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Wheatbelt Region - Katanning District

Interim Guideline

for

Water Skiing

at

Lake Bennett.

Department of Conservation and Land Management

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1.0 INTRODUCTION

This Interim Guideline (IG) establishes management directions for recreation at Lake Bennett (Figure 1) until the Wheatbelt Regional Plan is produced.

1.1 PURPOSE OF INTERIM GUIDELINES

An IG is a succinct statement of those short term management objectives and actions necessary for the preservation or protection of persons, property, land, flora or fauna, until a detailed management plan can be produced.

The major functions of the IG are to:

- provide an adequate safeguard against natural and operational calamities on lands administered by CALM in the absence of an approved management plan;
- ensure that critical "necessary operations" are identified and properly prescribed;
- ensure that the impacts of necessary operations are fully considered and effectively incorporated within existing management and control systems; and
- provide a simple, efficient and attainable means of gaining approval for necessary operations.

1.2 SCOPE OF THE INTERIM GUIDELINE

Water skiing and associated activities currently occur on and at Lake Bennett, which is part of the Dunn Rock Nature Reserve.

Under CALM's Policy Statement No 18 (Recreation, Tourism and Visitor Services) this recreational activity is "...allowed on nature reserves only by way of a management plan or interim management guidelines after consideration of the likely environmental and social impacts or where there is a pre-existing arrangement/agreement in place". In the absence of the Wheatbelt Region Regional Management Plan, skiing and associated activities will be managed through this document. Given the current time and resource constraints, the IG will not be extended to include the whole of the Dunn Rock Nature Reserve. Further, other management issues such as fire protection and plant diseases, will only be addressed in the context of recreational planning, development and management.

1.3 PURPOSE AND VESTING OF NATURE RESERVES

Lake Bennett forms part of the Dunn Rock Nature Reserve. The purpose of a nature reserve is to protect and restore the natural environment, and to protect, care for, and promote the study of indigenous flora and fauna, and to preserve any feature of archaeological, historic or scientific interest. Nature reserves are vested in the National Parks and Nature Conservation Authority and managed by the Department of Conservation and Land Management.

Within these areas, recreation which damages the natural ecosystem is not permitted.

1.4 APPROVAL LEVELS

Consistent with Administrative Instruction No 23, approval of this IG followed the established hierarchy of authority and control, that is, District Manager to Regional Manager to General Manager and Director for Nature Conservation. Support for this IG was also gained from the National Parks and Nature Conservation Authority.

2.0 RESOURCE DESCRIPTION

2.1 WETLANDS

In the south-eastern corner of the Katanning District of the Wheatbelt Region are a number of important wetlands. These wetlands are situated at the head-waters of a vast salt lake chain that runs northwest towards Merredin, then turns southwest and runs into the Avon River (Mulcahy, 1973). In the Kondinin - Lake Grace region the salt lake chain branches into three main forks (Lake Grace, Lake Magenta and Lake King) and a minor fork (Lake Bryde). The Dunn Rock Nature Reserve wetlands are at the southern end of the Lake King chain (Watkins and Mcnee, 1987).

2.2 DUNN ROCK NATURE RESERVE

The Dunn Rock Nature Reserve (Reserve No 36445) is a "C" Class reserve located 23 kilometres south west of the Lake King townsite, within the Shire of Lake Grace (Figure 1). The Reserve is set aside for the purpose of "Conservation of Flora and Fauna" and is vested in the National Parks and Nature Conservation Authority (NPNCA). The 27 348 hectare Reserve comprises a diversity of vegetation associations, which can be classified broadly as forests and woodlands; mallee, scrub and heathlands; and wetland vegetation. These vegetation associations were once characteristic of the Lake King area, but with continued clearing of the surrounding land for agriculture the original vegetation is poorly represented within the landscape.

Lake Bennett is situated in the north east corner of the Reserve (Figure 1).

2.3 LAKE BENNETT

This wetland covers approximately 58 ha and has surface drainage entering from the southwest and the east (Figure 1). To the southwest the catchment area is approximately 12 000 ha, most of which is contained within the Dunn Rock Nature Reserve. In contrast, the catchment area to the east is mostly on private property, covering an area of approximately 2000 ha.

The vegetation associated with the wetland consists of Eucalyptus and Melaleuca species, with *Melaleuca halmaturorum* occurring furtherest into the Lake basin and *Eucalyptus occidentalis* on the margin. Samphire plant communities are found on the Lake basin (Watkins and Mcnee, 1987).

The lake is not officially named, having been referred to in various reports and correspondence as "Lake Bennett", "Dunn Lake", "Dunn Rock and "Ski Lake". "Lake Bennett" is the preferred option of local residents. It is believed the name refers to an early settler who partly developed adjoining land (now in private property) and used the Lake as a source of water for livestock.

No significant archaeological sites have been recorded in the vicinity (Aboriginal Sites Department, pers. comm., 1993).

Details of past utilisation of the lake for recreation are sketchy. It was used for water skiing as early as 1975 (Chapman, 1985). Activity appears to have been minimal or intermittent until 1985

when the lake re-filled. The access road was upgraded and a small area was cleared and gravelled in 1985-86 (Watkins and McNee, 1987). Usage of the Lake is constrained by water levels and a series of years with average or above average rainfall may be required to maintain water levels. In some years a single, high rainfall event may provide sufficient water depth for a short period.

In the 6 month period to June 1993, 275 car visits were recorded. Given the high water levels in the Lake over this period, it likely that the majority of these visits were for water skiing.

2.4 SUMMARY OF IMPORTANT VALUES AND FEATURES.

2.4.1 Regional Context

The wetlands of the Wheatbelt Region are ecologically important as they: provide essential habitats for a multitude of water-dependent plants and animal species (eg. waterbirds); support a diversity and abundance of species within surrounding terrestrial ecosystems; provide habitat for migratory bird species which may be of international significance; and form one of the habitats that will be most affected by climate change (State Govt., 1992). In recognition of these values, some wetlands are gazetted as nature reserves and managed for the conservation of flora and fauna.

Usually these ecological values are strongly influenced by the land uses within the catchment of each wetland. For example, most wetlands of the Wheatbelt Region are indirectly affected by agricultural activities. In many cases, land clearing and later farming practices have resulted in increased water levels, water salinity, nutrient levels and sediment loads. These factors can have a major impact on the ecology of the lakes, causing a decline in the semi-aquatic and aquatic vegetation, and the disappearance of animals such as freshwater fish, molluscs, decapod crustaceans, frogs, birds associated with fringing vegetation, and leaches (Sanders, 1991). The magnitude of these impacts makes it extremely difficult to isolate the environmental impacts associated with recreational activities, such as skiing.

In addition to these ecological values, the wetlands add considerable landscape diversity and aesthetic appeal to a mainly arid environment, but above all from a local community point of view, they provide an opportunity to experience and enjoy many of the recreational opportunities usually limited to the coast. Recreational activities, such as water skiing, sailboarding, sailing and swimming, are now seen as an important part of the "country lifestyle". The recreational use of many lakes, including Lake Bennett, pre-dates present tenure. Skiing on many lakes is thus considered a "traditional use".

Additional points which need to be considered in assessing the impacts of skiing include: the use of wetlands on private property for skiing and the general lack of recreational opportunities on the CALM lands within the semi-arid environment.

2.4.2 Lake Bennett

In addition to the above general values of wetlands in the Wheatbelt, Lake Bennett and its environs are significant for the following reasons.

- **Water Quality**

Limited monitoring data indicates that water quality in Lake Bennett ranges from brackish ($< 10\,000 \text{ mg/l}$) in September to saline ($10\,000 - 25\,000 \text{ mg/l}$) in December. Low salinity wetlands are unusual in the south eastern wheatbelt, making Lake Bennett of regional importance for conservation.

- **Water Quantity**

Lake Bennett is a relatively deep wetland with a depth of greater than 2m in winter. In some years, it is the only wetland containing water and in these years its wetland refuge value is likely to be significant.

- **Fringing Vegetation**
Within the context of the Dunn Rock Nature Reserve, the Lake system provides a diversity of habitat for both flora and fauna (Martinick, 1984). Of particular conservation value are the populations of the rare plant *Eremophila subteretifolia* ms, and the fringing thickets of *Melaleuca halmaturorum* which provide nesting sites for waterbirds (Watkins and McNee, 1987).
- **Waterbird Useage**
To date, waterbird surveys show Lake Bennett is used by 23 waterbird species, with total waterbird numbers exceeding 900 on occasions. Nine waterbird species are recorded as breeding at the wetland, including the Chestnut Teal and Hooded Plover.

The Chestnut Teal occurs mainly along the south coast, with Lake Bennett being at the northern extreme of its breeding range. The Lake is also a significant habitat for the Hooded Plover, supporting breeding and relatively large numbers for an inland wetland (Halse, per. comm., 1992).
- **Aquatic Invertebrate Fauna**
Thirty-nine invertebrate species have been recorded within Lake Bennett, including one species which is possibly undescribed (CALM records). Species diversity is considered high for a lake of this salinity (< 10 000 mg/l) (Halse pers. comm., 1993).

2.5 SUMMARY OF CONSTRAINTS ON RECREATION.

Flora

Eremophila subteretifolia occurs within the recreation site.

Waterbirds

Hooded Plovers breed on the exposed lunettes on the fringe of the wetland. The wash from boats has potential to erode the lunettes.

The Chestnut Teal is vulnerable to disturbance by boats, particularly when nesting. Breeding may occur when Lake depth is at its maximum and salinity is at its lowest.

Boating may also disturb other waterbird species.

Invertebrate Fauna

Little is known of the impact of boating on the invertebrate fauna.

Water Quality

Recreation activities may affect water quality, eg increased turbidity from power boating.

Erosion

Erosion of beaches, shorelines and lunettes may occur from wave action created by powerboats.

Plant Diseases

Dunn Rock Nature Reserve is just outside the known distribution of *Phytophthora* - a plant fungal disease which causes dieback. The climate of this area is not readily conducive to the spread of *Phytophthora* species, although under particular conditions (for example, after significant summer rain) or within a micro-habitat (for example, around granite outcrops) the disease may survive. Once released the spores survive well in moist or wet soil and any movement

of the soil can spread the disease. Other plant diseases, such as Armillaria and canker fungi also have potential to affect the vegetation of the Reserve.

Fire

Since 1989, no wildfires have been recorded on the Reserve. Prior to March 1989 numerous fires had entered the Reserve from the adjoining properties. Most of these escapes were from clearing burns.

People visiting the Reserve, particularly water skiers, use open fireplaces for barbecues and warmth.

Recreation Site Location

The current recreation site at Lake Bennett is sited on the water's edge. Following heavy rainfall the site becomes inundated with water and may remain in this condition for many months.

Water Safety

Under the Department of Marine and Harbour's regulations, water skiing shall cease to be conducted at any time the maximum water level of the lake falls below 1.6 metres. Further, to ensure the safety of water skiers and other users, the above Department has designated areas for taking-off, skiing and landing (Figure 2).

CALM is also concerned about: water quality particularly the risk to health from amoebic meningitis; the condition and safety of water access points; submerged obstacles within the Lake; and the legal liability if somebody is injured whilst skiing or swimming in the Lake.

3.0 RECREATION MANAGEMENT

3.1 ENVIRONMENTAL AND SOCIAL IMPACTS OF SKIING.

3.1.1 Environmental

The environmental impacts associated with skiing can be sub-divided into three main groups - those resulting directly from skiing on the open water, those resulting from the effect of the wake of the boat on the shoreline and those associated with foreshore activities.

Open Water Impacts

- Direct physical disturbance to waterbirds.
- Noise disturbance to waterbirds.
- Oil and petrol pollution.
- Mixing of the water profile.
- Increased turbidity.

Shoreline Impacts

- Wave erosion of the shoreline.
- Periodic immersion of shoreline vegetation.
- Periodic immersion of waterbird nests within the shoreline vegetation.
- Oil and petrol pollution during refuelling.

Foreshore Impacts

- Physical disturbance to vegetation, including rare flora species.
- Soil compaction.
- Increased fire risk.
- Water pollution, through disposal of human wastes and draining of boats.

- Gully erosion.
- Rubbish.
- Vandalism.
- Domestic animals.
- Spread of plant fungal diseases.

3.1.2 SOCIAL IMPACTS

The issue of skiing on nature reserves is not only an environmental issue, but also a social issue. In assessing the impacts of skiing the following social factors need to be considered:

- A pattern of low level use of lakes for water skiing by local people has become well established and pre-dates the current tenure of many reserves.
- There is an absence of suitable alternative locations. Subsequently, there is strong shire and general community pressure for CALM to allow water skiing and other water-based recreation activities on lakes.
- It is unlikely that these activities can be physically prevented without considerable management input. Such levels of management are beyond current Regional resources.
- Under the Department of Marine and Harbour's regulations, water skiing shall cease to be conducted at any time the maximum water level of the lake falls below 1.6 metres. Further, to ensure the safety of water skiers and other users, the above Department designates areas for taking-off, skiing and landing.
- CALM has concerns about: water quality particularly the risk to health from amoebic meningitis; the condition and safety of water access points; submerged obstacles within wetlands; and the legal liability if somebody is injured whilst skiing or swimming in wetlands.

3.2 INTERIM MANAGEMENT OBJECTIVE

- To manage water skiing and associated activities to prevent further degradation of Lake Bennett and its environs.

3.3 INTERIM MANAGEMENT STRATEGY

Following consultation with the local community (including the Shire President and members of the ski club), the Department of Marine and Harbours, and CALM's Recreation and Landscape Branch, it is believed that the above objective can be achieved by:

- redesigning the current recreation site; and
- limiting skiing to designated areas.

3.4 RECREATION SITE DEVELOPMENT

Site development will be limited to improving access, and formalising the existing carpark and day-use area (Figure 2). Table 1 provides a summary of the "necessary operations" required to develop the site.

Vehicle Access

Vehicle access into the recreation site will be along an exiting external firebreak and internal track (Figure 1). To improve access and reduce the risk of introducing plant diseases, CALM in conjunction with the Lake Grace Shire will:

- install a culvert pipe in the table drain at the entry point to the Reserve;
- remove old bulldozer heaps and windrows causing water to pond on the access track;
- build up sections of the track where water ponds; and
- annually inspect the access route for maintenance works and fungal diseases.

Vehicle Parking

Vehicle parking will be upgraded to improve traffic flow and pedestrian safety. Upon entering the site, traffic will directed onto a one-way loop which takes vehicles past a carpark, down to the launching ramp, through a parking area for cars with boat trailers and, finally, back onto the access track (Figure 2).

At the local community's request, parking bays will be sited within existing gaps in the vegetation and the use of bollards will be restricted to protecting the populations of rare flora (*Eremophila subteretifolia*).

Picnic and Barbecue Area

Following consultation with local users, the picnic and barbecue facilities will be sited on the beach area under an existing clump of trees (Figure 2). This site provides shade and clear views of the Lake and skiing activities. In addition, the site is cleared of understorey vegetation and isolated from the surrounding bushland, thus reducing the fire hazard.

Facilities will be limited to a picnic table and a wood fuelled barbecue. The option of CALM providing a gas fired barbecue was discussed with the local community, but dismissed because of the low user numbers, perceived problems with maintenance and the strong desire by users to retain a "camp fire" experience at this site. It was agreed that site users would need to bring their own firewood onto the Reserve, and that if wood was gathered within the Reserve, barbecue options would be re-assessed.

The need for a toilet was also assessed and it was concluded that the current low level of visitation does not warrant the expense of providing this facility. The local users support this view. However, if monitoring shows a toilet is required, CALM will liaise with local users on the type of toilet required and maintenance of this facility.

3.4 MANAGEMENT OF SKIING

Under the Navigable Waters Regulations, areas used for water skiing must be gazetted for that purpose by the Department of Marine and Harbours. In 1991, Lake Bennett was assessed and, subsequently, parts of the wetland were gazetted for the purpose of water skiing (Figure 1). Under the conditions of this gazettal notice, waterskiing:

- is confined to the area demarcated by the Department of Marine and Harbours (Figure 1);
- ceases when the maximum water level of the Lake falls below 1.6m; and

- is prohibited within 45m of the foreshore, except at the designated landing and take off area.

Although these conditions address many of the safety problems associated with skiing, concerns still exist over: water quality; the condition and safety of water access points; submerged obstacles within wetland; and the legal liability if somebody is injured whilst skiing or swimming. Consistent with CALM's "duty of care" to visitors, the following precautionary actions are proposed.

- Signpost the Lake informing the public of the potential safety and health problems associated with water activities.
- Request that the Health Department or other appropriate authorities periodically monitor and assess water quality in the Lake. Known dangers will be signposted as required.
- Assess, in conjunction with local users, the condition and safety of the water access point at the Lake. Maintain, replace or remove facilities as required. Record inspections and management actions.
- Inspect, in conjunction with local users, the Lake annually for surface obstacles. Record all inspections and management actions.

Table 1 provides a summary of the "necessary operations" required for managing skiing.

4.0 MONITORING PROGRAM

4.1 PROBLEMS WITH MONITORING

Theoretically, the environmental significance of the impacts associated with skiing can be determined by quantifying both the magnitude of the impact and the importance of the environment impacted. However, many practical difficulties exist in isolating the impacts of skiing from natural disturbance events and the effects of surrounding land uses. To achieve this task a "control" is required.

A "before and after" experiment is difficult to establish as very little baseline data was collected prior to the commencement of skiing in the 1970s. Similarly, monitoring "before and after" the skiing season (Sept-May) produces data with a strong seasonal bias.

An alternative approach is to compare the wetland used for skiing with a similar adjacent wetland. However, the difficulties associated with this technique were illustrated in the monitoring of Lake Bennett in 1988, when the other wetlands in the immediate vicinity of the Lake (the controls) dried out during the monitoring period. A variation on this approach is to establish monitoring points in skiing and non-skiing areas of the same wetland. This technique is better suited to larger wetlands.

Further monitoring problems include the inability to quantify cumulative and synergistic impacts.

The Waterways Commission (WWC) has encountered similar problems in monitoring impacts associated with power boats on rivers and estuaries in south western Australia. Their experience indicates that it is extremely difficult to isolate power boat impacts from other water disturbances and that monitoring is expensive (WWC, pers. comm., 1992).

4.2 MONITORING AT LAKE BENNETT

Since 1985, CALM staff within the Katanning District have monitored the environmental impacts of skiing at Lake Bennett. Baseline information on water quality, water level, waterbird usage, invertebrate fauna, vegetation structure and floristics was initially gathered in 1986 (Watkins and Mc Nee, 1987). Since this time similar data has been collected on an opportunistic basis.

To date, this monitoring program has been extremely successful in detecting the foreshore impacts associated with skiing, as these impacts (for example, increased rubbish and vandalism) are obvious and easily measured. In contrast, the shoreline and open water impacts are more subtle, appear to be transient, and occur against a background of natural and human disturbance, and have thus proved more difficult to detect. Similar monitoring problems have been encountered by the Nannup District staff when monitoring skiing on Lake Jasper (Wright, pers. comm., 1993).

4.3 GUIDELINES FOR MONITORING

Given that components of the above monitoring program appear to be inadequate in determining the impact of skiing on wetland values, there is a need to develop new monitoring guidelines. It is proposed that the following guidelines will form the basis of the monitoring program for Lake Bennett.

- i Monitoring programs must have clearly stated aims;
- ii Monitoring must directly measure the impacts of skiing;
- iii Monitoring parameters must be highly sensitive to the impacts of skiing;
- iv Monitoring parameters must be easily measured by local district staff.
- v Monitoring parameters must have suitable temporal and spatial controls.
- vi Monitoring parameters must require infrequent sampling and/or observation.
- vii Monitoring data must be easily translated into meaningful management information.
- viii Monitoring must be cost effective.

4.4 MONITORING PROGRAM

The program will concentrate on measuring the impacts of skiing on birds inhabiting the open waters, the impact of boat wake on waterbirds inhabiting the shoreline vegetation, and the impact of boat wake on the shoreline vegetation. The onshore impacts associated with skiing will continue to be monitored using the "Human Usage" survey techniques developed for nature reserves in the Wheatbelt Region.

4.4.1 Impacts of skiing on birds inhabiting the open waters.

Aim: To measure the impacts of skiing on birds inhabiting the open waters.

Measurement: Observations of waterbirds that inhabit open water.

Sensitivity: Observations will be concentrate on waterbird species which are sensitive to skiing. For example, the Blue Billed Duck could be used as bio-indicator as it occupies the open waters of lakes and is thus likely to be sensitive to skiing (Lane, pers. comm., 1993).

Measured by local district staff: By concentrating monitoring on a limited number of species, staff can easily be trained in waterbird identification.

Controls: Waterbird observations will be restricted to two marked areas of open water - one located within the skiing area and one outside the skiing area. Observations will commence on the day prior to skiing (Friday) and will be repeated when skiing is occurring (Saturday).

Monitoring Frequency: Once during the skiing season.

Management Information: A decline in the numbers of indicator species during skiing, instantly suggests this recreational activity is impacting upon the waterbirds of the wetland. Management actions, such as reducing the area of open water available for skiing, can be immediately implemented.

Cost effective: By measuring only the species which are likely to be sensitive to skiing and restricting the monitoring period to two consecutive days, staff time and vehicle costs are minimised. It is anticipated that the shoreline and foreshore impacts would also be monitored at the same time as the open water impacts, thus integrating the monitoring program.

4.4.2 Impact of boat wake on waterbirds inhabiting the shoreline vegetation.

Aim: To measure the impact of boat wake on waterbirds inhabiting the shoreline vegetation.

Measurement: Observations of waterbirds that inhabit the shoreline vegetation.

Sensitivity: Observations will concentrate on waterbird species which are sensitive to boat wake. For example, the Hooded Plover could be used as bio-indicator as it breeds in the shoreline vegetation and is thus likely to be sensitive to the wave action associated with skiing (Lane, pers. comm., 1993).

Measured by local district staff: By concentrating monitoring on a limited number of species, staff can easily be trained in waterbird identification.

Controls: Waterbird observations will be restricted to two marked areas on the wetland - one located within the skiing area and one outside the skiing area. Observations will commence on the day prior to skiing (Friday) and will be repeated when skiing is occurring (Saturday).

Monitoring Frequency: Once during the skiing season.

Management Information: A decline in the numbers of indicator species during skiing, instantly suggests this recreational activity is impacting upon the waterbirds of the wetland. Management actions, such as prohibiting skiing within 100 metres of the shoreline or delaying the skiing season until breeding is complete, can be immediately implemented.

Cost effective: By measuring only the species which are likely to be sensitive to skiing and restricting the monitoring period to two consecutive days, staff time and vehicle costs are minimised. It is anticipated that the open water and foreshore impacts would also be monitored at the same time as the shoreline impacts, thus integrating the monitoring program.

4.4.3 Impact of boat wake on the shoreline.

Aim: To measure the impact of boat wake on the shoreline.

Measurement: Transects will be installed at specific sites around the Lake. Photographs will be taken from fixed points along the transect at six monthly intervals.

Sensitivity: The photographs will record features of the shoreline that are sensitive to boat wake, for example, the notch or bank between the vegetation around the Lake and the "beach" area.

Measured by local district staff: Local staff have experience in establishing and monitoring transects.

Controls: Transects will be located in areas of heavy wash (for example, adjacent to the boat ramp) and in areas least likely to experience boat wash (for example, on the eastern side of Lake).

Monitoring Frequency: Six monthly intervals.

Management Information: The monitoring and comparison of a transects provides information on the rate of shoreline erosion. If there is sufficient evidence to suggest that skiing is the primary cause of shoreline erosion then management actions, such as prohibiting skiing within 100 metres of the shoreline, can be immediately implemented.

Cost effective: The transects will be monitored at the same time as waterbirds, thus integrating the monitoring program.

5.0 REVIEW

Results from the above program will only provide a guide for managers, they will not show (in a scientific sense) if skiing is having a statistically significant impact on wetland values. To achieve the latter, requires resources and expertise beyond that currently available in the Wheatbelt Region. Nevertheless, if the monitoring results indicate that skiing is having a detrimental impact on the Lake and its environs, the decision to permit skiing will be reviewed in consultation with the local community.

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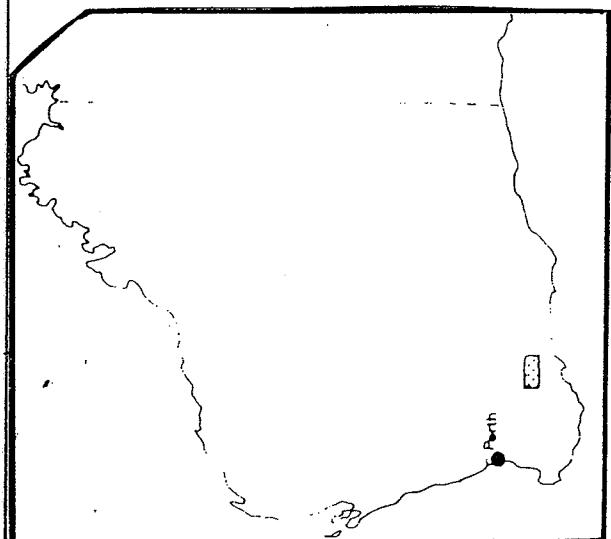
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TABLE 1: IMPLEMENTATION OF INTERIM GUIDELINE (continued)

Management Action	Implementation	Level of Approval Required*	Timetable	Expected Outcome	
Skiing Area (continued)	<p>Prohibit water skiing within 45m of the foreshore except at the designated landing and take off area.</p> <p>Signpost the Lake informing the public of the potential safety and health problems associated with water activities.</p> <p>Request that the Health Department or other appropriate authorities periodically monitor and assess water quality in the Lake. <input checked="" type="checkbox"/> known dangers will be sign-posted as required. Record inspections and management actions.</p> <p>Assess, in conjunction with local users, the condition and safety of the water access point at the Lake. Maintain, replace or remove facilities as required. Record inspections and management actions.</p> <p>Inspect, in conjunction with local users, the Lake for surface obstacles. Record all inspections and management actions.</p>	<p>Department of Marine Harbours, & local users.</p> <p>CALM</p> <p>CALM</p> <p>CALM, & local users</p> <p>CALM, & local users</p>	<p>Department of Marine Harbours.</p> <p>District Manager.</p> <p>District Manager.</p> <p>District Manager</p>	<p>On-going</p> <p>1994</p> <p>On-going</p> <p>Annually</p> <p>Annually</p>	<p>Improved skier safety and reduced impact on environmentally sensitive areas.</p> <p>Improved public safety and "Duty of Care" shown by CALM.</p> <p>Improved public safety and "Duty of Care" shown by CALM.</p> <p>Improved public safety and "Duty of Care" shown by CALM.</p> <p>Improved public safety and "Duty of Care" shown by CALM.</p>

* The "Level of Approval Required" is consistent with Administration Instruction No 39

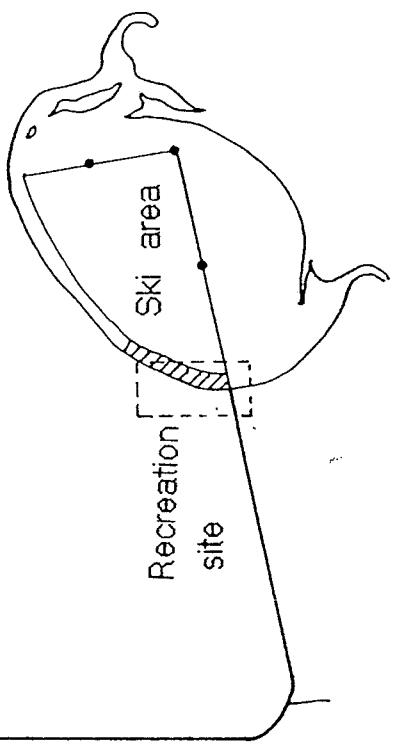


OLD NEWDEGATE ROAD

"LAKE KING" NATURE RESERVE 39422

Loc. 3027

"DUNN ROCK" NATURE RESERVE 36445



Scale 1:12 500



NOVEMBER 1993

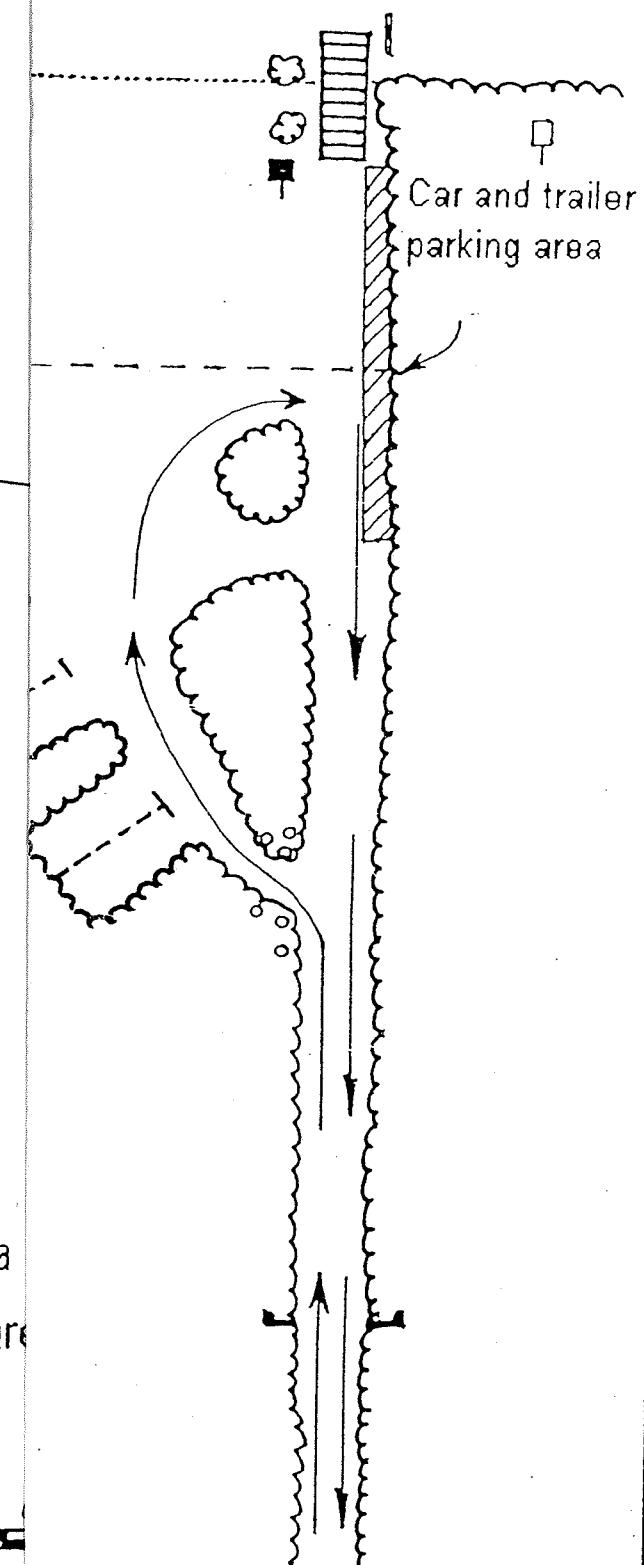
BASE PLAN

F. 1

KEY

- Table
- Rare Flora Markers
- Bollards
- Barbecue
- Launch ramp
- SIGN : Map of ski area
- SIGN : Ski take off area
- Depth guage

5



NOVEMBER 1993

F 2