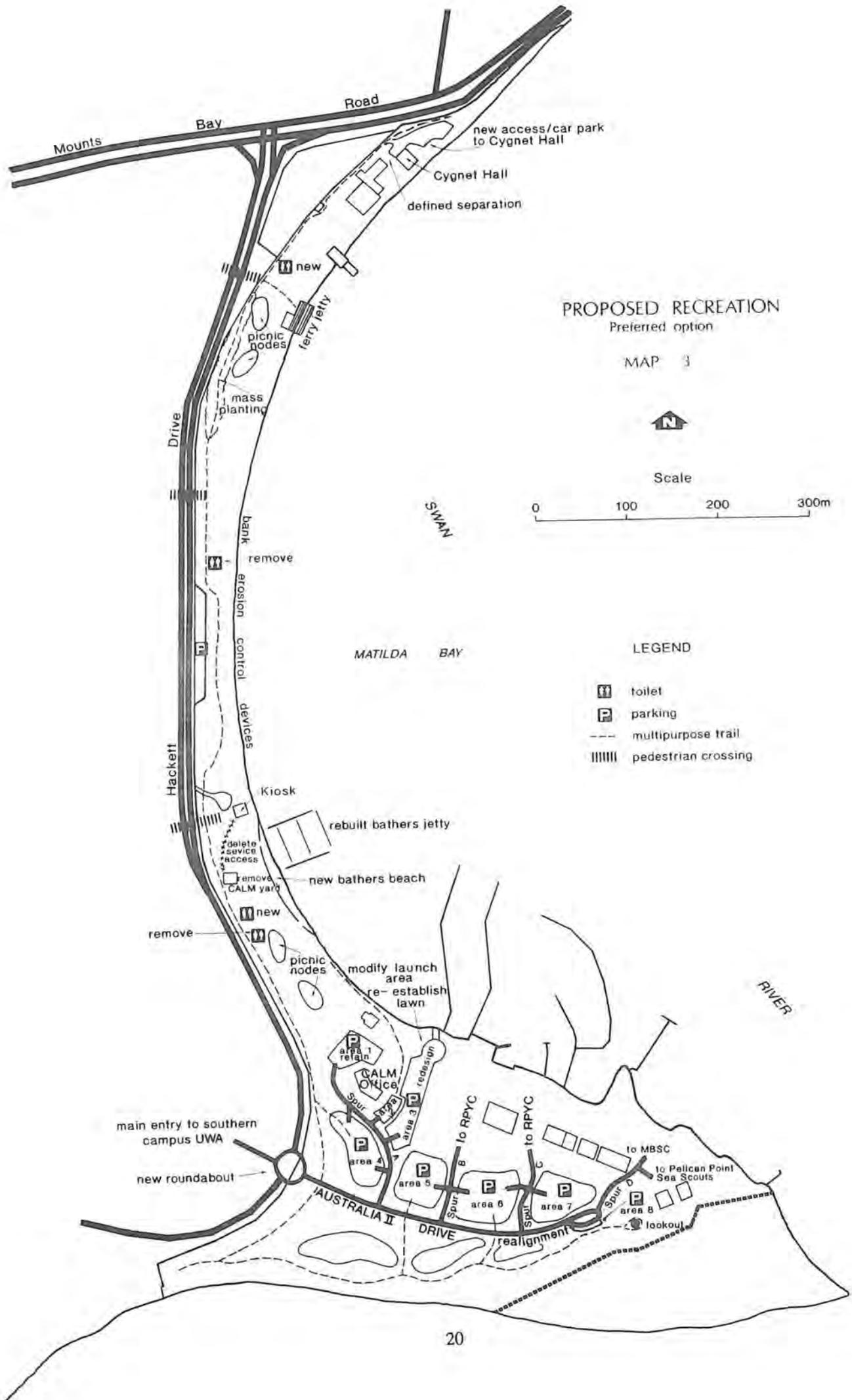
- toilet facilities
- parking
- Hackett Drive traffic and transport alternatives
- barbecues and picnic facilities
- visual impact of kiosk
- services
- erosion
- pedestrian circulation.

The resolution of these problems forms the essential thrust of the master development plan.

Toilet facilities

Toilet facilities on the Reserve are inadequate and not in accordance with the expectations of users, nor to CALM standards. There are two separate toilet facilities. One is located at the southern end between the restaurant and the kiosk. Male and female facilities are in two separate buildings. These toilets are used extensively. The other is located halfway between the University Boat Club and the kiosk and is not frequently used. Toilet facilities are completely lacking in the northern end of the Reserve and neither toilet block caters for disabled people.

It is proposed that the toilets between the restaurant and the kiosk be redeveloped into one building incorporating facilities for disabled people and with an architectural style consistent with the environment and history of the Reserve. It is also proposed that the toilets located between the University Boat Club and the kiosk be replaced by new facilities near the northern end of the Reserve (Map 3).



Australia II Drive Realignment and Parking

Australia II Drive is used extensively by the restaurant, the yacht clubs, CALM and university students. The current alignment presents both safety and congestion problems.

It is proposed that Australia II Drive be realigned (Map 3) and spur roads established as follows:

Spur A - access Matilda Bay Restaurant, CALM Headquarters and boat launch/car park.

Spurs B and C - access Royal Perth Yacht Club.

Spur D - access Mounts Bay Yacht Club and Pelican Point Sea Scouts

Parking is a major problem on the Reserve. The parking problem is particularly apparent during University terms when there is conflict between users of the Reserve and University students. The problem is aggravated because there is no restriction on parking on the Reserve, which is a public area.

It is proposed that parking be banned on the grassed areas and on the verge of the Reserve's road, and that a sign be erected at the entrance to Australia II Drive, alerting people that parking is restricted on the Reserve to the designated parking areas. Eight designated parking areas are proposed as shown in Map 3. They are as follows:

- Area 1 - Matilda Bay Restaurant (Reserved Area)
- Area 2 - CALM Headquarters (Restricted)
- Area 3 - Boat launch (Public and CALM)
- Area 4 - Public area
- Area 5 - Public area and yacht club overflow
- Area 6 - Public area and yacht club overflow
- Area 7 - Public area and yacht club overflow
- Area 8 - Terminus bays and bird observatory.

It is proposed that these parking areas have mechanisms in place to allow for fee collection for parking as required, with signs regarding restrictions and fees, and that they be policed.

Hackett Drive traffic and transport alternatives

While CALM does not have jurisdiction over Hackett Drive, the road has a marked effect on management of the Reserve and visitor satisfaction. It is intensively used and, running as it does alongside the western edge of the Reserve, it disrupts access and breaks the visual continuity between the University grounds and the Reserve. Two alternatives are being canvassed to provide an indication of public opinion about Hackett Drive. This will enable CALM to make appropriate submissions and recommendations to the responsible authorities, particularly local government.

1. Close Hackett Drive to through traffic. Access to the University would be mainly from the north. Access to Australia II Drive and the Restaurant would be from the south.
2. Implement slowing devices along the entire length of Hackett Drive, thus changing its purpose from a through route to a scenic drive. This could be achieved by the following:
 - implementing three major pedestrian crossing points with zebra markings

Part C. Recreation

- narrowing the road in favour of a wider median strip with boulevard style tree planting
- introducing a 40 kph zone
- removing all parallel parking bays on the Matilda Bay side but retaining the perpendicular 'view' bays
- constructing a roundabout junction at Australia II Drive incorporating a new southern access point to the University.

A roundabout junction at the beginning of Australia II Drive would make entry and exit to the Drive safer.

To alleviate traffic problems as well as to enhance access to the Reserve it is proposed that a ferry jetty might be built near the University Boat Club. This would allow access by ferry to the Reserve and would create a stronger link between the University, the Reserve and the river.

Barbeque and picnic facilities

At present there is only one barbeque on the Reserve. There is widespread representation for barbeques, and for more picnic facilities such as benches and tables.

It is proposed that two separate recreation areas be defined, one in the north of the Reserve and one in the south. As shown on Map 3 each area will have two or three barbeques, picnic tables, toilet facilities and bin clusters. It is proposed that a bathers beach be created in both areas using imported sand to overcome the erosion problem.

In the southern area it is proposed to repair the existing jetties to service swimmers.

Kiosk

The service access to the kiosk is in an unsafe location and is not a formalised access. It is proposed that the present service access be deleted and that a new access road be located at a safe junction point and, if possible, two parking bays be provided for kiosk staff.

There is widespread criticism of the visual impact of the kiosk which is out of character with the Reserve and its University backdrop. Subject to availability of finance it would be desirable that the kiosk be redeveloped in a style consistent with its environment, the history of the Reserve and the University.

Multi Purpose Path

The path running through the Reserve adjacent to Hackett Drive is used by pedestrians and cyclists, and often causes conflicts especially in the northern end of the Reserve near Cygnet Hall.

It is proposed that the path at the northern end be relocated to a safer place and that the path through the Reserve be widened to three metres. This will relieve conflicts between pedestrians and cyclists, and allow access by service vehicles without damage to the lawn area (Section 10. Services and Utilities).

Part C. Recreation

New Access to Cygnet Hall

At present there is one access to service Cygnet Hall and Perth Dinghy Sailing Club. Cygnet Hall houses CALM's Corporate Relations Division and Hale School Boat Club. Vehicle congestion occurs at that point especially between October and April, when Hale School uses the shed twice on weekdays, and on Saturday mornings.

It is proposed that a new access be created to alleviate vehicle congestion and that additional parking facilities be provided at the northern end of Cygnet Hall.

Pelican Point Sea Scouts Jetty

The jetty located within the lease boundaries of the Pelican Point Sea Scouts is in a poor state of repair and is a potential danger to those using it. It is proposed that the jetty either be repaired or removed.

Overall Theme

It is proposed that an overall theme be adopted for the Reserve and that the foreshore treatment be unified.

The building materials, architectural style and colours chosen for any development should have a common theme and be in harmony with the adjoining lands and the buildings, especially the University of Western Australia. This would include fencing, signs, and barrier treatment, such as logs and bollards. Facilities, including path surfacing, tables, barbecues, bins and benches, should be consistent throughout the Reserve.

RECOMMENDATIONS

- 1. Redevelop toilets in an architectural style which is in harmony with the environment, and which include facilities for disabled people.*
- 2. Demolish existing toilets between the restaurant and kiosk and replace by one new structure, which will include facilities for disabled people.*
- 3. Relocate toilet block currently situated midway between the kiosk and University Boat Club, to the northern section of the Reserve. This toilet will include facilities for disabled people.*
- 4. Realign Australia II Drive.*
- 5. Create spur roads to lease areas and CALM Headquarters.*
- 6. Ban parking on the grassed area and on the road verge of the Reserve.*
- 7. Redesign parking areas and, if necessary, install appropriate mechanisms for fee collection.*
- 8. Negotiate with relevant authorities regarding the status of Hackett Drive.*
- 9. Consider a roundabout junction at Australia II Drive.*
- 10. Consider building a ferry jetty on the Reserve.*

Part C. Recreation

11. *Create two picnic pods with barbeques and other picnic facilities.*
12. *Relocate access road to kiosk and, if possible, provide two parking bays for kiosk staff.*
13. *Consider redevelopment of kiosk.*
14. *Widen multi-purpose path to three metres.*
15. *Repair the two swimming jetties.*
16. *Create a new access road to Cygnet Hall, with extra parking.*
17. *Require Pelican Point Sea Scouts to either repair or remove their jetty.*
18. *Develop an overall theme for the Reserve.*
19. *Establish a car parking committee.*
20. *Ensure that Reserve furniture is adequate and maintained to a high standard.*
21. *Replace existing galvanised iron fence with pine post and rail fencing.*

9. ACCESS

The objectives are to:

- **Ensure that, as far as possible, the parking needs of visitors to the Reserve, leaseholders, and CALM staff are met.**
- **Ensure that, wherever feasible, disabled visitors have access to the Reserve.**
- **Improve access between the Reserve and the University of Western Australia.**

BACKGROUND

Parking

A visitor survey conducted on users of the Reserve (Pontré and Cavana, in prep.) showed that 60% of visitors come by car. Other forms of transport used by visitors include walking (30%) and bicycle (7%).

The survey also showed that visitors of the Reserve not associated with the University were dissatisfied with parking facilities, especially during weekdays and school holidays. As shown in Table 2, 52.6% of weekday visitors were dissatisfied with parking facilities compared with 25% during the weekend.

TABLE 2. SATISFACTION WITH PARKING FACILITIES
Visitors NOT Associated with University of W.A.

	WEEKDAYS AND SCHOOL HOLIDAYS (%)	WEEKENDS (%)
Dissatisfied	52.6	25.0
Satisfied	20.3	33.8
Neutral	27.1	41.2

At present the City of Perth, City of Subiaco and the University charge for street parking while there is no restriction on areas of the Reserve for parking. A major contributing factor to the problem is the use of parking facilities by University of Western Australia students. The problem is especially apparent on public holidays which are not observed by the University of Western Australia, and when school holidays do not coincide with University holidays. This has been the subject of complaints from the public, leaseholders and CALM staff. Planning for future parking needs is addressed under Section 8. Master Development Plan.

Disabled Access

Disabled people, including organised groups, currently use the Reserve for picnics and for water activities such as remote control sailing. At present there is limited access for the disabled to the foreshore or the toilets.

RECOMMENDATIONS

1. *Implement controls necessary to ensure parking is available to visitors of the Reserve, leaseholders and CALM staff. This might include time limits and fees, including the use of parking meters.*
2. *Consider extending disabled access, where feasible, along paths to major facilities including foreshore access.*
3. *Redevelop toilet facilities to enable use by disabled people.*
4. *Encourage public use of car parking facilities at UWA over weekends and holidays.*
5. *Consult with UWA and other relevant bodies, including local government and lessees, in decisions concerning parking.*
6. *Consider charging for parking associated with the boat ramp.*

10. SERVICES AND UTILITIES

The objective is to provide cost efficient, effective and safe services and utilities to the Reserve.

BACKGROUND

Power Lines

Currently, overhead power lines service the Reserve. Not all lease holders on the Reserve have individual electricity meters, which has often led to confusion over power bills. Overhead power lines are considered dangerous on the Reserve because of the presence of the yacht clubs which generate heavy use by trailers and boats. There is the potential danger of boat masts hitting overhead power lines.

Effluent Disposal

The toilets and restaurant are at present serviced by a septic tank effluent pumping system. According to the Water Authority of Western Australia this system is not the most effective way of dealing with wastewater and its life span is limited. A medium term objective would be to have a connection with the main sewerage system.

Lawn Care

At present the garden is maintained by CALM and mowed under contract by the Building Management Authority. The watering is done via an on-site bore, controlled by an automatic timing system. The reticulation system is old and in need of upgrading. There is some concern about the safety of the control cubicle which has rusted over the years. Another concern is the apparent conflict between care of the lawn and the current rubbish disposal system which is damaging the lawn.

Rubbish Disposal

The high volume of visitors to the Reserve generates a substantial amount of rubbish, especially during the summer months. Rubbish is largely the result of picnic material brought into the Reserve and the purchase of goods from the kiosk. Whilst the number of bins provided is substantial, the bins are sometimes overflowing during the peak months.

The bins are the standard green plastic type on wheels. They are secured to trees and posts by chains and padlocks, and this detracts from the aesthetic qualities of the Reserve. The bins are placed along the grassed area and are emptied by a service vehicle driving through the Reserve, causing some damage to the grassed area, and possibly to reticulation.

Rubbish bins could be placed close to the path or road to facilitate access by service vehicles. The public could be encouraged to take their rubbish to these areas. This strategy would reduce littering in the Reserve and would protect the grassed area.

Radio Antenna

There is a radio antenna situated in the southern part of the Reserve, south of Australia II Drive. The antenna detracts from the visual qualities of the Reserve, currently serves no purpose, and should be removed (Commonwealth Department of Transport, pers. comm., 1991).

RECOMMENDATIONS

1. *Replace overhead power lines with underground power to improve the safety and aesthetics of the Reserve, as resources allow.*
2. *Investigate the provision of master electricity meters for all lease holders on the Reserve.*
3. *Review the drainage system in consultation with the Water Authority of Western Australia and the Swan River Trust.*
4. *Consider connecting public toilets, and restaurant and kiosk toilets, to mains sewerage.*
5. *Replace the reticulation pump control cubicle.*
6. *Upgrade and maintain the reticulation system.*
7. *Ensure that rubbish bins do not overflow by considering the provision of additional bins, more frequent collection and “take it home” education.*
8. *Consider placing bins in clusters close to paths so that service vehicles do not need to drive along the grassed area.*
9. *Consider providing drinking fountains where appropriate.*
10. *Consider providing improved lighting on the Reserve, particularly adjacent to the multi-purpose path.*
11. *Remove the radio antenna situated in the southern part of the Reserve.*

11. LEASES

The objective is to ensure that management and development of leases is compatible with the character of Matilda Bay Reserve.

BACKGROUND

There are seven leases on the Reserve. Table 3 presents a summary of the lease areas and terms in order from north to south (Map 4).

TABLE 3. MATILDA BAY RESERVE LEASES

LEASE	AREA (ha)	TERM	EXPIRY DATE
Cygnets Hall	0.1	18 years	16.11.1994
Perth Dinghy Sailing Club	0.5	21 years	30.06.2002
University Boat Club	0.2	21 years	31.08.2005
Matilda Bay Restaurant and Kiosk	0.4	20 years	18.10.2005
Royal Perth Yacht Club	2.0	21 years	30.06.2004
Mounts Bay Sailing Club	0.8	21 years	30.06.1995
Pelican Point Sea Scouts	0.5	21 years	30.06.1999

HISTORICAL DEVELOPMENT OF LEASES ON THE RESERVE

Cygnets Hall

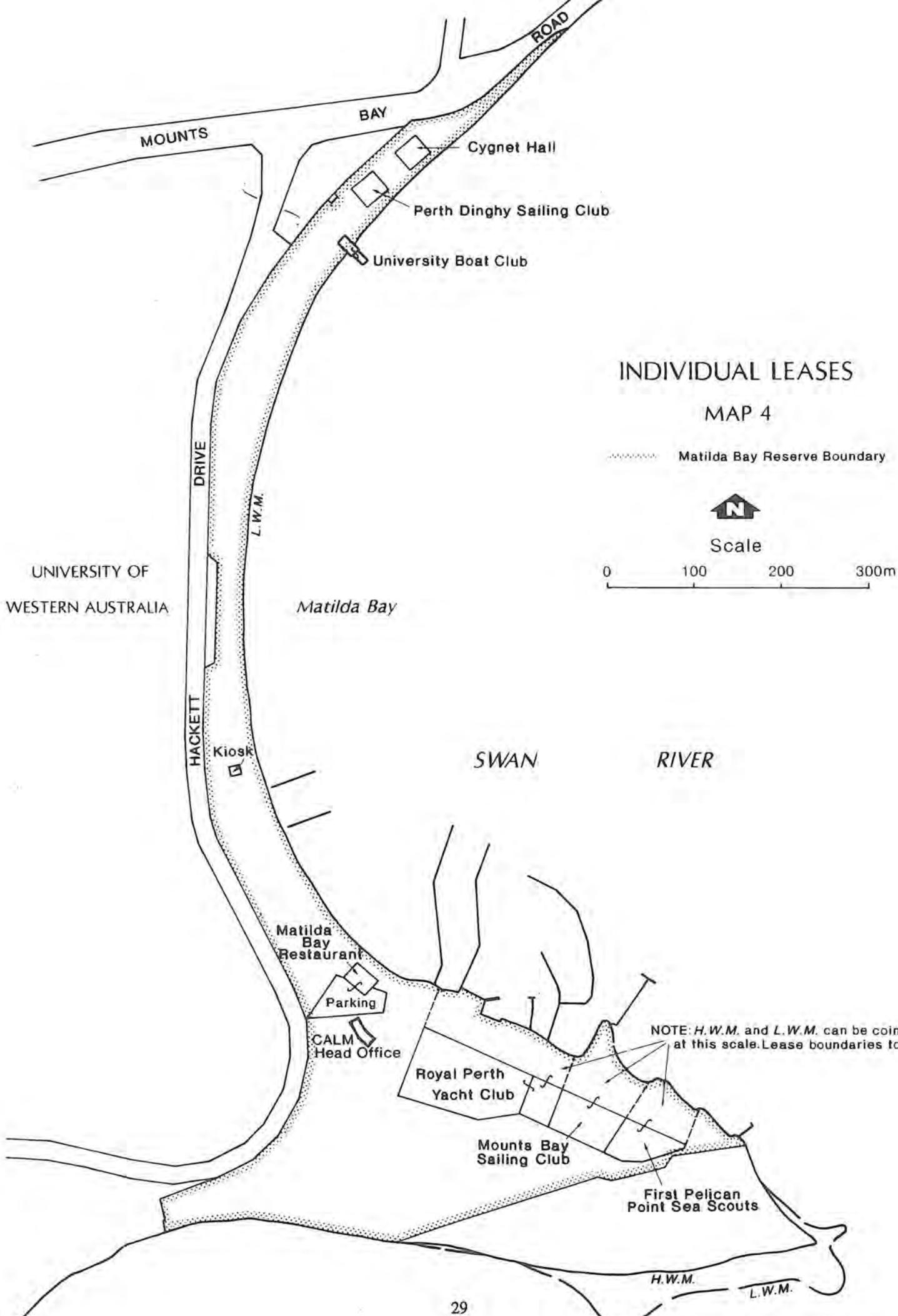
Cygnets Hall was built in 1961 by the Governors of Hale School to house the school's rowing shells and to become the base for Hale's rowing club.

Perth Dinghy Sailing Club

Perth Dinghy Sailing Club was established in 1903 and was originally located near the Barrack Street Jetty. The club moved to Matilda Bay in 1960. The club provides small dinghy sailing and its membership is principally family orientated, with a predominance of junior sailors.

University Boat Club

The University Boat Club was opened in July 1929. The original design was by the same architects (Rodney Alsop and Conrad Sayce) who designed Winthrop Hall, and showed a two-storey pitched roof building with verandahs at the river end. Due to limited funds this structure was not developed and instead a single storey boat storage and preparation shed was built with a viewing platform on top. At a later stage, the upper level was boxed in to become the mainly flat roofed building which stands today. The Guild of Undergraduates holds the lease for the Boat Club.



INDIVIDUAL LEASES

MAP 4

..... Matilda Bay Reserve Boundary



Scale



NOTE: H.W.M. and L.W.M. can be coincident at this scale. Lease boundaries to

Matilda Bay Restaurant and Kiosk

The Matilda Bay restaurant was built in 1968. It was designed by John White who is now a lecturer in architecture at the University of Western Australia. The restaurant underwent major refurbishment in 1984, and in 1987 the upstairs facilities of the restaurant were redeveloped. The kiosk is a sub-lease of the restaurant.

Royal Perth Yacht Club

Royal Perth Yacht Club was established in 1865 near the Barrack Street jetty. The club moved to Matilda Bay in 1953. The marina and club house were built by club members. In 1979 the club organised the Parmelia race from Plymouth to Fremantle to commemorate the 150th anniversary of British settlement on the Swan River. In 1983 the club won the America's Cup, and mounted an unsuccessful Cup defence in 1987.

Mounts Bay Sailing Club

Mounts Bay Sailing Club was founded in 1897 and built its first club house in 1939. During World War II the building served the United States Navy which operated a Catalina flying boat base at Matilda Bay. The present premises was built in the late 1950s - early 1960s.

Pelican Point Sea Scouts

The 1st Pelican Point Sea Scouts was originally known as the 1st W.A. Sea Scouts and was established in Albany in 1913. The group moved to Matilda Bay in 1926 to the area where the University Boat Club now stands, moving to their current location in 1957.

DISCUSSION

The leases represent major levels of use of the Reserve and facilitate recreational opportunities for local, interstate and international visitors, with over 250 000 visits a year. The three yacht clubs on the Reserve have a total membership of approximately 3 000 people. The restaurant is frequented by over 50 000 people a year, 40% of whom are from interstate and overseas.

A problem exists with public access to the foreshore because of the security requirements of the leases. Although most users, apart from visitors to lease areas, visit the central parts of the Reserve, it is essential that access along the length of the Reserve be provided. Nevertheless, the leases have a need for security, especially at night.

The leases on the Reserve are widely accepted by the public. However, it is probable that further major developments could be controversial.

RECOMMENDATIONS

- 1. Further leases should not be allowed.*
- 2. Changes to existing lease areas should be minimal, and follow the principle that any additional area is compensated by equivalent release for public use.*

Part C. Recreation

3. *Changes to buildings on the leases should be minimal, but may be allowed if they are necessary for the proper functioning of the lease.*
4. *Changes to buildings must be approved by the NPNCA.*
5. *The overall architectural theme of the University of Western Australia should be progressively implemented as opportunities for building changes arise.*
6. *As far as possible the conditions of club leases should be standardised.*
7. *Continue public access to the foreshore during daylight hours.*
8. *Extension to sea bed leases and private moorings should continue to be referred to CALM by the Department of Marine and Harbours.*

12. COMMERCIAL OPERATIONS

The objective is to ensure that any commercial operations allowed on the Reserve do not adversely affect the environment or the use of the Reserve by the general public, and as far as possible assist in peoples' enjoyment of the Reserve.

BACKGROUND

Commercial concessions may be granted on CALM lands or waters to provide appropriate facilities and services for visitors. Proposals are carefully considered by CALM and require approval by the NPNCA and the Minister. Concessions must be consistent with the purpose of the Reserve and the protection of its values. Facilities or services which exist or can be developed elsewhere, in a way which adequately meet visitor needs, should not be provided on lands and waters managed by CALM. Commercial concessions, if excessive, can detract from the conservation values of the Reserve, while limited concessions can enhance public access and enjoyment.

Apart from the restaurant and kiosk (Section 12. Leases) there is currently one commercial operator on Matilda Bay Reserve which provides recreational activity in the form of pedal water craft. It may be possible to allow other commercial operations on the Reserve. Any new operations will require approval from the NPNCA.

RECOMMENDATIONS

1. *Establish and manage commercial operations in accordance with CALM Policy Statement No 18, Recreation, Tourism and Visitor Services. Concessions will be allowed only if they are consistent with the purpose of the Reserve and its conservation values, and with the Swan River Strategy.*

Part C. Recreation

2. *Ensure that conditions of commercial concessions are fulfilled by the concession holder .*
3. *Commercial concessions on leases will only be considered if they are consistent with the objectives of this management plan, values of the adjoining nature reserve and marine park and the terms of the lease.*
4. *Continue to liaise with the University of Western Australia and the Cities of Perth and Subiaco to ensure that, as far as possible, commercial operations on their land do not conflict with the objectives for the Reserve.*

PART D. CONSERVATION

13. Principal Conservation Directions
14. Cultural Resources
15. Visual Resources
16. Vegetation
17. Erosion
18. Pests
19. Fire
20. Pets

13. PRINCIPAL CONSERVATION DIRECTIONS

CONSERVATION GOAL

To protect and conserve the physical, cultural and scenic resources of the Reserve.

The objectives are to:

- 1. Protect and conserve physical, scenic and cultural resources.**
- 2. Restore areas that have been degraded.**
- 3. Promote a conservation ethic in interpretation programs.**

CONSERVATION STRATEGY

The strategy for conservation management of Matilda Bay Reserve is to minimise conflict between recreational use and conservation values (Sections 6 - 20), rehabilitate degraded areas (Section 16), control erosion (Section 17) and control pest species (section 18).

14. CULTURAL RESOURCES

14.1 ABORIGINAL HISTORY

The objective is to protect Aboriginal cultural features in Matilda Bay Reserve.

BACKGROUND

Matilda Bay was an important riverine and estuarine area for Aboriginal people of Western Australia for thousands of years. The bay was known as Godroo, Gurndandalup or Goodamioorup.

The bay was a favoured area for its abundance of fish (Corrie Bodney, pers. comm., 1991). There were water holes in the Pelican Point area including the current nature reserve. Hot water springs were located where the University of Western Australia now stands. This area was also used as battle grounds by the Aboriginal people.

The Aboriginal traditional custodians were the Ballaruk who owned all the area around the Swan River.

At the time of British settlement the area around the Swan-Avon streams was divided into well-recognised hunting grounds (Williams, 1980). The largest of these hunting grounds extended along the whole north bank of the Swan River to a point approximately twenty-

Part D. Conservation

five kilometres south of Moore River. It included the Matilda Bay area. The tribe which used this area was the Mooro and it is believed that Yellagonga was their leader (Green, 1984).

All Aboriginal sites are covered by the provisions of the Aboriginal Heritage Act 1972-80 regardless of whether they are known to the Western Australian Museum. Section 17 of this Act makes it an offence to alter, in any way, an Aboriginal site without written permission from the Minister for Aboriginal Affairs.

A search of the Aboriginal Sites Register was conducted in April 1991 by the Western Australian Museum for Matilda Bay Reserve. The search indicated that there is one known Aboriginal site, although its exact extent has not been defined, and possibly a second site located on the Reserve.

A comprehensive study of Matilda Bay Reserve is necessary to determine if other sites exist. Such study should include Aboriginal representatives.

RECOMMENDATIONS

- 1. Conduct an Aboriginal site study of the Reserve. The study group will include Aboriginal representatives.*
- 2. Until such a study is completed, any activities on the Reserve which involve development should be referred to the Aboriginal Sites Department of the Western Australian Museum for comment before action is taken.*
- 3. Incorporate information on the Aboriginal history of the Reserve into interpretive material.*
- 4. Continue dialogue with Aboriginal people on their association with Matilda Bay..*

14.2 EUROPEAN HISTORY

The objective is to protect European historical features of Matilda Bay Reserve.

BACKGROUND

Matilda Bay is unofficially named after Matilda Bennett, whose husband was Sir John Septimus Roe, the first Surveyor-General of Western Australia. Previous names for the Reserve included Eliza, Currie's and Crawley Bay.

Matilda Bay Reserve was part of a block of 32 acres taken up in 1829 by Captain Mark Currie (first harbourmaster at Fremantle). In 1875, the Crawley Estate passed to Sir George Shenton, Member of the Legislative Council and Mayor of Perth, who lived on the estate until his death in 1909.

Part D. Conservation

In 1910, the State Government resumed the property for public recreation, turning the foreshore into a camping ground. This was served by a tram line from the city which hugged the river's edge all the way to Nedlands Baths. The University of Western Australia acquired the bulk of the land in 1914.

During World War II, the Commonwealth Government requisitioned the foreshore reserve for defence purposes (Spillman, 1985). The American Navy established a base at Matilda Bay for its Catalina flying-boats, where Mounts Bay Sailing Club now stands. Some of the University of Western Australia's nearby buildings were occupied by servicemen.

Since World War II, the change rooms, swimming jetties, restaurant and kiosk have been constructed and numerous trees planted. In 1987, the Royal Perth Yacht Club played host to the Americas Cup, won from the New York Yacht Club in 1983.

Today Matilda Bay Reserve is a favourite spot for family picnics, for University staff and students, and for visitors to Perth.

RECOMMENDATION

1. *Incorporate information on the European history of the Reserve into interpretive material.*

15. VISUAL RESOURCES

The objectives are to:

1. **Avoid conflict between the Reserve's visual resources and any development.**
2. **Ensure that future developments are compatible with the landscape on the Reserve, and the landscape and architecture of the University of Western Australia.**

BACKGROUND

One of the fundamental values of Matilda Bay Reserve is its unique parkland setting protected by the bay, with spectacular views across the Swan River to the city.

As discussed in Section 4, the University of Western Australia considers the river foreshore as a natural extension to its landscaped grounds and has identified some key visual corridors (Ferguson and Associates, 1990).

Landscape management - or visual resource management as it is frequently termed - is the scientific discipline concerned with the management of land, vegetation and water resources so as to maintain or improve their visual quality. Its prime goal is to ensure that all uses and activities are planned and implemented so as to complement, rather than

Part D. Conservation

detract from, the inherent visual qualities of the environments in which they occur. Visual Resource Management is a positive and integral component of land use planning and management processes. It should not be regarded as a cosmetic exercise in which the results of careless planning and development are hidden from view, or superficially treated to make them more palatable to the viewing public.

Matilda Bay Reserve has high scenic qualities from within the Reserve, the adjoining lands and from the Swan River. Its parkland settings with its varied vegetation, the sheltered bay, the landform and the view of Perth city are some of the factors that contribute to the high scenic quality of the Reserve. The areas which offer these views include:

- the Reserve itself
- Hackett Drive and Mounts Bay Road
- the University of Western Australia
- the Swan River.

Visual resource management in Matilda Bay Reserve involves protecting the landscape (including landform, vegetation and waterform), and locating and planning land-use developments so as not to obstruct views in any way.

There are both positive and negative visual elements on the Reserve. The negative elements include:

- toilet blocks
- fences of galvanised pipe
- rubbish bins chained to trees
- water bore pump and pipes
- Marine and Harbours signs (these are old and not in harmony with CALM signs)
- cement bollards
- the kiosk
- erosion
- power lines
- the radio antenna located in the southern part near the nature reserve.

The positive elements include:

- bird observatory
- jetties
- parkland setting
- city views
- boats
- trees
- sheltered bay.

RECOMMENDATIONS

1. *Retain and enhance existing positive elements of the Reserve.*
2. *Reduce existing negative visual impacts of the Reserve.*
3. *Seek advice on visual management of the Reserve, as required, from CALM landscape architects.*

16. VEGETATION

The objective is to manage vegetation of the Reserve by recognising its traditional value to visitors, but encouraging, over a longer term, restoration of a more indigenous ecology.

BACKGROUND

To facilitate discussion of this section the Reserve will be conceptually divided into two separate areas (Map 5). Matilda Bay area is north of Australia II Drive and Pelican Point area, south of Australia II Drive.

A survey of remnant plants of the Reserve was conducted in April 1991. The name, location and contour interval of naturally occurring plants were recorded¹ (Tables 4 and 5). Very few native plants remain in the Matilda Bay area; approximately 95% of the flora of that area is exotic. Exotic species include Ti-tree (*Leptospermum laevigatum*), Moreton Bay Fig (*Ficus* sp.) and Norfolk Island Pine (*Araucaria heterophylla*). These plants represent a substantial period of tending as specimen trees in a standard horticultural tradition. Visitors enjoy the Reserve's trees, but this amenity value could be retained if appropriate indigenous species were used to replace exotic trees as they died out or became diseased. Reference to visual harmony between the University of Western Australia, Matilda Bay and the Swan River will be necessary.

In the Pelican Point area of the Reserve, exotic species are less common but are of greater concern, particularly the Coastal Ti-tree and the salt sheoak (*Casuarina glauca*). Both are performing as weeds and are detracting from the value of this area. On this basis, plants should be removed and replaced as appropriate by indigenous species. Rehabilitation of this area with local species will create ecological and visual continuity with the adjoining nature reserve.

The Pelican Point area of the Reserve has suffered some degradation due to rubbish dumping and burning. Removal of these pressures as well as appropriate planting will allow rehabilitation of degraded areas.

The Reserve is used for tree-planting events such as Arbor Day. Planting of indigenous species will be encouraged in the Matilda Bay area. Indigenous species only will be allowed in the Pelican Point area.

There is concern about a number of trees on the Reserve which have dropped limbs and caused damage, and which remain a safety hazard to visitors and property.

1. The survey was conducted by Robert Powell, author of *Leaf and Branch: Trees and Tall Shrubs of Perth* (1990) and Jacqueline Pontré.

RECOMMENDATIONS

1. *Prepare a tree management plan which provides for long-term planting, being mindful of the historic value of existing exotic tree species.*
2. *Facilitate a transition to a more indigenous landscape by replacing exotic trees (as they die or become diseased) with indigenous species, as long as harmony with the University landscape is maintained.*
3. *Encourage the use of local species in rejuvenation of existing garden beds, and in any new plantings.*
4. *Control and where possible eradicate weed species on the Reserve.*
5. *Promote and protect indigenous plant communities in the Pelican Point area.*
6. *Ensure that trees on the Reserve are not a threat to life and property by assessing each tree and taking appropriate action.*
7. *Protect trees of special significance on the Reserve (for example, those planted on special occasions).*

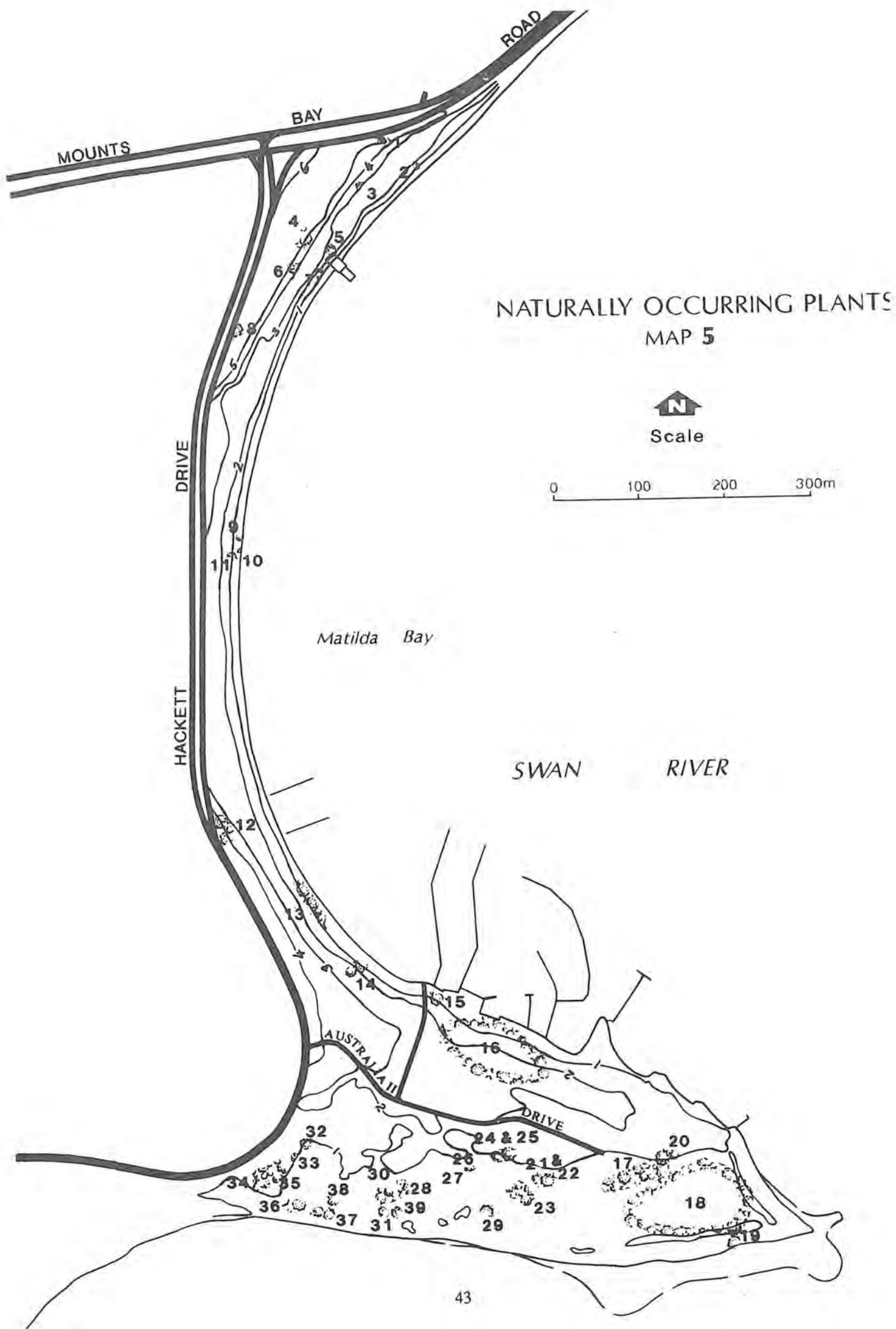
**TABLE 4. NATURALLY OCCURRING PLANTS:
MATILDA BAY AREA**

Ref No	Common Name	Botanical Name	Quantity	Contour Interval
1	Zamia	<i>Macrozamia riedlei</i>	1	5m
2	Coojong	<i>Acacia saligna</i>	2	2
3	Jarrah	<i>Eucalyptus marginata</i>	2	3-4
4	Jarrah	<i>E. marginata</i>	1	5
5	Flooded gum	<i>E. rudis</i>	1	2-3
6.	Jarrah	<i>E. marginata</i>	1	4-5
7.	Salt sheoak	<i>Casuarina obesa</i>	1	1
8.	Tuart hybrid	<i>E. gomphocephala</i> X <i>E. sp</i>	1	5-6*
9.	Coojong	<i>A. saligna</i>	1	1-2
10.	Rush	<i>Unknown sp.</i>	1	0
11.	Flooded gum	<i>E. rudis</i>	1	1
12.	Marri	<i>E. calophylla</i>	12	4
13.	Flooded gum	<i>E. rudis</i>	3	0-1
14.	Flooded gum	<i>E. rudis</i>	3	1-3
15.	Coojong	<i>A. saligna</i>	1	0-1
16.	Flooded gum	<i>E. rudis</i>	6+	1-2

*A chance hybrid between tuart and another eucalypt, presumably an eastern Australian species. The tree is probably unique.

**TABLE 5. NATURALLY OCCURRING PLANTS:
PELICAN POINT AREA**

Ref No	Common Name	Botanical Name	Quantity	Contour Interval
17.	Saltwater paperbark	<i>Melaleuca cuticularis</i>	100+	0-1m
18.	Rushes	<i>Unknown spp</i>	numerous	0-1
19.	Salt sheoak	<i>C. obesa</i>	1	0-1
20.	Freshwater paperbark	<i>M. raphiophylla</i>	3	0-1
21.	Salt sheoak	<i>C. obesa</i>	4	0-1
22.	Saltwater paperbark	<i>M. cuticularis</i>	1	0-1
23.	Coojong	<i>A. saligna</i>	50+	0-1
24.	Salt sheoak	<i>C. obesa</i>	1	1
25.	Coojong	<i>A. saligna</i>	1	1
26.	Christmas tree	<i>Nuytsia floribunda</i>	1	0-1
27.	Grey stinkwood	<i>Jacksonia farcellata</i>	numerous	0-1
28.	Saltwater paperbark	<i>M. cuticularis</i>	50+	0-1
29.	Flooded gum	<i>E. rudis</i>	1	0-1
30.	Coojong	<i>A. saligna</i>	20	0-1
31.	Red-eyed wattle	<i>A. cyclops</i>	1	0-1
32.	Coojong	<i>A. saligna</i>	6	1
33.	Red-eyed wattle	<i>A. cyclops</i>	1	1
34.	Flooded gum	<i>E. rudis</i>	50	1
35.	Swamp tea-tree	<i>Pericalymma ellipticum</i>	1	1
36.	Freshwater paperbark	<i>M. raphiophylla</i>	3	0-1
37.	Red-eyed wattle	<i>A. cyclops</i>	2	0-1
38.	Coojong	<i>A. saligna</i>	4	0-1
39.	White-stemmed wattle	<i>A. xanthina</i>	1	0-1



17. EROSION

The objective is to control erosion.

BACKGROUND

Erosion is a natural occurrence in any river. Localised erosion effects can occur at the surface in tidal waters from wave action, either wind induced or in heavily trafficked waters from boat wash and foreshore use. In Matilda Bay these erosion problems are quite severe, and due primarily to non-natural causes.

Various options exist to control erosion. The Department of Marine and Harbours (1990) has listed strategies including the following:

- Increasing the beach area so that the slope is more gradual
- Planting of trees, rushes and other vegetation to enhance natural protection
- Constructing walls, usually of logs or ungrouted rock.

RECOMMENDATIONS

1. *Implement measures to deal with erosion by increasing the beach area and planting vegetation as appropriate and consistent with landscape values.*
2. *Construct walls if other measures fail to relieve erosion.*

18. PESTS

The objectives are to:

1. Control pest species (that is, those species having an adverse effect on conservation values).
2. Ensure that any adverse effects of control measures on the environment are minimised.

BACKGROUND

Silver Gulls are an indigenous species but their numbers may be reaching pest proportions (CALM, 1990). Gull population growth is related to urban development and the increased availability of food.

Part D. Conservation

Control of Silver Gull populations is possible on a local basis either by reducing breeding success at colonies or by reducing the amount of food available on the Reserve. The former is considered difficult; controlling the availability of food is considered more practical. Visitors using the Reserve often feed the gulls.

The impact of cats and the two declared pest species, the red fox and the rabbit, are of great concern in the southern part of the Reserve. These species are a potential danger to the flora and fauna of the neighbouring nature reserve.

Other pests species on the Reserve include mosquitoes and European bees.

RECOMMENDATIONS

- 1. Inform the local community and visitors to the Reserve of the Silver Gull problem through an appropriate interpretation program, emphasising that people should not feed gulls.*
- 2. Control other pest species as necessary.*

19. FIRE

The objective is to protect people, and the conservation and property values of Matilda Bay Reserve.

BACKGROUND

There has been no recorded fire on Matilda Bay Reserve, however, fire on the Reserve could have a detrimental effect and potentially threaten life, and damage facilities. The major fire risk area is the southern part of the Reserve near the nature conservation area. There is a major threat to Pelican Point nature reserve especially during the summer months when the vegetation is driest.

RECOMMENDATIONS

- 1. Ensure that the Reserve remains free of unplanned fire.*
- 2. Develop a cooperative fire suppression agreement with the W.A. Fire Brigade and local government authorities.*

20. PETS

The objective is to protect the conservation and recreational values of the Reserve.

BACKGROUND

Dogs running free on the Reserve are a nuisance to visitors and present a danger to people in some cases. The visitor survey showed divided opinion on allowing dogs on the Reserve. Over 80% of the respondents stated that dogs should be kept on a leash, restricted to specific areas or allowed anywhere on the Reserve, whilst the remainder thought that dogs should not be allowed (Pontre and Cavana, 1991).

Domestic pets, including dogs, and especially cats, pose threats to wildlife including birds. This is especially important near the nature reserve because of the presence of small perching birds that are especially prone to predation.

RECOMMENDATIONS

- 1. Any dogs on the Reserve must be kept on a leash at all times in restricted areas.*
- 2. Ban dogs from the Reserve if Recommendation 1 does not lead to control of the problem.*
- 3. No other pets will be allowed on the Reserve.*

PART E. INFORMATION, INTERPRETATION AND EDUCATION

21. Information, Interpretation and
Education

21. INFORMATION, INTERPRETATION AND EDUCATION

INFORMATION, INTERPRETATION AND EDUCATION GOAL

Promote an understanding of the history of the Reserve and natural environment, and an awareness and appreciation of its values.

The objectives are to:

1. Provide interpretation of the Reserve in accordance with the CALM Regional Interpretation Plan.
2. Develop and maintain an information and education program conveying the Reserve's values and associated management concerns.
3. Provide effective signs to enhance communication, education and interpretation.

BACKGROUND

Any visit to Matilda Bay Reserve would be improved by having an understanding of the features and values of the Reserve. As discussed in 14. Cultural Resources, Matilda Bay Reserve contains a variety of fascinating cultural resources. The Reserve also has special values as discussed in 3. Purpose and Tenure. Provision of information is an important aspect of management which is valued by visitors.

The information process has three parts (Department of Conservation and Environment, Victoria, 1991):

Information - the provision of details of facilities, activities and regulations.

Interpretation - the explanation of cultural and natural features.

Education - the provision of detailed materials and programs designed to assist education groups at all levels.

At present there is no information and interpretation plan for the Reserve. According to the regional plan the following themes would form the basis for information and interpretive activities in the Reserve:

- cultural history
- the riverine vegetation
- appropriate use
- promotion of CALM activities.

Information

Services provided should include publications, displays, self-guided walks and signs.

Publications

These could be in the form of leaflets and maps. Funding from the Western Australian Tourism Commission could be sought to meet this cost.

Part E. Information, Interpretation and Education

Displays

Displays are an important means of informing visitors of the Reserve's features, facilities and regulations. This could be set up in information centres and shelters in the Reserve.

Self-guided activities

Self-guided activities are a successful way of helping visitors learn about the Reserve at their own time and pace. Activities could be based on a vegetation theme and historical themes.

Signs

Signs are an important element of visitor facilities, providing guidance, advice and information on the Reserve's features and controls on activities. Careful attention to accuracy of signs is required and signs must be designed and sited to harmonise with the appearance of the Reserve.

Interpretation and Education

Interpretation and education could be offered in the form of organised activities such as community education programs and holiday activity programs, possibly with the help of a "friends" group.

RECOMMENDATIONS

- 1. Prepare an Interpretation Plan for the Reserve to promote public awareness and appreciation of the Reserve, including its natural and cultural history.*
- 2. Develop an interpretation walk through the Reserve.*
- 3. Consider seeking funds from the Western Australian Tourism Commission to meet costs of publication materials.*
- 4. Install and maintain information shelters on the Reserve in accordance with the Interpretation Plan and the Master Development Plan.*
- 5. Provide appropriate directional, warning and feature signs in accordance with the CALM Sign Manual.*
- 6. Liaise with other departments and agencies such as the Department of Marine and Harbours and the City of Subiaco to ensure conformity of signs on, and adjacent to, the Reserve.*
- 7. Establish an Arbor Day interpretation program.*
- 8. Use Matilda Bay Reserve to promote CALM's activities elsewhere in the State.*

PART F. RESEARCH AND MONITORING

22. Research and Monitoring

22. RESEARCH AND MONITORING

RESEARCH AND MONITORING GOAL

Promote and undertake studies of the social values and natural processes within the Reserve.

The objectives are to:

- 1. Monitor the impacts of visitor use and management on the Reserve.**
- 2. Develop and maintain knowledge regarding the social values and natural processes of the Reserve.**

BACKGROUND

The principal value of the Reserve is its recreational use.

Social monitoring, or determination of visitor satisfaction and impacts of visitors, is receiving increasing attention from park management agencies throughout Australia. There is also a need to monitor the impact of recreation on the natural environment so management actions can be evaluated.

It would be appropriate that research projects and monitoring programs involve as wide a range of people as possible. The involvement of volunteers, educational institutions and individual researchers can reduce research and monitoring costs, and assist in the provision of information to the broader community.

CALM currently coordinates and promotes research undertaken within the Reserve.

RECOMMENDATIONS

- 1. Implement an integrated program of survey, research and monitoring (including social monitoring) based on the recommendations in relevant sections of this plan.*
- 2. Encourage the participation of volunteers, educational institutions and other organisations in research projects within the Reserve; promote research programs and findings that address key issues.*

PART G. IMPLEMENTATION

- 23. Priorities, Funding and Staff
- 24. Community Liaison
- 25. Term of the Plan

23. PRIORITIES, FUNDING AND STAFF

IMPLEMENTATION GOAL

Ensure proper management of the Reserve.

The objectives are :

- 1. Maintain staff numbers and funding at a level which ensures adequate management and maintenance of the Reserve.**
- 2. Manage the Reserve according to the priorities developed for implementation.**

BACKGROUND

Matilda Bay Reserve is managed from existing staff resources of CALM.

There are many recommendations within this management plan. While some are guidelines, others are prescriptions for specific actions. This management plan will be implemented by CALM within the framework of available resources, according to priorities within the plan and CALM regional and statewide priorities. A budget will be needed during the first two to three years of this plan for major works.

As mentioned in Section 8, the Reserve is used extensively by private corporations. It also has a high public profile generally. Accordingly, it is possible that private corporations may be receptive to providing sponsorship for upgrading of the Reserve. It is proposed that approaches be made by CALM to a range of organisations for this purpose.

RECOMMENDATIONS

- 1. Prepare a 10 year implementation plan, taking into account the priorities outlined in Table 6. Review the implementation plan annually, and prepare an annual progress report.*
- 2. Subject to Departmental priorities and funding, provide adequate staff to enable implementation of the Matilda Bay Reserve Management Plan and to ensure ongoing protection and maintenance of the Reserve.*
- 3. Consider seeking corporate sponsorship for Matilda Bay Reserve.*

TABLE 6. MATILDA BAY RESERVE RECOMMENDATIONS, PRIORITY AND EASE OF IMPLEMENTATION

SECTION	RECOMMENDATION	IMPLEMENTATION*	
HIGH PRIORITY			
3	Purpose & Tenure	2	E1
		3	E2
4	Surrounding Waters & Adjacent Land	1	E2
		2	E3
		3	E1
7	Visitor Use	1	E2
		2	E1
8	Master Development Plan	1	E3
		2	E3
		6	E1
		7	E2
		12	E3
		13	E3
		16	E3
		17	E3
		18	E3
		19	E1
		20	E2
21	E2		
9	Access	1	E3
		3	E2
		5	E1
		6	E2
10	Services & Utilities	4	E3
		6	E3
11	Leases	1	E1
		2	E2
		3	E2
		4	E2
		5	E2
		6	E2
		7	E1
		8	E1
12	Commercial Operations	1	E2
		2	E2
		3	E1
14.1	Aboriginal History	2	E2
		3	E1
		4	E2

SECTION	RECOMMENDATION	IMPLEMENTATION*
14.2 European History	1	E1
15 Visual Resource	2	E1
16 Vegetation	5	E2
	6	E2
17 Erosion	1	E2
	2	E3
19 Fire	1	E1
	2	E2
20 Pets	1	E2
	2	E2
	3	E2
21 Information, Interpretation and Education	1	E1
	2	E1
	3	E1
	5	E1
	6	E1
23 Priorities, Funding & Staff	1	E2
	2	E3
24 Community Liaison	1	E2
25 Term Of This Plan	1	E2
	2	E2
MEDIUM PRIORITY		
8 Master Development Plan	3	E3
	4	E3
	5	E3
	8	E2
	9	E2
	11	E2
	14	E3
	15	E3
9 Access	2	E2
	4	E2
10 Services & Utilities	1	E3
	2	E2
	3	E2
	5	E2
	7	E1
	8	E2

SECTION	RECOMMENDATION	IMPLEMENTATION*
10 Services and Utilities	9	E2
	10	E2
12. Commercial Operations	4	E1
14.1 Aboriginal History	1	E2
15 Visual Resource	1	E3
	3	E1
16 Vegetation	1	E2
	2	E2
	3	E2
	4	E2
	7	E1
18 Pests	1	E1
	2	E2
21. Information, Interpretation and Education	4	E1
	7	E1
	8	E1
22 Research and Monitoring	1	E2
	2	E2
23 Priorities, Funding & Staff	3	E2
LOW PRIORITY		
3 Purpose & Tenure	1	E1
8 Master Development Plan	10	E3

* E1 - Easy to implement
 E2 - Moderately difficult to implement
 E3 - Difficult to implement

NOTE: This refers to a combination of technical difficulty and availability of staff and finances.

24. COMMUNITY LIAISON

The objective is to provide for the continued interaction of interested members of the public and other organisations with the management and planning of Matilda Bay Reserve.

BACKGROUND

Ongoing liaison with local community groups and associations is essential, as is liaison with interests further afield. This has been achieved by day-to-day contact between CALM staff and members of the public. The community has also been made aware of the preparation of this management plan through radio and newspaper advertising. A public display will be held during the two months public review period to give the community an opportunity to provide comments on the future development of the Reserve.

Liaison between CALM, leaseholders and other Government agencies has also taken place and is discussed in Section 4. Surrounding Waters and Adjacent Land.

There is potential for the public to become involved in the implementation of this plan, perhaps by setting up an advisory committee, which would include members from the general public appointed by the Executive Director. Any such committee would be chaired by CALM.

RECOMMENDATION

- 1. Consider the establishment of appropriate public involvement in the implementation of this plan.*

25. TERM OF THIS PLAN

The term of this plan will be ten years.

RECOMMENDATIONS

- 1. Review the implementation of the plan annually, prior to preparing the works program for the following year. The review should identify which recommendations have been achieved and to what degree, and any new information which may affect management.*
- 2. Review the plan within ten years from the date of gazettal of the final management plan. This review should identify the extent to which the objectives have been achieved and recommendations implemented, the reason for lack of achievement or implementation, and a summary of information which may effect future management.*

There is provision under Section 61 of the CALM Act 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.

REFERENCES

- Department of Conservation and Land Management (1990). Shoalwater Islands Draft Management Plan. Perth, Western Australia.
- Department of Conservation and Environment (1991). Lower Glenelg National Park Management Plan. Melbourne, Victoria.
- Department of Marine and Harbours (1990). Swan River Trust Foreshore Erosion Study 1990. Perth, Western Australia.
- Ferguson R J and Associates (1990). The University of Western Australia Campus Planning Review 1990. Perth, Western Australia.
- Green N (1984). Broken Spears: Aboriginal and Europeans in the Southwest of Australia. Focus Education Services: Perth, Western Australia.
- Pontré J and Cavana M (in prep). Matilda Bay Reserve User Survey. Department of Conservation and Land Management. Perth, Western Australia.
- Powell R (1990). Leaf and Branch. Trees and Tall Shrubs of Perth. Department of Conservation and Land Management. Perth, Western Australia.
- Spillman K (1985). Identity Prized: A History of Subiaco, University of Western Australia Press: Nedlands for the City of Subiaco.
- Williams A (1980). Nedlands: From Campsite to City. City of Nedlands: Nedlands. Western Australia.