

Boundary Rd

Mosman Park

McCabe St

MSS  
etc  
MISC



**AREA INFORMATION**

System 6 Area (C or M) or Update Area (Update)

M55

<b>Conservation Area</b>	
Nature Reserve	
Reserve No	
National Park	
Reserve No	
Local Government	
Reserve No	
Other	
<b>Proposed Conservation Areas</b>	
Local Government	Mosman Park
Reserve No	C22057
Other	UWA C9140, C27798

not vested C9403 Cont'ing C11418 Obelisk + Triangomic Station  
 Conservation Area Water Res. C13374 with Defence Dept

<b>Conservation Area</b>	
Nature Reserve	
Reserve No	
National Park	
Reserve No	
Local Government	
Reserve No	
Other	

**AREA**

Total Area	hectares
Completely Degraded	hectares
comments:	

**AREA MAPPED FLORISTIC UNITS**

Boundaries: System6 CALM

Units	Site (Condition)	Code	Bound	Area (ha)	Area(ha)

Boundaries determined by use of

aerial photograph	Memo Street Directory run 7 5139 5/1/91
orthophoto	2033 1 NW
vegetation map	
soil map	



M55 Buckland Hill, Mosman Park

'Friends' Advocate Management

Other Names: Leighton Peninsula

Specific Study/studies Miscellaneous studies

? Flora

Vegetation Map	1	2	3	
Flora list	1	2	3	4
Significant Taxa			done / suitable / doubtful	

Fauna

Mammals	1	2	
Birds	1	2	RAOU
Reptiles and Amphibia	1	2	
Invertebrates	1	2	

Vegetation Condition Map Sites Comment

Disturbance Factors Comment Management

Swan Coastal Plain Floristic Survey

AHC: National Estate- Listed / Interim / Nominated / Notified NT (WA): Heritage Classification

Notes
D. Kaeshagen
Leighton Peninsula Regional Park

**M55 Beckland Hill, Mosman Park**

M55.1 Commonwealth and Mosman Park Town Council in consultation with EPA, UWA and Fremantle City Council prepare management plan for the area.

Partially Implemented

Two thirds of area developed for housing purposes. Management plan prepared as part of development proposals for the area. The undeveloped portion is being considered in the Leighton Peninsula Regional Park study which is being co-ordinated by DPUD.



Area M55 Name <u>Buckland Hill</u>			
Source <u>Museum Dr P. Berry</u>			
Purpose (why was the study done?)			
Government			
Corporate			
Community Group			
Management Plan			
Publication Planned	Yes	No	Date
Planned Location			

Soils		
Units	described	referenced

Landscape		
Features	described	referenced

Flora			
Vegetation Map			
Units	Site based (no)		
Mapped			
Veg Units	Comparable Heddle <i>et al</i>	Compared Heddle <i>et al</i>	Unit not mapped by Heddle <i>et al</i>
Flora list			
Timing	%completion		Significant Taxa
	Trees	Shrubs Herbs Sedges	Weeds DRF CALM Priority Other

Fauna <u>area based</u>			
Timing	%completion		Significant Taxa
	Mammals	Birds	Sched1 Sched2 Other
	<u>Reptiles</u>	Invertebrates	

Vegetation Condition		
Site based	Mapped	Units
Disturbance Factors		
Phytophthora	observed	Other incidental
	tested	itemised

Notes	<u>Good amateur Natural history data</u>		

Area MSS Name			BUCKLAND HILL (WHAT'S LEFT OF IT!)		
Source			① Buckland Hill Story		
			② Natural Parkland at Buckland Hill		
Purpose (why was the study done?) - Not a study - campaign material					
Government					
Corporate					
Community Group <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> ② D. KAESHAGEN					
Management Plan					
Publication Planned		Yes	<input checked="" type="radio"/> No	Date	② ENVIRONMENTAL 8(4)
Planned Location		14-16			

Soils		
Units	described	referenced

Landscape		
Features	described	referenced

Flora			
Vegetation Map			
Units	Site based (no)		
Mapped			
Veg Units	Comparable Heddle <i>et al</i>	Compared Heddle <i>et al</i>	Unit not mapped by Heddle <i>et al</i>
Flora list			
Timing	%completion		Significant Taxa
	Trees	Shrubs Herbs Sedges	Weeds DRF CALM Priority Other

Fauna			
Timing	%completion		Significant Taxa
	Mammals	Birds	Sched1 Sched2 Other
	Reptiles	Invertebrates	

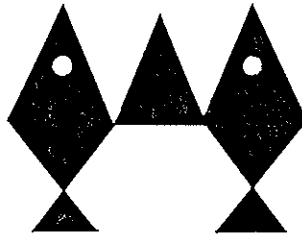
Vegetation Condition			
Site based	Mapped	Units	
Disturbance Factors			
Phytophthora	observed	Other	Incidental
	tested	itemised	

Notes I have a copy of ① if you want it - more historical aspects - no biological detail  
 ② - may be better - I don't have this.  
 E.S. should in their library



# BUCKLAND HILL REGIONAL PARK

concept study



BY

BUCKLAND HILL  
ACTION GROUP

1988

*This document was compiled by members of B.H.A.G. Thanks are due to Sharni Howe for drafting maps and figures; to Alex Hill, Ben Joel, Adrian Roderick and Martin Thompson for graphics and design assistance; and to many other people who have contributed information and constructive criticisms.*

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Naturally occurring plant species on Buckland Hill, 30th Sept., 1985

## Preface

The Buckland Hill Action Group (BHAG) has, since its inception, presented a positive and proactive campaign seeking the establishment of a people's park, centred on Buckland Hill, and linking the Indian Ocean to the Swan River. The campaign reflects a long-standing belief held by many people and State Government agencies that the landscape is a unique public asset and should be preserved and upgraded for the benefit of current and future generations.

In communications with BHAG, two prominent Australians have stated as follows:

*Professor George Seddon* "Buckland Hill is important...even more so than when I wrote *Swan River landscapes*"

*Vincent Serventy*: "Buckland Hill is a commanding site from where we can see out past and our future. It must be kept as a green place for all. None of us own the land. We are only trustees whose duty is to guard the quality of our heritage".

BHAG believes that this magnificent coastal landscape should remain intact and undivided. The group has developed a 3-dimensional model of its proposed people's park. This was done in order to create a visual impression of Buckland Hill as a park; to stimulate discussion on an alternatives to residential development; and to promote public awareness, discussion and participation in establishing a park.

This document seeks to clarify the rationale behind the proposed Park, illustrates the public's concern about the fate of this area, and presents concrete proposals for the Park's establishment. It is a unique document, produced with the voluntary assistance and encouragement of both professional and laypeople throughout the community, and from both European and Aboriginal cultures. We believe therefore that the proposed Park will be a permanent and substantial statement about Australians at the national Bicentenary year.

## 1. Introduction

### 1.1 Location

Buckland Hill (locally known as "the Monnie"), is an open space of approximately 30ha, situated on the southern boundary of the Town of Mosman Park, about 3 km north of the City of Fremantle. The Hill itself is in the north-eastern corner of this area. The study area considered in this document (Fig.1) also includes other public and private lands adjacent to Buckland Hill itself, which together complete a natural link between the Swan River foreshore and the ocean beach at Leighton.

The area has been of public concern and interest for many years. This interest is founded on the site's rich historical heritage, its special location and natural environment, and its significance as the only remaining large open space between Fremantle and Perth.

Relevant land tenure details are shown in Fig.1. Much of the land from Stirling Highway through to the river was vested in the University of Western Australia (UWA) at its foundation in 1913. The Commonwealth compulsorily purchased their Buckland Hill land in 1941 for £20,499, and in 1983, it offered this land back to the University for \$9.5 million, but the university declined.

UWA retains a part of the area on the south side of the hill, some of which is leased to Esso for storage purposes. The future of its holding south of McCabe street, formerly leased by CSBP Ltd for manufacture of superphosphate fertilizer, is uncertain, due to heavy metal contamination (Landbank, 1987). At the present time, we understand the UWA has handed responsibility for disposal of these lands to the State Government's Landbank.

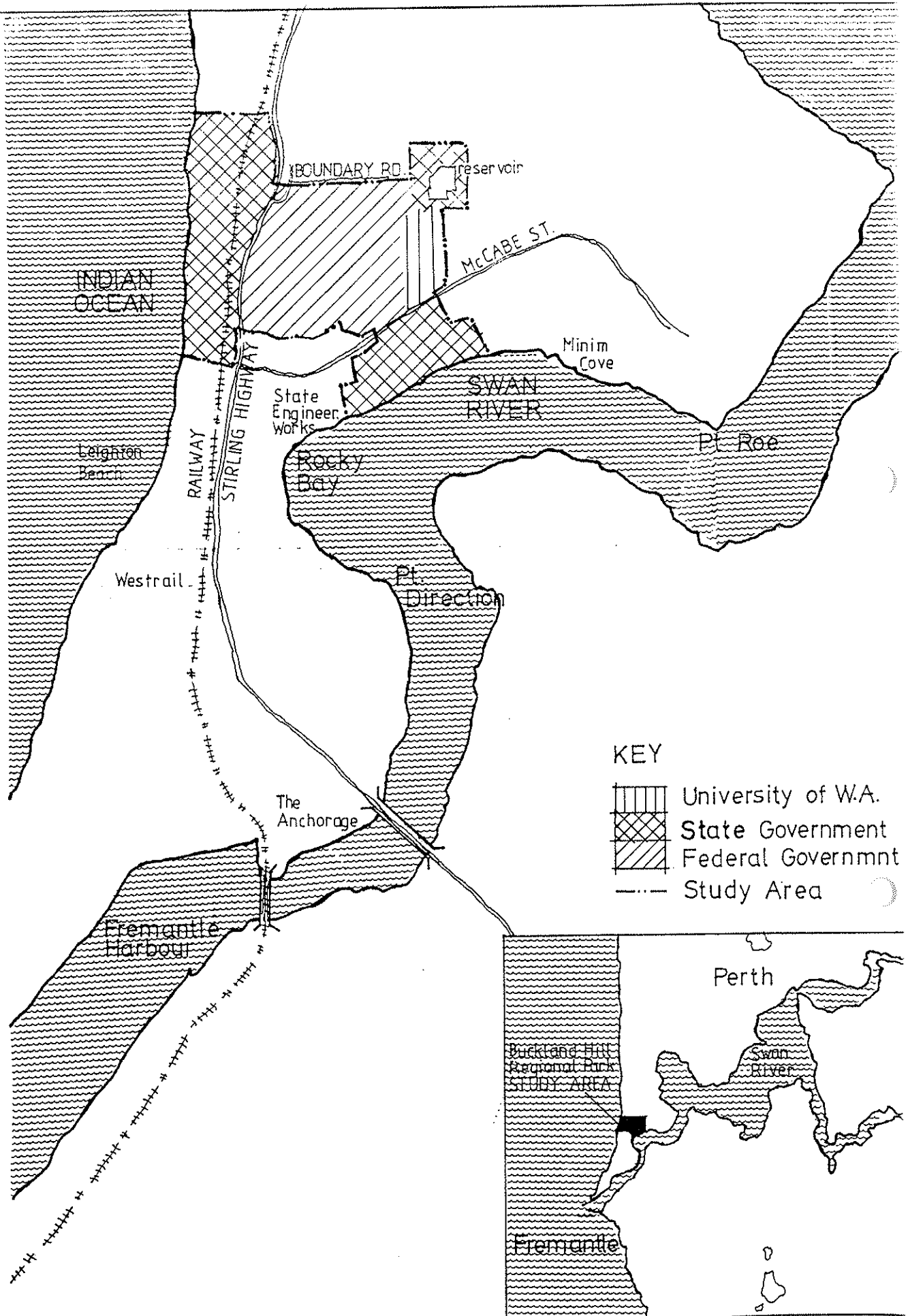
West of Stirling Highway to the ocean is largely Main Roads Department and Westrail land. Two significant proposals exist for new developments in this corridor: the planned electrification of the Perth-Fremantle rail link; and a major N-S road artery. Between Curtin Ave and the sea, a continuous 50 m strip of public reserve zoned "Recreation" runs north from the Fremantle Port Authority boundary into the Town of Cottesloe. This reserve includes the historic site of the Vlamingh Memorial.

### 1.2 The tide of public interest

As early as 1904, the local community became concerned at the loss of their local landmark, at that time due to limestone quarrying (see below). The government of the day acknowledged the value of both landscape and site by banning further quarrying on Buckland Hill itself. Further pressure for private development was brought to bear on the then owners (UWA) during the 1930s, but this was also resisted by the University Senate in particular.

The significance of the Buckland Hill open space has been recorded in two important publications. Firstly, Professor George Seddon (1970) states: "it is important to the future of the metropolitan area that (Buckland Hill) should not be built on....it is at least as important as Kings Park, perhaps even more so.....The limestone heath vegetation...could be regenerated with care".

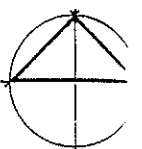
Since then, many other prominent citizens, community groups and the Department of Conservation and Environment (DCE) have endorsed Professor Seddon's evaluation. In its 'Conservation through Reserves Committee' report on the need for reserves within System 6 (the



# BUCKLAND HILL REGIONAL PARK



LOCATION & TENURE PLAN  
figure 1



Darling System), DCE assessed Buckland Hill's significance as follows:

*"Firstly, it has historic value, as it was one of the sites Captain Stirling chose for the Swan River colony. Secondly, it has regional importance as the only large undeveloped area (apart from Kings Park) on the Stirling Highway north of the River. It provides visual relief from the light industry to the south and suburbia to the north. It also provides open views to the sea and emphasises Fremantle as a separate entity from Perth" (DCE, 1983).*

In 1982, the Environmental Protection Authority (EPA) endorsed these findings and recommended that:

- 1) the open character of the area be retained,*
- 2) its indigenous flora be regenerated, and*
- 3) a plan of management be prepared.*

These recommendations were endorsed by the State Labor Government in 1984.

After an announcement in the same year that the Commonwealth wished to sell their Buckland Hill lands, public concern about the fate of the area grew. The Western Australian Naturalists' Club (1985) carried out a flora and fauna survey of the Hill and River foreshore, and included the results in a detailed submission to the Mosman Park Council, recommending that both Buckland Hill and the foreshore to Point Roe be preserved. This document, and a submission from BHAG outlining the area's historical significance, form the basis of a nomination for heritage listing currently before the Australian Heritage Commission.

In January 1986, the Mosman Park Ratepayers' Association and the North Fremantle Community Association publicly declared their support for the retention of the Buckland Hill open space, and initiated a campaign to present the local community's views on the issue. BHAG was then formed to coordinate the campaign, to promote public awareness of the value of the site, and to ensure that the case for saving the Hill was heard.

In September 1987 the EPA restated the importance of the System Six recommendations for future development of the area.

The Mosman Park Town Council unanimously supported the concept of a regional park at Buckland Hill by a full council resolution in November 1987.

### **1.3. The case for an urban park**

As urban areas become more spread out and more densely populated, greater pressures are brought to bear not only on the people who live there but also on plant and animal communities in the remaining patches of bush. An estimated population of 1.25 million in the Perth metropolitan area is predicted by the year 2000 (Australian Bureau of Statistics, pers.comm. 25/2/1988), will bring increasing pressure on the existing major city parks (Kings, Bold, Wireless Hill).

•Natural spaces in the urban environment provide cheap and readily accessible opportunities for people to recreate and unwind from the pressures of urban life. This becomes particularly important as urban sprawls and rising transport costs make it more expensive in time, energy and money to leave the city to visit rural and bush environments. Natural open spaces also provide visual relief

from the built environment, thus enhancing the urban landscape, and making our cities more pleasant places to live in, and to visit.

- Natural open spaces also provide an first-hand educational resource for city children who might otherwise remain separated from their natural and environmental heritage. Such areas are also of scientific value, often providing the last remaining evidence of the natural diversity of wildlife communities in a region.

- The ongoing survival of many of the native plant and animal species in our city landscape depends on the preservation and restoration of its remaining natural open spaces. Many of the remnant plant and animal communities in urban areas are under stress because they are small and often isolated. Continuous green belts are vital to ensure that their populations and genetic diversity can be maintained at viable levels.

While these benefits of open spaces are very real, they are also hard to measure in dollar terms. For this reason, advocates of excessive urban development can always provide misleading arguments for building on remaining natural areas, which fail to account for the permanent costs to the local community.

*Buckland Hill and the surrounding areas are largely State and Federal public lands which, if established as a major park, would yield a stream of benefits for ourselves and for future generations of our children.*



## 2. Buckland Hill — a unique asset for Western Australia

Buckland Hill and its surrounding open spaces have always been a well-known landmark on Perth's coast. The Hill is already a remarkable public asset. Its rich Aboriginal and European heritage, its magnificent location and natural environment, and its excellent accessibility from all points make this open space invaluable to Perth as a whole. Linking the Swan River to the Indian Ocean, it expresses much about Perth's very existence and its people, and in this respect would have much in common with other great city parks in the world.

### 2.1 Aboriginal heritage

Buckland Hill and Rocky Bay have an extra dimension in Nyungar legends and stories of the area. From an oral history stretching back thousands of years, the Nyungar people believe that the Rainbow Snake, the Wagyl, formed the seven undulating hills (named the "Seven Sisters" by early settlers), after crawling into the limestone cliffs at Garangup (Rocky Bay) when the sea flooded the land between Wadjimup (Rottnest) and Walyalup (the Fremantle coast). These hills came to represent a gateway to the spirits of the dead, which passed down the river through the depths under Garangup and on to rest at Wadjimup.

These legends have been under threat, and many have been lost since European settlement, but they are now being re-established by the Nyungar people. The remaining natural lands in the area are clearly of key importance in fostering this process.

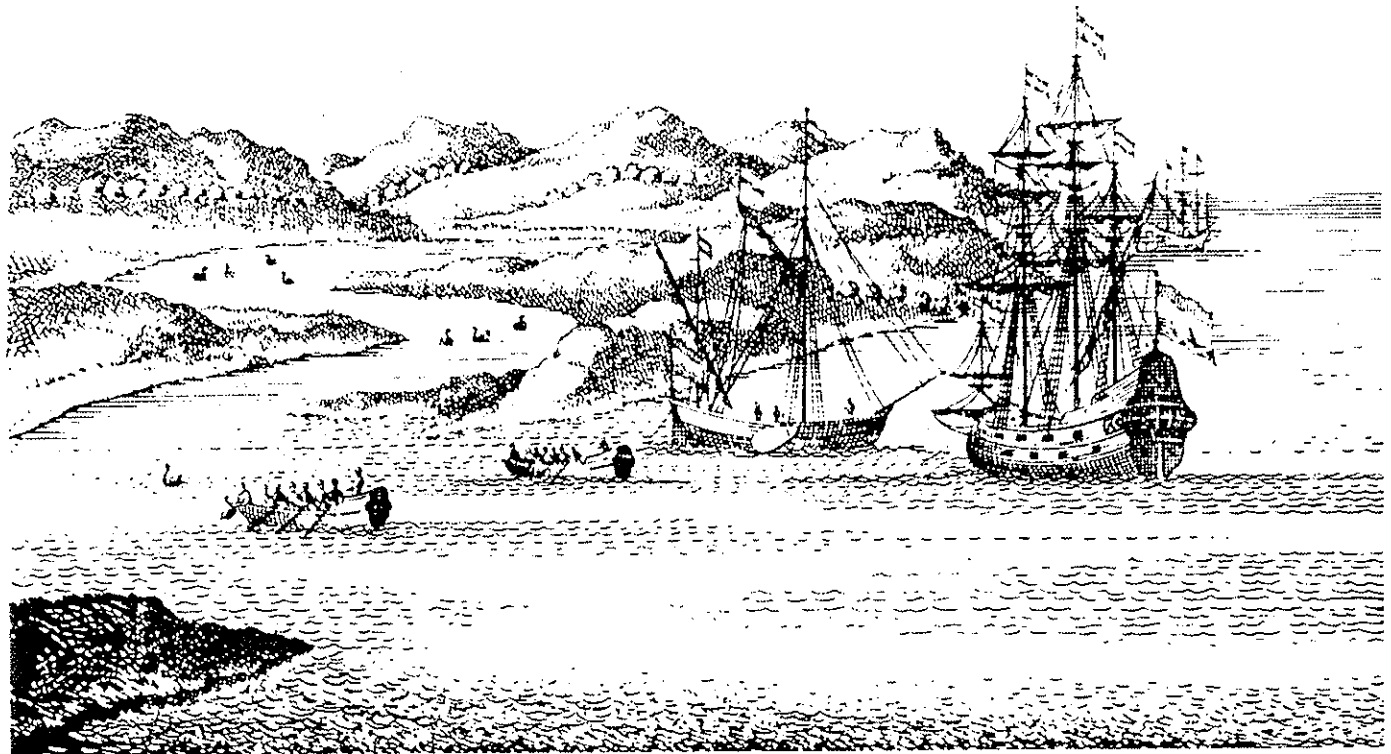
Modern archaeological studies confirm that the area has long been an important to the Aboriginal people. Artefacts and shell middens, dated to 10,000 years ago, indicate campsites of some significance both at Minim Cove and near Victoria St. railway station (Clark & Dortch, 1977). A spokeswoman for the WA Museum aboriginal sites department recently confirmed to BHAG that the sites are "important" in the Perth area.

*Buckland Hill and Rocky Bay can be an exceptionally important meeting place of the European and Aboriginal cultures.*

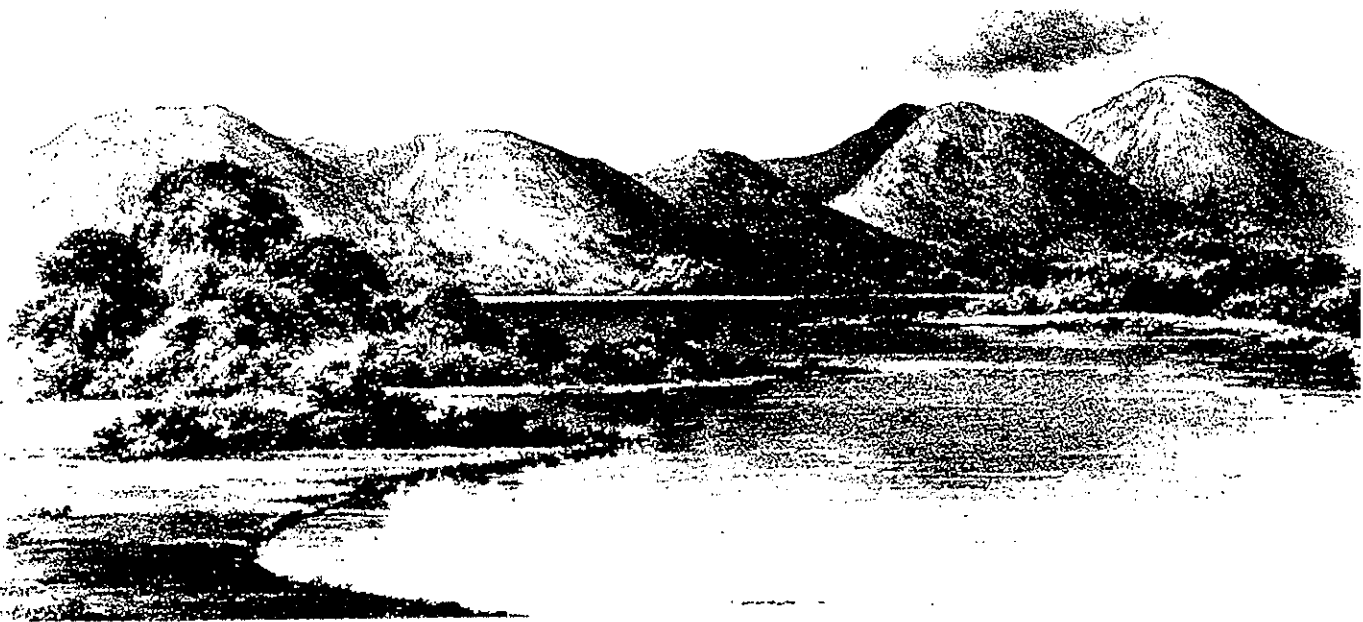
### 2.2 Colonial and recent heritage

Buckland Hill attracted the attention of the very earliest European visitors to Western Australia. On Saturday, 5th January, 1697, the Dutchman, Commander Willem de Vlamingh, landed 86 men from his fleet of three boats on a beach somewhere near the mouth of the Swan River; they then "climbed up on the high ground" (Schilder, 1985). The party is believed to have landed south of Cottesloe, near Leighton Beach, and climbed Buckland Hill, from which their first view over the Swan River was obtained (Downey, 1970; Town of Cottesloe, 1974). A memorial on the dunes west of Buckland Hill, inscribed as "Vlamingh's landing", commemorates this event.

Artists among Vlamingh's crew sketched large tracts of the WA coastline. One subsequent engraving from these sketches, dated 1724-6, shows Vlamingh's ships with his landing party rowing ashore, against a backdrop of the Seven Sisters, and enshrines Buckland Hill in the earliest pictures we have of WA (Schilder, 1984). These events, recorded in detail in the diaries of



Buckland Hill enshrined in one of the earliest extant pictures of Western Australia.  
The Hill is the backdrop to a view of Vlamingh's fleet at the Swan River mouth,  
January 1697. (Engraving of 1726 from sketches made by the expedition).



Buckland Hill and the former "Seven Sisters" hills, 1880s  
(Only Buckland Hill now remains, after quarrying operations)

Vlamingh and other members of his expedition, warrant far greater recognition than they have been given to date.

On 8th March 1827, Captain James Stirling explored the same area, and named the Hill after William Buckland, FRS, a prominent teacher in geology and mineralogy at Oxford University. He also recommended the Hill as an excellent site for the first capital of the Swan River Colony. Charles Fraser, the Colonial Botanist of New South Wales (who surveyed the Swan River with Stirling), wrote as follows: "these hills are admirably adapted for the site of a town, their elevated situation commanding a view of the whole of Canning Sound with the adjacent coast, the interior for some distance, and the meanderings of the river" (Seddon, 1970, 1972).

This draws an interesting historical analogy between Buckland Hill and Botany Bay: both were chosen by the first British expeditions (Stirling in the west, Cook in the East) as the best initial settlement sites, but both were subsequently abandoned in favour of nearby sites (Arthur Head in the west, Sydney Harbour in the east), when the first settlers actually arrived. As the site of first European landing, and the first choice for settlement, Buckland Hill can be seen the gateway to the west, in the same sense that Botany Bay was the gateway to the east — although Vlamingh's inferred landings have almost a century of precedence over those at Botany Bay. Furthermore, Buckland Hill is the *only* site in the Perth area with connections going back to all the earliest European visitors.

The first reference to the area by its present name is contained in a map of the WA colony, drawn in September 1832. It was referred to then as "Buckland Downs". The value of Buckland Hill as a landmark for shipping and geodesy was quickly recognised, and by 1878–1880, convict labour had built the permanent obelisk which now stands on top of the hill, and is incorporated into the crest of the Town of Mosman Park.

During World War I, Buckland Hill, known as 'Port War', was used as a signal station by the navy. The Army then took possession of much of the hill in 1941, for coastal defence purposes. Two anti-aircraft gun emplacements were built, joined by a 30m tunnel, with two rooms for artillery storage and gunner's sleeping quarters. These features are still in place. Following the changes of ownership described earlier, the Army rescinded use of the land in 1984, when the last of its personnel were removed.

In 1924, a small reservoir was first excavated adjacent to the monument (Metropolitan Water Authority, 1985). This was enlarged in 1934, whereupon the obelisk briefly became an island in the middle of the reservoir. Although its foundations were preserved, so that it could continue to function as a survey station, the obelisk's inaccessibility in this position led to its being superseded as a survey station in 1967. However, when the entire reservoir was reconstructed and roofed in 1983–4, the obelisk was moved and carefully restored, and is now once again part of the State's geodetic network. Recognising the "prominence" and historical significance of this "outstanding vantage point", the Metropolitan Water Authority also arranged for the obelisk to be floodlit, making it one of the most striking landmarks in Perth's western suburbs, both by day and by night.

*Buckland Hill is a major Australian historical site, offering a unique opportunity as a popular educational and cultural resource.*

### 2.3 The physical environment

Buckland Hill rises steeply from the Swan River foreshore near Rocky Bay, and in a more gentle fashion from the Leighton reefs, beach and dunes. It is one of the highest points in the Perth metropolitan area, reaching about 60m (200ft). The limestone hill affords a 360° panoramic view which rivals the views from King's Park, Wireless Hill or Reabold Hill, encompassing not only the surrounding suburbs, but also providing superb vantage over the Swan River's meanderings, and an unsurpassed seascape over the Indian Ocean, Rottnest and other islands. The open space affords a striking transition from urban to coastal landscape and dramatic ocean views for visitors entering or leaving Fremantle.

Geologically, the Hill is a striking example of how our coastline was reshaped by the last major rise in sea level during a warm climatic period some 80,000 years ago. Stabilised then as a huge calcareous sand dune, it has since consolidated as limestone — part of what is known as the Spearwood Dune System which runs parallel to our present coastline. As mentioned above, Buckland Hill previously crowned the distinctive group of hills known as the "Seven Sisters".

At Minim Cove (Fig.1), the Swan River cliffs expose a fossil-rich shell bed dating from the Pleistocene period (some 130,000 years ago) that has been the subject of studies by geologists and others for over 50 years. Interestingly, although nearly all the shells recorded represent creatures still living, there is no known animal community along the Australian coast today which contains all of these together: some of the creatures live today in warmer waters around Geraldton, while others live in cooler water around Cape Leeuwin. For the information this throws on palaeontology, climatic changes and today's fauna, the Western Australian Museum (1971) assesses the locality as follows: "The Minim Cove outcrop is without doubt the best preserved and most informative deposit of its age in Western Australia. It is also one of the very few fossiliferous outcrops that occur conveniently close to Perth. Its value to the study and teaching of the history of the Swan River district in the recent geological past is outstanding".

The physical environment was greatly changed by quarrying operations, starting in the 1890s. All the original 'Sisters' were quarried for limestone. The smaller hills immediately above Rocky Bay (which rose to about 50m) were quarried down to a platform in the 1890s, with the spoil forming a new river bank. Some of the limestone went into the Fremantle harbour moles, some into the foundations of the first Perth–Fremantle road, some into buildings (such as Winthrop Hall at UWA), some was burned in lime kilns on the site, and some was even supplied to the goldmines at Kalgoorlie (Downey, 1970; Catomore, 1986).

Leighton Beach was also radically altered many years ago when the dunes and rocks above the beach were buried under landfill during excavation of the Westrail marshalling yards platform. This created the very steep slope of spoil currently above the northern end of the beach.

### 2.4. The living environment

The abovementioned physical changes, together with fire and uncontrolled access, have together caused major loss of natural vegetation throughout the study area. Around the Vlamingh Memorial, a small but diverse population of dune plants is the only survivor of what was once an extensive area of stable, well-vegetated dunes.

Above the railway land, there nevertheless remains much evidence of the great variety of plant

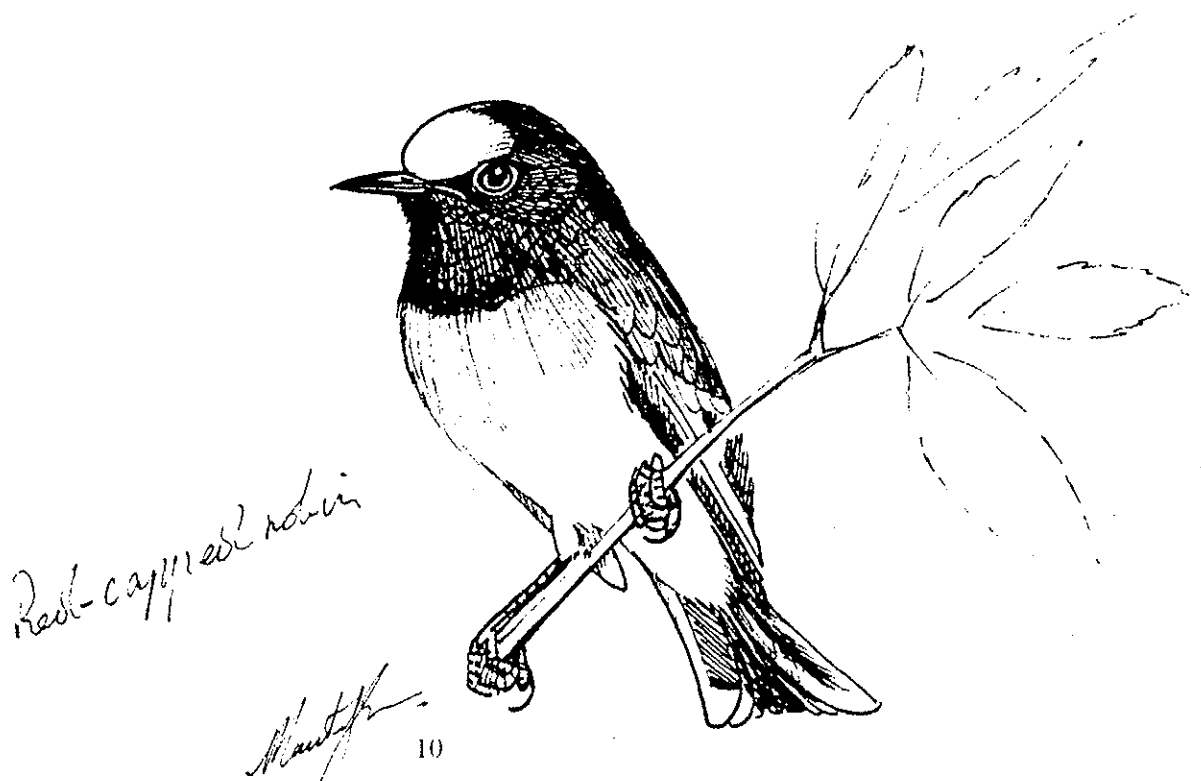
life present in these coastal heathlands prior to European settlement (Kaesehagen, 1986). Many of the well-known native plant genres such as *Acacia*, *Melaleuca*, *Banksia*, *Eucalyptus*, *Grevillea*, *Hakea* and *Leschenaultia* can be seen in less disturbed areas on the northern slopes and around the summit of Buckland Hill.

From surveys of similar but better protected areas on our city coast, we can conclude that a population of some 100–120 plant species occurred here. The WA Naturalists' Club (1985) inventory of Buckland Hill identified 44 remaining species (see Appendix). Most importantly, pioneers such as *Acacia rostellifera*, *A. cyclopis*, *Dryandra sessilis* and *Templetonia retusa* are regenerating vigorously in many parts of the study area.

The patterns of vegetation are largely determined by the degree of exposure to winds from the sea. Where our strong summer breezes prevail, small plants abound and the large shrubs and trees are constantly trimmed back at their growing points. However, slight changes in the landscape create shelter from the sea breezes, allowing larger plants to flourish and become dominant. For example, the small valley immediately below Buckland Hill would have originally supported a woodland of mature wattles, banksia, WA peppermint and the coastal eucalypts, limestone marlock and, perhaps, tuart.

Amongst the native fauna, reptile species including skinks, spring-tailed geckoes, bearded dragons and bobtails have survived best. The loss of shrub and tree cover, and the influx of foxes and domestic animals have affected the favoured environments of birds and small mammals to a greater degree. However, by protecting and supplementing natural regeneration of plant cover, a link can be established with other bushland along the river. This is vital to encourage such shy species as the New Holland honeyeater, the little wattlebird, the boobook owl and the sacred kingfisher to remain within our community, and to attract the return of others already lost, such as the red-capped robin, western shrike thrush and tawny-crowned honeyeater.

*After a history of degradation and neglect since 1829, the Hill should be preserved  
and upgraded as a superb example of the city's coastal environment*



### 3. Towards a responsible land use plan for Buckland Hill

Buckland Hill and the surrounding ocean and river foreshores therefore present a real opportunity for the Western Australian government to establish a natural urban park of immense value. Even though much of the land is only just recovering from severe disturbance by military, industrial and public works activities, its intrinsic beauty and appeal is still very apparent. The realization of this potential requires care and sensitive planning. But firstly, it requires that the government makes a bold and visionary decision to establish Buckland Hill as a major urban park for the people of Perth.

#### 3.1. The planning approach

In order to develop a sensible proposal for a Buckland Hill park, we have used standard landuse planning techniques. The first stage of planning involved detailed investigation and analysis of the natural and cultural resources of the study area (Fig. 3). This basic information was then used to evaluate the conservation, recreation and tourism potential for the area and to draw up a strategy for its use. Finally, we developed an overall concept plan for the area, incorporating a basic objective of restoring the natural environment.

The underlying themes used to plan and design the park are as follows:

- Open-ness
- Scenic amenity
- Historical significance
- Public accessibility
- Conservation value
- Recreational diversity
- Ecological viability

#### 3.1.1. The Study area

In defining a study area for this project we took into account the distribution of industrial, residential and vacant lands in the area. We also considered the implications of existing industrial land, such as the State Engineering Works, being allocated to residential use in the future. Furthermore, we considered that some of the sparsely used land such as the university land leased to Esso for storage tanks, should be incorporated into the park when that lease expires.

Fig.2 shows the boundary of the land we consider should be incorporated into the *Buckland Hill Regional Park*. The proposed Park area provides a continuous band of open space linking the smaller Ocean and River foreshore reserves. It could therefore form an important focus of recreation area for users of these foreshore areas.

#### 3.1.2 The natural resources

After surveying the existing vegetation, topography and landforms, we were able to identify the key natural features of the proposed Park (Fig. 2). These highlight the conservation and

toilet facilities, and the like. The area can also be one of a number of staging points for walking or cycling around the rest of the park, and will therefore need an appropriate information shelter.

Apart from providing facilities to help people enjoy the many natural attributes of the park, we also envisage the development of cultural attractions such as an amphitheatre and a sculpture park. Such venues have a great potential to attract people and provide them with an integrated experience of the natural and cultural environment. Clearly, any such developments will require the most careful and sensitive design so that they blend into the natural environment (see also Section 4).

The framework plan for Buckland Hill Park takes into account the many different types of potential users of the area. It provides a range of recreational experiences for short term visitors such as sightseers, for small groups, for people with particular cultural interests, and for people who wish only to spend a quiet time appreciating nature.

These proposals present only a conceptual sketch of possibilities for Buckland Hill. More detailed planning, site design and budgeting is needed to bring these intentions to fruition.

### **3.3. Public access**

This section deals with park visitors access to and within the Buckland Hill Park. It also deals with some of the problems of major transport through the study area.

#### 3.3.1. Visitor access

Public transport. Buckland Hill Park should be easily accessible to all people. Fortunately, it can be made accessible by ferry, bus *and* train alike (one of few open spaces in Perth with this distinction). A stop at the Park could be conveniently incorporated into an enjoyable outing using public transport services. Wherever possible, such services should be integrated into the proposed recreation plans for the Park.

The Park is already within easy reach of major and secondary bus services (72, 100, 101, 103) and of the Perth-Fremantle line at Victoria St. station. It should be made accessible to current and future river ferry services by providing a jetty landing at an appropriate point on the river foreshore. Ferry access will provide a unique and novel service for park users. The landing should be serviced with only minimal facilities (public information shelters, benches, etc.) so that people land in an essentially natural parkland environment.

Private transport (cars). Buckland Hill Park is well serviced by surrounding roads. It is a relatively small area and its potential recreational and conservation needs would be seriously impaired by allowing public vehicles access into the Park. There should be no further development of roads within the Park area, and most of the old roads and tracks should be closed and/or rehabilitated.

There will be a need to provide marginal parking facilities at various staging points around the Park (see map). Such facilities should be kept small and carefully designed and located to minimize impact on the Park and surrounding residential areas.

#### 3.3.2. Major transport issues.

The main north-south transport routes in the study area are Stirling Highway, the Perth-Fremantle railway line, and Port Beach Road. The future of these routes is under review by government

agencies. We consider it both necessary and desirable to address the long-term transport issues which will impact on the establishment of the Park. It is clearly undesirable and dangerous to have 3 major and separate transport routes creating an unnecessary barrier to public movement between the Buckland Hill area, new large-scale residential developments in North Fremantle, and Leighton Beach.

Stirling Highway should be relocated to the current under-utilized Westrail marshalling yards to form a single transit zone with the proposed Perth/Fremantle electric rail link. The marshalling yards are low in the landscape and are invisible from most places in the Park. A new railway station should be developed closer to the park, or the existing Leighton station relocated to service both new housing and the park, with pedestrian overpasses to link these with the beach and concourse.

This rationalisation is consistent with general plans to upgrade both road and rail transport on the west coast metropolitan area and to reduce east/west division in North Fremantle. It also provides for safe direct pedestrian access across the transit zone at a number of important points, and minimizes the impact of through traffic on the study area.

Beach access. Curtin Avenue is heavily used as a through road for commercial and suburban traffic. In summer it is often congested and dangerous for the many people who use it solely for access to the beach. Provision of a single transit zone will allow Curtin Avenue to be redeveloped simply as a means of access to the beach concourse, for park or beach users only. Realignment of the road can markedly improve the recreational and aesthetic value of this popular and exceptionally attractive beach.

#### 4. Environmental restoration and revegetation

Revegetation forms an integral part of this proposal (see also recommendation of EPA Section 1.2). The broad aims of our program would be:

- ° to re-establish endemic plant communities characteristic of natural bushland originally found in the area;
- ° to establish a variety of recreational landscapes using endemic plant species.
- ° to highlight the diversity of our coastal environment.

There are substantial areas of vigorous natural regeneration at several places in the Park. In addition, there are some scattered clumps of shrubs and trees. These examples provide a working model for revegetation of other areas, and assurance that with careful management the original coastal heath and woodlands can be substantially restored. The revegetation program would be designed to approximate the natural sequence of regeneration and supplementary planting and seeding programs would continue to establish species diversity. In this way, marked improvements in the landscape could be achieved within 3 years.

Some more specific objectives of the revegetation program would be:

- (1) to create a 'limited access' nucleus as a base for self-sustenance of the Park's restored fauna and flora;
- (2) to establish 'managed access' endemic vegetation as the main feature of the Park's natural environment;
- (3) to establish parkland spaces for public recreation; and
- (4) to establish wind breaks, fire breaks and visual buffers where necessary, to define recreation zones or venues and protect the privacy and security of neighbours to the Park.

The revegetation programme would be undertaken in stages and in accordance with specific landscape site plans. We believe such a programme ideally suited to a community-based project involving such organisation as Greening Australia, Men of the Trees, the Tree Society and the Australian Trust for Conservation Volunteers. The programme could also be of great educational value through the participation of local schools and clubs. Assistance may also be sought from scientific organisations for this major exercise in environmental restoration.

The programme could be developed and implemented through Apace Aid (Inc.), a community-based organisation located in North Fremantle. Along with the North Fremantle Community Association, Apace Aid will be revegetating the cliffs of nearby Rocky Bay. Both organisations were joint recipients of a Greening Australia grant for the bicentennial year. As the infra-structure for this project will already be in place, it seems logical and cost-effective to extend it to the Buckland Hill area.

## 5. Park establishment and management

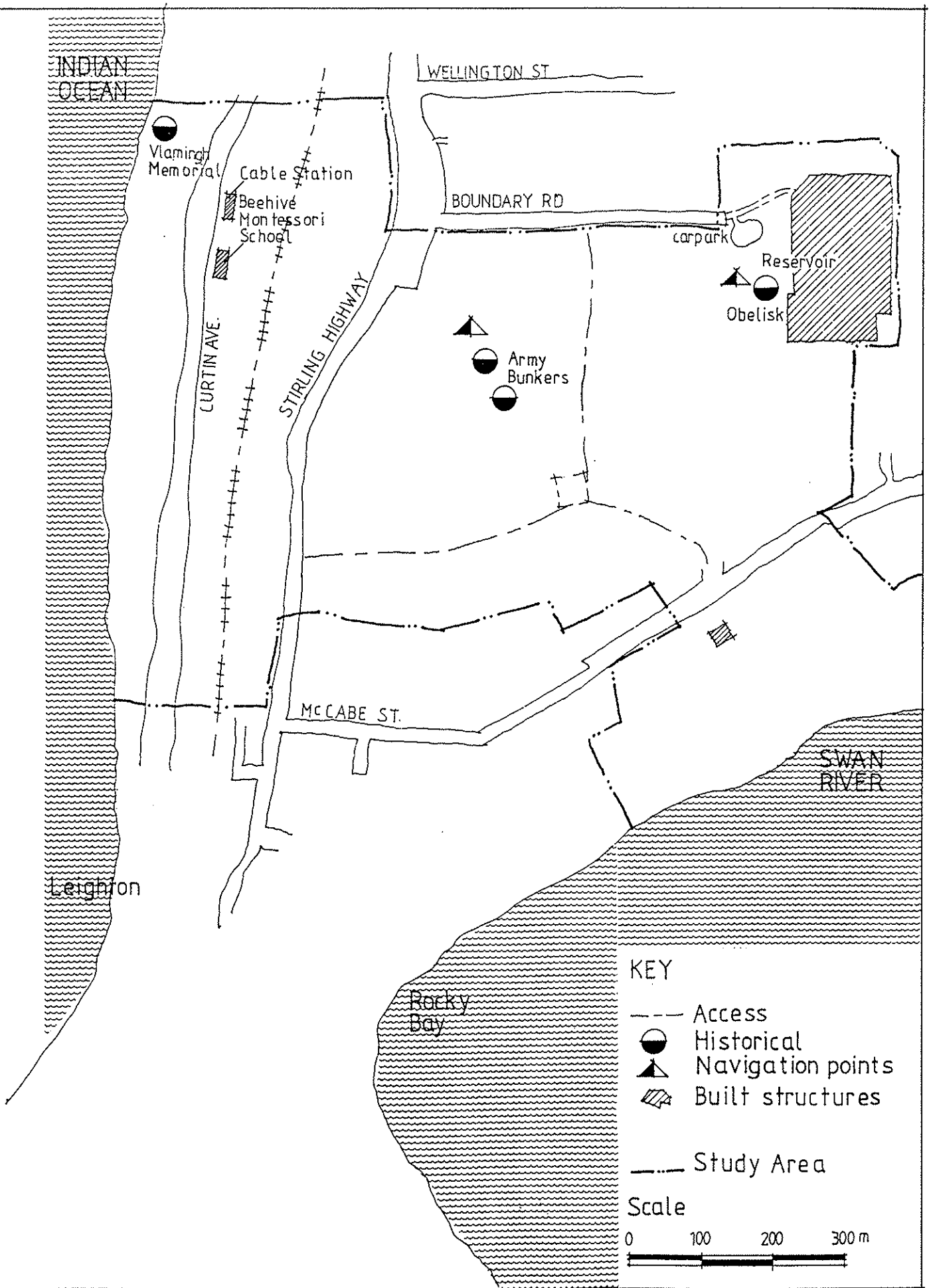
An interim Buckland Hill Park Establishment Committee should be constituted immediately by the Premier of Western Australia. This committee should have representation from local authorities, community interest groups and relevant State government departments. It should also have appropriate access to funds and Government expertise, so as to carry out its functions effectively. The committee should:

- (1) *negotiate* the reservation and gazettal of Buckland Hill as an A-class reserve for conservation and recreation;
- (2) *draught* a costs structure and development schedule for establishing the basic park environment by 1991;
- (3) *establish* a trust fund or foundation to enable all sections of the community to contribute to the establishment of the Park.
- (4) *direct* the community revegetation programme and provide basic recreational facilities to park users;
- (5) *recommend* a regulatory body for the permanent management of the Park in the longer term;

A regulatory body similar to the Kings Park Board should eventually be constituted to manage the Park, with representation from local authorities, community groups, State government departments, the Kings Park Board and WA Herbarium.

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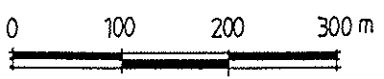


**KEY**

- Access
- Historical
- ▲ Navigation points
- ▨ Built structures

..... Study Area

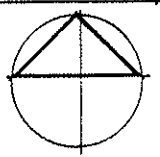
**Scale**

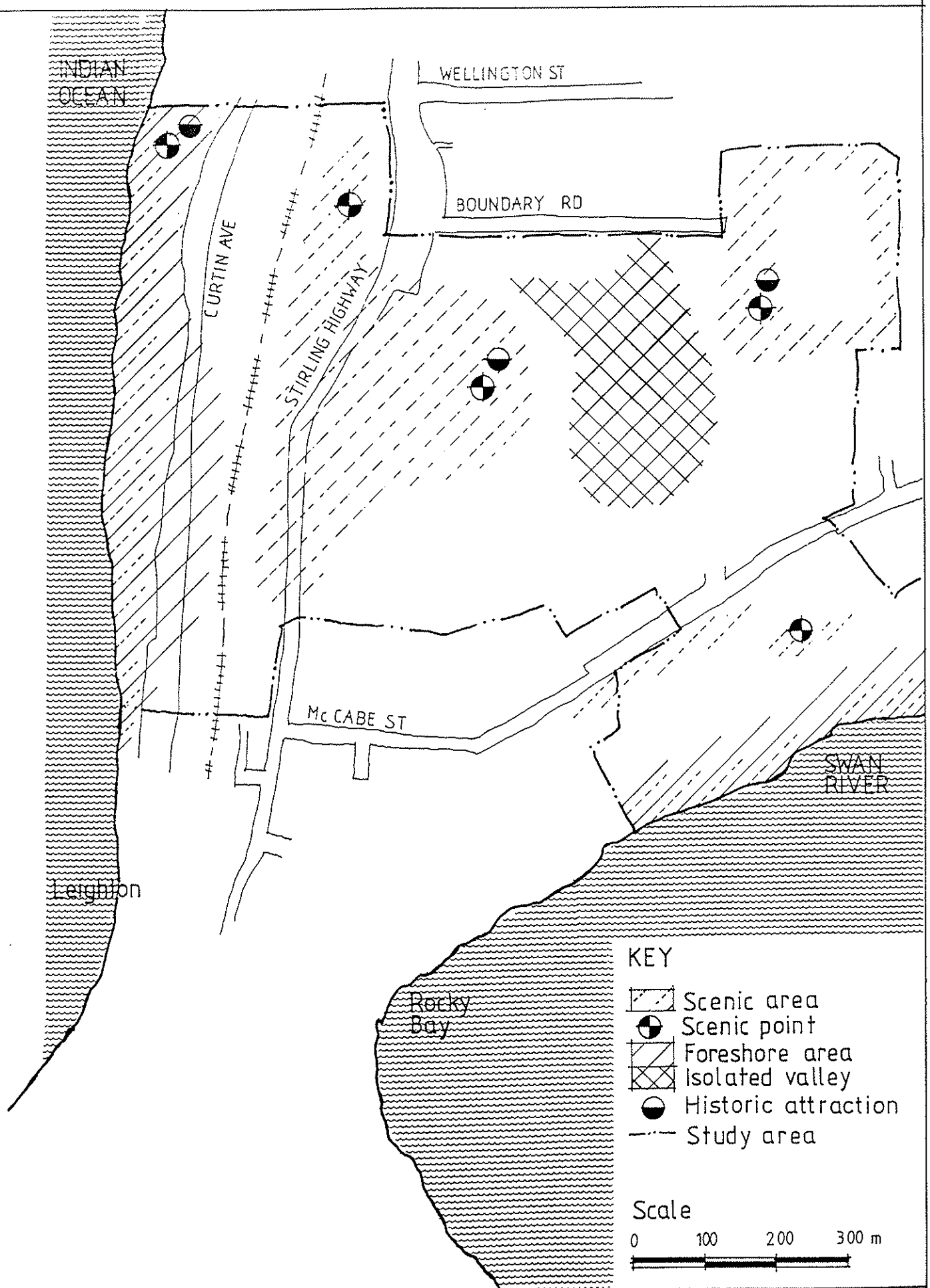


**BUCKLAND HILL  
REGIONAL PARK**

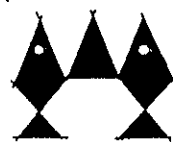


CULTURAL  
FEATURES  
figure 3

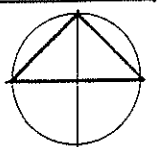


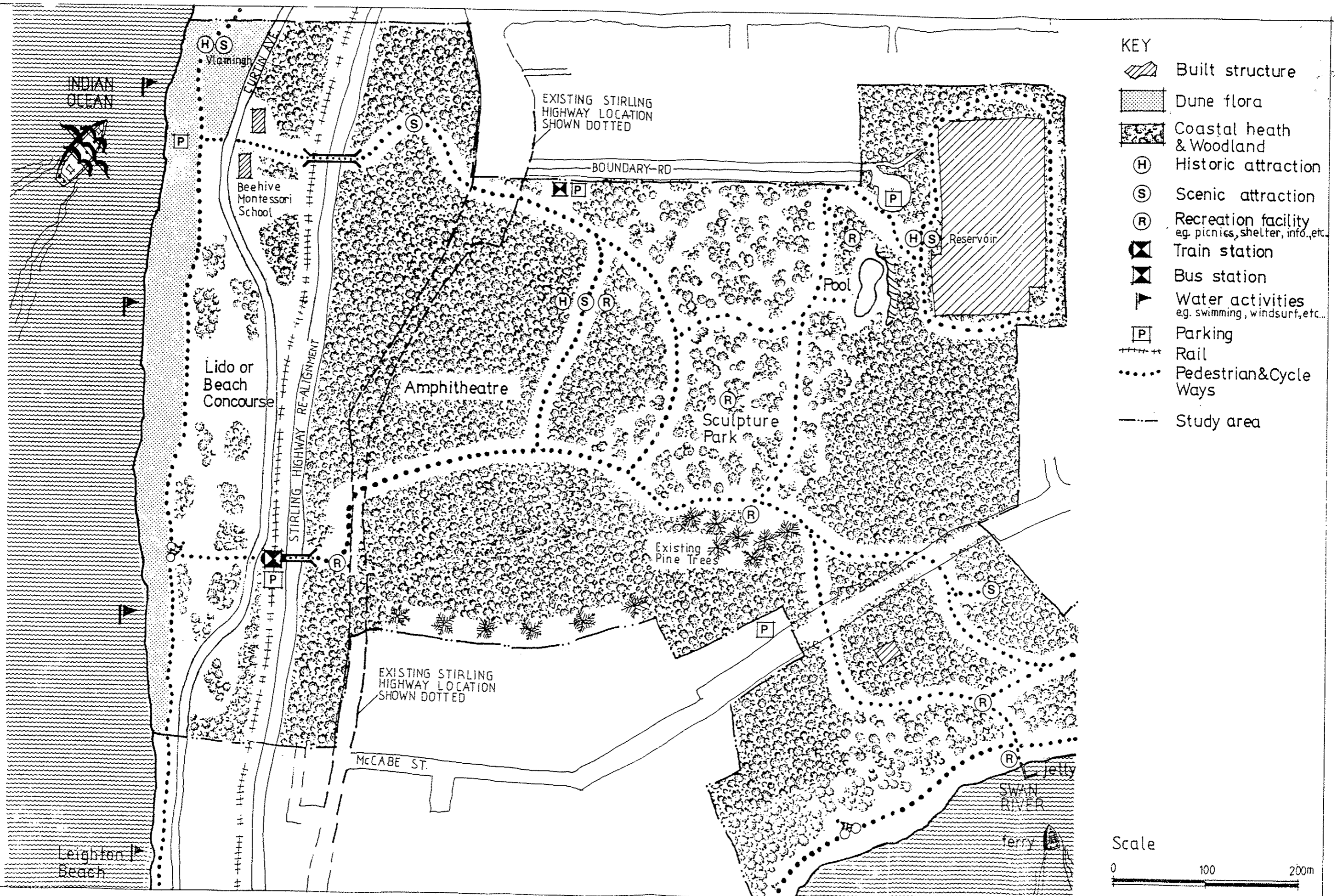


# BUCKLAND HILL REGIONAL PARK



RECREATIONAL  
OPPORTUNITIES  
figure 4



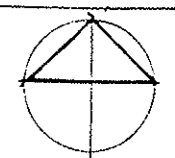


- KEY**
- Built structure
  - Dune flora
  - Coastal heath & Woodland
  - Historic attraction
  - Scenic attraction
  - Recreation facility eg. picnics, shelter, info., etc.
  - Train station
  - Bus station
  - Water activities eg. swimming, windsurf, etc.
  - Parking
  - Rail
  - Pedestrian & Cycle Ways
  - Study area



**BUCKLAND HILL REGIONAL PARK**

CONCEPT PLAN  
figure 5



Appendix. Naturally-occurring plant species on Buckland Hill, 30th Sept., 1985

<u>Botanical name</u>	<u>Common name</u>
<i>Acacia cyclops</i>	Red-eyed wattle
<i>A.lasiocarpa</i>	Dune moses wattle
<i>A.rostellifera</i>	
<i>A.saligna</i>	
<i>A.xanthina</i>	
<i>Acanthocarpus preissii</i>	Prickle lily
<i>Agonis flexuosa</i>	Peppermint
<i>Beyeria ?viscosa</i>	
<i>Clematis microphylla</i>	Old man's beard
<i>Conostylis candicans</i>	Grey cottonheads
<i>Dianella revoluta</i>	Flax-lily
<i>Diplopeltis huegelii</i>	
<i>Dryandra nivea</i>	Couch honeypot
<i>D.sessilis</i>	Parrot-bush
<i>Gompholobium tomentosum</i>	Yellow pea
<i>Grevillea thelemanniana</i>	Spider-net grevillea
<i>Hakea prostrata</i>	Harsh hakea
<i>Hemigenia sericea</i>	
<i>Hybanthus calycinus</i>	Native violet
<i>Isolepis nodosa</i>	Knotted club-rush
<i>Isotropis cuneifolia</i>	Granny's bonnets
<i>Kennedia prostrata</i>	Running postman
<i>Lepidospermum angustatum</i>	Slender sword sedge
<i>Leucopogon parviflorus</i>	Beard heath
<i>Lomandra maritima</i>	Mat rush
<i>Loxocarya flexuosa</i>	
<i>Melaleuca acerosa</i>	
<i>M.huegelii</i>	Chenille honey-myrtle
<i>Olearia axillaris</i>	Coast daisybush
<i>Opercularia vaginata</i>	
<i>Petrophile serruriae</i>	
<i>Phyllanthus calycinus</i>	
<i>Pimelea calcicola</i>	
<i>Rhagodia baccata</i>	Berry saltbush
<i>Scaevola holosericea</i>	Fan flower
<i>S.nitida</i>	
<i>S.thesioides</i>	
<i>Spyridium globulosum</i>	
<i>Stipa sp.</i>	Tall spear-grass
<i>S.elegantissima</i>	Feather spear-grass
<i>Templetonia retusa</i>	Cockies' tongue
<i>Tricoryne elatior</i>	Yellow autumn lily
<i>Trymalium ledifolium</i>	
<i>Xanthorrhoea preissii</i>	Blackboy