YALGORUP NATIONAL PARK

INTERIM GUIDELINES FOR NECESSARY OPERATIONS

1989-1994

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YALGORUP NATIONAL PARK

COMPILED BY: _____

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ENDORSED BY: _____ REGIONAL MANAGER

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ENDORSED BY: _____ FIRE PROTECTION BRANCH

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ENDORSED BY: _____ ENVIRONMENTAL PROTECTION BRANCH

DATE: 3.1.90

APPROVED BY: _____ DIRECTOR NATIONAL PARKS

DATE: 24/8/90

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PREFACE

The Interim Guidelines for Necessary Operations in the Yalgorup National Park are intended to provide managers with a basis for the annual works programme and job prescriptions for the protection of persons, property, flora and fauna and other natural values in and around the Park, in the absence of an area management plan for the Park.

A major revision will be held within 5 years from the date of approval unless preceded by a completed Area Management Plan. Any major changes are to be re-endorsed by the Director, National Parks.

During the preparation of the annual works programme for the following financial year, the proposed necessary operations are to be appraised for their likely impact on the environment. The "Necessary Operations" checklist will be used to assess the impact of all operations.

Levels of approval will follow the guidelines laid down in Administrative Instruction No. 39 (Necessary Operations - A Guide to Manager), 18 July 1988.

PART 1

1.0 DESCRIPTION

1.1 Location and Tenure

Yalgorup National Park is comprised mainly of Class A Reserves 11710, 12189, and 22057 and is situated approximately 20km south of Mandurah on the coastal strip between Myalup and Dawesville.

The National Park covers an area of approx. 11500 ha. Its long axis lies North-South and is 50 km long. It is 5 km wide at its widest point.

The park was formally gazetted in 1968. Numerous additions and alterations to the park have been made since. Proposed additions to the park are:- Loc 1700; Loc 534 which lie between the Indian Ocean and the Northern part of Lake Clifton; Clifton M.P.A. (520 ha); McLarty M.P.A. (700 ha); and, Myalup M.P.A. (870 ha); and a series of unvested crown reserves adjoining Lakes Clifton and Preston.

1.2 Topography, Soils and Climate

The climate is Mediterranean with cool wet winters and hot dry summers. Rain mainly occurs in winter between May and October, and the mean annual rainfall is 880 mm.

Topography is dominated by the 9 saline lakes of the Preston/Clifton chain, of Lakes Clifton, Preston, Pollard, Newnham, Hayward, Yalgorup, Martins Tank, Boundary and Duck Pond. The lake system runs almost the entire length of the park.

Apart from the immediate vicinity of the lakes where the soils are estuarine clays and silts, the park soils are sands mostly of marine origin. The coastal dunes of the Quindalup dune system contain calcareous material and rise steeply from the beaches to heights of up to 50 metres. Further inland the older dune systems have less pronounced slopes forming a gently undulating topography. Limestone underlies all sands at varying depth and outcrops are common.

1.3 Flora and Fauna

Flora

The park consists of five vegetation types as described in the System 6 study (Map 2). There is a strip of low coastal heathland (Quindalup complex) running parallel to the coast and averaging 1.5 km in width on the western side of the park. The vegetation adjoining this is Cottesloe complex of low Tuart (*Eucalyptus gomphocephla*) and Jarrah (*E. marginata*) with closed heath on limestone outcrops. The Yoongarillup complex of Tuart with a second storey of Peppermint (*Agonis flexuosa*) surrounds Lake Clifton and sections of Lake Preston. Pockets of closed melalueca species, flooded gum (*E. rudis*), Tuart, Jarrah and Marri (*E. calophyalla*) forming the Vasse complex, occur north of Lake Preston, and south of Lake Clifton. The open Karrakatta forest complex of Tuart, Jarrah, Marri and Banksia occurs in the north eastern corner of the park.

Since 1976 the Biology Department of Curtin University has been carrying out vegetation field studies. They have recorded 295 native and 55 introduced species in the park.

Fauna

The lake system within the park provides an important habitat and refuge for many bird species. The population reaches its peak in mid to late summer as inland waters dry up. Surveys carried out between 1981-83 recorded 123 different species of birds within the Park.

Benthic Flora & Fauna

The 9 lakes show considerable variation in their flora and fauna, primarily as a result of their variable salinity. The sediments of the extremely saline lakes, (up to 20%) Yalgorup, Hayward and North Newnham are covered in a mat of mucilaginous growth of bacteria and algae.

Within Lake Pollard there is a large growth of the stonewart, Lamprothamnium papulosum in spring and summer. Whilst, within Lake Clifton, a lake of similar salinity (2-5%) a 15km long reef of stromatalites has been formed by microbial activity.

The benthic flora and fauna is currently being studied by Researchers from U.W.A.

1.4 Past History

Prior to being gazetted, the land now making up the National Park was vacant crown land and private property. The area was subjected to frequent fires and grazing by livestock. Logging was carried out prior to 1954 by Whittakers in the areas of the park dominated by Tuart and Jarrah.

In 1921, the WA Cement Company built a lime kiln on the eastern side of Lake Clifton and began extracting lime marl from the lake bed. The operation was found to be uneconomic and closed after a few years.

1.5 Existing Use

The primary use of the park is for conservation. The park also receives some public use for recreation and scientific study. Bushwalking, picnicking and camping are popular activities.

There is a gazetted water skiing area at the southern end of Lake Preston. The area is controlled by the Department of Marine and Harbours and administered by the Bunbury Water Ski Club.

Surrounding landuses are: pine plantation and agriculture to the east; rural subdivision on the northern and eastern boundaries; and, agriculture to the south.

Population centres adjacent to the park are Melros, Yalgorup (Preston Beach), Myalup and several semi rural subdivisions (White Hills, Clifton Downs, Lake Clifton and Yalgorup Parklands).

PART 2

2.0 GENERAL MANAGEMENT OBJECTIVES

To protect and manage the scenery, flora, fauna, historical and geographical features from disfigurement, damage or destruction.

To provide and maintain facilities for the enjoyment of the natural resources of the park by the public.

To provide suitable access within the Park for visitors, and for implementation of management operations.

3.0 FIRE PROTECTION

3.1 Introduction

Records show that since 1960 significant areas of the park have been burnt by either wildfires or prescribed fires (Map 1). Wildfires have been caused by fires starting from both inside and outside the park.

The park is dissected by 3 chains of lakes that lie parallel to the coast. The lakes and the Indian Ocean to the west provide natural barriers to the spread of fire.

There are 4 settlements/townsites immediately adjacent to the Park. Melros on the northern boundary, Yalgorup midway along the western boundary,Myalup to the south. The semi rural subdivisions at White Hills, Lake Clifton, Clifton Downs and Yalgorup Parklands also adjoin the park.

The coastal towns adjoining the park are popular holiday areas during Summer. An increase in recreational visits occurs at this time.

3.2 Fire Protection Objectives

To protect human lives (visitors, neighbours and departmental staff) from wildfire entering or burning within the park.

To protect community assets, property and park facilities

To protect flora, fauna and landscape values from severe damage by uncontrolled fires or from inappropriate burning regimes or suppression techniques.

To maintain ecological diversity and natural processes.

To attempt to confine wildfires to less than 20 per cent of the total park area in any one single fire event.

To reduce the risk and frequency of wildfires starting in or near the park, caused by human activities.

3.3 Fire Protection Strategies

The fire protection strategies to be adopted conform with the Departments Fire Management Policy (No 19).
Six specific fire protection strategies to be implemented are:

*Maintenance of Fuel Reduced Buffers
* Liaison with local community
* Public awareness
* Visitor protection and safety measures
* Fire detection, preparedness and suppression actions
* Fire research

3.4 Fire Protection Actions

The fire prevention and suppression actions required to meet the objectives are:

3.4.1 Fuel Reduced Buffers (Refer to Map 3)

-Buffers will be located and maintained to provide protection for: visitors to the Park and adjoining towns; major concentrations of private property and park environmental values.
The location and boundary of these buffers will also take into account the:

-location of rare flora and fire susceptible vegetation types
-recreation sites
-natural low fuel zones

-Buffers will be burnt when the fuels in them reach 8 t/ha. The burn rotation will depend upon the rate of fuel accumulation. All buffers, apart from Preston Beach Road will be at least 200m wide.

As Clifton, McLarty & Myalup MPA's adjoin pine plantation, they will be burnt when the fuels in them reach 6 ton/ha. To maintain diversity the past pattern of burning small blocks will continue (Map 1). The burn rotation will depend upon the rate of fuel accumulation.

The large block between the lake chains in the central part of the park will be protected from fire. The area has a history of infrequent fires

The boundaries of buffer areas will generally utilise existing roads, management access tracks and natural fire barriers. A new access track will be constructed on the proposed buffer south of Preston Beach Road.

Where the park boundary adjoins vacant Crown Land or undeveloped private lands, arrangements will be developed with the Bush Fires Board and private landowners to extend buffers beyond the Park.

Treatment of the verge vegetation wihtin the buffer along Whitehills road and Tims Thicket road will be carried out by either slashing, grading or spraying.

Management access tracks will be maintained along buffer boundaries. Track construction is required in some areas.

All burns will comply with a written prescription approved by the District Manager.

3.4.2 Liaison:

District staff will maintain close liaison with the Waroona, Harvey and Mandurah Shire Councils, local Bushfire Brigades and park neighbours to encourage mutual aid in fire prevention, detection and suppression activities in or near the park. Fire protection planning for the Park will be linked with Shire protection plans.

3.4.3 Public Awareness:

Public education and awareness of fire hazards and the role of fire in ecosystem management and hazard reduction will be promoted by District staff.

A fire danger board will be sited along Preston Beach road and kept up to date by the park ranger.

3.4.4 Visitor Protection and Safety:

- Sign posting of public roads will be maintained to enable safe evacuation in case of wildfire emergency.
- Public facilities will be protected by narrow fuel reduced buffers.
- Public education and awareness of fire risks and use of fire will be promoted through pamphlets, information signs and personal contact by District staff.

3.4.5 Fire Detection and Suppression:

Fire detection for the park during the fire season is provided by the Departments Spotter aircraft

- Wildfires in or threatening the park will be contained to the smallest possible area. Suppression action will take into consideration the likely threats to life and property and the impact on the environment.

- Procedures and arrangements for actions in case of wildfires are listed in the District Fire Control Working Plan.

- The level of fire preparedness maintained by District staff is related to the Fire Danger Index for the area. On days of extreme fire danger, Park staff will undertake ground patrols. Preparedness is based on Northern Jarrah FDI.

- Existing water supplies are considered inadequate and four additional water points are proposed for construction. (Map 3)

3.4.6 Fire Research:

Currently no fire research trials are planned for the Park.

-Any research trials established to study impacts of burning and fuel modification treatments on flora, fauna and other natural values must be written up as a Research Working Plan by Research Branch and endorsed by the Regional Manager.

4.0 DIEBACK PROTECTION

4.1 Introduction

An initial reconnaissance for dieback has been undertaken along some firebreaks.Sampling of some suspect areas has been carried out, no positive results have been obtained.

The disease appears to be absent from the Park. The disease is known to occur in the Clifton, Myalup and McLarty MPA's. No detailed sampling or surveys are deemed necessary at this stage.

The predicted impact, if the disease was introduced, would be:

Impact on Vegetation

Vegetation Type (Map 2)	Overstorey	Understorey	Consequences of Introduction
Quindalup	N/A	V. Low	V. Low
Yoongarillup	V. Low	V. Low	V. Low
Vasse	Low	Low	Low
Cottesloe	V. Low	Low	Low
Karrakatta (Central & South)	Low-Mod	Mod	High
Bassendean (Central & South)	Mod-High (wetter areas)	Mod-High (wetter areas)	High-V. High
Serpentine	Low	Low	Low

Armillaria leuteobubalina is present at two sites

- Martins Tank Lake
- White Hills Road

4.2 Management Objectives

To prevent the introduction and spread, and minimise the impact of Phytopthora cinnamomi and other disease on the environment.

4.3 Policies and Strategies

All operations will conform with Departmental policies and strategies - Dieback Hygiene Manual
- Dieback Policy 1982

4.4.1 Actions for Dieback Protection

Plant deaths suspected of being caused by dieback will be sampled by District staff.

A dieback distribution and sample point map will be maintained by District staff.

Prior to any operation a dieback survey and sampling are to be carried out and a 7 Way Test completed.

All operations will be carried out in accordance with the Dieback Hygiene Manual.

Staff will be trained in recognition hygiene and sampling for dieback.

Access within the park is to be rationalised to protect disease free areas (see 9.4).

4.4.2 Actions for Armillaria Protection

Where an Armillaria infection is suspected, sampling will be carried out by District staff.

An Armillaria sample point and distribution map will be maintained by District staff

All operations in these areas will be designed to minimise the movement of soil and root tissue.

Staff will be trained in recognition, hygiene and sampling for armillaria.

5.0 NOXIOUS WEEDS/FERAL ANIMALS

5.1 Introduction

Declared weeds known to be located within the park are:

- Apple of Sodom
- Cottonbush
- Doublegee
- Thistle
- Cape Tulip
- Patersons Curse

Apple of Sodom infests large areas of the Park whilst other weeds only occur in small scattered groups.

Other non-declared weeds are:

- Australian Blue Lupins
- Onion Weed (Trachyandra divaricata) -this weed is

found extensively throughout the park, adjoining properties, and along the west coast between Moore River and Busselton. This plant rapidly colonises disturbed sites.

- Introduced pasture plants (grasses)

Rabbits, foxes and cats are found within the Park. Rabbits were present in large numbers along the eastern boundary. A baiting programme conducted by the A.P.B. in 1986/87 has greatly reduced rabbit numbers. Pigs are found on land immediately to the east of the park.

5.2 Management Objectives

To prevent further introduction and control the abundance and spread of noxious weeds and feral animals.

5.3 Policies and Strategies

Control techniques will conform with Departmental policies and procedures - Weeds on CALM land. (Policy No 14)
- Control of Feral animals on CALM land.

5.4 Action for Control

Maps showing the distribution of declared and non-declared weeds are prepared and maintained annually by District staff.

A weed and feral animal control programme for the District is prepared annually and implemented with the approval of the Regional Manager.

To ensure the latest control techniques are used, liaison with the Agricultural Protection Board and Environmental Protection Branch will continue.
Liaison with neighbours will be undertaken to ensure joint control of weeds and feral animals.

The effect of any control programme on non target species is to be monitored. Advice will be sought from Research Branch.
No Autumn prescribed burning will be undertaken adjacent to cleared private property as this practice encourages grass invasion.

6.0 RARE FLORA AND ENDANGERED FAUNA

6.1 Introduction

There are no known declared rare flora or endangered fauna species occurring within the park. However, the priority 3 species E. petrensis and priority 5 species E. foecunda do occur.

Stromatolites occur in Lake Clifton. They are brittle structures and physical damage has resulted from boats, vehicles, people and livestock. Microbial mats occur in all lakes within the Park.

6.2 Management Objectives

To protect rare and endangered flora and fauna.

6.3 Policies and Strategies

Protection procedures will conform with Departmental policy. -Conservation of Rare Flora in the Wild (Operational guidelines). (Policy No 9)

-Protection of Endangered Flora in Departmental operations.(Admin Instruction No 24)

6.4 Proposed Action if Declared Rare Flora of Endangered Fauna are Discovered

The District Office and Park Ranger will hold a copy of maps and lists of known declared rare flora and endangered fauna.

Known locations of declared rare flora or endangered fauna are shown on operation plans and are to be protected from inappropriate burn regimes, roadworks, firebreak construction and other disturbance.

When disturbance to localised population of rare flora is considered necessary or unavoidable an application for a ministerial permit to "TAKE" the flora will be required.

7.0 MAN-MADE DISTURBANCE

7.1 Introduction

There are a number of problems evident within the Park which require remedial action.

- The Melaleuca and sedgeland zones fringing the lake shore are being damaged in places due to frequent burning and grazing from adjacent private property.

- Grazing has been carried out recently on location 5334. The area contains pasture and infestations of exotic grasses and weeds.

- Damage has occurred on the lake shores and to stromatolites from boating activities.

- Rehabilitation of 4 limestone pits is required. Refer to Map 3.

-A number of areas in the park are illegally cleared and are being grazed.

-Some illegal kangaroo shooting occurs in the Park.

Currently there are no mining tenements or applications for mining tenements over the park.

There is a proposal for an exchange of land with the Shire of Mandurah. The areas of land involved are: National Park to the north of Tims Thicket Road and Shire Reserve 24198 south of Tims Thicket Road. The reason for the proposed exchange is to allow access by the M.R.D. and Shire to limestone deposits in the Park.

7.2 Management Objectives

To prevent intrusion of livestock into the Park and stop indescriminate burning.
To restrict boating to designated areas.
To rehabilitate disturbed sites.
To minimise environmental damage to the Park.

7.3 Policies and Strategies

All works will be carried out in line with Departmental Policy and Guidelines - Rehabilitation of disturbed land. (Policy No. 10)

7.4 Actions for Protection

Areas denuded by soil disturbance are to be rehabilitated with indigenous plant species.

As far as possible, all land uses and activities within the park must be carried out in ways that complement rather than detract from the visual and aesthetic qualities of the park environment.

A prescription will be prepared for the rehabilitation of location 5334 and implemented with the endorsement of the Regional Manager.

Any proposals for mining, exploration or land exchange will be referred to the Regional Manager and Environmental Protection Branch and NPNCA.

A programme of surveying the Park boundary will be commenced. As boundaries are established landowners, where applicable, will be requested to correctly fence their properties.

The Dept of Marine and Harbours will be requested to clearly designate the northern limit of boating on Lake Preston.

8.0 ARCHEOLOGICAL AND HISTORIC SITES

8.1 Introduction

The only known archeological site in the Park is a gnamma hole in the limestone formation to the south of Ellis Road. There are 2 historic sites, the lime kiln and a series of tunnels which were constructed early this century. (Map 3)

8.2 Management Objectives

To protect all sites in accordance with the requirements of the W.A. Heritage Act 1972-1980.

8.3 Policies and Strategies

Protection procedures will conform with the Departmental policy - Protection of Aboriginal sites (Policy No. 11).

- Operational guidelines for the protection of Aboriginal sites (Admin. Instruction No. 25).

8.4 Action for Protection

Before new roads and facilities are constructed, the impact on archaeological or historic sites will be assessed.

9. FACILITIES AND ACCESS MANAGEMENT

9.1 Introduction

There are two developed picnic sites within the Park (Map 3). They are all located along the Preston Beach Road.

An informal camping site is located on the western boundary of Martins Tank Lake.

A number of organisations are conducting scientific surveys and research within the Park.

There is an extensive network of management access tracks and unused road reserves within the Park.

It is proposed to provide facilities at Lake Clifton to allow the public to observe the stromatilites and to protect them from inappropriate human activity.

Exact numbers of people using the Pa;rk are not known.

9.2 Objectives

To rationalize access within the park to a level that achieves the safe and effective management of visitors, fires, dieback and other environmental protection requirements.

To maintain existing recreational facilities and walk trails.

To protect stromatolites from human interference.

To monitor the number of park visitors.

To co-ordinate and maintain a record of all research projects being undertaken within the Park.

9.3 Policies and Strategies

Access will be in accordance with Recreation Policy (No. 18) and the Department's Dieback Policies.

9.4 Action Required:

Close and rehabilitate all tracks not required for management purposes.

Management access tracks will only be open to the public for walking. Physical barriers will be installed to prevent vehicle access.

Well formed, hard surfaced roads will be maintained to all visitor facilities.

Install traffic counters and continue observation counts.

Formalise Martins Tank Campsite and provide improved facilities.

Construct visitor facilities at Lake Clifton for stromatolite observation.

Visitor facilities will be maintained. Rubbish bins will be removed from all day use sites and visitors will be encouraged to take their rubbish home.

All research trials proposed to be carried out within the park must be written up as a research working plan and be endorsed by the Regional Manager and Director, Research Branch (or nominee).

The vesting of unused road reserves (Map 3) is to be changed to A class reserve and included within the National Park.

All research permits issued for use within the Park must be approved by the District Manager and the permit holder is to personally report to the park ranger each day they intend to use the permit.

10. REVIEW

These guidelines will be reviewed and endorsed by the Regional Manager in February each year.

REFERENCES

Smith Dr F.G., 1975 Yalgorup National Park Working Plan
Period 1975-1980.
Prepared by the National Parks Board.

Armstrong L.E., 1986 Interim Fire and Environmental Protection
Plan for Yalgorup National Park.

Anon. 1980 Atlas of Natural Resources Darling System
Western Australia.
Dept of Conservation and Environment, W.A.

Beard, J.S., 1979 The Vegetation of the Pinjarra Area
Western Australia.
Veg. map Publications, Perth.

ANNUAL WORKS PROGRAMME 1989/90

FOR NECESSARY OPERATIONS IN YALGORUP NATIONAL PARK

		Approval Req'd
1.	Prescribed burning of buffers will be undertaken annually according to the District Master Burning Plan.	R/M
2.	Regrade management access tracks as required. These tracks also form boundaries for buffer burns and to private property.	D/M
3.	Develop arrangements with the Bushfires Board and private land owners to initiate and complete complimentary fire protection works.	N/A
4.	Construct water points as indicated on map 3.	N/A
5.	Produce map showing dieback distribution and sample points. To be done for P.C. and Armillaria. Arrange training session on recognition, hygiene and sampling for Armillaria.	N/A
6.	Complete annual programme of weed spraying. Liaise with A.P.B. regarding feral animal control.	D/M
7.	Remove all bins from picnic sites and erect signs encouraging visitors to take rubbish home.	D/M
8.	Prepare site development plan for Martins Tank campsite.	D/M

Levels of approval required as per Administrative Instruction No. 39.