



# **Fauna Rehabilitation Plans**

**Balls Head Reserve**

**Port Jackson Catchment**

**2001**

## **C) Balls Head Reserve**

### **INTRODUCTION**

Balls Head Reserve is situated on a prominent headland at the tip of the Waverton peninsula. The headland is bordered by the ocean, Woodleys Marina and the Coal Loader (no longer in use) to the north. The Maritime Museum is situated in bushland on the eastern shoreline of Berrys Bay. The dominant vegetation association is Open Forest (10ag) *Angophora costata* (Smooth-barked Apple) and *Corymbia gummifera* (Blackbutt) community with Closed-Forest (10ag) on the western facing slope. The entire area is approximately 10.2 hectares. The composition of vegetation is variable in the centre of the Reserve due to the parkland/bushland situation that existed in the past. Exotic and non-indigenous trees and shrubs have been planted along the edges of Balls Head Drive and throughout Balls Head Reserve. These plantings are now surrounded by the mature and regenerating native vegetation.

Weeds are scattered throughout but are particularly found on the edges of the bushland, along the bush tracks and on the western slope where *Pittosporum undulatum* has flourished. Bush Regeneration activities are carried out by the Council's Bushland Management Team, the Friends of Balls Head Bushcare Group and Contractors. The bushland forms an important link to Waverton Park and the privately owned bushland of HMAS Waterhen.

This Reserve is one of the most highly utilised bushland areas in North Sydney, with stunning views of the harbour and the city. Tracks are numerous throughout. This factor alone is contributing to high weed growth. Leisure and recreation activities are diverse and wide ranging.

### **1.0 FLORA**

Refer to **Map 1 - Vegetation Communities** for location details.

For further information, see:  
Waverton Peninsula Master Plan

#### **1.1 Nearby Parks and Verges containing Remnant Vegetation**

##### Waverton Park

Waverton Park contains a few remnant canopy species including areas of Open Forest/Woodland dominated by *Angophora costata* (Smooth-barked Apple) and Closed Forest dominated by *Ceratopetalum apetalum* (Coachwood) and *Glochidion ferdinandi* (Cheese Tree). Weed trees are numerous in both areas and include species such as Camphor laurel (*Cinnamomum camphora*), Large Leaf Privet (*Ligustrum lucidum*), Small Leaf Privet (*Ligustrum sinense*) and Sweet Pittosporum (*Pittosporum undulatum*). The under-storey is mostly degraded in both communities. The most common weed species here are Asparagus Fern (*Protoasparagus aethiopicus*), Wandering Jew (*Tradescantia albiflora*) and seedlings of weed canopy species.

For further information, see:  
**Section 3** – Indigenous Flora of North Sydney - Balls Head Reserve.

## 1.2 Marine Plant Life

The perimeter of Balls Head Reserve has a marine influence. There are stretches of sandy beach in amongst the scattered areas of exposed sandstone and cliffs of the foreshore on the eastern side. The diversity and abundance of plant species found along the beach edge are low. On the western side the foreshore has a sharp distinction - where bushland meets the sea.

The waters surrounding Balls Head Reserve are part of a large Intertidal Protection Area (IPA) for Sydney Harbour.

For further information, contact:

The Department of Fisheries, Wollstonecraft.

## 2.0 FAUNA

### 2.1 Terrestrial Vertebrates

Both Brushtail and Ringtail Possums inhabit Balls Head Reserve. Mortality unnaturally occurs from predation by the introduced Red Fox and evening traffic through the area.

It has been also witnessed that people are trapping and releasing Possums into Balls Head Reserve. Trapped and released possums have been witnessed to die a few hours after relocation. To trap a Possum it is necessary to first obtain a licence from the National Parks and Wildlife Service and it cannot be released further than 50m from the original dwelling where it was captured. The reasons for this and the advisable alternatives are outlined in the *Living with Possums* booklet prepared by North Sydney Council and can be obtained by contacting the Bushland Management Team on 9936 8224.

An imbalance in bird ecology exists at Balls Head Reserve. Species such as the Noisy Miner and the Pied Currawong are very common throughout the bushland and gardens adjacent to the barbecue areas. These birds are very territorial and attack any other birds that pass through this territory. The reason for the large populations of these two species in particular is due to three main factors:

1. The hybrid *Grevillea sp.* and other exotic plant species around the barbecue areas that unnaturally flower most months of the year providing a continuous supply of nectar for the Noisy Miners;
2. Feeding the Currawongs and the Noisy Miners. The more these birds are fed, the more solid their populations and territories become; and
3. The high density of *Pittosporum undulatum*, *Elaeocarpus reticulatus* (Blueberry Ash) and *Glochidion ferdinandi* (Cheese Tree) which the Pied Currawongs feed on and in the process also distribute the seeds of these trees throughout the bushland.

Spotted Pardalotes have in recent years been heard in the canopy to the north. These species are important because they nest on the ground by burrowing into steep embankments throughout the area. This makes them extremely vulnerable to ground dwelling predators such as the introduced cat and fox. Other smaller birds find refuge on the lower western side, in particular in the thick under-storey of the regenerating Bushcare site, eg. Silvereye, White-browed Scrubwren. Welcome Swallows are often seen swooping above the canopy on the southern edge catching insects.

Channel-billed Cuckoos rely on this area for breeding sites and to nourish themselves before they take the long journey back to Papua New Guinea each year.

There is a lack of nesting hollows in the North Sydney area due to the lack of old native trees that tend to bear such hollows. Native birds, arboreal mammals and bats suffer from the lack of safe nesting and roosting sites. Brushtail and Ringtail Possums have both been seen to be sleeping in precarious locations. These creatures play an important role in the ecology of the vegetation communities of Balls Head Reserve.

Four Possum nesting boxes have been installed in Balls Head, two in 1996 and 1998.

## **2.2 Other Native Fauna Groups**

- Terrestrial invertebrates
- Marine vertebrates
- Marine invertebrates

A formal survey of the diversity and abundance of the above groups of organisms has never been undertaken by North Sydney Council. More detailed studies are required.

## **2.3 Introduced and Feral Animals**

Tracks, scats and other traces of the Red Fox have been found at Balls Head Reserve. Scattered fur and the remains of possums have been found throughout the bushland. Fox cubs with mange have been seen at Balls Head in 2001.

A feral cat was sighted at Balls Head Reserve in 1997. The cat had no collar and was much larger and more muscular than a domestic cat.

Dog scats were found throughout the reserve and the Black Rat and House Mouse were also recorded in the Fauna Survey.

Five introduced bird species were recorded in the reserve in the Fauna Survey: Rock Dove, Spotted Turtle Dove, House Sparrow, Common Starling, and Common Mynah.

## **2.4 Vulnerable and Threatened Species**

The Large Bent-wing Bat *Miniopterus schreibersii*, listed as Vulnerable under the *Threatened Species Conservation Act, 1995*, was recorded in the Fauna Survey at Balls Head Reserve.

The Grey-headed Flying-fox *Pteropus poliocephalus*, listed as Vulnerable under the *Threatened Species Conservation Act, 1995*, was observed flying over and feeding in the reserve.

### **3.0 FAUNA REHABILITATION MANAGEMENT PLAN**

#### **3.1 Aim Statement**

To protect and recreate habitat for the:

Blue-tongue Lizard	Rainbow Lorikeet
Brush-tail Possum	Ringtail Possum
Common Eastern Froglet	Skinks
Crimson Rosella	Southern Figbird
Grey-headed Flying-fox	Southern Leaf-tail Gecko
Large Bent-wing Bat	Superb Blue Fairy-wren
Lesuer's Velvet Gecko	Tawny Frogmouth
Owls	White-browed Scrub-wren

and to:

Integrate conservation measures with recreational activities of the reserve.

#### **3.2 Summary of Fauna Survey Findings**

Ringtail Possums were found to be particularly abundant. The Large Bent-wing Bat and the Grey-headed Flying-fox were recorded. Twenty-three bird species were recorded, of which five species are exotic. Dog scats were found throughout the reserve and the Black Rat and House Mouse were also recorded. Three species of skinks, two species of geckos and one species of frog were recorded.

For further information, see:

**Section 3** – Fauna Port Jackson Bushland Reserves North Sydney 2001 Report.

#### **3.3 Site Issues**

- High recreational usage and sporadic vandalism.
- Informal use a rock shelf in the harbour for fishing, frequently littered with rubbish and fishing line.
- Lack of middle-storey vegetation.
- Lack of fire.
- Lack of nesting hollows and nesting habitat for possums.

#### **3.4 Objectives**

- Integrate conservation measures with recreational activities of the reserve.
- Protect the diversity of vegetation communities and habitats.
- Re-establish middle-storey vegetation.
- Reduce feral and domestic animal predation on feral animals.
- Practise bush regeneration techniques that preserve existing habitat.
- Create Wildlife Corridors.
- Undertake ecological burning to promote biodiversity.
- Create a fresh water source.
- Reduce 'edge effects' by formalising tracks/paths.
- Provide continued community education on bushland/wildlife issues.
- Provide additional habitat for Possums and Parrots.
- Reduce footpath/street lighting entering the reserve.
- Discourage vandalism.

### 3.5 Nesting Seasons of Scrub Birds

Habitat requirements for birds that nest in the scrub layer will have implications for ecological burns and primary bush regeneration activities. Table 1 shows scrub birds found in Balls Head and their nesting season. Primary bush regeneration and clearing middle and under-storey vegetation should take place outside of nesting season. For maximum native regeneration potential, ecological burns should be carried out during or after spring when plants have produced seeds. However, spring and summer is often nesting season for birds also. Caution needs to be exercised when burning piles or undertaking broad area burns, that nesting sites are not destroyed.

**Table 1. Bird species, nesting height above ground and nesting season**

Data obtained from Fauna Survey (2001) and Fauna of North Sydney Database.

Common Name	Height (m)	J	F	M	A	M	J	J	A	S	O	N	D
Superb Fairy-wren	Up to 1m												
White-browed Scrub-Wren	On or near ground												
Rose Robin	1 – 2m												
Willy Wagtail	1 – 20m												
Brush Wattlebird	1.5m – 3.5m (-15)												
Red Wattlebird	3 – 10m (-20)												

Key  Indicates breeding season

### 4.0 ACTION PLAN

#### Priority

As a general principle, first priority (short and medium term) of bush regeneration works should be given to regeneration and protection of 'good bush' and revegetation in bare areas. Lowest priority (long term) should be given to regeneration of degraded areas.

<b>ST</b>	(Short Term)	Action completed within 2 years
<b>MT</b>	(Medium Term)	Action completed within 2-4 years
<b>LT</b>	(Long Term)	Action commenced after 4 years
<b>O</b>	(Ongoing)	Action is carried out on a regular basis throughout the duration of the Action Plan
<b>C</b>	(Commenced)	Action has commenced
<b>CP</b>	(Completed)	Action has been carried out

Refer to **Map 2 – Rehabilitation Zones** for location details

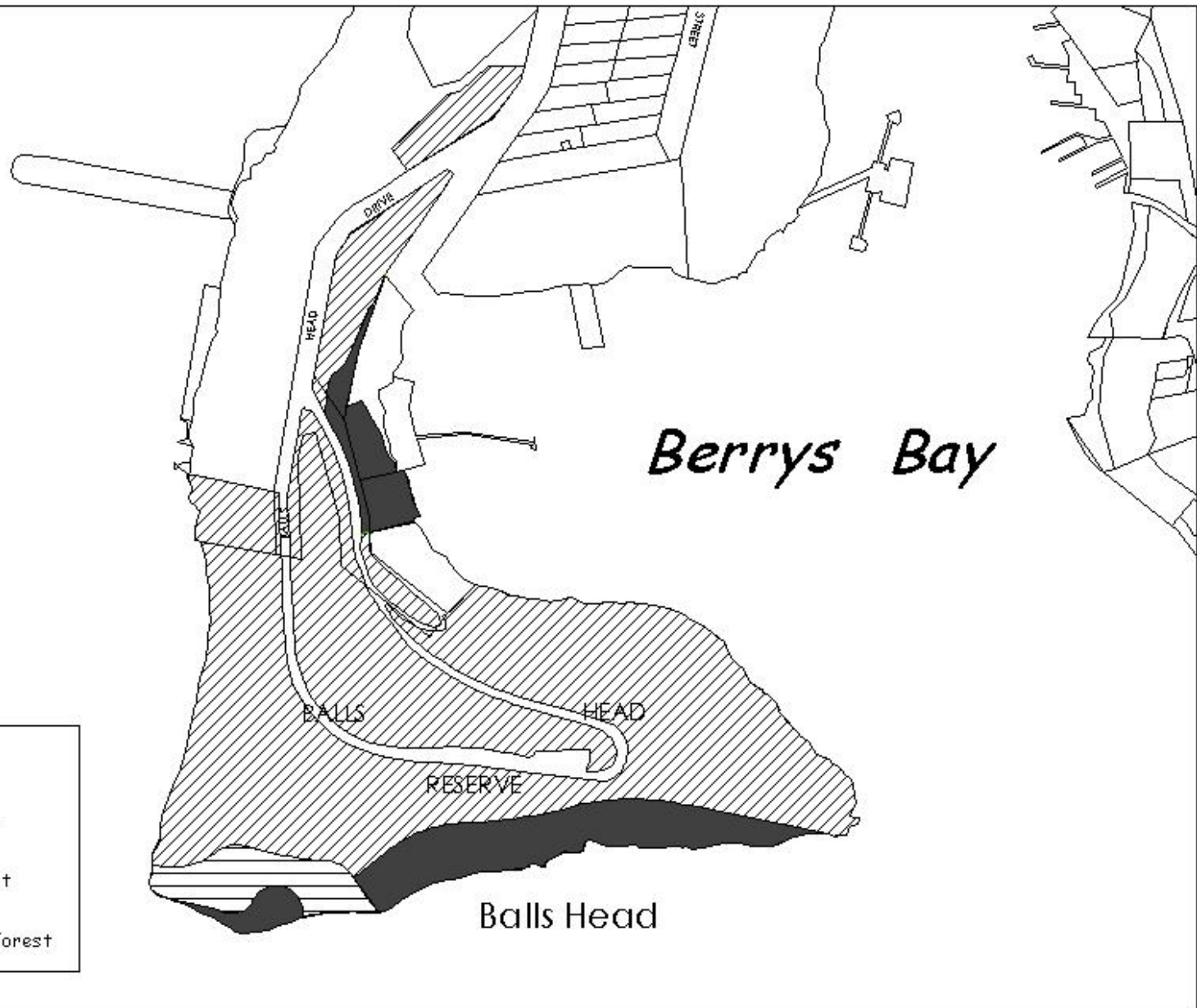
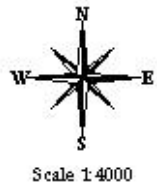
**Table 2. Management Strategies**

Zone	Issue	Objective	Action	Comments	Priority
5	Rubbish at 'Fishing Rock'.	Protect marine ecosystem from being rubbished and discourage the harvesting of protected species.	Provide a formal bin for fishing rock.		MT
			Provide educational and legislative signage at fishing rock.	Provide information on the damage caused to marine fauna with the discarding of fishing line, fishing hooks and rubbish etc.	MT
1, 5	Lack of fresh water source.	Provide fresh water for frogs, reptiles and birds.	Create a wetland habitat for frogs near the coal loader. Establish at least two bird-baths on the headland.	Refer to <b>Section 3</b> for details.	MT
All	Isolated remnant bushland.	Create Wildlife Corridors and vegetation linkages that adjoin bushland.	Plant native vegetation corridors along street verges, parks, vacant land.	Green Corridor is currently being planted under the NHT 'Berrys Bay to Gore Creek Green Corridor Project'.	C
			Backyard Bushcare Program.	Backyard Bushcare Program currently under way through the NHT grant.	C O
All	Lack of middle-storey vegetation and habitat.	Maximise retention of middle-storey throughout weeding process.	Leave poisoned trees in situ to create connective middle-storey and canopy coverage.		ST
		Re-establish native middle-storey vegetation.	Pile burns and small broad area burns throughout reserve.	Small broad area burn in centre of reserve conducted in October 2001.	CP O
		Reduce impact of primary clearance on habitat.	Patchwork primary clearing to be done in areas no larger than 10m x 10m. Leave areas undisturbed until vegetation in cleared areas has regenerated to 1.5m.		O


Zone	Issue	Objective	Action	Comments	Priority
		Protect the core areas of bushland.	Plant buffer shrubs along the remaining edges of the road and reserve.	Buffer planting has been done along new car park and new pathway at the start of the reserve in 2001.	C MT
All	Respectful and informed visitation to reserves.	Increase public appreciation and understanding of native wildlife in the Reserve.	Educational signage about the local flora and fauna of the area along the walking tracks.		ST
All	Many informal walking tracks reducing availability of 'core' areas of bushland and increasing disturbance.	Reduce the 'edge effect' caused by an informal track network.	Define formal walking tracks and block other informal walking tracks with brush matting.	Some track upgrading was undertaken in 2001.	CP ST
All	Disturbance to wildlife from dogs off walking leads.	Reduce incidence of predation/impact by domestic dogs.	Informative legislative signage at the start of walking tracks and patrol by Rangers.		ST
All	Vandalism.	Reduce vandalism in the reserve.	Installation of boom-gate that closes the reserve off to vehicles in the evening.		ST
			Increase Ranger patrol.		O
			Police involvement for criminal offences.	Police involvement has been enlisted to reduce graffiti vandals in 2001.	C
All	Predation from feral foxes and cats.	Reduce predation by feral animals.	Fox Control Program involving den location and den fumigation and baiting.	Some areas in Balls Head are able to have baiting stations due to appropriate distance from residential areas.	O
			Trapping of any feral cats.		O



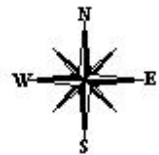
<b>Zone</b>	<b>Issue</b>	<b>Objective</b>	<b>Action</b>	<b>Comments</b>	<b>Priority</b>
All	Possible predation from domestic animals.	Reduce predation by domestic animals.	Public education.		O
			Declaration of Wildlife Protection Area. Legislation to require cats to be kept out of the reserve.		LT
All	Loss of nesting hollows and habitat.	Increase artificial nesting sites for possums, parrots and owls.	Install nesting boxes for Possums (4), Parrots (3) and Owls (2). Place some possum nesting boxes at mid-storey height for Ringtail Possums.	A total of four possum boxes have previously been installed in 1998 (2) and 2000 (2).	C ST
All	Street lighting shining directly into bushland.	Reduce light being directed into bushland.	Installation of light shields.	Lighting into bush poses a problem to nocturnal fauna, with the exception of Tawny Frogmouths.	ST
All	Loss of diverse vegetation communities.	Create and preserve diversity of ecological communities.	Plant species and encourage regeneration of species specific to environmental conditions and aspect of the area.	Eg. <i>Kunzea</i> and <i>Causurina</i> communities.	O
All	Dumping of trapped possums in reserve.	Reduce incidence of trapped possums being dumped in the reserve.	On-site education, education via Bushcare program volunteers.	Possums have been seen dumped at Balls Head Reserve, first-hand witness by members of the Bush Regeneration Team.	ST/O



**LEGEND**

-  Open Forest
-  Closed Forest
-  Low Closed Forest

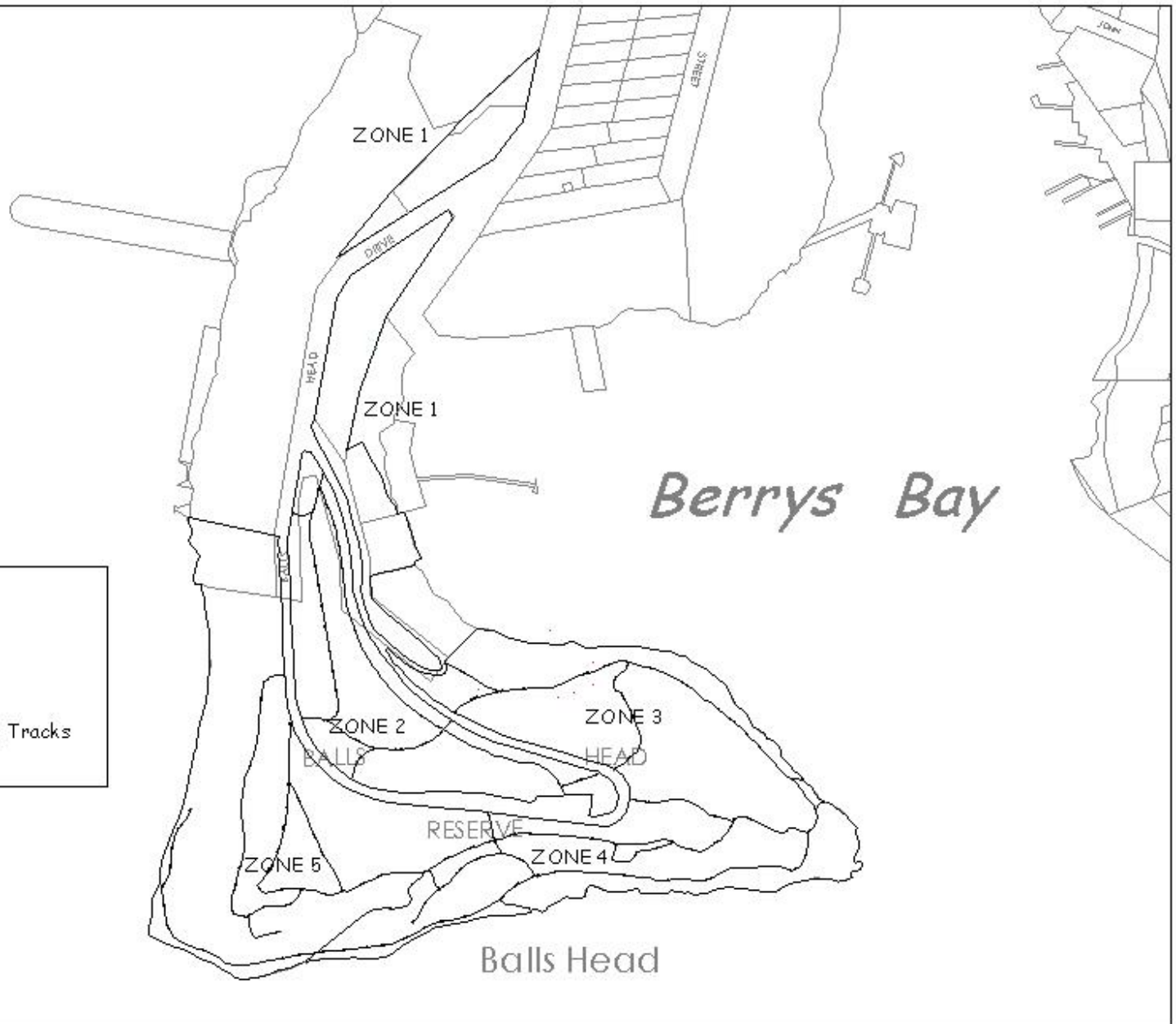
**MAP 1 - VEGETATION ZONES**



Scale 1:4000

**LEGEND**

-  Zones
-  Main Walking Tracks



**MAP 2 - REHABILITATION ZONES**