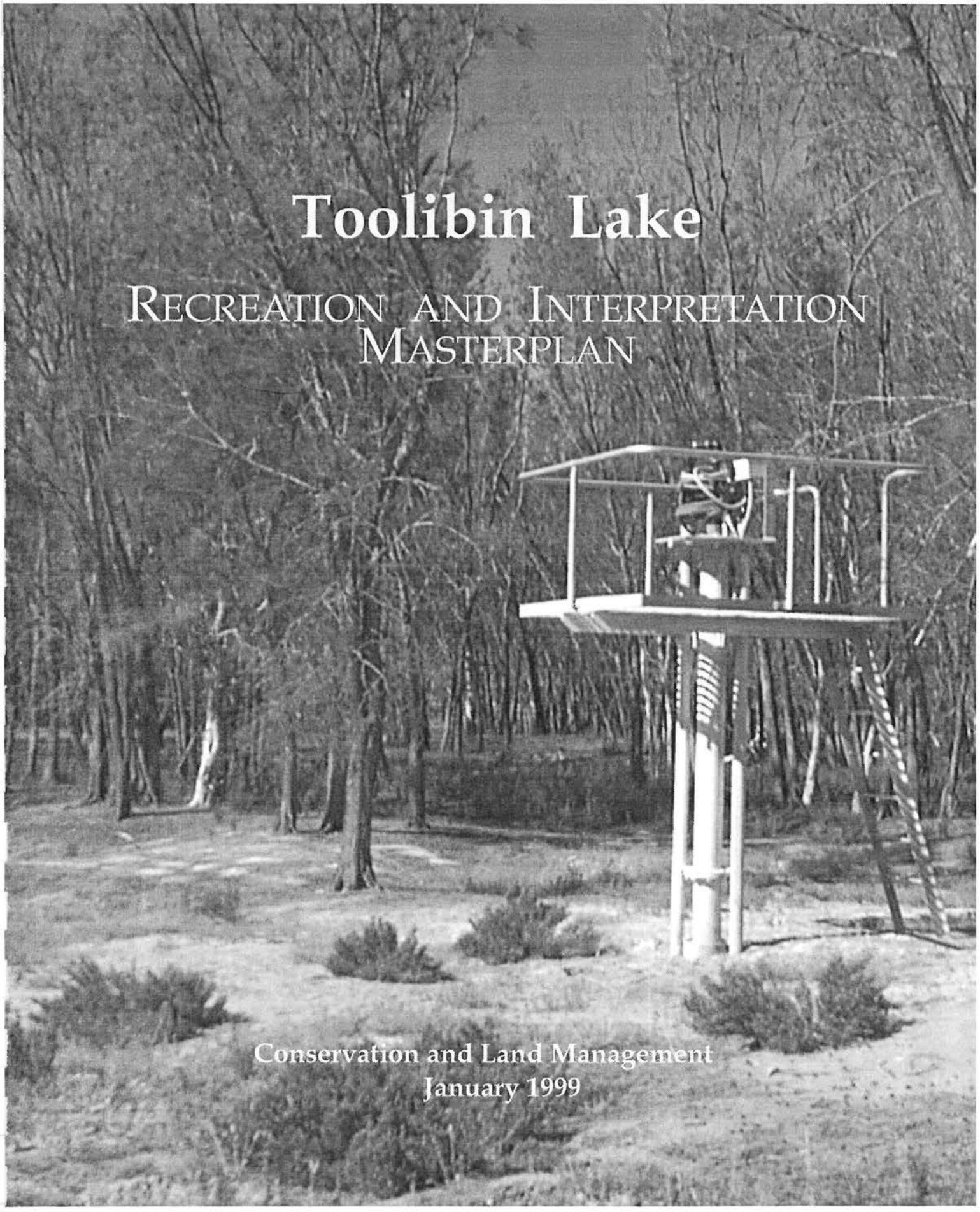
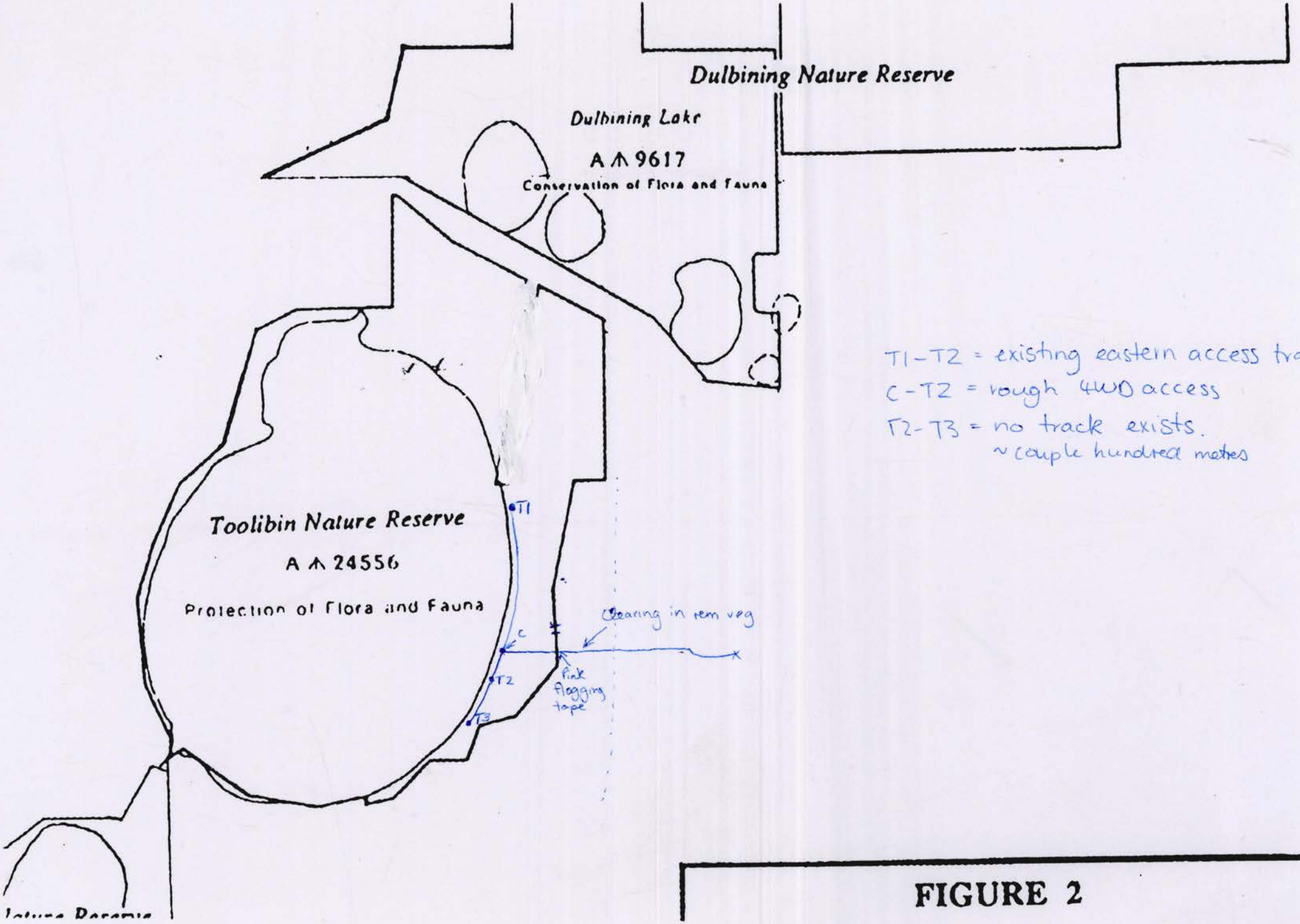


Toolibin Lake

Recreation and Interpretation Masterplan

Conservation and Land Management
January 1999



T1-T2 = existing eastern access track
C-T2 = rough 4WD access
T2-T3 = no track exists.
~ couple hundred metres

FIGURE 2

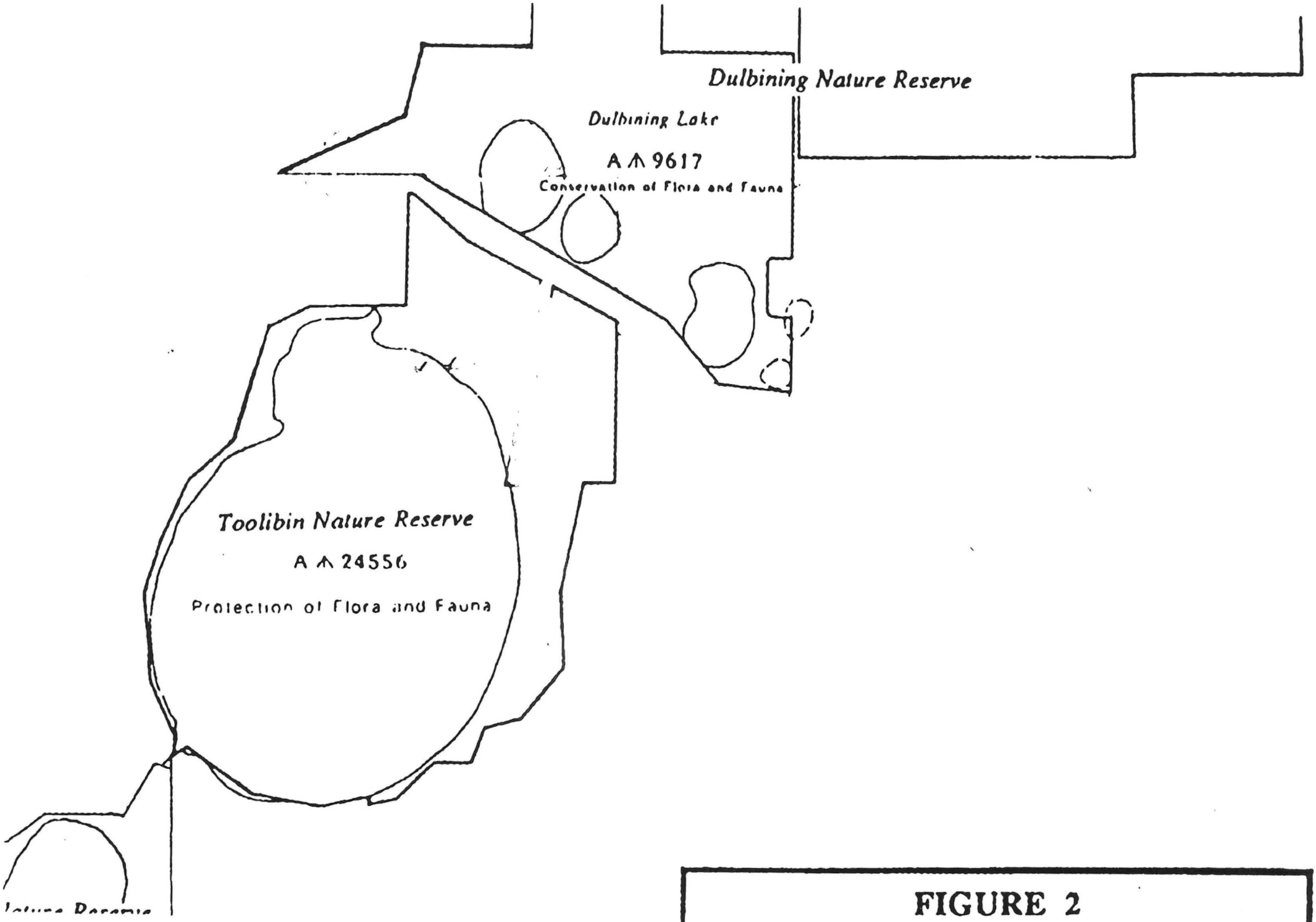

Dulbining Nature Reserve
Dulbining Lake
A 9617
Conservation of Flora and Fauna
Toolibin Nature Reserve
A 24556
Protection of Flora and Fauna

FIGURE 2

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Background

Toolibin Lake is part of a chain of ephemeral freshwater wetlands at the headwaters of the Arthur River, 250 kilometres south east of Perth (see Map 1, Location). The Lake is unique for its ecological, landscape and interpretive values. It is listed under the RAMSAR Convention as a Wetland of International Importance and on the Register of the National Estate. More waterbird species have been recorded breeding at Toolibin Lake than at any other single wetland in south-western Australia.

The Lake is threatened by salinity from saline surface water inflows and rising ground waters. Taarblin Lake, downstream of Toolibin, lost its *Melaleuca strobophylla* and *Casuarina obesa* thickets to salinity and waterlogging in the 1950s. Toolibin Lake is the last large wetland in which this type of vegetation survives across the lake bed. However vegetation started to decline in the late 1970s and by 1994 a Recovery Plan was prepared for Toolibin Lake.

The Toolibin Lake Recovery Plan integrates short-term measures, such as surface water drainage and pumping of saline groundwater from under and around the Lake, with long term measures such as catchment revegetation.

Toolibin Lake, Taarblin Lake, Toolibin Nature Reserve and other sites in the catchment offer opportunities for visitors to understand land care and catchment management issues and practices and enjoy the outstanding natural values of the surviving Lake and its surrounding woodland. The Recreation and Interpretation Masterplan aims to guide the development and management of recreation and interpretation facilities and services so that these opportunities are realised.

Management Goals

There are five principle goals relating to Toolibin Lake and its catchment[1]:

1. To conserve the Lake and its associated wildlife, as a freshwater habitat.
2. To improve land use decision making and practice within the Toolibin catchment so that land management:
   - is sustainable, productive and profitable in the long term (over 100 years);
   - reduces the current area of degraded land;
   - favours conservation of local wildlife.
3. To demonstrate that, in a large catchment, it is possible to stabilise hydrological trends which if unchecked threaten land, water and biodiversity values.
4. To demonstrate to other land managers in Australia methods of protecting their biodiversity, land and water resources.
5. To develop mechanisms which lead to community ownership of WA's natural resources including management problems and their solutions.

Visitor Facilities and Services

The basic goals in providing recreation and interpretation facilities and services are twofold; firstly to help visitors understand and enjoy Toolibin Lake's natural values, and secondly to help visitors understand the management actions required to conserve the Lake, including the sustainable use of catchment lands.

[1] *Toolibin Lake Recovery Plan*, 1994

Introduction to the Plan

Scope

The Masterplan comprises three main components, a recreation site development plan for Toolibin Lake, an interpretation plan for Toolibin Lake, and a recreation and interpretation plan for a drive trail covering the wider Toolibin Catchment.

Desired Outcomes

RECREATIONAL ACCESS

- Facilitate safe, enjoyable access to parts of Toolibin Lake Nature Reserve, including the Lake, surrounding woodland, key elements of the recovery program and other important features.

ENVIRONMENTAL SUSTAINABILITY

- Minimise the impacts of visitors and visitor facilities on natural values.

EDUCATION

- Explain the natural values of Toolibin Lake, the catchment and the Wheatbelt region.
- Explain land degradation issues at each of these scales.
- Interpret to visitors the land management strategies and infrastructure represented at Toolibin Lake and other sites.

Site Analysis and Key Issues

A summary of general issues of key importance to recreation and interpretation planning and design is included below. Many are represented also in Map 2 *Site Analysis.*

ISSUES	COMMENTS
Toolibin Lake naturally fills only once every few years.	Facilities like boardwalks out into the Lake may be too seldom needed to justify their expense. Visitor numbers when the Lake is full may be much higher than usual.
There is some risk of theft of, or interference with, some of the groundwater pumping equipment.	Public access should be restricted to minimise risks of interference.
The primary role of the Reserve is Conservation of Flora and Fauna.	Public access and visitor facilities should be restricted in extent. Recreation facilities and activities should be appropriate to this setting.
Management access by vehicles onto the Lake bed is required.	Maintain management access whilst minimising the risk of inappropriate recreational access.
Some recreation facilities like paths will be flooded occasionally.	Facilities that are within flood areas must be designed and constructed to cope with flooding.
The future environmental health of the Lake is uncertain.	Recreation facilities should start fairly small but be planned and designed for expansion.
Visits to Toolibin Lake by groups (schools, land care groups etc) are expected.	Facilities like parking and information shelters should accommodate groups.
Dieback susceptible vegetation occurs within the Reserve	Management activities must minimise the risks of disease introduction and spread
A variety of landforms and vegetation occur at Toolibin and adjacent reserves	Opportunities exist for trails and interpretation in areas other than the Lake itself.

PREFERRED RECREATION PLAN

See Maps 3 to 5 and Sketches.

Road Access

DISCUSSION

The Wickepin-Harrismith Road transects the Nature Reserve. It passes close to the upstream (northern) end of Toolibin Lake and provides an ideal opportunity for access to Toolibin Lake. Existing tracks provide access from the Wickepin Road to sites within the Nature Reserve, however these tracks are not 2WD accessible in all weather and they do not provide access to areas with high recreation and interpretation potential.

OBJECTIVES

1. Provide a high standard of access for a fairly low volume of traffic.
2. Minimise environmental impacts and aesthetic impacts from roads and vehicles.
3. Minimise construction and maintenance costs.
4. Minimise visitor risk.
5. Provide good access to interpretive opportunities.

RECOMMENDATIONS

- Construct a new road (550m long) into the Nature Reserve near the inlet channel to the Lake. The road should be to all-weather 2WD standard, initially unsealed but constructed so as to minimise dust and maintenance liability. Sealing may be a longer term option. The road alignment represented on Map 3 is indicative only and must be 'fitted to the site' to minimise environmental disturbance and maximise scenic value.
- Develop a parking area at the end of this road east of the inlet channel. Bollards and post-and-rail barriers should be used to define the parking area. Initially parking should be provided for about 6 cars and one long vehicle, with scope for expansion either by constructing additional bays or demarcating 'overflow' parking areas that are hardened to cope with high use at times like a flood year.
- Provide restricted access to the track at the western boundary to allow appropriate groups like land care groups and school groups to visit the buffer plantation, pumps and bores, the Toolibin Alley Farming Trial (TAFT) and the diversion drain and gate. There is potential for this track to be closed to the public by a locked gate, with a key available from CALM Narrogin or the Wickepin Community Agricultural Centre by arrangement. The *Preferred Interpretation Plan* discusses this idea further.
- Restrict access onto the Lake bed via the northern access track by installing removable bollards as indicated in Map 5. The interpretive path to the Lake bed (see below, *"Pedestrian Access"*) should be designed and constructed to offer management vehicle access (see sketches).

- Provide information about the Toolibin catchment land care drive trail at the main information shelter at Toolibin.

Pedestrian Access

DISCUSSION

Pedestrian trails offer opportunities for access to key sites with minimal disturbance of natural values. The gentle gradients that prevail in the area mean that good access can be provided for all visitors, including those with disabilities. The natural sandy ground is not an appropriate surface for high standard paths, so material will need to be imported for most of the paths. Access to the lake bed is problematic because it is periodically inundated. A raised board walk to facilitate access out across the water when the Lake is full is an option but the cost may not be justified if the Lake fills only once every five years or so on average.

OBJECTIVES

1. Provide pedestrian access to key recreation and interpretation sites and facilities.
2. Ensure that all paths in the car park area and the entire interpretive walk are accessible to people with disabilities.
3. Ensure that the interpretive path is wide enough to allow groups of visitors to walk two or three abreast.
4. Ensure that all paths are appropriate to their settings aesthetically and functionally.

RECOMMENDATIONS

- Provide an interpretive walk beginning and ending at the main car park and picnic facilities. The walk should be to wheelchair standard; formed, stabilised and compacted to provide a hard, stable, appropriately coloured and well drained surface. Larger standing areas (about 12 to 15 sq/m beside the path) should be provided at interpretation points. The proposed interpretive walk consists of a loop at the northern end of the reserve, passing the separator gate, piezometer 19 and Pump 1 and then returning to the picnic site. The section of path between the Lake bed and the car park should be 2.8 to 3m wide to accommodate management vehicles. The remainder of the path should be 1.8 to 2.3m wide
- The vehicle accessible part of the interpretive path should be constructed with a base course of compacted crushed rock 100mm thick (compacted to 75mm) and a stabilised gravel pavement 100mm thick (compacted to 75). The pavement material should contain appropriate proportions of gravel and fines to ensure that it compacts and binds well and it should be cement stabilised at a proportion of about 1 part cement to 9 gravel. It should be compacted at optimum moisture content with a wacker or small roller.
- Where no vehicle access is required omit the base course and construct a cement stabilised gravel path (100mm compacted to 75) on a natural foundation that has been cut to form a 75mm deep 'box' and lightly compacted. The stabilised path should be compacted as for the vehicle accessible sections.
- Create a 1m wide level path along the top of the bund to provide a 250 metre return walk from the separator gate to near the pump shed. This path can include

interpretive sites as appropriate. Provide steps to the top of the bund at both ends of this path.

- Provide 'stepping stones' at the drain crossings. These should be concrete or similar, not fixed but large enough to stay in place and be stable under their own weight. The 'stones' should be about 500mm wide by 800 long (800 from upstream end to downstream end), with 1200mm between centres. Ideally they would be of a shape that will minimise turbulence, like a teardrop or egg shape with the thick end upstream.
- Consider constructing a raised board walk (not indicated on the plan), perhaps including a bird hide as a later stage development. A boardwalk is likely to be required only once every few years. Such low use may not justify the high cost of construction[2].

Other Visitor Facilities

DISCUSSION

There are no developed facilities for visitors as yet at Toolibin Lake. If recreational access and interpretive activities are to be encouraged some associated facilities should be developed.

OBJECTIVES

1. Enhance visitor's enjoyment, appreciation and understanding of the Lake and Reserve.
2. Mitigate visitor impacts on the natural environment.
3. Ensure that facilities are appropriate to their settings.

RECOMMENDATIONS

- Provide a toilet at the main recreation area. The toilet should provide two wheelchair-accessible unisex cubicles. A composting toilet seems to be the most appropriate type. Several options are available and should be investigated.
- Provide picnic furniture at the same site. Initially three wheelchair accessible tables on stabilised, compacted pads.
- Provide a gas BBQ at the picnic area (if visitor numbers warrant it). An exact location in the picnic area should be selected on site.

[2] However a raised boardwalk can create a sense of wonder and privilege, and of the uniqueness of this lake. A raised boardwalk is likely to evoke an appreciation of the Lake's changing nature even when the Lake is dry. When the Lake is full a raised boardwalk that is just above high water level would provide a superb perspective on the Lake. The boardwalk could incorporate a bird hide. The provision of a raised boardwalk should remain a long term aim.

Rehabilitation and Landscape Enhancement

DISCUSSION

The ongoing revegetation program at Toolibin Lake Nature Reserve will be continued in 1999. Planting for this year includes further revegetation of the bund, infill of the buffer zone and trials of *Casuarina obesa* and *Melaleuca strobophylla* on the lake bed.

OBJECTIVES

1. Improve the aesthetic standard of the Lake and Nature Reserve.
2. Aid ground water management.
3. Demonstrate rehabilitation techniques.

RECOMMENDATIONS

- Furrow the length of the bund between the separator gate and Pump 9 to encourage samphire regeneration and to minimise erosion.
- Rehabilitate drainage works and salinity affected patches in the north-western entrance to the Nature Reserve.
- Revegetate the corridor to the revetment mattress (without limiting management access).
- Proceed with existing revegetation plans. Consider, and as appropriate develop interpretive opportunities associated with ongoing revegetation programs.

Research and Monitoring

DISCUSSION

Research and monitoring will be ongoing at Toolibin Lake. Research and monitoring activities and facilities pose some constraints on public access and recreation but they also provide interpretation opportunities.

OBJECTIVES

1. Minimise impacts on research and monitoring activities and facilities from recreation.
2. Encourage public understanding of, and participation in, ongoing research and monitoring.

RECOMMENDATIONS

- Take all necessary precautions during works to avoid disturbing a vegetation monitoring plot and several piezometers that are located close to the parking facilities and paths.
- Combine interpretation and additional groundwater monitoring at piezometer 19 by installing a series of new piezometers with flags in situ to indicate the level of ground water visually (see sketches). These will aid visitors' understanding of how

the water table works, and also provide additional data on the impacts of pumping at Pump 1.

- Investigate potential to involve the public and special interest groups in research and monitoring by providing up to date information via a newsletter or on site display. For example there may be potential to create a 'data display' which includes the latest hydrological and ecological news and data, updated as appropriate.

Signs

See *Sign Plan* in the following *Preferred Information and Interpretation Plan* section of the Masterplan.

Design Guidelines and Detailing

In addition to design guidelines included under the relevant headings (like "Pedestrian Access"), see Maps 1 to 4 and the sketches that follow the maps. The Maps and sketches are at the end of the following section, the *Preferred Information and Interpretation Plan.*

The Maps are as follows:

1. Location
2. Site analysis
3. Masterplan
4. Main Recreation Area plan (including description of interpretation sites)
5. Main Recreation Area plan (details of the main parking and facility area)

The sketches relate to the following topics:

1. Path construction
2. Interpretation sites and facilities

PREFERRED INFORMATION AND INTERPRETATION PLAN

Objectives

The main objectives are to interpret, using the most effective means possible, the *natural values of Toolibin Lake* and its wider setting, and the goals and strategies of the *Toolibin Lake Recovery Plan.*

The four highest priority Recovery Strategies provide four main interpretation topics. The Strategies are:

1. to control groundwater levels beneath Toolibin Lake and ensure that they do not threaten the freshwater status of the Lake or its environs;
2. to control surface water inflows to Toolibin and ensure that they do not threaten the freshwater status of the Lake;
3. to maintain or enhance the natural vegetation in and around the Lake;
4. to achieve sustainable agriculture and increased water use on agricultural lands in the catchment by:
    - developing and implementing commercial revegetation schemes based on woody, native vegetation
    - developing and implementing revegetation which improves current agricultural production (cereal and stock). For example by effective implementation of alley farming, shelter belts, and rehabilitation and pastoral use of areas with surface salinity
    - encouraging changes in farm practice which better utilise water 'where it falls'. This may include improving soil structure to enhance plant growth (and thus water use)

Thus the main topics for interpretation are:

1. The *natural values* of Toolibin Lake (and similar lakes) and *threats* to those values.
2. *Surface water management* strategies at Toolibin Lake.
3. *Groundwater management* strategies at Toolibin Lake.
4. *Catchment management* strategies to minimise degradation whilst maintaining agricultural productivity.

Interpretive Resource Inventory

Natural Values

- Last remaining major fresh (fresh to brackish) water lake in the Wheatbelt.

- Lake bed vegetation in relatively good condition.
- Waterbird habitat and breeding significance. Listed under the Ramsar Convention as a Wetland of International Significance.
- Other flora and fauna in the Reserve such as banksia woodland, wildflowers and eucalypts.
- Landforms such as lunettes, sand dunes, aerial views of lake systems.
- Original conditions, oral histories documenting changes in Wheatbelt wetlands (flora, fauna, hydrology).
- Threats to natural values, tree deaths, species succession... refer to catchment.

Surface Water Management

- The separator gate and diversion drain, inflow channel, outflow to Taarblin Lake, water quality objectives and surface water monitoring.
- Toolibin Lake natural seasonal regime, impact of surface water management, flood levels indicated on trees.
- Origins of surface water problems, refer to Catchment Management.

Groundwater Management

- Groundwater pumps, piezometers to test groundwater levels and quality, water table profile near pumps, flow rates.
- Trees as natural groundwater pumps, groundwater at Toolibin too saline for trees to survive.
- Groundwater utilisation and changes post land clearing, refer to Catchment Management.
- Many of the stories about hydrology are physical (forces, volumes, rates, depths etc) therefore physical means of interpreting them seem appropriate. For example piezometers may house floating poles that indicate water table levels, and may be used to indicate water table gradients near the pumps. This example is included in the sketches following Maps 1 to 4.
- There is also a chemical story. Salt levels (surface water or groundwater or both) can perhaps be continuously displayed on a scale that includes rainwater, tap water, groundwater and seawater... or updated manually as inflowing water is monitored.

Catchment Management

- Basic Land Care strategies following a whole catchment approach, such as whole farm planning, protection of remnant vegetation, revegetation, contour farming etc.
- Encouraging the use of native commercial trees with other values (aesthetic, habitat, shelter, shade) such as Toolibin Alley Farming Trial, oil mallees, Toolibin Melaleuca Trial.
- Revegetation Trials on the property recently purchased by CALM, to trial direct seeding biodiversity plantings, native perennial grasses, infill of salt tolerant revegetation, break of slope plantings and natural regeneration.

Proposed Information and Interpretation Facilities and Services

See Map 3, *Toolibin Lake Recreation and Interpretation Masterplan.*

See Map 4, *Main Recreation Area Recreation and Interpretation Concept Plan.*

Toolibin Lake Main Recreation Area

SITE 1 Central Information Shelter - orientation and introductory information

4 panels (2 double-sided boards)

PANEL 1 *Toolibin Lake ... the big picture..* Regional context/catchment (map of catchment including towns & other lakes). Significance of Lake, RAMSAR wetland and unique in being the last significant natural freshwater inland lake. Protected waterfowl such as Freckled Duck and last surviving Melaleuca/Casuarina association on a lake bed. Refer to drive tour of other sites of significance in the catchment such as Taarblin Lake, Albert Facey House and Catchment Revegetation.

Artwork to include map of catchment either illustrated or landsat, map of Lake and region. Illustration of freckled duck next to title or photo of Yellow Billed Spoonbills nesting at Toolibin Lake.

PANEL 2 *The Way of Water... rising damp..* Explains the water table in the Wheatbelt before agriculture. Salt is stored in the soil profile and groundwater utilised by vegetation. Impact of land clearing, remove trees and saline groundwater rises, bringing the stored salts with it. Runoff becomes saline and affects rivers and lakes – killing vegetation and destroying wildlife habitat. Also affects agriculture – pasture, wheat and bushland. Toolibin Lake one of the last survivors.

Artwork may include profile of land including Lake with line for water table indicating rise and fall depending on rainfall and uptake by plants. Illustration of old hand pump next to title? Or unhappy tree with roots in (salty) water ? See diagram of European Impact on a Wheatbelt wetland, on page iv of the Toolibin Lake Recovery Plan.

PANEL 3 *Caring for the Catchment... the Toolibin Lake Recovery Plan.* Recovery Strategies; 'why' (as above), 'who' (gov't, sponsors, local people etc), 'how' (cooperation, Lake Toolibin Catchment Group, local Shire, consultants and researchers), what (surface water management, ground water management, catchment management)... and refer to interpretive path and example sites along it (see below).

Artwork may include good farm plans representing such strategies as surface water management, alley farming, tree lots, links with remnant bush, etc. Also photos of the separator gate overflowing, a groundwater pump or revegetation.

PANEL 4 *The Toolibin Experience.* "The Toolibin Lake Recovery Plan is an example of a whole-catchment plan developed with the aim of restoring hydrological processes and saving the Lake. Similar strategies can be used elsewhere at different scales. Take the walk to discover features of Toolibin Lake and its recovery. You will cross from the sand ridge here down to the lake margins, passing from woodland to wetland." (Or something similar)

Artwork may include a map of the site with the interpretive walk indicated on it and showing sites of significance. Photo's of seasonal events like lake full, breeding birds, wildflowers. Transect drawing of vegetation communities.

SITE 2 Woodland, lake edge and lake bed - interpretation of natural values

400 by 300mm sign with text (50 words) and picture, or 800 by 600 sign with up to 200 words. Locate the sign in an area of wider path that can accommodate a small group standing (about 3 by 3m) Maybe use the quote from Ray Rigby that appears on the *Recovering Toolibin Lake* article by Kate Hooper and Ken Wallace.

SITE 3 Groundwater Pump & piezometers - interpretation of groundwater management

The path will pass close to Pump 1. Install a sign similar to the previous to talk about ground water management and monitoring infrastructure. The pumping can potentially be interpreted with special indicator piezometers (see sketches following Maps 1 to 4) that show water table depth. These should indicate a depression in the water table around the pump, which could be interpreted with text and an illustration on a sign. "Look for the floating flags that show groundwater depths... they show that the water table is lower near the pumps" (or similar). And either at the same site or panel 3 of the main shelter, "trees can have a similar effect, but only when ground water is not too saline. The ground water beneath Toolibin Lake is saltier than seawater and will kill these trees if it rises to their rootzone".

SITE 4 Diversion System - Interpretation of surface water management

The path emerges from the trees at the upstream end of the revetment mattress. There is potential here to create a lookout area on the top of the mattress or just off the end,. Interpretation located at the car-park end of the mattress will be accessible to all visitors even when the Lake is full. Talk about water quality monitoring and the diversion scheme. The wheelchair-standard path can end at this point and a signposted walk trail continue on along the mattress and up some steps to the top of the bund. The trail then can continue along the bund to near the pump shed.

The Toolibin Lake 'technical tour'

Some visitors will be particularly interested in the technical details of the Recovery Plan. There is potential for such visitors to be permitted access to areas that are not accessible to the public (a 'technical tour'), perhaps accompanied by a guide or guided by a publication. Sites on this tour would include the Lake buffer plantings, the Toolibin Alley Farming Trial (TAFT), Toolibin Melaleuca trial, the diversion drain and bund, pumps and piezometers.

Install a gate on the western boundary track near the Wickepin-Harrismith Road and keep this gate locked. Keys to the gate can be made available from the Narrogin CALM office and the Wickepin Agricultural Centre.

Prepare a 'technical tour' pamphlet to guide visitors through the tour. The pamphlets can be handed out with the gate keys.

Ensure that the track enables access by all types of vehicles, including buses. Each of the bends on the track should have minimum outside radii of 15 to 20m and the swale crossing should be cut (or filled with a culvert installed) so that a bus can cross it. A turn

around loop with a minimum outside radius of 20m should be provided at the end of the tour.

Map 3, the *Masterplan*, shows the proposed technical tour.

Other Interpretation opportunities

1. There is an opportunity to provide an audio introduction to the Toolibin Experience, via a narrow cast FM system. The introduction need only be a message of about a minute duration that welcomes visitors, tells them what recreation and interpretive opportunities are available and where. After the radio introduction they can take the walk. There are also opportunities to provide (recorded, 'push button' type) audio stories at interpretive sites like the separator gate and revetment mattress (Site 4).
2. There is potential to extend the interpretive walk across the road into the northern part of the Reserve to interpret other lakes, vegetation and landforms.
3. There are opportunities to provide interpretive signage half way along the bund walk trail detailing the revegetation buffer zone, lichens, waterfowl nesting. Another interpretive site on the bund opposite the pump shed to explain the transfer system and the impact of groundwater pumping at Pump 9.

Broad Scale - Toolibin Catchment

The objective is to provide a drive tour that links sites of significance throughout the catchment. A publication is needed to aid navigation and interpret sites. There is potential to provide audio interpretation on the drive trail. The tour should include Toolibin Lake but not necessarily begin there. It should also include appropriate examples of good land care and sustainable agriculture in the Toolibin Catchment. A potential drive trail is described below.

- Taarblin Lake, a typical casualty of salinity. At Taarblin create a signposted parking area off the main road (see sketches). Refer to Toolibin, the last survivor.
- Toolibin Lake.
- Lakes Walbyring and Dulbinning.
- Toolibin Alley Farming Trial (TAFT).
- Toolibin Melaleuca Trial.
- Toolibin buffer planting.
- Oil mallees and *Pinus pinaster.*
- CALM's recent land acquisition and plans for it (maybe a stage two inclusion)
- Drainage works in west and north east Toolibin Catchment.

Some roads are summer roads only. In the longer term (for instance when developments on CALM's new block have progressed) consider upgrading some roads and drain crossings to allow all season access.

Sign Plan

DISCUSSION

The following relates to information that is not part of the interpretive walk, the information shelter or the interpretive drive.

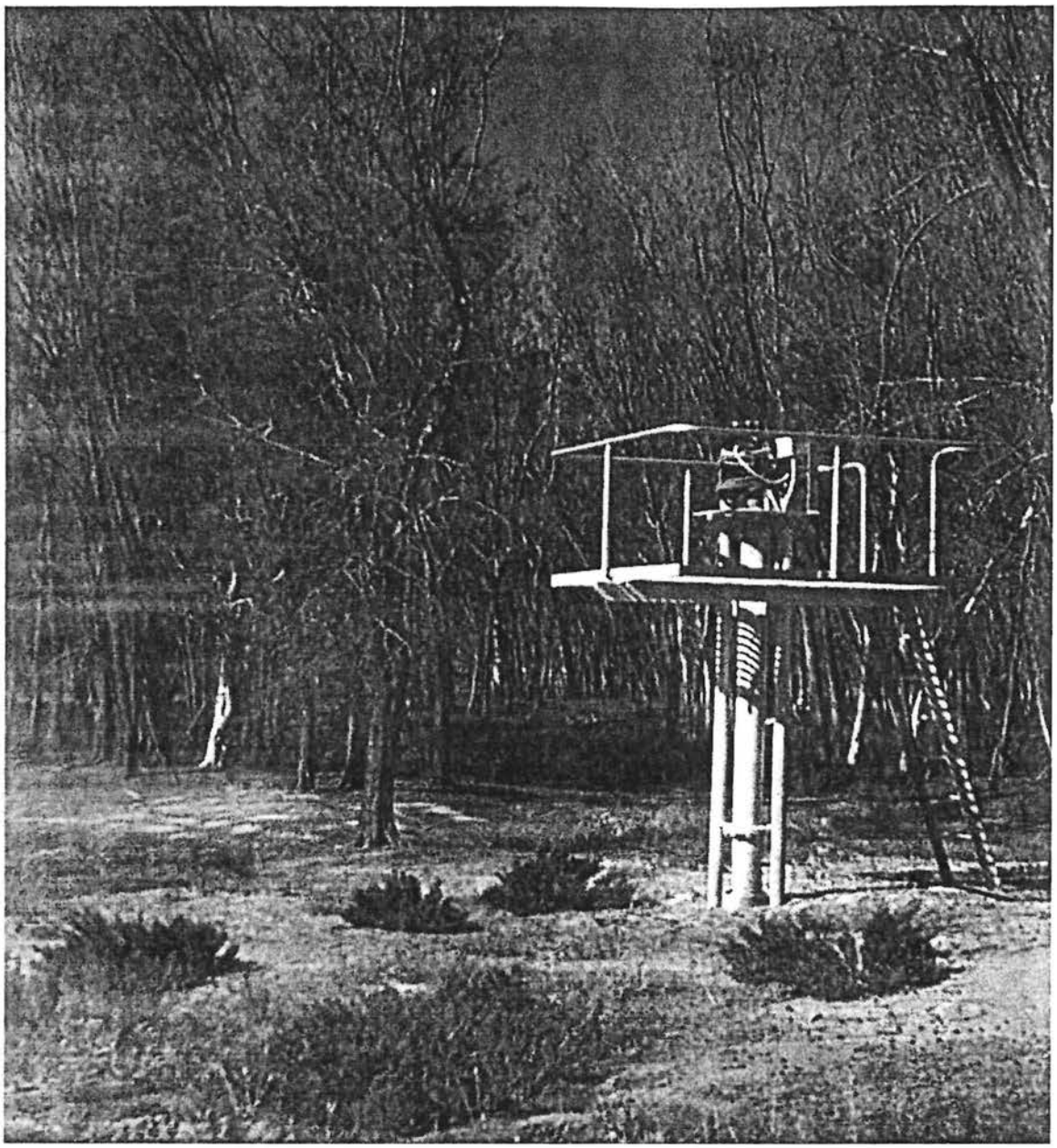
OBJECTIVES

1. Help visitors understand what recreation and interpretation opportunities are available at Toolibin Lake, where to find them and how to appropriately enjoy them.
2. Ensure that signs are appropriate functionally and aesthetically to their settings.

RECOMMENDATIONS[3]

- Replace the *Toolibin Lake Nature Reserve* signs at the north-west and north-east entrances to the nature reserve.
- Install *Toolibin Lake 500m* (or similar) signs to the west and east of the main entrance on Wickepin Harrismith Road, and include on the signs symbols for picnicking and 'i' for information.
- Install a main entrance sign at 2WD access road to include symbols (the standard 'i' for information, a 'bird watching' symbol, 'no camping', 'no dogs').
- Consider installing *No Swimming* sign/s in the vicinity of the inlet channel if required in the future.
- Install a *Danger* sign and warning not to climb the steps up to the platform at Pump 1.
- Incorporate a 'no parking' symbol and 'management vehicles only' message on the removable bollard at the start of the interpretive path. Cut a square face on the bollard to fix the symbols to.
- Install *No Salt* signs at the picnic area. (A symbol of a salt shaker with a red slash through it and text beneath saying NO SALT).

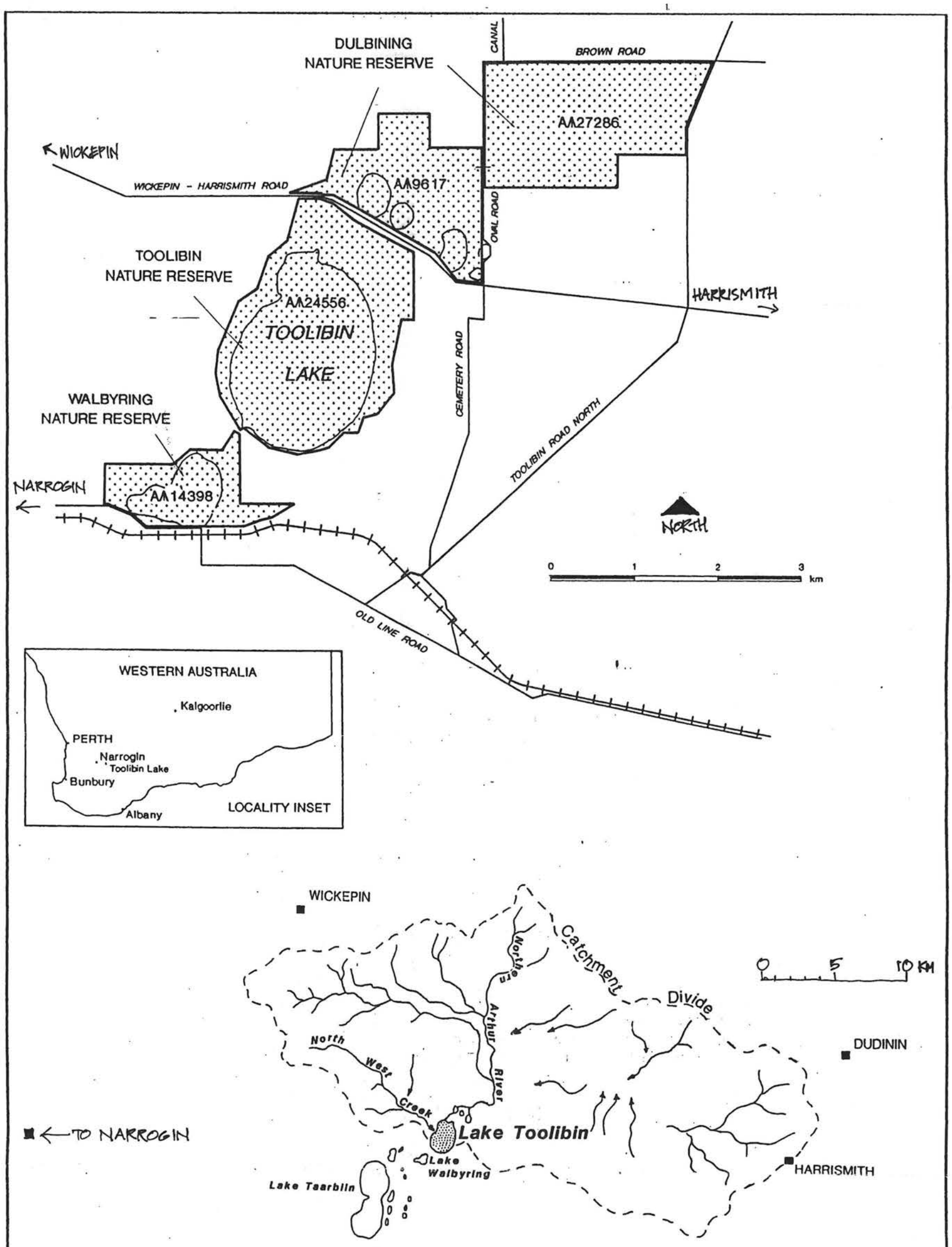
[3] Wording used in the plan should be regarded as preliminary only. More detailed resolution of wording is required.



Groundwater pump (Pump 1) on the bed of Toolibin Lake. The proposal is to take the interpretive path past Pump 1 and tell the groundwater management story with a combination of a display panel and the hardware itself. In addition the Plan proposes that a series of piezometers be installed close to each other in a line from very close to the pump to about a hundred metres distant. The aim is to have floating poles sticking out of the piezometers that will indicate water table depth and demonstrate groundwater draw down resulting from the pumping.



Taarblin Lake, with the Lake bed in the background. The Plan proposes that Taarblin Lake be a part of the Toolibin interpretive drive trail. Vehicles would park in the open area in the foreground of this scene and visitors would walk down to the Lake to look out across its bed. There is potential for an interpretation panel at this site to explain the story behind the death of the Lake's *Casuarina* and *Melaleuca* community.

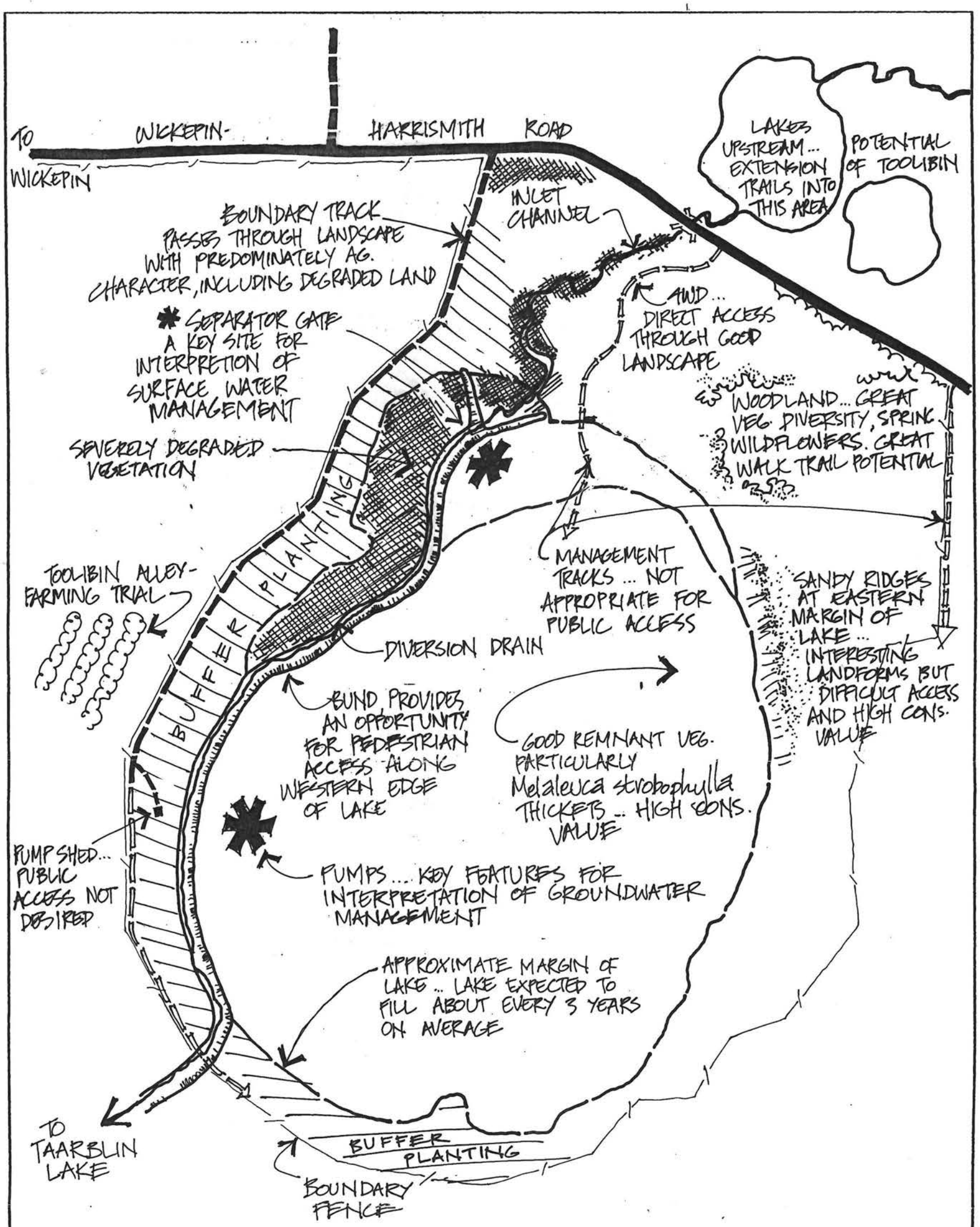


Toolibin Lake
Recreation and Interpretation Masterplan

Location

Conservation and Land Management **January 1999**

MAP 1 Location



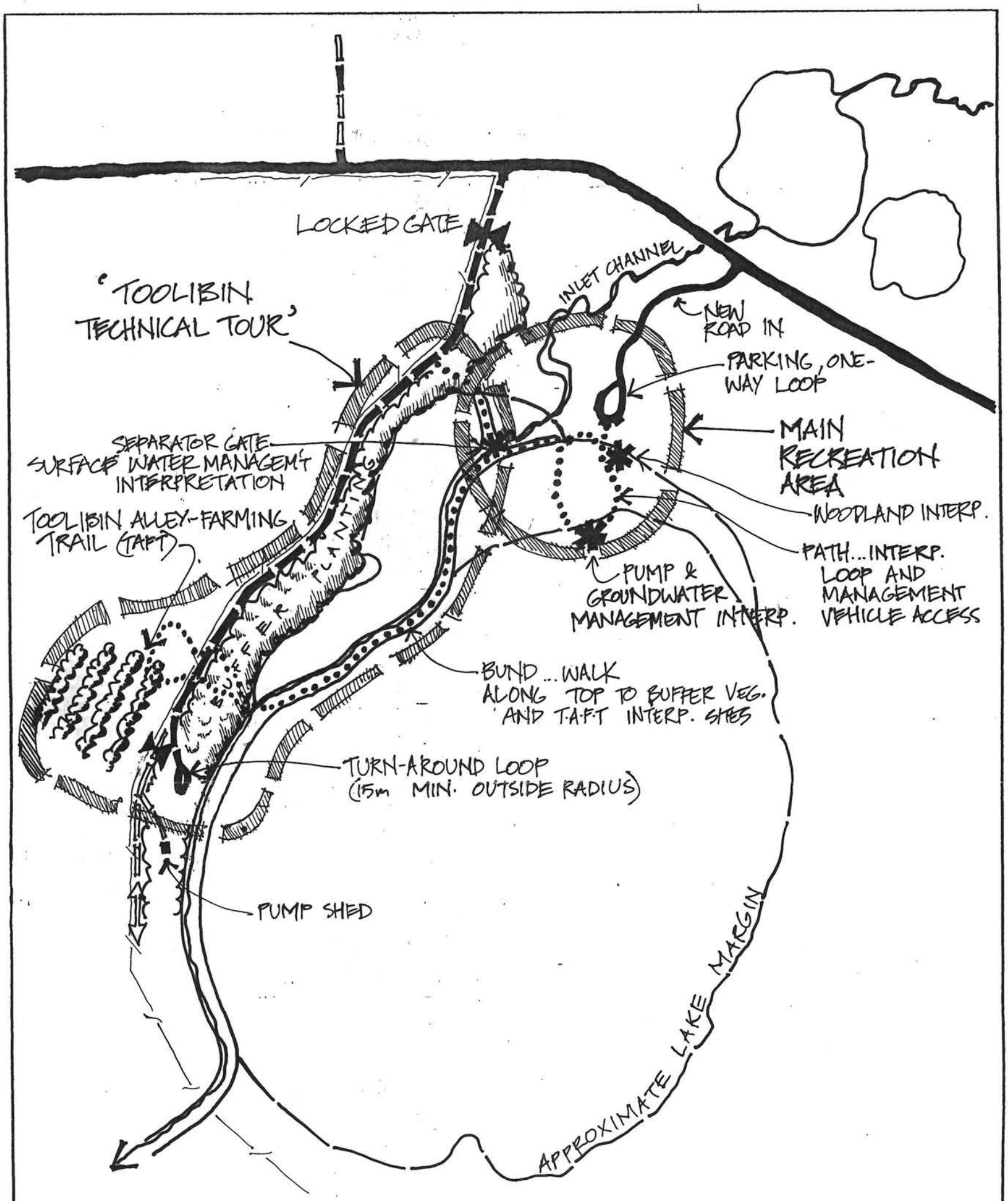
Toolibin Lake
Recreation and Interpretation Masterplan

Site Analysis

0 100M 600M

Conservation and Land Management **January 1999**

MAP 2. Site Analysis



Toolibin Lake
Recreation and Interpretation Masterplan

Masterplan

0 100M 600M

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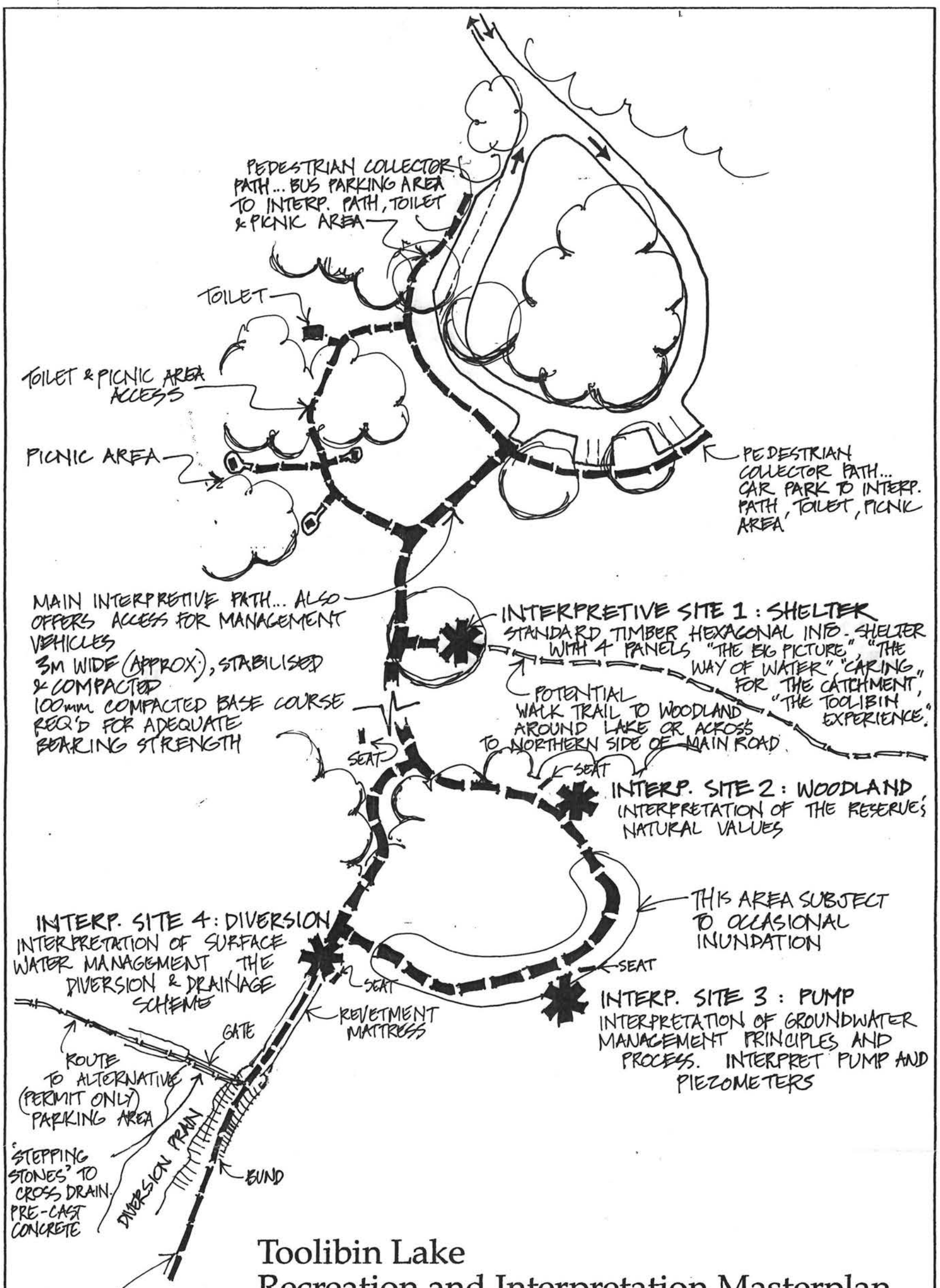
MAP 3. Masterplan



Toolibin Lake
Recreation and Interpretation Masterplan

DETAILS Main Recreation Area

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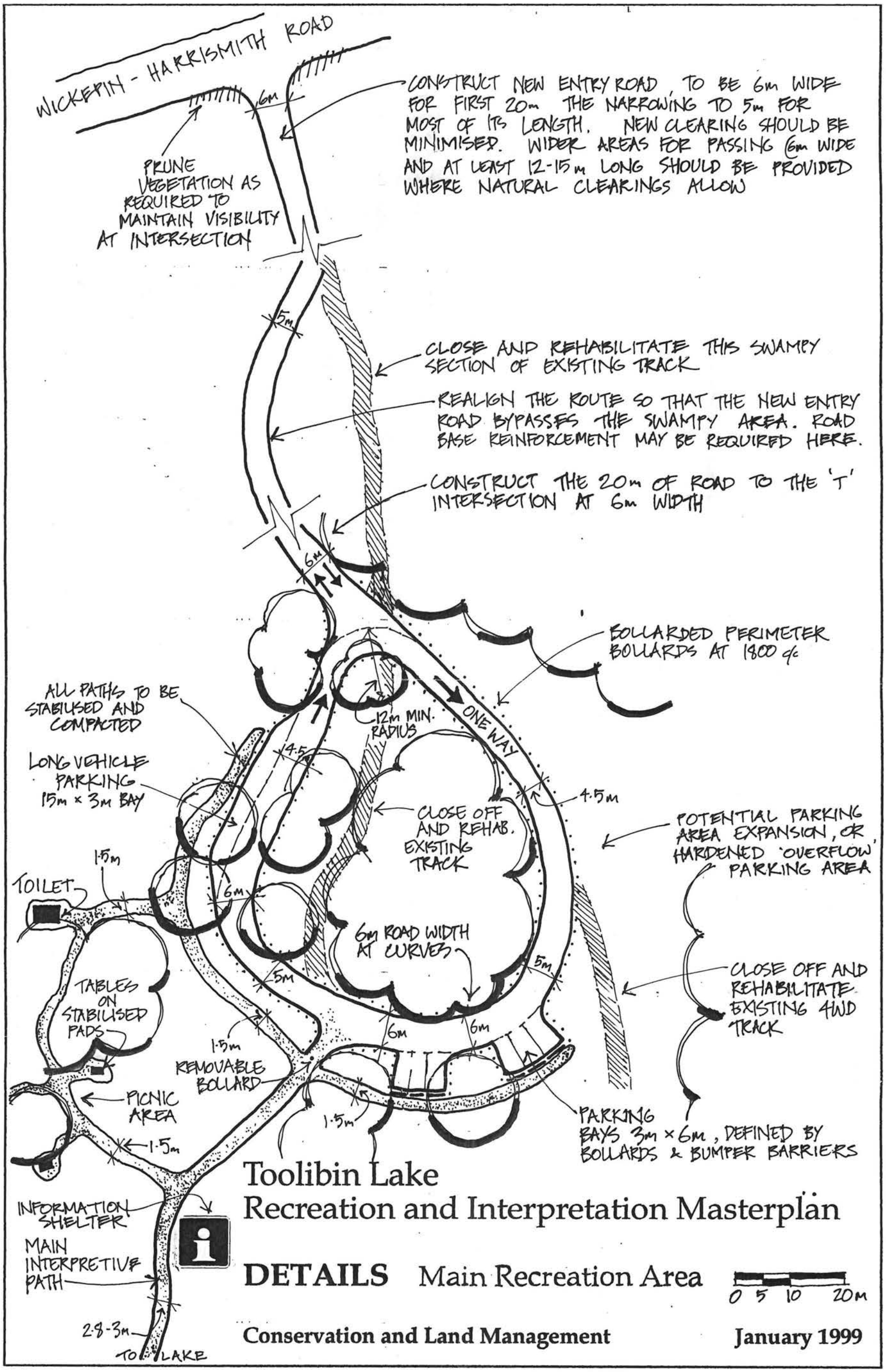
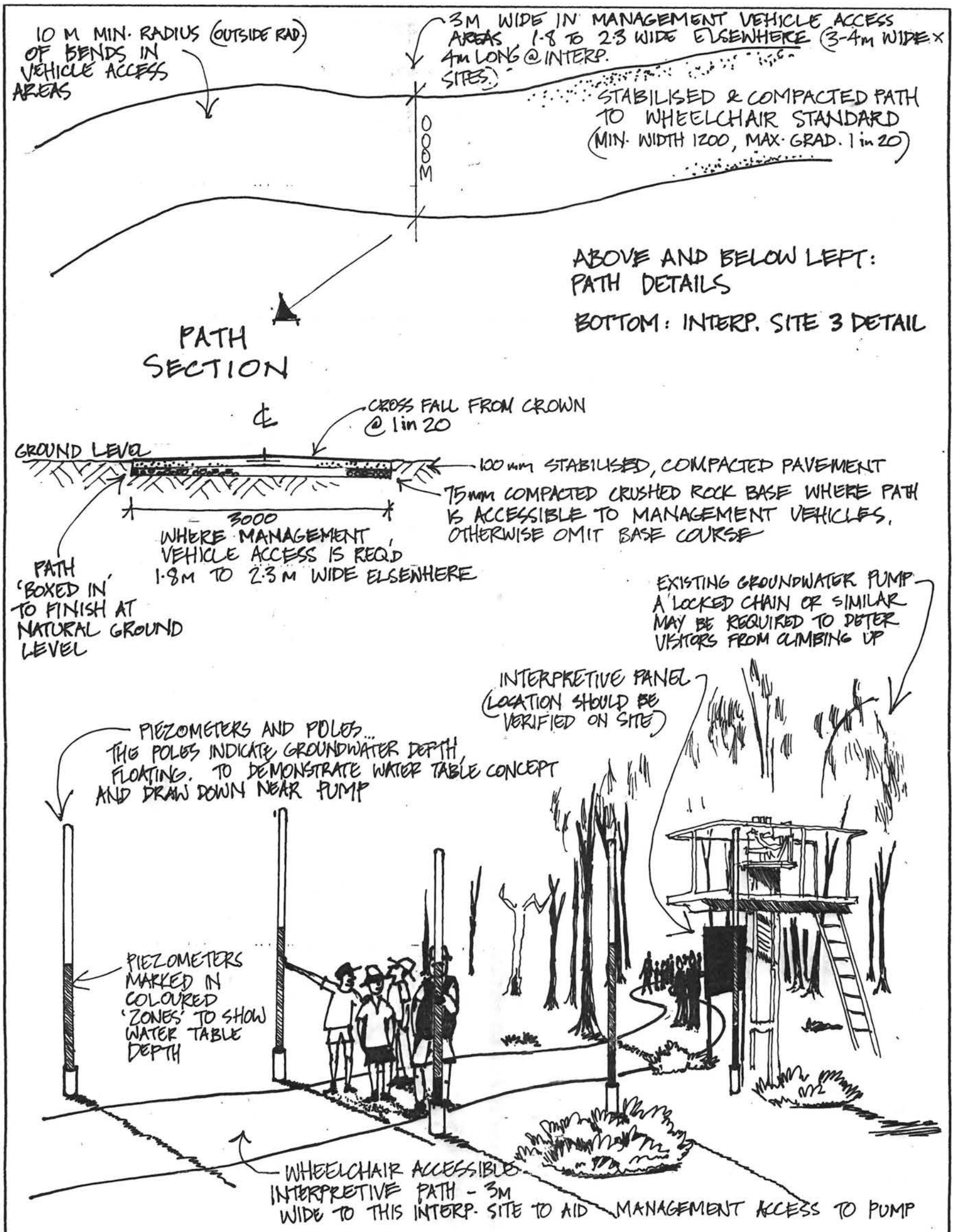
MAP 4 DETAILS
Main Recreation Area



MAP 5 DETAILS
Main Recreation Area



Toolibin Lake
Recreation and Interpretation Masterplan

DETAILS Interp. SITE 3

Conservation and Land Management **January 1999**

SKETCHES