# EXPLORE MELBOURNE'S WETLANDS

By Sid Cowling

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Night Heron at the Altona / Williamstown shore.

NOEL RYAN / DCE

# EXPLORE MELBOURNE'S WETLANDS

By Sid Cowling

A visitor's guide to 25 wetlands in and around Melbourne


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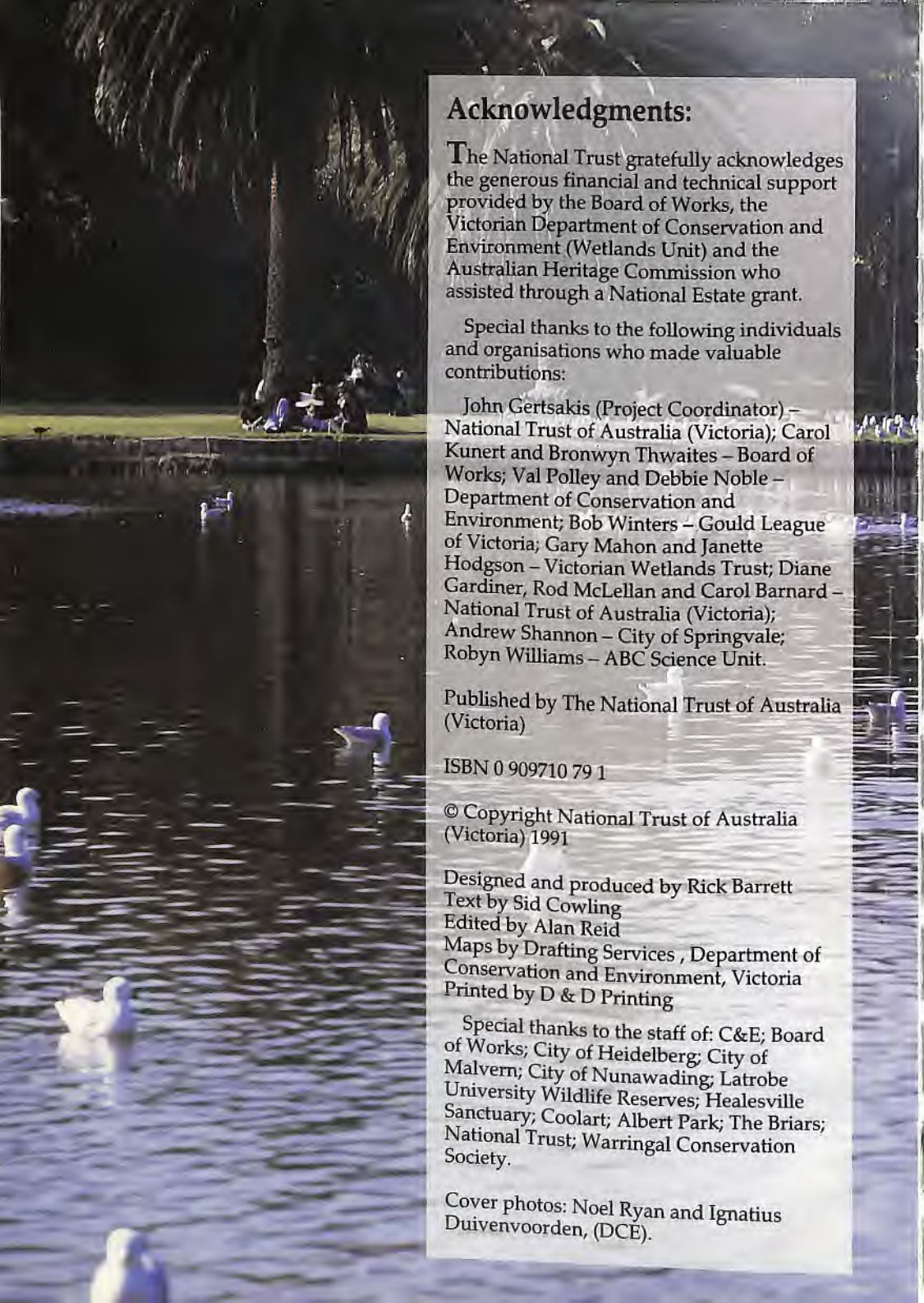



## Acknowledgments:

The National Trust gratefully acknowledges the generous financial and technical support provided by the Board of Works, the Victorian Department of Conservation and Environment (Wetlands Unit) and the Australian Heritage Commission who assisted through a National Estate grant.

Special thanks to the following individuals and organisations who made valuable contributions:

John Gertsakis (Project Coordinator) – National Trust of Australia (Victoria); Carol Kunert and Bronwyn Thwaites – Board of Works; Val Polley and Debbie Noble – Department of Conservation and Environment; Bob Winters – Gould League of Victoria; Gary Mahon and Janette Hodgson – Victorian Wetlands Trust; Diane Gardiner, Rod McLellan and Carol Barnard – National Trust of Australia (Victoria); Andrew Shannon – City of Springvale; Robyn Williams – ABC Science Unit.

Published by The National Trust of Australia (Victoria)

ISBN 0 909710 79 1





Designed and produced by Rick Barrett
Text by Sid Cowling
Edited by Alan Reid
Maps by Drafting Services , Department of Conservation and Environment, Victoria
Printed by D & D Printing

Special thanks to the staff of: C&E; Board of Works; City of Heidelberg; City of Malvern; City of Nunawading; Latrobe University Wildlife Reserves; Healesville Sanctuary; Coolart; Albert Park; The Briars; National Trust; Warringal Conservation Society.

Cover photos: Noel Ryan and Ignatius Duivenvoorden, (DCE).


DAVID TATNALL

# "Stay Wet"

It was long way from Melbourne: Western Samoa to be precise. The beach curved long and gold to the distant mangrove.

"I'm delighted to see you look after your swamps", I remarked to my Samoan broadcasting colleague who ran the radio station in Apia.

"What do you mean?", he turned, as startled as you're likely to be in the pleasant twilight of the South Pacific. His concern, he explained, was centred on the practice of keeping all land in the possession of the villages. The only development must be offshore, sometimes at the expense of mangroves.

I told him that wetlands everywhere are the nurseries of fishes and invertebrates and that too many communities had recklessly demolished their swamps only to wonder, a couple of years later, where all the fish had gone.

My friend was so impressed by my impassioned defence of wetlands that he set off immediately for Apia. A few hours later I was astonished to hear myself being quoted on the national news as "visiting science broadcaster urges Samoans to protect mangroves".

Some months later I was in the middle of Florida's Everglades, contemplating the ruin of one of the world's great stretches of inland waterway. Some birds remained, but the woodstork had gone, unable to tolerate the appaling damage done. "Today", a ranger told me, shaking his head, "the soil is riddled with mercury and no one dares eat the fish." Perhaps it's because of inappropriate agricultural methods. Whatever the reasons, a famous wetlands is in deep trouble.

It isn't too late to look after our own and even to enjoy their wonder. And where better to start than close to home? So many wetlands are near the city, even within its boundaries. There you can find an immense variety of small creatures: invertebrates, fish, all manner of ducks, waders, visitors from other lands flying in for the season, even wallabies and other large marsupials.

This booklet is a timely introduction for all of us, youngsters discovering that swamps and marshes are treasure troves, locals who thought they knew the region but can now be amazed at what's behind the most unpromising turning, or visitors such as me, who want to find sites quickly and be informed by expert knowledge.

Few now doubt the value and richness of Australia's forests. Let us now try to realise that the natural world is a continuous web, connecting all living things in a subtle and, as yet undiscovered way. One of the most important strands of this web is wetlands. Here is a way to find out just how important yours may be.

**Robyn Williams**
**ABC Science Unit**

BOB WINTERS

Wetlands are prime feeding and nesting sites for all types of birds. Above: a spoonbill keeps a wary eye on some coots. Below: ducks and swans compete with seagulls for bread at the Botanic Gardens.

IGNATIUS DUIVENVOORDEN / DCE

NOEL RYAN / DCE

Above: A seal pays a visit to the Altona/Williamstown shore.

Below: A ranger conducting a bird count. This helps to establish the basis for ongoing management programmes.

# Wetlands are fun

Wetlands are fun places to visit. A wetland is a place which is inundated with water for all or part of the year. It includes rivers and streams, lakes and swamps, tidal flats and estuaries but not the deep bays or oceans.

They are usually peaceful but at the same time wild. They are often hidden and hold hidden treasures. Certainly they are interesting and not the nasty places that swamps and marshes are often depicted as in movies.

The water in a wetland can be fresh as in a mountain stream, salty as in mangroves, or brackish – somewhere in between, and this variety produces a range of different wetland types.

Although Australia is the world's driest inhabited continent it has many valuable wetlands. Some of the most valuable are close to or within city boundaries, such as Melbourne's Board of Works Farm at Werribee (pages 62-65) and the Edithvale-Seaford Swamps (pages 38-41).

BOARD OF WORKS



The most important wetlands tend to be complex, in that they have a variety of plant communities and a range of water depths. Other Melbourne wetlands are less complex and easy to visit and understand, such as the Botanic Gardens Lake (pages 12-15) and Newell's Paddock at Footscray (pages 54-55).

The most obvious inhabitants of wetlands are birds and many rare and beautiful bird species can be seen in Melbourne's wetlands.

Wetlands can provide:–

- habitats for flora and fauna
- study areas for recreation and research
- outdoor recreation opportunities
- water supply and flood control
- recycling of nutrients
- pleasant or interesting landscapes.

NOEL RYAN / DCE

Above: a group of school children take a hands-on approach to learning about wetland flora and fauna.

Below: Netting fish at Jells Park to prevent overstocking of the wetlands.

BOARD OF WORKS

This book introduces some of Melbourne's wetlands and hopefully encourages the reader to visit one or more.

The wetlands featured have been selected for a variety of reasons: –

- many because they can be reached by public transport
- all because they encourage visits to all parts of the Melbourne region, wherever the reader may reside
- all because they provide a wide representation of wetland types.

Open, artificial lakes such as at Albert Park (pages 16-17), remnant natural wetlands such as at Edithvale/Seaford (pages 38-1), built wetlands such as Gardiners Creek (pages 26-27) and a mountain stream such as Badger Creek, Healesville (pages 72-73) have been included.

Remember that wetlands are dynamic; they change with the seasons and the years. In summer the water will be lower and the birds resting at midday. In winter–spring the water will be high and many birds will be active and nesting.

So look carefully at these wetlands, think about what is happening in and to them, read more about them (perhaps using the reading suggestions on page 78 ) and have fun while you are doing it.

Banyule Flats, on the floodplains of the Yarra River, provides a glimpse of rural Australia in the midst of the city.

DERRY SARGENT



# Wetland visitor code


**Do not** bring cats, dogs or horses to wetlands – they disturb wildlife and plants, especially in the breeding season

**Check** whether fires are permitted before lighting a barbecue or campfire and make sure your fire does not escape.


**Do not** leave the nature trails, paths or walking tracks and do not trample the water's edge.


**Do not** pick any plants or wildflowers – pollen and nectar are essential for the survival of birds and insects

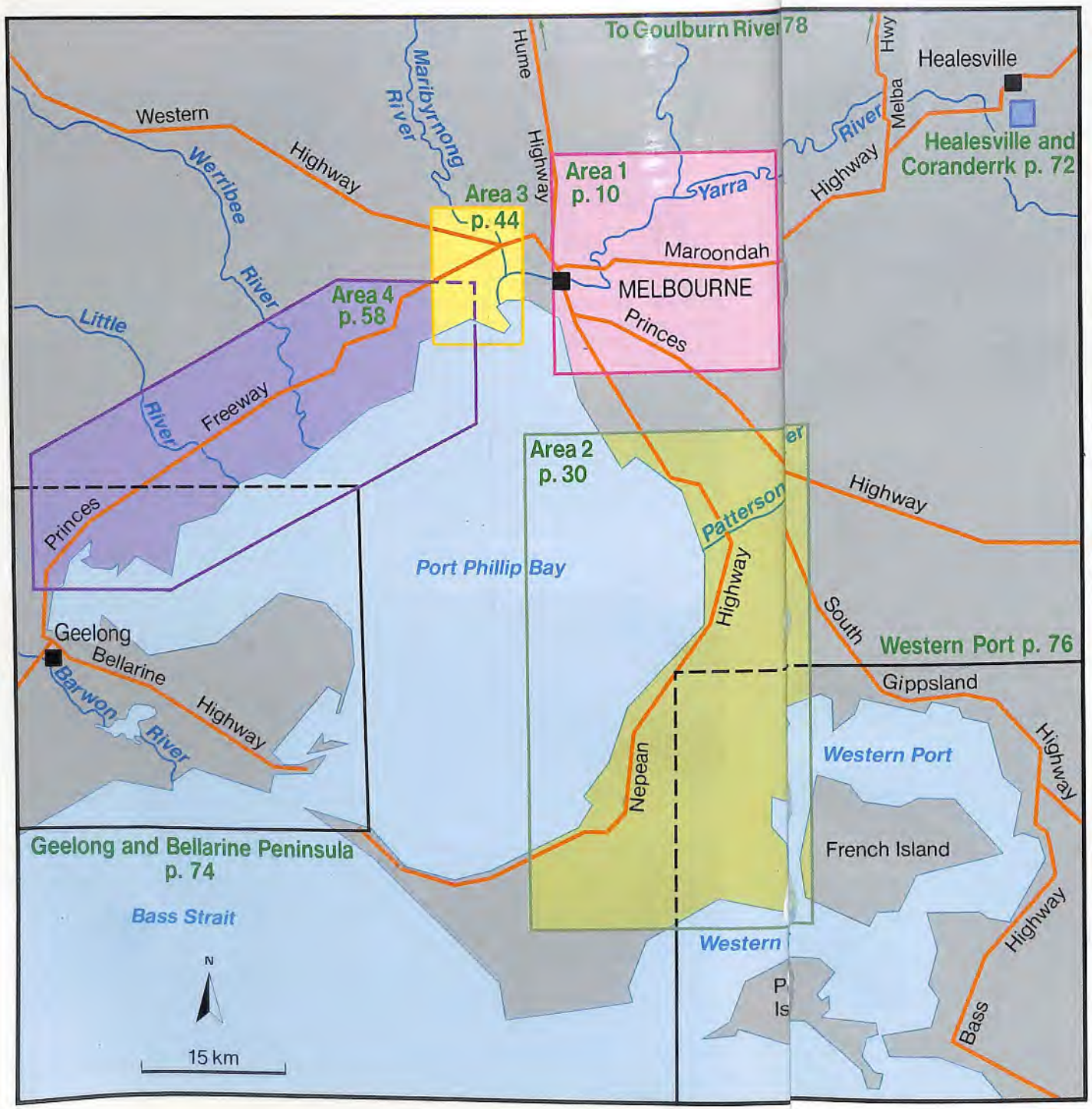
**Clean up** all your litter and take it away or place it in bins at the car park


Snakes are part of the natural scene – **leave them alone** and they will leave you alone


**Do not** pollute the waters or leave any rubbish – birds and other animals can become entangled in fishing line and plastics debris


**Avoid** sudden or erratic movement, loud or unusual noise – this may frighten the wildlife away

DRAWINGS BY KAZ COOKE




# Key Map

The wetlands in Melbourne described in this book are organised into four main areas.
These areas are:–

1. The floodplains of the Yarra River and its tributary creeks, Dandenong Creek, plus Albert Park Lake;
2. The former Carrum Carrum Swamp and the floodplains of Mornington Peninsula streams;
3. Depressions and intertidal areas at the mouth of the Yarra River and west of the Maribyrnong River;
4. Coastal wetlands between Altona and Geelong.

Wetlands in three country areas adjacent to Melbourne have also been described for those who wish to venture 'beyond the urban fringe'.

These are:–

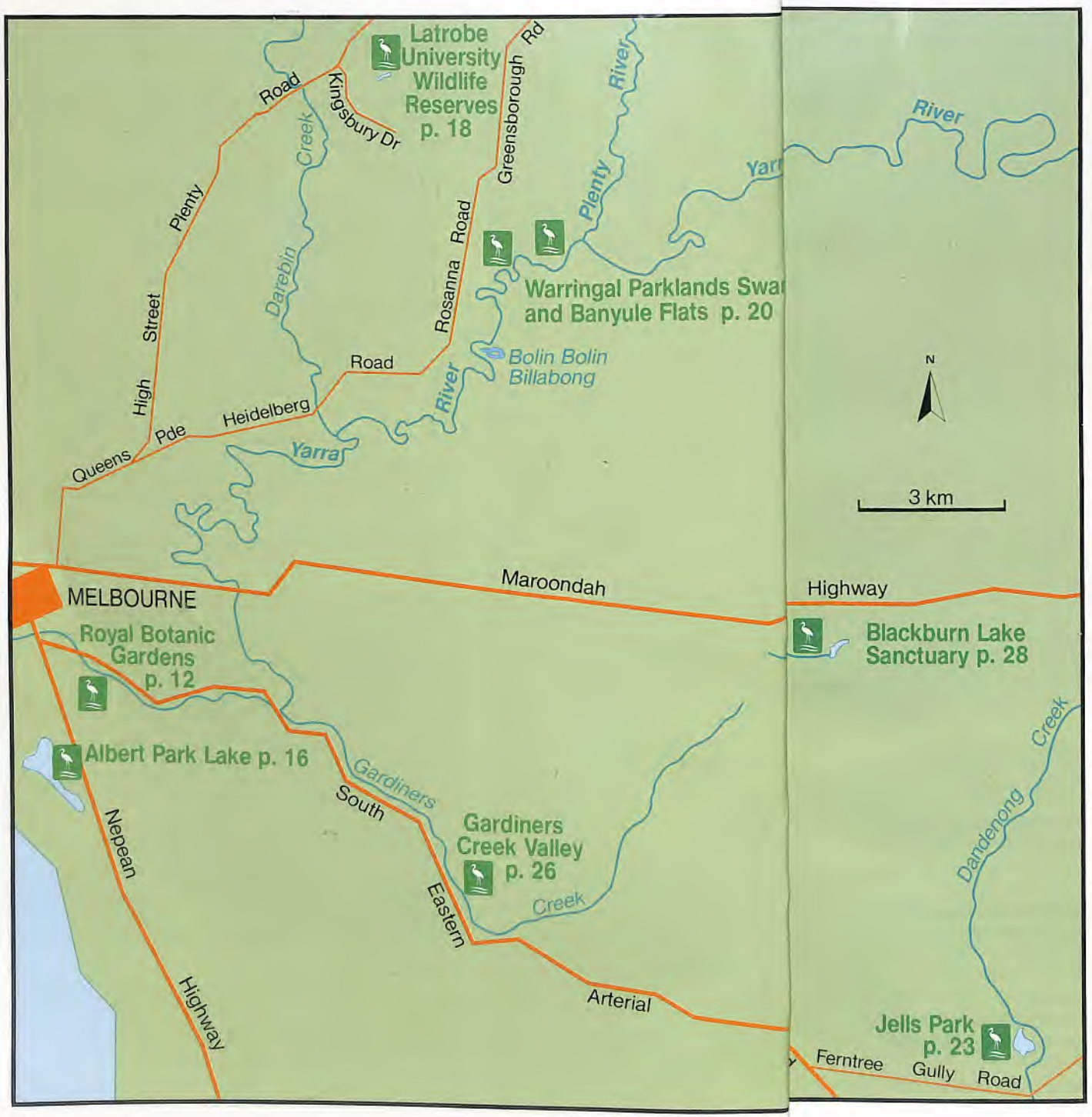
5. Geelong and the Bellarine Peninsula, with their wide range of fresh, salt and coastal wetlands;
6. Western Port with its extensive intertidal mudflats and the freshwater swamps of French and Phillip Islands;
7. The floodplain of the Goulburn River between Cathkin and Nagambie with its many billabongs.

## Key To Map Symbols

- Major Road
- Minor Road
- Walking Track
- Wetland Reserve
- Marsh
- Parking
- Picnic Area
- Toilets
- Information
- Birdhide

**Abbreviations**

| | |
|---|---|
| DCE | Department of Conservation & Environment |
| DVWPA | Dandenong Valley & Western Port Authority |
| POGA | Port of Geelong Authority |
| POMA | Port of Melbourne Authority |
| ha | hectare(s) |
| m | metre(s) |






## Area 1

# Inner Melbourne, Lower Yarra and Northern Suburbs, Eastern Suburbs and Upper Yarra Valley.

Some of the more accessible urban wetlands are in inner Melbourne. They are no less interesting than rural wetlands, and can provide great enjoyment and relaxation from the pressures of city life. Many can be reached by public transport. They have lots of picnic and other facilities and are a great place to start when learning about wetlands.

The eastern suburbs and upper Yarra Valley are hilly, and most of their wetlands are in narrow creek valleys, such as along Gardiners Creek at Malvern and Blackburn Lake. In contrast, at Jells Park the Board of Works has built wetlands along the Dandenong Creek.

Many of the billabongs and swamps adjacent to the Yarra have remained close to their original state and hence were the first to be conserved. The wet areas along the steep-sided tributaries, such as Gardiners Creek, are only now receiving the attention they deserve. The Darebin Creek and the Plenty River valleys have proved more difficult to manage but some progress is being made. Many sections of the Dandenong Creek still resemble a natural waterway.

In contrast, the modified wetlands such as at Latrobe University, Albert Park and the Botanic Gardens provide three very different contrasts to the natural areas.

CITY OF MALVERN


## Royal Botanic Gardens, Melbourne

MELWAYS 44 B 12, 2G A 12

- Main access is from Birdwood Ave., Anderson St., or Alexandra Ave.
- Take Tram No 8 from the City into Domain Rd., alight at Tram Stops 19, 20 or 21
- Facilities: Parking nearby; disabled parking at the Visitor Centre near the Herbarium; toilets; disabled facilities; kiosk; asphalt walking paths
- Open to the public every day of year: 7.30 am (Mon to Sat), 9 am (Sun & Hols) to sunset
- Visitor Centre adjacent to Herbarium open every day except Good Friday & Christmas Day
- Direct enquiries: Gardens Office: 8.30 am to 4.30 pm (03) 650 9424

Swans in Melbourne's Royal Botanic Gardens

IGNATIUS DUIVENVOORDEN / DCE

### General description

The 4 ha Ornamental Lake is centred in 35 ha of magnificent gardens landscaped during the late 19th century. The lake was originally part of a series of billabongs of the Yarra River and was formed when the river was straightened.

The gardens have large, sweeping lawns with many curved paths and beds containing some 10,000 species and cultivated plants from throughout the world.

*Water*: The water level remains constant throughout the year, with depths from a few cm to 2.5 m.

### Ownership and management

The Royal Botanic Gardens is public land, managed by the Department of Conservation and Environment.

### Management objectives

- scientific research centred on plants;
- conservation of Australian and exotic plants;
- recreation and tourism through displays, both in the gardens and the adjacent Herbarium;
- public education about plants and their conservation.



The Royal Botanic Gardens, just a stone's throw from the city centre, is a surprisingly peaceful haven popular with young and old alike.

### Vegetation

Whilst the lake design is ornamental, with stone edging, some of the margins have aquatic plants such as flax, common reed, papyrus bulrush, lilies and elephant's ear. The fern gully, an old watercourse leading to the lake, has a variety of ferns and palms.

### Fauna

A wide range of waterbirds and garden birds utilise the variety of habitats in the gardens. Ducks, grebes, swans, moorhens and coots are found on the lake. Cormorants and herons are often seen roosting in the trees at the lake.

Wrens, wagtails, honeyeaters (including wattlebirds), cockatoos and silvereyes are some of the native birds of the lawns, garden beds and shrubs. Prominent in the gardens are a number of introduced birds, including greenfinch, goldfinch, blackbird and the domestic pigeon.

IGNATIUS DUIVENVOORDEN / DCE

Feeding the swans is a popular pastime.

DAVID TATNALL

In late summer a group of fruit bats (grey-headed flying fox) arrive in the gardens and roost there until early winter. The nocturnal ring–tail possum abounds in the gardens and eels thrive in the lake.

**Aids to the visitor**

Brochure with map; seasonal brochures with calendar & programme; garden notes; history of gardens brochure; special topic brochures on succulents, notable trees, Australian plants, rose garden, birds, bats.

*Free Guided Walks*: Tues to Fri & Sun hosted by voluntary guides – information from Gardens Office, Plant Craft Cottage: 10 am to 3 pm weekdays, (03) 650 3235.

**Special features**

The gardens abound in features of special horticultural significance.

The lake is the central feature of the landscaping of the gardens and is the main haven in the city area for waterbirds.

**Nearby wetlands**

The adjacent Yarra River provides a flypath for waterbirds to and from the wetlands at the mouth of the river such as Westgate Park and Greenwich Bay and to and from the wetlands upstream such as Warringal Parklands Swamp and Banyule Flats. The nearby Albert Park Lake is another inner-city wetland.



**History**

The site for the Botanic Gardens was chosen by Charles LaTrobe in 1845 and the first 2 ha were fenced in 1846. Major developments occurred in the 19th century, particularly under the directorships of Ferdinand von Mueller and William Guilfoyle. By 1910 the gardens had attained much of their present character.

The present lake was originally partly a billabong of the Yarra River and partly a bend of the river. Initially, the billabong was deepened into an ornamental lagoon and its shoreline and islands landscaped to provide an irregular perimeter. At that stage the central lake was built at the foot of the fern gully. From 1897 to 1901 the Yarra River was straightened to prevent periodic flooding. Another 16 ha were added to the gardens, and part of the former bank of the Yarra became Long Island in the lake.

The small Nymphaea Lily Lake in the southern lawn was excavated in 1907 to provide another sanctuary for native birds and to display water lilies.

*See —"A History of the Royal Botanic Gardens, Melbourne"* – a brochure available at the gardens.

**Major changes and threats**

The Royal Botanic Gardens is an intrinsic part of Melbourne. The changes which might threaten it are natural processes, such as the ageing of the trees and shrubs, and the silting of the lakes. Wise landscaping and replanting, and periodic removal of silt from the lake will resolve these problems. Also of concern is the presence of high rise buildings around the gardens, intruding on its integrity and peacefulness.

*"A glimpse of the 19th century"*

To visit the Royal Botanic Gardens is, in one sense, to travel back in time. The sweeping landscaped lawns, so well hidden from the nearby city, and the surprising vistas of so many plants which greet you along the pathways, are a delight to the eye. The lakes of the gardens are examples of how wetlands were landscaped in the mid to late 19th and early 20th centuries, and are a contrast to the more natural swamplands now being protected at such places as Edithvale-Seaford, Point Cook and Banyule Flats. Nevertheless the lakes at the gardens support many waterbirds, although those frequenting the ornamental lake tend to be those which are adapted to the deeper water and artificial shoreline, such as black swan.

DAVID TATNALL

**Further information**

The Friends of the Royal Botanic Gardens, Melbourne , offer a range of lectures, tours and other activities.

They can also provide a reading list on the gardens and its history.

A useful reference is *"The Royal Botanic Gardens, Melbourne"* by Joan Law Smith, published by the Maude Gibson Trust in association with the Royal Botanic Gardens – available at the Information Centre.


## Albert Park Lake MELWAYS 57 J4, 2K G6

- Main access is from Lakeside Dve. & Aughtie Dve.
- Take Trams 10,12,17 from the City and alight at Stop 21; or take the St Kilda Light Rail (No. 96) and alight at one of the stops in Albert Park.
- Facilities: Car parks; toilets; picnic areas; barbecues; hire boats; paddleboats. The lake is used for sailing, rowing and power boating.
- Open to public: The park and lake are open to the public at all times.
- Direct enquiries: To Committee of Management, Public Golf Links, Queens Rd., Melbourne 3004, (03) 51 5588

BOB WINTERS

### General description

The Albert Park Reserve is 220 ha of recreational parkland, including the 42 ha Albert Park Lake in the centre. There is a small island in the lake. The reserve is primarily playing fields, golf courses and parkland and the lake is ringed by roads within the park.

*Water*: The water level is always high, maintained by natural springs and the drains which flow into the lake. Occasional floods occur at times of high rainfall.

### Ownership and management

Public land, managed by a Committee of Management responsible to Minister for Conservation and Environment.

### Management objectives

- to provide recreational opportunities for the people of Melbourne.

### Vegetation

The lake vegetation is aquatic weeds. The stone and concrete wall along the shoreline prevents reeds and shrubs developing.

### Fauna

Swans, ducks, cormorants and coots are the main animals frequenting the lake. Many of the ducks are the introduced mallard and "dumped" domestic ducks.

### Aids to the visitor

Sign with map at the Aughtie Dve. entrance from South Melbourne.

### Special features

An easy wetland to visit – an example of a natural swamp converted to an artificial lake in an urban park.

### Nearby wetlands

Botanic Gardens; Westgate Park; Greenwich Bay.

### History

Albert Park Lake was originally a brackish swamp, up to a metre deep in winter, with several islands. In 1871 sailing commenced and the lake was first deepened in 1873 to improve it for boating. In 1872 sewage was pumped into the lake, and in 1875 water weeds started to flourish due to increased nutrients from the sewage and cover the surface of the water. Dredging commenced in 1905 with weed cutting first becoming necessary in the 1930s.

Since the last dredging in the 1930s the bed has silted up to a large extent. Major weed poisoning has taken place in 1964 and 1970. These resulted in substantial fish kills and a reduction in the number of birds using the lake.

### Major changes and threats

Silting, including a build–up of nutrients, is a continual process which threatens the nature of the lake.

Weed control is a dilemma. Removal of silt, by deepening the lake, would partly discourage weed growth but the high nutrient level would continue to encourage some growth. Reed–beds at drain outlets would absorb much of the nutrients as well as trap silt.

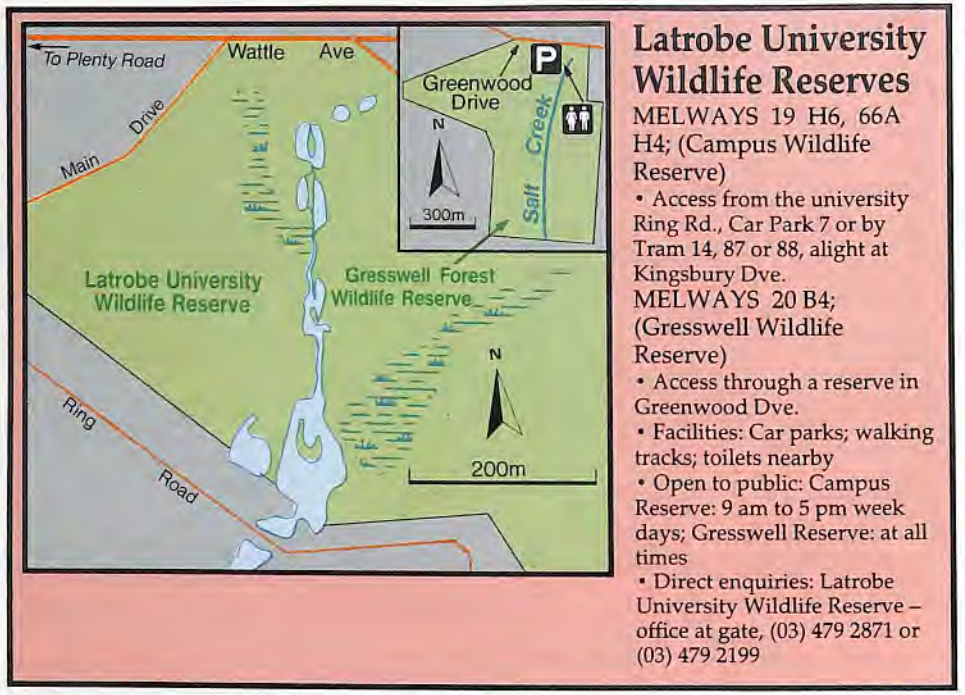
*"A multi–use wetland"*

Albert Park Lake is of limited value to wildlife because of the way it and its shores are managed for recreation. Nevertheless it attracts many visitors because of its size and location. The pleasant vistas include yachts gliding along in the light airs on a late summer afternoon, or grey showers scudding across the dark waves during a winter's storm. There are usually a few waterbirds resting on the lake, and it has great potential for supporting more birds without detracting from the boating.

BOB WINTERS

A Eurasian coot, one of the many birds that make Albert Park Lake their home.

BOB WINTERS



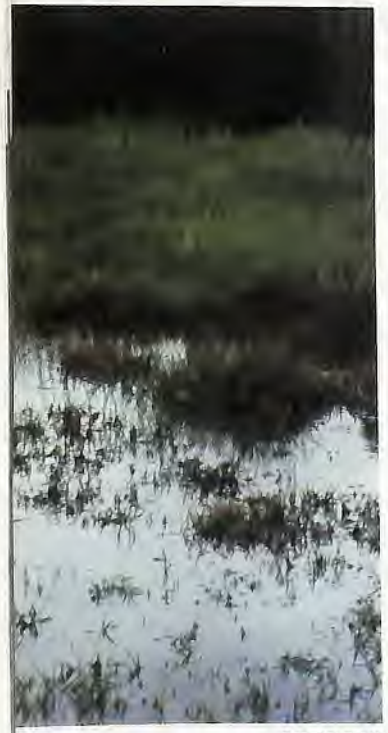

# Latrobe University Wildlife Reserves

MELWAYS 19 H6, 66A H4; (Campus Wildlife Reserve)

- Access from the university Ring Rd., Car Park 7 or by Tram 14, 87 or 88, alight at Kingsbury Dve.

MELWAYS 20 B4; (Gresswell Wildlife Reserve)

- Access through a reserve in Greenwood Dve.
- Facilities: Car parks; walking tracks; toilets nearby
- Open to public: Campus Reserve: 9 am to 5 pm week days; Gresswell Reserve: at all times
- Direct enquiries: Latrobe University Wildlife Reserve – office at gate, (03) 479 2871 or (03) 479 2199



ROD MCLELLAN

## General description

The 28 ha campus wildlife reserve is mainly red gum woodland with copses of black wattle. The original swamp has been augmented by excavating lakes and ponds, and there has been extensive replanting of native vegetation.

The 52 ha Gresswell Reserve is remnant red gum woodland, with areas of both native and introduced plants as understorey. This reserve is an example of red gum occupying soils waterlogged in the winter rather than occurring in regularly flooded wetlands.

*Water*: The campus reserve receives substantial run–off from a largely woodland and grassland catchment. Local rainfall is usually sufficient to maintain water in the wetlands throughout the year.

## Ownership and management

Latrobe University is the management authority for these reserves.

## Management objectives

- provide an area for research and education in environmental management;
- provide example of the area's original woodlands and wetlands;
- provide a recreation area.



ROD MCLELLAN

## Vegetation

Plantings of native trees and shrubs, together with wetland plants around the edge of the lakes and ponds, have been added to the original red gum woodland with its grasslands and clumps of black wattle. The resultant woodland and wetland complex is very diverse.

## Fauna

A total of 175 bird species has been recorded in the reserves in recent years. Native animals have also been released into the campus reserve, including bandicoots, wallabies and kangaroos; ducks, ibis and herons; geckos, skinks, lizards and tortoises; and blackfish, pygmy perch and galaxias.

## Aids to the visitor

Small brochure; guided tours by arrangement.

## Special features

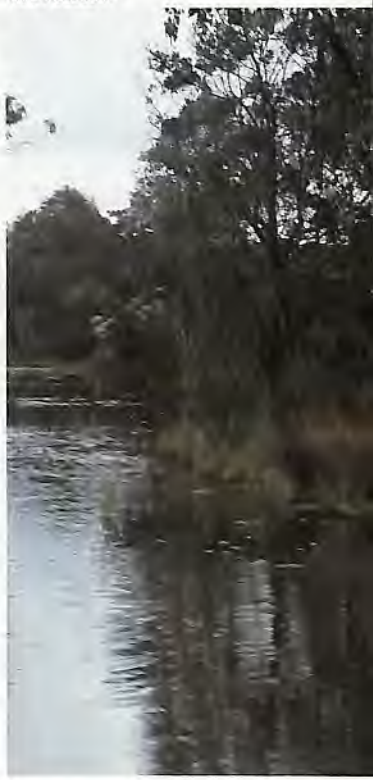
The campus reserve has developed a system of using ponds and wetland vegetation to remove sediments, pollutants and nutrients. These enter the reserve from the water flowing through the reserve to the university's lake system.

## Nearby wetlands

Yarra River; Warringal Parklands Swamp; Banyule Flats; Plenty River.

*"A grass–roots study area"*

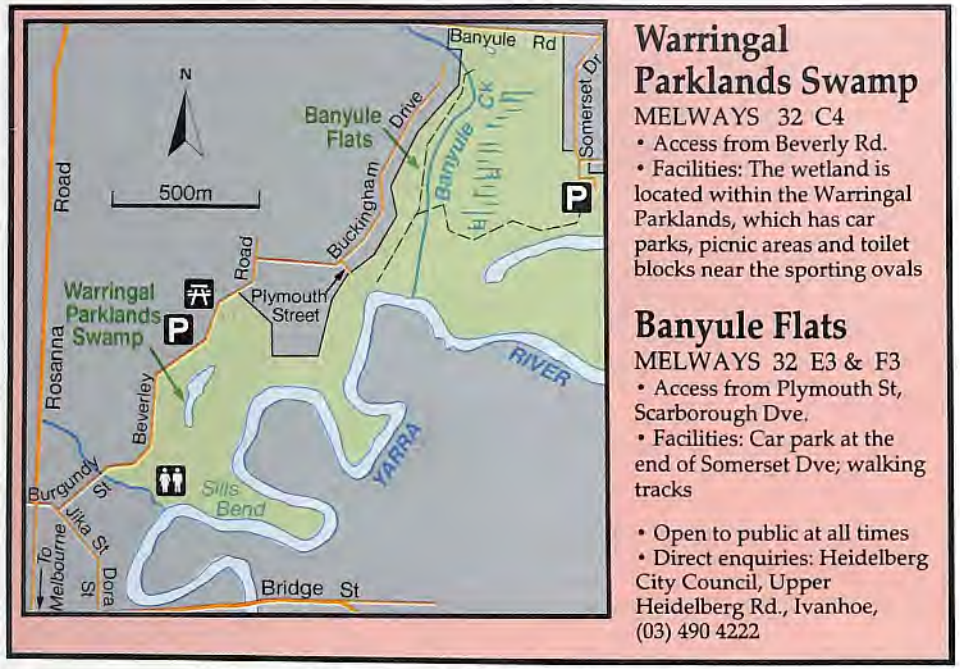
The Latrobe University Wildlife Reserves, with their wetlands and woodlands, were first established in 1968, the year of the first student intake. This was in response to initiatives from the students themselves for an area of land to be set aside for native animals and plants. In the 1970s a series of litter traps and ponds were constructed along the natural drainage line which leads from a 31 ha catchment of residential housing. Natural wetlands were enhanced using run–off from hospital grounds and open–space. These highly innovative measures have prevented most of the solid and chemical pollutants from reaching downstream areas and demonstrate the nutrient filtering qualities of wetlands.



The Latrobe University Wildlife Reserve is a former swamp that has been extensively replanted and augmented.

Gresswell Wildlife Reserve is adjacent to the Latrobe reserve and is an essential part of this complex system.

ROD MCLELLAN




## Warringal Parklands Swamp

MELWAYS 32 C4

- Access from Beverly Rd.
- Facilities: The wetland is located within the Warringal Parklands, which has car parks, picnic areas and toilet blocks near the sporting ovals

## Banyule Flats

MELWAYS 32 E3 & F3

- Access from Plymouth St, Scarborough Dve.
- Facilities: Car park at the end of Somerset Dve; walking tracks

- Open to public at all times
- Direct enquiries: Heidelberg City Council, Upper Heidelberg Rd., Ivanhoe, (03) 490 4222

## Warringal Parklands Swamp

### General description

Warringal Parklands Swamp is situated in a natural depression in parkland. Islands have been constructed in the swamp, the shoreline has been planted and reeds have flourished.

*Water*: Warringal Parklands Swamp usually contains water in winter. A pump can be used to supply water from the Yarra River in times of drought.

### Ownership and management

Heidelberg City Council.

### Management objectives

- to provide for recreation;
- to provide an example of wetland habitat of the Yarra floodplain.

### Vegetation

This swamp has dense reeds and rushes throughout and there are some blackberries at the water's edge. Some old willows grow on the eastern side. Native trees and shrubs have been planted on the island and in clumps near the shore.

Warringal Parklands Swamp provides an example of the wetland habitat of the Yarra River.

DERRY SARGENT



### Fauna

The main animals using this wetland are waterbirds, including ducks, coots and moorhens.

### Aids to the visitor

None known.

### Special features

A good example of how a wetland can be incorporated into multi–purpose parklands to provide recreation and study opportunities in an urban setting.

### Nearby wetlands

Yarra River; Banyule Flats; Latrobe University; Darebin Creek; Yarra Flats, Ivanhoe; Wilson Reserve, Ivanhoe; Bolin Billabong, Bulleen.

### History

The Heidelberg area was one of the first "outer" suburbs to be settled. The river flats were cleared and grazed, the Banyule homestead being one of the major properties. The Warringal Parklands were developed by the Heidelberg City Council and this low-lying depression on the floodplain was first planned as a lake for model boats. In the early 1970s the council decided to block the drain to the river and build an island in the lake.

### Major changes and threats

The major threat to the swamp is the quality of water flowing into it from the surrounding suburb. The dense reeds, without pools of open water, limit the usefulness of the swamp for birds. Cats from neighbouring houses also pose a threat to birds.

*"The birds move in"*

The idea of a wetland in Warringal Parklands was developed about 1970 by the then Councillors and City Engineer, the author and some local residents. Soon after the works were completed and the drain to the river blocked it rained and the swamp filled. The same day many species of ducks and other waterbirds moved onto this new wetland although the reeds were still very sparse.

Heidelberg council were amazed at such a rapid acceptance of the area by birds. Such an "invasion" of a newly–filled swamp is common in rural areas but perhaps not so readily observed in the suburbs.

DERRY SARGENT

**Further information**

Warringal Conservation Society, 30 Waldemar Rd, Heidelberg 3084, (03) 457 1845.

*"Birds of Heidelberg and the Yarra Valley"* - see reading list.

*"Heidelberg Rambles"* by Simon Plant, available from Heidelberg City Council.

## Banyule Flats

### General description

Banyule Flats contains a series of wetlands, including reed

DERRY SARGENT

With cattle grazing in the paddocks alongside, this could be anywhere in rural Australia.

Below: The billabong forms an arc across the paddocks.

DERRY SARGENT

swamps, a shallow herb and sedge marsh and a billabong of the Yarra River, together with sporting fields, a native bush garden and grazing paddocks.

*Water*: The Banyule Flats swamps are flooded to less than one metre in winter and are often dry by late summer. The billabong contains water at all times.

**Ownership and management**

Heidelberg City Council.

**Management objectives**

- to conserve the wetlands of the area;
- to preserve the historic landscape associated with the Heidelberg School of artists;
- to preserve the pastoral landscape.

**Vegetation**

The deep swamp and drainage lines have dense reeds, the shallow areas have herbs, grasses and sedges under dead and old gum trees, and the billabong has old gum trees along its banks. Some of the paddocks are grazed, whilst other areas are rank grassland with clumps of blackberry and boxthorn.

**Fauna**

The fauna is mainly birds, especially ducks, herons, other waterbirds and waders on the shallow edges. Other birds, including black–shouldered kite, can be seen in the area. The most abundant native mammals are possums; snakes and frogs also occur.

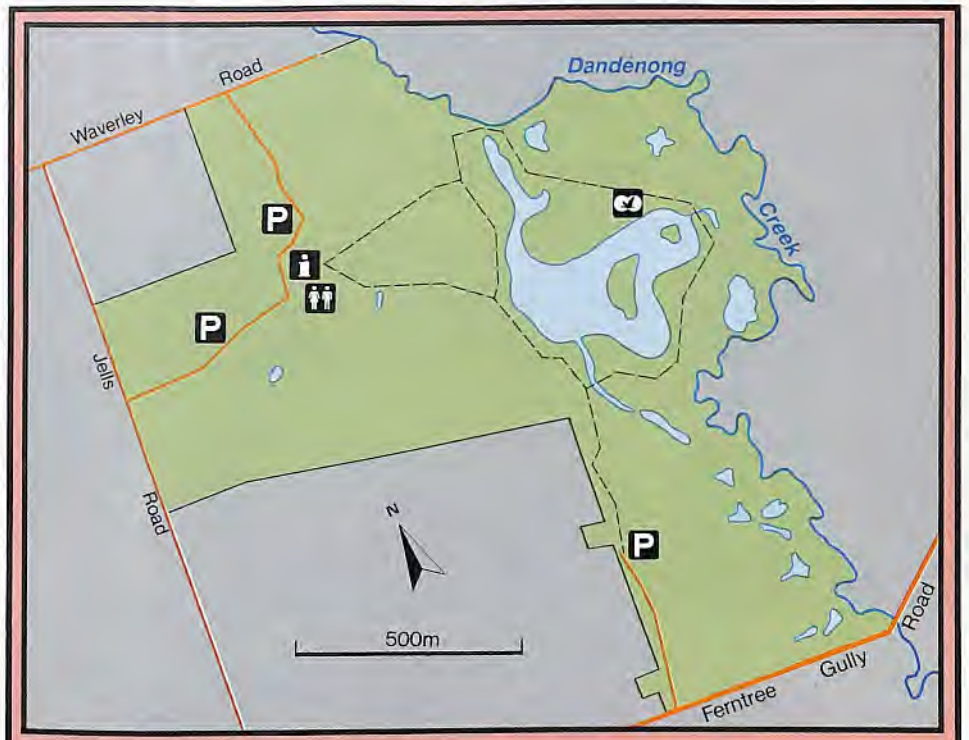
**Major changes and threats**

The dense growth of reeds in the deep swamp and along the drainage lines limit the usefulness of the swamp to birds. The rank growth of grasses on the higher ground encourage many native species. However the numerous cats from the adjacent houses are a serious threat to the birds of the area.

*"A cattle and horses swamp"*

The walking track joining Plymouth St. and Somerset Dve. is mainly fenced, separating the walker from the horses, cows and the bull (just as well). Nestled in the valley behind Banyule Homestead, with black duck upending as they feed in the shallows, and with the sounds of cattle and horses in the background, this area could be anywhere in rural Australia. The still waters of the billabong reflect the old gums and the birds gliding across its surface. And in summer you can feast on the ripe blackberries.






## Jells Park MELWAYS 71 K7

- Access: – Jells Park & Jells Park East from Waverly Rd; – Jells Park South from Ferntree Gully Rd.
- Facilities: Car parks; visitor centre; information boards; toilets; disabled facilities; picnic areas; playgrounds; barbecues; nature trails; guided walks; bird hide
- Open to public: Every day from 10 am to 4 pm, 5 pm or 8 pm depending upon season
- Direct enquiries: To Visitor Centre, (03) 561 4522, 8 am to 4 pm Mon to Fri

**General description**

Jells Park (127 ha) is part of the Dandenong Valley Metropolitan Park. The grasslands of the former farmland have been partly replanted with native trees and shrubs and wetlands have been developed by reflooding billabongs, digging ponds and building a new lake. In addition, there are many old trees and remnants of former orchards dating back to early settlement.

*Water*: The lakes and billabongs hold water all year round, although many shallow areas dry out in summer.

**Ownership and management**

Jells Park is part of the Dandenong Valley Metropolitan Park managed by the Board of Works.

BOARD OF WORKS

Jells Park is a large recreational area built along the floodplains of the Dandenong Creek. The higher levels of the park provide an excellent spot for a family barbeque before setting off to explore the wetlands.

**Management objectives**

- to conserve examples of the flora & fauna of eastern Melbourne;
- to develop wetland habitats;
- to provide educational and recreational opportunities based on the flora and fauna of the park.

**Vegetation**

The former paddocks with their scattered gum trees have been extensively landscaped and planted. The open grassland is now dotted with copses of native trees and shrubs. The wetlands contain reeds and rushes and have grasses, shrubs and trees along their banks.

**Fauna**

The various wetlands support waterbirds, including ducks and herons, as well as frogs and native fish. A wide range of urban and bushland birds inhabit the remainder of the park. A large possum population lives in the trees.

**Aids to the visitor**

Brochure with map, guided tours, summer programme.

**Special features**

The lake and Dandenong Creek valley are major features of the park as they support a host of wetland wildlife.

**Nearby wetlands**

Dandenong Creek; Blackburn Lake; Gardiners Creek.

**History**

Thomas Napier was the first European settler in this area in 1839. The property was named "*Bushy Park*" by the next settlers, the Scotts. Joseph Jell grazed cattle on the land from 1849 to 1886. The area was used for grazing, market gardening and orchards, although the flat land along the Dandenong Creek was flooded in most winters. The Board of Works gradually acquired much of the floodplain of the creek over the years and opened its first Metropolitan Park, Jells Park, in 1976.

*"Across the park"*

The open grassland and woodlands in Jells Park enable the visitor to sense the nature of the early landscape of eastern Melbourne. The view down the hill from the visitor centre and across the lake takes in the Dandenong Creek valley with the Dandenong Ranges on the horizon. If you half–close your eyes, with the heat shimmering off the lake and the haze on the far foothills and the waterbirds calling in the reeds, you could imagine yourself to be in any green valley in Australia.

**Further information**

Visitor Centre,
(03) 561 4522.
Board of Works
Parks Division,
(03) 615 4933.




## Gardiners Creek Valley, Malvern MELWAYS 59 K9

- Access via footbridge over Gardiners Creek from car park at end of Estella St., or from June Cres.
- Take a train to Glen Iris Station and then walk along Essex St. to the underpass under the freeway
- Facilities: Car parks; toilets; picnic areas; pathways; boardwalk across wetland; viewing deck
- Open to the public: At all times
- Direct enquiries: City of Malvern – Projects Group, (03) 823 1209

The upper wetland with the boardwalk leading to a small island.

### General description

Three interlinking wetlands have been built on the floodplain of Gardiners Creek. The water margins have been extensively planted with reeds, trees and shrubs, especially the middle wetland. The upper wetland has a boardwalk across it and a small island.

*Water*: The wetlands are supplied by local drains and contain water throughout most years although levels fluctuate.

### Ownership and management

Malvern City Council.

### Management objectives

- to provide maximum habitat for birds and other wildlife;
- to create opportunities for observation of wildlife and viewing wetland landscapes.

### Vegetation

The plantings around the margins of the wetlands are still developing and hence give an open appearance at present. Reeds and rushes have been planted at the water's edge and these already provide cover for birds.





### Fauna

The fauna is primarily birds at this early stage. Ducks, herons, cormorants and other waterbirds already use the wetlands and the nearby Gardiners Creek, as well as the adjacent weir on the Hedgeley Dene drain and the lake on Gardiners Creek a little upstream near Dunlop St.

### Aids to the visitor

None known

### Special features

It is an excellent example of how a very secretive and peaceful place of great natural value can exist in a highly urbanised environment.

### Nearby wetlands

Gardiners Creek; Yarra River; Jells Park; Royal Botanic Gardens

### History

Gardiners Creek was originally a number of shallow channels along the swampy valley floor, with thickets of swamp paperbark, Bursaria and swamp gum. Over the years the creek valley was used as a tip and service corridor, the creek straightened and channelised and the native vegetation replaced with introduced plants. The council nursery occupied part of the site for more than 70 years. Construction of the freeway removed 20 ha of public open space but this provided the opportunity to replan the remainder and dramatically improve the natural landscape.

### Major changes and threats

The freeway has reduced the area of public open space and created severe noise problems for the area. This has been alleviated to some extent with mounds and fencing. Cats from nearby residential areas are a threat to the birds.

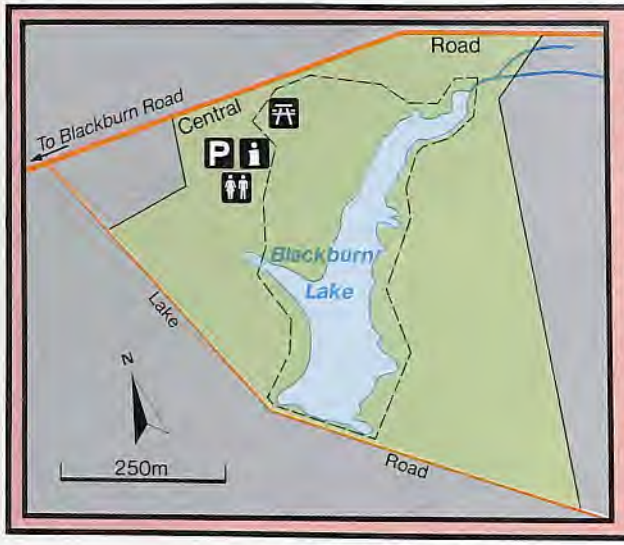
*"At the bottom of the garden"*

As you turn your back on the suburban gardens and walk across the footbridge over Gardiners Creek you glimpse the mirror–like waters of the swamp reflecting the reeds. There is an immediate sense of peace and tranquillity despite the hum of traffic on the nearby freeway. The pathway along the creek passes by each of the wetlands, and there is an immediate recognition of the subtle differences between them, each with its own plants and animal life. The boardwalk provides a different perspective as you ponder what might be in the grass and shrubs on the island. The return walk takes you back to the viewing deck (really like a little jetty) where you might study some of the aquatic insects.

Gardiners Creek at the confluence of the Hedgeley Dene drain.

**Further information**

City of Malvern - Projects Group
(03) 823 1209




# Blackburn Lake Sanctuary

MELWAYS 48 B11

- The car park is off Central Rd., on the northern boundary of the reserve
- Facilities: Car park; toilets; Information Centre; picnic area & playground; walking tracks
- Open to public: Open to the public at all times. DOGS MUST BE ON A LEASH
- Information Centre: open 2 pm to 4 pm Sundays
- Direct enquiries: Parks & Recreation Department, City of Nunawading, (03) 872 3177

## General description

A 4 ha lake is set in 26 ha of bushland. Fringing the lake are reeds, rushes and paperbarks. The remainder of the reserve is grassland and open eucalypt forest (stringybark and box).

*Water*: The water levels in the lake are relatively constant, although the lake functions as a flood mitigation area in times of heavy rainfall.

Blackburn Lake, constructed in 1888, is home to more than 180 species of birds.

ALAN REID

## Ownership and management

City of Nunawading, assisted by a Committee of Management.

## Management objectives

- Develop and maintain the Sanctuary as a bushland and wildlife habitat of high scenic and educational value.

## Vegetation

The four main types of vegetation are: lake margins; drainage depressions; stringybark–box open forest; yellow box open forest.

Some notable plants are pink heath, purple coral–pea, wattle mat–rush, common correa, blue pincushion, narrow–leaf bitter–pea, greenhood orchids and scented sundew.

## Fauna

180 species of birds have been recorded in the Sanctuary, including rainbow lorikeets, crimson and eastern rosellas, kookaburras, wattlebirds, black duck and Australian coot.



Mammals seen in the area include ringtail and brushtail possums, echidna and the recently introduced sugar glider. Snakes, tortoises, frogs, fish and a host of insects inhabit the lake and its margins.

## Aids to the visitor

Brochure and map.

## Special features

This area is an important remnant of bushland which formerly extended over much of Melbourne's eastern suburbs. The 100-year-old lake has been the focus for many different uses over the years.

To the west, starting at Furness Park, stretches a fine 2 km walk through the Blackburn Creeklands Reserve.

## Nearby wetlands

Gardiners Creek, Mullum Mullum Creek and Dandenong Creek valley.

## History

In 1888 a dam wall was built at the head of Gardiners Creek to control flash flooding, to provide water for the township of Blackburn and surrounding orchards and to provide a scenic lake.

The then Adult Deaf and Dumb Society purchased a 31 ha block which included the lake. From 1915 to the 1960s the lake and surrounds were used for picnicking, fishing, swimming and excursions. Late in this period it was even used for power–boating, water–skiing, and rubbish dumping.

The City of Nunawading purchased the land gradually in 1975, 1976 and 1980. This enabled a rehabilitation program to commence, with extensive plantings and the encouragement of recreation.

## Major changes and threats

Care needs to be exercised to prevent fires and to ensure that visitors do not affect the naturalness of the reserve. Run–off from the surrounding urban areas needs to be monitored. The introduction of the mosquito fish gambusia will affect the future of many small water animals.

Weed invasion is a major threat, including introduced native shrubs such as pittosporum and Cootamundra wattle.

*"Urban Bushland"*

Blackburn Lake Sanctuary is a precious area which delights the discoverer. Rarely does one find so much naturalness in the midst of the urban sprawl. At the lake's edge, with no roof in sight, one could be in the midst of the Australian bush.

ALAN REID

**Further information**

From Nunawading Council Offices or from Nunawading Horticultural Centre in Jolimont Rd.

Friends of Blackburn Lake run an education programme, (phone (03) 878 6829 or (03) 873 2619 for details).

See *"History of Nunawading"* and *"Blackburn - a Picturesque History"*.




# Area 2

## South–Eastern Suburbs and Mornington Peninsula

The wetlands beyond Mordialloc, at Braeside, Edithvale, Seaford, Coolart at Somers and The Briars at Mornington, are all semi–urban to rural in character. Remnants of the original swamps still survive or have been enhanced. All have excellent visitor facilities including hides to enable the visitor to observe bird–life at close hand.

The original Carrum Carrum Swamp provided food for the aborigines of the Bunurong tribe. Later, hunters shot ducks there for the Melbourne market, as vividly described by H.V.Wheelright in his "*Bush Wanderings of a Naturalist (by an old bushman)*", published in 1861. The original outlet to Port Phillip Bay was via Kananook Creek at Frankston. Gradually the swamp was cleared and drained, with a new channel dug to the Mordialloc Creek, and a new outlet to the Bay at Carrum, now the Patterson River. These changes reduced the flow in Kananook Creek with consequent silting of its entrance.

The wetlands of the Mornington Peninsula also fed the aborigines and early settlers, although these were smaller and easier to convert to farming. Most were along the beds of streams such as Merricks Creek at Coolart, although Boneo Swamp was a more extensive wetland in a large depression near Rosebud.

JOHN GERTSAKIS

Above: A remnant of the Carrum Carrum Swamp at Edithvale.

Below: A bird's eye view of the Minismere hide at Coolart, among the best bird hides in Australia.

STEVE YORKE


## Coolart Reserve MELWAYS 193 J8

- The main entrance to Coolart is 1 km on the right down Lord Somers Rd. from Sandy Point Rd.
- Facilities: Parking; toilets; disabled facilities and hide access; visitor centre with gift shop; picnic area with barbecues (wood supplied); walks with guide notes; Minsmere Hide on the lagoon; Observatory on the upper wetland; self-service tea and coffee in the Dining Room of the Coolart House; on Sundays Devonshire Teas are served by the Friends of Coolart
- Open to public: Coolart is open to the public from 11 am to 5 pm every day except Christmas Day, Boxing Day and Good Friday. An admission fee is charged
- Direct enquiries: P.O. Box 84, Balnarring 3926, (059) 831 333

Sacred ibis with chick.

STEVE YORKE

### General description

There are some 15 ha of wetlands in the 87 ha Coolart Reserve, formerly farmland with remnant woodlands.

The main wetland is a 5 ha lagoon developed in the creek bed, fringed by swamp paperbarks, willows, elms and swamp cypresses. The old dam wall and the islands (built during droughts in 1958 and 1968) have enhanced the lagoon for birds. Additional wetlands have been developed since 1980 by flooding pastures and creating shallow sedge marshes.

Other wetland habitats include seasonal billabongs, salt marsh and natural reed beds, mainly associated with Merricks Creek, a dune–trapped estuary. The condition of these is dependent upon local rains and the state of the sandbar.

*Water*: The wetlands usually contain some water all year round, although in years of low rainfall the shallow areas are dry in autumn.



### Ownership and management

Purchased by Victorian government in 1977. Reserved under the Land Act (1958) as a Public Purposes (Conservation and Education Purposes) Reserve.

Managed by Coolart Committee of Management, responsible to Minister for Conservation and Environment.

### Management objectives

- preserve and protect Coolart's natural and cultural values;
- enhance habitat values with further development of wetlands and revegetation;
- provide opportunities for the public to enjoy the Reserve with provision of high quality facilities;
- promote understanding of the Reserve and its management.

### Vegetation

There are formal "English" gardens, pastures, windbreaks of native and introduced trees and shrubs, an arboretum of Australian trees and shrubs, swamp paperbark thickets on the lagoon margins, remnant native grasslands and banksia and manna gum woodlands.

### Fauna

Coolart's best known wildlife species is the sacred ibis. A breeding colony of ibis established itself in 1961 on the paperbark–covered islands which Tom Luxton had built. From June to January as many as 550 pairs can be seen at their nests, some only a few metres from the viewing hides. Throughout the year, but especially in autumn, up to 8 species of ducks, most notably chestnut teal, can be seen along with grebes, swans, cormorants, coots, swamphens and other waterbirds.

The other habitats support a range of garden and bush birds. Coolart's mammals include swamp wallabies, ringtail and brushtail possums, southern brown bandicoots and eastern swamp rats, all hard to see. Koalas are often seen along the Woodland Walk.

### Aids to the visitor

Brochure with a map, guide notes and binoculars (no charge) are available at the visitor centre. The Friend Of Coolart on duty is available to answer any questions.

Daily audio–visual shows in the Observatory are:
1.30 pm – Introducing Coolart – history & wildlife, 20 min.
4.00 pm – Australian Plants & Australian Birds – How to create a garden for native birds, 25 min.

STEVE YORKE

The view from the Observatory through one-way glass.

Below: One of Coolart's wetlands sits at the bottom of the hill from the 1895 homestead and formal gardens.

STEVE YORKE

STEVE YORKE

Green swamp frog.

2.30 pm (week–ends only) warden's illustrated talk.

Bird identification charts are displayed in the Minsmere Hide and the Observatory.

A display of historic photographs and correspondence can be viewed in Coolart House.

Conducted tours can be arranged by contacting the Warden.

Special children's activities are organised each January.

### Special features

Most of Coolart's important wetlands are artificial in that natural wetlands have been modified or new wetlands built. These demonstrate how landowners can either create a wetland or restore a degraded one. A series of ponds constructed in 1987 demonstrate how plants and animals colonise new wetlands. One of the plant species, swamp wallaby–grass, is rare in Victoria.

### Nearby wetlands

The wetlands at Coolart are part of a chain of wetlands on the Mornington Peninsula and around Western Port. The ibises from Coolart feed in wetter areas on nearby farms, and on the mudflats around Westernport, including those on and near French and Phillip Islands.

Cormorants and royal spoonbill, which also feed around Western Port, breed at Coolart. The rarely–seen waterbirds – crakes and rails move around the wetlands from Merricks Creek to the Coolart lagoon.

The lagoon viewed from the Minismere hide.



### History

Prior to 1840 the local Bunurong people lived near a large wetland of perhaps 250 ha. They obtained much of their food, such as fish, waterbirds and eggs, from this wetland. Henry Meyrick wrote in 1840 that Merricks Creek was teeming with fish and ducks.

Most of the original wetland was cleared and drained in 1840 by Henry and his cousin Alfred Meyrick, Coolart's first settlers, who had a 17,000 acre lease.

In the early 1860's clay for brickmaking was dug from the bed of a gully, forming the deep section of the lagoon. Photographs taken around the turn of the century, now in the Grimwade collection, show water to the edge of the road with dense thickets of paperbark and sedges. In 1939 Tom Luxton raised an earth wall along the road and increased the size of the lagoon. Islands were built in the droughts of 1958 and 1968. Ibis began to nest on the islands in 1961.

In 1980 and 1982 new wetlands were developed in a wet paddock to the west of Coolart House. These are filled by overflow from the lagoon and other run–off and were designed to provide different habitats in contrast to the lagoon and Merricks Creek.

### Major changes and threats

Increasing settlement and subdivision may restrict the ibis feeding grounds near Coolart. Also there is a build–up of nutrients in the lagoon when there are several years of extended ibis breeding. This is countered by draining water from the lagoon in autumn, allowing oxygen into the exposed mud and then "new" water to fill the lagoon in winter.

The breeding ibis damage the vegetation in nest building and roosting. It is necessary to ensure that sufficient new growth occurs each year by planting or restricting grazing of young paperbarks.

*"Everyman's Country Estate"*

This apt description indicates not only the nature and atmosphere of Coolart as felt by a visitor, but also that this property is owned by the people and is available to all.

To visit Coolart is to experience the comfort of a country retreat which is not ostentatious, and which was always a working farm. The past owners have retained and enhanced the natural features of Coolart so that its wetlands, woodlands and grasslands abound with birds and other animals. The visitor can explore its many paths and tracks, finding hidden glens and vistas of Western Port; or can use one of its hides to see Coolart's bird life in close–up and learn their habits; or can simply sit and enjoy the gardens.

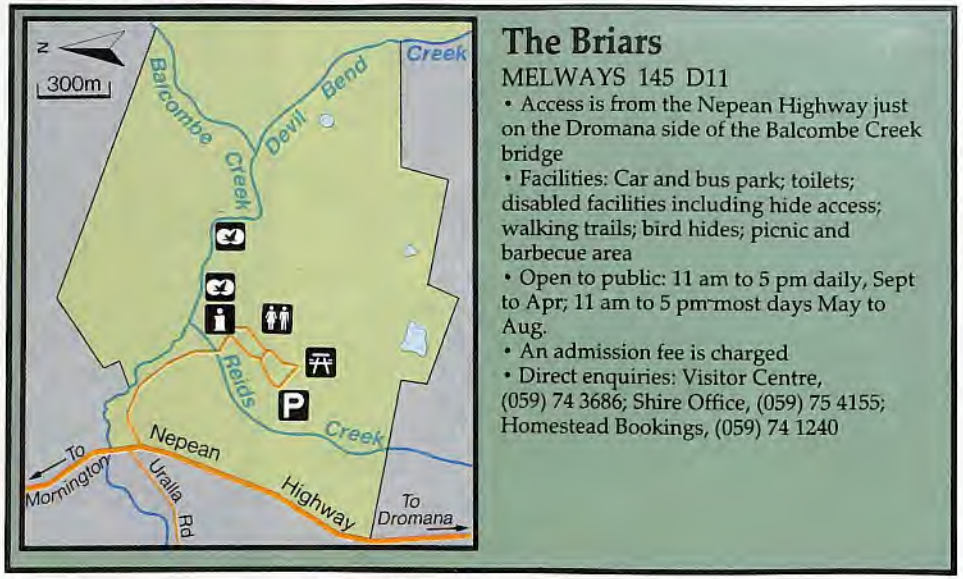
STEVE YORKE

The lagoon is fringed by swamp paperbarks and exotics planted by Tom Luxton.

**Further information**

Coolart produces many small publications, including a bird checklist; leaflets on plants and animals; nature walk guides; and a visitor's guide with a map and historical information.

The Friends of Coolart publish a regular newsletter which includes articles by the warden and staff on the natural history calendar at Coolart.




## The Briars

MELWAYS 145 D11

- Access is from the Nepean Highway just on the Dromana side of the Balcombe Creek bridge
- Facilities: Car and bus park; toilets; disabled facilities including hide access; walking trails; bird hides; picnic and barbecue area
- Open to public: 11 am to 5 pm daily, Sept to Apr; 11 am to 5 pm most days May to Aug.
- An admission fee is charged
- Direct enquiries: Visitor Centre, (059) 74 3686; Shire Office, (059) 75 4155; Homestead Bookings, (059) 74 1240

Crake and rail pond.

DOUGLAS EVENDEN

### General description

30 ha of wetlands along the Balcombe Creek set in the 230 ha property which includes the historic homestead and garden, woodlands, a community forest, vineyard, and farmland all overlooking the creek.

*Water*: The wetlands contain some water all year round, although in dry summers creek flow is low.

### Ownership and management

The Shire of Mornington owns and manages The Briars, with the National Trust being jointly involved in the homestead.

### Management objectives

- to conserve examples of woodlands and wetlands of the Mornington Peninsula
- to provide opportunities for the public to visit and appreciate wetlands

### Vegetation

In addition to the homestead garden and farmland, there are swamp gum and manna gum woodlands overlooking the creek, a recently planted forest of manna gums and she–oaks, and stands of reeds, rushes, swamp paperbarks in the wetland, interspersed with open areas of duckweed and water–buttons.

### Fauna

The wetlands support insects, frogs, fish, reptiles and crustaceans as well as birds. The more regularly seen birds are ducks, grebes, herons and other waterbirds, marsh harriers and bush birds from the woodland.



DOUGLAS EVENDEN

### Aids to the visitor

Guide brochure with map; displays in visitor centre and bird hides; nature trail notes; 17 minute introductory audio–visual.

### Special features

Of special interest are the artificial wetlands built adjacent to the creek, the bird hides and the historic homestead and contents.

### Nearby wetlands

Coolart; Western Port Bay; Port Phillip Bay; Tootgarook Swamp; numerous farm dams.

### History

First a pastoral lease in 1840, The Briars was settled in 1846 by Alexander Balcombe. Whilst it was mainly managed as farmland, areas of natural vegetation were retained, one example being the woodland. The property was purchased in 1977 by the Shire of Mornington which has developed it for conservation and its historical features. One of these is the collection of Napoleonic memorabilia gathered by Dame Mabel Brookes, a grand–daughter of Balcombe. Part of this collection is displayed in the homestead.

*"Built around history"*

The Briars is a lesson in how valuable wetlands can be created adjacent to the environs of a creek. Careful planning has enabled these to be built and planted so that they receive maximum use by birds and still enable visitors to view them at a close distance from the hides.

DOUGLAS EVENDEN

Visitor centre with Bunurong wetland

Chechingurk wetland and hide with The Briars homestead in the background.

DOUGLAS EVENDEN


## Edithvale Wetlands

MELWAYS 93 D8

- Access is from Edithvale Rd.
- Take a train to Edithvale Station and bus number 888 along Edithvale Rd.
- Facilities: Car park; bird hide
- Open to public: Bird hide open Sundays 2 pm to 5 pm (attended by Friends of Edithvale–Seaford Wetlands) June to January
- Access to Edithvale South Wetland during normal working hours by arrangement with DVWPA
- Direct enquiries: Dandenong Valley & Western Port Authority, 208 Princes Hwy Dandenong, 3175, (03) 797 1555

The Edithvale wetlands are constructed close to houses and main roads, yet still attract many migratory birds.

JOHN GERTSAKIS

### General description

The Edithvale Wetlands reserve is in two parts straddling Edithvale Rd, 50 ha to the north and 45 ha to the south. The south wetland has 20 ha of shallow water and flooded meadow with fringing reeds during winter and spring. The north wetland is former grazing land in a shallow depression. Several lagoons have been dug and nature trails, bird hides and a visitor centre are being built.

*Water*: Depth in south wetland is up to 1 m in winter and spring, but generally it dries out from late summer to late autumn. The lagoons in the north wetland are much deeper and contain water all year round.

### Ownership and management

The Dandenong Valley and Western Port Authority manages the wetlands.

### Management objectives

- to preserve the waterfowl habitat values of Edithvale south wetland;
- to develop the Edithvale north wetland into an educational and enjoyment area;
- to use the area as part of the DVWPA flood mitigation programme.

### Vegetation

The main plants in the wetlands are beds of common reed, streaked arrowgrass mudflats, water–buttons mudflats and paspalum pasture.



### Fauna

These wetlands support a high diversity and density of waterbirds. Ducks abound and breed. Grebes, coots and moorhens, herons and spoonbills are commonly seen. Migratory waders, including Latham's snipe and sharp–tailed sandpiper, feed on the edges.

Within the perimeter fence of the Edithvale south wetland resides a small mob of eastern grey kangaroos.

### Aids to the visitor

General brochure with map, specialised brochures on birds, plants, aboriginal history, fossil shells, displays in the two–storey bird hide.

### Special features

Of particular interest is the preservation of this valuable wetland in the midst of suburban development and with considerable support from the local residents. Despite the closeness of houses, migratory waders from northern Asia feed here each year.

### Nearby wetlands

Chelsea Heights Wetlands; Seaford Swamp; Mordialloc Creek; Patterson River; Port Phillip Bay; Braeside Metropolitan Park.

### History

The once extensive Carrum Carrum Swamp stretched from Mordialloc to Frankston. Aborigines of the Bunurong tribe sought eels, birds and their eggs, and green reed shoots in the swamp. It was drained in the late 1800s and used for crops and grazing. Being very low–lying (much of it less than a metre above mean sea level) it was flooded in winter–spring in most years. The Edithvale wetlands were purchased by the DVWPA and are now part of its flood mitigation programme.

### Major changes and threats

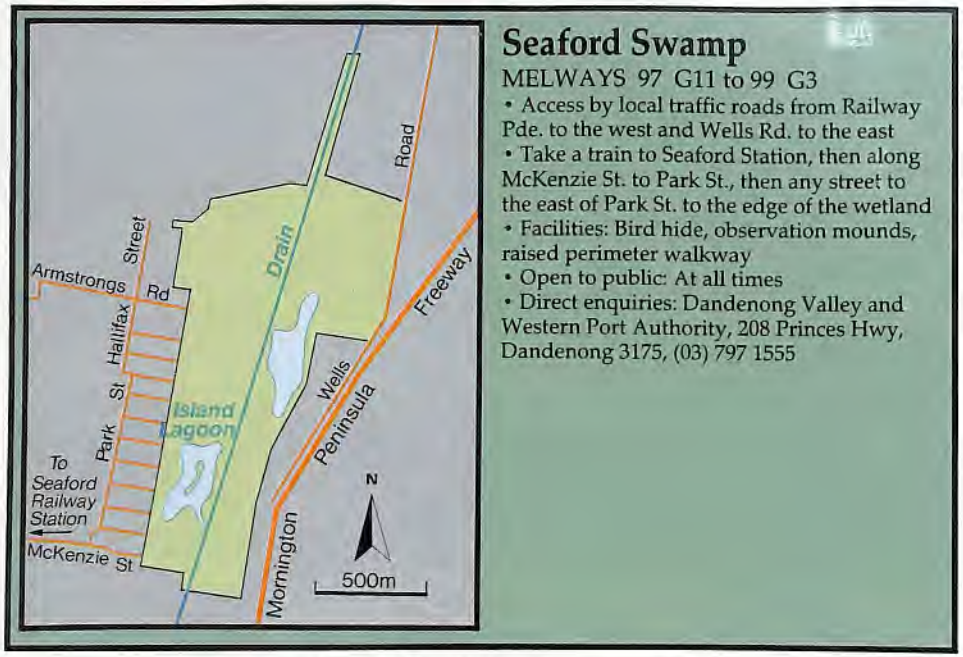
Since all water reaching the wetlands is run–off from residential and urban areas, peak flows are increased and water quality is often poor. The small macrophyte filter traps at drain inlets prevent many contaminents reaching the wetlands. The chain mesh fence around the Edithvale south wetland helps to encourage the large numbers and diversity of waterbirds because it keeps out dogs and trail bikes.

JOHN GERTSAKIS

The bird hide gives you an opportunity to view birds at close quarters without disturbing them.

**Further information**

Friends of Edithvale-Seaford Wetlands Inc.,
7 Randall Ave,
Edithvale 3196,
(03) 772 3952




## Seaford Swamp

MELWAYS 97 G11 to 99 G3

- Access by local traffic roads from Railway Pde. to the west and Wells Rd. to the east
- Take a train to Seaford Station, then along McKenzie St. to Park St., then any street to the east of Park St. to the edge of the wetland
- Facilities: Bird hide, observation mounds, raised perimeter walkway
- Open to public: At all times
- Direct enquiries: Dandenong Valley and Western Port Authority, 208 Princes Hwy, Dandenong 3175, (03) 797 1555

### General description

This shallow brackish swamp covers 120 ha at the southern end of the former Carrum Carrum Swamp, a long depression extending south from Mordialloc.

*Water*: The extensive shallow mudflats are flooded in winter–spring but dry out in summer. Deeper areas, such as drains, groundwater upwell sites and newly constructed lagoons hold water all year.

### Ownership and management

Administered by the Dandenong Valley and Western Port Authority and the City of Frankston.

### Management objectives

- to increase the aesthetic values and recreational opportunities of the perimeter of the swamp while preserving and enhancing the environmental values of its interior;
- to continue its role as a flood storage basin.

### Vegetation

The wide variety of plants include fog grass pastures, streaked arrowgrass, paspalum and water–ribbons flooded grasslands, water–buttons, reeds, rushes and sedges. There are remnants of the former stands of red gum, coast tea–tree and swamp paperbark.

**Further information**
Friends of Edithvale-Seaford Wetlands Inc.,
7 Randall Ave,
Edithvale 3196,
(03) 772 3952



### Fauna

Most wetland dependent birds of southern Victoria frequent this wetland some time during the year. Notable birds include marsh sandpiper, field wren and Latham's snipe, which is typically present in quite large numbers each year.

Other animals include the native swamp rat and bush rat, and native fish such as common galaxias and short–finned eel.

### Aids to the visitor

Brochures available from DVWPA.

### Nearby wetlands

Chelsea Heights Wetland; Edithvale Wetlands; Braeside Metropolitan Park; Port Phillip Bay; Western Port Bay.

### History

The once extensive Carrum Carrum Swamp stretched from Mordialloc to Frankston. Aborigines of the Bunurong tribe sought eels, birds and their eggs, and green reed shoots in the swamp. It was drained in the late 1800s and used for crops and grazing. The lowest pockets, such as Seaford Swamp, could only be cropped or grazed in the driest months, and then not every year. The peat which formed the original bed of the swamp caught fire in the early 1900s and burned for several years, lowering the bed of the swamp by up to 1 metre. The area is part of the DVWPA flood mitigation programme.

### Major changes and threats

Since all water reaching the wetlands is run–off from residential and urban areas, peak flows are increased and water quality is often poor.

ROD MCLELLAN

Edithvale, like Seaford Swamp, is constructed adjacent to roads and housing. Both are remnants of the once extensive Carrum Carrum Swamp.

ROD MCLELLAN


# Braeside Metropolitan Park

MELWAYS 88 E8

- Access from Lower Dandenong Rd.
- Bus routes 811 & 812 connecting Dandenong, Springvale & Mentone run past the gate
- Facilities: Car parks; toilets; disabled facilities and access; picnic areas & playground; barbecues; nature trails; bicycle trails; bird hide; visitor centre
- Open to public: Every day 10 am to 4 pm, 5 pm or 8 pm, depending upon the time of the year
- Direct enquiries: Visitor Centre, 8.30 am to 4 pm, (03) 551 1640

BOARD OF WORKS

## General description

This 295 ha park is flat, with open grassland, red gum grassy woodlands (75 ha), wetlands (50 ha) and sandy rises covered by heath woodland (54 ha). The heavier, wetter soils near the depressions carry red gum woodland while wetlands occupy the lowest areas. These wetlands are deep channels and pools of varying depth.

*Water*: The deeper pools hold water all year round, and the shallow areas are flooded in winter–spring. In summer/autumn the water becomes slightly brackish.

## Ownership and management

Braeside Metropolitan Park is managed by the Board of Works.

## Management objectives

- to conserve examples of remnant flora & fauna of south–east Melbourne, for the purposes of nature conservation and public appreciation;
- to provide educational and recreational opportunities based on the flora and fauna of the park;
- to promote public appreciation and interpretation of wetland ecology.



## Vegetation

The park was formerly farmland with some remnant heath woodland, red gum woodland and swamp paperbark thickets. Some of the grasslands have been retained, whilst the heath woodland on the sandy rises is being carefully managed as one of the few such remaining areas in the south–eastern suburbs. Similarly the red gum woodland is being prepared for park visitors. Introduced pasture grasses dominate this woodland at present, but there is some native kangaroo grass and scattered patches of orchids and other native wildflowers. The wetlands contain reeds and rushes, sedges, and areas of flooded herbs and grasses. Large dead red-gums have been installed as roosting sites for birds.

## Fauna

Waterbirds abound in the wetlands, with ducks, swans, water hens and pied stilts breeding in winter–spring. Native fish galaxias have been released into the waters. The park is currently being surveyed to establish the status of mammals, reptiles and amphibians.

## Aids to the visitor

Brochure with map; species lists; self–guided trails; ranger–led tours – Wetlands: Jan to March, Heathland: August to November; special school programmes.

## Nearby wetlands

Edithvale–Seaford Wetlands; Western Port Bay; Dandenong Creek valley; farm dams.

## History

The Bunurong tribe occupied this area on the north arm of the former Carrum Carrum Swamp before European settlement. The Keys family (hence Keysborough) ran cattle here from 1844 to 1910. In 1928 the Board of Works purchased the land and in 1940 a sewage treatment plant was established. When this ceased operating in 1980 cattle grazing resumed until the park was developed.

*"Woodlands and wetlands"*

Walking from the visitor centre to the wetlands, the extensive heathland and grassy woodland provide an unusual introduction to this wetland. It is like coming across a wetland after a long tramp through the bush. And the shallow, almost confined, wetlands provide a sense of hidden quietness, a sharing of this gentle haven with its birds and other animals.

BOARD OF WORKS

Large dead red gums have been installed in the wetland as roosting sites.

**Further information**

Visitor Centre, (03) 551 1640.
Board of Works Parks Division, (03) 615 4933.
Braeside Friends Group, (03) 551 1640.




NOEL RYAN / DCE

Above: Jawbone Reserve has been created from the former Williamstown Rifle Range and features untouched saltmarsh. Below: Skeleton Creek, typical of western suburb wetlands.

## Area 3

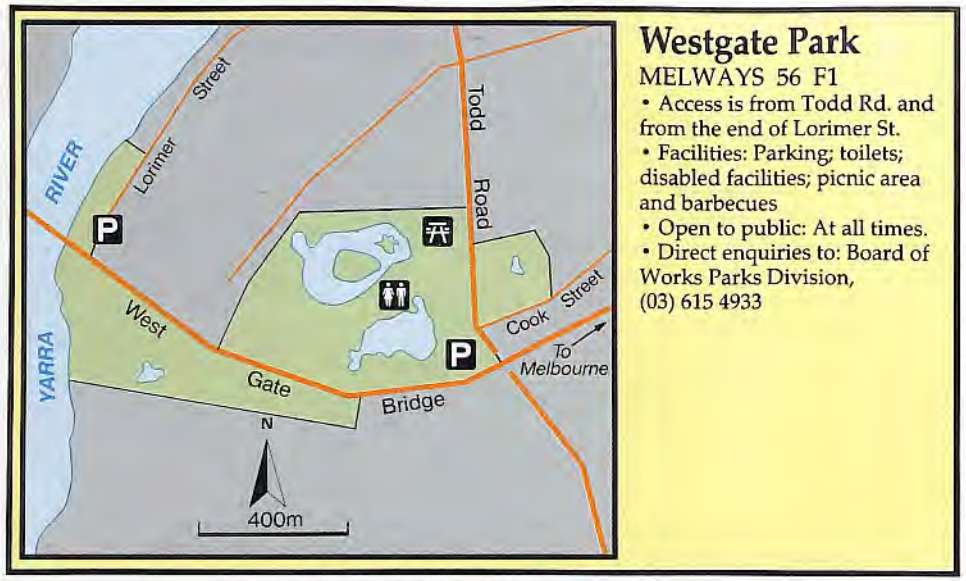
# Inner Western Suburbs

Some of Melbourne's most valuable wetlands are in the western suburbs. Although some are tucked away in hidden corners, from the air birds find them easily. Each year they are visited by waders migrating from northern Asia. Here, mangroves and salt marshes survive in the midst of suburbia and industries.

Originally there were many wetlands abutting the lower reaches of the Yarra and Maribyrnong Rivers and along the Altona-Williamstown shores of the Bay. The deepening of the Yarra for shipping started the process of change. The salt marshes at the junction of the two rivers became Coode Island and are now an industrial zone. Some areas such as Newell's Paddock and Stony Creek Backwash retained their basic wetland nature whilst becoming part of the new industrial areas. Thus, they are now valuable examples of early Melbourne.

In contrast, Westgate Park and Cherry Lake have been developed using their swampy nature as a basis. The unique shoreline of the Williamstown Rifle Range is now part of the new Jawbone Reserve and hence will remain essentially unaltered.

NOEL RYAN / DCE




# Westgate Park

MELWAYS 56 F1

- Access is from Todd Rd. and from the end of Lorimer St.
- Facilities: Parking; toilets; disabled facilities; picnic area and barbecues
- Open to public: At all times.
- Direct enquiries to: Board of Works Parks Division, (03) 615 4933

## General description

A newly–landscaped park under and near the eastern approaches to Westgate Bridge. Lakes have been excavated and extensive plantings have been undertaken.

*Water*: Freshwater and saltwater lakes have been built in former swampland and these contain water all year round.

## Ownership and management

Westgate Park is public land, managed by the Board of Works.

## Management objectives

- To provide a recreation and wetlands area.
- To provide major viewing opportunities of the river and docklands area.

## Vegetation

The area has been sown to grass, with extensive plantings of native trees and shrubs. Reeds and saltmarsh plants have become established around the fresh and salt lakes respectively.

## Fauna

A variety of seabirds and waterbirds use the lakes and adjacent land. These include ducks, gulls, coots, pelicans, swans, ibis, moorhens and waders such as stilts.

## Aids to the visitor

Basic brochure.

**Further information**

Board of Works Parks Division, (03) 615 4933.

Bird Observers Club of Aust.– Field Research Committee, 183 Springvale Rd, Nunawading, (03) 877 5342.

*"Birds of Port Phillip Bay"* - see reading list.



## Nearby wetlands

Albert Park Lake; Botanic Gardens; Stony Creek Backwash; Greenwich Bay.

## History

An extensive saltmarsh extended from Port Melbourne to Flemington Racecourse prior to European settlement. Over the years parts of this area were mined for sand, dredged for port facilities, filled for industrial development and levelled for an airstrip adjacent to the Government Aircraft Factory.

The construction of the Westgate Bridge provided an opportunity for the development of parkland in surplus public land around the bridge approaches.

## Major changes and threats

Nutrients and other chemicals from past industrial use of the site are being leached from the soil into the lakes. This is causing excessive growth of algae.

*"Surrounded but peaceful"*

Westgate Park, straddled by Westgate Bridge, nestles between crowded suburbs, industrial sites and the major shipping facilities for Melbourne. To visit Westgate and to wander its pathways is a fascinating experience. The nearby traffic on the bridge and even on the river slips noiselessly by, providing a strange backdrop to the birds busily feeding and lazily resting on its ponds.

BOARD OF WORKS

Westgate Park contains water all year round and attracts a wide variety of seabirds and waterbirds.

BOARD OF WORKS


# Cherry Lake, Altona

MELWAYS 54 J9

- Access from Millers Rd. or the end of Fresno St.
- Facilities: Car parks, toilets; disabled facilities; barbecues; picnic areas; playgrounds; bird hide.
- Open to public: At all times
- Direct enquiries: Board of Works Western Region Offices, (03) 3138517; Board of Works Parks Division, (03) 615 4933; DCE Western Wetlands Team, (03) 651 3038; City of Altona, (03) 316 1212

## General description

The 116 ha reserve includes a shallow 60 ha lake, parkland on the southern shore and a conservation zone to the north and west.

*Water*: The lake contains freshwater all year round which is supplemented by groundwater.

## Ownership and management

Owned and managed by the Board of Works. The parkland on the southern shore is leased to the City of Altona which provides picnic, play and toilet facilities.

## Management objectives

- retain and enhance the natural character of the area;
- provide recreation and education opportunities compatible with conservation and flood mitigation;
- function as a flood mitigation basin, allowing controlled discharge of floodwaters to Port Phillip Bay and so preventing seasonal flooding of the surrounding plain.

## Vegetation

The lake shores are grass with some reeds in the park section, the remainder being reed–beds, saw–sedge and salt marsh communities. The conservation zone has been planted with a variety of native trees and shrubs. The parkland has also been planted.

## Fauna

Waterbirds, such as ducks, coots and waders, including Latham's snipe, use the lake and its margins. Reed warblers breed in the reed–beds. The rare Altona skipper butterfly occurs in association with the chaffy saw–sedge. The lake is stocked with a variety of native and introduced fish species.

Cherry Lake is fed by small streams and holds fresh water all year round making it an important refuge for birds in droughts and dry spells.

BOARD OF WORKS

## Aids to the visitor

Basic brochure, walking tracks.

## Special features

Cherry Lake is one of the few permanent bodies of freshwater in the western region and in times of drought becomes an important refuge for waterfowl and migratory waders. The inaccessible northern shore of Cherry Lake greatly enhances its value as a conservation area.

## Nearby wetlands

Lower Kororoit Creek; Truganina Swamp; Point Cook; Greenwich Bay; Stony Creek Backwash.

## History

William Cherry settled the area in1845 and gave his name to Cherry's swamp. The swamp originally covered an area of 101 ha and was frequently dry. The swamp was converted into a permanent retarding basin in the late 1960s when a weir was constructed on the eastern side.

## Major changes and threats

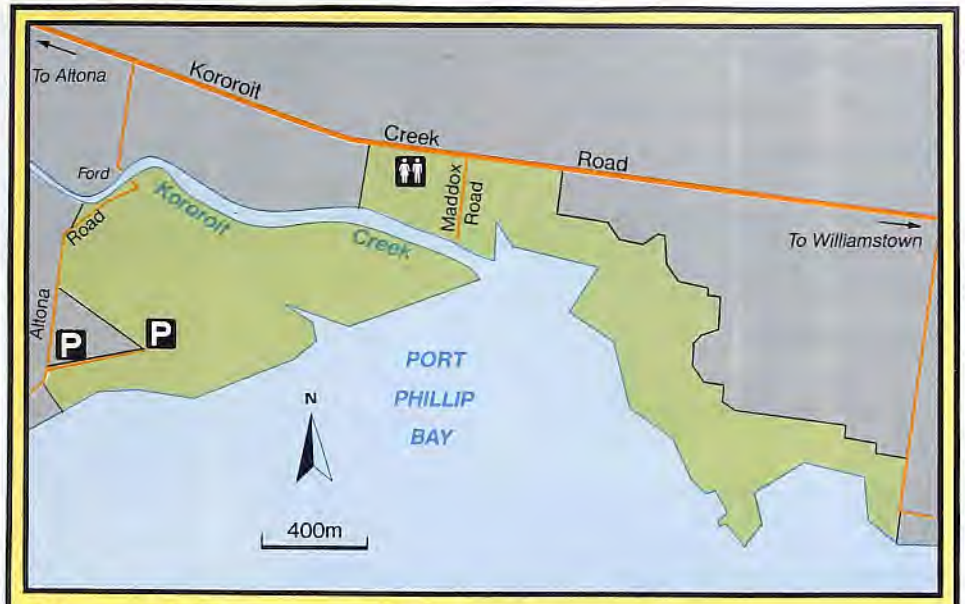
Weed invasion, uncontrolled access, recreation and water quality may affect the biological values of the area. A proposed industrial development in the catchment may alter drainage characteristics and water quality.

**Further information**

Board of Works Parks Division, (03) 615 4933;
DCE Western Wetlands Team, (03) 651 3038;
*"Birds of Port Phillip Bay"* - see reading list.

Surrounded by industry, Cherry Lake was originally a swamp. It became a lake when a retarding basin was constructed in the 1960s.

NOEL RYAN / DCE

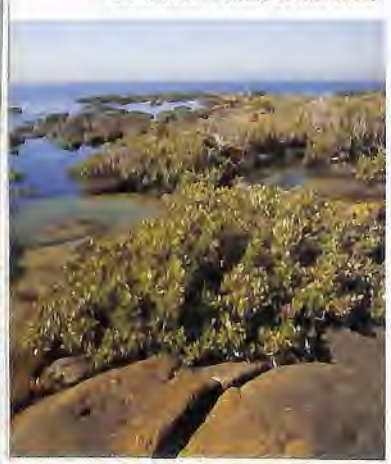



## Altona–Williamstown Shore, MELWAYS 55 J8

Comprising: Altona Coastal Park; Kororoit Creek Estuary; Jawbone Flora and Fauna Reserve

- Access: Jawbone: none yet; Mouth of Kororoit Creek: From Maddox Rd., and ford between Altona Rd & Racecourse Rd.; Altona Coastal Park: Altona Rd.
- Facilities: At this stage there are few public facilities, although recently developed plans provide for extensive visitor facilities at Jawbone. There are toilets and a boat ramp at the P.A.Burns Reserve adjacent to the Altona Coastal Park
- Open to public: At all times, apart from Jawbone which is planned to be open to the public in 1992
- Direct enquiries: DCE Western Wetlands Team, (03) 651 3038

Mangroves growing on basalt, an unusual feature of this shore.



NOEL RYAN / DCE

### General description

The Kororoit Creek enters Altona Bay between the Jawbone Reserve (formerly Williamstown Rifle Range) to the north–east and the Altona Coastal Park to the south–west. The Kororoit Creek changes from freshwater reed beds between Kororoit Creek Rd and Millers Rd to salt marsh between Millers Rd and the Altona Railway line to salt creek as it enters Altona Bay. The vegetation of Jawbone Reserve is salt marsh and mangrove which grows amongst outcrops of basalt. The coast of the park is sandy with occasional basalt boulders, while offshore there is a 500 metre wide belt of sand bars parallel to the coast resting on submerged basalt.

### Ownership and management

Altona Coastal Park – crown land managed by Altona City Council through a Committee of Management; Kororoit Creek Mouth – Board of Works & POMA, Kororoit Creek Swamps – Board of Works; Jawbone Flora & Fauna Reserve – DCE.

### Management objectives

- the conservation, preservation and restoration of the natural values of the area.

### Vegetation

This section of coast and the estuary of the Kororoit Creek contain a variety of types of salt marsh, mangroves growing on a rocky shore, dune vegetation in the coastal park, and rushes and reedbeds along the creek.

### Fauna

The fauna of this complex area is mainly birds, with a wide range of seabirds, waterbirds and waders occurring at different times of the year. The extensive intertidal flats are particularly valuable feeding areas for birds. The coastal vegetation also supports a wide range of other birds. A few mammals, including echidna, possums and water rat, are present as well as some reptiles and amphibians.

### Special features

Mangroves, basalt platforms, intertidal flats.

### Nearby wetlands

Cherry Lake; Greenwich Bay; Stony Creek Backwash.

### History

The Jawbone Reserve occupies part of the former Williamstown Rifle Range, which operated from 1878 to 1990. The mouth of the Kororoit Creek has historically been a fishing anchorage for Melbourne's west, and the Altona Coastal Park was formerly considered a wasteland.

### Major changes and threats

Dogs and cats from nearby residential areas and trampling of salt marshes are major threats. It is proposed that wetlands be developed in Jawbone Reserve and some parts will be zoned as "restricted public access".

*"Rifles protect the mangroves"*

This formerly neglected part of Melbourne's shoreline has many hidden gems for the visitor. The existence of the Rifle Range has meant that the mangroves and saltmarshes behind the butts have been left relatively undisturbed. The mouth of the Kororoit Creek is a sleepy little fisherman's haven, with the boats reflected in the calm waters on a lazy hot summer day. You need time to properly explore the shores of the Altona Coastal Park. It is best to time your visit at low tide to see the most birds and appreciate the complexity of the inter–tidal zone.

NOEL RYAN / DCE

Waterbirds are abundant in all areas with a variety of vegetation types providing a range of habitats.

**Further information:**

DCE Western Wetlands Team, (03) 651 3038.
Board of Works Parks Division, (03) 615 4933.
Altona City Council, (03) 316 1212.
Friends of the Rifle Range, 17 Laverton St Williamstown, 3016, (03) 399 9053.
*"Birds of Port Phillip Bay"* - see reading list.


## Greenwich Bay

MELWAYS 56 C5

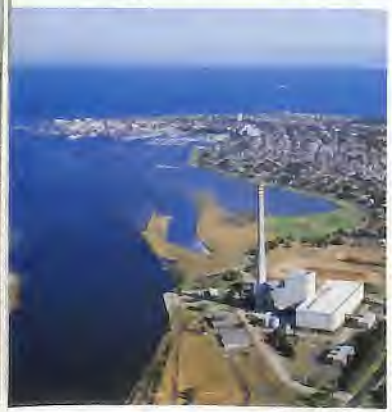
- Facilities: The adjacent Greenwich Reserve has car parks; boat launching ramp; picnic areas; barbecues; playground. There are few shade trees for hot summer days
- Open to public: At all times
- Direct enquiries: Williamstown City Council, 104 Ferguson St., Williamstown, (03) 393 9311

## Stony Creek Backwash

MELWAYS 42 C11

- Facilities: Small car park; walking tracks; footbridge / boardwalk across the backwash to the banks of the Yarra
- Open to public: At all times
- Direct enquiries: To Port of Melbourne Authority, (03) 611 1777

An aerial view of Greenwich Bay to Williamstown's north.



BOARD OF WORKS

### General description

Greenwich Bay is a shallow inlet at the head of Hobsons Bay adjacent to the mouth of the Yarra. Rock groynes line the river mouth and the sides of the cooling water outlet from the Newport Power Station as well as along the shore of the Greenwich Reserve. Sandy spits have formed along some of the groynes. Stony Creek Backwash is a tidal backwater of the Yarra River at the mouth of Stony Creek. The backwash is shallow and fringed by mangroves and salt marsh.

*Water*: Greenwich bay is an open marine inlet and both areas are subject to wind and tide.

### Ownership and management

Management of Stony Creek Backwash and Greenwich Bay is vested in the Port of Melbourne Authority. Greenwich Reserve is managed by the Williamstown City Council.

### Management objectives

- to conserve an example of lower Yarra tidal marshes;
- to provide an area for recreation and nature study.

### Fauna

Greenwich Bay is noted for its large numbers of black swan as well as a wide variety of seabirds, waterbirds and waders. The groynes are also popular fishing spots. Stony Creek Backwash is used by sea and waterbirds and ibis, gulls, herons and lapwings are readily seen.

### Special features

The warm water flowing from the power station outlet no doubt attracts birds and fish, especially during the winter. Stony Creek features the nearest mangroves to the city and access to an isolated section of the Yarra.

### Nearby wetlands

Westgate Park; Kororoit Creek; Cherry Lake; Albert Park Lake; Newell's Paddock.

### History

The salt marshes at the mouth of the Yarra were mostly converted to ash settling ponds for the original Newport Power Station. The construction of groynes has also altered the nature of this area, but there is still a variety of feeding and resting habitats for seabirds, waterbirds and waders.

Stony Creek Backwash was neglected as the port developed and industries established on the higher ground around it. The mangroves dwindled but still survived. The area was in the headlines when the partly–built Westgate Bridge collapsed onto one side of it. With the completion of the bridge, attention turned to rehabilitating the surrounds and the natural values of the backwash now seem assured.

### Major changes and threats

Oil and other pollution from shipping and nearby industries enters Stony Creek Backwash via the Yarra River. Rubbish also accumulates in the creek and backwash.

*"Mangrove Haven"*

As you begin to walk across the Stony Creek bridge/board-walk towards the banks of the Yarra there is an immediate sense of leaving the city and entering the quiet world of the marshes. The birds feeding and resting on the shore, the young mangroves sprouting from the mud, and the occasional glimpse of a fish where the backwash deepens into Stony Creek all contribute to this "sense of place".

JOHN GERTSAKIS

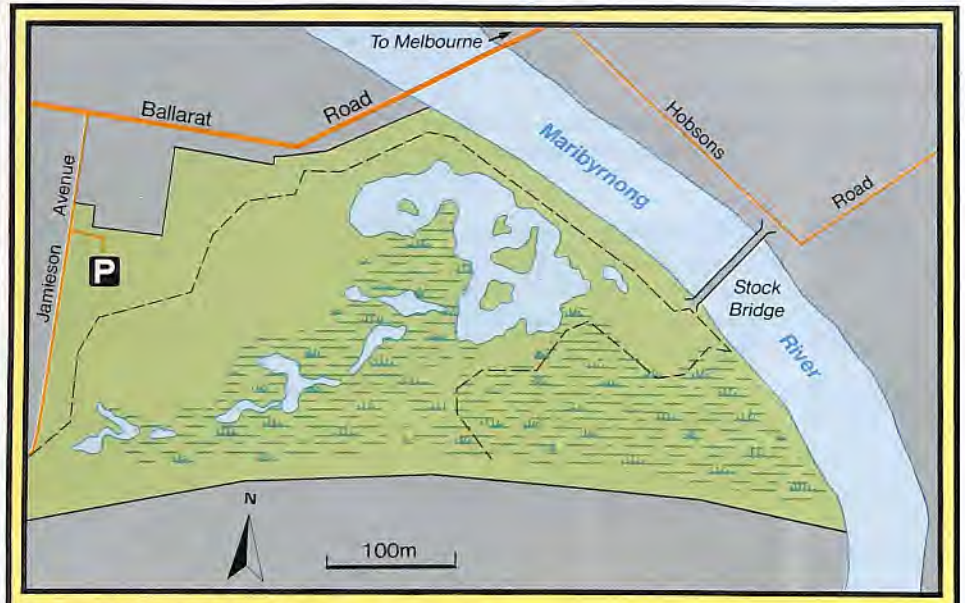
Above: a pelican on Greenwich Bay.
Below: Stony Creek Backwash.

JOHN GERTSAKIS

**Further information**

DCE Western Wetlands Team, (03) 651 3038.

*"Birds of Port Phillip Bay"* - see reading list.




## Newell's Paddock MELWAYS 42 F3

- Facilities: Car park; walking tracks; footbridge over Yarra River (not yet open); cycle track along the Maribyrnong River
- Open to public: At all times
- Direct enquiries: Footscray City Council

Leisure Services, (03) 688 0302; DCE Western Wetlands Team, (03) 651 3038; The Living Museum of the West, Pipemakers Park, Van Ness Ave., Maribyrnong, (03) 318 3544

Newell's Paddock, on the Maribyrnong River, is easily accessible and surprisingly close to the city.

JOHN GERTSAKIS

### General description

Newell's Paddock is a 12 ha flat area of grassland and small open wetlands with some fringing reeds and saline flats.

*Water*: Local run–off after rain provides water for the wetlands, and they dry out in summer except for the deepest pond.

### Ownership and management

Owned by the Board of Works, managed by Footscray City Council.

### Management objectives

- to provide a recreation and wetlands area adjacent to housing estates.

### Vegetation

The landscaped areas have been extensively planted with eucalypts, wattles, sheoaks and tea–tree. There is a row of old cypress' along the stock route. Salt marsh plants occur on saline soils, mainly near the Maribyrnong River, whilst there are clumps of reeds and rushes on the edges of the freshwater ponds.



### Fauna

The animals found here are primarily birds, although some reptiles inhabit the long grass and shrub copses. Ducks, grebes, moorhens and gulls abound on the wetlands and ibis and lapwings feed on the edges and in the adjacent grassland. Swallows and other small birds such as the golden–headed cisticola are also seen.

### Aids to the visitor

Basic brochure available.

### Special features

A good example of how a degraded area can be returned to close to its original state.

### Nearby wetlands

Maribyrnong River; Westgate Park; Stony Creek Backwash; Pipemakers Park.

### History

The reserve is named after David Newell, the owner in 1886. The flat area was formerly wetlands along the river, but was progressively filled during the operations of the Angliss meatworks on the hillside to the west. The stock route crossed Newell's Paddock, with some of the cypress' along the fence being planted in 1910. A large freshwater lagoon, used to supply water to the holding paddocks, once occupied the site of the car park.

The land was bought by the Board of Works in 1983.

### Major changes and threats

The plantings need careful tending as the site becomes very dry in summer. The waters are enriched by nutrients from the soil and small catchment, causing excessive algae growth.

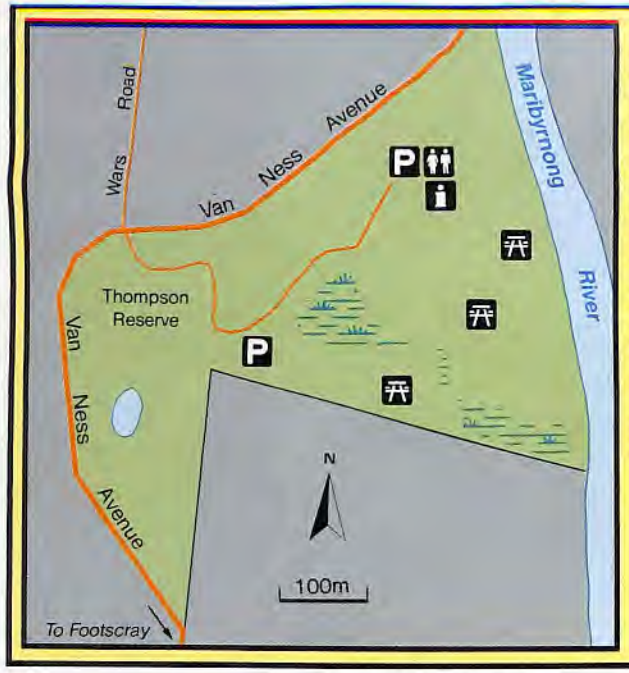
*"Hidden and Unexpected"*

Visited on a hot summer Sunday, this "shy place" was sheltering a variety of birds. Flocks of silver gulls were bathing in the shallows and a small group of White Ibis stood on the edge of the grass. A pair of masked lapwing watched warily from near the ibis whilst two little grebes dived alternately in the shade of the cypress' near the stock route. A lone white–faced heron stood statuesque in the reeds while a few black duck loafed on the water, heads tucked into their backs.

And all this in Footscray, on the edge of Melbourne's first river.

JOHN GERTSAKIS

JOHN GERTSAKIS




## Pipemakers Park

"The Living Museum"
MELWAYS 28 B9

- Facilities: Car parks; visitor centre; toilets; disabled facilities; picnic areas; barbecues; walking tracks; historic trails
- Open to the public: Every day except Christmas Day, Good Friday and Easter Sunday
- Hours – 10 am to 4, 5 or 7 pm depending on the time of year
- Direct enquiries: Living Museum of the West in the Visitor Centre, (03) 318 3544

### General description

The site comprises a hillside and river flats adjacent to the Maribyrnong River, with buildings and remnants from industries formerly on the land. There is landscaped parkland with some older trees and extensive replanting. Two small wetlands have been created by excavation at the foot of a small gully.

The Living Museum of the West occupies part of the Visitor Centre.

*Water*: The small wetlands have only a limited catchment and are usually dry by early summer.

### Ownership and management

This park is owned and managed by the Board of Works.

### Management objectives

- to provide recreation;
- to preserve examples of the original environment in Melbourne's western suburbs;
- to assist the Living Museum of the West to focus on the history and heritage of Melbourne's western suburbs, including the environment and the industries.

### Vegetation

The wetlands have dense reedbeds and some old dead trees provide useful roosting sites.

**Further information**

Detailed displays in the Visitor Centre



### Fauna

Small numbers of waterbirds use the wetlands, including gulls, ducks and other waterbirds, and waders such as Latham's snipe.

### Aids to the visitor

Brochure with map.

### Nearby wetlands

Newell's Paddock; Maribyrnong River.

### History

The area was the site for some of Melbourne's earliest industries. In 1847 a boiling down works was established and in 1867 the Melbourne Meat Preserving Company canned meat using a vacuum process. However canning meat for export to Europe began to be superseded by shipments of refrigerated meat during the 1880s. The Humes pipeworks was established in 1911. Its closure in 1979 provided the opportunity for the Board of Works to buy the land and develop the historical and environmental parkland in conjunction with the Sunshine City Council and the local community.

JOHN GERTSAKIS

Pipemakers Park, adjacent to Highpoint West shopping centre, features an unusual range of activities to interest visitors of all ages.

JOHN GERTSAKIS

BOARD OF WORKS

Birds nest in the dead trees of Lake Borrie in the Board of Works Farm.

# Area 4

## Outer West, Laverton, Werribee and Lara

Leaving the western suburbs one encounters the flat basalt plains stretching to the You Yangs and Bacchus Marsh. Drainage is poor, with only a few meandering streams in winter. Originally the area was dotted with shallow swamps and coastal lagoons. A few remain, while others have been enhanced, such as at the Board of Works Farm and Serendip.

The wetlands of the western shores of Port Phillip Bay are very different from other Melbourne wetlands. The low featureless shoreline, with its shingle and shell beaches, is less attractive to the summer visitor than the sandy beaches of the eastern shore. The low rainfall of this area has also attracted uses such as saltworks and sewage treatment farms.

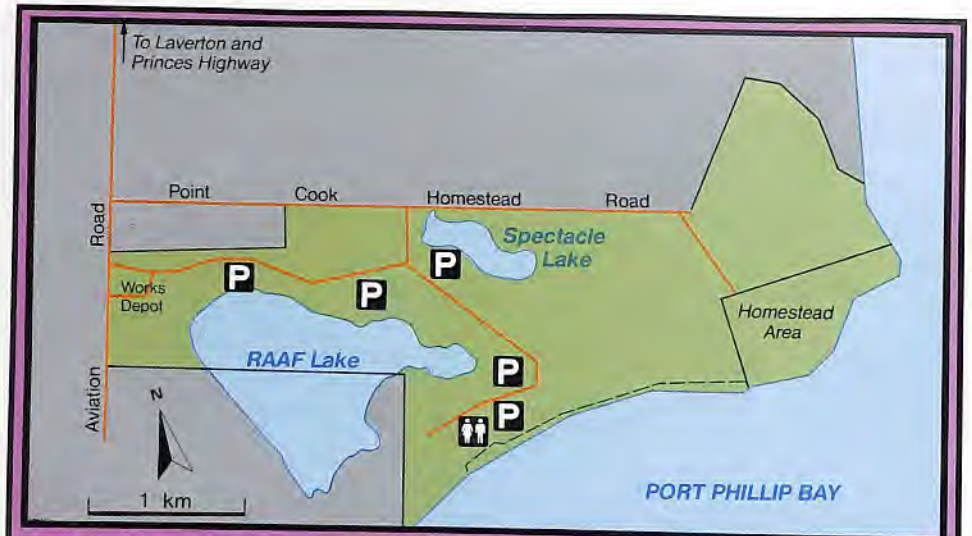
Whilst these have radically changed the nature of the wetlands, they have nevertheless remained wetlands with an assured water supply. The Cheetham Saltworks is one of the most valuable wader feeding areas in Australia. Kororoit and Skeleton Creeks and the Werribee and Little River often cease to flow in summer and sandbars form across their mouths. The extensive saltmarshes and inter-tidal flats attract huge flocks of waders and other waterbirds, the area enjoying a high reputation among bird enthusiasts the world over.




Saltmarsh at Limeburners Bay.



NOEL RYAN / DCE




## Point Cook Metropolitan Park MELWAYS 207 K12

- Access from Aviation Rd.
- Facilities: Car parks; gas barbecues; changing rooms for swimming; disabled toilets at beach car park; bird hide at Spectacle Lake; walking track at homestead
- Open to public: Open daily 10 am to 8 pm in summer, earlier at other times
- Direct enquiries: To the ranger office, (03) 395 1198

Sheep graze adjacent to part of the Point Cook wetlands.

NOEL RYAN / DCE

### General description

The landscape is generally flat, with sand dunes along the coast of Port Phillip Bay, Spectacle Lakes, grassland and saltmarsh. The historic homestead and outbuildings are at Point Cook itself.

*Water*: Spectacle Lake is shallow and water levels vary with rainfall

### Ownership and management

Board of Works.

### Management objectives

- to provide a variety of recreational and educational experiences in a coastal setting;
- to protect, restore and enhance the natural and cultural values of the park;
- to manage the park in a manner compatible with other wetlands in the region.

### Vegetation

Much of the park's plants are grasslands and dune vegetation. Lignum and water–buttons occur in Spectacle Lake and saltmarsh communities are also present, especially around the edge of the RAAF Lake.



### Fauna

The main fauna is birds, especially waterbirds and waders, and seabirds along the coast.

### Aids to the visitor

Brochure & map, guided tours of homestead by arrangement.

### Special features

Marine Reserve offshore; historic homestead.

### Nearby wetlands

Board of Works Farm; Cherry Lake; Mouth of Kororoit Creek; Cheetham Saltworks.

### History

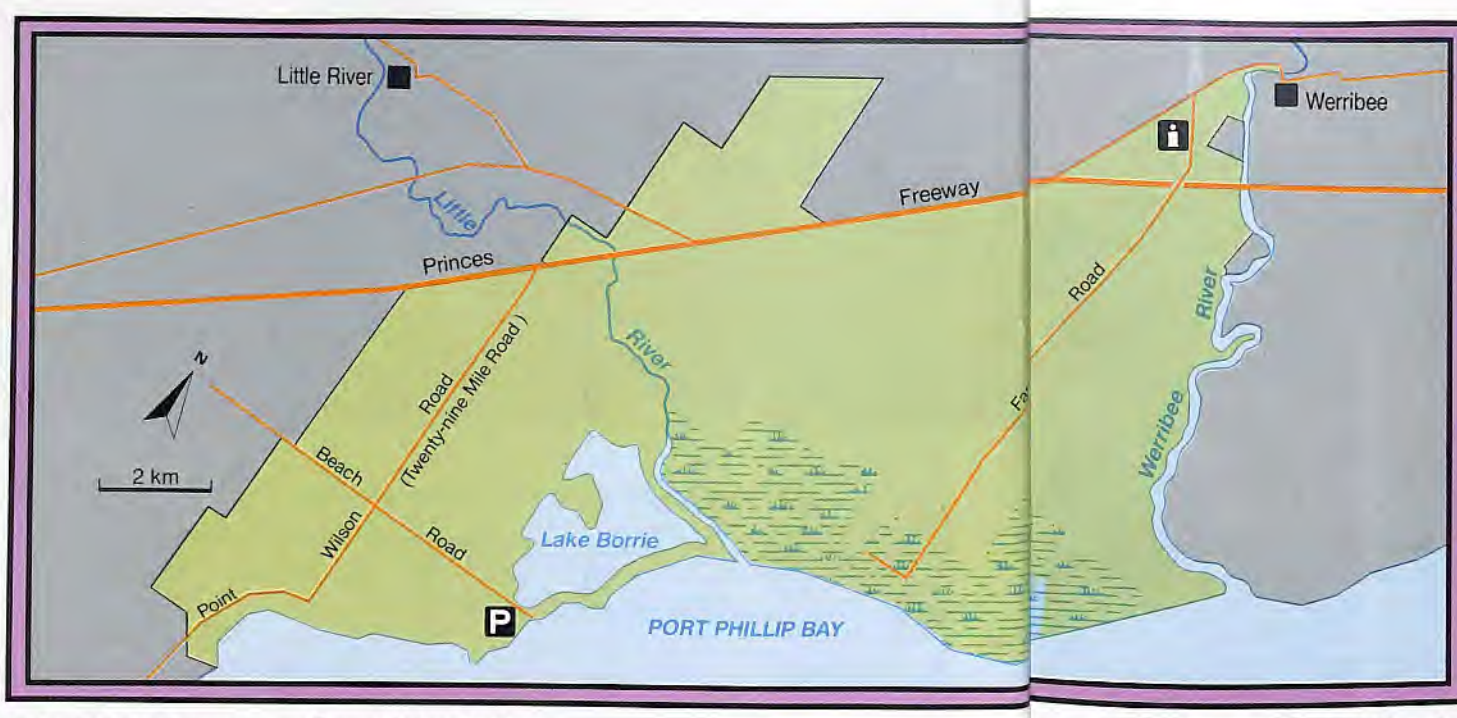
Point Cook was named after John Cooke, mate of HMV *"Rattlesnake"*, which charted the area in 1836. The "e" has since disappeared. By 1849 the land around Point Cook was being grazed and in 1852 ownership passed to the Chirnside family, who later established Werribee Park. Many of the buildings date from around 1850 but they and the garden seem to have been somewhat neglected. The soils and proximity to the bay would have made it difficult to establish and maintain trees and gardens. Little is known of the subsequent history, except that the land was grazed, until the Board of Works purchased it and opened the first part of the park in 1982.

*"Homestead by the sea"*

The old homestead was obviously once grand, but what hard work it must have been trying to grow a garden and establish a farm on this hungry soil. Now the shore and adjacent wetlands are enjoyed by visitors, both human and bird, who give scant consideration to the difficulties of those former residents nearly 150 years ago.

**Further information**

Board of Works Parks Division, (03) 615 4933.




## Board of Works Farm, Werribee

MELWAYS 205 E12 (Entrance)

- Access: From New Farm Rd.
- Facilities: The farm office in New Farm Rd. has toilets and parking. A visit to the farm involves driving around the farms internal roads
- Open to the public: Naturalists, students and members of the public can visit the farm, although permission is required. Permits for specific purposes can be obtained and talks and group tours can be arranged
- Direct enquiries: Wildlife Section, Werribee Farm, Box 10, Werribee, 3030, (03) 742 9209

Birds nesting in dead trees in Lake Borrie.

### General description

The 10,850 ha Board of Works Farm is located on the plains south–west of Werribee and includes sewage treatment lagoons, created wetlands, irrigated pasture, dry pasture, saltmarsh, natural swamps, permanent and temporary streams, estuaries, coastal lagoons and mudflats.

*Water*: The water levels in most pondages is stable. Some coastal areas are tidal and many areas are waterlogged in winter. Some creeks and the natural swamps are dry in summer.

### Ownership and management

Board of Works.

### Management objectives

- primarily to treat Melbourne sewage effluent;
- manage livestock as part of land filtration and grass filtration treatment processes;
- protect and enhance birds and other wildlife inhabiting the farm.

### Vegetation

There is a wide range of plant communities on the farm – pastures, native grassland, plantations and windbreaks, saltmarsh, herbfields, red gum woodland, reed beds and other stream side vegetation. Important plants include the endangered brittle greenhood orchid, grey glasswort, glaucous goosefoot, rare sedges, lignum, kangaroo grass, wallaby grass, spear grass and stands of very old red gums.

### Fauna

Over 250 species of birds have been recorded on the farm. Some of the more important birds are the endangered orange–bellied parrot, a number of migratory waders which breed in northern Asia, waterfowl including the rare freckled duck, rails, seabirds, breeding colonies of ibis and cormorants, and birds of prey.

15 native and nine introduced species of mammal inhabit the farm. The fat–tailed dunnart, a small mouse–like marsupial, live in grasslands, nesting in rocky outcrops. One of the bats, the little forest eptesicus, is often found in hollow trees, disused buildings and fence posts. The water-rat nests in burrows along the banks of drains and streams and there is a small platypus population along the Werribee River.

Of the 17 species of reptiles found on the farm, some of the more interesting are the legless lizard, eastern long–necked tortoise, white–lipped snake and metallic skink. Seven species of frogs inhabit the swamps, watercourses, ponds and pastures.

Artificial islands constructed to provide shelter and nesting sites for birds.

NOEL RYAN / DCE

BOARD OF WORKS

Sunset over the You Yangs and Lake Borrie.

**Aids to the visitor**

Brochures, maps, guided tours by arrangement.

**Special features**

The Board of Works Farm is considered to be "the most famous place for waterbirds in Australia". It supports endangered species, significant proportions of the known national population of 8 wader species, and very significant proportions of 2 others. The other major features are the annual breeding colonies of white and straw–necked ibises and pied cormorant and the very high population of birds of prey.

**Nearby wetlands**

The Spit; Point Cook; Limeburners Bay; Cheetham Saltworks at Point Cook; Serendip.

**History**

In 1892 the Board of Works bought land to the west of the Werribee River for treatment of Melbourne's sewage. The site was chosen because of its low rainfall and suitable soils. Initially 3,580 ha was purchased but as Melbourne's population grew further land was bought between 1912 and 1960, when the farm reached its present size of 10,850 ha. The initial emphasis was on land filtration treatment, but this had to be augmented in winter with grass filtration. Development of the lagoon system also became necessary in 1928. In addition to the artificial lagoons, natural wetlands such as Lake Borrie were also incorporated into the system. The dead trees in Lake Borrie, killed by permanent inundation, date from before it became permanently flooded. All of these changes contributed to the development of the remarkably diverse and productive set of wildlife habitats. The conservation values of the farm are now well recognised and incorporated into its management.

**Major changes and threats**

There will still be changes to the management of the farm as the nature of Melbourne's effluent changes. Care needs to be exercised to ensure that the conservation values of the farm are maintained and enhanced. The continual urbanisation of Melbourne and Werribee could encroach on part of the farm, which would detract from its value.

**Further information**

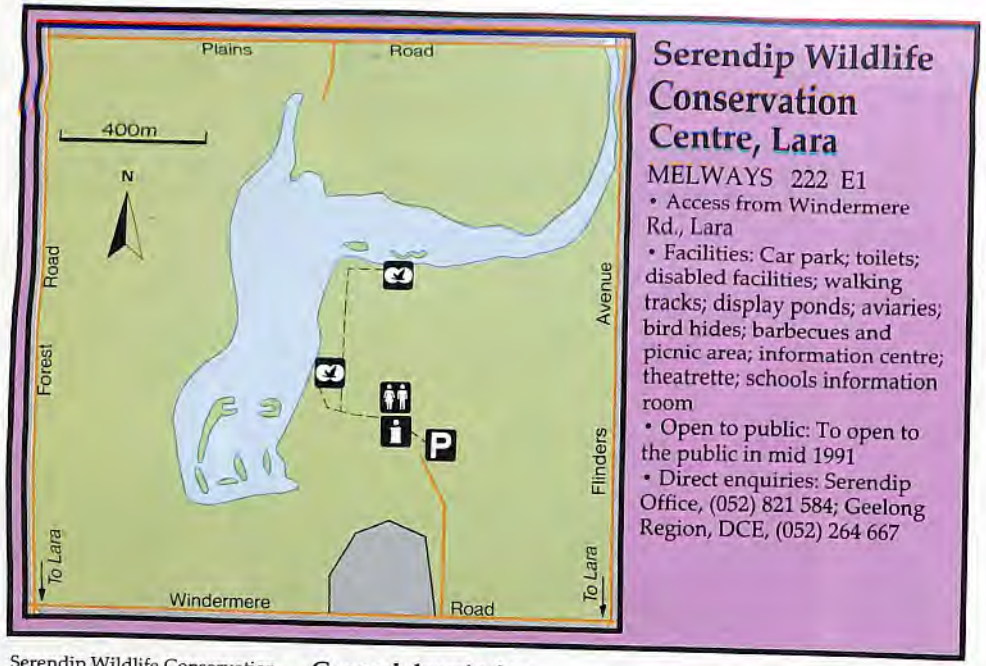
Board of Works publications – contact Board of Works farm office.

*"The best place for waterbirds in Australia"*

Once one overcomes a natural reluctance to visit a sewage farm, the sheer size and diverse wildlife of the farm almost overwhelm the visitor. With occasional glimpses of the wild and lonely western shore of Port Phillip Bay , you explore the intricate road system of the farm as you search out the best wildlife sites. Whether it be the quiet ponds and lakes with their waterfowl, or the shoreline constantly lapped by waves, one has a sense of remoteness not usually felt within a few kms of a city of almost 3 million people. This sense is reinforced by the continual movement of birds – waders seeking mud flats on which to feed, waterfowl winging in to rest after feeding, birds "hawking" after insects, raptors "hawking" after other birds.

Pelicans at Lake Borrie, one of the best places for waterbirds in Australia.

NOEL RYAN / DCE




## Serendip Wildlife Conservation Centre, Lara

MELWAYS 222 E1

- Access from Windermere Rd., Lara
- Facilities: Car park; toilets; disabled facilities; walking tracks; display ponds; aviaries; bird hides; barbecues and picnic area; information centre; theatrette; schools information room
- Open to public: To open to the public in mid 1991
- Direct enquiries: Serendip Office, (052) 821 584; Geelong Region, DCE, (052) 264 667

Serendip Wildlife Conservation Centre with the You Yangs in the distance.

NOEL RYAN / DCE

### General description

Serendip covers 250 ha of the flat plains north of Lara. It has been extensively replanted since 1959. In the centre is a 30 ha lake formed over 100 years ago by the damming of a tributary of Hovell's Creek. Ponds have been built on the margins of this lake and a display wetland is adjacent to the visitor centre.

*Water*: The main lake rarely goes dry although the level falls each summer. The display ponds are kept full.

### Ownership and management

Geelong Region, DCE.

### Management objectives

- to promote the conservation of wetlands and wildlife;
- to provide educational and recreational opportunities associated with wetlands.

### Vegetation

In addition to the original open woodland and early sugar gum and stone pine plantations there have been extensive plantings of a wide variety of native trees and shrubs. A variety of aquatic plants have also been planted in and around the lake and ponds.

### Fauna

Serendip now has 115 bird species, 60 of which breed.



Substantial numbers of waterfowl use the lake and surrounds, and other waterbirds such as ibis roost each night after feeding in surrounding farmland. Swamp wallaby and grey kangaroo roam the woodlands at the lake's edge.

### Aids to the visitor

Basic brochure, walking tracks, aviaries, provision for disabled visitors in hides, ranger on duty.

### Special features

Extensive wetland displays and breeding populations of Australian bustard, magpie goose, Cape Barren goose and brolga.

### Nearby wetlands

Board of Works Farm; The Spit; Limeburners Bay; Avalon Saltworks.

### History

The Windermere homestead was the base for a once-extensive grazing property to the north of Lara. Only 256 ha remained of the original property by the 1950s and it was heavily grazed. In 1959 it was purchased by the then Fisheries & Wildlife Department and developed as its main Wildlife Research Station. The lake area was extended and further ponds and farm dams excavated to add to the variety of wetland habitats. Extensive studies into waterfowl biology were conducted at Serendip. It became a centre for captive breeding of rare species and is recognised world–wide for its work with brolga, bustard, magpie goose, and Cape Barren goose.

### Major changes and threats

Serendip has undergone major changes since it was the principal wildlife research station for the government. Extensive remodelling to enable it to be a major visitor and education centre is still proceeding. Water supply is spasmodic as the centre is in a rain shadow area. Sufficient rain and run–off occurs once every 2–3 years to fill the lake, and it dries out to a few pools about one year in seven.

*"A wetland for birds and people"*

The western plains of Victoria were once open woodlands with shallow wetlands as well as deeper lakes. Serendip presents to the visitor many of the elements of western Victoria – open woodlands, sugar gum plantations, small pine plantations, and open wetlands. But added to this is the opportunity to see many waterbirds at close hand.

NOEL RYAN / DCE

Serendip features 115 bird species including this brolga (below)

NOEL RYAN / DCE


# The Spit

(The Island, Murtcaim)
MELWAYS 255 G6

- Access to the saltmarsh is possible from Point Wilson Rd. The coastal spits can be reached through the BOW Farm by permit only. Access through freehold land on southern side is not permitted
- Facilities: None
- Open to public: The Point Wilson Rd. is open at all times (to the Explosives Reserve Gatehouse). Access through the Board of Works Farm is by permit – see Access above
- Direct enquiries: To DCE Geelong Region, (052) 264 667; Board of Works Farm Office, (03) 742 9209

The tidal lagoon at the Spit at low tide.

NOEL RYAN / DCE

## General description

This area is a tidal lagoon, separated from Port Phillip Bay by shingle and shell banks and bars. On the landward side there are extensive saltmarshes.

*Water*: The area is tidal.

## Ownership and management

The Spit State Wildlife Reserve is managed by DCE.

In addition, the Murtcaim Wildlife Management Committee has been established to oversee management of the reserve and adjacent Board of Works and private land.

## Management objectives

- to conserve habitat for local wildlife, for migratory waders and for the endangered orange–bellied parrot.

## Vegetation

The bulk of the vegetation is saltmarsh, with some shrubs on the spits separating the lagoon from Port Phillip Bay. Extensive beds of algae also occur behind these spits. Important plants include the native brittle greenhood orchid, and two critical food plants for the orange–bellied parrot, the grey glasswort and the glaucous goosefoot.



## Fauna

The most notable bird is the endangered orange–bellied parrot. Waterbirds, waders and seabirds use the lagoon and intertidal flats, the fairy tern breeding on some of the spits. Other animals are metallic skink, white–lipped snake and the Altona skipper butterfly.

## Aids to the visitor

None.

## Special features

Part of the Port Phillip Bay wintering grounds of the orange–bellied parrot and extensive wader populations in summer.

## Nearby wetlands

Board of Works Farm; Limeburners Bay; Altona Saltworks; Serendip.

## History

This isolated stretch of shore was extensively mined for shell–grit up until the 1960s and grazed by sheep until the 1970s. ICI Australia purchased the adjacent freehold land and proposed to build a large petrochemical plant to replace its inner urban chemical plants in Sydney and Melbourne. This created potential conflict with the need to conserve the wintering grounds of the endangered orange–bellied parrot but eventually the plant proposal was abandoned.

## Major changes and threats

This section of coastline is ever–changing as is the channel linking the lagoon with Port Phillip Bay. The spits become islands and vice–versa, so that the dune vegetation is continually recolonising new ground.

*"The wild shore"*

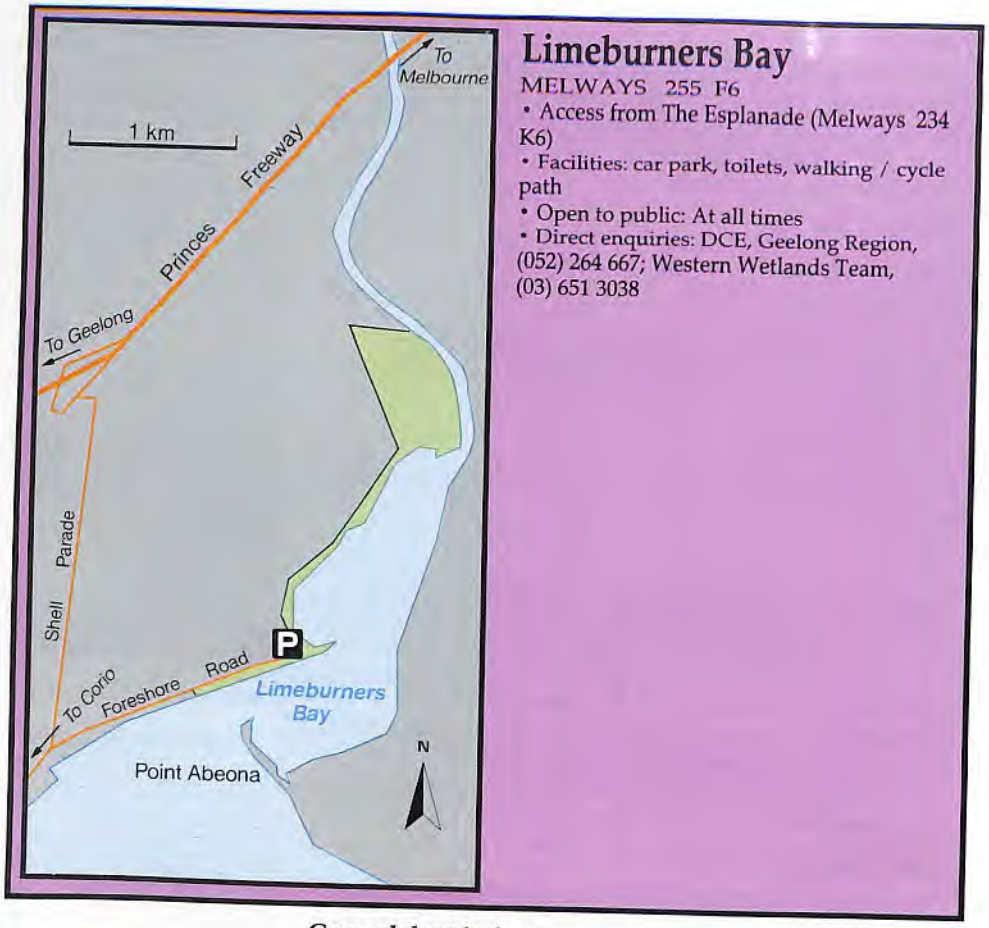
Visiting this wild, abandoned shore gives a sense of total isolation. To reach the spit you have to walk across rock–strewn paddocks, cross the salt–marsh or wander up the shingle beach. The flat featureless coast stretches north and south. The only signs of humans are a navigation beacon, a jetty, the ruins of a fisherman's hut, and the remnants of shell–mining machinery. On a calm summer's day at low tide the intertidal mudflats are a mass of small birds feeding – the migratory waders storing up energy for the return flight to northern Asia. But on a grey winter's day, with squalls scudding across Port Phillip from Corio Bay, flocks of birds seek shelter on the comparatively calm waters of the lagoon, and I seek shelter while I scan the saltmarsh for a sign of an orange–bellied parrot.

NOEL RYAN / DCE

A view of the Spit from offshore.

**Further information**

Extensive reports on the area were published when a petrochemical plant was proposed on adjacent freehold land – contact DCE Library.




## Limeburners Bay

MELWAYS 255 F6

- Access from The Esplanade (Melways 234 K6)
- Facilities: car park, toilets, walking / cycle path
- Open to public: At all times
- Direct enquiries: DCE, Geelong Region, (052) 264 667; Western Wetlands Team, (03) 651 3038

### General description

This long narrow estuary of Hovell's Creek has a long unstable shellgrit spit across its mouth. It is surrounded by well–grassed high ground and has a sizeable stand of mangroves as well as salt–marshes and reeds.

*Water*: Part of Corio Bay, the waters are tidal. Freshwater habitats occur upstream of the mouth of Hovell's Creek.

### Ownership and management

DCE and POGA.

### Management objectives

- to conserve the natural values of the estuary and creek environs.

### Vegetation

Plant communities in this relatively untouched area include mangroves, a range of types of salt marsh and salt pan, and beds of common reed.

### Fauna

Seabirds, waders and waterbirds.

### Aids to the visitor

None known.

### Special features

One of the few areas of mangroves remaining near Melbourne.

### Nearby wetlands

Avalon Saltworks; Serendip; The Spit; Board of Works Farm.

### History

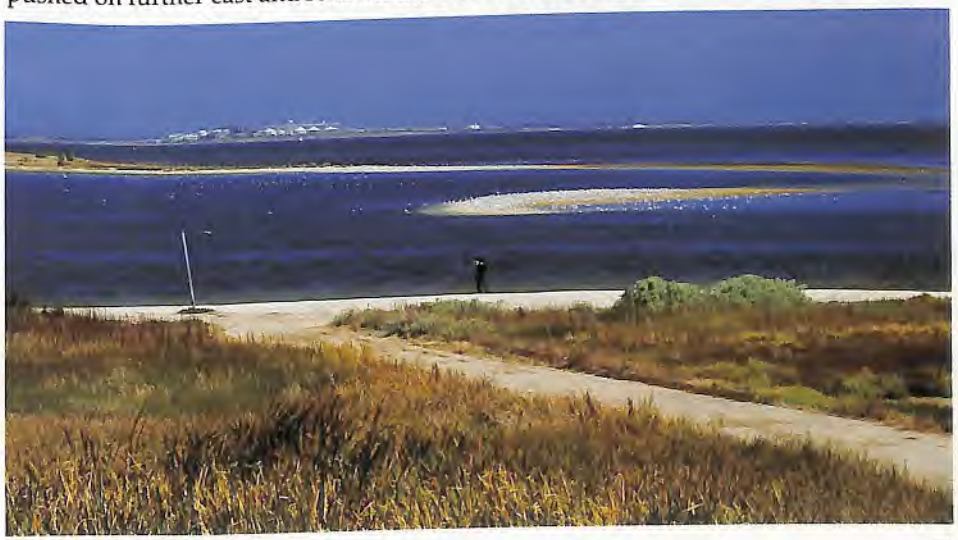
Hovell's Creek is where Hume and Hovell first reached the sea after their overland trek from south of Sydney in 1824. In the early days the extensive shell–grit deposits were burnt for lime, but by and large the area has remained undisturbed apart from being an anchorage for small fishing boats.

*"Quiet anchorage"*

This quiet backwater, far removed from the crowded anchorage of Corio Bay or the busy Port of Melbourne, allows one to reflect on how Hume and Hovell must have felt when they finally reached the sea. And with our knowledge of Victorian geography we can ponder at what might have been a different history of settlement had they pushed on further east and reached the Yarra River in 1814.

NOEL RYAN / DCE

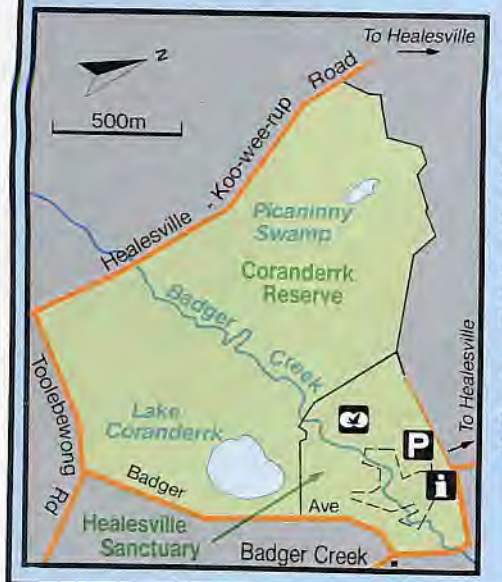
Seagulls in flight.



The sand spit at the entrance to Limeburners Bay

NOEL RYAN / DCE

# OUTER MELBOURNE




## Healesville Sanctuary

MELWAYS 248 11D

- From Melbourne, on entering Healesville, turn right at Badger Creek Rd. after the shops, and proceed for 4km to Healesville Sanctuary
- Buses also depart from Whights in Flinders St. for day trips
- Facilities: Car parks; toilets; disabled facilities; picnic areas; barbecues; kiosk; visitor centre; walking tracks; bird hides; boardwalk
- Open to public: 9 am to 5 pm every day. An admission fee is charged
- Direct enquiries: Healesville Sanctuary Office, Badger Creek Rd, Healesville, (059) 62 4022

### General description

The Healesville Sanctuary is essentially a "zoo" displaying a wide range of Australian fauna in a natural setting of tall eucalypt forest along the Badger Creek. A number of ponds and lakes have been created along the creek. There is a walk–through, free–flight aviary centred over part of one of the wetlands.

The Coranderrk Bushland, off–limits to visitors, has two major wetlands, the Coranderrk Lake and the Picaninny Swamp, which complement the public area and encourage many free–living waterbirds to frequent the display ponds.

*Water*: The water levels are maintained in the ponds and lakes by water from the creek. There are marsh and shallow wading areas in addition to deeper water (up to 3m).

### Ownership and management

Zoological Board of Victoria.

### Management objectives

- to display Australian native wetland animals (particularly birds) and plants in a simulated natural environment;
- to educate people to become aware of the intrinsic beauty, complexity and vulnerability of wetlands and their inhabitants;
- to provide habitat for local wildlife populations.

Inside the bird aviary at Healesville Sanctuary, centered over part of the wetland area. A walkway takes the visitor in and out of the aviary whilst exploring the wetland.

SID COWLING



### Vegetation

Mixed eucalypt forest which has been extensively modified to house and display the animal collection. Many ferns, sedges, sword grasses and shrubs such as tea–tree grow along the banks of the wetlands.

### Fauna

A wide range of Australian waterbirds is on display. Many wild birds, including ducks, ibis, spoonbills and herons, use the display ponds and the other wetlands on the property.

Other animals include frogs, long–necked tortoise, native fish and eels, platypus and many insects.

### Aids to the visitor

Brochure with map, booklets, guided tours by arrangement, staff on site, talks by keepers.

### Special features

A wide range of wetland species can be seen at close range. Many of the species breed on site, including the rare freckled duck.

### Nearby wetlands

Coranderrk Lake; Picaninny Swamp; Yarra River valley; numerous farm dams.

### History

The Healesville Sanctuary is located on the former Coranderrk Station, which was an aboriginal reserve, established in 1860. The Sanctuary was the first to breed platypus in captivity and they are still a major feature. The present wetland was developed in 1988 by modifying a dam built in the 1960s.

### Major changes and threats

Water quality is a problem where large numbers of animals are kept together and care is needed to ensure proper circulation and disposal. The water from the Badger Creek can become polluted before it reaches the Sanctuary, and in dry summers flow can be less than desired.

*"Finding a swamp in the forest"*

On arriving, the immediate feeling is of visiting an isolated swamp as you see the ducks swimming amongst the reeds and the spoonbills perched on the dead stumps. Soon after entering the aviary you leave it again and walk around the edge of an open wetland with many wild birds feeding on the edges. You then re–enter the aviary and cross the wetland on a boardwalk. Different waterbirds, and tortoises, are feeding in the water and resting on the bank, unconcerned at the people close by.

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Mountain streams flow through Coranderrk Park to supply water to Healesville Sanctuary.

## Coranderrk Park

When visiting Healesville, a short visit to the Coranderrk Park and Badger Creek Weir, off Don Rd., provides an opportunity to see another wetland habitat – the bed and margins of a mountain stream. This area at the head of the Badger Creek supplies water to Healesville and the Sanctuary. It is managed by the Board of Works and is open from 10 am to dusk each day.


# Beyond the urban fringe

## South-West – Geelong and the Bellarine Peninsula

The floodplain of the Barwon River extends through Geelong to Barwon Heads with a wide range of wetland types between Balyang Sanctuary at Newtown and Bass Strait.

Balyang Sanctuary is essentially an artificial pond in a park with substantial copses of trees, shrubs and reeds. The floating barrage on the Barwon River prevents salt water intruding upstream from near Reedy Lake and helps to maintain the river level in Geelong.

The dense reedbeds in the freshwater Reedy Lake at Leopold foster breeding colonies of ibis and other waterbirds, whilst large flocks of swans inhabit the salt Lake Connewarre. On the southern bank of the Barwon River are the extensive saltmarshes of Hospital and Salt Swamps, and the smaller Murtnagurt Swamp.

Close to Geelong is the vast Moolap–Point Henry saltworks on Corio Bay. Around the Bellarine Peninsula are the tidal Swan Bay at Queenscliff, coastal lagoons at Portarlington, Indented Head and Point Richards as well as many small dams.

NOEL RYAN / DCE




# Beyond the urban fringe

## South-East – Western Port and Phillip Island

Travelling towards Phillip Island, the first indications of the former Koo-Wee-Rup Swamp are the market gardens on the left after passing through Cranbourne. At Tooradin a weir has been built under the road bridge so that the upper section of the tidal estuary now always contains water.

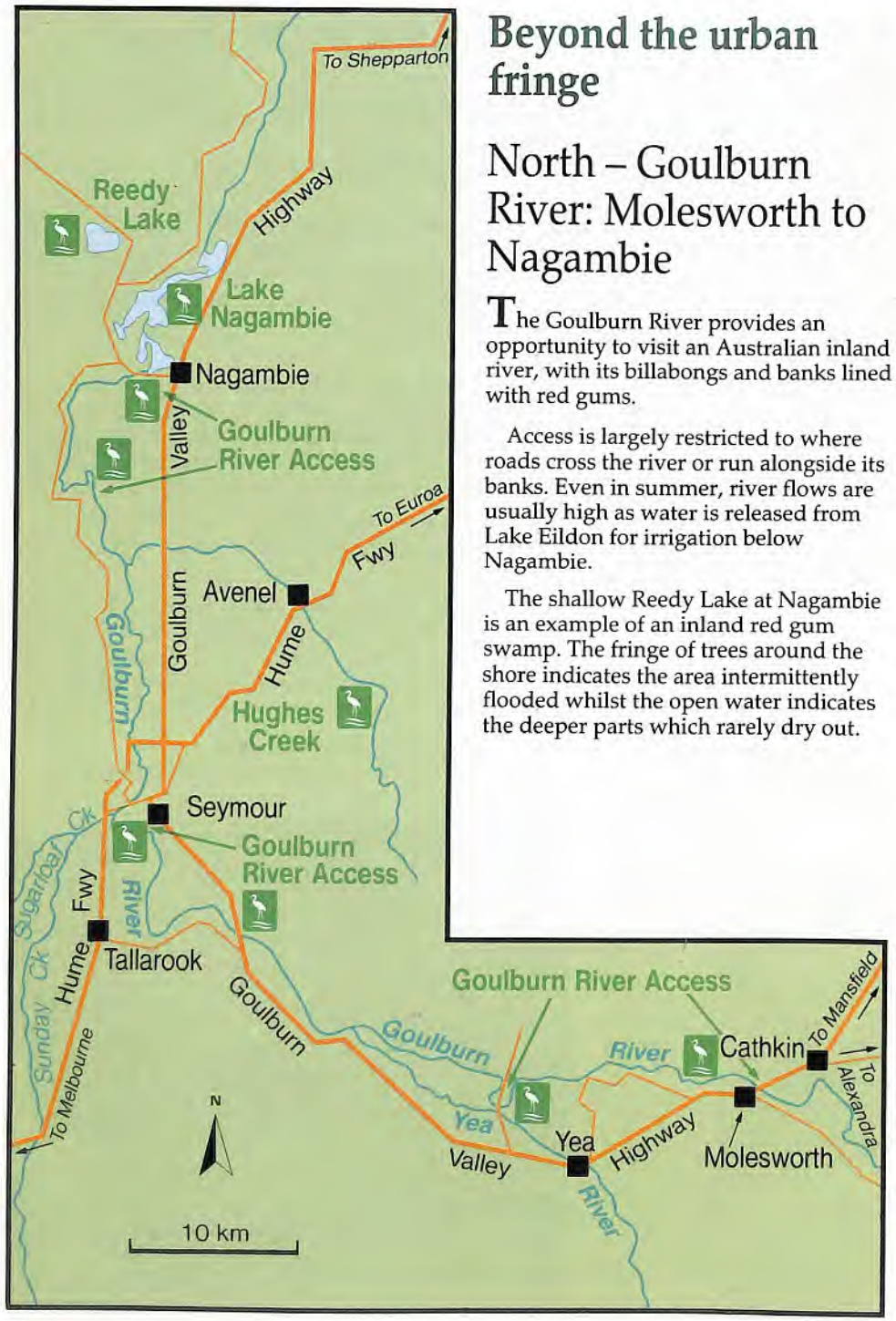
Between Tooradin and Lang Lang, many channels were dug to drain this vast swamp. Some of these are now anchorages for fishing boats and all are flyways for birds seeking wetlands upstream when high tide covers their feeding grounds on the mudflats of Western Port.

A tower near the Bunyip River enables the visitor to obtain glimpses of Western Port and remnants of this once great swamp.

On reaching Phillip Island the most accessible wetlands are Rhyll Swamp and Swan Lake near the Penguin Parade. Rhyll Swamp, with its ibis colony, is a classic coastal shrub swamp similar to many found on the Gippsland and far western coasts of Victoria.

The wetlands of French Island are largely undisturbed and are a haven for waterbirds as well as aquatic plants.

JOHN GERTSAKIS




# Beyond the urban fringe

## North – Goulburn River: Molesworth to Nagambie

The Goulburn River provides an opportunity to visit an Australian inland river, with its billabongs and banks lined with red gums.

Access is largely restricted to where roads cross the river or run alongside its banks. Even in summer, river flows are usually high as water is released from Lake Eildon for irrigation below Nagambie.

The shallow Reedy Lake at Nagambie is an example of an inland red gum swamp. The fringe of trees around the shore indicates the area intermittently flooded whilst the open water indicates the deeper parts which rarely dry out.



# Further reading


| | |
|---|---|
| Anon (1981) | Birds of Heidelberg and the Yarra Valley<br>*Warringal Conservation Society* |
| Anon (1987) | Birds of the Maribyrnong Valley<br>*Friends of the Maribyrnong Valley Inc* |
| Cowling, S.J. (1990) | Wetlands Wildlife<br>*Gould League Victoria & Victorian Wetlands Trust* |
| Diez, S (Ed) (1990) | Wetlands; their ecology, function, restoration and management.<br>Proceedings of an Applied Ecology and Conservation Seminar Series<br>*Wildlife Reserves, Latrobe University* |
| Garnet, S et al (1986) | Birds of Port Phillip Bay –<br>*Ministry for Planning & Environment* |
| Reid, A.J. et al (1974) | Birds of Victoria – 3 – Oceans, Bays & Beaches –<br>*Gould League Melbourne* |
| Reid, A.J. et al (1987) | Birds of South–eastern Australia – 4 – Inland Waters –<br>*Gould League Melbourne* |


White-faced heron at Cherry Lake.

BOARD OF WORKS

# Index of places





# Further information

(Organisations involved in wetlands management, conservation and education)

**Board of Works** (ph 03 620 0221)
*625 Little Collins Street, Melbourne, 3000*
As a responsible environmental manager for the past 100 years, the Board of Works has played a key role in the rehabilitation of Melbourne's major waterways. One of its key corporate objectives is to maximise the waterways' aesthetic and recreational benefits. This involves a number of programmes, including re-establishment works along a number of water-courses involving planting of native and indigenous trees to create 'green corridors'.

The Board's extensive network of metropolitan parks is an important conservation link in a chain of wetland areas in and around Melbourne, including the Werribee Treatment Complex which is home to more than 200 species of birds and has been declared a wetland of international significance.

**Department of Conservation and Environment** (phone 03 412 4422)
*240 Victoria Parade, East Melbourne, 3002*
In 1988 major changes in wetland management were announced with the release of the Wetland Conservation Programme by the state government. The Programme grew out of the State Conservation Strategy and Fauna and Flora Guarantee and aims to redress the abuse and neglect of the past.

A Wetlands Unit was established in 1989 within the Department of Conservation and Environment (formerly Conservation, Forests and Lands) to coordinate implementation of the programme. Major actions include a statewide inventory, assessment and evaluation of Victorian wetlands to designate those of high value, establishing water requirements for wetlands, an economic evaluation of wetlands, setting guidelines for management planning, grazing, and use of fire and developing a community awareness strategy.

The Department of Conservation and Environment, through its Wetlands Unit plays a major role in other key wetland initiatives. These include the Western Wetlands Agreement, a programme designed to conserved and enhance wetlands in Melbourne's western suburbs, an integrated watering strategy for River Murray wetlands and for ensuring wetlands are accounted for within salinity management areas. Copies of the Wetland Conservation Programme are available from the Wetlands Unit at 1/240 Victoria Parade, East Melbourne 3002 (phone 03 412 4422).

**Victorian Wetlands Trust**
(ph: 03 412 4448) *1/250 Victoria Parade, East Melbourne, 3002*
The Victorian Wetlands Trust was formed in 1988 to promote better wetland conservation and management. The Trust aims to provide a forum for wetland issues, advocate conservation and foster scientific research and environmental education. New members are welcome.

**Gould League of Victoria**
(ph: 03 510 1493) *67 High Street, Prahran, 3181*

**Bird Observers Club of Australia**
(ph: 03 877 5342) *183 Springvale Road, Nunawading, 3131*

**Royal Australasian Ornithologists Union** (ph: 03 370 1422) *21 Gladstone Street, Moonee Ponds, 3039*

**National Trust of Australia (Victoria)**
(ph: 03 645 4711) *Tasma Terrace, Parliament Place, Melbourne, 3002*

**Victorian National Parks Association**
(ph: 03 650 8296) *247 Flinders Lane, Melbourne, 3000*

**Victorian Association for Environmental Education**
(ph: 03 650 8050) *247 Flinders Lane, Melbourne, 3000*

**Dandenong Valley and Western Port Authority** (ph 03 797 1555) *208 Princes Highway, Dandenong, 3175*

**Royal Melbourne Zoological Gardens**
(ph: 03 347 1522) *Parkville, Victoria 3052*

*Explore Melbourne's Wetlands* is a handy guide to 25 wetlands in and around Melbourne.
Featuring maps of each wetland and many colour photographs, this book is an invaluable reference for anyone interested in wetlands and waterbirds.

A wide range of wetlands are covered from the Board of Works Farm at Werribee, to the Royal Botanic Gardens in the Domain.

For those unfamiliar with wetlands, *Explore Melbourne's Wetlands* provides the perfect introduction to these rich and important places.

Sid Cowling, a biologist, has worked on fish and wildlife management projects for over 25 years, primarily on waterbirds and wetlands with the Victorian Department of Conservation, Forests and Lands. He has also been involved with international, national and interstate programmes, and lectures at universities on wildlife and management of the natural environment.

Sid is a member of the Research Committee and a former Vice-President of the Royal Australasian Ornithologists Union, and a member of the International Ornithological Committee. He is a foundation member of the Victorian Wetlands Trust. Previous publications include *Wetlands Wildlife* (published by the Gould League).

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