

# RECHERCHE BAY

## NORTHEAST PENINSULA

### Reserve Management Plan



*Photo: Northeast peninsula of Recherche Bay © Bob Brown 2006*

### Tasmanian Land Conservancy

Prepared by Max Kitchell and Denna Kingdom

Financial assistance for the preparation of this plan has been provided by the Historic Heritage Management Section of the Australian Government's Department of Environment and Water Resources

**Approved September 2007**

## Executive Summary

### Background

The Tasmanian Land Conservancy acquired a 143.9 ha block of freehold land on the northeast peninsula of Recherche Bay in March 2006. This acquisition followed much public controversy surrounding approval to log the freehold land.

This management plan has been developed to guide the TLC's stewardship of this nationally significant area. The development of the management plan was guided by a community reference group composed of relevant stakeholders interested in the TLC's ongoing protection of the area. A full list of this group can be found on page 5.

This plan covers most, but not all, of the northeast peninsula at Recherche Bay, including the TLC's land and those areas of neighbouring Crown land areas not included within the adjacent Southport Lagoon Conservation Area.

A significant area of the northeast peninsula of Recherche Bay is listed under State and National Heritage Registers for its important cultural heritage values. The most pertinent of these values include the French exploration in 1792 and 1793 led by Bruni D'Entrecasteaux, involving botanical collections, astronomical observations, the planting of a vegetable garden and peaceful contact with Aboriginal people. Other values include extensive use of the land for convict coalmining, whaling, ship building, and timber harvesting and milling.

The northeast peninsula of Recherche Bay also has important natural values. These values are old growth forest and the presence of habitat for species threatened by extinction, including White-Bellied Sea Eagle and Swift Parrots. The landscape values are also important, with the natural beauty underpinning much of the public interest in protecting the peninsula.

### Management

The overarching objective for the management plan is:

*To identify, conserve, protect, assist people to appreciate and, where necessary, rehabilitate the Land's natural and cultural heritage values, and to ensure these values are passed on to future generations in as good or better condition than at present.*

Twelve management objectives expand upon and augment the overarching objective, with management prescriptions outlining what actions are proposed to achieve this objective. A summary of these are outlined in Table I.

These management actions will be prioritized by the TLC and implemented according to availability of funding and resources.

Minor reviews of the plan will occur at least every two years, with a full review of the plan between five and ten years after publication of this plan. This full review will involve public input and result in the publication of a new plan.

**Table I: Summary of management objectives and prescriptions**

| Category                              | Management Objective   | Management prescription summary  |
|---------------------------------------|--|--|
| <b>Identification</b>                 |  |  |
|                                       | To encourage research and assessment that furthers the overarching objective for the land  | Commission, encourage and/or assist further archaeological, flora, fauna and historical surveys and research   |
| <b>Conservation</b>                   |  |  |
| Geology                               | To conserve geological diversity   | Ensure no disturbance to the land that drains onto Blackswan Lagoon.   |
| Flora and Fauna                       | To conserve and enhance natural biological diversity   | Prohibit clearance of native vegetation other than that required for management purposes;<br>Comply with recovery plans for threatened species   |
| Aboriginal heritage                   | To encourage cooperative management programs with Aboriginal people in areas of significance to them.  | Collaborate and encourage Aboriginal involvement in managing the land  |
| Historic heritage                     | To conserve and enhance sites or areas of heritage significance  | Adhere to legislation and agreements in conserving and managing the historic heritage values, and ensure that any archaeological studies are consistent with the management objective;<br>Protect the historic heritage where necessary through encasement or removal of vegetation.   |
| Wilderness and landscape values       | To preserve the Land's remote character and landscape.   | Do not allow the establishment of vehicle tracks, permanent dwellings or permanent occupation of the land;<br>Ensure that any walking tracks or interpretation facilities are not to be visible from vantage points across Recherche Bay;<br>Establish a photographic monitoring program to monitor future changes in landscape condition.   |
| <b>Protection</b>                     |  |  |
| Fire, introduced species and diseases | To protect the values from, and rehabilitate following, adverse impacts such as fire, introduced species, diseases and soil erosion.   | Develop a joint fire management plan with the neighbouring Conservation Area;<br>Prohibit the lighting of fires or bringing of non-indigenous plants or animal species onto the land;<br>Monitor for evidence, and where possible remove, pest species and diseases identified on the land.  |
| Water quality                         | To preserve the quality of water flowing from the land   | Prohibit actions that would diminish the quality of water flowing from the land  |
| <b>Assist people to appreciate</b>    |  |  |
| Education and interpretation          | To encourage education and interpretation of the natural and cultural heritage values  | Install interpretation signs on the land and encourage the installation of interpretation signs at sites overlooking the land;<br>Encourage educational groups and researchers to utilize the land for increasing understanding of the areas natural and cultural values;<br>Provide access to interpretative or educational material on the TLC website   |
| Recreation and tourism                | Subject to the outcomes of environmental assessments and risk and cost-benefit analyses that demonstrate the values will not be compromised and the TLC will not be financially disadvantaged, allow limited recreation use, including low-impact tourism. | Consider the provision of walking tracks and a low-impact point of entry (not a jetty) along the western shore;<br>Encourage cultural and artistic events based on the historic cultural landscape;<br>Consider proposals from the tourism sector for low-impact ventures sympathetic to the values of the land;<br>Use any revenue generated from commercial activities for the ongoing management of the land. |

| Category                   | Management Objective   | Management prescription summary   |
|----------------------------|--|---|
| <b>Community relations</b> |  |   |
| Neighbour relations        | To develop and maintain cooperative relationships with neighbouring landholders. | Ensure management of or visitation to the land has no impact on adjoining land or marine areas;<br>Where appropriate, develop co-operative management strategies and actions with neighbours  |
| Community involvement      | To encourage community involvement in the ongoing management of the Land.        | Encourage and facilitate the formation of a Friends of Recherche Bay group;<br>Explore opportunities for involvement of local community and Aboriginal groups, e.g. in the development of interpretative materials and undertaking of management activities |

## Acknowledgements

The development of this Plan has been partly funded by the Australian Government's Department of Environment and Water Historic Heritage Management Section.

The TLC acknowledges Max Kitchell, who volunteered his time and expertise in the coordination of the planning process, convening of the reference group, drafting of the plan and coordination of the public consultation process. The plan could not have been completed in this timeframe and detail without his extraordinary contribution.

A large number of people contributed to the development of this management plan. Most notably Sib Corbett from the Department of Primary Industries and Water (DPIW) who undertook the vegetation survey and completed the detailed report at Appendix 1.

Assistance in the provision of data, information and logistic support was given by officers of:

- Parks and Wildlife Service, a Division of the Department of Tourism, Arts & Environment (DTAE)
- Resource Management and Conservation Division of DPIW
- Crown Land Services within DPIW
- Forestry Tasmania
- Mineral Resources Tasmania, a Division of the Department of Infrastructure, Energy & Resources
- Tourism Tasmania, a Division of DTAE
- Forests Practices Authority

Huon Valley Council provided meeting facilities.

The plan was developed with the assistance of a Community Reference group made up of the following individuals.

- Wren Fraser Cameron – Recherche Bay Protection Group
- Michael Garner – Parks and Wildlife Service
- John Harkin – Dept of Primary Industries and Water
- Deb Hocking – Aboriginal community
- Greg Hogg – Recherche Bay Protection Group
- Max Kitchell – Huon Valley resident
- Aletta Macdonald – Huon Valley Council
- Angie McGowan – Heritage Tasmania
- Jim Mulcahy – Tasmanian Land Conservancy
- Ivan Saltmarsh – Australian Garden History Society
- Annick Thomas – the French connection
- David Vernon – former joint owner

## Table of Contents

|   |    |
|---|----|
| Executive Summary .....   | 2  |
| Acknowledgements .....  | 5  |
| 1. Introduction .....   | 7  |
| a. Area Covered by the Plan .....   | 7  |
| b. Summary of Cultural Heritage Values .....  | 7  |
| c. Summary of Natural Heritage Values .....   | 9  |
| 2. Legal Requirements for Management .....  | 10 |
| 3. Overarching Objective .....  | 13 |
| 4. Management Objectives and Prescriptions .....  | 13 |
| 4.a. Identification .....   | 13 |
| 4.b. Conservation .....   | 14 |
| Geology .....   | 14 |
| Flora .....   | 14 |
| Fauna .....   | 16 |
| Cultural Heritage - History .....   | 17 |
| Aboriginal Heritage .....   | 20 |
| Historic Heritage .....   | 21 |
| Wilderness and Landscape Values .....   | 24 |
| 4.c. Protection .....   | 25 |
| Fire, Introduced Species and Diseases .....   | 25 |
| Water Quality .....   | 25 |
| 4.d. Assist People to Appreciate .....  | 27 |
| Education and Interpretation .....  | 27 |
| Recreation and Tourism .....  | 28 |
| 4.e. Community Relations .....  | 29 |
| Neighbour Relations .....   | 29 |
| Community Involvement .....   | 29 |
| 5. Prioritisation of management prescriptions .....   | 30 |
| 6. Plan Review .....  | 30 |
| Appendix 1: Fauna species list .....  | 31 |
| Appendix 2: Flora species list .....  | 34 |
| Appendix 3: Vegetation of the Tasmanian Land Conservancy block - Recherche Peninsula .....              | 36 |
| Appendix 4: White-bellied Sea-eagle ( <i>Haliaeetus leucogaster</i> ) biology and nest management ..... | 43 |
| Appendix 5: National Heritage Listing .....   | 47 |
| Appendix 6: Historic heritage and Tasmanian historic heritage protection .....                          | 50 |

## **1. Introduction**

In March 2006, the Tasmanian Land Conservancy (TLC) acquired a 143.9 ha block on the northeast peninsula of Recherche Bay. As a responsible land manager the TLC has a policy of developing management plans for all the properties it acquires. This management plan has been developed to guide the TLC's stewardship over this nationally significant area at Recherche Bay.

A high degree of public interest in the land led the TLC to compile the management plan through a process that involved extensive consultation with key local and national stakeholders and provided opportunity for input from the broader Tasmanian community.

It is the intention of the TLC to manage its land on the northeast peninsula to ensure the long-term protection and conservation of its important cultural and natural heritage features. This plan details the objectives the TLC has adopted and the actions it will take to achieve such a protective management regime.

### **a. Area Covered by the Plan**

This management plan applies to most, but not all, of the northeast peninsula at Recherche Bay. The land that is the subject of the plan is outlined at Figure 1 and includes:

- 143.92 ha held in freehold title by the Tasmanian Land Conservancy,
- a number of Crown road reserves that have been surveyed but never developed,
- the coastal Crown reserve on the eastern, southern and western boundaries of the TLC freehold property, and
- the coastal Crown reserve around Quiet Cove and Sullivan Point.

These four areas in total will henceforth be referred to in this plan as the Land.

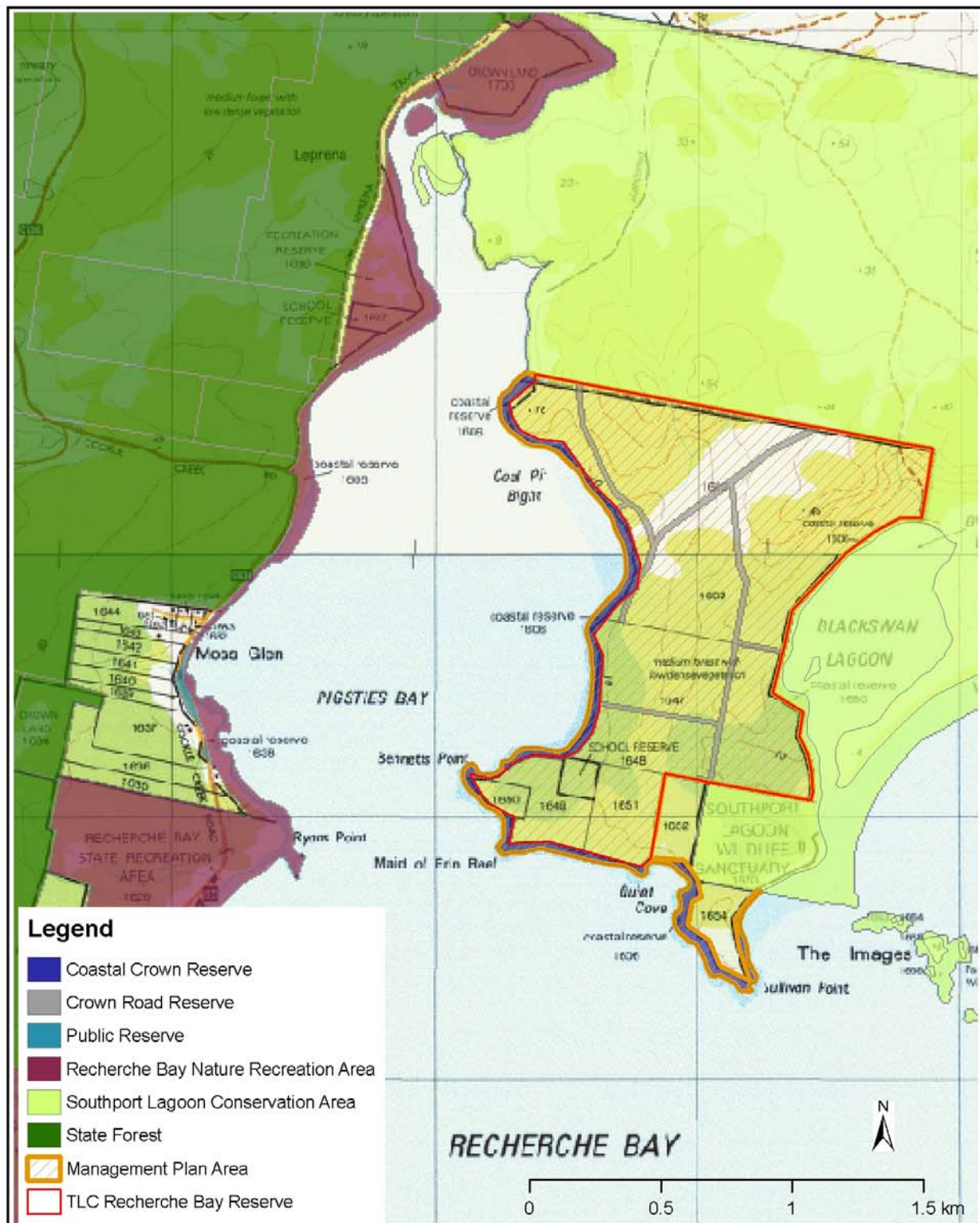
The Land is bordered by the Southport Lagoon Conservation Area on the north and east, by Recherche Bay on the west and south, and by two privately-owned blocks, one immediately north of Quiet Cove and the other covering Sullivan Point.

### **b. Summary of Cultural Heritage Values**

In developing this management plan the TLC has been keenly aware of the Land's very important values. Foremost amongst those are the cultural heritage values that have led to the Land being part of one of Australia's first National Heritage listed areas. This listing recognises the importance of the Recherche Bay area to the story of Australia's development.

In 1792, a French expedition led by Rear Admiral Bruni D'Entrecasteaux was mounted to look for another French explorer, Jean Francois de Galaup de la Prouse. Members of the D'Entrecasteaux scientific and exploratory expedition camped at Recherche Bay for more than four weeks in 1792 and more than three weeks in 1793.

Figure 1: Area of the Management Plan



## Area of the Recherche Bay (Northeast Peninsula) Management Plan

Tasmanian Land Conservancy  
August 2007



Base layers supplied by LIST  
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Expedition members, led by geoscientist Elisabeth Paul Edouard de Rossel, made astronomical observations and geomagnetic tests while they were camped at Recherche Bay and the tests – the first deliberate European scientific experiments on Australian soil – helped to prove that geomagnetism varied across the earth’s latitude.

The expedition members also collected plant and animal specimens and established a vegetable garden, the “French Garden”. While the botanist Jacques Julien Houtou de Labillardiere was not the first European to collect Australian plants, his collection, which is likely to contain Recherche Bay specimens, resulted in the first general publication of Australian flora in 1804-06.

Images and other documents record encounters between the French expedition and local Aboriginal people. Records from these expeditions are important because they provide information about the lives of the Tasmanian Aborigines before they were significantly affected by disease and European settlement.

The Tasmanian Aboriginal community have a special association with the Recherche Bay area as it provides information about their ancestors prior to European settlement.

The features of the area that embody the National Heritage values include,

- the landscape features, especially the coastal setting and vista,
- sites of contact with Aborigines around Blackswan Lagoon and the beach and hinterland east of Sullivan Point,
- south and west coastal zones of the northeast peninsula of Recherche Bay,
- sites of the “French Garden” and the observatory,
- any further archaeological sites dating to the French expedition, and
- any trees or remnant elements of old growth forest or other vegetation contemporaneous with the French visits.

The official values for which the area was included on the National Heritage List are outlined in full at Appendix 1. The Land forms only a part of the listed area, however, it is a very important part.

A number of the same features and associations that led to National Heritage listing have also contributed to listings on the Tasmanian Heritage Register.

### **c. Summary of Natural Heritage Values**

The northeast peninsula comprises gently rolling hills entirely covered with native vegetation, predominantly *Eucalyptus obliqua* forest and woodland, with smaller areas of scrub, heath and coastal vegetation communities. Such vegetation types are widely distributed across Tasmania. There are, however, areas of old growth forest with rainforest understorey which are not common in coastal areas of the southeast and could, therefore, be afforded State significance.

The area’s fauna are not well understood with just one recorded listed threatened species, the White-Bellied Sea Eagle. Notwithstanding the lack of any detailed knowledge of the fauna, the area’s relatively intact vegetation coupled with the absence of any known weeds or feral animals would suggest a relatively full and healthy complement of animals typical of such vegetation types. This may well afford the area a regional significance on the basis of its assumed faunal composition.

The landscape values of the area are very high with the views across Recherche Bay to the timbered northeast peninsula being strikingly beautiful. It is this natural beauty that underpinned much of the public interest in protecting the peninsula.

## 2. Legal Requirements for Management

There are a number of local, State and national statutory and policy measures that apply to the Land and, therefore, influence the way the Land can be used and managed. A brief summary of each of these follows.

**a. Commonwealth heritage protection under the *Environment Protection and Biodiversity Conservation Act 1999*.** The heritage values of the whole of the northeast peninsula, along with parts of the adjoining Southport Lagoon Conservation Area, have been recorded on the National Heritage List of the *EPBC Act*. As such, the Land is included within an area that becomes a matter of National Environmental Significance under the *EPBC Act*. The National Heritage listed area is outlined at Figure 2.

The implication of this listing for management is that the TLC cannot take an action that has, will have, or is likely to have, a significant impact on the National Heritage values without the written approval of the Australian Government Minister for the Environment and Water Resources.

**b. State heritage protection under the *Historic Cultural Heritage Act 1995*.** Two places and one area of the northeast peninsula have been entered on the Tasmanian Heritage Register under the provisions of the *HCH Act*. The two places are,

- Observatory, Bennetts Point, being the site of the French observatory on Bennetts Point, and
- Lahaie's Botanic Garden, being the site of the French garden.

The registered heritage area is formally named the North East Peninsula Recherche Bay Heritage Area and is a 100 metre wide strip of land extending for approximately four kilometers along the western and southern coast of the northeast peninsula. It has been declared for a period of five years from 1 February 2005.

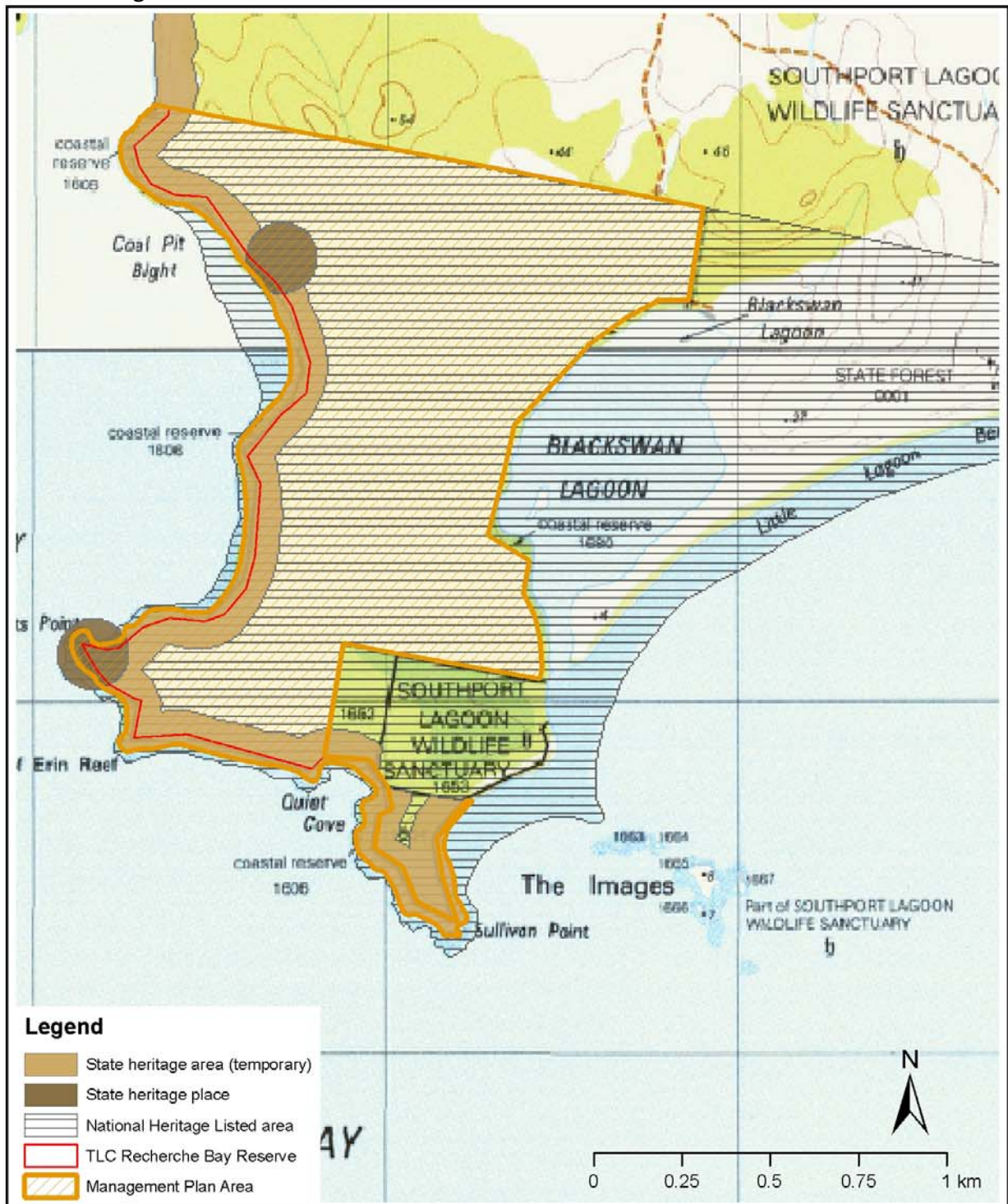
The location of the two registered places and the registered area are indicated at Figure 2.

The implication of these listings for management of the Land is that no works can be undertaken within these registered sites without the prior approval of the Tasmanian Heritage Council.

**c. *Aboriginal Relics Act 1975*** seeks to protect Aboriginal relics from destruction, removal, damage, concealment, taking, sale or defacement.

**d. *Threatened Species Protection Act 1995*** provides protection to all listed threatened species of which there is just one on the Land, the White-Bellied Sea Eagle. It is an offence to knowingly disturb or destroy a listed species without a permit.

Figure 2: National and State heritage protection areas and places of the Land and surrounding areas



## National and State heritage protection areas and places

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August 2007



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**e. State Coastal Policy** applies to the Land. The three main principles of the policy are:

- natural and cultural values of the coast shall be protected,
- the coast shall be used and developed in a sustainable way,
- integrated management and protection of the coastal zone is a shared responsibility.

**f. Huon Valley Council Planning Scheme** has the Land included within two zones. The TLC freehold land is zoned Rural B while the coastal reserve is zoned Public Open Space. In both zones works for low-level recreation and tourism are permissible but would require a permit from Council.

**g. Covenant under the *Nature Conservation Act 2002*.** The TLC intends to develop a covenant aimed at ensuring the protection of the freehold land's conservation values. The conditions of the covenant will draw from but not be restricted to the provisions of this plan. Once registered under the Act the covenant will have the force of a statutory document and will bind the TLC to its provisions.

**h.** In accordance with its policy for permanent reserves the TLC will seek the proclamation of the area as a Private Sanctuary under the *Nature Conservation Act* in order to ensure that the Reserve Regulations under that Act can be applied and to ensure that the whole of the larger reserved area running from Southport to Recherche Bay can be managed in a consistent manner for conservation.

In addition to the above legal requirements, the TLC will also be guided in the management of the Land by the Australia ICOMOS Burra Charter, the Precautionary Principle and the Principle of Intergenerational Equity.

### 3. Overarching Objective

The freehold land was acquired by the TLC with the intention, and with the public expectation, that it be managed in a way that ensures the protection of its natural and cultural heritage features. The TLC will honour that expectation and, accordingly, has adopted the following overarching objective for the Land.

*To identify, conserve, protect, assist people to appreciate and, where necessary, rehabilitate the Land's natural and cultural heritage values, and to ensure these values are passed on to future generations in as good or better condition than at present.*

This objective will guide all future management of the Land and provides a basis from which more detailed management objectives and prescriptions have been derived.

### 4. Management Objectives and Prescriptions

The following 12 management objectives expand upon and augment the overarching objective. Each management objective has one or more management prescriptions that explicitly outline what actions are proposed to be taken to achieve the objective. There are 45 management prescriptions in total.

The management objectives have been broadly arranged to correspond with the separate components of the overarching objective, i.e., identification, conservation, protection, assist people to appreciate and community relations.

#### 4.a. Identification

Prior to the controversy that surrounded the proposal to harvest timber there had been very little rigorous description or assessment of the values of the Land. Much of the work that has been done recently was completed in the context of the development of a Forest Practices Plan and, subsequent to that, in relation to national and state heritage listings. As useful as this work has proved to be there are still major gaps in the knowledge base necessary to properly manage the Land for the purposes outlined.

##### Management Objective

*To encourage research and assessment that furthers the overarching management objective for the Land.*

##### Management Prescriptions

- i. Commission a comprehensive historical heritage survey (including archaeology and cultural landscape) with a view to better understanding the historic heritage features and values of the Land and how this heritage can be interpreted and protected.
- ii. Encourage and assist fauna surveys of the Land.
- iii. Encourage and assist further flora surveys of the Land, including those focusing on the little-studied non-vascular flora.
- iv. Encourage further historical research that documents and traces the occupation and use of the Land and how it linked with surrounding areas within Recherche Bay/Cockle Creek.
- v. Consider favourably any other research proposals that would assist ongoing management of the Land.

## 4.b. Conservation

### GEOLOGY

For the most part the Land comprises gently rolling hills interspersed with poorly drained plains.

The geology of the northeast peninsula has not been well studied with the last publicly-available information being the 1:250000 Mineral Resources Tasmania maps that were produced with little or no ground truthing and which have not been updated since the 1980s. Some elaboration of the MRT mapping has been done in the course of the preparation of this plan, which has resulted in a new geology map at Figure 3.

There are three basic geological sequences that cover the Land, the most widespread being the Jurassic dolerites. The oldest sequences are the Triassic sandstones and siltstones, which, in part, contain coal measures. Large numbers of fossil wood fragments (both conifers and ferns), found on the beaches north of Bennetts Point, are likely to be derived from coal measures, but their exact source is unknown. The most recent deposits are the Quaternary blanketing sand sheets, which have a marked affect on the vegetation since they support peat soils quite unlike those developed on dolerite or sandstone.

There are no features of high geoheritage significance on the Land although all peat soils are accorded a certain level of importance owing to their slow rate of formation. Adjoining the Land to the east is the relatively pristine Blackswan Lagoon. Such unmodified coastal lagoons are uncommon geomorphological features, in particular the bay mouth sand spit, which is to be nominated for listing on the State Geoconservation Database.

With the lack of vehicular access there are no current threats to the Land's geoheritage features, unlike the adjoining Southport Lagoon Conservation Area that has suffered heavy damage and erosion from 4WD activity.

### Management Objective

*To conserve geological diversity.*

### Management Prescriptions

- i. Ensure no disturbance to that part of the Land that drains into Blackswan Lagoon.

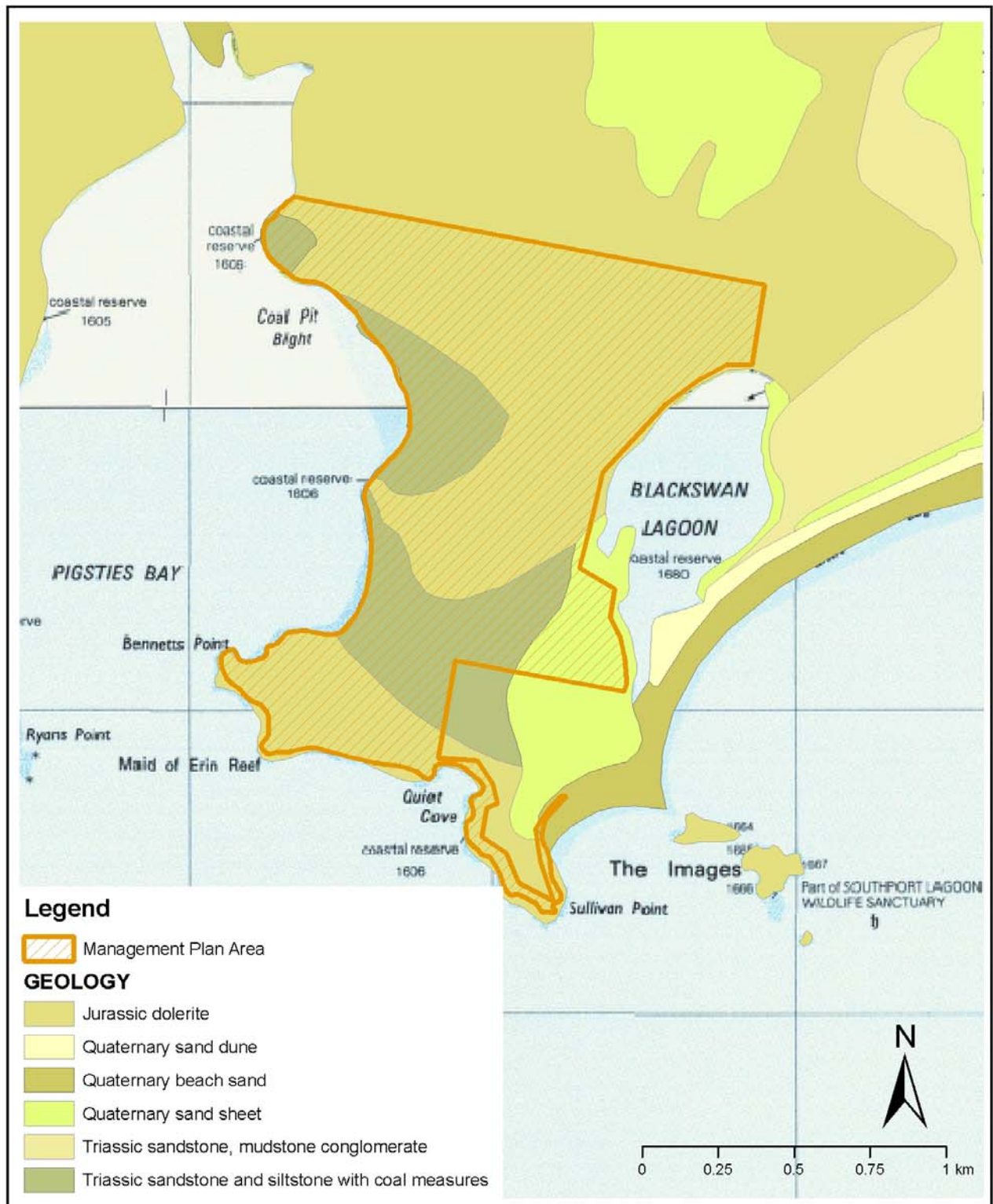
### FLORA

Given the fundamental significance that native vegetation plays in the ecological health of the Land, and due to the lack of a comprehensive vegetation assessment of the area, a full vegetation survey was conducted in 2006 by Sib Corbett from the Department of Primary Industries and Water (full report at Appendix 1). A map from the survey is at Figure 4.

In spite of the extensive timber harvesting and other industrial activities that occurred in the 19<sup>th</sup> and early 20<sup>th</sup> centuries, the Land is now in an essentially natural state.

Botanists attached to the 1792 and 1793 French expeditions under Bruny d'Entrecasteaux made extensive collections in southeast Tasmania, particularly on the northeast peninsula. These collections of both vascular and non-vascular plants have bestowed considerable scientific importance on the Land, particularly as many of these specimens were made type specimens when the species were formally described. Surveys during the last 200 years in the general Southport area have recorded more than 190 vascular plant species, including 16 endemic to Tasmania and ten that are listed as threatened. All species recorded by the French are still found in the area.

Figure 3: Geological map of the Land and surrounding areas



## Geology of the Northeast Peninsula of Recherche Bay

Tasmanian Land Conservancy  
August 2007



Base layers supplied by LIST  
Base images supplied by TASMAR

The nature of the vegetation on the Land has been determined by two fundamental influences; the underlying geology (discussed above) and the fire history. The whole Southport area, including the Land, has suffered repeated wildfires from prehistoric times.

Vegetation is dominated by *Eucalyptus obliqua*, in forests that span the full spectrum of classes from dry heathy forest to wet forest where the understorey ranges from tea-tree scrub to broadleaf scrub and rainforest. *Eucalyptus globulus* occurs as a minor component within the forests. There are areas of wet heathland and *Melaleuca squarrosa* scrub in the north and smaller areas of *Melaleuca* short forest and scrub and *Leptospermum* scrub in the east.

None of the vegetation communities nor any of the known individual species on the Land are listed as threatened. Saline wetlands mapped on the shores of Blackswan Lagoon have been assigned Priority A for bioregional conservation significance. These wetlands are outside the Land but might be affected by any disturbance to the eastern slopes of the Land.

Perhaps the most interesting vegetation community is in the central southern section of the Land where part of the forest mosaic consists of very large *E. obliqua* which are scattered over a mid-storey of rainforest species dominated by Sassafras, Myrtle, Leatherwood and Soft Tree Fern. Parts of this community feature *Parsonsia brownii* vines draped around the trees. Although rainforest is relatively common in the bioregion and at a state level, the Land provides an example of the coastal form in the extreme southeast of the state where it has become restricted to relict patches. This forest, therefore, has significance from a representational perspective at a state level.

While the rainforest community seems to have escaped recent fires, it was subject to selective timber harvesting prior to 1920. The 1922 fire seems to have been patchy in this area and the vegetation has been able to regenerate. The oldest *Eucalypts* and some of the rainforest trees, rather than the whole forest, might be all that is left of the pre-1800 forests seen by the French.

## FAUNA

No systematic surveys of mammals have been undertaken on the Land. However, given the relatively intact nature of the vegetation, good complements of mammals typical of lowland *E. obliqua* forests and coastal heaths and moorlands could be expected to be present.

A similar circumstance applies for birds. It is known though that an active White-bellied sea-eagle nest is present on the Land. The White-bellied sea-eagle is listed as vulnerable on the *Threatened Species Protection Act* and a recovery plan has been developed for this species. An extract of the recovery plan is at Appendix 2.

The endangered Grey Goshawk has been frequently recorded in the general area and is likely to use the Land for foraging. Both the endangered Masked Owl and Swift Parrot have also been recorded in the general area and could use the Land for nesting, roosting and/or foraging.

Very little is known of the Land's invertebrate fauna, due to only limited survey work.

## Management Objective

*To conserve and enhance natural biological diversity*

## Management Prescriptions

- i. Prohibit clearance of native vegetation other than that required for management purposes.
- ii. Comply with the recovery plan for the White-bellied Sea Eagle.

## CULTURAL HERITAGE - HISTORY

Recherche Bay formed part of the 3000 sq km territory of the South Eastern Tribe, considered to be the most sedentary and maritime of the Tasmanian tribes. The band that lived in the Recherche Bay area was most commonly known as the Lyluequonny. They spent much of each summer and autumn utilizing the bountiful marine food resources of the Bay, especially the large seal colonies. They also hunted wallaby on the inland plains, which they fired extensively. Other resources of the area that were utilized included trees which provided bark for boats and understorey vegetation that was used for medicines, food and material for baskets and weaving.

In April and May 1792 a French expedition of some 200 people, under the command of Bruni d'Entrecasteaux, anchored off the northeast peninsula of Recherche Bay.

While the principal task of d'Entrecasteaux was to search the South Seas for the lost explorer La Perouse he also had the task of replicating the scientific work of the lost La Perouse expedition.

The two ships of d'Entrecasteaux, the 'Recherche' and 'Esperance' anchored in Port du Nord in what is now called Coal Pit Bight and set up astronomical and magnetic instruments at Observatory Point, which is now called Bennetts Point. The major shore establishments for repair and replenishment of the vessels were located near the observatory.

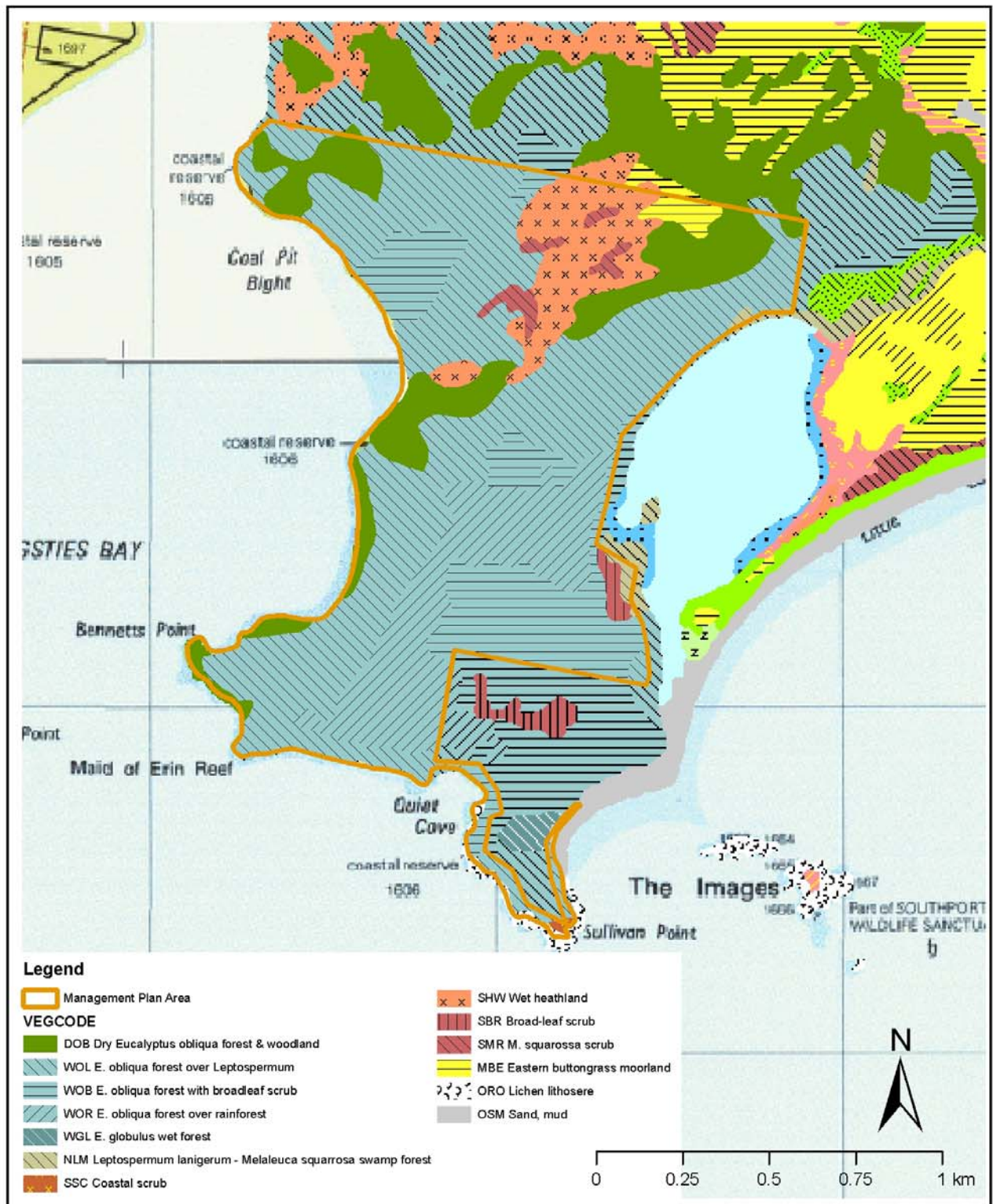
In the five weeks of their stay in 1792, the French conducted astronomical observations and hydrographic surveys. The measurements they made of magnetic intensity are now regarded as the foundation of the science of geomagnetism.

The site of the 1792 observatory on Bennetts Point is precisely located on the French chart. The French journals state that all the 1792 shore facilities were initially located "within a few paces" of the observatory.

Thousands of specimens of flora and fauna were also collected by the naturalists of the expedition, for example, the type specimen of Tasmania's floral emblem, the Tasmanian bluegum (*Eucalyptus globulus*) was collected by the botanist Labillardiere.

Perhaps the most famous site on the peninsula is the garden planted in 1792 by Lahaie. It is clearly shown on the French chart of Port du Nord, and archaeological work has recently been undertaken to establish its precise location. An extensive historical analysis of the garden was undertaken by Edward Duyker in 2004.

Figure 4: Vegetation map of the Land and surrounding areas



## Vegetation of the Northeast Peninsula of Recherche Bay

Map based on data provided by the Tasmanian Vegetation Monitoring and Mapping (TASVEG) Program of the Tasmanian Government's Department of Primary Industries and Water.

Tasmanian Land Conservancy  
August 2007



Base image supplied by TASMAP

The Lyluequonny were almost certainly aware of the d'Entrecasteaux expedition anchored in Recherche Bay in 1792. It was not until the French expedition's return visit in 1793 that the Lyluequonny and the French made contact. These interactions with the French, which took place at beaches on Blackswan and Southport Lagoons in the neighbouring Southport Lagoon Conservation Area, were overwhelmingly positive with none of the brutality that accompanied later British colonisation of Van Diemen's Land. Indeed, these early interactions with the French have been described as cross-cultural celebrations which left a lasting impression with the French and, we can surmise, with the Lyluequonny people also. These interactions resulted in one of the most important anthropological studies of native Tasmanians ever undertaken and much of it was undertaken on the peninsula.

Within a year of the French, English ships visited the bay and in the next few years colonial vessels, sealers and whalers used the peninsula as a place of shelter from the Southern Ocean.

By 1829, when George Augustus Robinson came to round up those Aborigines who were following a traditional lifestyle to transport to the islands of the Furneaux Group, almost all the Lyluequonny had died out. While the reason for their demise has not been recorded, it is known that they became very aggressive in their dealings with the British colonists. It would not stretch the imagination too far to suppose that the Lyluequonny came off second best in many of these encounters with whalers and sealers who perhaps did not share the enlightened approach to indigenous people of the French expeditioners.

The peninsula was probably one of the landing places of the crew of the Brig *Cyprus*, which was marooned by convict escapees in 1829.

Lady Jane Franklin explored the peninsula in 1838 and endeavoured to locate Lahaie's garden. Accompanied by botanist Ronald Campbell Gunn and the ornithologist John Gould she found an entrenched site of what appeared to be a garden to the north of the garden shown on the French chart. Gould and Gunn also duplicated the collections of specimens made by the French.

In subsequent years whalers, miners and shipbuilders used the peninsula as a place of industry. At Sullivan Point a shore whaling station was established and the convict coalmine that gave its name to Coal Pit Bight was established in the 1840s close to Lahaie's garden.

Ship building took place close to the site of the observatory and an 1863 survey of Bennetts point shows a two-masted vessel and three huts on the site.

While occasional timber harvesting took place on the peninsula from the earliest times, timber mills were not established until the end of the nineteenth century and then mainly for the purpose of milling timber from more productive areas.

Kemsley's Crescent Mill, located to the south of Lahaie's garden site was established to process timber brought by tramline from a large holding north west of the peninsula. This was abandoned when the tramline was extended to the port at the Deep Hole, Southport.

Construction on second mill at the mouth of the d'Entrecasteaux River was begun by Henry Jones & Co but was abandoned before completion. Finally a small spot mill operated by Gourlay operated for a few years to the north of Blackswan Lagoon.

For most of the twentieth century the peninsula was abandoned by man and left to nature although there were some attempts at running cattle in the area.

In 1922, following a bushfire, Herbert Smith and Clive Lord found a small cultivated area surrounded by a trench which they interpreted as the French garden. Lord is said to have planted pine trees at each corner to mark the spot.

The majority of the northeast peninsula was owned by the Vernon family from around 1950 until 2006. From the time of its purchase the property was jointly owned by Mr G.R.E. Vernon and his son Mr Robert Vernon (snr). Following the death of Robert Vernon (snr) in 1987, the property passed to his sons Robert and David.

From the time they originally acquired the property it had been the Vernon family's long-term intention to sustainably manage the land for its valuable timber resource and for other ventures. By 1996, after many years of work and planning, this family goal, to harvest timber from part of the property, looked like being fulfilled. By 2005, a comprehensive Forest Practices Plan had been developed and all relevant approvals had been granted that would have permitted sustainable forestry operations on the Vernons' property.

In 2000, a group of local residents, including Bruce Poulson, Paddy Prosser and Greg Hogg, began searching for the site of the garden shown on the French expeditions' chart of the peninsula. This search for the garden was instigated by historical research for a play.

Upon hearing of plans to harvest timber on the peninsula, these three together with Jane Thiele and other locals founded the Recherche Bay Protection Group. The first meeting of the Group was held in late-2002. Members of the Group subsequently met with the Vernons and the Forestry Operations Manager of timber company Gunn's Ltd, and outlined their view of the historical importance of the site and the need to protect the area. The Group also consulted with representatives of the Aboriginal community.

After the location, in early 2003, of what many consider to be the French garden, the Group escalated their media campaign and began to lobby State and Commonwealth Ministers and French consular officials, with a view to preserving the peninsula. Over the next three years this campaign escalated considerably with a number of demonstrations and national media coverage. While the campaign raised the profile of Recherche Bay in the public's consciousness, it also proved to be very hurtful and disturbing for the Vernon family.

In early 2006, businessman and philanthropist Dick Smith, at the urging of Senator Bob Brown, made a very generous donation and loan to the Tasmanian Land Conservancy.

This, together with financial support from the Tasmanian Government, led to the Vernons reluctantly agreeing to sell their property to the Conservancy in March 2006.

## **ABORIGINAL HERITAGE**

Today there are just a few recorded Aboriginal sites on the Land as indicated on the Tasmanian Aboriginal Site Index. This is an indication there have been very limited surveys looking for such sites. Indeed, the only known surveys for Aboriginal sites were carried out as part of the Forest Practices Plan and these identified visibility as a major issue in identifying sites.

It is known that surrounding areas are rich in Aboriginal heritage and casual observations have noted some sites on the Land, which are not listed on TASI. A proper assessment of the Land is almost certain to identify a number of additional Aboriginal sites, especially around the coastal margins.

Given the relatively undisturbed nature of the Land there is no current threat to Aboriginal heritage. The major possible future threat would be through inadvertent damage in the course of management works.

The Aboriginal heritage significance of the Land is not confined to physical relics but extend to the associative values, particularly related to the first contact with the French expeditioners. The Land and neighbouring areas hold great spiritual importance to Aboriginal people who continue to this day to be interested in maintaining their links to the area.

In dealing with Aboriginal heritage issues on the Land, land managers will utilize the principles and approaches outlined in the publication *'Ask First, A Guide to Protecting Indigenous Heritage Places and Values'* (Australian Heritage Commission, 2002).

#### **Management Objective**

*To encourage cooperative management programs with Aboriginal people in areas of significance to them.*

#### **Management Prescriptions**

- i. Collaborate with the Aboriginal community with a view to jointly investigating Aboriginal heritage values and cultural perspectives on the Land.
- ii. Explore the possibility of the Land becoming a focus for the reconciliation process.
- iii. Invite Aboriginal involvement in any tourism enterprises that utilise the Land.
- iv. Locate, as far as possible, any recreation or interpretation facilities that may be developed away from areas of Aboriginal heritage.
- v. Consult the Aboriginal community on any development that may impinge upon Aboriginal places.
- vi. Report all Aboriginal places discovered to the Director of the Parks and Wildlife Service in accordance with the *Aboriginal Relics Act*.

#### **HISTORIC HERITAGE**

The Land's historic heritage is of great significance as indicated by it being a part of one of the first National Heritage listed sites to be scheduled under the *EPBC Act*. The nationally significant features relate to the French expeditions and their interactions with the local Aboriginal people. The full listing statement is at Appendix 1. Subsequent European occupation and use of the Land for whaling, coal mining, timber harvesting and boat building add further to the Land's very high heritage importance.

The approximate location of the Land's European heritage sites is depicted at Figure 5. This map and descriptions of the known heritage sites are to a large extent based on the work of the Forest Practices Authority (Kostoglou 2006) and work undertaken for the Forest Practices Plan for the area.

The historic heritage of the NE Peninsula include:

*Sites of 1792 and 1793 French activities.* These include the 1792 observatory, forges and associated charcoal kilns near the observatory, a repair yard near the observatory, a linen-

washing area, Lahaie's 1792 garden as mapped by Beautemps-Beaupre, a possible second garden reported by Lt La Motte du Portail and perhaps revisited by Jane Franklin in 1838, other vegetable plantings throughout the woods, a number of campsites accommodating about 220 expeditioners, a number of exploration tracks traversing the peninsula, locations where various botanical specimens were collected, 1793 meeting places with Aborigines between the Observatory and Southport Lagoon. The locations of these activities can be approximately inferred from historic documents. In some cases these locations are a general area, in some cases a more precise location is known. At the time of writing, there are no physical or botanical remains which have been conclusively identified as remains from the French visits. The type of features which could exist, if they have survived, include: buried footings for walls or work platforms, occupation/activity deposits (e.g. from the forges and charcoal kilns), botanical remains, ancient trees and forest structure congruent with the French descriptions, disturbed vegetation or disturbed ground, French artefacts incorporated into Aboriginal sites.

Investigations of sites and features on the Land and in nearby areas were undertaken by the French-Tasmanian Collaborative Archaeological Project in 2006. The results of this Project, when available, may shed light on some sites thought to be of French origin, which, in turn, could influence the management of the Land and listings on the Tasmanian Heritage Council Register.

*Sites of convict coal-mining activities 1840 - c.1845* - including a deep vertical circular shaft and other features which may be remnants of convict miners' huts.

*1840s Whaling sites.* – including a possible whaling station site at Quiet Cove, Sullivan Point.

*Ship building c.1863 at Bennetts Point.*

*Late 19th/early 20th logging and sawmilling sites.*

*Sites of 19th century settlement at Sullivan Point.*

*20th century coal prospecting*

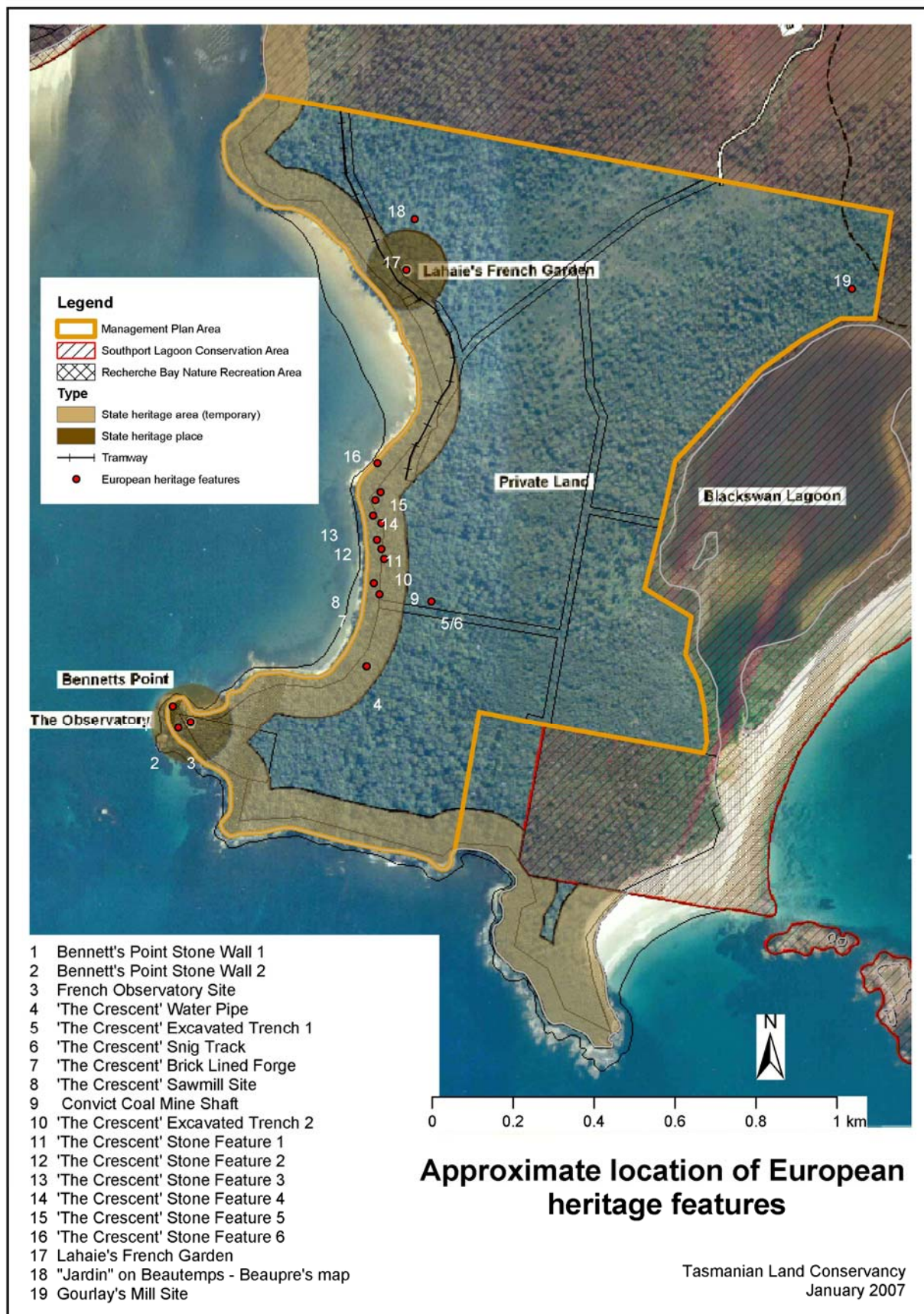
*20th century settlement.*

*Pine trees marking a possible garden site, c.1922*

*Unidentified features:* A number of archaeological features have been recorded on the peninsula. Although the approximate date and purpose of many of these have been identified there are also several features which are of unknown age and historical association. These include two stone walls and several other features at Bennetts Point, a number of chimney/fireplace remnants along the western edge of the Peninsula, a deep well and other remains at Sullivan Point. Probable interpretations include remains of the mid-19<sup>th</sup> century shipyard, 20th century sawmilling huts, huts associated with convict coal-mining or a mid-19th century settlement.

A rectangular stone-wall enclosure with a number of internal divisions is located at Coal Pit Bight. The function and age of this enigmatic structure are not readily apparent. It is similar in size and shape to the dimensions of the 1792 garden described by Lahaie and Labillardiere, however it is located some distance from the location illustrated by Beautemps-Beaupre. At the time of writing investigations undertaken as part of the 2006 French-Tasmanian Collaboration Project have not been completed. This structure may be more confidently identified when the results of this study are available.

Figure 5: Approximate location of European heritage features on the Land and surrounding areas. Base map from Kostoglou, P. 2006. 'Northeast Peninsula, Recherche Bay – an Archaeological Survey.'



### **Management Objective**

*To conserve and enhance sites or areas of heritage significance*

### **Management Prescriptions**

- i. Adhere to the Burra Charter in all conservation and management works.
- ii. Adhere to the requirements of the *Environment Protection and Biodiversity Conservation Act* for the National Heritage listed area and to the State heritage protection measures that apply to the land.
- iii. Provide robust encasement of some particularly sensitive sites that could be vulnerable to human interference or degradation.
- iv. Remove vegetation where it is necessary for the protection of important heritage features.
- v. Ensure that any archaeological studies undertaken are consistent with the management objective by requiring permits with appropriate conditions for any field studies.

### **WILDERNESS AND LANDSCAPE VALUES**

Given its past history of use and occupation the Land does not have high wilderness values within the commonly accepted definition of wilderness. It does, however, have a great feeling of remoteness and isolation that needs to be preserved. The forested Land also forms the major component of a very beautiful landscape across Recherche Bay from the Cockle Creek Rd, from Moss Glen to Fishers Point. It is adjoined on the east by the white sands of Little Lagoon Beach and is framed against the striking backdrop of mountain ranges within the South West World Heritage Area. It is this beautiful setting that is one of the Land's most significant features.

The only real threat to the Land's isolation would be the provision of land access routes into and across the Land. Any development on the Land that was visible from Cockle Creek Rd would potentially threaten the high landscape values of Recherche Bay.

### **Management Objective**

*To preserve the Land's remote character and landscape.*

### **Management Prescriptions**

- i. No vehicle tracks to be constructed on the Land.
- ii. No permanent dwellings to be constructed on the Land.
- iii. No permanent occupation to be allowed on the Land.
- iv. Any development of walking tracks or interpretation facilities will be done in such a way as not to be visible from Moss Glen and other vantage points along Cockle Creek Rd and not to detract from coastal vistas as viewed from the water.
- v. Establish a photographic inventory to serve as reference points for monitoring future changes in landscape condition.

## 4.c. Protection

### FIRE, INTRODUCED SPECIES AND DISEASES

The Land and surrounding areas have been subjected to wildfire and Aboriginal burning for millennia. During the 20<sup>th</sup> significant fires occurred in the 1920s, following the cessation of timber harvesting operations. It is likely that the widespread fires of 1934 burnt the southeastern section of the Land, an area now covered by tall *Melaleucas*, tea trees and broadleaf shrubs under young, mature *Eucalyptus obliqua*. The immature *Eucalypt/Leptospermum* south of the Land, on Sullivan Point, may result from this or a more recent fire event. Wildfire spreading from the northeast in the early 1980s reopened the corridors in the northern half of the Land. It seems likely that most wildfires have originated from the north and burnt into the Land rather than being initiated within the Land and burning out to surrounding areas. The fire history of the Land and surrounding areas is depicted at Figure 6.

The Land would appear to be virtually weed free and contain no incursions of alien pest animal species. With no road access to or near the Land, the risk of weeds or pests becoming established is very low. Were they to become established, however, they could pose a significant threat to the Land's native flora and fauna. The remnants of former garden plantings have been reported from former hut sites on the western side of the peninsula. There appears to be little chance of these spreading into surrounding forests.

*Phytophthora cinnamomi* (root rot fungus) is present in adjoining areas but has not yet been identified on the Land. It is a potential threat to the heath communities but the likelihood of its introduction is low with the only opportunity for incursion being from infected soil on boots.

### Management Objective

*To protect the Land against, and rehabilitate the Land following, adverse impacts such as inappropriate fire regimes, introduced species, diseases and soil erosion on the Land's natural and cultural heritage values.*

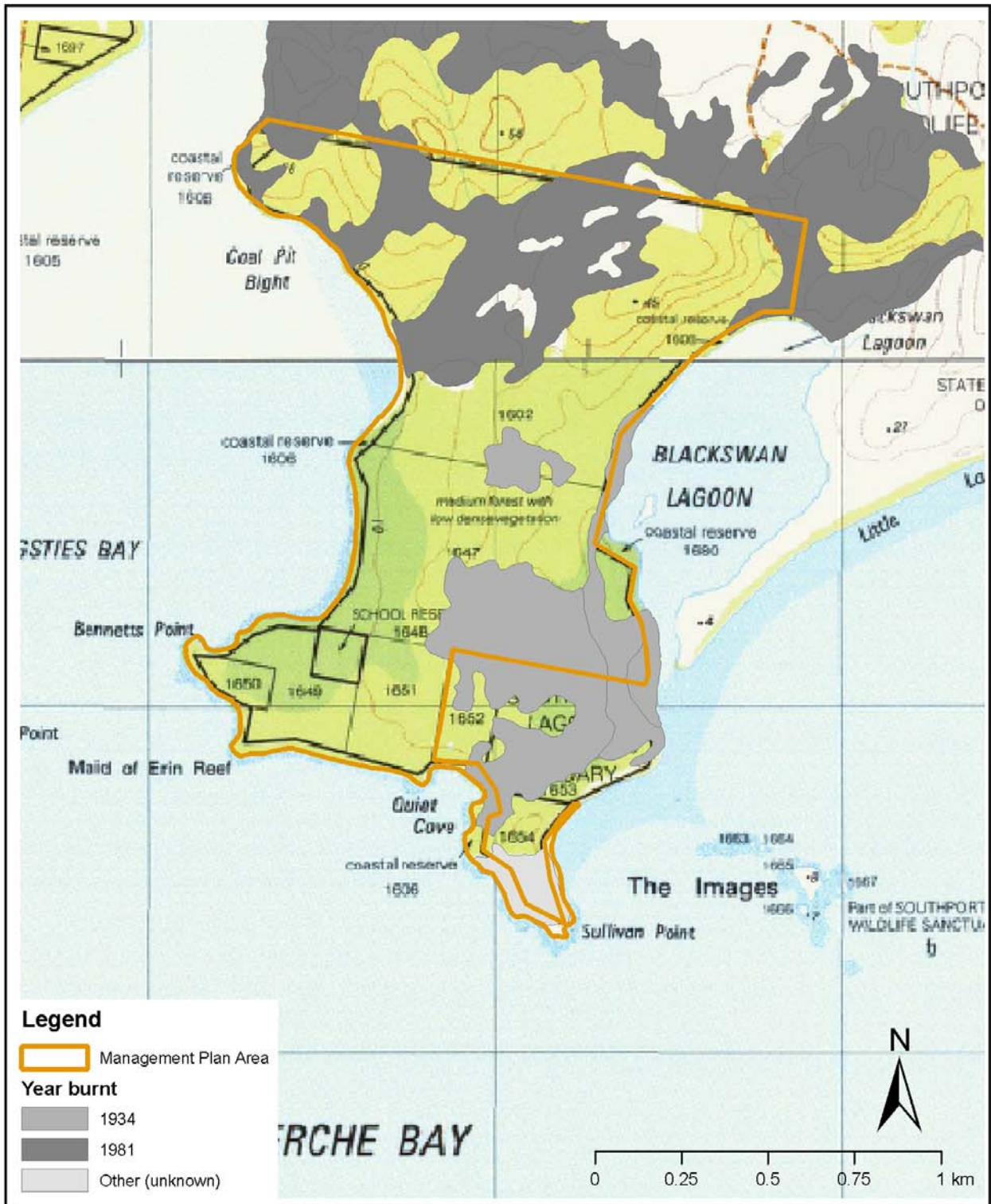
### Management Prescriptions

- i. Develop a joint fire management plan with the Parks and Wildlife Service.
- ii. Prohibit the lighting of fires on the Land except for management purposes.
- iii. Monitor for evidence of *P. cinnamomi* infection on the Land.
- iv. Prohibit the bringing of non-indigenous plant or animal species onto the Land.
- v. Monitor for and remove pest species if and when detected.

### WATER QUALITY

The Land does not comprise the catchment for any water supply, however, runoff from the Land does drain into two sensitive receiving environments. In the northwest, runoff enters Pigsties Bay adjacent to the oyster lease, which relies on the retention of good water quality for its continued viability. In the east the Land drains into the enclosed Blackswan lagoon, which would suffer from any significant input of sediments.

*Figure 6: Fire history of the Land and surrounding areas*



## Fire history of the Northeast Peninsula of Recherche Bay

Map based on data provided by the Tasmanian Vegetation Monitoring and Mapping (TASVEG) Program of the Tasmanian Government's Department of Primary Industries and Water.

Tasmanian Land Conservancy  
August 2007



Base image supplied by TASMAR

There is minimal threat that the water flowing from the Land will contain turbidity levels above normal background and virtually no threat of any chemical or faecal contamination. The only activity that could possibly adversely impact water quality would be walking track works near streams.

#### **Management Objective**

*To preserve the quality of water flowing from the Land*

#### **Management Prescription**

- i. Ensure no actions are taken that would significantly diminish the quality of water that flows from the land into Blackswan Lagoon in the east and to the oyster lease in the west.

### **4.d. Assist People to Appreciate**

#### **EDUCATION AND INTERPRETATION**

The rich history that attaches to the Land and surrounding areas represents an outstanding educational resource that has the potential to be made available to the community. The stories of the indigenous peoples, the French expeditions, British colonization and the subsequent development of the Far South, including coal mining, whaling and timber harvesting, can all be told from this area. However, very few people are likely to have the opportunity of visiting the Land directly, so interpretation facilities should not be confined to the northeast peninsula.

#### **Management Objective**

*To encourage education and interpretation of the Land's natural and cultural heritage values*

#### **Management Prescriptions**

- i. Install interpretation boards at strategic locations on the Land that interpret the Land's natural and cultural heritage values (*subject to the outcomes of risk and cost-benefit analyses referred to in the Recreation and Tourism Management Section*).
- ii. Encourage the construction of interpretation facilities on Crown land at Moss Glen between Cockle Creek Rd and Recherche Bay, that tell the story of European and Aboriginal occupation of the land and the broader Recherche Bay area.
- iii. Actively encourage schools and university groups to use the Land to assist their understanding of the Far South's history and natural values.
- iv. Utilise the expertise and resources of organisations such as universities and other academic bodies to develop further interpretation products in relation to the Land's natural and cultural heritage values.
- v. Provide access to any interpretative or educational material that is developed in relation to the Land on the TLC website.

## RECREATION AND TOURISM

While the Land holds great interest for an increasing number of people, there are currently no facilities there to cater for visitors. The only practical access is by boat although the fit bushwalker can reach the northern end of the Land by walking through the adjoining Southport Lagoon Conservation Area.

The potential for severely compromising the conservation values of the Land if it were to be opened up to large-scale recreation and mass tourism would be great. There is no intention of doing so. It is possible, however, that small-scale, low-impact public access could be permitted if it could be demonstrated not to conflict with the fundamental conservation objective of management.

Any decision on public access will be informed by generally by the precautionary principle and specifically by risk and cost-benefit analyses to ensure that such access will not,

- adversely impact on the Land's natural and cultural heritage values
- subject the TLC to unmanageable public liability risk
- involve net financial costs to the TLC.

Given the TLC's limited management resources, any developments to cater for visitors will be restricted and involve very little built infrastructure. For instance, any walking tracks will be located on natural surface in robust geology with minimal, if any, boardwalk. Furthermore, any such developments will only proceed following clearance from comprehensive archaeological and natural features assessments.

### Management Objective

*Subject to the outcomes of environmental assessments and risk and cost-benefit analyses that demonstrate the Land's conservation values will not be compromised and the TLC will not be financially disadvantaged, allow limited recreation use, including low-impact tourism.*

### Management Prescriptions

i. Consider the following possibilities,

– provision of an identifiable but low-impact point of entry (not a jetty) to the Land on the western shore, at or near the site of the former Kemsley Crescent sawmill.

– development of a walking track close to the western shore from Bennetts Point to near the northern boundary of the Land, following, for much of its length, the old timber tramway route.

–development of a loop walking track (linked to the coastal track in ii. above) that accesses the rainforest and “jungle vine” vegetation in the south of the Land.

ii. Encourage cultural and artistic events based on the Land's historic cultural landscape.

iii. Consider proposals from the tourism sector for low-impact ventures based on and sympathetic to the Land's natural and cultural heritage values.

iv. Utilise any revenues generated from commercial activities on the Land for the ongoing management of the Land.

## 4.e. Community Relations

### NEIGHBOUR RELATIONS

The Land has four immediate neighbours,

- two small privately-owned blocks in the south
- the Southport Lagoon Conservation Area, managed by the Parks and Wildlife Service, in the east and north
- the oyster lease, managed by Okorp Pty Ltd, in Pigsties Bay in the west.

Every effort will be made to ensure the TLC acts as a good neighbour to all parties.

It is recognized that the northeast peninsula forms only a part of the important heritage, landscape and natural features that make the Recherche Bay area such a significant national asset. Collaborative efforts by all public and private land managers are necessary to adequately protect and realize the potential of the area.

#### Management Objective

*To develop and maintain cooperative relationships with neighbouring landholders.*

#### Management Prescriptions

- i. Insofar as it is practical, ensure that management of the Land does not have a detrimental impact on adjoining land or marine areas.
- ii. Where appropriate, undertake with neighbours complementary works such as weed control and fire prevention.
- iii. Ensure any recreation and/or tourism developments and activities do not have adverse impacts on water quality in the oyster lease, nor attract boating into the oyster lease.
- iv. Ensure this plan is consistent with the provisions of the Southport Lagoon Conservation Area management plan where the Land and Conservation Area share a common boundary.
- v. Cooperate with public and private land managers in the Recherche Bay area with a view to providing an holistic approach to management of this important national heritage asset.

### COMMUNITY INVOLVEMENT

It is important to encourage involvement of the community in the ongoing management of the Land. Firstly, because very many members of the Tasmanian public have contributed in one way or another to the acquisition of the property by the TLC. But also because community support will be vital to ensuring the ongoing protection of the Land and assisting the TLC with day-to-day management.

#### Management Objective

*To encourage community involvement in the ongoing management of the Land.*

#### Management Prescriptions

- i. Encourage and facilitate the formation of a Friends of Recherche Bay group.

- ii. Explore the opportunities for the involvement of the Aboriginal community and of existing local community groups such as bird watching groups, history groups and the like.
- iii. Appoint voluntary wardens to exercise a form of custodianship over the Land.
- iv. Support the formation of a loose affiliation of technical experts from disciplines such as botany, zoology, earth sciences, archaeology, history and marine science (Scientists for Recherche Bay), which could provide management advice to the TLC from time to time, as well as an independent assessment of the success of achieving the objectives of this plan.
- v. Request the Parks and Wildlife Service, Moss Glen residents and employees at the oyster lease to monitor activities on the Land in the absence of TLC staff.
- vi. Utilise the knowledge and experience of the families with a long-term association with Recherche Bay in the development of interpretative and education materials.

## **5. Prioritisation of management prescriptions**

The implementation of the prescriptions of this management plan will be subject to the availability of funding and resources, and for this reason the prescriptions may be prioritised by the Board of the TLC. In undertaking this prioritization the TLC Board will recognize the pre-eminent importance of protecting the Land's national heritage values.

## **6. Plan Review**

Progress towards meeting the objectives of this plan will be reviewed at regular intervals not exceeding every two years. Such reviews may lead to minor amendments to the plan.

A full review of the plan is expected to occur at a time no earlier than five years and no later than ten years from the date of publication of this plan. Earlier review would only occur in the event of compelling reasons to do so. This full review will involve public input and result in the publication of a new management plan.

## Appendix 1: Fauna species list

May 2009

| Family           | Common name                  | Scientific Name                  | Status <sup>1</sup> |
|------------------|------------------------------|----------------------------------|---------------------|
| <b>BIRDS</b>     |                              |                                  |                     |
| ACANTHIZIDAE     | Yellow-rumped Thornbill      | <i>Acanthiza chrysorrhoa</i>     |                     |
| ACANTHIZIDAE     | Tasmanian Thornbill          | <i>Acanthiza ewingii</i>         |                     |
| ACANTHIZIDAE     | Brown Thornbill              | <i>Acanthiza pusilla</i>         |                     |
| ACANTHIZIDAE     | Scrubtit                     | <i>Acanthornis magnus</i>        |                     |
| ACANTHIZIDAE     | Striated Fieldwren           | <i>Calamanthus fuliginosus</i>   |                     |
| ACANTHIZIDAE     | Superb Fairy-wren            | <i>Malurus cyaneus</i>           |                     |
| ACANTHIZIDAE     | Tasmanian Scrubwren          | <i>Sericornis humilis</i>        |                     |
| ACCIPITRIDAE     | Collared Sparrowhawk         | <i>Accipiter cirrhocephalus</i>  |                     |
| ACCIPITRIDAE     | Brown Goshawk                | <i>Accipiter fasciatus</i>       |                     |
| ACCIPITRIDAE     | Grey Goshawk                 | <i>Accipiter novaehollandiae</i> | e                   |
| ACCIPITRIDAE     | Wedge-tailed Eagle           | <i>Aquila audax</i>              | VU, e               |
| ACCIPITRIDAE     | Swamp Harrier                | <i>Circus approximans</i>        |                     |
| ACCIPITRIDAE     | White-bellied Sea-Eagle      | <i>Haliaeetus leucogaster</i>    | v, CAMBA            |
| AEGOTHELIDAE     | Australian Owlet-nightjar    | <i>Aegotheles cristatus</i>      |                     |
| ALCEDINIDAE      | Azure Kingfisher             | <i>Alcedo azurea</i>             |                     |
| ALCEDINIDAE      | Laughing Kookaburra          | <i>Dacelo novaeguineae</i>       | i                   |
| ANATIDAE         | Chestnut Teal                | <i>Anas castanea</i>             |                     |
| ANATIDAE         | Grey Teal                    | <i>Anas gracilis</i>             |                     |
| ANATIDAE         | Mallard                      | <i>Anas platyrhynchos</i>        |                     |
| ANATIDAE         | Australasian Shoveler        | <i>Anas rhynchotis</i>           |                     |
| ANATIDAE         | Pacific Black Duck           | <i>Anas superciliosa</i>         |                     |
| ANATIDAE         | Musk Duck                    | <i>Biziura lobata</i>            |                     |
| ANATIDAE         | Australian Wood Duck         | <i>Chenonetta jubata</i>         |                     |
| ANATIDAE         | Black Swan                   | <i>Cygnus atratus</i>            |                     |
| ANATIDAE         | Australian Shelduck          | <i>Tadorna tadornoides</i>       |                     |
| APODIDAE         | White-throated Needletail    | <i>Hirundapus caudacutus</i>     |                     |
| ARDEIDAE         | Great Egret                  | <i>Ardea alba</i>                |                     |
| ARDEIDAE         | White-faced Heron            | <i>Egretta novaehollandiae</i>   |                     |
| ARTAMIDAE        | Dusky Woodswallow            | <i>Artamus cyanopterus</i>       |                     |
| ARTAMIDAE        | Forest Raven                 | <i>Corvus tasmanicus</i>         |                     |
| ARTAMIDAE        | Grey Butcherbird             | <i>Cracticus torquatus</i>       |                     |
| ARTAMIDAE        | Black Currawong              | <i>Strepera fuliginosa</i>       |                     |
| CACATUIDAE       | Sulphur-crested Cockatoo     | <i>Cacatua galerita</i>          |                     |
| CACATUIDAE       | Yellow-tailed Black-Cockatoo | <i>Calyptorhynchus funereus</i>  |                     |
| CAMPEPHAGIDAE    | Black-faced Cuckoo-shrike    | <i>Coracina novaehollandiae</i>  |                     |
| CHARADRIIDAE     | Double-banded Plover         | <i>Charadrius bicinctus</i>      |                     |
| CHARADRIIDAE     | Red-capped Plover            | <i>Charadrius ruficapillus</i>   |                     |
| CHARADRIIDAE     | Hooded Plover                | <i>Thinornis rubricollis</i>     |                     |
| CHARADRIIDAE     | Masked Lapwing               | <i>Vanellus miles</i>            |                     |
| CHARADRIIDAE     | Banded Lapwing               | <i>Vanellus tricolor</i>         |                     |
| CHARADRIIDAE     | Black-fronted Dotterel       | <i>Euseiornis melanops</i>       |                     |
| COLLURICINCLIDAE | Grey Shrike-thrush           | <i>Colluricincla harmonica</i>   |                     |
| COLUMBIDAE       | Common Bronzewing            | <i>Phaps chalcoptera</i>         |                     |
| COLUMBIDAE       | Brush Bronzewing             | <i>Phaps elegans</i>             |                     |
| CUCULIDAE        | Fan-tailed Cuckoo            | <i>Cacomantis flabelliformis</i> |                     |
| CUCULIDAE        | Horsfield's Bronze-Cuckoo    | <i>Chrysococcyx basalis</i>      |                     |

Tasmanian Threatened Species Act 2002 – r = rare, v = vulnerable, e = endangered; Commonwealth Environment Protection and Biodiversity Conservation Act 1999 – R = rare, VU = vulnerable, EN = endangered; i = introduced; CAMBA = China-Australia Migratory Bird Agreement

| Family            | Common name                | Scientific Name                     | Status <sup>1</sup> |
|-------------------|----------------------------|-------------------------------------|---------------------|
| CUCULIDAE         | Shining Bronze-Cuckoo      | <i>Chrysococcyx lucidus</i>         |                     |
| CUCULIDAE         | Pallid Cuckoo              | <i>Cuculus pallidus</i>             |                     |
| DIOMEDEIDAE       | Royal Albatross            | <i>Diomedea epomophora</i>          |                     |
| DIOMEDEIDAE       | Shy Albatross              | <i>Thalassarche cauta</i>           |                     |
| DIOMEDEIDAE       | Black-browed Albatross     | <i>Thalassarche melanophrys</i>     |                     |
| ESTRILDIDAE       | Beautiful Firetail         | <i>Stagonopleura bella</i>          |                     |
| FALCONIDAE        | Brown Falcon               | <i>Falco berigora</i>               |                     |
| FALCONIDAE        | Australian Hobby           | <i>Falco longipennis</i>            |                     |
| FALCONIDAE        | Peregrine Falcon           | <i>Falco peregrinus</i>             |                     |
| FRINGILLIDAE      | European Goldfinch         | <i>Carduelis carduelis</i>          | i                   |
| HAEMATOPODIDAE    | Sooty Oystercatcher        | <i>Haematopus fuliginosus</i>       |                     |
| HAEMATOPODIDAE    | Pied Oystercatcher         | <i>Haematopus longirostris</i>      |                     |
| HIRUNDINIDAE      | Welcome Swallow            | <i>Hirundo neoxena</i>              | i                   |
| HIRUNDINIDAE      | Tree Martin                | <i>Hirundo nigricans</i>            |                     |
| LARIDAE           | Kelp Gull                  | <i>Larus dominicanus</i>            |                     |
| LARIDAE           | Silver Gull                | <i>Larus novaehollandiae</i>        |                     |
| LARIDAE           | Pacific Gull               | <i>Larus pacificus</i>              |                     |
| MALURIDAE         | Southern Emu-wren          | <i>Stipiturus malachurus</i>        |                     |
| MELIPHAGIDAE      | Eastern Spinebill          | <i>Acanthorhynchus tenuirostris</i> |                     |
| MELIPHAGIDAE      | Little Wattlebird          | <i>Anthochaera lunulata</i>         |                     |
| MELIPHAGIDAE      | Yellow Wattlebird          | <i>Anthochaera paradoxa</i>         |                     |
| MELIPHAGIDAE      | Yellow-throated Honeyeater | <i>Lichenostomus flavicollis</i>    |                     |
| MELIPHAGIDAE      | Black-headed Honeyeater    | <i>Melithreptus affinis</i>         |                     |
| MELIPHAGIDAE      | Strong-billed Honeyeater   | <i>Melithreptus validirostris</i>   |                     |
| MELIPHAGIDAE      | New Holland Honeyeater     | <i>Phylidonyris novaehollandiae</i> |                     |
| MELIPHAGIDAE      | Crescent Honeyeater        | <i>Phylidonyris pyrrhoptera</i>     |                     |
| MENURIDAE         | Superb Lyrebird            | <i>Menura novaehollandiae</i>       | i                   |
| MONARCHIDAE       | Satin Flycatcher           | <i>Myiagra cyanoleuca</i>           |                     |
| MOTACILLIDAE      | Richard's Pipit            | <i>Anthus novaeseelandiae</i>       |                     |
| MUSCICAPIDAE      | White-fronted Chat         | <i>Ephthianura albifrons</i>        |                     |
| PACHYCEPHALIDAE   | Olive Whistler             | <i>Pachycephala olivacea</i>        |                     |
| PACHYCEPHALIDAE   | Golden Whistler            | <i>Pachycephala pectoralis</i>      |                     |
| PARDALOTIDAE      | Spotted Pardalote          | <i>Pardalotus punctatus</i>         |                     |
| PARDALOTIDAE      | Striated Pardalote         | <i>Pardalotus striatus</i>          |                     |
| PASSERIDAE        | House Sparrow              | <i>Passer domesticus</i>            | i                   |
| PELECANIDAE       | Australian Pelican         | <i>Pelecanus conspicillatus</i>     |                     |
| PETROICIDAE       | Dusky Robin                | <i>Melanodryas vittata</i>          |                     |
| PETROICIDAE       | Scarlet Robin              | <i>Petroica boodang</i>             |                     |
| PETROICIDAE       | Flame Robin                | <i>Petroica phoenicea</i>           |                     |
| PETROICIDAE       | Pink Robin                 | <i>Petroica rodinogaster</i>        |                     |
| PHALACROCORACIDAE | Great Cormorant            | <i>Phalacrocorax carbo</i>          |                     |
| PHALACROCORACIDAE | Black-faced Cormorant      | <i>Phalacrocorax fuscescens</i>     |                     |
| PHALACROCORACIDAE | Little Pied Cormorant      | <i>Phalacrocorax melanoleucos</i>   |                     |
| PHALACROCORACIDAE | Little Black Cormorant     | <i>Phalacrocorax sulcirostris</i>   |                     |
| PHASIANIDAE       | Brown Quail                | <i>Coturnix ypsilophora</i>         |                     |
| PODICIPEDIDAE     | Hoary-headed Grebe         | <i>Poliiocephalus poliocephalus</i> |                     |
| PODICIPEDIDAE     | Australasian Grebe         | <i>Tachybaptus novaehollandiae</i>  |                     |
| PROCELLARIIDAE    | Fairy Prion                | <i>Pachyptila turtur</i>            |                     |
| PROCELLARIIDAE    | Common Diving-Petrel       | <i>Pelecanoides urinatrix</i>       |                     |
| PROCELLARIIDAE    | Fluttering Shearwater      | <i>Puffinus gavia</i>               |                     |
| PROCELLARIIDAE    | Sooty Shearwater           | <i>Puffinus griseus</i>             |                     |

Tasmanian Threatened Species Act 2002 – r = rare, v = vulnerable, e = endangered; Commonwealth Environment Protection and Biodiversity Conservation Act 1999 – R = rare, VU = vulnerable, EN = endangered; i = introduced; CAMBA = China-Australia Migratory Bird Agreement

| Family         | Common name             | Scientific Name                | Status <sup>1</sup> |
|----------------|-------------------------|--------------------------------|---------------------|
| PROCELLARIIDAE | Hutton's Shearwater     | <i>Puffinus huttoni</i>        |                     |
| PROCELLARIIDAE | Short-tailed Shearwater | <i>Puffinus tenuirostris</i>   |                     |
| PROCELLARIIDAE | Northern Giant-Petrel   | <i>Macronectes halli</i>       |                     |
| PROCELLARIIDAE | Wilson's Storm-Petrel   | <i>Oceanites oceanicus</i>     |                     |
| PROCELLARIIDAE | Great-winged Petrel     | <i>Pterodroma macroptera</i>   |                     |
| PROCELLARIIDAE | Soft-plumaged Petrel    | <i>Pterodroma mollis</i>       |                     |
| PSITTACIDAE    | Musk Lorikeet           | <i>Glossopsitta concinna</i>   |                     |
| PSITTACIDAE    | Swift Parrot            | <i>Lathamus discolor</i>       | EN, e               |
| PSITTACIDAE    | Orange-bellied Parrot   | <i>Neophema chrysogaster</i>   |                     |
| PSITTACIDAE    | Blue-winged Parrot      | <i>Neophema chrysostoma</i>    |                     |
| PSITTACIDAE    | Ground Parrot           | <i>Pezoporus wallicus</i>      |                     |
| PSITTACIDAE    | Green Rosella           | <i>Platycercus caledonicus</i> |                     |
| RALLIDAE       | Eurasian Coot           | <i>Fulica atra</i>             |                     |
| RALLIDAE       | Tasmanian Native-Hen    | <i>Gallinula mortierii</i>     |                     |
| RALLIDAE       | Black-tailed Native-hen | <i>Gallinula ventralis</i>     |                     |
| RALLIDAE       | Purple Swamphen         | <i>Porphyrio porphyrio</i>     |                     |
| RALLIDAE       | Spotless Crake          | <i>Porzana tabuensis</i>       |                     |
| RALLIDAE       | Lewin's Rail            | <i>Rallus pectoralis</i>       |                     |
| RHIPIDURIDAE   | Grey Fantail            | <i>Rhipidura albiscapa</i>     |                     |
| SCOLOPACIDAE   | Latham's Snipe          | <i>Gallinago hardwickii</i>    |                     |
| STERNIDAE      | Crested Tern            | <i>Sterna bergii</i>           |                     |
| STERNIDAE      | Caspian Tern            | <i>Sterna caspia</i>           |                     |
| STERNIDAE      | Fairy Tern              | <i>Sterna nereis</i>           |                     |
| STERNIDAE      | White-fronted Tern      | <i>Sterna striata</i>          |                     |
| STRIGIDAE      | Southern Boobook        | <i>Ninox novaeseelandiae</i>   |                     |
| STURNIDAE      | Common Starling         | <i>Sturnus vulgaris</i>        | i                   |
| SULIDAE        | Australasian Gannet     | <i>Morus serrator</i>          |                     |
| SYLVIIDAE      | Little Grassbird        | <i>Megalurus gramineus</i>     |                     |
| TURDIDAE       | Common Blackbird        | <i>Turdus merula</i>           | i                   |
| TURDIDAE       | Bassian Thrush          | <i>Zoothera lunulata</i>       |                     |
| TYTONIDAE      | Masked Owl              | <i>Tyto novaehollandiae</i>    | e                   |
| ZOSTEROPIDAE   | Silvereye               | <i>Zosterops lateralis</i>     |                     |
| <b>MAMMALS</b> |                         |                                |                     |
| MACROPODIDAE   | Pademelon               | <i>Thylogale billardierii</i>  |                     |

## Appendix 2: Flora species list

| Family         | Common name             | Scientific Name                         | Status <sup>1</sup> |
|----------------|-------------------------|---|---------------------|
| <b>DICOTS</b>  |                         |   |                     |
| APOCYNACEAE    | twining silkpod         | <i>Parsonsia brownii</i>                |                     |
| ASTERACEAE     | musk daisybush          | <i>Olearia argophylla</i>               |                     |
| CASUARINACEAE  | necklace sheoak         | <i>Allocasuarina monilifera</i>         |                     |
| CUNONIACEAE    | wiry bauera             | <i>Bauera rubioides</i>                 |                     |
| DILLENIACEAE   | scrambling guineaflower | <i>Hibbertia empetrifolia</i>           |                     |
| DILLENIACEAE   | spreading guineaflower  | <i>Hibbertia procumbens</i>             |                     |
| ELAEOCARPACEAE | heartberry              | <i>Aristotelia peduncularis</i>         |                     |
| EPACRIDACEAE   | native cranberry        | <i>Astroloma humifusum</i>              |                     |
| EPACRIDACEAE   | common heath            | <i>Epacris impressa</i>                 |                     |
| EPACRIDACEAE   | swamp heath             | <i>Epacris lanuginosa</i>               |                     |
| EPACRIDACEAE   | seaspray pinkberry      | <i>Leptecophylla abietina</i>           |                     |
| EPACRIDACEAE   | common pinkberry        | <i>Leptecophylla juniperina</i>         |                     |
| EPACRIDACEAE   | coast beardheath        | <i>Leucopogon parviflorus</i>           |                     |
| EPACRIDACEAE   | goldey wood             | <i>Monotoca glauca</i>                  |                     |
| EPACRIDACEAE   | pink swampheath         | <i>Sprengelia incarnata</i>             |                     |
| EPACRIDACEAE   | fragrant purpleberry    | <i>Trochocarpa gunnii</i>               |                     |
| ESCALLONIACEAE | Tasmanian laurel        | <i>Anopterus glandulosus</i>            |                     |
| EUCRYPHIACEAE  | leatherwood             | <i>Eucryphia lucida</i>                 |                     |
| FABACEAE       | golden pea              | <i>Aotus ericoides</i>                  |                     |
| FABACEAE       | spiky bitterpea         | <i>Daviesia ulicifolia</i>              |                     |
| FABACEAE       | heartleaf bushpea       | <i>Pultenaea daphnoides</i>             |                     |
| FABACEAE       | prickly beauty          | <i>Pultenaea juniperina</i>             |                     |
| FAGACEAE       | myrtle beech            | <i>Nothofagus cunninghamii</i>          |                     |
| MIMOSACEAE     | Sydney coast wattle     | <i>Acacia longifolia var longifolia</i> |                     |
| MIMOSACEAE     | black wattle            | <i>Acacia melanoxylon</i>               |                     |
| MIMOSACEAE     | redstem wattle          | <i>Acacia myrtifolia</i>                |                     |
| MIMOSACEAE     | prickly moses           | <i>Acacia verticillata</i>              |                     |
| MONIMIACEAE    | sassafras               | <i>Atherosperma moschatum</i>           |                     |
| MYRTACEAE      | blue gum                | <i>Eucalyptus globulus</i>              |                     |
| MYRTACEAE      | western peppermint      | <i>Eucalyptus nitida</i>                |                     |
| MYRTACEAE      | stringybark             | <i>Eucalyptus obliqua</i>               |                     |
| MYRTACEAE      | common teatree          | <i>Leptospermum scoparium</i>           |                     |
| MYRTACEAE      | scented paperbark       | <i>Melaleuca squarrosa</i>              |                     |
| PITTOSPORACEAE | cheesewood              | <i>Pittosporum bicolor</i>              |                     |
| POLYGALACEAE   | blue lovecreeper        | <i>Comesperma volubile</i>              |                     |
| PROTEACEAE     | silver banksia          | <i>Banksia marginata</i>                |                     |
| PROTEACEAE     | beaked needlebush       | <i>Hakea epiglottis</i>                 |                     |
| PROTEACEAE     | guitarplant             | <i>Lomatia tinctoria</i>                |                     |
| RHAMNACEAE     | common dogwood          | <i>Pomaderris apetala</i>               |                     |
| RUBIACEAE      | mountain currant        | <i>Coprosma nitida</i>                  |                     |
| RUTACEAE       | hairy boronia           | <i>Boronia pilosa</i>                   |                     |
| RUTACEAE       | satinwood               | <i>Nematolepis squamea</i>              |                     |
| RUTACEAE       | stinkwood               | <i>Zieria arborescens</i>               |                     |
| SANTALACEAE    | common native-cherry    | <i>Exocarpos cupressiformis</i>         |                     |
| SOLANACEAE     | kangaroo apple          | <i>Solanum aviculare</i>                |                     |
| THYMELAEACEAE  | cherry riceflower       | <i>Pimelea drupacea</i>                 |                     |

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|                      |                       |                                      |  |
|----------------------|-----------------------|--------------------------------------|--|
| THYMELAEACEAE        | bushmans bootlace     | <i>Pimelea nivea</i>                 |  |
| WINTERACEAE          | mountain pepper       | <i>Tasmannia lanceolata</i>          |  |
| <b>MONOCOT</b>       |                       |                                      |  |
| CYPERACEAE           | cutting grass         | <i>Gahnia grandis</i>                |  |
| CYPERACEAE           | buttongrass           | <i>Gymnoschoenus sphaerocephalus</i> |  |
| CYPERACEAE           | tall swordedge        | <i>Lepidosperma elatius</i>          |  |
| CYPERACEAE           | common rapiersedge    | <i>Lepidosperma filiforme</i>        |  |
| IRIDACEAE            | western flag iris     | <i>Diplarrena latifolia</i>          |  |
| IRIDACEAE            | white flag iris       | <i>Diplarrena moraea</i>             |  |
| LILIACEAE            | christmas bells       | <i>Blandfordia punicea</i>           |  |
| LILIACEAE            | grassland flaxlily    | <i>Dianella tasmanica</i>            |  |
| LILIACEAE            | turquoise berry       | <i>Drymophila cyanocarpa</i>         |  |
| ORCHIDACEAE          | small mosquito-orchid | <i>Acianthus pusillus</i>            |  |
| POACEAE              | rice grass            | <i>Ehrharta sp.</i>                  |  |
| RESTIONACEAE         | spreading roperush    | <i>Empodisma minus</i>               |  |
| RESTIONACEAE         | slender twinerush     | <i>Leptocarpus tenax</i>             |  |
| XYRIDACEAE           | yelloweye             | <i>Xyris spp.</i>                    |  |
| <b>PTERIDOPHYTES</b> |                       |                                      |  |
| DENNSTAEDTIACEAE     | bracken               | <i>Pteridium esculentum</i>          |  |
| DICKSONIACEAE        | soft treefern         | <i>Dicksonia antarctica</i>          |  |
| GLEICHENIACEAE       | pouched coralfern     | <i>Gleichenia dicarpa</i>            |  |

## Appendix 3: Vegetation of the Tasmanian Land Conservancy block - Recherche Peninsula

Sib Corbett, September 2006

### Background

The project was carried out in response to a request from the Tasmanian Land Conservancy for improved mapping on the southern part of the Recherche Peninsula. RFA Forest vegetation mapping carried out at 1:100,000 was incorporated into TASVEG 1.0, with non-forest mapping at 1:25,000 completed in 2001. Limited field verification resulted in maps not sufficiently detailed or accurate for management purposes.

The TLC block, although freehold, has been mapped in the context of the whole Southport Lagoon area, which includes the Conservation Area, State Reserve and Historic Site and is currently the subject of a Draft management Plan.

### Geology

The geology of the Recherche Peninsula is shown on Mineral Resources Tasmania maps produced at 1:250,000 but not updated since the 1980's. A new map is presented here (see Figure 3 in main section of Management Plan), one in which the distribution of Jurassic dolerite and Triassic sedimentary sequences are shown more accurately but structural information is not given. The new map also shows the Quaternary blanketing sand sheets, at least where they are thickest. These deposits have a marked effect on vegetation, since they support peat soils quite unlike the soils developed where dolerite is close to the surface, and only a little more like soils found on sandstone. Recent sand deposits have been mapped as beach sands and sand dunes.

### Fire History

The whole Southport area has suffered repeated wildfires from pre-historic times on, and the frequency of fires seems to have increased in recent decades. Fires have been recorded from the Historic Site in 1981 and 1994, with a major fire over much of the Reserve in 1998 (Southport Lagoon Draft Management Plan, 2005). Aerial photos flown in 1991 and 1995 indicate that the last wildfire on the Recherche Peninsula occurred in the 1980's, with 1981 the likely date when a major moorland fire penetrated the TLC block.

Tracing fire history in the moorlands is difficult. Most areas of buttongrass and wet heath appear to have been burnt in 1981 and possibly more recently, but now show complete recovery, at least at aerial photo scale. The exception is seen in some of the swamps, including those to the east of the TLC block. In these swamps fire scars are apparent between closed canopy *Melaleuca squarrosa* shrublands and sedgelands in which *Melaleuca* is slow to recover, and the swamps are dominated by sedges, particularly *Leptocarpus tenax*, with a few barely emergent shrubs such as *Hakea epiglottis*.

Damage to the forests and woodlands in the area around Southport Lagoon is so extensive that it has not been possible to map individual events. The understorey species appear to recover well from fire events and species diversity is higher in these woodlands than in similar dry *Eucalyptus obliqua* forests on dolerite ridges on Recherche Peninsula. Species diversity appears to be greatest in the most recently (and most often?) burnt forests but there may be other factors operating.

Fire history is best demonstrated on Recherche Peninsula (see Figure 6 in main section of Management Plan) where a number of events, going back to the early C20, are clearly evident.

The short forest immediately west of Blackswan Lagoon seems to have been initiated by an event, which has little expression elsewhere in the Southport area. This forest is mainly underlain by windblown sand, probably resting on Triassic sandstone, but substrate influences

would not seem to entirely explain this unusual vegetation. In 1934 much of Southwest Tasmania was swept by bushfires, resulting in the loss of much of the King Billy Pine and Deciduous Beech forests on the Southern Ranges. Perhaps a spot fire from this event destroyed a wet *Eucalyptus obliqua* forest west of the Lagoon, leaving a few dead stags at the southern end, which now project over a cover of scattered young eucalypts and tall broadleaf shrubs, with rainforest seedlings (*Nothofagus*, *Anopterus*) and *Dicksonia* in the understorey. Similar forests occur a few kilometres to the south, in a coastal area underlain by deep sand at Fisher Point. At the southern end of Blowhole Valley similar forests generally lack eucalypts. An even-aged stand of *E. obliqua* over a dense mid-storey of *Leptospermum scoparium* and *Monotoca glauca* on the exposed tip of Sullivan Point may also have its origins at this time or be more recent.

Coal mining between the 1840's and early 1900's at Recherche Bay and sawmilling in the early part of the C20 were almost certainly accompanied by wildfires. Blackened cut stumps in heavily timbered parts of the TLC block appear to date from a major fire in 1920, reported by David Vernon (pers. com.). A partial rainforest understorey has been able to develop in parts of the TLC forest, and it seems likely the bluegum forest near Sullivan Point also dates from 1920.

If anything remains of the pre-1800 forests seen by the French, it may lie in the heart of the TLC block at the southern end. There, very large *E. obliqua* are scattered over a mid-storey dominated by Sassafras, with a few smaller myrtles and leatherwood. *Anopterus*, *Dicksonia* and *Trochocarpa* form a sparse groundcover. Selective logging occurred in much of this forest before 1920. The oldest eucalypts, rather than the whole forest, may be all that remains from a time when fires were periodically set by aboriginal people.

Various lines of evidence suggest that the Recherche landscape seen by the French was much more open than it is today, probably as a result of aboriginal firing. The forests which filled D'Entrecasteaux with such admiration for their antiquity are likely to have been on the peninsula, inland from the observatory, but may also have been on the western side of Pigsties Bay, or further afield. Most of the eastern routes taken by Labillardiere and other French explorers in 1793 pass through what is now the most open part of the TLC block, the "fire corridor" which runs south west from the northeastern corner of the block to Pigsties Bay. A broader area, between the north end of Coal Pit Bight and the mouth of the D'Entrecasteaux River, was burnt extensively in 1981. It is suggested that these two corridors, which are rich in flammable moorland species, have repeatedly acted as fire pathways, although there is no way of knowing when they first filled that role. The fact that both corridors are underlain by dolerite has probably precluded the development of *Eucalyptus nitida* scrubs and moorland, which normally occurs after fire on siliceous substrates – the corridors are occupied by *Eucalyptus obliqua* sparse woodlands and sedgy heath.

The site of the French garden lies on the northern side of the southern fire corridor, and is covered by eucalypts perhaps 100 years old. It seems certain the French would not have chosen a garden site in an area covered by gum trees. Finally, there is an engraving (after Piron) of French sailors and aborigines together, in which a good deal of artistic license has been applied, but it seems likely the setting is on the shore near Blackswan Lagoon. In the middle ground is an isolated manfern, such as only happens after fire has removed the forest.

## Vegetation Overview

In spite of a complex cultural history the area is now in an essentially natural state.

Botanists attached to the 1792 and 1793 French expeditions under Bruny D'Entrecasteaux made extensive collections in southeast Tasmania, particularly on the Recherche Peninsula. These collections have bestowed considerable scientific importance on the area. Surveys during the last 200 years in the general Southport area have recorded more than 190 vascular plant species, including 16 endemic to Tasmania and ten that are listed as rare, vulnerable or endangered. All species recorded by the French expeditions are still found in the area.

The present survey is concerned with the identification and distribution of plant communities rather than individual species (see Figure 4 in main section of Management Plan). None of the vegetation communities on or near the TLC block are currently listed as threatened.

The TLC block vegetation is dominated by *Eucalyptus obliqua*, in forests which cover the full spectrum of TASVEG *E. obliqua* classes, from dry heathy forest to wet forests in which the understorey may be tea-tree scrub, broadleaf scrub or rainforest. The TASVEG classes have been further divided to indicate the strong influence of substrate on floristics. These vegetation sub-classes are shown on the customised map of the Recherche Peninsula (see Figure 4 in main section of Management Plan) and will be identified in the next release of TASVEG within the notefield. Except where changes are associated with fire boundaries there is continuous gradation between forest classes.

*Eucalyptus globulus* occurs as a minor component within the TLC forests –the only place where *E. globulus* dominates is in a small patch of wet forest near the southern end of the peninsula, just south of the Wildlife Sanctuary. This species may have been more abundant along the shoreline in the past. No other eucalypt species have been identified on the TLC block. Just to the north of the block *E. nitida* occurs as scattered trees over wet heath on the fringes of *E. obliqua* forests. *E. ovata* also occurs at the forest edge but is generally confined to the wettest areas of closed heath and some of it is associated with *Melaleuca squarrosa* swamps. East of Blackswan Lagoon outcropping sandstone supports a mosaic of heath, moorland and *Melaleuca* scrub with emergent *E. nitida*.

Most of the wetland-sedgeland-heathland communities north and west of the TLC block fit within the general and particular descriptions of lowland Eastern Moorland of Jarman *et al* (1982). Although this area was not sampled by Jarman *et al*, the vegetation in the Southport/Recherche area provides an excellent demonstration of a number of moorland communities and their interrelationships. New moorland community descriptions will be presented to expand the TASVEG catalogue in anticipation that the Southport-Recherche plains will become the type area for a new TASVEG Lowland Eastern Moorland class. Buttongrass and closed heath communities are presently assigned to the generalised classes Undifferentiated Eastern Moorland and Wet Heath. Wet areas within the southern fire corridor, and in the moorlands east of the TLC block, support short *Melaleuca squarrosa* sedgy swamps, which in the absence of fire, are able to develop into *Melaleuca* swamp forest like that growing on the southwestern shore of Blackswan Lagoon. Fire-damaged *Melaleuca/Leptospermum* short forest occurs along the eastern edge of eucalypt forest, on slopes leading to the lagoon from the northeast.

Coastal vegetation is represented by Grassy Sedgeland on sand along the shores of Blackswan Lagoon, and dense coastal scrub on the tip of Sullivans Point. Scrub, including a very narrow seaward strip of *Acacia longifolia* var *longifolia*, tops the dune behind Little Lagoon Beach, with barely emergent *Eucalyptus nitida*. Muttonbird Rookery vegetation is confined to The Images.

## Vegetation in Detail

### THE FORESTS

#### *Eucalyptus obliqua* dry forest (DOB)

This is the most abundant forest type in the Southport area, but uncommon on the TLC block, where wet forests predominate. DOB forest and woodland occurs on well-drained dolerite ridges, often in a position between wet forest WOL and moorland. DOB appears to be the most fire-prone of the forest communities, and there are no unburnt examples. The most diverse understoreys are seen where fires appear to have been most frequent in recent times, north and northeast of the TLC block

The canopy is generally open, and may be quite sparse. It is dominated by fire-scarred *Eucalyptus obliqua* up to about 30m tall. There may be a few *E. globulus* present near the

coast, and *E. nitida* occurs on sandstone or sandy peat at the moorland fringes, where the forest becomes woodland or scattered trees.

Understoreys can be highly diverse near the Ida Bay railway line, but on the Recherche Peninsula diversity is generally lower. *Banksia marginata*, *Leptospermum scoparium* and sometimes *Exocarpos cupressiformis* form an uneven and sparse midstorey generally over 2m tall. *Melaleuca squarrosa* may be significant in this layer although it is usually associated with wetter sites. A sparse to closed heathy understorey 1-2m tall has any of *Leptospermum scoparium*, *Allocasuarina monilifera*, *Aotus ericoides*, *Pultenaea daphnoides*, *P. juniperina* and *Lomatia tinctoria* over *Epacris impressa*, *Astroloma humifusum*, *Dianella tasmanica*, *Boronia pilosa*, *Hibbertia procumbens* and *Diplarrena moraea* or *D. latifolia*. A feature of the dry woodlands is the presence of moorland species among the shrubs. These can include *Gymnoschoenus sphaerocephalus*, *Lepidosperma filiforme*, *Xyris* spp., *Leptocarpus tenex*, *Empodisma minus* and *Gleichenia dicarpa*.

Dry *E. obliqua* forests are underlain by sandstone along the eastern shore of Recherche Peninsula. Where they have an open canopy and an understorey that is shorter and more sparse than their equivalent on dolerite. These forests are shown on the Recherche Vegetation Map (see Figure 4 in main section of Management Plan) as xDOB and are distinguished in the notes field in TASVEG. They share a number of species with DOB as well as with the sandstone variant of wet *E. obliqua* on tea-tree. There may be no distinct mid-storey but an uneven heathy understorey 1-3m tall. Shrub species include *Leptospermum scoparium*, *Davesia ulicifolia*, *Pultenaea daphnoides*, *P. juniperina*, *Leptecophylla juniperina*, *Leucopogon parviflorus* (near the shore), *Pteridium esculentum*, *Epacris impressa*, *Pimelia drupacea*, *Drymophila cyanocarpa* and *Acacia myrtifolia*, with scramblers *Hibbertia empetrifolia* and *Comesperma volubile* and *Acianthus* sp. on the ground. Monocots include *Dianella tasmanica* and *Lepidosperma elatius*. As the community passes into WOL there are a few *Pomaderris apetala*, *Zieria arborescens* and *Pittosporum bicolor* forming a sparse mid-storey. These forests appear to show complete recovery from fires long past.

#### *Eucalyptus obliqua* over *Leptospermum* (WOL)

West of Leprena Road *E. obliqua* forests are generally wetter than those further east, and appear to show little effects from fires in the 1980's. Understoreys are tall (5m) *Pomaderris apetala*, *Leptospermum lanigerum*, *Nematolepis squamea* and *Acacia verticillata* with *Melaleuca squarrosa* in the wettest areas. *Bauera rubioides* and ferns or *Gahnia grandis* dominate the ground layer. Wet forests on dolerite on the TLC block rarely attain such a tall understorey, and are dominated by a horrible tangle of *Gahnia grandis* and *Lepidosperma elatius*. *Acacia verticillata*, *Zieria arborescens* and a few *Banksia marginata* reach 2-3m, with *Melaleuca squarrosa* again prominent in wetter areas. Diversity is generally low.

East of the sawmill site WOL contains elements of both WOB and WOR, and is at its most diverse, with a scattered mid-storey of *Acacia melanoxylon* over *Zieria arborescens*, *Acacia verticillata*, *Nematolepis squamea*, *Melaleuca squarrosa*, *Pomaderris elliptica* and *Monotoca glauca* in an uneven layer 8-15m high. Beneath this are *Dicksonia antarctica*, shrubs of *Tasmannia lanceolata* and *Coprosma nitida*, groundferns, *Lepidosperma elatius* and *Gahnia grandis*.

A form of WOL in which *Leptospermum scoparium* forms a closed canopy beneath small *E. obliqua*. is seen on Sullivans Point. The ground is generally bare except for drifts of *Gahnia grandis* and a scattering of burnt logs. Some *Monotoca glauca* occurs in the tea-tree canopy, and structurally this forest resembles the WOL on sandstone seen along the Pigsties Bay shoreline.

The south-facing shoreline west of Quiet Cove has short *E. obliqua* over a dense, wind-pruned shrub layer dominated by *Leptospermum scoparium* and *Leptecophylla juniperina*, with *L. abietina* right on the shoreline – this understorey is equivalent to coastal scrub but the forest is classified as WOL.

A distinctive variant of WOL occurs on sandstone and appears to be confined to the Recherche Peninsula and a few places near the South Coast. This appears on the vegetation

map as xWOL and is distinguished in the notes field in TASVEG. This is a medium height open forest with a signature mid storey in which *Monotoca glauca* is dominant. *Leptospermum scoparium*, *Zieria arborescens*, *Acacia verticillata* and *Pittosporum bicolor* may share this layer. The ground is nearly bare, with just a little *Lepidosperma elatius* and bracken. Blackened logs on the floor indicate fires perhaps 60-80 years ago.

#### *Eucalyptus obliqua* over Broadleaf (WOB)

WOB occupies a large part of the southern end of the Peninsula, but further north it only survives in fire-protected pockets. Broadleaf shrubs burnt in the 1980's would probably not have had time to re-establish, and the recovering forest would look more like WOL. On the Peninsula most of the forest mapped as WOB appears to have developed since a fire in 1934(?) and much of it is underlain by sandstone.

WOB mapped east of Coal Pit Bight is similar to WOB described from State Forest to the north and west. It consists of *Eucalyptus obliqua* over an uneven mid-storey of *Pomaderris apetala* and *Zieria arborescens*, with *Acacia melanoxylon*, *A. verticillata*, *Nematolepis squamea*, *Olearia argophylla* and *Monotoca glauca* with *Melaleuca squarrosa* in wet places. Further inland WOB forests transitional into WOR have many of the above species plus *Nothofagus cunninghamii*, *Anopterus glandulosus*, *Eucryphia lucida*, *Tasmannia lanceolata*, *Pimelia drupacea* and *Aristotelia peduncularis*. In many places on the Peninsula the transition between WOL and WOB covers a fairly wide area; mapping the boundaries is heavily dependent on photo interpretation.

In the centre of the Peninsula the forest consists of scattered small *E. obliqua* trees above a closed canopy of 10m *Pomaderris apetala* with a very sparse ground layer of *Gahnia grandis*, *Lepidosperma elatius*, *Pimelia drupacea*, *Pomaderris* seedlings and *Trochocarpa gunnii*. There are a few very big-stemmed *Melaleuca squarrosa*. A striking feature of this part of the forest is a dense draping of *Parsonsia brownii* vines among the slender *Pomaderris* stems.

On the eastern side of the block, on sand flats south of Blackswan Lagoon, the forest is of a similar age to that described above, but is more diverse, with a few eucalypt stags above a closed canopy of *E. obliqua* scattered amongst *Pomaderris apetala*, *Zieria arborescens* and some *Pittosporum bicolor*. *Monotoca glauca* is most abundant near the coast, while *Melaleuca squarrosa* becomes increasingly important with the transition into swamp forest near the lagoon. There is a very sparse midstorey of *Dicksonia antarctica*, small *Nothofagus cunninghamii* and *Anopterus glandulosus*, with aging *Gahnia* in patches and bracken where light can penetrate. The ground is littered with very large eucalypt logs, but is otherwise fairly bare and there are no vines.

In Figure 4 (see main section of Management Plan) this forest is shown as xWOB. In TASVEG it is distinguished in the notes field. Patches where the eucalypt overstorey is absent have been mapped as Broadleaf Scrub SBR.

Mixed forest is rare in the Southport Lagoon conservation area, being found only in the heart of the TLC block on Recherche Peninsula. This forest is crowned by scattered very large *E. obliqua* and *E. globulus*, often approaching senescence. The open mid-canopy is dominated by *Atherosperma moschatum*, with a few *Nothofagus cunninghamii*, *Anodopetalum biglandulosum*, *Acacia melanoxylon* and *Eucryphia lucida*. *Dicksonia antarctica* are scattered throughout and the forest floor is dominated by very large eucalypt logs. There are a few ground ferns and some straggling *Aristotelia peduncularis* and *Trochocarpa gunnii*. Transitional areas of the forest are more diverse. Near its southern end this forest is extraordinary for the prominence of *Parsonsia brownii* vines draped about the trees.

#### *Eucalyptus globulus* wet forest (WGL)

WGL occurs as a small stand just to the south of the TLC block. *E. globulus* trees about 35m tall form the canopy above an uneven scrub (to 4m) dominated by *Leptecophylla juniperina*, with a few taller *Acacia melanoxylon*. *Coprosma nitida*, *Zieria arborescens* and *Acacia verticillata* and *Leucopogon* sp. are common, with *Monotoca glauca* concentrated near the

coast. There are a number of openings with bracken and/or *Lepidosperma* sp., *Gahnia grandis* and grass.

It appears likely this forest is growing on the site where Labillardiere collected the type specimens for *Eucalyptus globulus*, but the present forest probably dates from the early C20, with trees something like 100 years old. *E. globulus* may well have been more abundant in the Recherche Peninsula forests at the time of the French visits, as there are records of an export trade in the species, which has the advantages of growing as very straight spars and is also resistant to borers and thus desirable as wharf timber. Although *E. globulus* regenerates readily in clearfell a few km further north, selective logging may not have provided the openings necessary for germination, and the present Peninsular forests may be depleted in Tasmania's floral emblem.

## Non-Forest vegetation

### Western Moorland Association

East of the TLC block sandstone underlies a scrub-moorland sequence, which has its closest affinities with Western Blanket Moorland mapped in Southwest Tasmania. Vegetation in this area consists of *Eucalyptus nitida* over heath fringing the WOL forest on the eastern edge of the TLC block. The heath becomes progressively shorter to the east then gives way to sparse buttongrass moorland on the sandstone ridge to the east. The moorland-heath association is mapped as Buttongrass Moorland with Emergent Shrubs (MBS) and Sparse Buttongrass Moorland (MBR). Full descriptions will appear in a report on the whole Southport Lagoon Conservation Area.

### Eastern Moorland Association

Most of the moorland east and north of the Recherche Peninsula falls within the eastern association, and is currently divided into three classes, Wet Heath (SHW), *Melaleuca squarrosa* Scrub (SMR) and Eastern Buttongrass Moorland (MBE). Only the heath and scrub classes occur on the TLC block, where they occupy the central part of the southern fire corridor.

Wet heath on the TLC block shows rather lower species diversity than the heaths east of Southport Lagoon – both are likely to have been burnt in the 1980's. At the northern end of the corridor sedgy heath has *Melaleuca squarrosa*, *Leptospermum scoparium* and *Banksia marginata* over *Lepidosperma filiforme*, *Leptocarpus tenax*, *Ehrharta* sp., *Gahnia grandis* and rare *Blandfordia punicea* with *Sprengelia incarnata*, *Boronia pilosa*, *Epacris lanuginosa* and *Gleichenia dicarpa*. At the south end, near the shore, these species are joined by *Acacia myrtifolia*, *Pimelia drupacea*, *Hakea epiglottis*, *Pimelia nivea*, *Pultenea juniperina*, *Bauera rubioides*, *Diplarrena moraea* and *Epacris impressa*, in an area on dolerite which is slightly better drained and *Melaleuca squarrosa* is occasional rather than dominant. *Eucalyptus obliqua* small trees occur sparsely over the heath, particularly at the margins.

Wet heath passes laterally into *Melaleuca squarrosa* scrub in the wettest areas, with the same general species present but *Melaleuca* dominant as a closed canopy, which is interrupted by sedgy openings.

### *Leptospermum lanigerum*-*Melaleuca squarrosa* Swamp Forest (NLM)

A form of this short forest occurs partly within the TLC block on the southwestern shore of Blackswan Lagoon. The canopy, at 5-8m, appears to be dominated by *Melaleuca squarrosa* and there are probably few other species. This community passes westward into broadleaf scrub through a transition zone in which the canopy includes *Pomaderris apetala* and *Zieria arborescens*.

## Acknowledgments

The project was initiated by Max Kitchell and the Tasmanian Land Conservancy, who have expressed an ongoing interest and encouragement as well as providing the opportunity to outline some of the natural values of this extraordinary area to a range of interested stakeholders. The project was managed by Anne Kitchener, Co-ordinator for TASVEG. Field mapping was carried out by Sib Corbett and Felicity Hargraves, with the assistance of Murray Stebbing, Tony Hunn, Mike Garner and Keith Corbett, who also provided geological input. The GIS component of the project was performed by Murray Stebbing, with the assistance Julian Ward. Mike Garner and Phil Bradley provided boat access to the Western side of Recherche Peninsula.

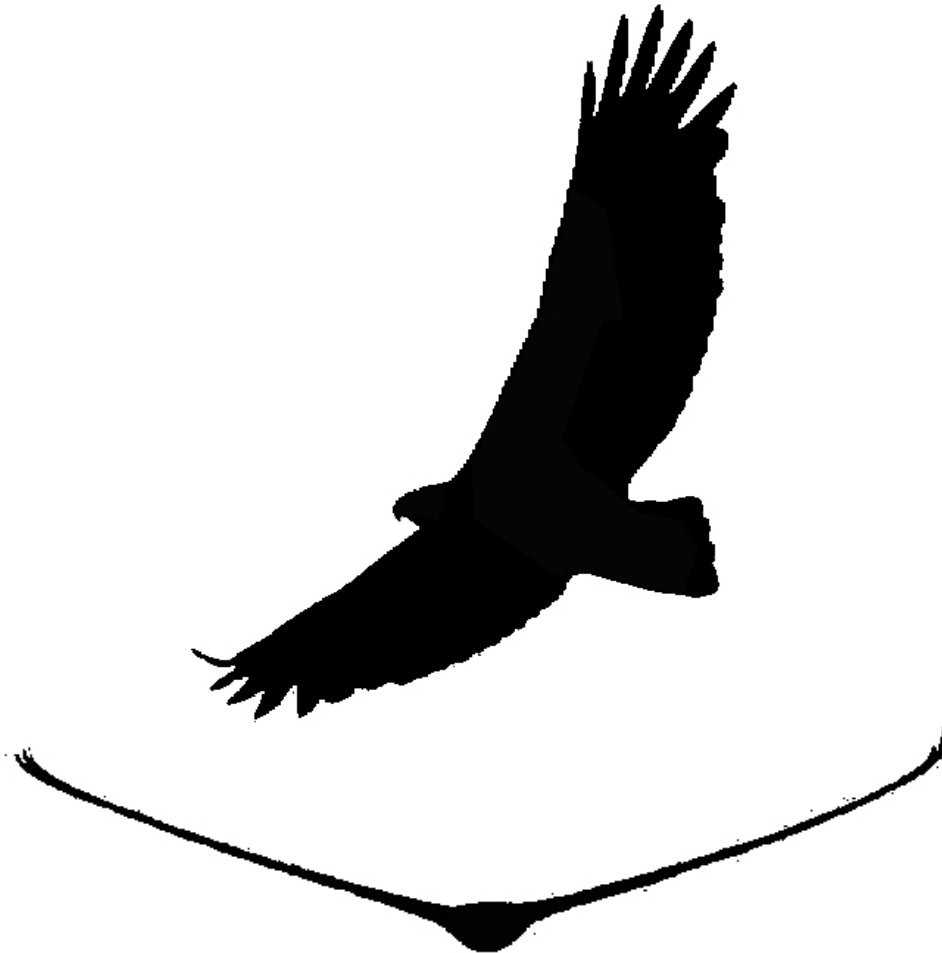
Fred Duncan kindly made available his field plots for the Recherche Peninsular as well as providing unpublished reports on forest communities in the Cockle Creek area as well as the benefit of his experience of cultural sites on the peninsular, including insights into tramway robbers. Notes and observations on vegetation compiled by Jayne Balmer and Wendy Potts for the report on the Southport Access survey were also most helpful.

An excellent summary of the history and natural values of much the area is provided in the Southport Lagoon Conservation Area Draft Management Plan, although this does not include most of the Recherche Peninsular. Detailed species lists appearing in the Southport Lagoon Access Re-route Report provide a useful supplement, although there are some discrepancies between the assignment of communities in that mapping and the current exercise.

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## Appendix 4: White-bellied Sea-eagle (*Haliaeetus leucogaster*) biology and nest management



Prepared by Bill Brown

Project Officer: Threatened Eagles - Threatened Species Section  
Biodiversity Conservation Branch

Department of Primary Industries and Water  
GPO Box 44  
Hobart 7001  
Ph: 6233 6137  
Fax: 6233 3477  
E-mail: [Bill.Brown@dpiw.tas.gov.au](mailto:Bill.Brown@dpiw.tas.gov.au)

## Conservation Status and Legal Protection

The Tasmanian population of the White-bellied sea-eagle (*Haliaeetus leucogaster*) is a sub-population of the Australian population and is under threat from human activity. The species is listed as vulnerable under the Tasmanian *Threatened Species Protection Act 1995*. The Tasmanian *Nature Conservation Act 1992* classifies the White-bellied sea-eagle as a wholly protected species, meaning it is an offence to knowingly harm any individual and substantial fines are assigned for such offences.

## Threatening Processes

There are a number of reasons for the species status. The population has a limited size, less than 1000 individuals though there is limited exchange of individuals with the mainland population. A small population also means that there is limited diversity in the gene pool, which could lead to inbreeding or affect the species ability to cope with environmental change or disease. The White-bellied sea-eagle population in Tasmania has a maximum size set by the area of suitable breeding and foraging habitat. Therefore, by ensuring as many nests as possible produce young each year, we can ensure that the population maintains a healthy size.

Each year many eagles are killed in collisions with power lines, fences and vehicles. Many eagles are also electrocuted on power lines. The most disturbing mortality is from persecution by vandals who shoot, trap and/or poison eagles. Sea-eagles are also affected by pollution of waterways and can become entangled in fishing nets that are not monitored frequently or carelessly discarded.

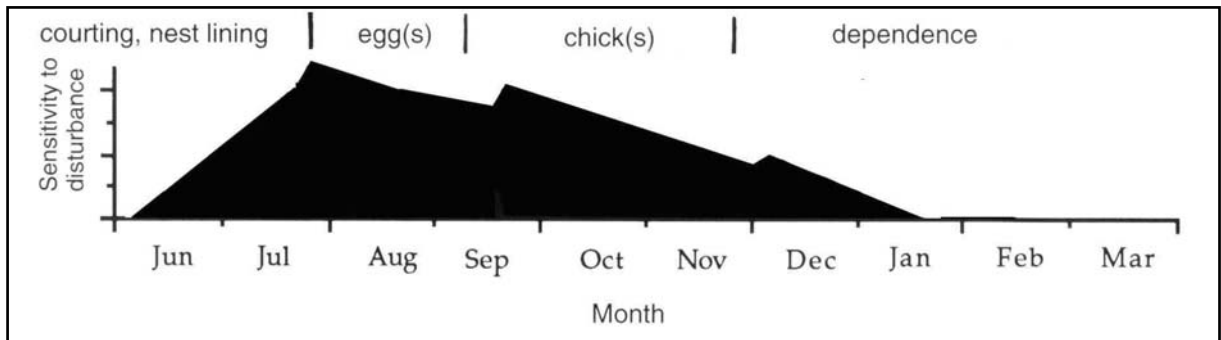
The sum of all these threats means that the population is at risk of decline.

## Ecology

White-bellied sea-eagles mature at about 4-5 years and until this age, they maintain a nomadic existence between the territories of mature birds. A healthy population is comprised of mature territorial birds, "floating", mature and immature birds and juveniles that are tolerated in the territories of their parents.

Sea-eagle densities in coastal areas in Tasmania may be high but away from the coast and major rivers their density is much lower. Resident birds are present around many of the highland lakes and some large rivers. Rarely they nest in areas where there are many small water bodies.

Tasmanian White-bellied sea-eagles have specific nesting requirements, needing large trees on slopes close to water in which to construct their nests and large territories in order to adequately provision up to two chicks. Much of the their original nesting habitat has been cleared and continues to be cleared, for agriculture, forestry and urban development. In addition, they are sensitive to disturbance whilst breeding and will abandon a nest, leaving eggs and chicks to die, if disturbance exceeds a critical level. This sensitivity fluctuates during the breeding season but is generally greatest at the onset of egg laying. The breeding season extends from 1<sup>st</sup> of July to 31<sup>st</sup> of January, inclusive. There may be variation in the commencement of breeding according to latitude, with northern birds commencing breeding earlier. The figure below demonstrates eagle sensitivity during breeding.



*Redrawn from Mooney and Holdsworth 1991, Tasforests Vol. 3 Dec. 1991.pp 15-31, Forestry Commission, Tasmania*

## Nest disturbance

The effects on eagles of different types and intensity of disturbance have been studied and can be summarised as follows.

The effects of disturbance are cumulative and increase with;

- proximity to the nest,
- visibility,
- rate,
- duration,
- adverse climatic conditions,
- height above the nest, and
- were the nest is the focus of the disturbing activity,

However, the effects decrease with;

- regularity
- predictability, and
- prior breeding success.

Disturbance of a high level such as land clearing and earthworks should not be allowed within 500 metres of an active nest during the breeding season. If the disturbance is within line-of-sight of the nest it should not occur within 1000 metres. Lesser types of disturbance, such as vehicle use should be avoided in this area but not allowed closer than 200 metres from the nest during this time. The forest surrounding the nest for a distance of 200 metres should be maintained and fires should be prevented.

## Recovery Actions

There are a number of actions, which can be taken to help secure the species in Tasmania. These actions include;

- locating nests prior to disturbance,
- monitoring mortality occurring as a result of human activities,
- establishing nest management agreements with landholders,
- monitoring the breeding success of the population,
- ensuring that all known nests are adequately protected in reserves,
- assessing of the effectiveness of reserves, and
- educating landholders in eagle ecology and conservation.

These are some of the actions identified in the Threatened Tasmanian Eagles Recovery Plan.

## **MONITORING**

It is essential that nest sites be monitored regularly by biologists (or other trained people) and data gathered to establish the efficacy of nest management. The understanding of ecological processes in managing threatened species and communities is incomplete and there is an urgent need for ongoing research and monitoring of sites to establish the correct management regimes to maintain the species and its habitat.

Information on breeding success of nests allows for improved management through a better understanding of the causes and effects of nest disturbance and in establishing the health of the. Identifying nests occupied by tolerant birds is of particular interest as it may indicate adaptation by some individuals to a more disturbed environment. The long-term benefit of this may be quite significant. If tolerant parents produce tolerant offspring then the population will be better able to cope in an increasingly disturbed environment.

## **NEST MANAGEMENT**

The establishment of nest management agreements with private landholders is an important component of the protection of nests on private property. Such agreements detail the measures needed to ensure the productivity and long-term viability of individual nests.

Nest management agreements aim to:

- Ensure the long-term security of nests through the creation of managed nest reserves.
- Maximise the productivity of individual nests by reducing the incidence and degree of disturbance.
- Provide landholders with training and information necessary to manage eagles nests on their land.
- Promote a positive attitude toward eagles amongst landholders.
- Provide landholders with feedback about nest productivity and land management practices.
- Assist landholders with other conservation and land management issues by providing contacts and access to information.

In many cases, little change in current management practices will be necessary. The timing of activities on properties may require additional planning to avoid nest disturbance, particularly during the breeding season.

A nest reserve consists of at least 10 hectares of intact forest (equivalent to a circle of 180 metre radius) and an additional 10 hectare buffer area is recommended. Reserves are designed to provide maximum shelter for the nest and reflect the degree of sensitivity of birds to disturbance from different perspectives. The forest on the uphill and windward sides of a nest are particularly important and the distance to forest edges boundaries on these side should be sufficient to maintain nest protection. It needs to be stressed that 10 hectares is the minimum reserve size and that larger reserves provide greater protection and long-term security.

You are encouraged to contact the Biodiversity Conservation Branch to discuss any issues arising from the management of your eagle nest.

## Appendix 5: National Heritage Listing

### Recherche Bay (North East Peninsula) Area

About 430ha, 11km south-south-west of Southport, being that part of the peninsula south of the alignment of the northern boundary of Land Parcel 15-1602 (extending from Pigsties Bay to Eliza Point) and above Low Water Mark.

| Criterion  | Values   |
|--|--|
| <p><b>(a)</b> The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.</p> <p>continued</p> | <p>The north east peninsula of Recherche Bay has an association with the French scientific and exploratory expedition of Rear Admiral Bruni D'Entrecasteaux, mounted to look for another French explorer, Jean Francois de Galaup de La Perouse. It stopped at Recherche Bay for more than four weeks in 1792 and more than three weeks in 1793.</p> <p>The relatively extensive, well-documented (both pictorially and in writing), encounters on the north east peninsula of Recherche Bay, compared with those in other places and involving other expeditions, between the expedition members and the Tasmanian Aborigines, provided a very early opportunity for meetings and mutual observation. The recordings, from the French perspective, of these encounters, are important observations of the lives of the Tasmanian Aboriginal people before they were significantly affected by disease and European settlement. These observations contribute significantly to knowledge of the diversity of traditional Aboriginal cultures.</p> <p>The observations relate to various parts of the place, especially including that part of the place around Blackswan Lagoon, and the beach and hinterland east of Sullivan Point.</p> <p>The French also made astronomical observations and important geomagnetic tests (the first geo-scientific test in Australia and the critical test in a series proving that geomagnetism varied with latitude) - evidence of these and other activities may remain on site - they collected numerous specimens of flora and fauna (including type specimens of Blue Gum, the Tasmanian State emblem, and heath, the Victorian State emblem) across the peninsula, with the collections still surviving, and established a vegetable garden (the 'French Garden', evidence of which is said to survive). In 1792 the French camped on the north east peninsula, repaired boats and undertook other activities there. Parts of the place to which these various activities relate include the south and west coastal zone of the northern peninsula of Recherche Bay (a strip of 100m from the high water mark), the sites of the 'French Garden' and the observatory (areas defined as circles with centres, respectively, at GDA references 492725E and 5180202N, and 492129E and 5179168N, and of 100m radius), and any further archaeological sites dating to the French expedition.</p> <p>Whilst Jacques Julien Houtou de Labillardiere, botanist, was not the first to collect Australian flora, his collection involved a substantial number of species, many specimens of which were likely to have been collected at Recherche Bay, and were included in the first general publication of illustrated Australian plants. Therefore, the place has heritage value for its association with Labillardiere's</p> |

| Criterion   | Values   |
|---|--|
|   | <p>botanical collection.</p> <p>The known activities of the French expeditioners across the place and the significance of many of these activities constitute, through their association with the place, an associative cultural landscape.</p> <p>Important features in this landscape include the coastal setting and vista, that part of the place around Blackswan Lagoon, and the beach and hinterland east of Sullivan Point, the south and west coastal zones of the northern peninsula of Recherche Bay (a strip of 100m from the high water mark), the sites of the 'French Garden' and the observatory (areas defined as circles with centres, respectively, at GDA references 492725E and 5180202N, and 492129E and 5179168N, and of 100m radius), any further archaeological sites dating to the French expedition, and trees or remnant elements of old growth forest or other vegetation contemporaneous with the French visits.</p> <p>While the place has been much disturbed since the French visit and contains substantial re-growth forest not directly related to the values of the place except in the areas specified above, the predominantly undeveloped character of the landscape contributes to the appreciation of the values.</p> <p>The documented association of the place with the D'Entrecasteaux expedition, which undertook the above activities, is sufficient to establish the place's outstanding heritage value to the nation.</p> |
| <p><b>(c)</b> The place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.</p> | <p>The extensive documentation and specimen collections created by the French expeditioners, if utilised in conjunction with the information that might derive from possible future field survey and investigation of the place, creates an important research potential to improve the understanding of Australia's cultural history.</p> <p>In terms of archaeological research value, this relates to the areas of greatest archaeological potential at the place – the south and west coastal zone of the northern peninsula of Recherche Bay (a strip of 100m from the high water mark), the sites of the 'French Garden' and the observatory (areas defined as circles with centres, respectively, at GDA references 492725E and 5180202N, and 492129E and 5179168N, and of 100m radius), and that part of the place around Blackswan Lagoon, and the beach and hinterland east of Sullivan Point.</p>   |
| <p><b>(f)</b> The place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.</p>              | <p>The observatory site associated with Rossel's 1792 geomagnetic measurement at Recherche Bay is of importance because it is the site where the first deliberate scientific experiment on Australian soil was undertaken, and because the measurement conducted at the site was of international scientific significance as the most critical of a series of measurements proving that geomagnetism varied with latitude. The part of the place associated with these achievements is the observatory site and any associated archaeological remains relating to the French activities at the site.</p>   |

| Criterion  | Values   |
|--|--|
| <p><b>(g)</b> The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.</p>                 | <p>There is a strong or special association by the Tasmanian Aboriginal community with the Recherche Bay Area as the place associated with the best documentary evidence of Tasmanian Aboriginal culture before European settlement.</p> <p>This relates to various parts of the place, principally including that part of the place around Blackswan Lagoon, and the beach and hinterland east of Sullivan Point.</p> |
| <p><b>(h)</b> The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.</p> | <p>People who had significant associations with the place are certain members of the 1792 and 1793 French expedition – Jacques Julien Houtou de Labillardiere (botanist – his work here resulted in the first publication of general flora of Australia, 1804-06) and Elisabeth Paul Edouard de Rossel ('geoscientist').</p>   |

## **Appendix 6: Historic heritage and Tasmanian historic heritage protection**

Prepared by Angela McGowan, Heritage Tasmania. November 2006.

### **Background and values: Historic heritage**

The history of the NE Peninsula of Recherche Bay is covered elsewhere in this plan (Hogg this volume). This section deals with the historic heritage of the Peninsula. It describes the known remains of historic activities, remains which have not been identified and discusses the potential of the area for further remains or physical evidence of historic activities. The sites include earthworks, surface artefacts, occupation and industrial deposits, wooden structural remnants, stone and brick masonry remnants, and sites of historic events with no apparent physical remains. Ongoing research may reveal additional sites such as vegetation disturbance and botanical remains.

The historic heritage of the NE Peninsula includes:

#### **SITES OF 1792 AND 1793 FRENCH ACTIVITIES**

These include the 1792 observatory, forges and associated charcoal kilns near the observatory, a repair yard near the observatory, a linen-washing area, Lahaie's 1792 garden as mapped by Beautemps-Beaupre, a possible second garden reported by Lt La Motte du Portail and perhaps revisited by Jane Franklin in 1838, other vegetable plantings throughout the woods, a number of campsites accommodating about 220 expeditioners, a number of exploration tracks traversing the peninsula, locations where various botanical specimens were collected, 1793 meeting places with Aborigines between the Observatory and Blackswan Lagoon. The locations of these activities can be approximately inferred from historic documents. In some cases these locations are a general area, in some cases a more precise location is known. At the time of writing, there are no physical or botanical remains which have been conclusively identified as remains from the French visits. The type of features which could exist, if they have survived, include: buried footings for walls or work platforms, occupation/activity deposits (e.g. from the forges and charcoal kilns), botanical remains, ancient trees and forest structure congruent with the French descriptions, disturbed vegetation or disturbed ground, French artefacts incorporated into Aboriginal sites.

#### **SITES OF CONVICT COAL-MINING ACTIVITIES 1840 - C.1845**

These include a main shaft 120 feet deep, two other shafts, sawing activities, convicts' huts, blacksmithing, horse stables and forage store. Identified remains include a vertical circular shaft, about four metres diameter and 4.5 metres deep, (similar in form to a convict shaft at the Coal Mines on the Tasman Peninsula), which is located south of the creek flowing into Pigsties Bay. Some nearby unidentified stone features to the north of the shaft probable dating to the mid-19th century, may be remnants of huts and other structures associated with the convict mining activities.

#### **1840s WHALING SITES**

A whaling station is said to have been located at Quiet Cove, Sullivans Point. A pile of stone rubble in this area recorded in the Tasmanian Historic Places Index may be a remnant of this station.

#### **SHIP BUILDING C.1863**

A Crown Survey map made by Surveyor George Innes in 1863 shows a ship being built at Bennetts Point and annotated 'craft building'. The ship may be the *Ripple*, which was built at Recherche Bay in 1863 and owned by William Domeney, who later lived at Sullivans Point. The map also shows three huts near the craft building location. The more substantial of two dry-stone walls at Bennetts Point has been identified as the remains of the ship building slip.

## LATE 19TH/EARLY 20TH LOGGING AND SAWMILLING SITES

These include:

*Kemsley's Crescent sawmill* which was steam powered and operated 1899-1910, together with associated features including a steam-powered log hauler, a blacksmiths forge, a timber rail tramline running north from the Crescent mill close to the shoreline, two jetties, stables, two houses, and seven huts ('Hut City').. Identified remains from the Crescent sawmill operations include: the sawmill site (earthworks in a 30 by 22 metres clearing, remnant mill shed marked by a line of posts, a sawdust heap, wharf timbers and a brick chimney base - probably one of the houses), small pond (dry) associated with the steam powered log hauler (earthworks and iron waterpipe), blacksmith's forge (stone and brick feature with coal ash, iron fragments and horseshoes), two stretches of timber tramway, snig tracks (unconsolidated earth tracks or shallow linear depressions, approximately 3 metres wide). Other features associated with the Crescent sawmill and other early 20th century sawmilling are also located to the north of the Management Plan area.

*Gourlays Mill just north of Blackswan Lagoon.* At the time of writing no remains of this mill have been located.

*1904/05 road reserves.* One road and tramway reserve, and four road reserves, all one chain wide, traverse the northern part of the peninsula.

A small proportion of the timber for these mills was obtained from the NE Peninsula. In addition to the built features and other artefacts, the extent and technology of the early 20th century logging operations can be seen in the cut eucalypt stumps and some remnant felled logs, which extend throughout the bush of the NE Peninsula. All the stumps are from large buttressed old growth trees, and most have shoe board cuts.

## SITES OF 19TH CENTURY SETTLEMENT AT SULLIVANS POINT

These included: a lock-up at Quiet Cove, occupied by Thomas Driscoll, constable and mailman, and his family from at least 1869 to 1889; and a boarding house built by William Domeney at Sullivans Point. The PWD plan of the Recherche Lock up shows a small L-shaped weatherboard building with one chimney, and a small outhouse (WC) in a fenced backyard. Driscoll had cut an access track across the Point from the beach opposite The Images. He had a large garden and cultivated the ground using horses.

Chimney rubble and footings at Quiet Cove may be the remains of the lock-up or the boarding house. Other types of features which may survive include remains of the second building, stables, remnant cleared areas with 100 years regrowth and tracks.

## 20TH CENTURY COAL PROSPECTING

In the 1920s some exploratory boring was carried out at Coal Pit Bight. No sites have been identified as associated with this activity, although it seems likely that huts previously used by the sawmill workers could have been re-used at this time. Features which could survive include drill holes and huts.

## 20TH CENTURY SETTLEMENT

The Ryan family occupied a 2-storey house, ran cattle and cultivated a garden on 18 acres at Bennetts Point until the 1920s. Other inhabitants of the Recherche Bay area also ran cattle across parts of the peninsula. At the time of writing remains of this occupation had not been recorded.

## UNIDENTIFIED FEATURES

*Two dry stone walls located at Bennetts Point.* These walls are 35 and 40 metres long and about 50 metres apart. These have been interpreted as remains of the French observatory, as the remains of a shipyard which was in existence there by 1863, as a ballast dump, or as a livestock pen. The shipyard interpretation appears the most likely, at least for one of the dry-

stone walls. The other wall may also relate to the shipyard or possibly be associated with the nearby brick settlement remains.

*Four red-brick features at Bennetts Point.* These are located between the two dry-stone walls and appear to be the remains of a building dating to the early 20th century. Arum lilies and early 20th century bottle glass are associated with this building.

*Two stone linear features at Bennetts Point.* Two lines, about 10 metres long, of small round boulders aligned perpendicular to the shore line. Unknown age and function.

*A shallow pit,* 6 by 1.7 metres by 0.5 metres deep, located north of the Crescent sawmill site. Unknown age and function, but possibly associated with the sawmill or 20th century coal prospecting.

*Six remnant stone masonry features,* located north of the Crescent sawmill site. These six features comprise either one or two small plinths of mortared stonework about half a metre high. All the features are probably chimney/fireplace remnants, some clearly so. These are of unknown age and historical association, although some features have bricks and artefacts which may allow some closer dating. Probable interpretations include: one workman's cottage associated with the 20th century sawmilling, five huts associated with convict coal-mining or a mid-19th century settlement.

*A rectangular stone-wall enclosure* with a number of internal divisions and other stone features. This feature, located about 70 metres inland at Coal Pit Bight is considered, at the time of writing, to be the 1792 French garden. The function and age of this enigmatic structure are not readily apparent as there are no associated diagnostic artefacts and the single-course lines of stones appear too flimsy to be house footings. It is similar in size and shape to the dimensions of the 1792 garden described by Lahaie and Labillardiere, and its shape suggests two distinct segments (which could perhaps explain La Motte du Portail's reference to two gardens). However it is located some distance from the location illustrated by Beautemps-Beaupre. At the time of writing investigations undertaken as part of the French-Tasmanian Archaeological Collaboration Project have not been completed. This structure may be more confidently identified when the results of this study are available.

*Deep well at Sullivans Point surrounded by stone masonry.* Unknown age and association, but possibly associated with the convict coal mine or the Crescent sawmill.

*Stone rubble and possible footings at Quiet Cove.* Unknown age and association, but may be a fireplace or chimney possibly associated with a 1840s whaling station or the 1870s/80s police lock-up.

## State Heritage protection

This section outlines the State mechanisms for recognising and protecting the historic cultural heritage significance of historic remains and briefly outlines and describes the historic heritage of the North East Peninsula of Recherche Bay that is entered in the Tasmanian Heritage Register.

The *Historic Cultural Heritage Act 1995* provides for the recognition and protection of historic cultural heritage through the listing of 'places' in the Tasmanian Heritage Register. The definition of a 'place' includes:

- (a) a site, precinct or parcel of land; and
- (b) any building or part of a building; and
- (c) any shipwreck; and
- (d) any item in or on, or historically or physically associated or connected with, a site, precinct or parcel of land where the primary importance of the item derives in part from its association with that site, precinct or parcel of land; and
- (e) any equipment, furniture, fittings and articles in or on, or historically or physically associated or connected with, any building or item;

'Historic cultural heritage significance' is defined in the Act, in relation to a place, as "significance to any group or community in relation to the archaeological, architectural, cultural, historical, scientific, social or technical value of the place;".

The listing of places is determined by the Tasmanian Heritage Council, who may enter a place in the Register if, in its opinion, the place meets at least one of the following criteria:

- (a) it is important in demonstrating the evolution or pattern of Tasmania's history;
- (b) it demonstrates rare, uncommon or endangered aspects of Tasmania's heritage;
- (c) it has potential to yield information that will contribute to an understanding of Tasmania's history;
- (d) it is important as a representative in demonstrating the characteristics of a broader class of cultural places;
- (e) it is important in demonstrating a high degree of creative or technical achievement;
- (f) it has strong or special meaning for any group or community because of social, cultural or spiritual associations;
- (g) it has a special association with the life or work of a person, a group or an organisation that was important in Tasmania's history.

Once listed, a place is protected from any 'works' which may affect the place's historic cultural heritage significance. Anyone wishing to undertake 'works', as defined in the Act, must obtain the authority of the Tasmanian Heritage Council.

Places of historic cultural heritage significance, whether entered in the Register or not, may be protected by the Minister, the local authority or the National Trust by means of a voluntary Heritage Agreement between the Minister, local authority or National Trust and the owner. Heritage Agreements may cover any of the following topics:

- (a) the conservation of the place;
- (b) the financial, technical or other professional advice or assistance required for the conservation of the place;
- (c) the review of the valuation of the place;
- (d) the restriction on the use of the place;
- (e) the requirement to carry out specified works or works of a specified kind;
- (f) the standards by which the works are to be carried out;
- (g) the restriction on the kind of works that may be carried out;
- (h) the exemption of specified works or works of a specified kind from [Part 6](#);
- (i) the public appreciation of the historic cultural heritage significance of the place;
- (j) the availability for public inspection;
- (k) the charges made for admission.

Places which may have historic cultural heritage significance may be temporarily protected for up to five years by means of the Minister declaring a Heritage Area. The Heritage Area is entered in the Heritage Register and in the same way as applies to listed 'places', anyone wishing to undertake 'works' must obtain the authority of the Heritage Council.

## Tasmanian Heritage Register

Two 'places' and one 'heritage area' are entered in the Tasmanian Heritage Register:

### **THR 10172 OBSERVATORY, BENNETTS POINT.**

The registered place is a 100 metre radius circle centred on GDA reference 492129E/5179168N.

Bennetts Point is the site of an observatory, set up by one of the d'Entrecasteaux expedition scientists, Elisabeth-Paul-Edouard Rossel, on 24 April 1792 and used until the expedition's departure on 16 May. Rossel used observations made at this site to make a major scientific breakthrough and founded the science of geomagnetism. His observations helped prove that the Earth's magnetic field varied with latitude. His discovery revolutionised compass use and made global navigation much safer, especially in the southern hemisphere.

Historic documents (Denis de Trobriand, quoted in MacFie 2006, p2; d'Auribeau quoted in Galipaud and Richard 2005; Beautemps-Beaupre's *Atlas du Voyage de Bruny D'Entrecasteaux*, published 1807, cited in MacFie 2006; D'Auribeau's journal cited in Plomley and Piard Bernier 1993 p63; Kermadec's journal cited in Plomley and Piard Bernier 1993 p64; du Portail quoted in MacFie 2006, p4) indicate that tents, a survey mast and a flag pole were erected on 24 April 1792 at Bennetts Point, and that repair workshops and two or more forges were also established at or near Bennetts Point. The observatory site was also the rendezvous and departure point for the various exploratory and scientific parties.

The d'Entrecasteaux expedition returned to Recherche Bay in January 1793, and used Bennetts Point as an access point to the NE Peninsula. On the 8 and 10 February, French scientists and officers met with Aborigines at 'Observatory Point', who were camping nearby. No physical remains or evidence of these activities have been identified at the site at the time of writing.

In 1992 the Geophysics Institute of Australia and the CSIRO commemorated Rossel's observations with a plaque at the site. Remains of structures identified as relating to later historic activities have been recorded at or adjacent to the Bennetts Point observatory site. These include an unidentified stone embankment at Bennetts Point and other unidentified features nearby. There are also other structures historically documented nearby, but which have not been recorded on the ground.

### **THR 10173 LA HAIE'S BOTANIC GARDEN, ADJACENT TO COAL PIT BIGHT**

The registered place is a 100 metre circle centred on GDA reference 492725/5180202N.

This place is the site of a rectangular stone feature, which is considered at the time of writing as the garden established by the d'Entrecasteaux expedition gardener, Felix Lahaie in April 1792. The expedition included a gardener for the dual purposes of collecting useful native plants and establishing gardens of useful European plants. The French objective in establishing gardens during their expeditions was partly to provide a gift to the indigenous inhabitants of places they visited and partly as a resource for future visiting mariners.

Historic documents (Lahaie quoted in Galipaud and Richard 2005; La Billiardere quoted in Galipaud and Richard 2005; Beautemps-Beaupre's *Atlas du Voyage de Bruny D'Entrecasteaux*, published 1807, cited in MacFie 2006) variously describe or illustrate Lahaie's garden as '28 feet square'. '7 by 9 metres', 'divided into four beds', a rectangular plot possibly bounded by some kind of fence, and indicate its location.

The stone feature has similar dimensions to those indicated in the historic documents, is divided internally into four or five sections and is situated close to the location of the 'jardin' as indicated on Beautemps-Beaupre's map, although its distance from the sea is not in accord with the gardener's descriptions.

## THR 10683 NORTH EAST PENINSULA RECHERCHE BAY HERITAGE AREA

The registered Heritage Area is a 100 metres wide strip of land extending for approximately four kilometres along the western and southern coastlines of the peninsula, from the north-west boundary of the Public Reserve (just north of Coal Pit Bight) to the north-east boundary of the Public Reserve (north of Sullivans Point). The Heritage Area extends inland 100 metres from the high water mark and includes the two registered places (Observatory, Bennetts Point and La Haie's Botanic Garden, Coal Pit Bight). The Heritage Area has been declared for a period of five years from 1 February 2005.

At the time of writing investigations of sites and features within the Heritage Area and on the adjacent Tasmanian Land Conservancy land undertaken by the French-Tasmanian collaborative archaeological project are still in progress. It is expected that the Tasmanian Heritage Council will use the results of the study to update the existing place entries and consider additional entries in the Register if necessary.

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