

Burrup Peninsula (Moora Joorga)

Conservation, Heritage and Recreation Areas

Recreation and Tourism Masterplan

DRAFT

September 1998

Department of Conservation and Land Management, in partnership with the
Burrup Aboriginal Council and the Burrup Advisory Committee

**DRAFT BURRUP PENINSULA(MOORA JOORGA)
RECREATION AND TOURISM MASTERPLAN**

You are invited to comment on the proposals outlined in this plan.

If you wish to do so, please provide feed back to CALM's Karratha Office by **14 December 1998**.

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Draft Burrup Peninsula (Moora Joorga¹) Recreation and Tourism Masterplan

EXECUTIVE SUMMARY

INTRODUCTION

Role of the Draft Recreation and Tourism Masterplan

The Burrup Peninsula contains the world's richest known concentration of rock art, has significant cultural and conservation importance, is potentially one of the most important industrial port sites in Australia, and has high landscape, tourism and recreation values. There are a number of long standing industrial leases and a township (Dampier) established on the Burrup. The *Burrup Land Use plan and Management Strategy 1996* addressed uncommitted land north of the Dampier road, and proposed a balance between competing land uses by dividing the Burrup into two broad land use areas: *Industrial Area* and *Conservation, Heritage and Recreation Area*. This Masterplan focuses on the '*Conservation, Heritage and Recreation Area*', an area covering about 60% of that portion of the Burrup addressed in the *Burrup Land Use Plan and Management Strategy 1996*.

The role of the Masterplan is to guide the development and management of recreation and tourism facilities and opportunities so that people can enjoy the Burrup Peninsula's special values, particularly its environmental, heritage and landscape values, without degrading them.

Key Issues

The Masterplan reflects the importance of the following issues.

1. The Peninsula's Aboriginal heritage is diverse and internationally significant, comprising shell and stone tool scatters and middens, stone arrangements, grinding patches, burials, sites of cultural and spiritual significance, and the world's largest known concentration of petroglyphs (rock engravings).
2. The Peninsula's natural environment and landscape values are rich, diverse and unique, and remain largely unspoilt across most of the Peninsula. Its high walls of piled rock, narrow gullies and complex coast create an extraordinary variety of natural 'corridors' and 'rooms'.
3. These values mean that the Burrup represents a recreation and tourism resource and conservation responsibility of world significance. The Peninsula is also valued by local people (mostly from the towns of Karratha, Dampier and Roebourne) as a readily accessible and rewarding recreation area.
4. Visitors to the Peninsula, as is typical of visitors to readily accessible natural areas with diverse characteristics, demonstrate an almost infinite range of recreational preferences. Some recreational activities are more appropriate in an environmentally and culturally sensitive area than others. In some places erosion,

¹ Moora Joorga is a local Aboriginal name for the Burrup Peninsula. Moora Joorga means literally 'hip bone sticking out'. It may be that the name Moora Joorga can be used when the non-industrial areas of the Peninsula are vested... for instance the *Moora Joorga Conservation Park* or *Moora Joorga National Park*.

littering, damage to vegetation and damage to Aboriginal sites and rock art attest to the inappropriateness of some visitors' behaviour. The less appropriate activities are those that are neither based on nor respectful of the Peninsula's special values.

5. Resource industries occupy part of the Peninsula and industrial expansion is planned so. Under the *Burrup Land Use Plan and Management Strategy 1996*, about 40% of the area considered is zoned for and may eventually be occupied by industry. This would potentially result in 55% of the total Burrup Peninsula (or more strictly the island) being townsite or industrial, changing the Peninsula's character from predominantly natural to more developed and industrial.

The Masterplan creates a balance between *allowing or facilitating* public access and recreation, because the Peninsula's values are so enjoyable, and *restricting* recreation because many of the Peninsula's special, rare and irreplaceable values are vulnerable to damage.

Main Components of the Masterplan

- Discussion of **key issues** affecting recreation planning and design to establish a substantial background to the recommendations that follow.
- **A zoning plan** that identifies parts of the Peninsula that have distinctive recreational and conservation characteristics and significance, and recommends how to develop and manage recreation to preserve the zones' special values and to help visitors enjoy those values.
- **A roads and trails plan** that recommends a network of roads and trails that will aid public access to places with various characteristics whilst minimising pressure on sensitive places.
- **Recreation site development plans** for several sites in various parts of the Peninsula that indicate how to facilitate more intensive, accessible recreation whilst protecting cultural, landscape and environmental values to the highest degree possible.
- Discussion of other planning, design and management requirements and options, including *Aboriginal heritage protection* and '*cultural tourism*' development, possibilities for contemporary *Aboriginal cultural involvement* in management and providing recreation and tourism opportunities, *environmental protection*, *visitor risk management*, *visitor information and interpretation*, *landscape management*, and *implementation*.

SUMMARY OF RECOMMENDATIONS

Vision

Opportunities to enjoy the diversity and quality of the Burrup Peninsula's Aboriginal heritage values, natural environments and recreational character will be maintained in perpetuity by appropriate public access, protection and education.

Key Recreation Planning and Design Proposals

The following is an introduction to proposals that are discussed and illustrated in greater detail in the Draft Masterplan.

All of the proposals to follow have been discussed amongst many key stakeholders, including an advisory council of local Aboriginal people, and have received provisional endorsement. Further design, and any actual site developments must be preceded by Aboriginal heritage surveys and discussion with the 'Burrup Council' and the wider Aboriginal community.

Any of the following proposals may be restricted if adequate protection of Aboriginal heritage values can not be assured.

A NEW ROAD TO CONZINC BAY

The Masterplan proposes that a sealed road be constructed from the present end of Burrup Road near the Woodside plant at Withnell Bay, to Conzinc Bay. The Map at the end of the Summary indicates the proposed alignment.

The aim is to help local people and tourists access the delightful Conzinc Bay coast quickly and easily for swimming, fishing, walking and picnicking. In time it is hoped that greater access to the Conzinc Bay area will also help foster recognition of its special recreational, scenic and cultural values, and encourage public participation in the protection of those values.

TWO NEW RECREATION SITES AT CONZINC BAY

The Masterplan proposes that the new road lead to two new parking and beach access sites. The sites are designed to offer easy access to the best Conzinc Bay beaches whilst preserving the Bay area's natural scenery and minimising disturbance of environmental and heritage values both during development and under the pressure of ongoing recreational use.

The northernmost site, 'Conzinc Creek' is designed to accommodate about 30 cars. The Masterplan also proposes a toilet, staircase and path access to the beach, and ways of protecting nearby rock art from damage by visitors.

The southern site, 'Conzinc Beach' is a larger site designed to accommodate up to about 50 cars. A toilet and beach access steps and paths is proposed there also, plus picnic facilities like shade shelters, tables and gas barbecues.

Camping will not be allowed at these sites and visitors will be encouraged to take their rubbish away with them.

A NEW ROAD TO HEARSON COVE

The existing road to Hearson Cove transects an area that was proposed in the 1996 *Burrup Peninsula Land Use Plan and Management Strategy* as an industrial area. If the area is developed for industry the road will have to be reconstructed elsewhere. The Masterplan proposes that the road be constructed along the foot of the northern edge of the 'Pistol Ranges' and that the industrial area boundary be revised so that the new road effectively forms the southern boundary of the industrial area.

REDEVELOPMENT OF THE HEARSON COVE RECREATION SITE

The Masterplan proposes a redevelopment to enable better protection of environmental values whilst preserving the character of this long-used recreation site and upgrading recreation facilities. A toilet is proposed, and fencing along the dune inland of the beach to discourage visitors from testing their four-wheel-driving abilities on this fragile dune. Otherwise the site is intended to function as it presently does, with an accessible, 'user-friendly' character.

AN UPGRADE TO THE WITHNELL BAY BOAT RAMP

The Masterplan proposes that boat launching facilities at Withnell Bay be upgraded to facilitate boat access to nearby waters, complementing the ramps at Dampier. The Withnell Bay site is restricted in size and may be constrained by Aboriginal heritage sites and possible future industrial development. The facility is therefore designed for use by small boats only (to about six metres, as at present), with parking for about thirty cars with trailers plus another dozen cars. The plan indicates a new road, a 'formal' parking area, a new ramp, a toilet, rubbish bins and visitor information.

A NEW ROAD TO COWRIE COVE

A new road is proposed from near Hearson Cove to Cowrie Cove. The road aims to facilitate the launching of small boats at the existing 'natural' high-tide boat ramp at Cowrie Cove, whilst minimising conflict with proposed future industry along the Hearson Village Road. The proposed road is unsealed 2WD standard.

DEVELOPMENT OF A 'CULTURAL TOURISM' SITE AT DEEP GORGE

The Masterplan proposes a 2WD road, parking area (for about ten cars and up to four long vehicles) and path to enable easy access to an Aboriginal site. The Deep Gorge site has a history of public visitation. It is typical of the Burrup's internationally significant cultural heritage sites, with an incredible variety and density of petroglyphs and other features like grinding patches and shell and stone tool scatters.

A MORE 'REMOTE' RECREATION AREA IN THE NORTH-WEST BURRUP

The Masterplan proposes that the north-west Burrup, that is the area west of the 4WD track from Conzinc Bay north up to Searipple Passage, be maintained as a semi-remote, 4WD accessible recreation area. The aim is to maintain recreational access as long as environmental and heritage values and the area's secluded, natural recreational character remain unthreatened.

The development of the Conzinc Bay road is expected to lead to an increase in vehicle traffic in the north-west Burrup area, which may threaten the area's environmental and cultural values. In that case vehicle access to the north-west Burrup is likely to be further restricted. The plan discusses alternatives for recreational access to the north-west Burrup, including permit access only, guided access only, or walk and cycle access only.

ACCESS RESTRICTIONS

In addition to proposing some new roads and trails the Masterplan also proposes a number of road and track closures. In some cases, like the Hearson Cove Road and Hearson Village Road, the closures indicated in the plan will only occur if proposed industrial developments occur and constrain public access. In both of those cases alternative routes are proposed.

In other cases, for example several 4WD tracks along the Conzinc Bay coast, tracks will be closed to address degradation of important Aboriginal sites or sensitive natural environments. In most cases alternative tracks exist that access the same destinations but avoid the sensitive areas. In some cases, like the Cowrie Cove to Watering Cove mud flats, vehicle access will be stopped altogether. Again the aim is to address existing degradation of natural areas and Aboriginal sites. The 'remote' recreational character of those areas will be preserved intact and indefinitely.

Recreational access on foot or by boat will not be restricted. Other large areas proposed as vehicle free include the northern Burrup, most of the 'Pistol Ranges' and, as discussed above, the north-west Burrup in the longer term.

Key Recreation Management Recommendations

A FULL TIME MANAGEMENT PRESENCE

Much of the Burrup Peninsula is rugged enough to withstand recreational pressures without help, however to ensure that the Peninsula's more sensitive environments are appropriately respected and enjoyed a full time management presence is proposed. A Ranger In Charge and an assistant Ranger responsible primarily for Aboriginal heritage protection is proposed in the Masterplan.

PROVISION OF RECREATION AND TOURISM FACILITIES AND SERVICES

The Masterplan proposes several facilities and services other than those discussed above. The primary service is a visitor centre. The visitor centre aims to provide a focus for visitors who seek experiences of the Burrup that they would not otherwise be able to enjoy. In addition the visitor centre can serve as a gateway to the Burrup's natural areas, providing an important opportunity for the Peninsula's managers to convey information about the Peninsula and how to safely and responsibly enjoy it.

It is envisaged by CALM and local Aboriginal people that both groups will be partners in the visitor centre; with CALM providing information and interpretation services to foster an appreciation of environmental issues and guide recreation activities, and local Aboriginal people helping visitors experience the Burrup's world class cultural heritage values and aspects of contemporary Aboriginal culture.

RECREATION MANAGEMENT REGULATIONS

The Masterplan recommends that the Conservation, Heritage and Recreation Area of the Burrup Peninsula be vested such that a broad spectrum of recreation opportunities can be enjoyed by visitors, and visitors' activities can be effectively managed to ensure protection of environmental, heritage and recreational values. *National Park* would be an appropriate class of tenure.

It is also recommended that regulations be developed, through a partnership between CALM, local Aboriginal people and the WA Museum, for the protected areas (Aboriginal Heritage Act 1972) on the Burrup Peninsula to pursue the most effective means possible for protecting those areas.

CONCLUSION

The Draft Burrup Peninsula Recreation and Tourism Masterplan is a simple plan that aims to ensure that public enjoyment of the Peninsula can continue indefinitely without recreational pressure leading to degradation of the very values that most visitors seek.

The Burrup Peninsula's international significance sets it apart from other communities' 'natural playground' areas. Residents and visitors are fortunate to have access to a place that is revered by rock art experts throughout the world, where nature-based and coastal recreation opportunities abound as well. They also have a responsibility to 'tread lightly' on the Burrup to ensure that those values are protected in perpetuity as world heritage.

Through strategies like zoning, restricted vehicle access, appropriate recreation site design and partnerships with local Aboriginal people it seems likely that a wide variety of recreation and tourism opportunities can be maintained, and the Burrup's inherent values protected.

Draft Burrup Peninsula Recreation and Tourism Masterplan

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PREAMBLE

The Burrup Peninsula, or Moora Joorga¹ is situated on the Pilbara coast near the towns of Karratha and Dampier (see Map 1, *Location*). The Peninsula's Aboriginal heritage, natural environments and scenery are of international significance. The petroglyphs (Aboriginal rock art) are, at a global scale, the most significant of all the Burrup's values.

The Peninsula has also, since the 1960's, been a focus for natural gas, salt and iron ore industries. The North West Shelf LNG Project remains the largest capital infrastructure development to date. The *Burrup Peninsula Land Use Plan and Management Strategy* (1996) encourages a level and diversity of industrial activity on the Burrup that is far beyond the present.

Industrial growth is accompanied by population growth and an increase in pressure on recreation areas. Recreation is already contributing to significant degradation of some natural areas and Aboriginal heritage sites.

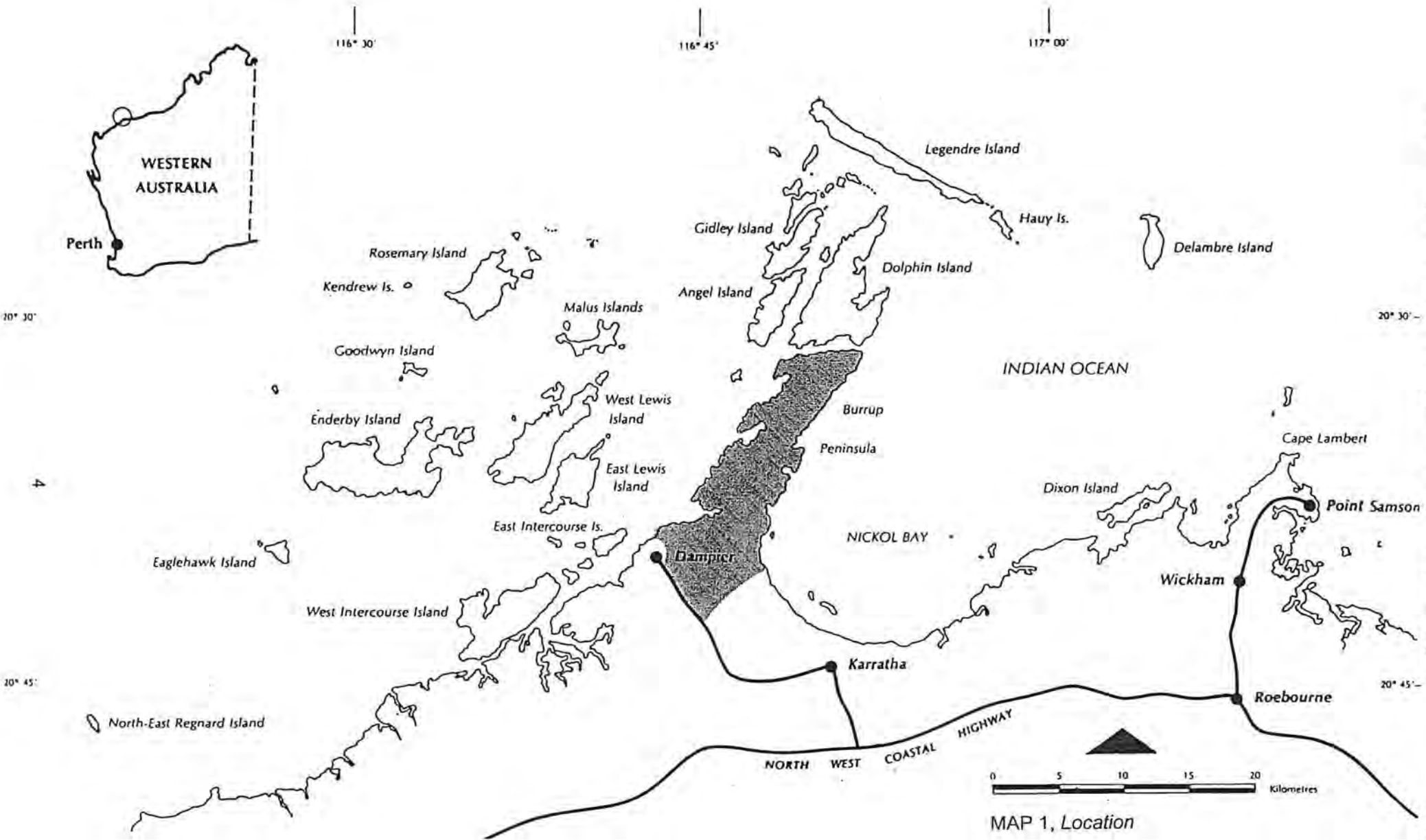
The threat of physical damage to the Burrup's natural environments and Aboriginal heritage is not the only serious threat. Over time recreational use of natural areas tends to alter the character of those areas, so that areas that were once remote gradually become more accessible and their character becomes less 'wild' and more 'developed'. The same process threatens the wild places on the Burrup.

CALM's recreation planning should protect environment and heritage, provide facilities and services for recreation and tourism, and preserve the wildness and mystery of the Burrup's more remote recreation settings.

At the time of writing the issue of which authority will ultimately be responsible for management of the Conservation, Heritage and Recreation Area of the Burrup is unresolved. When the Area is vested it is envisaged that a management plan will be prepared, with a broader scope than this plan.

CALM hopes that this Recreation and Tourism Masterplan, in addition to guiding the development and management of recreation in the immediate term, will provide effective guidance for whoever is to look after the Burrup in the long term.

¹ Moora Joorga is a local Aboriginal name for the Peninsula. The name literally means hip bone sticking out.



MAP 1, Location

PART ONE

INTRODUCTION TO THE PLAN

Role of the Plan

The plan focuses on guiding the development and management of recreation and tourism opportunities. It mainly reflects CALM's *Recreation and Tourism Strategy* (1996-2000) and the 1996 *Burrup Peninsula Land Use Plan and Management Strategy*.

The *Land Use Plan and Management Strategy*, which was endorsed by Cabinet in 1997, contains a zoning scheme that divides the Peninsula into an *Industry Area* and a *Conservation, Heritage and Recreation Area*. The Recreation and Tourism Masterplan focuses on the '*Conservation, Heritage and Recreation Area*'. (See Map 2).

Normally CALM's recreation planning is preceded by management planning that addresses a wider range of issues than recreation and tourism. It is not intended that this plan achieve what a Management Plan would. A Management Plan should be prepared for the Peninsula when the vesting of the Conservation, Heritage and Recreation Area is resolved.

Study Area

The Burrup Peninsula is situated on the Pilbara coast near the towns of Karratha and Dampier (see Map 1, *Location*). The study area is the *Conservation, Heritage and Recreation Area* (see Map 2, *Burrup Peninsula Land Use Plan*) within that part of the Peninsula that is north of Dampier and the Karratha-Dampier road and rail corridor.

Scope of the Plan

The Plan undertakes to:

- identify and discuss key recreation planning and design *issues*
- involve relevant *stakeholders* in recreation planning and design
- identify *opportunities* for recreation and tourism
- identify factors that *constrain* recreation and tourism or the further development of recreation and tourism opportunities
- provide a *vision* for recreation on the Burrup that reflects key issues, opportunities and constraints
- develop *objectives* that together will help achieve the overall vision
- outline planning and design *strategies* for achieving those objectives
- develop a Recreation and Tourism *Masterplan*: a plan for the provision of recreation and tourism opportunities in the immediate to long term
- identify issues for further study and opportunities or requirements for further planning

Project Team and Contributors

The project has been coordinated from CALM's Pilbara Region office. CALM regional staff prepared the plan with help from various people and groups from outside CALM, including the following:

The **Burrup (Aboriginal) Council**, was formed in March 1998. Members were elected at a meeting of the Ngaluma and Injabandi community for the purpose of entering into a joint management arrangement with CALM, who has temporary control of the conservation areas pending future vesting. The Council consists of ten members, two consulting elders and four proxy members. The role of the Burrup Council is to provide an effective mechanism for Aboriginal people to be involved in the planning and management of the area. Members have had direct input into the plan and have assisted in the dissemination of information and recreation planning ideas amongst the wider Aboriginal community and provided feedback from the community. Liaison between CALM and the Council was assisted by the Aboriginal Legal Service (ALS) and ALS representatives were usually present when CALM and the Burrup Council met. If future vesting confirms CALM's ongoing involvement, such joint management arrangements will continue.

The **Burrup Advisory Committee**, formed in March 1998. The Committee is comprised of representatives from CALM, Dampier Salt, Shire of Roebourne, Hamersley Iron, Woodside (North West Shelf Joint Venture), the Gorgon (WAPET) gas project, Karratha and Districts Tourist Information Centre and the Department of Resource Development (DRD). A forum for discussion of key issues and ideas between CALM and main non-Aboriginal stakeholders.

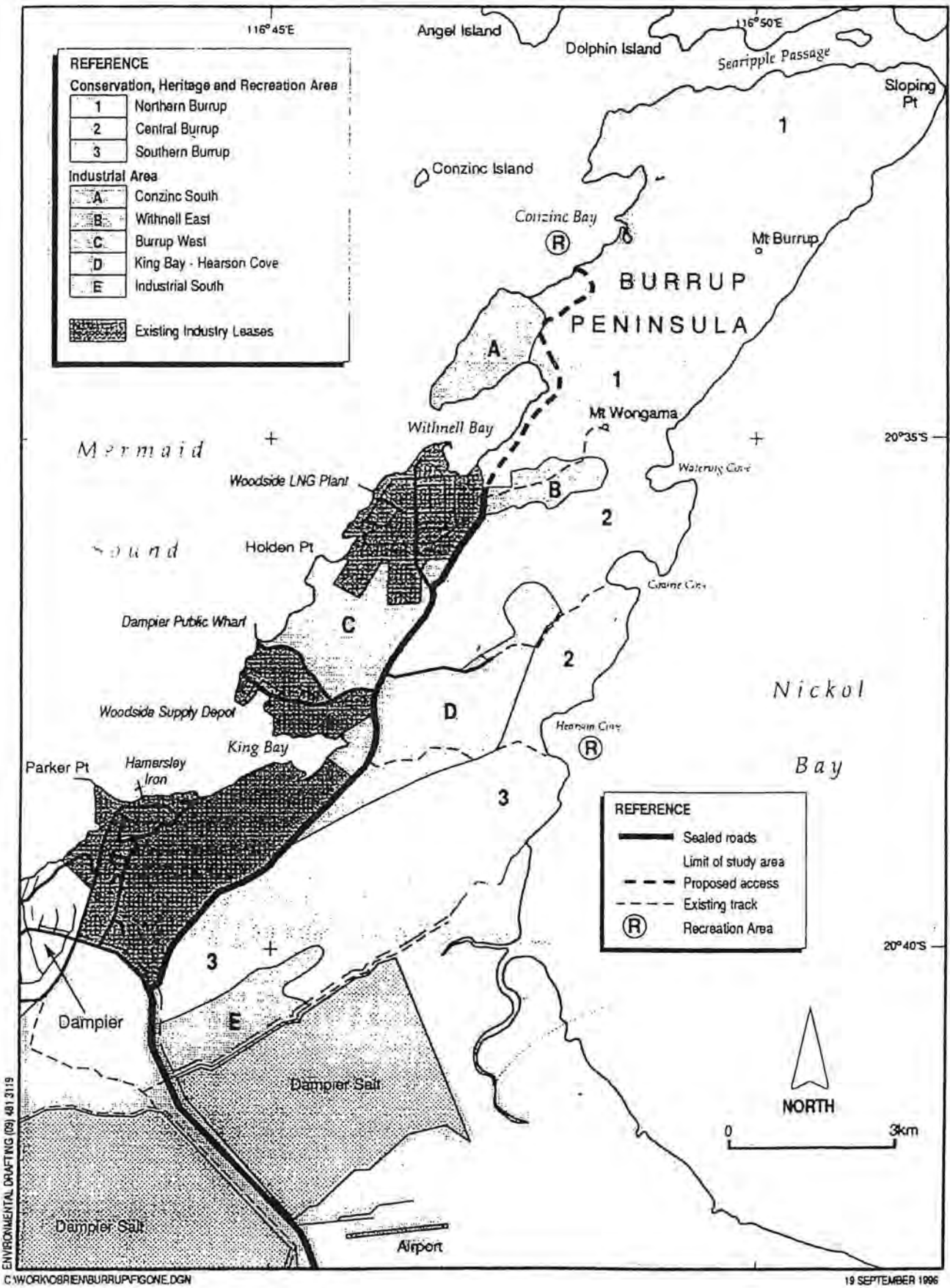
Other stakeholders that have contributed at different times include: Environmental Protection Authority (EPA), Department of Environmental Protection (DEP), National Parks and Nature Conservation Authority (NPNCA), CALM Corporate Executive and Parks, Planning and Tourism Division, RECFISHWEST, local community, Aboriginal Legal Service (ALS), Aboriginal Affairs Department (AAD),

Using the Plan

The *Executive Summary* presents the plan's main features and recommendations in the light of a basic explanation of key recreation and tourism planning issues.

Part 2, Key Issues provides background information on the issues that most affect recreation and tourism opportunities and constraints, and presents objectives relating to those issues.

Part 3, Objectives and Recommendations reiterates objectives and recommends how to achieve those objectives by applying planning, development and management strategies and implementing specific, 'bite sized' actions.



BURRUP PENINSULA LAND USE PLAN

MAP 2, Land Use Plan & Management Strategy (1996)

PART TWO

KEY ISSUES AND OBJECTIVES

This section aims to discuss the issues of greatest relevance to recreation planning, design and management.

Aboriginal Heritage Protection and 'Cultural Tourism'

Aboriginal heritage values include the petroglyphs, which, at a long term global scale, are arguably the most significant of all the Burrup's values.

- *The Burrup Peninsula contains the highest known concentration of petroglyphs (rock carvings) in the world.* Also numerous other sites of various types including middens, artefact scatters, quarrying and tool-making sites, burials, grinding patches, standing stones and other stone arrangements. (See Map 3, *Aboriginal Heritage Sites*, source: Veth *et al.*, 1993).
- Aboriginal people are thought to have occupied the Burrup for at least 20,000 years (Veth *et al.*, 1993, p73). The antiquity of rock art has not been definitively established but estimates suggest thousands of years. A new effort to obtain dates for petroglyphs is being planned at the time of writing.
- Some places and features are culturally or spiritually sensitive and not to be visited by just anybody. (Veth *et al.*, 1993) In aboriginal culture, visits to unfamiliar country are thought to be dangerous for Aboriginal and non-Aboriginal people alike because of the risk of unknowingly causing sacrilege to a powerful place.
- Many people, both Aboriginal and non-Aboriginal, are proud of the remnants of Aboriginal culture that occur on the Burrup and want to help visitors understand and enjoy some of them (Veth *et al.*, 1993; WATC 1997; Ngurra Wangkamagayi Business Plan, 1997). Awareness of the importance of the Burrup's Aboriginal heritage values is poor. Greater awareness achieved through appropriate public access and interpretation may promote greater appreciation and an informed desire for protection.
- Some heritage sites are vulnerable to disturbance or damage from visitors: many shell and stone artefact scatters are at risk from souvenir hunters, as are petroglyphs on rocks that are portable. Some petroglyphs have been affected by graffiti or attempts to chisel them out of the rock that they are in. Sites in vehicle-accessible areas are most vulnerable.
- All Aboriginal sites are protected under the Aboriginal Heritage Act (1972) and some parts of the Burrup have been declared protected areas² under the Act. Present and proposed listed and protected areas are shown in Map 4, *Burrup Peninsula Protected Areas*. (Source: Veth *et al.* 1993)

² Protected area status allows special regulations to be formulated for the area. Regulations might cover access to the protected area, rights to take photographs in the area and so on. Under the Act regulations for protected areas are set by the trustees, who typically are Aboriginal people recognised by the Aboriginal Affairs Department as having the right to speak for a particular area. No specific regulations have been formulated for any of the protected areas on the Burrup to date.

- It is not just the heritage itself that is important. The natural land around heritage sites is an essential part of sites' identity and power. Large areas of land like the 'Pistol Ranges', if preserved intact, clearly express physical, economic and spiritual relationships between people and natural environment.
- The Burrup Peninsula's Aboriginal heritage provides an internationally significant resource for research.

(Further reading: Veth *et al.* 1993, *Burrup Peninsula Aboriginal Heritage Project*; Vinnicombe 1997, *King Bay-Hearson Cove Aboriginal Heritage Survey*)

objectives

- Protect Aboriginal heritage values.
- Help visitors understand and enjoy some of the Peninsula's Aboriginal heritage.
- Minimise risks of visitors inadvertently causing sacrilege to powerful places.

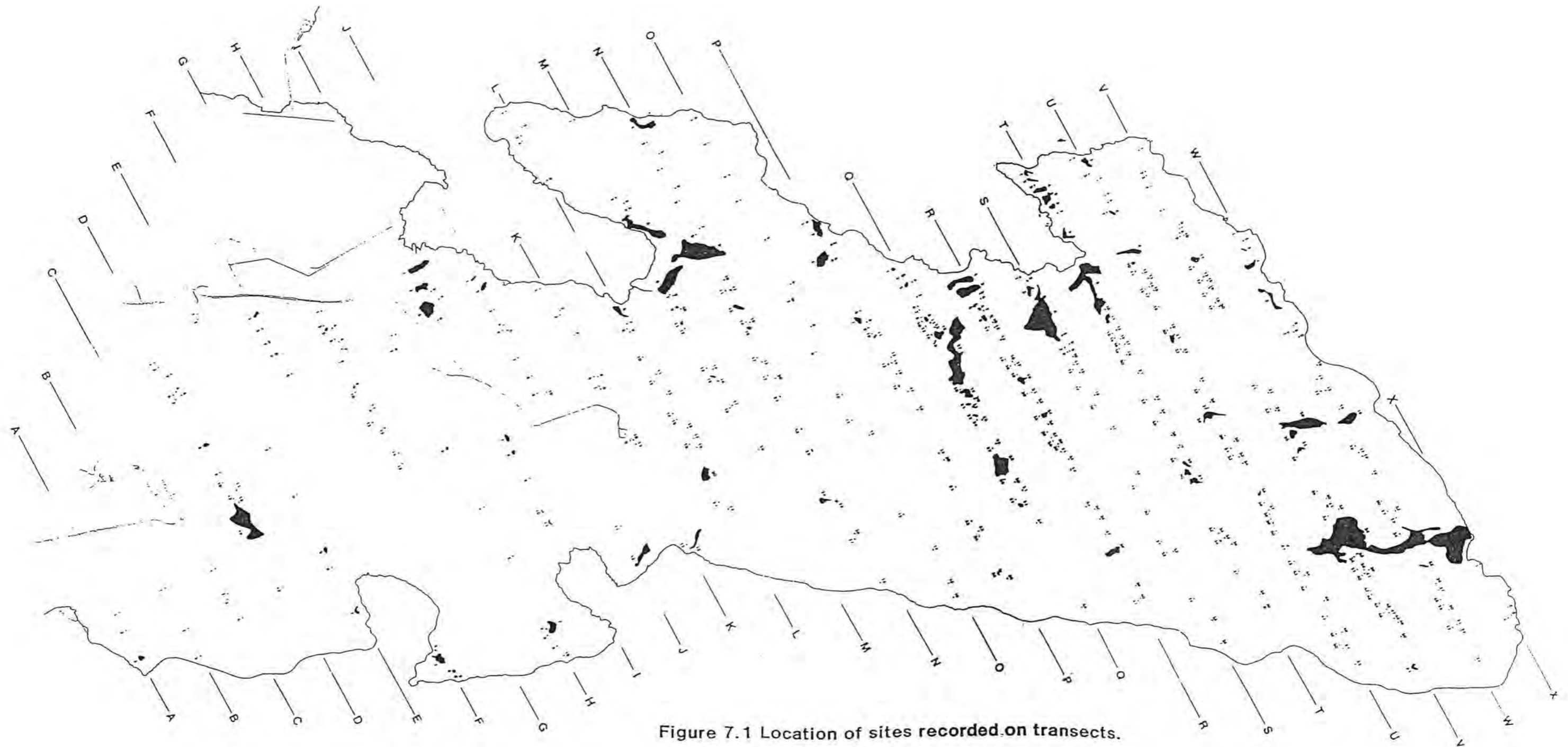


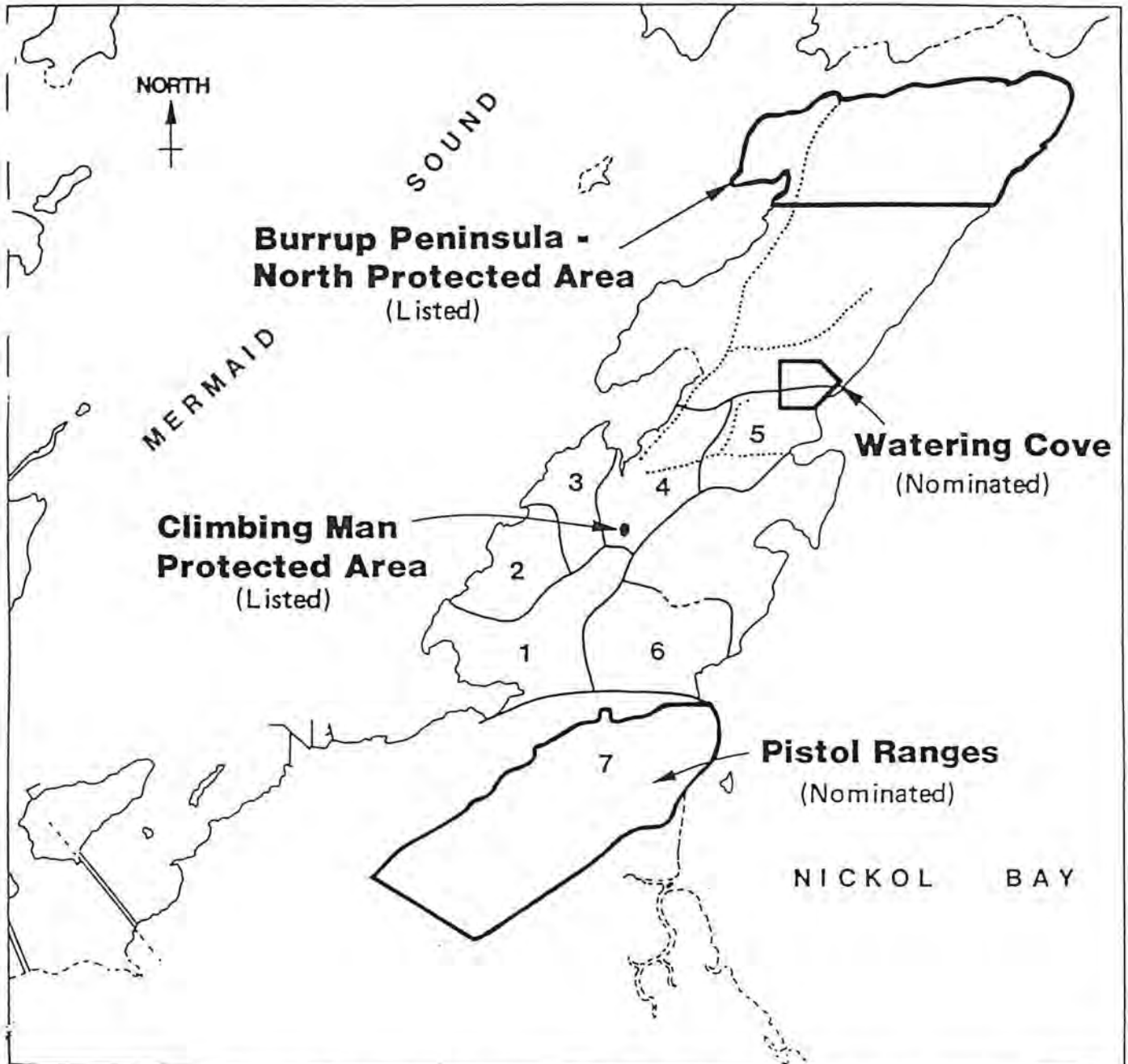
Figure 7.1 Location of sites recorded on transects.

Map 3 shows Aboriginal Sites surveyed in the 1993 Burrup Peninsula Aboriginal Heritage Project. The survey consisted of 20m wide E-W transects at 100m intervals throughout the area indicated on the map. Thus 20% of the N Burrup was surveyed, allowing predictions to be made of site distribution, size and density in unsurveyed area. The map indicates the high density of sites and large size of some sites.

MAP 3, *Aboriginal Sites (Veth et al 1993)*

Map 4 Existing and Proposed Protected Areas

(source, Veth et al. 1983)



Location of Protected Areas. Nominated areas to National Estate; Watering Cove and Pistol Ranges. (SOURCE: VETH ET AL. 1995)

Ongoing Aboriginal Involvement

Although traditional Aboriginal culture and language have long been displaced from the Burrup local Aboriginal people continue to visit the Peninsula, and its future is an issue of concern for many. There is a desire amongst many Aboriginal people to retain cultural ties with the Burrup, and continue to look after it. Joint management with CALM is proposed if the land is suitably vested.

- Many Aboriginal and non-Aboriginal people are proud of the Burrup's Aboriginal heritage and feel that it offers world-class 'cultural tourism' opportunities, although tourism opportunities are regarded as secondary to heritage protection.
- Aboriginal people see themselves as well placed to help visitors to the Burrup experience Aboriginal heritage and contemporary Aboriginal culture.
- Local Aboriginal people see themselves as having an understanding of land that can aid CALM's land use planning and management.
- At the time of preparation, two claims for Native Title were current covering the Burrup Peninsula, a Ngarluma-Indjibundi claim and a Martuthunira claim. Whilst this plan has been prepared in consultation with claimants, issues relating to native title have not been specifically addressed during its formulation. Recreation and tourism planning and management is considered necessary immediately for the long term protection of the area regardless of who ultimately becomes responsible for the land. Where construction or other activities may potentially impact native title, appropriate process will need to be followed.

objectives

To provide opportunities for local Aboriginal people to:

- be directly involved in the management of the area
- strengthen cultural ties with the Burrup
- help visitors enjoy cultural heritage and contemporary Aboriginal culture
- gain significant income, employment and satisfaction from recreation and tourism on the Burrup
- help protect Aboriginal sites from damage or disturbance
- help minimise the risks of having people accidentally causing sacrilege to spiritually powerful places
- help plan recreational activities and facilities on the Burrup and help manage recreation from day to day

Industry

The Burrup Peninsula is one of Australia's most significant resource-industry locations. Industrial growth is planned to continue in the future. Many local people are in some way associated with industry, are proud of local industry and supportive of industrial growth. There is also opposition to plans for industrial growth on the Burrup on the grounds that industrial land use is inappropriate in an area with internationally significant heritage, environmental and landscape values. (See Map 2).

Industry can impact both positively and negatively on recreation and tourism. Effects include the following:

- **Visual impacts.** The scenery in the southern part of the Peninsula will tend to become more industrial than natural in character. Even in the northern Burrup natural landscape views to the south will tend to be degraded by an industrial background. (See also 'Landscape Management' Section)
- **Light.** The night sky over much of the Burrup is often affected by light from industry, detracting from the sense of naturalness that characterises that area.
- **Odour.** Whilst industrial odour is not presently considered an issue on the Burrup it may become so if plans are implemented to develop a petrochemical industry precinct in the Hearson-King Bay Industrial Area. The effects are most likely to be noticed at Hearson Cove, which is heavily used during westerly winds (summer seabreeze), at which time the beach is downwind of the proposed industrial area.
- **Noise.** The sounds of industry, including vehicular traffic, are evident throughout the central Burrup (Hearson Cove to Watering Cove and Withnell Bay) and are noticeable throughout much of the natural areas of the Peninsula, particularly at night. Noise detracts from the wilderness character of otherwise undisturbed areas.
- **Access.** Industrial development has made Burrup far more accessible through the construction of sealed roads.
- **Loss of access to recreation areas.** For example Holden Point, a site proposed for future LNG projects, where access to two popular beaches has been constrained by industrial activity. The main consequence apart from the direct loss of access to the affected area is that people are displaced to other recreation areas, placing extra pressure on previously less used places.
- **Public risk.** Discussed separately below.
- **'Industrial Tourism' values.** Many visitors to the Burrup enjoy seeing and learning about the Burrup's industries³. In some cases the contrast between natural and industrial scenery is dramatic and intriguing and enhances the character of both scenery types. All of the major Burrup industries have information and interpretation facilities and services for visitors, and intend to maintain those.
- **Demand for recreation opportunities** is affected by industrial activity. Industrial growth results in population growth, with a corresponding increase in pressure on recreation settings. During the construction phases of

³ Woodside Visitor Centre had 26,000 visitors in 1997.

industrial projects the local population can grow by thousands⁴. Itinerant workers have historically displayed less regard for environmental and cultural sensitivities (Butler, 1984). Industries are responsible at least in part for the conduct of their workforces, and major companies on the Burrup have demonstrated a willingness in the past to influence behaviour through induction, education, and employment policies. All companies should accept this responsibility in the future.

objectives

- Provide recreation opportunities for an expanding local population.
- Have companies foster respect for the Burrup's cultural and natural values amongst both their permanent and itinerant workforces through induction, education and employment policies.
- Encourage and assist industries to pursue best practice in minimising impacts on the Burrup's landscapes, natural environments and Aboriginal heritage.
- Encourage and assist Burrup industries to maximise the positive, 'sculptural' and monumental characteristics of their installations.
- Assist industries in prioritising sponsorship of programs for enhancement of the Burrup's environmental, cultural and recreational values.

Public Risk from Industry⁵

There is potential for the risks that industries pose to extend outside their boundaries and constrain recreation nearby. The main determinants of risk to recreational visitors and tourists include⁶:

- the nature of the industries and the **risks they pose**
- **proximity** of the recreation site and visitors to hazards
- **numbers** of visitors using a site that is exposed to risk
- **duration** of visit at a site exposed to risk (thus duration of exposure to risk)
- ability for visitors to **protect** themselves (eg to evacuate, shelter or similar)

There is also potential for visitors to pose risks to industries, for example ignition risks in the vicinity of petrochemical industries.

The EPA use the following risk criteria to assess proposed developments of a potentially hazardous nature, and for providing advice on land use planning in the vicinity of existing hazardous installations (EPA Bulletin 627, 1992. p7):

"Risk levels from industrial facilities should not exceed a target of fifty in a million per year at the site boundary for each individual industry..."

"A risk level for any non-industrial activity located in buffer zones between industrial facilities and residential zones of ten in a million per year or lower, is so small as to be acceptable to the Environmental Protection Authority."

⁴ If major construction projects including the Gorgon Gas Project and the Woodside expansion proceed the local population may temporarily increase by around 10,000. Such an increase effectively doubles the local population.

⁵ 'Risk' as used in this context means the "likelihood of unwanted consequences, such as death, injury, damage to property or damage to the environment, from the realisation of specified hazards." 'Hazard' means "an object or situation which has the potential to cause such unwanted consequences". (EPA 1992, Bulletin 627, p. 1) 'Public Risk' deals less with damage to the environment than to visitors (and/or to a lesser extent their property).

⁶ Source: Environmental Protection Authority Bulletins 730 (1994), 611 (1992), 627 (1992)

objectives

- Minimise risk to visitors from existing and proposed future industry.
- Minimise risks posed by visitors to industries.
- Avoid the closure of existing or potential recreation sites through public risk requirements.

Natural Environment and Natural Processes

The Burrup's natural environments and natural processes have some major implications for development and management of recreation and tourism opportunities.

Terrain, Topography and Soils

- Rugged terrain effectively restricts vehicle access to a limited number of 'lines of least resistance', so that damage from vehicles tends not to be widespread, means that large recreational developments like parking areas are physically achievable at very few sites, and offers opportunities to partially hide or screen recreation sites and facilities to preserve natural landscape character.
- Gently sloping areas of stony soils are particularly robust and hard wearing and in many areas large rocks provide effective barriers to vehicle traffic. Sandy areas and any steep areas are more prone to erosion⁷. Steep sandy areas are most vulnerable.
- When soft, supratidal areas like the Watering to Cowrie Cove mudflats are vulnerable to widespread damage (mostly aesthetic) from vehicle traffic. Damage remains conspicuous for years.

objectives

- Utilise the Burrup's rugged terrain as a 'natural defence' against damage from recreation (use the Burrup's hard parts to protect its soft parts).

Tides

- Tides range between about a metre at neaps to over four metres at springs. Low tides make swimming and boat launching difficult or impossible at the currently accessible shores on the Burrup, whilst flooding from high tides can restrict vehicle access.
- High, rapidly rising tides can be dangerous, placing visitors at risk of being cut off from shore whilst fishing from rocks, bogging their vehicle or being flooded out of a camp.

objectives

- Pursue ways of providing opportunities for visitors to swim, fish and boat on the Burrup at any tide.
- Minimise risks to visitors' safety associated with tides.

Cyclones and Storm Surge

- Cyclones occur throughout the Pilbara coast. Winds and airborne debris can be highly destructive. The onshore winds of a cyclone approaching the coast can push seas against the coast in a 'storm surge', with flooding to six metres or more above mean high water level possible (Bureau of Meteorology, 1996).
- The Hearson Cove-King Bay corridor is recognised as a major storm surge floodway, as is the area presently occupied by the Dampier Salt evaporating lagoons. Maintenance of these floodway capacities is important to mitigate

⁷ Coastal sands are also known to contain Aboriginal burials. Burials have been located in a coastal dune at Conzinc Bay and more are presumed to occur in Conzinc Bay and Withnell Bay sands and similar areas. (Veth *et al.*, 1993 p 183; pers. comm. Kendrick 1997)

flooding on and around the shores of Nickol Bay in the event of a storm surge or tsunami.

- The recreation sites at Hearson Cove, Withnell Bay and other similarly low lying shoreline areas may be flooded in a storm surge.

objectives

- Ensure that recreation facilities are located and designed so as to minimise risk of damage in a cyclone and/or storm surge.
- Ensure that recreational structures are designed to cyclone standards.

Climate

- Hot dry summers, humid periods, risk of cyclone from about December to about April. Mild, drier winters.
- Very low average annual rainfall of 250 to 300mm (mostly January to March) versus annual evaporation of 3,500mm. Vegetation growth is slow.
- Rainfall intensity and runoff can be high. Drainage lines can flood suddenly and will affect road planning and construction.
- Prevailing winds are westerly and north-westerly in summer and easterly to north-easterly in winter. Visitors tend to seek sheltered shores for recreation.

objectives

- Maintain or provide recreation sites with a variety of aspects so that visitors can choose a weather or lee shore.
- Provide protection from sun at some recreation sites.
- Allow for slow vegetation growth rates and schedule planting (revegetation, screen and amenity planting) to utilise natural growth periods.

Environmental Protection

- Erosion and vegetation loss from vehicles is the most common type of physical degradation associated with recreation, generally most severe on sandy ground.
- Because of very slow rates of vegetation growth tracks tend to remain evident even with very little traffic.
- Some weeds threaten natural vegetation on the Burrup, including kapok *Aerva javanica*, ruby dock *Acetosa vesicaria*, and buffel grass *Cenchrus ciliaris*. All of these species tend to colonise disturbed areas, for example dunes disturbed by vehicle traffic or areas disturbed by recreation site development.
- Other damage at recreation sites includes littering, denudation of vegetation, graffiti on rocks, disturbance (including removal) of Aboriginal artefacts and rock art, and inadequate disposal of human wastes. Littering is most severe alongside tracks and at vehicle-accessible sites. These impacts severely degrade 'naturalness' values in semi-remote areas.
- Baiting with 1080 to protect native fauna from cats, dogs and foxes is carried out on the Peninsula and will continue.

objectives

- Survey existing environmental degradation and maintain assessments to monitor future environmental degradation.
- Address existing environmental degradation as soon as possible.
- Ensure that recreation and tourism activities, facilities and sites are planned and constructed so that visitors' environmental impacts are minimised in future.
- Ensure that visitors are aware of the Burrup's special environmental values and help protect those values.
- Minimise risks of weed introduction from recreation site developments.
- Discourage pets being brought to the Burrup. Prohibit in some areas.
- Minimise poison risks to visitors (and their pets in areas where they are permitted).

Recreation and Tourism Opportunities

The Peninsula is notable for the diversity and quality of recreation and tourism opportunities that it offers. The aim of the *Recreation and Tourism Masterplan* is to make the most of the Burrup's natural comparative advantages by recognising and promoting a broad spectrum of appropriate recreation and tourism opportunities.

Nature Based Recreation and Tourism Opportunities

Nature based basically means that the pleasure that visitors derive from their recreation and tourism activities is largely due to the activities being in a natural setting. Sustainable nature based recreation activities are conducted in harmony with and cause minimal impact on the immediate environment.

The Burrup Peninsula offers various nature based recreation and tourism opportunities. The sustainability of these opportunities depends upon conservation of natural environments and resources. On the Burrup notable nature based recreation and tourism opportunities include the following:

- *Opportunities to quickly access natural environments.* Recreational access is quick and easy from Dampier and Karratha. Many places with 'wilderness' character are within a few minutes' walk of main roads or recreation sites.
- *Opportunities for various levels of 'immersion' in natural environments.* Beyond the 'accessible wilderness' it is possible to walk progressively deeper into undisturbed country, through natural 'doorways' in rugged country.
- *Opportunities to experience very special or unique natural environments.* The diversity and accessibility of recreation and tourism opportunities on the Peninsula is extraordinary even at a world scale.

objectives

- Ensure that recreational access covers a spectrum, from quick, easy access to more 'developed' sites to more difficult access to 'remote' sites.
- Preserve large areas as wilderness with no apparent management intrusion or development.
- Promote the Burrup's natural values, both on the Peninsula and more widely, and ensure that visitors are aware of how to safely and responsibly enjoy natural areas.

Cultural Tourism Opportunities

Cultural tourism in this case means tourism based primarily on Aboriginal heritage and/or contemporary Aboriginal culture. Cultural tourism opportunities potentially range from intensive guided interpretation at heritage sites or a visitor centre, to self-guided walks at sites where information and interpretation is provided, to unguided wandering and musing. It is envisaged that the development of appropriate 'formal' cultural tourism opportunities will draw some visitor pressure away from undeveloped, unprotected sites. Key issues affecting the potential for cultural tourism include:

- *Aboriginal people's attitudes to the concept.* The level of cultural tourism on the Burrup depends on local Aboriginal people's support.
- *Sensitivities at prospective sites.* Some prospective sites are expected to be more or less suitable than others on the basis of their content. The Aboriginal community must be involved in assessing the suitability of prospective sites.

- *Assurance of site protection.* Protection of rock art and other Aboriginal sites is of utmost importance. If satisfactory protection cannot be assured tourists should not be encouraged to visit such sites.
- *The ability of sites to physically accommodate facilities* like access roads, parking areas, trails, toilets and interpretation with minimal economic cost or detriment to the integrity and character of the area.
- *Quality of the site.* High quality sites (large, diverse in content, accessible and with a predominantly natural landscape context) are likely to be the best basis for cultural tourism and are most likely to attract recreation and tourism pressure away from undeveloped heritage sites. The quality and abundance of the Burrup Peninsula's Aboriginal heritage suggests that world class cultural tourism opportunities are available.
- *Quality of information and interpretation.* Information and interpretation must be carefully planned and accurate so as to satisfy visitors who want to be told without forcing explanations on those who would rather ponder meanings for themselves.

objectives

- Develop cultural tourism with the support of local Aboriginal people.
- Ensure that cultural tourism aids, rather than threatens, Aboriginal heritage protection.
- Ensure that the quality of cultural tourism opportunities and facilities reflects the Burrup's status as one of the foremost cultural heritage areas in the world.
- Provide a broad spectrum of cultural tourism opportunities, from highly 'developed' sites to more remote, undeveloped sites.

Industrial Tourism Opportunities

Many visitors to the Burrup are interested in the Peninsula's industrial installations and activities. Visitor information and interpretation facilities and services have been a part of the main Burrup industries for years, with the Woodside visitor centre being a major tourism focus. The general intention amongst Burrup industries is to maintain their separate facilities on their respective sites, rather than to present industrial stories as part of a shared industry-ecology-cultural centre.

objectives

- Integrate tourism opportunities in the Conservation, Heritage and Recreation area and in the Industry area where practicable.
- Plan recreational access so that visitors have opportunities to view or visit industrial installations.
- Encourage industries to plan, design and manage their installations and activities carefully to minimise impacts on the Peninsula's natural environments, landscape and Aboriginal heritage values.

Social Recreation Opportunities

Opportunities for recreation in groups or in proximity to other people are commonly appreciated, even in natural areas, as long as opportunities for solitude are also available. Hearson Cove provides a good example of social recreation in a natural setting.

objectives

- Maintain some social recreation opportunities within the Conservation, Heritage and Recreation Area of the Burrup.

Wider Recreation and Tourism Context

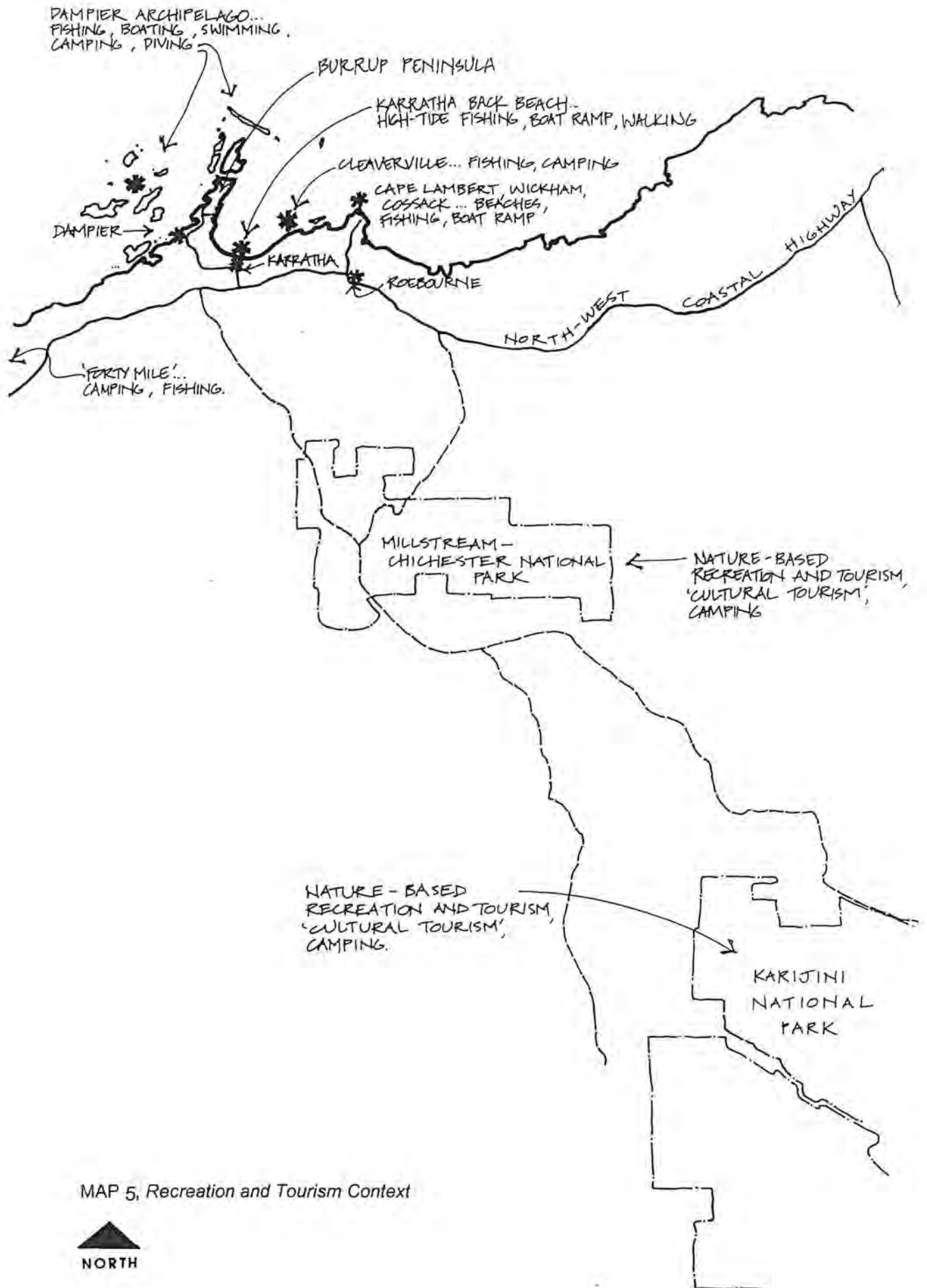
The Burrup Peninsula does not stand alone as a recreation and tourism destination. A wide variety of recreation and tourism opportunities are available elsewhere in the region. (See Map 5, *Regional Recreation and Tourism Context*).

The Burrup's comparative advantages are its accessibility and the opportunities it offers for nature based tourism, cultural tourism, industrial tourism and coastal recreation. Other notable recreation areas in the region include:

- Towns like Dampier, Karratha, Cossack, Roebourne; offering recreation and tourism opportunities at the more *developed* end of the spectrum, like tourist bureaux, swimming pools, walk and bicycle trails, heritage trails, 4WD tracks and Off-Road Vehicle Areas, motocross tracks, boat ramps, accommodation.
- Karijini National Park (KNP) and Millstream-Chichester National Park (MCNP). The National Parks are mostly 2WD accessible. KNP is about five hours' drive from Karratha, and MCNP about two hours. Both National Parks are characterised by *nature based tourism*, '*cultural tourism*', *natural scenery*, *camping and remote area recreation* opportunities.
- Other local *coastal recreation* areas like Cleaverville Beach, Forty Mile, and Karratha Back Beach. Cleaverville and Forty Mile have been popular *camping* areas for decades (although currently not permitted under the *Caravan and Camping Act*), catering mainly to winter travellers. Apart from Forty Mile the sites are close to Karratha, Dampier, Roebourne and Wickham, so are often visited as day trips for *swimming, walking and fishing*.
- The Dampier Archipelago. Consists of 42 islands, islets and rocks. Covered by the CALM & NPNCA *Dampier Archipelago Nature Reserves Management Plan 1990-2000*. Most of the islands incorporate zoning for public use which allows for boat access to beaches and recreation around islands' shores. *Boating, fishing, camping, diving and swimming* amongst the islands is very popular. Many of the islands are rich in Aboriginal sites and environmental values. Between them the islands offer a similar spectrum of recreation and tourism opportunities to the Burrup Peninsula, except that they are accessible only by boat. (See Map 6, *Dampier Archipelago*)

objectives

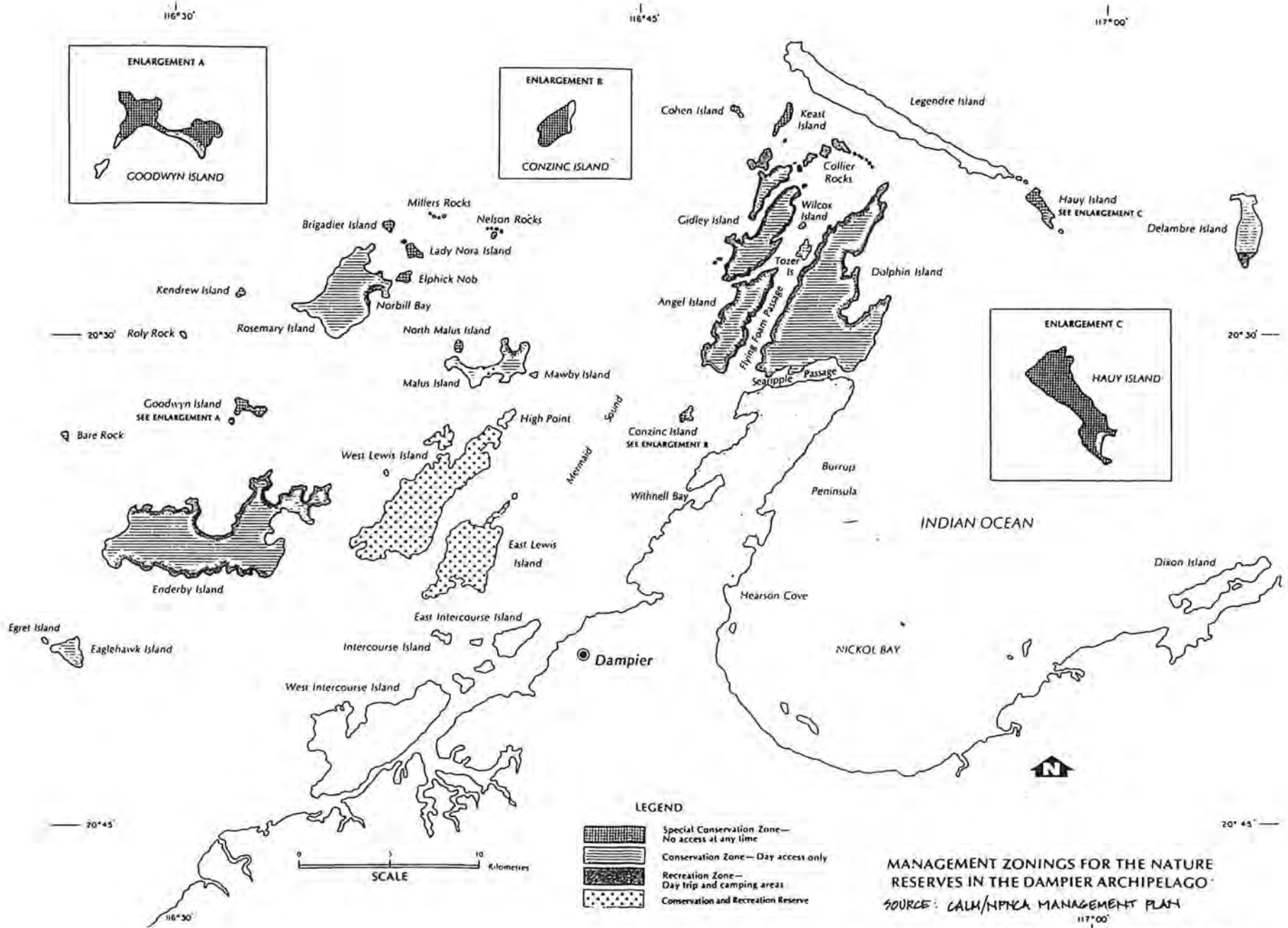
- Ensure that recreation and tourism opportunities on the Burrup and off the Burrup tend to complement each other, rather than compete or conflict.
- Ensure that recreation and tourism opportunities on the Burrup are based on the Burrup's natural advantages and unique opportunities (accessibility and the opportunities it offers for nature based tourism, cultural tourism, industrial tourism and coastal recreation).
- Reduce pressure on the Burrup's cultural, social and natural values by promoting alternative recreation and tourism opportunities off the Burrup as appropriate.







MAP 5, Recreation and Tourism Context



July 1998



LEGEND

-  Special Conservation Zone—No access at any time
-  Conservation Zone—Day access only
-  Recreation Zone—Day trip and camping areas
-  Conservation and Recreation Reserve

MANAGEMENT ZONINGS FOR THE NATURE RESERVES IN THE DAMPIER ARCHIPELAGO

SOURCE: CALM/NPNC MANAGEMENT PLAN

MAP 6, Dampier Archipelago

Preservation of Recreational Character

'Accessible wilderness' and opportunities for solitude are essential components of the Burrup's recreational character, particularly north of Withnell Bay. Given projected increases in local population, and hence recreational activity on the Burrup, crowding and physical impacts from visitors are likely to tend to characterise its accessible natural areas.

One management response can be to 'shut the gate' and severely limit recreation. An opposite response is to formalise and 'harden' recreation sites and facilities to help the site accommodate recreation without degrading. Both of these options have their advantages and disadvantages. Basically, the former severely restricts opportunities for public enjoyment of the place and the latter severely affects the 'naturalness' of the place. On the Burrup Peninsula a 'happy medium' should be pursued whereby accessibility *and* natural character are preserved.

objectives

- Use the *Zoning* plan (see Map 8, *Zoning*) as the framework for recommendations relating to preservation of recreational character.
- Ensure that change to recreational character can be identified and assessed, and actions taken to limit changes to preserve recreational character as recommended in the *Zoning* plan.

Swimming Opportunities

The Burrup Peninsula is significant for offering some of the best swimming beaches on the Pilbara mainland coast.

- At present Hearson Cove is the main swimming beach for local people. It is 2WD accessible and quick to access. Swimming is only possible at high tide. Industrial development near Hearson Cove may diminish the appeal of the Cove for recreation, in which case people are likely to seek alternative beaches.
- The two beaches at Holden Point are popular, being fairly quick to access (4WD only) and sandy throughout the tides. Public access to Holden Point is likely to be prohibited due to industrial development. People prevented from swimming at Holden Point are likely to seek alternatives.
- The beaches at Conzinc Bay are popular but access is more difficult (4WD only and about 20 minutes further than Holden Point).
- Beaches north of Conzinc Bay are characterised more by 'remoteness' and are more often visited overnight.
- Having beaches accessible on both sides of the Burrup provides, at most times, a beach sheltered from the prevailing winds.

objectives

- Maintain access to beaches on both (east and west) coasts of the Peninsula.
- Maintain 4WD access to more remote beaches, but restrict access if necessary to minimise degradation.
- Ensure that some beaches are inaccessible to vehicles so that walkers can seek seclusion at them.

Fishing Opportunities

The Burrup Peninsula is a popular land based fishing destination^B. It offers world class fishing of significance to locals and travellers alike. The Burrup's shores also offer various boat fishing opportunities.

- Access to east and west facing shores is valuable because a lee shore (favoured for fishing) is accessible in most winds.
- Most fishing occurs at vehicle accessible shores.
- Littering and damage from vehicle traffic seem to be the two main environmental impacts associated with shore based fishing at present. Neither of these problems are caused only by fishing but fishing seems to be a significant contributor to recreational pressure on coastal areas of the Peninsula.
- Fishers on the Burrup are also exposed to many hazards, like dangerous marine animals, slippery rocks, large tidal ranges, oyster covered rocks and sunburn/skin cancer. Some visitors may not be aware of some of these hazards.

objectives

- Maintain a similar range of shore based fishing opportunities to those presently available.
- Retain vehicular access to coast on both sides of the peninsula.
- Assist fishers to fish safely and with appreciation of their environmental and social responsibilities.

Boat Launching and Boating Opportunities

The boat launching area at Withnell Bay is one of the Burrup's busiest recreation sites. A good boat ramp on the Burrup north of industrial areas is high on local boat owners 'wish lists' because a facility so located would provide quick access to the sheltered waters at Searipple Passage, Flying Foam Passage and around Dolphin, Angel, Gidley, and other nearby islands.

The Withnell Bay site is heavily used but the parking area impinges on a large Aboriginal site. The public risk issue needs to be addressed if the proposed 'South Conzinc' industrial area is developed (see Map 2). In addition the ramp and the track to it are rough at present and suitable for small boats (to about 6m) only. Launching is possible at any tide although it is far easier at high tide. The site is also popular for walking, swimming and shore-based fishing.

Potential alternative boat launching areas have been assessed and are discussed in Appendix 1. Based on assessments of those alternative sites the area at Withnell Bay that is presently in use is preferred at least until the 'Conzinc South' industrial area is developed.

objectives

- Construct an all tides ramp for small boats (up to 6m) with 2WD access, parking and ablutions facilities, located so as to provide good boat access to the waters and islands of the northern part of the Dampier Archipelago.
- Minimise disruption of natural, cultural and landscape values.

^B An assessment of recreation on the Burrup in 1988 (McLaughlan 1988) indicated that most (nearly 70 %) of visitors to the Burrup were fishing. About 25% were sightseeing and about 10% were swimming. Ten years on fishing still seems to be an integral part of most visits to the Burrup.

Four Wheel Driving Opportunities

Four wheel driving (4WD'ing) is at present an integral part of recreation on the Burrup north of Withnell Bay. It is largely as a result of the rough tracks that the Burrup still offers a 'semi-remote' or adventure type experience so close to town, however 4WD vehicles driven without due regard for environmental sensitivities threaten fragile areas like the Conzinc Bay dunes. There are opportunities for 4WD'ing off the Burrup that pose less of a threat to environmental and heritage values.

objectives

- Ensure that 4WD vehicles are restricted to designated roads and tracks.
- Provide information on 4WD'ing opportunities off the Peninsula.

Camping Opportunities

Camping occurs at many locations, mostly beaches and inland pools, and is highly valued by visitors. At some beaches and dune areas vegetation denudation and erosion seems to be associated with camping. Like many activities impacts from camping range from almost none to severely damaging depending on how it's done. If access to the northern Burrup is made easier more camping pressure at Conzinc Bay and the north west Burrup can be expected and camping may need to be regulated to avoid environmental impacts and conflicts with day use.

The *BPLUP & MS (1996)* recommends that camping opportunities not be developed on the Peninsula. There may however be scope for a special developed camping area that is based on experience of Aboriginal culture and the Burrup's Aboriginal heritage values, including activities like dances, stories, bush food and rock art walks and so on. Such a camp might operate seasonally (May to September) in association with a visitor centre.

Camping opportunities on the coast have historically been available at Cleaverville Beach (20 km east of Karratha) and Forty Mile (about 60 km west). Whilst camping is currently not permitted in these areas under the *Caravan and Camping Act*, they seem to be more suitable to be developed for vehicle-based camping in the long term than the Burrup.

objectives

- Maintain informal, short stay (one or two nights) camping opportunities only while impacts on environments, heritage and recreational character are acceptably low.
- Consider potential for a camping experience that contains a major Aboriginal culture and heritage component.
- Support retention of camping opportunities at sites off the Burrup, to 'share the load' with the Burrup.

Walking Opportunities

Walking is an excellent way to experience the ruggedness and diversity which provide a richness of stimuli. Many places are only accessible on foot and vehicle access may be restricted further in future to minimise impacts on natural areas and cultural heritage sites.

There are currently no developed walking (or other trail based recreation) opportunities.

objectives

- Provide information and facilities for walkers to encourage enjoyable, minimal impact access to a variety of natural and cultural settings.

Cycling Opportunities

At present the Peninsula's 4WD tracks are occasionally used by cyclists, who generally drive to the Withnell Bay area and then cycle northwards. The tracks throughout the northern Burrup are mostly rough and undulating, so that cycling tends to be uncomfortable and strenuous. Presumably this is the main reason why few people cycle on the Burrup. Cycling is popular with local people and many tourists also carry bicycles. Cycling can have a significantly lower impact on natural values than 4WD'ing and allows a slow, 'intimate' experience of the Peninsula.

objectives

- Provide and promote a range of cycling opportunities in appropriate areas, including road cycling (sealed roads) and mountain biking (unsealed roads, 4WD tracks and 'single track').

Other Recreation Opportunities

Rock climbing and abseiling opportunities abound from Cowrie Cove up the east coast of the Burrup and Dolphin Island. The cliffs just south of Cowrie Cove are popular for abseiling and are occasionally used as a training ground for emergency services. They are easily accessed by 2WD vehicle. The cliffs further north are accessible only on foot or by boat, offering more of an 'adventure climbing' experience. The plan proposes no formal development of climbing and abseiling opportunities. The objective is to maintain opportunities for rock climbing and abseiling provided they do not result in risks to other visitors or environmental damage.

Picnicking is popular at Hearson Cove, where shelters and furniture are provided. The objective is to upgrade facilities for picnicking at Hearson Cove and to provide picnicking facilities at one of the two proposed recreation sites at Conzinc Bay (see 'Recreation Sites' section).

Scenic viewing opportunities are limited but there are popular locations at which visitors take in views east over Nickol Bay and Karratha, and west to the islands.

PART THREE

RECREATION AND TOURISM MASTERPLAN

INTRODUCTION

Aim

The Recreation and Tourism Masterplan aims to guide the development and management of recreation and tourism facilities and settings so that people can enjoy the Burrup Peninsula without degrading its special values.

A Vision for the Burrup Peninsula (Moora Joorga)

Conservation Area

Opportunities to enjoy the diversity and quality of the Burrup Peninsula's Aboriginal heritage values, natural environments and recreational character will be maintained in perpetuity by appropriate public access, protection and education.

The keys to achieving this vision are:

- *facilitating recreation and tourism at a variety of sites that typify the Burrup's special environmental, cultural heritage and landscape values*
- *promoting awareness, amongst all who affect or are affected by the Burrup, of its significance and sensitivities*
- *Promoting responsible attitudes towards protection and use of the Burrup.*
- *restricting developed recreational access and developed recreation facilities to a small proportion of the Peninsula overall*
- *actively managing people's recreational activities as necessary to both enrich their experiences and ensure protection of the Burrup.*

Desired Outcomes

ABORIGINAL HERITAGE PROTECTION

Recreation and tourism on the Burrup must not threaten the Burrup Peninsula's unique and irreplaceable cultural heritage values, rather recreation and tourism should contribute to heritage protection by fostering an attitude of respect and stewardship amongst visitors.

ONGOING ABORIGINAL INVOLVEMENT

Encourage local Aboriginal people to continue to help plan and manage land use on the Burrup, and to help visitors understand and enjoy the Burrup's natural and cultural values.

ENVIRONMENTAL PROTECTION

Many of the Burrup's natural environment values are significant and so far have been little disturbed. The Burrup's natural environments should be protected from the pressures of recreation and tourism.

SUSTAINABLE RECREATION

The costs and impacts of providing recreation and tourism opportunities on the Burrup should be able to be borne indefinitely without serious degradation or significant alteration of the Burrup's special values.

VISITOR SATISFACTION

The recreation and tourism opportunities that CALM facilitates and manages on the Burrup should be accurately matched to the preferences of visitors, as well as being appropriate to and sustainable in the Burrup's environments. Opportunities should be provided for people with disabilities to access as wide a range of recreation settings as realistically achievable.

ENRICH VISITOR EXPERIENCES

Visitors should be offered information and interpretation facilities and services to help them understand and be enriched by cultural and natural values of the Burrup that may not be accessible or apparent to them without help.

LEGIBILITY

Visitors should be able to easily understand the range of recreation opportunities that are available on the Burrup and how to safely enjoy them, as well as what sort of activities are unacceptable and why.

PARTNERSHIPS

The benefits and responsibilities associated with recreation on the Burrup should be shared between CALM and partners like local Aboriginal people, industry, local government, commercial recreation and tourism operators and the visitors themselves.

VISITOR SAFETY

Visitors to the Burrup should not unwittingly be exposed to serious risks. Risks visitors take should only be taken deliberately and responsibly as part of their recreation.

ADAPTABILITY

The Burrup's managers should be able to respond effectively to changes in factors such as visitor numbers, visitor behaviour and the condition of roads and recreation sites to ensure that the quality of recreation experiences is maintained and natural and cultural values are protected.

NOTES

The proposals indicated require detailed design and Aboriginal heritage surveys. Proposals indicated may be altered to ensure Aboriginal heritage protection.

A NEW ROAD TO CONZINC BAY

Sealed (bitumen) road from Burrup Road (Withnell Bay) to Conzinc Bay. Aims to offer quick, easy access for swimming, fishing, walking and picnicking. It is hoped that greater access to the Conzinc Bay area will gradually encourage public participation in protection of heritage, environmental and landscape values.

TWO NEW RECREATION SITES AT CONZINC BAY

Aims to offer easy access to the best Conzinc Bay beaches & protect landscape, environmental and heritage values. 'Conzinc Creek' offers parking (about 30 cars), toilet, paths to the beach. Plan discusses ways of protecting rock art nearby from visitors who may want to damage or remove engravings. 'Conzinc Beach' offers parking (about 40 cars), toilet, beach access paths, shade shelters, tables and gas barbecues. Camping will not be allowed.

A NEW ROAD TO HEARSON COVE

If the proposed Hearson-King Bay Industrial Area is developed, Hearson Cove Rd should be reconstructed along the foot of the 'Pistol Ranges'. The Industrial Area boundary should be revised so that the new road effectively forms the southern boundary of the Industrial Area.

REDEVELOPMENT OF THE HEARSON COVE RECREATION SITE

Aims to ensure protection of environmental values, preserve the existing accessible, 'user-friendly' character, and upgrade recreation facilities. A toilet is proposed, plus fencing along the dune front, new picnic shelters and gas BBQ's.

AN UPGRADE TO THE WITHNELL BAY BOAT RAMP

Aims to improve launching facilities for small boats (to about 6m). Plan includes a new 2WD access road, 'formal' parking area (30 cars & trailers, plus another 10 cars), new ramp, toilet, rubbish bins, visitor information.

A NEW ROAD TO COWRIE COVE

Unsealed 2WD road to facilitate launching of small boats at the existing site, and minimise contact with proposed future industry along Hearson Village Rd.

DEVELOPMENT OF A 'CULTURAL TOURISM' SITE AT DEEP GORGE

Aims to provide high standard public access to a superb rock art site. Plan includes 2WD access, parking area (10 cars & up to 4 buses), pedestrian access. Deep Gorge is typical of the Burrup's internationally significant cultural heritage sites, with an incredible variety and density of petroglyphs and other features like grinding patches and shell and stone tool scatters.

'SEMI-REMOTE' RECREATION AREA IN THE NORTH-WEST BURRUP

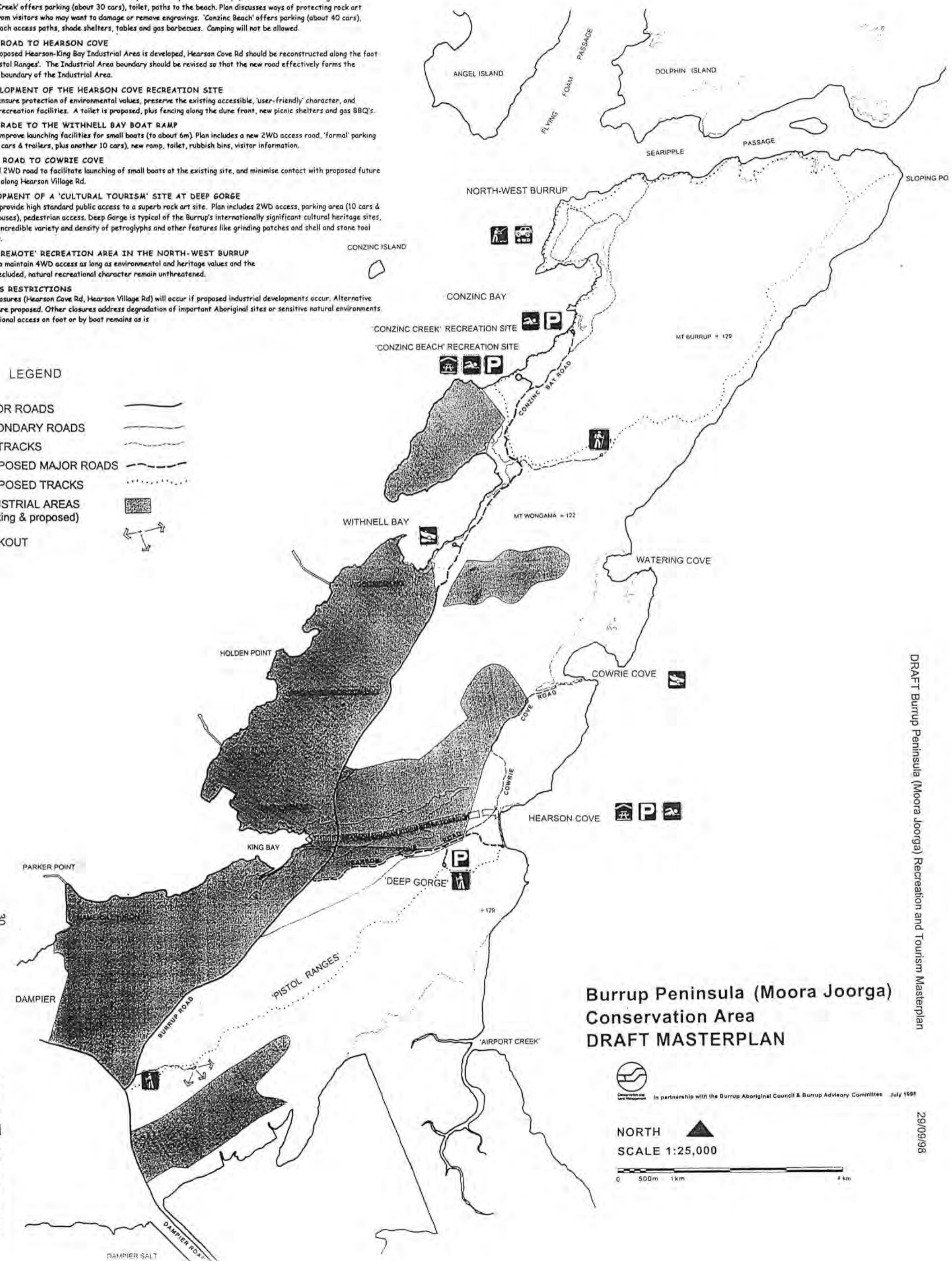
Aim is to maintain 4WD access as long as environmental and heritage values and the area's secluded, natural recreational character remain unthreatened.

ACCESS RESTRICTIONS

Some closures (Hearson Cove Rd, Hearson Village Rd) will occur if proposed industrial developments occur. Alternative routes are proposed. Other closures address degradation of important Aboriginal sites or sensitive natural environments. Recreational access on foot or by boat remains as is

LEGEND

- MAJOR ROADS
- SECONDARY ROADS
- 4wd TRACKS
- PROPOSED MAJOR ROADS
- PROPOSED TRACKS
- INDUSTRIAL AREAS (existing & proposed)
- LOOKOUT



Burrup Peninsula (Moora Joorga) Conservation Area DRAFT MASTERPLAN



In partnership with the Burrup Aboriginal Council & Burrup Advisory Committee July 1998

NORTH
SCALE 1:25,000



MAP 7, Masterplan

DRAFT Burrup Peninsula (Moora Joorga) Recreation and Tourism Masterplan

29/09/98

OBJECTIVES AND RECOMMENDATIONS

This section aims to present a program for *management* of recreation settings and activities and for *development* of recreation and tourism facilities and services.

The *objectives* state what outcomes are sought in addressing key issues.

The *recommendations* include strategies and 'bite sized' actions required to achieve the objectives.

Land Tenure

The issue of land tenure is raised in this plan because it is an issue of primary importance to the development and management of recreation settings and activities. However the resolution of the issue is a task for the Implementation Group that was established following Cabinet endorsement of the 1996 *Burrup Peninsula Land Use Plan and Management Strategy*.

The objective is for the tenure of the Conservation, Heritage and Recreation Area of the Burrup to enable most effective management of its special values.

recommendations

1. A vesting should be pursued that enables effective protection of heritage and natural environments, allows various recreation opportunities and enables effective recreation management.
2. The Implementation Group should pursue prompt resolution of this issue. At present the insecurity of management tenure means that management opportunities and constraints are unclear and the Burrup's conservation and heritage values remain threatened.
3. The Implementation Group should consult local Aboriginal people to investigate options for vesting.

Zoning

(See Map 8, *Zoning*)

The zoning plan provides a geographically specific framework to guide the development and management of recreation settings and activities.

The zones within the Conservation, Heritage and Recreation Area are based on landscape character, special recreation opportunities and environmental characteristics.

Broad planning and management strategies are stated for each zone pursuant to the objectives below.

The objectives of the zoning plan are to:

- ensure that recreation activities and developments occur in areas of the Peninsula where they are most appropriate
- preserve the heterogeneity of recreational experiences on the Burrup

'Pistol Ranges'⁹

A large, rugged natural area in the south-east part of the Peninsula. Low recreational use at present. Easy access to the periphery via Hearson Cove Road or Burrup Road, but difficult access to the interior even by walking. Known to be rich in Aboriginal sites but as yet not systematically surveyed. Complex networks of steep intersecting gullies create many 'secret' places and evoke feelings of curiosity and mystery. Many ephemeral creeks and pools.

The objective is to maintain this as a large conservation and semi-remote recreation zone, and preserve scenic quality.

recommendations

1. Avoid dissecting the area with roads and other major recreational or industrial infrastructure to maintain the Pistol Ranges' integrity as a large natural area.
2. Minimise disturbance of the area's landscape, particularly the highly visible western, northern and south-eastern flanks.
3. Undertake a systematic survey of Aboriginal heritage in the Pistol Ranges to gain a clearer picture of heritage protection requirements and cultural tourism potential.
4. Encourage minimal impact recreation (eg walking) in the interior by providing trails and trailhead parking as indicated in the *'Roads and Trails'* section.
5. Facilitate 'cultural tourism' by undertaking site developments at 'Deep Gorge' as indicated in the *'Recreation Sites'* section.
6. Maintain or enhance vehicle access to the periphery to encourage further access on foot.

⁹ The name refers to the pistol shooting range at the eastern edge of the hills. A traditional Aboriginal name for the area may be more appropriate if one is known.

Hearson¹⁰

Characterised by Hearson Cove, a popular swimming, sunbathing and picnicking beach. Currently intensively used. 2WD access and close proximity to Dampier and Karratha. A relatively highly altered area with relatively low 'naturalness'.

A petrochemical industry precinct is proposed for land west of the recreation site¹¹. If that plan is realised the character of the zone is likely to be significantly altered by noise, odour, and visual impacts. Visitor numbers may thus tend to *decrease*.

The objective is to maintain the existing (accessible, social, relatively 'developed') recreational character of the area.

recommendations¹²

1. Upgrade facilities at the beach to enhance its 'user-friendliness'
2. Protect sensitive natural environments (like dunes and dune vegetation) by excluding vehicles.
3. If/when industrial development occurs in this precinct, realign and upgrade the access road to avoid transecting the industrial area (without threatening conservation, landscape and heritage values)..
4. Encourage industries locating in the vicinity to minimise impacts on amenity to ensure that Hearson Cove remains a viable recreation site and continues to attract a significant amount of recreational pressure away from more sensitive beaches.

Central Burrup

Generally natural, little disturbed. Characterised by diversity of natural environment, geology, landform, scenery. Very limited vehicle access. Inland areas very rugged. Coast includes bouldery shores, Cowrie and Watering Coves (sheltered shallow waters, several species of mangroves, sandy beach areas, samphire and mud flats, reef flat). Several significant Aboriginal sites. Little recreational use at present.

The objective is to preserve this as a natural zone with vehicle access only as far as Cowrie Cove.

recommendations

1. Restrict vehicle access in coastal areas to minimise disturbance of mud flats and sands. Prohibit vehicle access to the Cowrie-Watering Cove mud flat.
2. Protect Watering Cove as a natural area; preservation of natural character and environmental and scenic quality a high priority. 'Semi-remote' to 'remote' recreation (walking and boat access only to Watering Cove).
3. Maintain small boat launching opportunities at Cowrie Cove. Maintain the natural boat ramp as is, and provide 2WD access as outlined in the 'Roads and Trails' section.
4. Undertake rehabilitation (weed control, revegetation) of degraded areas.

¹¹ The 'Hearson-King Bay' Industrial Area (BPLUP & MS 1996). See Map 2.

¹² See also 'Recreation Sites' section and *Hearson Cove Concept Plan*, Map 10

Withnell Bay

Sheltered bay, narrow entrance, characterised by enclosure/refuge. Woodside gas plant at southern end, elsewhere natural shores. Industry proposed for promontory west of Withnell Bay ('Conzinc South' Industrial Area). Present recreation (poor 2WD access) mostly small boat launching and boating, also fishing, walking, some swimming, also 'just looking'. Large Aboriginal site eastern side extending inland, other sites along shores. Mangal (several spp.) and mud/samphire flats at north end. Track to northern Burrup (and possible industrial transport and infrastructure corridor to 'Conzinc South') via this zone (east shore).

The objective is to maintain relatively accessible, 'developed' recreational character in this zone and improve boat launching opportunities.

recommendations¹³

1. Upgrade facilities for small boat launching near the present site, focussing on protecting Aboriginal sites as well as providing good launching facilities.
2. Modify the alignment of the road heading north to separate through traffic from the boat launching area, to minimise disturbance of known Aboriginal heritage sites, and to concentrate recreational impacts in areas that are already severely disturbed. (See '*Roads and Trails*' plan, Map 9)
3. Plan this recreational road heading north so that any future industrial corridor will take the same alignment to minimise possibility of duplication and minimise environmental and landscape impacts.

Withnell Bay Valleys

Two long creek valleys inland (north) from Withnell Bay's northern shore. Strong refuge character, enclosed by high, steep hills. The valleys evoke feelings of curiosity because they offer rare opportunities for access to inland Burrup. Easy 4WD access along broader eastern valley, no vehicle access along narrower western valley. Relatively light recreational pressure at present (sightseeing, visiting Aboriginal sites, camping).

The objectives are to:

- Preserve the naturalness of the western valley.
- Ensure that the character of the eastern valley remains predominantly natural too, but maintain vehicle access to facilitate experience of the inland Burrup.

recommendations

1. Maintain vehicle access in the eastern valley to enable visitors to experience the valley scenery from their vehicles and to access the head of the valley for walking to the east coast and northern Burrup.
2. Develop a walk trail and trail-head parking at the head of the eastern valley.
3. Maintain the western valley as a natural area (more 'primitive' recreation only eg. walk trail).

Conzinc Bay

Spectacular natural coastal scenery, sandy beaches, rocky outcrops, views to the islands, rich marine environment. Popular swimming, fishing and camping destination (4WD only). High use, some severe but isolated environmental and

¹³ See also 'Recreation Sites' section and *Withnell Bay Concept Plan*, Map 14

landscape degradation from traffic. Inappropriate industrial development on 'Conzinc South' has potential to severely impact on the recreational character of the Conzinc precinct. The Bay's shore is about 2km long.

Predominantly sandy coast punctuated by rocky outcrops and creek lines. Northern third sheltered, contains mangrove communities, tidal flat and several small sandy beaches. A hinterland of rolling rocky ground occurs east extending inland to a 'wall' of steep, rocky hills and gullies.

The objective is to develop and manage this zone as an easily accessed, intensive recreation area whilst protecting environmental and heritage values and minimising impacts on the area's natural landscape character.

recommendations¹⁴

1. Facilitate relatively intense beach-oriented recreation by developing high standard 2WD access, parking, toilets, pedestrian access to beaches, picnic facilities.
2. Use the 'natural defences' of the area (mainly rocky outcrops) to physically and visually contain impacts of recreation sites and activities and preserve environmental, heritage and scenery values.
3. Defer any upgrade of access until acceptable strategies for the protection of natural values and Aboriginal heritage can be implemented. This includes appropriate detailed site design, Aboriginal heritage survey and formulation of heritage protection actions, site definition and 'hardening' and ongoing visitor management capabilities.
4. Consider restricting boating in the Bay to maximise protection of recreational and environmental values and to minimise public risk.

Northern Burrup

A large, rugged natural area. Mostly accessible only on foot, requiring care and effort even then. The north-western portion of this zone is discussed separately below ('North-West Burrup') because it is accessible to 4WD vehicles. Contains many important Aboriginal sites and is a 'protected area' under the Aboriginal Heritage Act (1972). Diverse natural environments and scenery typical of the Burrup, close proximity and walking/wading access to Dolphin Island. From most of the zone little evidence of 'civilisation' is visible¹⁵.

The objective is to preserve this area's remote and natural character.

recommendations

1. Conserve cultural and environmental values and wilderness character by restricting access to the Northern Burrup to walking or landing from boats only.
2. Provide limited and 'primitive' recreation facilities only in this zone.
3. In partnership with local Aboriginal people and the Aboriginal Affairs Department develop regulations for the Northern Burrup Protected Area

¹⁴ See also 'Recreation Sites' section and *Conzinc Bay Concept Plans*, Maps 12 and 13.

¹⁵ As with many otherwise undisturbed areas there are many ephemeral or remote impacts on 'naturalness'. On the Burrup these most commonly include litter borne by water and left on shores, emissions from industry like plumes of sooty smoke, noise from flares, and light from flares. Feral animals also occur on the Burrup, though baiting programs to control their numbers have been operating for many years and are ongoing.

(Aboriginal Heritage Act 1972, see Map 4) to help protect Aboriginal heritage values.

North-West Burrup

Characterised by remoteness, ruggedness, rich scenery and being the 'end of the road'; the most distant vehicle-accessible area on the Burrup. Several sandy beaches, views to Searipple and Flying Foam Passages, Angel and Dolphin Islands. Coastal aspects vary so one shore is always sheltered. Popular camping area, most camps on beaches. Numerous 4WD tracks, some damage to vegetation and dunes but not widespread. Included in the Northern Burrup protected area (see Map 4).

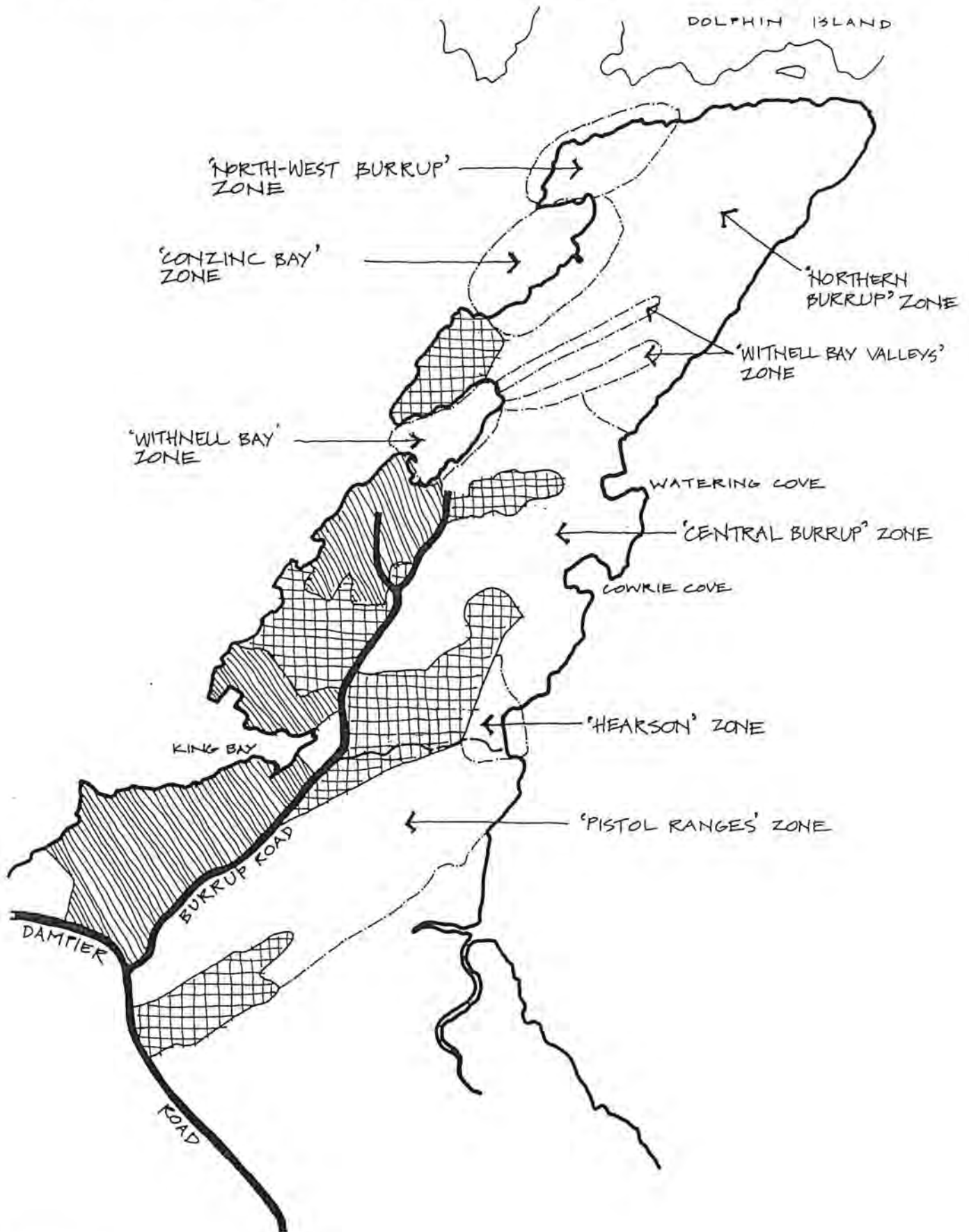
A major increase in 4WD traffic and general recreational activity is likely in this zone if easy access to Conzinc Bay is developed. It is a small area and 'fills up' with visitors quickly. Crowding is likely to contribute to environmental degradation and to destroy the sense of remoteness and seclusion that characterises this zone.




The objectives are to:

- Maintain the semi-remote, natural and uncrowded character of this zone.
- Maintain a high degree of recreational access in the long term, though not necessarily unrestricted vehicle access.

recommendations

1. Maintain recreational access as is in the short term, only closing tracks that are degrading and/or are the worst of two tracks that lead to the same destination.
2. Restrict future vehicular access as necessary to ensure that crowding is avoided and impacts are minimised.
3. Site hardening including the upgrade of roads not be undertaken, to preserve the semi-remote, predominantly natural or 'wild' recreational character of the zone.
4. If a 2WD road is constructed to Conzinc Bay the resultant pressure on the northern areas will be unsustainable. Close vehicular tracks north of Conzinc to general access by private vehicles. Consider *walk/cycle* access, vehicle access by *permit* only, or *guided* vehicle access to maintain recreational access.



-  EXISTING INDUSTRY (OR LEASE AREA)
-  PROPOSED INDUSTRY
-  'RECREATIONAL CHARACTER ZONE' BOUNDARY

MAP 8, Zoning



Roads and Trails

The objectives are to:

- help visitors access recreation settings, sites and facilities
- ensure that access experiences are enjoyable; that 'getting there is part of the fun'
- minimise the impacts of roads and trails, and the recreation that they encourage, on heritage, landscape and environmental values
- minimise conflicts between recreational and industrial access

recommendations









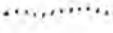

1. See *Roads and Trails Plan*, Map 9 for proposed track closures and proposed new roads and trails.
2. Close some existing tracks to address existing environmental degradation or threats to Aboriginal heritage.
3. Vary the standards of roads to create an access hierarchy, to ensure that road standards are aesthetically appropriate to their settings, and as a way of automatically controlling the numbers of visitors to the areas they access.
4. Provide information to discourage visitors from driving off roads and to explain track closures.
5. Aim to utilise the Burrup's 'natural defences' by routing new roads through areas that are rugged enough to discourage off-road driving but not so rugged as to significantly constrain roadworks.
6. Undertake detailed design and Aboriginal heritage survey of all proposed roads and trails before implementation.
7. Provide a 2WD road to Conzinc Bay, to the following approximate standards:
 - design speed 60 km/h
 - pavement width 6 m
 - overall corridor width about 12 to 20 m
 - bitumen pavement
 - minimal impact on surrounding natural environment
8. Realign the Hearson Cove access road to follow the foot of the Pistol Ranges, roughly skirting the southern side of the Hearson-King Bay Industrial Area (unsealed, but otherwise design standard as above). Redefine the 'Hearson-King Bay Industrial Area' as required.
9. Provide a new road to Cowrie Cove via Hearson Cove (unsealed 2WD).
10. Maintain 4WD access north of Conzinc Bay in the short term (see 'Recreation Sites' and 'Zoning')
11. Consider down-grading this 4WD track (narrowing, roughening) to discourage some traffic.
12. Provide trails to various standards (Map 9 and table, below) to facilitate pedestrian and bicycle access to a variety of settings.
13. Generally use rocks embedded to about half of their diameter to close tracks, and rehabilitate closed tracks at least in the vicinity of either closure point. The aim is to achieve effective closures that look as 'natural' as possible as soon as possible.

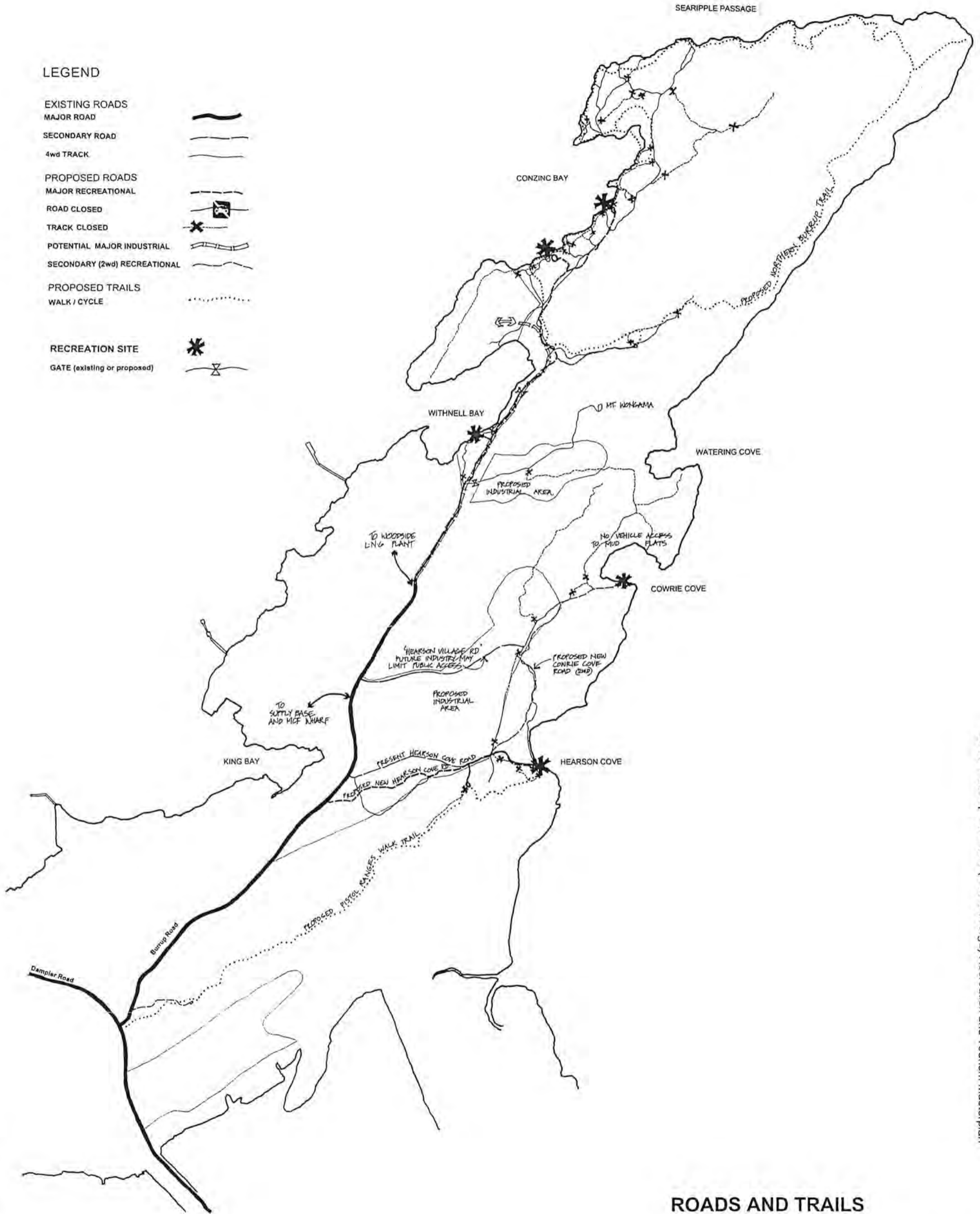
Proposed Roads and Trails, Summary

ROAD NAME (prelim.)	GRADE	TYPICAL DESIGN STANDARDS
Burrup Road (north), or Conzinc Bay Road	primary recreational	sealed, 6m pavement width, 12 to 20m corridor width, 60kmh design speed
Hearson Cove Road	as above	unsealed, 6m running surface as above
Deep Gorge Road	secondary recreational	as above but 6m 40kmh design speed
'Conzinc Creek' Road	as above	as above
'Conzinc Beach' Road	as above	as above
Cowrie Cove Road	as above	as above
Withnell Valley Trail-head Rd.	as above	unsealed, some formation to achieve 2wd access, 5m running surface, minimum overall width, 40kmh
'Kangaroo Paw Valley' Track (exist'g, off Hearson Cove Rd)	4WD track	unformed track, artificial barriers (eg half-buried rocks) where required to protect Aboriginal sites
Searipple Passage Track (existing)	as above	unformed track, closed to public vehicular in longer term if Conzinc Rd constructed, or environmental degradation is ongoing
North-West Burrup Tracks (existing)	as above, several	unformed tracks, some closed, some retained as is, some realigned (see Map 10), Closed to public vehicular access if Conzinc Rd constructed.
Northern Burrup Inland Track (existing)	as above	unformed track, ideally closed and rehabilitated but may be required for management access, may be gated


TRAIL NAME (prelim.)	GRADE	TYPICAL DESIGN STANDARDS
Deep Gorge Walk	walk (& wheelchair)	1500 min. width, sealed (or similar), 1:20 max. gradient
Visitor Centre Walk	walk (& wheelchair)	1500 wide, otherwise as above
Deep Gorge-Hearson Cove Track	track	400 to 900 wide, unsurfaced but formed, 1:8 max. gradient
North-West Burrup Track/s	dual use track/s (walk and cycle)	as above, potentially replacing 4WD tracks if they're closed, potentially upgraded to 'walk' standard in longer term, requiring trail-head developm't
Pistol Ranges Track	track (maybe walk and cycle, dual use)	as above but mostly unformed, 1:6 max. gradient
'Round the Burrup' Track	route level 1	unformed, about 400 wide, some marked sections, beach camping


LEGEND


- EXISTING ROADS
 - MAJOR ROAD 
 - SECONDARY ROAD 
 - 4wd TRACK 
- PROPOSED ROADS
 - MAJOR RECREATIONAL 
 - ROAD CLOSED 
 - TRACK CLOSED 
 - POTENTIAL MAJOR INDUSTRIAL 
 - SECONDARY (2wd) RECREATIONAL 
- PROPOSED TRAILS
 - WALK / CYCLE 
- RECREATION SITE
 - GATE (existing or proposed) 



ROADS AND TRAILS

NORTH 

0 1 3 km
SCALE 1:25,000 

 July 1998

Recreation and Tourism Sites

The objectives are:

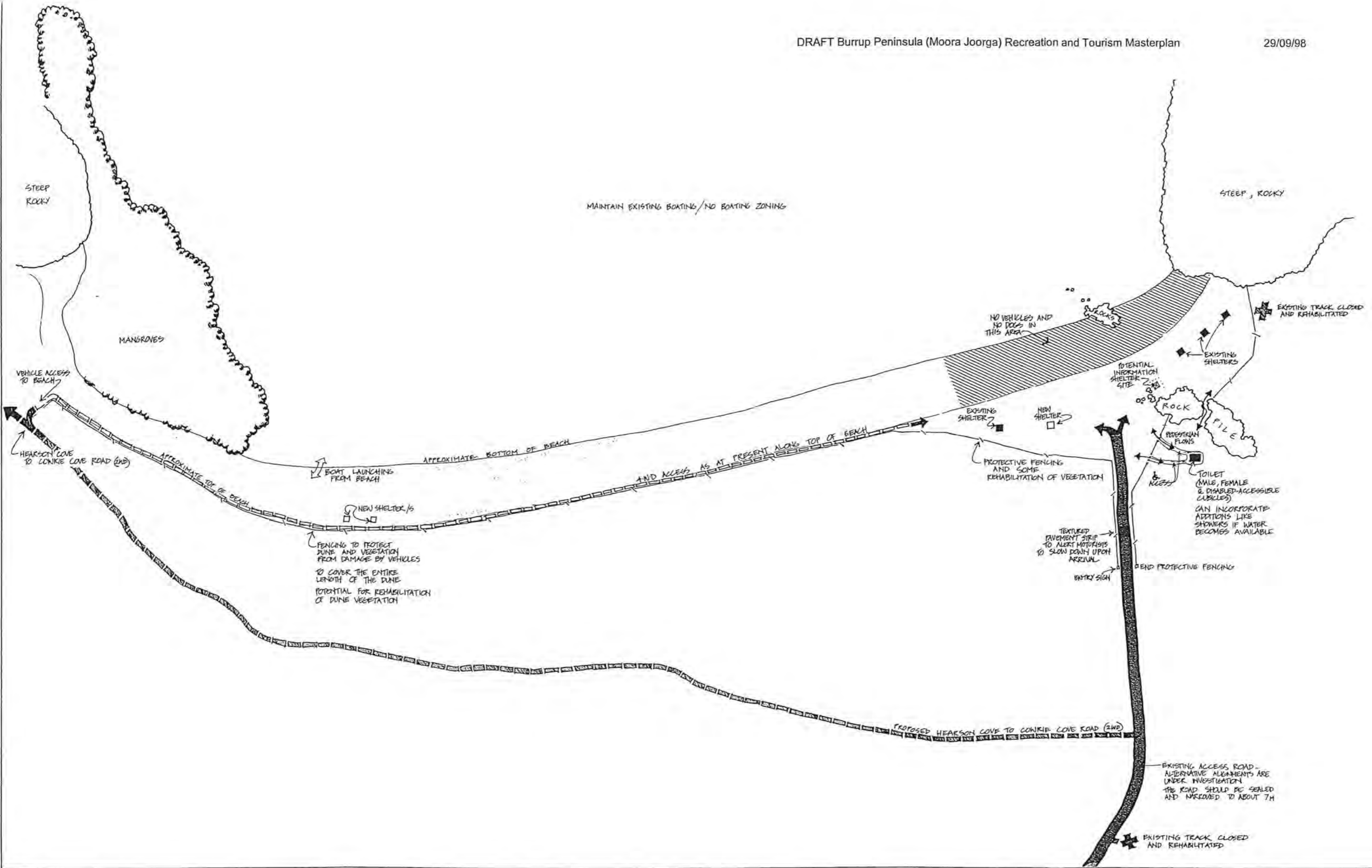
- to provide a number of sites that facilitate enjoyable, safe, accessible and sustainable recreation and pose minimal threat to landscape and heritage values
- to ensure that between them the sites offer a broad spectrum of appropriate recreation and tourism opportunities
- to ensure that each site has a distinctive and memorable character yet have a consistency of components like materials and colours that ensures that all sites are clearly part of the same 'park'.

Hearson Cove

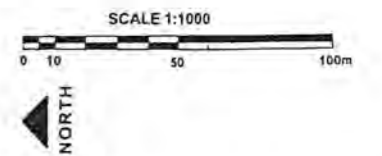
The objective is to preserve the existing recreation character of Hearson Cove. The site is characterised by accessibility, relatively intensive recreational use, openness and 'sociability', relatively large visitor 'carrying capacity' and high degree of 'facilitation' (picnic and BBQ facilities, signs, shelters).

recommendations

1. See Hearson Cove Site Development Concept Plan, Map 10.
2. Minimise change to the site's character by
 - preventing further loss of vegetation and erosion
 - not fundamentally modifying vehicle or pedestrian circulation patterns
 - maintaining or enhancing facilities and services (to maintain the site's 'user friendliness')
 - maintaining or enhancing ease of road access
 - maintaining the openness or visual permeability of the site
3. Improve visitor safety by controlling vehicle traffic to a slightly greater extent than at present, and by providing visitor risk information.
4. Manage the site in partnership with the Shire of Roebourne to ensure most effective management and maintenance.
5. Install a toilet, located as per the Plan. The toilet should be a composting or flushing kind (the latter presently unfeasible due to lack of water supply) with two unisex disabled-access cubicles.
6. Discontinue rubbish collection and remove rubbish bins, providing information to encourage visitors to take their rubbish home.
7. Install signs as per the Burrup Peninsula Sign Plan.



Hearson Cove Recreation Area DRAFT SITE DEVELOPMENT CONCEPT PLAN



July 1998

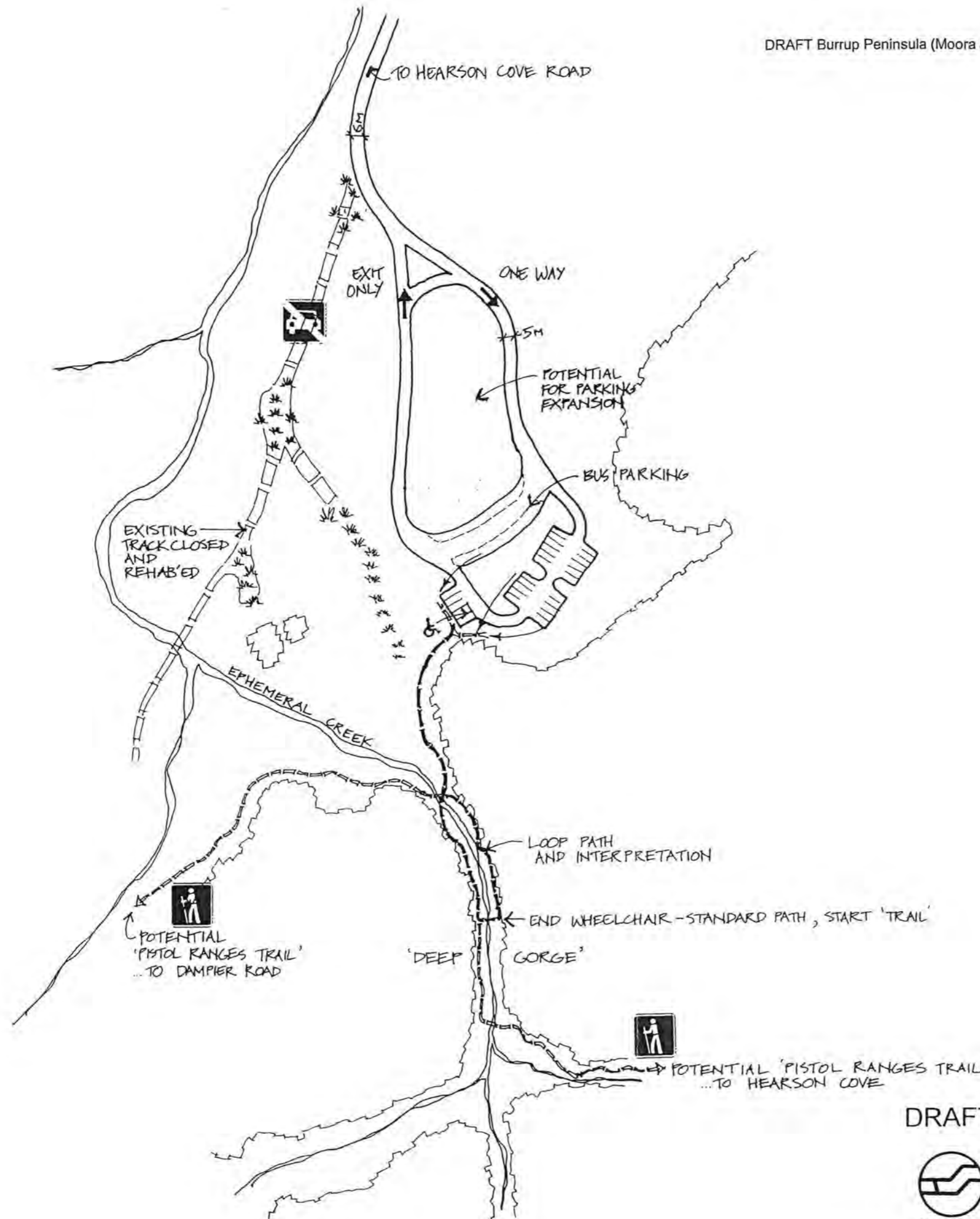
'Deep Gorge'

The objectives are to:

- facilitate a high standard of public access to this major Aboriginal site
- help visitors to understand the site and the elements that comprise it, including petroglyphs, shell and artefact scatters, ephemeral pools and grinding patches
- protect the site and minimise the impacts of site developments and visitors' activities' on its components and overall character

recommendations

1. See *Deep Gorge Preliminary Site Development Concept Plan*, Map 11.
2. Undertake Aboriginal heritage survey and detailed site design prior to any new site developments.
3. Avoid locating site developments directly opposite (west of) the gorge so that views back from within the gorge are of natural landscape.
4. Provide parking for at least 30 cars, and at least two coaches or smaller buses, plus scope for expansion.
5. Encourage industries locating in the 'Hearson-King Bay' Industrial Area to minimise their impacts on the landscape to the north of the proposed Deep Gorge recreation site (between Deep Gorge and Cowrie Cove).
6. Provide a high standard of pedestrian access (to wheelchair standard if achievable) from the parking area to the beginning of the bedrock section of the Deep Gorge creek.
7. On signs, provide information to encourage visitors to use the picnic shelters and (proposed) toilets at Hearson Cove rather than seeking alternatives at Deep Gorge.
8. Close the 4wd track that heads south from Deep Gorge (into the Pistol Ranges) and rehabilitate the closed track up to the Deep Gorge creek.
9. In partnership with the local Aboriginal community, plan and provide information and interpretation to help visitors understand, enjoy and value the Aboriginal heritage values at Deep Gorge, particularly by interpreting specific features along the walk, like petroglyphs, grinding patches and the scattered shells and stone tools.
10. Provide a walk trail linking Deep Gorge and Hearson Cove (see *Roads and Trails* and Map 9).



'DEEP GORGE'

DRAFT SITE DEVELOPMENT CONCEPT PLAN

SCALE 1:1,250 (approx.)



Conservation and Land Management



NORTH



July 1998

Conzinc Bay

The objectives are:

- to protect Aboriginal heritage and natural environments
- to facilitate public access to beaches at Conzinc Bay
- to preserve existing landscape character (little disturbed, high 'naturalness')

discussion

Recreation at Conzinc Bay is likely to be affected by industrial activities. Firstly if the proposed LNG projects proceed at the Holden Point site the beaches there will be inaccessible for recreation, and people will tend to look to alternatives like Conzinc Bay for swimming and fishing. Any increase in traffic at Conzinc Bay is likely to lead rapidly to severe physical degradation and loss of natural character given that few physical impediments to 4WD vehicles exist in the area.

Secondly development of the proposed Conzinc South Industrial Area will require a major road past Withnell Bay which will provide vehicle access to just south of Conzinc Bay. If that road is developed recreational pressure at Conzinc Bay is likely to increase significantly, requiring either site 'hardening' (designated parking areas, vehicle barriers etc) to cope, or barriers to exclude vehicles from Conzinc Bay altogether.

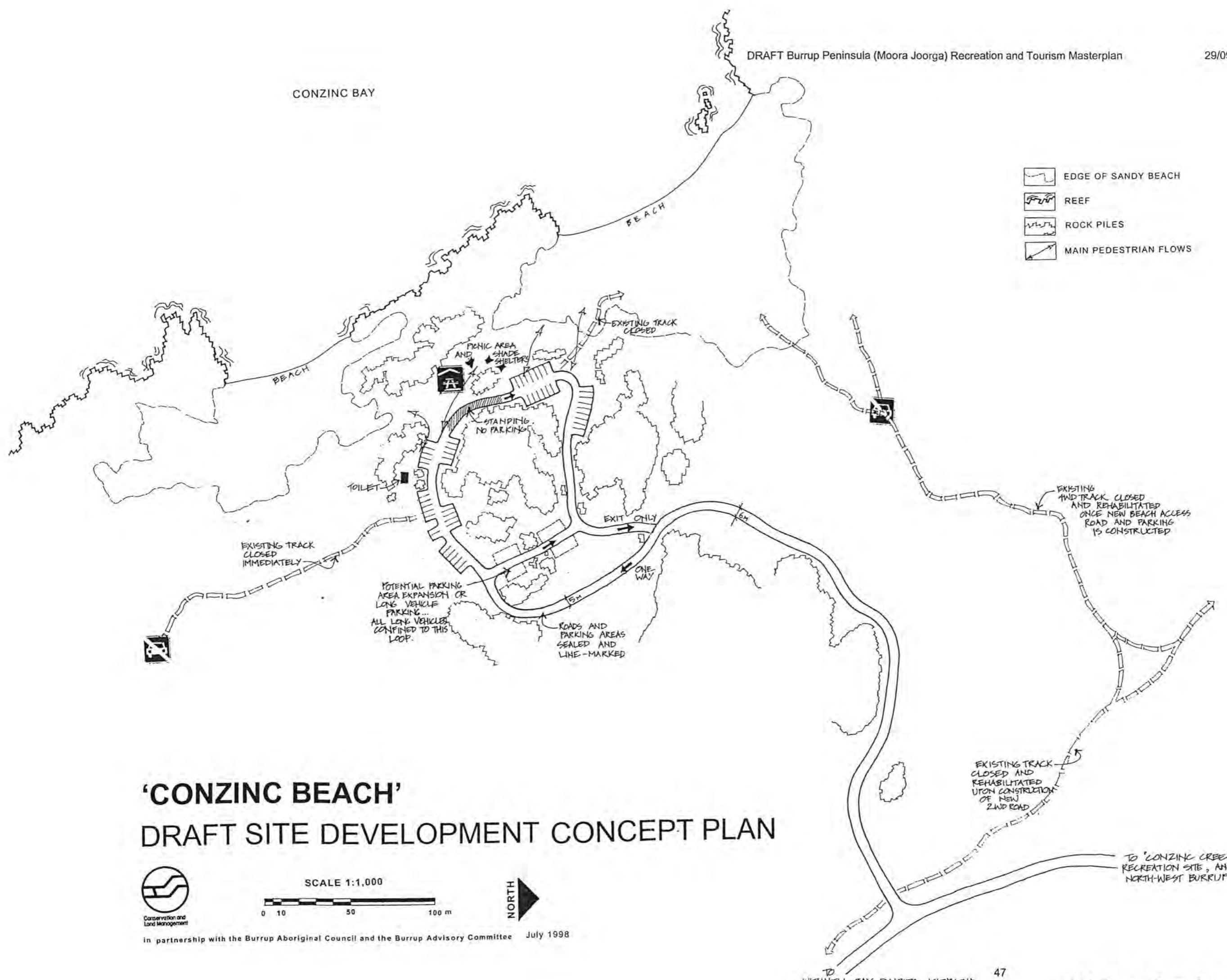
The aim of the following strategies and recommendations is to establish guidelines for site protection further development of recreation opportunities *if 2WD access is facilitated*.





recommendations

1. See Conzinc Bay Draft Site Development Concept Plans, Maps 12 and 13.
2. Defer any improvement of access and site developments (including those below) until protection of environment and Aboriginal sites is assured, through appropriate site 'hardening' and ongoing on-the-ground management.
3. Provide a new 2WD road (Maps 9, 12 and 13) to Conzinc Bay to facilitate quick, easy public access.
4. Develop two recreation sites to share recreational pressure and to provide visitors with easy access to most of the Conzinc Bay shore. The two proposed sites share the following attributes:
 - can be developed with minimal cost and disturbance to existing landscape character
 - potential for vehicle access very close to ideal beaches
 - 'natural defences'; both sites are surrounded by rockpiles and rocky ground that will help contain vehicles both physically and visually
 - are large enough to comfortably accommodate the proposed site developments (parking, toilets, pedestrian paths, picnic facilities, information and interpretation)
5. Restrict vehicle access to only these two developed sites, and direct most pedestrian traffic to appropriately designed and hardened paths to minimise vegetation loss and erosion.
6. Immediately close tracks as indicated on the *Roads and Trails* plan, Map 9 and install signs as specified in the CALM Burrup Peninsula Sign Plan.
7. Rehabilitate closed tracks to restore the 'naturalness' of the Bay's landscape and to help minimise ongoing use of those areas.

8. Install toilets at both sites, standards as for Hearson Cove in both cases.
9. In the event that access to Conzinc Bay is improved, protect engravings in the vicinity of roads and parking areas by employing methods like the following, and others identified in partnership with local Aboriginal people and heritage conservation consultants.
 - Provide information (at Conzinc Bay and elsewhere) to foster respect for Aboriginal heritage, warn of 'spiritual risks' from disturbing Aboriginal heritage, and state relevant regulations and penalties under the Aboriginal Heritage Act (1972).
 - Relocate, invert or cover engraved stones that are portable.
 - Tag individual engraved stones that are portable and install a facility for detecting those stones if they are removed from the site.
 - Supply artefacts for purchase at the (proposed) visitor centre, as legitimate souvenirs.
 - Patrol the areas and enforce the regulations and penalties of the Act.

CONZINC BAY



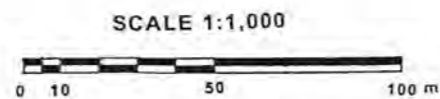
-  EDGE OF SANDY BEACH
-  REEF
-  ROCK PILES
-  MAIN PEDESTRIAN FLOWS

'CONZINC BEACH'

DRAFT SITE DEVELOPMENT CONCEPT PLAN

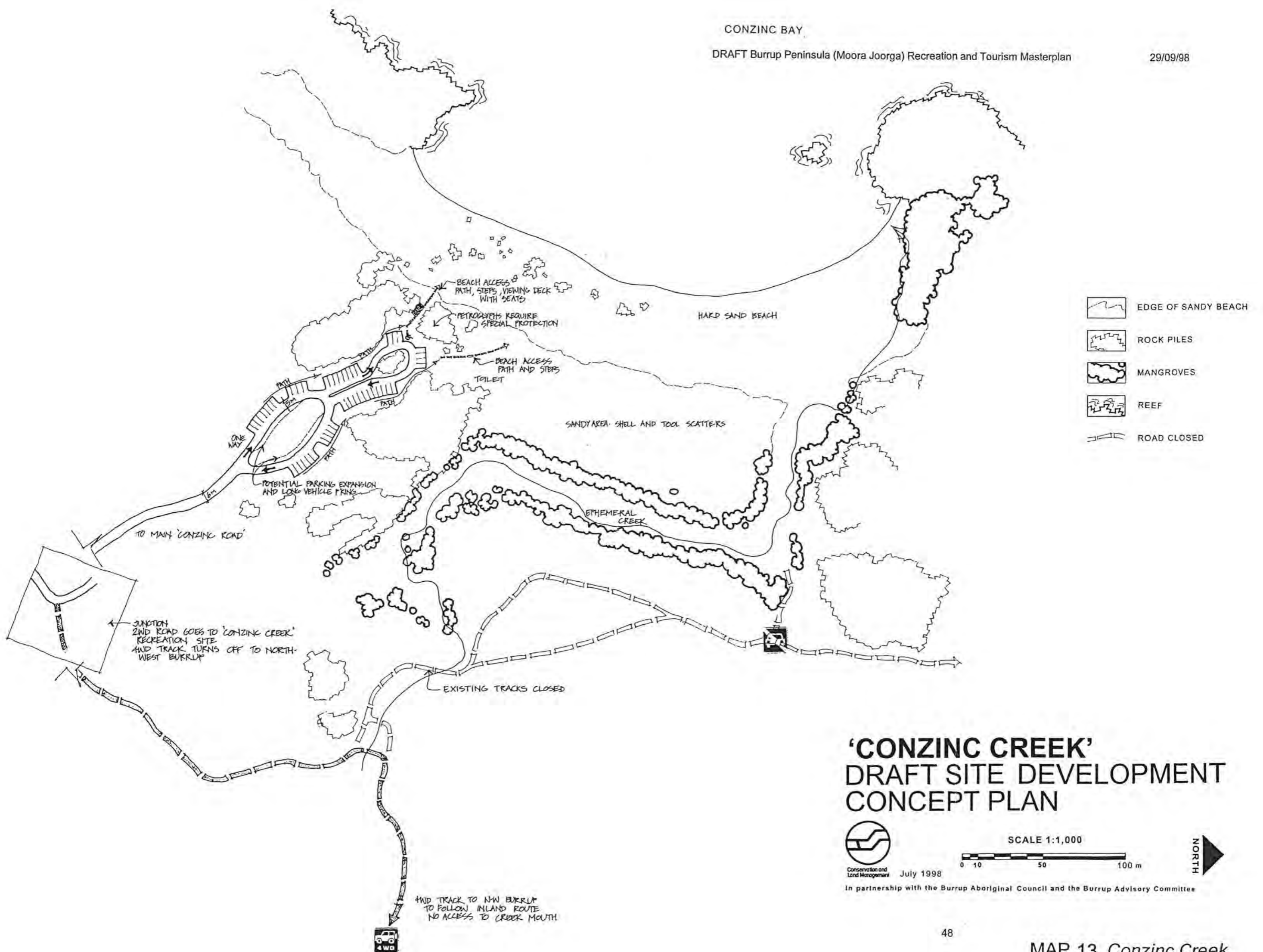


Conservation and Land Management



in partnership with the Burrup Aboriginal Council and the Burrup Advisory Committee July 1998

TO WITHNELL BAY, DAMPIER, KARRATHA



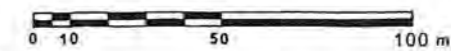
'CONZINC CREEK'
 DRAFT SITE DEVELOPMENT
 CONCEPT PLAN



Conservation and Land Management July 1998

In partnership with the Burrup Aboriginal Council and the Burrup Advisory Committee

SCALE 1:1,000



Withnell Bay

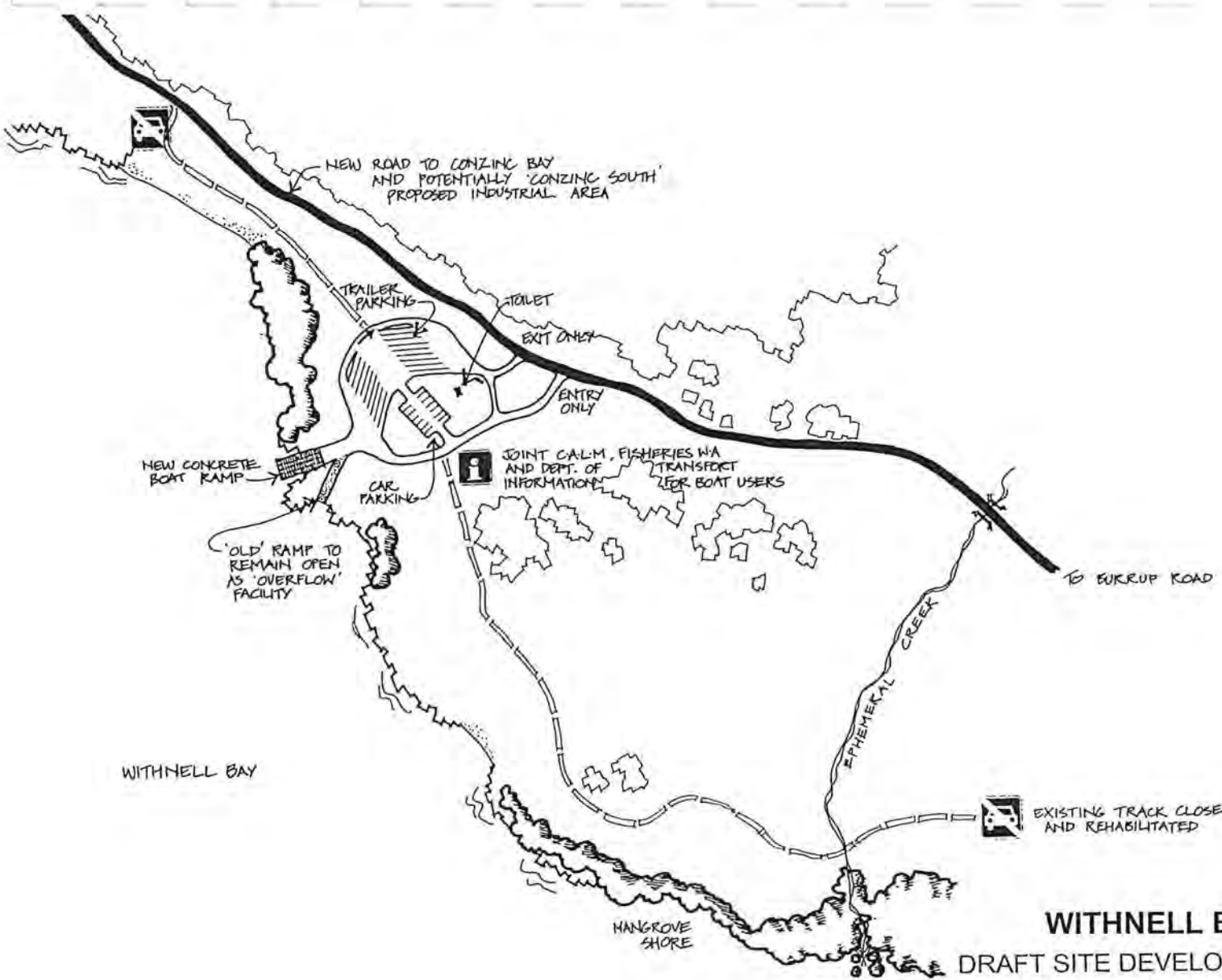
The objectives are to:

- upgrade boat launching facilities and maintain them in the long term
- protect heritage, environmental and landscape values
- minimise conflicts between industrial and recreational land uses

recommendations

1. See Draft Site Development Concept Plan, Map 14.
2. Relocate the Conzinc Bay access track/road to mitigate impacts on Aboriginal heritage sites and to improve amenity, visitor safety and the utility of the boat launching area. Provide a short spur road off the Conzinc Bay road to access the boat ramp area.
3. Undertake rehabilitation works as required following redevelopment of the site to restore areas outside the designated parking and boat launching area.
4. Survey Aboriginal heritage in detail to identify heritage protection requirements prior to detailed site design and implementation.
5. Install signs as per the CALM Sign Plan.
6. Re-locate and reconstruct the boat ramp (Map 14) to improve its utility throughout the tidal range. Retain the present bulldozed natural surfaced ramp as an 'overflow' ramp.
7. Provide a toilet with one unisex disabled-accessible cubicle.
8. Maintain rubbish collection so that boat users have an easy alternative to disposing of rubbish at sea or on islands.
9. Provide coordinated information on the islands and waters of the Archipelago; recreation opportunities and constraints, incorporating CALM, Fisheries WA and Department of Transport (Marine) information. Encourage Withnell Bay boat ramp users to responsibly and safely enjoy Archipelago islands and waters.

50



WITHNELL BAY BOAT RAMP
 DRAFT SITE DEVELOPMENT
 CONCEPT PLAN July 1998



SCALE 1:2,500 (approx.)

0 20 100 m



Cowrie Cove

The objectives are to:

- improve access for small boat launching
- otherwise protect environmental and landscape values in keeping with the objective of maintaining the 'Central Burrup' zone as a natural or 'wild' area.

recommendations

1. Provide a new 2WD road to Cowrie Cove via Hearson Cove to avoid transecting the Hearson-King Bay Industrial Area and to take advantage of recreation facilities at Hearson Cove (toilets, picnic facilities).
2. Close the 4wd track from Cowrie Cove north (towards Watering Cove) to prevent ongoing degradation of the Cowrie-Watering Cove environs (see *Roads and Trails* and Map 9).
3. Maintain the boat ramp at a similar standard to the present. There is potential to 'harden' and formally define traffic areas if necessary in the future to mitigate environmental impacts whilst maintaining launching opportunities.
4. Provide no rubbish bins, and request that visitors take their rubbish out with them.

North West Burrup

Proposals for the north-west Burrup were discussed under *Zoning*. Those proposals are reiterated below. See *Zoning* (Map 8), *Roads and Trails* (Map 9) and the *Masterplan* (Map 7).

The objectives are to:

- preserve the character of the area, that is relatively *wild, undeveloped, remote* and *uncrowded* despite it potentially becoming much more accessible than at present if a 2WD road is provided to the north end of Conzinc Bay
- provide recreational access whilst preventing crowding and environmental degradation.

recommendations

1. Maintain recreational access as is in the short term, only closing tracks that are degrading and/or are the worst of two tracks that lead to the same destination (Map 9).
2. Restrict future vehicular access as necessary to ensure that crowding is avoided and impacts are minimised. Consider restricting 4WD access to the Searipple Passage coast of the zone and reserving the rest of the zone for pedestrian and cycle access, developing trails to link sites within the area and to link the area to recreation sites at Conzinc Bay.
3. Do not undertake site hardening including the upgrade of roads, to preserve the semi-remote, predominantly natural or 'wild' recreational character of the zone.
4. If a 2WD road is constructed to Conzinc Bay the resultant pressure on the northern areas will be unsustainable. Close vehicular tracks north of Conzinc to general access by private vehicles. Consider *walk/cycle* access, vehicle access by *permit* only, or *guided* access to maintain recreational access.

Recreation and Tourism Facilities and Services

Boat Ramp

See 'Recreation Sites' section and Map 14 for boat ramp proposals at Withnell Bay. See also Appendix 1 for discussions of potential alternative boat ramp sites to the present.

The recommendation is to upgrade the boat launching facilities at the present Withnell Bay site. Aboriginal heritage surveys should precede detailed site planning to indicate whether or not development at this site is appropriate.

Full development of the 'Conzinc South' industrial area may constrain boat traffic to the point where a boat ramp at Withnell Bay is no longer be viable. Even so it seems that an upgrade to facilitate good 2WD access and all-tides small boat (up to 6m) launching is warranted.

Good boat launching facilities at Dampier are essential to 'share the load' with Withnell Bay. It seems that the Withnell Bay site could not accommodate large boats and vehicles, or large numbers of boats and vehicles, without high risk to landscape, conservation and Aboriginal heritage values.

Visitor Centre

Local Aboriginal people aim to develop a cultural centre on the Peninsula. CALM also require a centre for interpretation of environmental and heritage values, and to aid day to day management of recreation and tourism. Burrup industries have indicated that each will operate their own visitor centres. It is proposed that a visitor centre be developed and managed jointly by local aboriginal people and CALM. Discussions between CALM and local Aboriginal people (April 17, 1998) have identified potential components of the centre as follows:

- an 'office' to aid management of the Conservation, Heritage and Recreation Area
- a cultural centre (information and interpretation, audio visual displays, art studio and gallery, artefact displays and sales, stories, bush food tours, dances, walk and/or vehicle tours of heritage sites etc)
- camping as part of the cultural experience... a camping component of the cultural centre
- support services (tour bus, cafeteria, toilets and showers, first aid, possibly staff accommodation nearby)
- information and interpretation relating to natural values (flora, fauna, geology, nearby islands, regional context etc)

To fulfil these roles a large site will be required that has a natural and cultural context, is 'comfortably' separated from industrial areas and is or will be readily accessible from a major road. (See preliminary visitor centre location and design ideas, Appendix 2)

At the time of writing a number of sites (Appendix 2) are being considered jointly by CALM and local Aboriginal people.

Walk and Cycle Trails

See 'Roads and Trails' section and Map 9.

Access and Interpretation Services

The objectives are to:

- help visitors access and enjoy experiences that would be inaccessible to them without assistance
- provide very special experiences for visitors by interpreting sites and characteristics of the Burrup to them in a manner and to a depth beyond that achievable with signs and other 'passive' interpretive media
- by being with visitors, achieve a very high degree of environmental and heritage protection.

recommendations

1. Guide visitors' activities in particularly sensitive or special places where tourism is viable and potentially very enriching, but where unrestricted access is undesirable.
2. Pursue access and interpretation services like the following:
 - day-time Aboriginal heritage stories and heritage site visits, operated from the (proposed) visitor centre
 - an overnight 'heritage camp' on the Peninsula including stories and site visits, operated from the (proposed) visitor centre
 - guided trips to island Nature Reserves in the Dampier Archipelago
3. Encourage commercial operators to assist CALM in providing these recreation and tourism opportunities.
4. Provide training or seek quality assurance as necessary to ensure that operators provide high quality services.

Recreation off the Burrup

The objective is to pursue ways of providing recreation opportunities off the Burrup Peninsula that can not be provided on the Peninsula without threat to its special conservation, heritage and landscape values.

recommendations

1. Encourage vehicle-based camping at Cleaverville and Forty Mile.
2. Upgrade boat launching facilities at Dampier to ensure a popular alternative to the more sensitive Withnell Bay site.
3. Provide and promote off-road vehicle areas in non-sensitive environments (like ex-industrial or proposed future industrial areas) near Karratha/Dampier as alternatives to sensitive environments on the Burrup.
4. Promote nature based and cultural tourism opportunities elsewhere in the Region, like Roebourne and the National Parks, so that visitors have opportunities to understand where the Burrup Peninsula fits in the 'big picture'.

Cultural Heritage Protection & 'Cultural Tourism'

The objectives are to:

- protect Aboriginal heritage sites and features
- facilitate public understanding and enjoyment of Aboriginal heritage
- minimise risks to visitors from spiritually powerful places and features considered dangerous under aboriginal culture..

recommendations

1. With local Aboriginal people, identify and prioritise heritage protection issues, and implement protective measures.
2. Pursue legislative means for protection, for example *protected area* and *temporary protected area* status under the Aboriginal Heritage Act (1972).
3. Consult with experts in the fields of archaeology, rock art conservation and similar to determine optimal strategic and technical approaches to heritage protection.
4. Ensure that management staff are appropriately trained and equipped to conserve Aboriginal heritage.
5. Develop and control recreational access to minimise threats to heritage values from recreational use. Create levels of accessibility as appropriate, including the following:
 - easily accessible, developed and 'hardened' sites to accommodate intensive cultural tourism (eg 'Deep Gorge', see 'Recreation Sites' and Map 11)
 - undeveloped sites but access managed and monitored (and possibly actually discouraged by signs, barriers or similar)
 - undeveloped and unmanaged sites (in remote, non-vehicle-accessible areas)
 - 'prohibited areas' where access is by permit only.
6. Provide information and interpretation facilities and services to increase visitors' appreciation of the Burrup's heritage values and awareness of how to help protect them.
7. At recreation sites where visitors have easy access to Aboriginal heritage, particularly at parking areas near heritage features or sites, (ie relatively high risk of disturbance) seek design and management solutions that will minimise risks (see 'Recreation Sites' section, *Conzinc Bay*).
8. Conduct a heritage survey of the 'Pistol Ranges' Area, adopting the methodology used for the 1993 Burrup Peninsula Aboriginal Heritage Project (Veth *et al.*, 1993) to identify heritage protection requirements in that area.
9. Encourage other research into Aboriginal heritage protection priorities, strategies and methods.
10. Review the recommendations of the Veth (1993) report in cooperation with the Aboriginal Affairs Department and local Aboriginal people, and implement those recommendations as appropriate (See Map 4).
11. Formulate regulations, in cooperation with the Museum and local Aboriginal people, for existing and proposed protected areas.

Ongoing Aboriginal Involvement

The objectives are to:

- Encourage continuity of Aboriginal cultural activities on the Burrup.
- Ensure that Aboriginal people share in the responsibilities and benefits of providing and managing recreation opportunities on the Peninsula.
- Provide employment opportunities for local Aboriginal people where possible.

recommendations

1. Maintain an active Burrup Aboriginal Council to provide planning and management advice to CALM to assist in the preparation and implementation of conservation, recreation and management plans . Conduct a significant proportion of CALM/Council business on the Peninsula to maintain the Council's physical involvement with the Peninsula.
2. Encourage and assist Aboriginal people to be the primary operators of the proposed visitor centre and develop cultural tourism products.
3. Employ Aboriginal people immediately on interim management projects like sign making and installation, track closures, rehabilitation and Aboriginal heritage surveys.
4. Encourage local Aboriginal people to prepare a plan for Aboriginal involvement in recreation and tourism related activities on the Peninsula, so that CALM (and other stakeholders) have a clear and concise record of local Aboriginal people's aspirations on the Burrup.

Environmental Protection

The objective is to preserve the quality and diversity of the Burrup's natural environments. The focus here is on protection from impacts *related to recreation and tourism*.

recommendations

1. Undertake regular photographic surveys of environmental conditions at recreation sites and zones to complement existing environmental monitoring programs.
2. Plan and design recreation sites and facilities to make best use of the Peninsula's 'natural defences', particularly by containing vehicles (roads and parking areas) within areas that are too rugged to enable off road driving (see 'Recreation Sites' section, *Conzinc Bay* as an example).
3. Provide information and interpretation facilities and services to encourage visitors to enjoy and value the Burrup's natural environments, and involve visitors in environmental protection. (Install signs as specified in the CALM Burrup Peninsula Sign Plan.)
4. Cooperate with other land users on the Burrup, like industries, to achieve high standards of environmental protection on the Burrup including through the encouragement of environmentally sensitive behaviour by all employees/contractors.
5. Close tracks as indicated in the '*Roads and Trails*' plan, Map 9.
6. Rehabilitate areas indicated in the *Masterplan*, Map 7 and the '*Roads and Trails*' plan, Map 9.
7. Employ appropriate measures to minimise risks of spreading weeds in developing roads and recreation sites.

Visitor Risk Management

The objective is to minimise the risk of accidents and injury to visitors without degrading the character of the Burrup's natural settings or diminishing visitors' enjoyment of those settings.

recommendations

1. Provide information to encourage visitors to recognise risks and take responsibility for their own safety in natural areas of the Peninsula.
2. Ensure that recreation facilities comply with relevant design standards and specifications.
3. Carry out periodic safety audits at proposed and existing recreation sites in the Conservation, Heritage and Recreation Area of the Peninsula.
4. Provide information that warns visitors of risks including the following and those identified in the audits:
 - risks to personal safety and property from tides
 - risks at swimming sites (like Hearson Cove and Conzinc Bay) from submerged rocks, sharp oysters and corals, dangerous fish
 - risks of falling and crush injuries at rockpiles (particularly at intensively used sites like 'Deep Gorge') due to unstable rocks
 - hazardous areas when rifle or pistol ranges are in use
 - places and features considered dangerous under Aboriginal culture

Visitor Information and Interpretation

The objective is to provide information and interpretation that helps visitors:

- recreate safely
- appreciate the Burrup's special natural and cultural heritage values
- identify and enjoy recreation and tourism opportunities
- understand what they should not do and why

recommendations

1. Prepare a visitor information and interpretation plan for the Peninsula, addressing the issues below and others (refer to CALM Visitor Interpretation Manual).
 - Marketing of the Burrup's recreation and tourism opportunities (locally to internationally) in cooperation with the tourism industry.
 - Identification of information and interpretation opportunities.
 - Information and interpretation techniques and media (personal; activity programs, public contact and non-personal; signs, displays, publications) that will provide a wide variety of interpretation experiences to visitors.
 - Partnerships with local Aboriginal people that will provide special cultural information and interpretation facilities and services.
 - Partnerships with industries and the Shire of Roebourne to ensure that local people, including industries' itinerant workforces, are aware of the Peninsula's cultural and environmental values and sensitivities.
2. As an interim management measure install signs as directed in the Burrup Sign Plan.

Landscape Management

The objective is to preserve or enhance the quality and diversity of the Peninsula's scenery in the long term.

discussion¹⁶

Many visitors to the Peninsula experience landscapes of three basic character types, industrial, natural and residential. Within and at the boundaries of these types are what could be termed *landscape units*. A landscape study undertaken by Gorgon (unpublished) identified ten landscape units. These are as follows: Dampier township, Dampier hinterland / industrial surround, rocky outcrops, industrial islands, island outcrops, low lying island, mangrove flats, salt flats - natural, salt flats - developed, NWSJV LNG plant (Woodside).

All stakeholders on the Burrup are 'responsible for' one or more of these units, and visitors (or for that matter Burrup residents and workers) may experience all of them in a single visit. It is important in planning recreation and tourism to consider that landscape management, like environmental management is an issue that concerns all Burrup land users and managers and that a coordinated approach to landscape planning and management is essential.

recommendations

1. Encourage all Burrup Peninsula land users and managers to participate in the preparation of a landscape management plan for the whole of the Burrup that includes:
 - inventory and assessment of landscape character and landmarks (good and bad) in industrial, natural, and residential areas
 - formulation of scenic quality objectives
 - preparation of landscape management guidelines
 - recommendation of visual impact mitigation strategies for existing developments and aesthetic standards for new developments
2. Implement interim landscape management strategies as follows:
 - Locate and design recreation sites and facilities so as to minimise their alteration of natural scenery in the Conservation, Heritage and Recreation Zone of the Burrup, except at Hearson Cove where prominent recreation facilities are considered appropriate to the site's intensive recreational context.
 - Encourage industries to retain natural buffers between and within their boundaries, particularly as corridors that link natural areas that would otherwise be totally segregated by industry (to provide both scenic diversity and continuity, and ecological linkages).
 - Preserve the landscape of the northern Burrup from Withnell Bay north as predominantly natural landscape. At present the Withnell Bay area provides an excellent transition zone between industrial character and natural character. From most areas north of Withnell Bay industry is presently either invisible or an inconspicuous and non-threatening part of a predominantly natural scene. Development of the 'Conzinc South' industrial area potentially threatens scenery values throughout the northern

¹⁶ See also Appendix 3 for assessments of landscape character and preliminary landscape management ideas.

Burrup. Any industrial development on South Conzinc should be sensitively located to minimise visual impacts, and not intrude on the Conzinc Bay viewshed.

- Burrup industries will tend to be increasingly open to scrutiny from a 'sensitive' tourist audience, and should make the most of the sculptural elements of their installations and minimise the visibility of uglier elements like boundary fences, lay down areas and disturbed landforms (cut and fill slopes).
- Undertake a photographic survey of landscape character and landmarks in the zones discussed earlier. The aims are to illustrate the character of those zones and to record scenes in the Conservation, Heritage and Recreation Area that are expected to change with either recreational or industrial development
- Repeat the survey periodically to monitor changes to scenery / landscape character.

Review

The objective is to ensure that the Recreation and Tourism Masterplan remains relevant and effective.

recommendations

1. Make this Draft plan available for review and comment by stakeholders including the Burrup Advisory Committee, the Burrup Council and the public.
2. Amend the draft as appropriate after the review period and produce a final plan.
3. Review that plan after five years (CALM to undertake the review, or other management authority if another is appointed in that time in conjunction with the Burrup Council and Advisory Committee).
- 4.

Research and Further Planning

The objective is to base long term planning and management decisions, as well as visitor information and interpretation on the best, most current knowledge that is achievable.

recommendations

1. In conjunction with other land users/holders, prepare a landscape management plan that considers natural, industrial and residential areas.
2. Prepare a CALM/NPNCA Management Plan for the Conservation, Heritage and Recreation Area of the Burrup if the area is vested in the NPNCA following recommendation by the *Burrup Peninsula Land Use Plan and Management Strategy Implementation Group*.
3. Prepare a cultural heritage conservation plan, including strategies and priorities for conservation of rock art.
4. Encourage research into topics that are of relevance to management of conservation, heritage and recreation values on the Burrup. Keep a register of potential topics for research and consider establishing a fund to support appropriate research on the Burrup.

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APPENDIX

Appendix 1

ASSESSMENTS OF POTENTIAL ALTERNATIVE BOAT LAUNCHING AREAS ON THE WEST COAST OF THE CONSERVATION, HERITAGE AND RECREATION AREA

- **900m north of the present site.** A rocky point with a flat stony area above. Main advantages are that the site is about twice as far from the gas plant as the present; launching is not constrained by tide; the rocky shore with a consistent gradient is likely to provide a good foundation for a ramp; the ramp is slightly more sheltered. Main disadvantages are that the site is small, with limited space for parking; the area is rich in petroglyphs; the site is slightly closer to 'Conzinc South'; the potential ramp, parking area and access road are stony and, though physically strong, would require extensive alteration (base preparation, surfacing) to be useable. The difficulties of the site seem to outweigh its advantages.
- **The opposite shore of Withnell Bay.** A rock bar on a sandy shore with a low dune behind. Main advantages are that the site is about 2km from the gas plant; is very sheltered, allowing launching in almost any wind; has ample space for parking; access road, parking area and ramp seem likely to be easy to construct; the adjacent shores offer magnificent beachcombing, swimming and shore-based fishing opportunities. Main disadvantages are that launching is impossible at spring low tides unless some dredging occurs; conflicts with 'Conzinc South' industrial zoning and would need to be closed if industry proceeds; as yet entirely undeveloped so high cost; potentially high environmental impact on a magnificent natural shore. This site is probably not worth developing whilst industrial development on 'Conzinc South' is a possibility.
- **Conzinc Bay south end.** A beach adjacent to a rocky headland. Main advantages are good boat access to islands and Burrup west coast; good walking, swimming, shore-based fishing on adjacent shores; potential for launching at any tide. Main disadvantages are limited parking too far from the likely ramp site; site very exposed to wind and waves; likely disruption of (and potentially risk to) swimmers and snorkellers in Conzinc Bay; coral bommies in Conzinc Bay pose a hazard to boats and boats to corals. This site can not accommodate boat launching without severe impact on environmental and shore-based recreation values.
- **Conzinc Bay central.** Mostly as above. Some areas have ample parking space but again too far from potential ramp sites, more exposed to weather, more disruptive and hazardous to shore-based visitors. Not suitable.
- **Conzinc Bay north end.** Mostly as above but significantly better protected from wind and waves, significantly closer to islands north and public risk from industry likely to be negligible. Would require major road building for 2WD access and the road is likely to be busy if the boat ramp is good. A 2WD road to the north-west Burrup is likely to lead to severe recreational pressure on the area and high risk of environmental degradation. The area has significant natural and cultural values that must be protected. The only site with sufficient parking space is not useable at spring low tides. A facility in this area is likely to severely disrupt the natural character of the north-west Burrup and is not considered suitable.

NOTES

THERE ARE TWO MAIN ROLES FOR THE VISITOR CENTRE:

- ① TO PROVIDE A SPECIAL EXPERIENCE FOR VISITORS
- ② TO HELP MANAGE RECREATION ON THE BURRUP BY ACTING AS A 'GATEWAY'

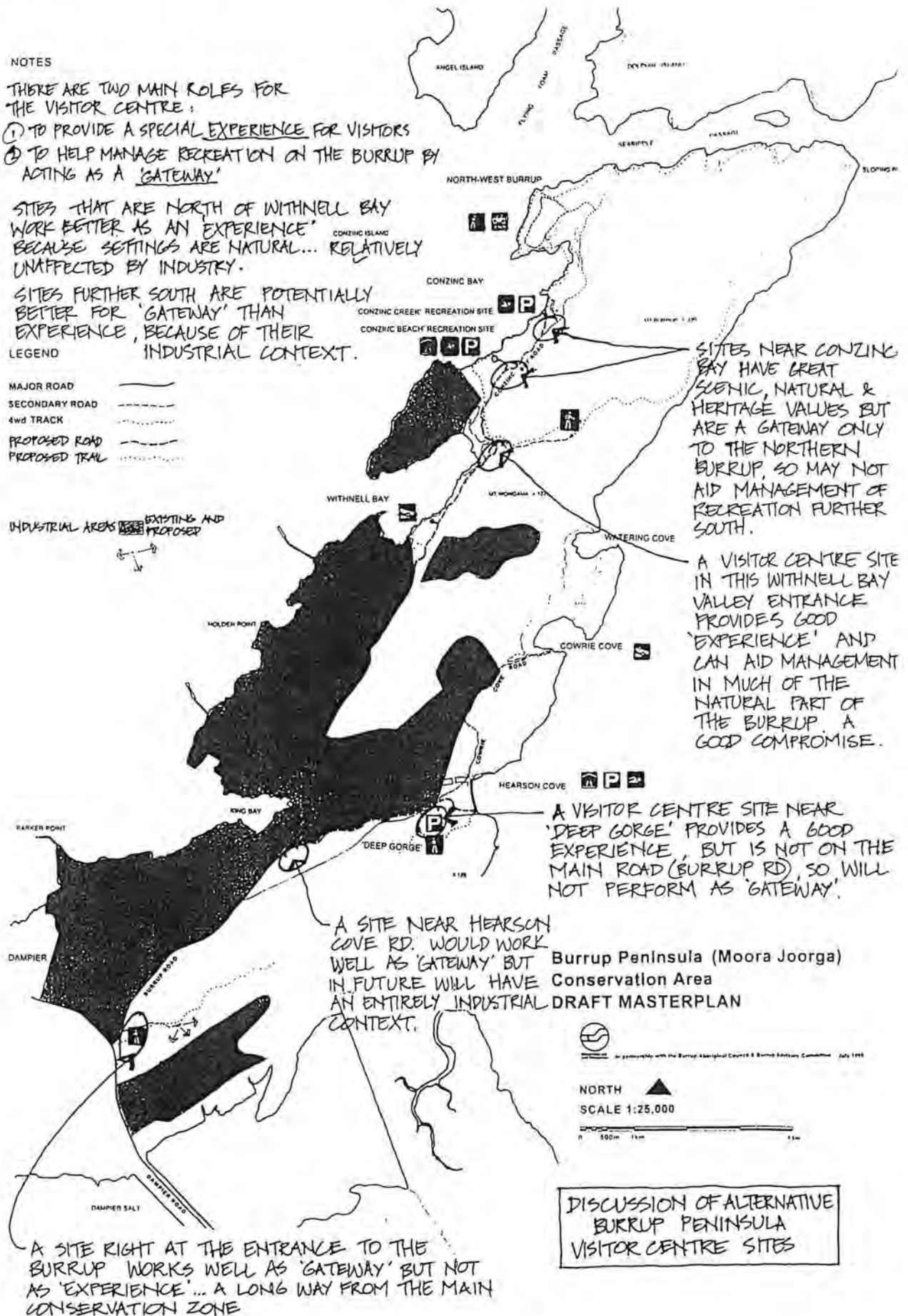
SITES THAT ARE NORTH OF WITHNELL BAY WORK BETTER AS AN 'EXPERIENCE' BECAUSE SETTINGS ARE NATURAL... RELATIVELY UNAFFECTED BY INDUSTRY.

SITES FURTHER SOUTH ARE POTENTIALLY BETTER FOR 'GATEWAY' THAN 'EXPERIENCE', BECAUSE OF THEIR INDUSTRIAL CONTEXT.

LEGEND

- MAJOR ROAD
- SECONDARY ROAD
- 4wd TRACK
- PROPOSED ROAD
- PROPOSED TRAIL

INDUSTRIAL AREAS EXISTING AND PROPOSED



SITES NEAR CONZINC BAY HAVE GREAT SCENIC, NATURAL & HERITAGE VALUES BUT ARE A GATEWAY ONLY TO THE NORTHERN BURRUP, SO MAY NOT AID MANAGEMENT OF RECREATION FURTHER SOUTH.

A VISITOR CENTRE SITE IN THIS WITHNELL BAY VALLEY ENTRANCE PROVIDES GOOD 'EXPERIENCE' AND CAN AID MANAGEMENT IN MUCH OF THE NATURAL PART OF THE BURRUP. A GOOD COMPROMISE.

A VISITOR CENTRE SITE NEAR 'DEEP GORGE' PROVIDES A GOOD EXPERIENCE, BUT IS NOT ON THE MAIN ROAD (BURRUP RD), SO WILL NOT PERFORM AS 'GATEWAY'.

A SITE NEAR HEARSON COVE RD. WOULD WORK WELL AS 'GATEWAY' BUT IN FUTURE WILL HAVE AN ENTIRELY INDUSTRIAL CONTEXT.

A SITE RIGHT AT THE ENTRANCE TO THE BURRUP WORKS WELL AS 'GATEWAY' BUT NOT AS 'EXPERIENCE'... A LONG WAY FROM THE MAIN CONSERVATION ZONE

Burrup Peninsula (Moora Joorga) Conservation Area
DRAFT MASTERPLAN

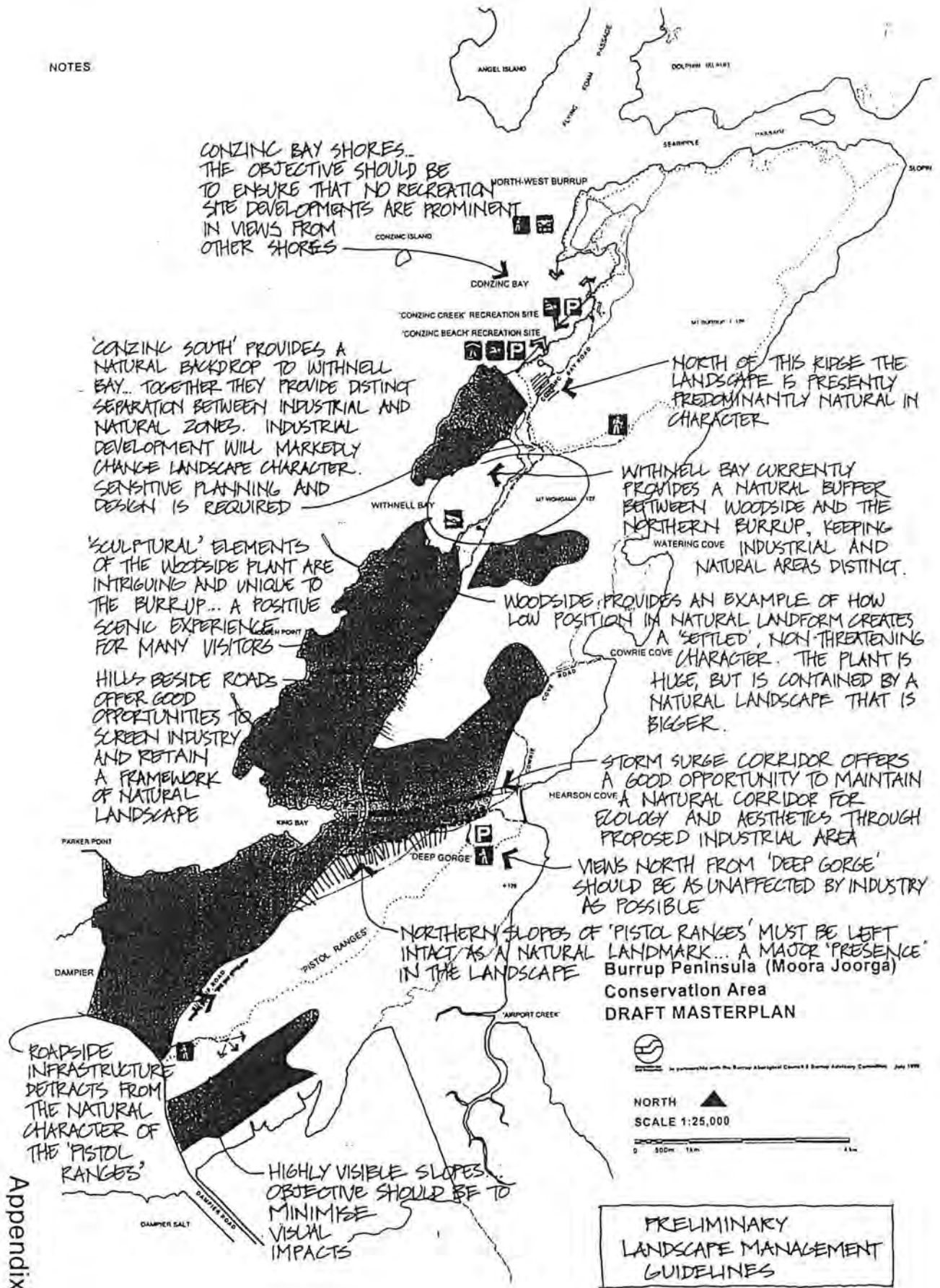
In partnership with the Burrup Aboriginal Council & Burrup Heritage Committee July 1998



DISCUSSION OF ALTERNATIVE BURRUP PENINSULA VISITOR CENTRE SITES

Appendix 2

NOTES



CONZINC BAY SHORES... THE OBJECTIVE SHOULD BE TO ENSURE THAT NO RECREATION SITE DEVELOPMENTS ARE PROMINENT IN VIEWS FROM OTHER SHORES

'CONZINC SOUTH' PROVIDES A NATURAL BACKDROP TO WITHNELL BAY... TOGETHER THEY PROVIDE DISTINCT SEPARATION BETWEEN INDUSTRIAL AND NATURAL ZONES. INDUSTRIAL DEVELOPMENT WILL MARKEDLY CHANGE LANDSCAPE CHARACTER. SENSITIVE PLANNING AND DESIGN IS REQUIRED

'SCULPTURAL' ELEMENTS OF THE WOODSIDE PLANT ARE INTRIGUING AND UNIQUE TO THE BURRUP... A POSITIVE SCENIC EXPERIENCE FOR MANY VISITORS

HILLS BESIDE ROADS OFFER GOOD OPPORTUNITIES TO SCREEN INDUSTRY AND RETAIN A FRAMEWORK OF NATURAL LANDSCAPE

NORTH OF THIS RIDGE THE LANDSCAPE IS PRESENTLY PREDOMINANTLY NATURAL IN CHARACTER

WITHNELL BAY CURRENTLY PROVIDES A NATURAL BUFFER BETWEEN WOODSIDE AND THE NORTHERN BURRUP, KEEPING INDUSTRIAL AND NATURAL AREAS DISTINCT.

WOODSIDE PROVIDES AN EXAMPLE OF HOW LOW POSITION IN NATURAL LANDFORM CREATES A 'SETTLED', NON-THREATENING CHARACTER. THE PLANT IS HUGE, BUT IS CONTAINED BY A NATURAL LANDSCAPE THAT IS BIGGER.

STORM SURGE CORRIDOR OFFERS A GOOD OPPORTUNITY TO MAINTAIN A NATURAL CORRIDOR FOR ECOLOGY AND AESTHETICS THROUGH PROPOSED INDUSTRIAL AREA

VIEWS NORTH FROM 'DEEP GORGE' SHOULD BE AS UNAFFECTED BY INDUSTRY AS POSSIBLE

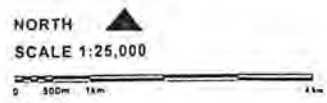
NORTHERN SLOPES OF 'PISTOL RANGES' MUST BE LEFT INTACT AS A NATURAL LANDMARK... A MAJOR 'PRESENCE' IN THE LANDSCAPE

ROADSIDE INFRASTRUCTURE DETRACTS FROM THE NATURAL CHARACTER OF THE 'PISTOL RANGES'

HIGHLY VISIBLE SLOPES. OBJECTIVE SHOULD BE TO MINIMISE VISUAL IMPACTS

Conservation Area
DRAFT MASTERPLAN

In partnership with the Burrup Aboriginal Council & Burrup Advisory Committee July 1998



PRELIMINARY
LANDSCAPE MANAGEMENT
GUIDELINES

Appendix 3

LANDSCAPE / RECREATIONAL CHARACTER ZONES



ABOVE: 'PISTOL RANGES'... A LARGE, VERY RUGGED NATURAL AREA. EASY ACCESS TO PERIPHERY (BURRUP RD, HEARSON COVE RD) BUT DIFFICULT ACCESS TO INTERIOR. OPPORTUNITIES FOR WALKING, MOSTLY FOLLOWING VALLEYS. STRONG SENSE OF MOVING THROUGH 'CORRIDORS' AND ROOMS... CURIOSITY & DISCOVERY. RICH IN ABORIGINAL SITES.



ABOVE: 'CENTRAL BURRUP'... VERY DIVERSE, MOSTLY NATURAL. DIVERSE COASTAL ENVIRONMENTS AND RUGGED INLAND. OPPORTUNITY TO PRESERVE AS A SEMI-REMOTE AREA CHARACTERISED BY NATURAL VALUES AND LOW RECREATIONAL USE.



ABOVE: 'WITHINELL BAY VALLEYS' ... LONG, BROAD VALLEYS ENCLOSED BY STEEP HILLS. STRONG 'CORRIDOR' CHARACTER, OFFERING OPPORTUNITIES TO PENETRATE INTO THE LESS VISITED INLAND BURRUP.



ABOVE: 'CONZINC BAY'... CHARACTERISED BY BEACHES, SWIMMING, FISHING, WALKING OPPORTUNITIES. SOME AREAS SEVERELY DAMAGED BY VEHICLES. BEAUTIFUL VIEWS... ESPECIALLY LATE AFTERNOONS AND SUNSET.



ABOVE: 'NORTHERN BURRUP'... CHARACTERISED BY ALMOST NO VEHICLE ACCESS AND OPPORTUNITIES TO FIND SOLITUDE AND UNSPOILT NATURAL PLACES. MANY IMPORTANT ABORIGINAL SITES. A PROTECTED AREA UNDER THE ABORIGINAL HERITAGE ACT.



ABOVE: 'NORTH-WEST BURRUP'... DIVERSE COASTAL RECREATION OPPORTUNITIES AND NUMEROUS LITTLE AWD-ACCESSIBLE 'SPOTS'. USUALLY OFFERS SOLITUDE IN A CHOICE OF SEVERAL SPOTS BUT STARTS TO FEEL CROWDED VERY QUICKLY (ABOUT A DOZEN VEHICLES).