The BUSH in BASSENDEAN

Bassendean Preservation Group (Inc.)

INTRODUCTION

Concern for remnant bushland and wetlands has increased as more people realise the values of our natural heritage and appreciate its true beauty. This realisation comes from understanding the local plants and animals and how these relate to the environment. This brochure features Bassendean's natural heritage.

VALUES OF OUR NATURAL HERITAGE

There is little of our natural heritage left in Bassendean (see map inside).

That which remains is valuable because:

- despite infertile sandy soils and long dry summers the vegetation has evolved into a species-rich community which co-exists in harmony. Given the need to conserve water and prevent fertiliser run-off into the Swan River, the remnant vegetation represents a genetic resource likely to be very valuable in the future.
- this vegetation is the type with which our animals evolved. Remnant vegetation (the areas we have left) provides the best food, shelter and breeding sites for native fauna - especially insects and nomadic birds such as Silvereyes which move from remnant to remnant.
- many people appreciate wildflowers and the form or shape of local plants. Insects associated with local plants often cause them to develop interesting irregularities.

◆ THE FLORA OF BASSENDEAN

THE TREES

Although the understorey of local bushland is diverse, there are only a few tree species.

This brochure is intended to help you to identify some of the trees and wetland plants in Bassendean and to highlight points of interest and value of each.

If a tree or plant you wish to identify does not appear on this brochure, you could consult the references given for more information. (Outside of Perth, the information provided here may lead to incorrect plant identification.)

THE UNDERSTOREY

In bushland, under the trees are shrubs, tree seedlings, hardy tufts of local grasses, herbaceous plants such as kangaroo paws, creepers and vines (such as Running Postman *Kennedia prostrata*) and mosses. Together these plants form the understorey that provides colourful wildflowers throughout the year, particularly during spring. The presence of understorey plants significantly increases the ability of the bushland to support fauna.

In urban areas, the fauna is generally restricted to insects, reptiles and birds. Some understorey plants such as Acacias and Casuarinas have micro-organisms on their roots that improve soil fertility by converting nitrogen from the atmosphere into useable forms for plant growth.

In wetlands, the understorey often includes samphire, sedges and rushes (see further on for more information on these).

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Gordon Reid Foundation

LOTTERIES COMMISSION

◆ THE NEED FOR MANAGEMENT

'Nature will take care of itself' is a view still widely held in the community but it is not true for urban bushland and wetlands. Even for an area to remain the same there must be some management.

Each piece of bushland should have a management plan which considers the issues and provides a framework for people who want to help care for the bush. A management plan would consider issues such as replanting, weed control, visitor education, trampling, vandalism, rubbish dumping and removal, control of disease, insects and fire.

> *'Even for an area to remain the same there must be some management.'*

One reason that nature cannot take care of itself is the introduction of plants and animals from other countries. Many introduced plants, free from their natural controls, are able to reproduce more successfully and vigorously than our own native plants. A basic understanding of weed ecology is needed to determine the best control method; pulling certain types of weeds only helps them to reproduce more successfully.

If you would like to help look after a piece of bushland you should contact the Council or join the Bassendean Preservation Group.

The Bassendean Preservation Group Inc. can be contacted by phoning the Chairman, Mr Greg Peterson, on 279 7713 or by writing to PO Box 75, Bassendean, WA 6054.

◆ THE RIVER FRINGES

The Swan River is a scenic treasure, a playground, a natural drain and a functioning ecosystem.

The foreshore is the most important part of the river for wildlife. It has a range of habitats and provides a corridor for wildlife movement. Shallow tidal banks support a variety of tiny animals like worms and crustaceans which form part of the food chain for larger fauna such as fish and water birds.

Algae blooms can completely use up the oxygen in the water. Larger fauna can move away from the blooms but tiny animals that cannot escape are killed. Once water quality has recovered new populations take a long time to recolonise.

Bank erosion and loss of foreshore vegetation are a significant concern for the health of the river. This can be attributed to clearing, boat wash and bait digging.

RUSHES AND SEDGES

There have been few studies of the values of rushes and sedges. They probably provide important habitat for frogs and for waterbirds, such as the Purple Swamphen, Crakes and Rails who use rushes for nesting. In the water, tiny animals benefit from the shelter and the shade provided.

Rushes and sedges are able to spread rapidly by pushing rhizomes (underground stems) through the soil to create new plants. This is an advantageous method of survival in areas where wetland water levels fluctuate.

Along with trees and shrubs, rushes and sedges prevent soil erosion. Replanting the fringing vegetation and protecting it from waves generated by passing boats is necessary along sections of riverbank.

References

Seddon, G. 1972, *A Sense of Place* University of WA Press

Powell R, 1990, *Leaf and Branch*, Department of Conservation and Land Management.

The illustrations overleaf (from George Seddon's *Sense of Place*) are reproduced by kind permission of the artist, David Hutchison.

1 JUBILEE RESERVE

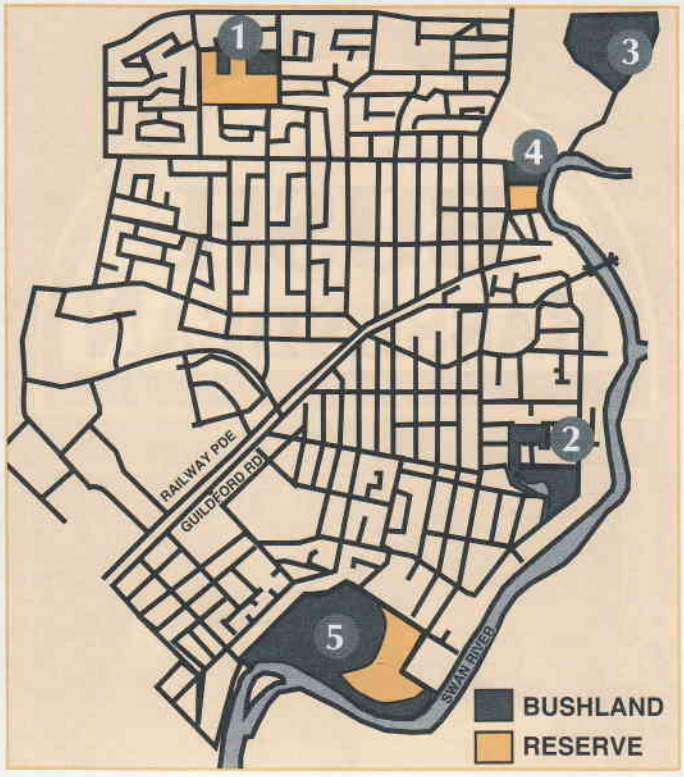
Jubilee Reserve is the only bushland in the Town of Bassendean with an understorey in good condition. This understorey is very diverse, providing a colourful array of wildflowers during spring. Very few local understorey plants are more than 500 mm high. Plants in the western piece of bushland indicate that the area was seasonally waterlogged. The eastern bushland includes species such as Donkey Orchids, Blackboys, Western Australian Christmas Trees and Dryandra.

The Town of Bassendean conducts some weed control but more comprehensive management is needed.

2 BINDARING PARK

Bindaring Park is a linear park which follows a creek to the Swan River. In most suburbs, creeks such as this have been filled, the water put through a pipe and the natural beauty lost.

Bindaring Park is valuable to wildlife by providing places to hide, rest and to search for food. Tortoises, Purple Swamphens and Black Swans still use the creek and associated wetlands.



3 BENNETT BROOK

Bennett Brook is part of a vegetated corridor which links the Swan River to Whiteman Park. A wide range of fauna can be found in Bennett Brook. Fish spawn in the upper reaches and frogs are common.

Where the Brook forms a wide swamp it contains large stands of paperbarks, several species of sedge and four samphire species. Waterbirds such as Ibis and Ducks feed or rest in the shallow open water of the swamp. Dense stands of Flooded Gums and Paperbarks along the brook are used by birds for breeding. Purple Swamphens abound in the shallow areas of the swamp.

This area has significant Aboriginal and conservation value recognised by the State Government. Land along Bennett Brook is currently leased or private property but will be bought by the State Government which may then provide public access.

4 SUCCESS HILL

Success Hill is dominated by the Firewood Banksia and also has some resprouted coastal plain Jarrah (*Eucalyptus marginata*). The understorey is significantly degraded by weeds, although rehabilitation is probably possible. Success Hill has significant Aboriginal and European heritage values.

5 ASHFIELD FLATS

The significant conservation value of the Ashfield Flats has been recognised in State Government reports. The Flats are large and have saltwater wetland vegetation in areas flooded by tides and freshwater wetland vegetation where water seeps from the steeply rising land to the west.

Since European settlement, construction of a drain has increased the area of freshwater wetland vegetation on the west side of the flats, dairy farmers cleared and then grazed cows on the higher land, and the erosion of the riverbank has caused trees to fall into the river.

Saltwater wetland vegetation includes samphire heath, often in association with Swamp Sheoak (*Casuarina obesa*). Three types of samphire heath are found, the *Halosarcia complex*, the *Sarcornia complex*, and the *Sarcornia blackiana* community which is found on the Swan River only at the Ashfield Flats and Bennett Brook.

The Ashfield Flats are valuable for birds and features in *Birding Sites Around Perth*. Australian Kestrels are regularly recorded and can be seen hovering over the flats, hunting for insects, reptiles, small birds or mammals.

BANKSIAS

IDENTIFICATION

Banksias can be identified just by their leaves. The Swamp Banksia which grows only in wetlands, has similar leaves to Candle Banksia, but no specimens remain in Bassendean.

ECOLOGICAL VALUES

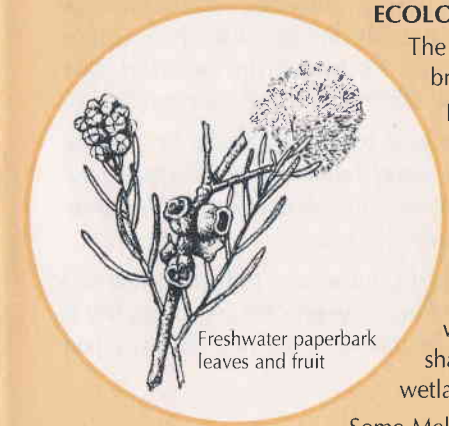
The Firewood Banksia and Candle Banksia are the two most common Banksias in Perth and together they provide a year-round supply of nectar for honeyeaters such as the Singing Honeyeater and Red Wattlebird.

The Firewood Banksia flowers from late summer to late winter, producing flower spikes which change in colour from light green, through orange and pink as the flowers mature. Firewood Banksias also provide habitat for insects eaten by birds. Moth larvae burrow into the flower spikes and the cones are used by the burrowing larvae of two species of weevil.

PAPERBARKS

IDENTIFICATION

Wetland vegetation, including paperbarks, grows in zones that reflect maximum water levels. Banbar (*Melaleuca teretifolia*) grows in the innermost zone and can tolerate flooding for several years, whilst Freshwater Paperbark (*Melaleuca rhaphiophylla)* grows further upslope where it is usually flooded each spring. Dense thickets of the salt-tolerant *Melaleuca hamulosa* are a distinctive feature at the Ashfield Flats.



ECOLOGICAL VALUES

The dense canopy and branch structure and the protection given by the ground flooding in spring makes Freshwater Paperbark a favoured nesting tree for waterbirds.

Freshwater Paperbark will only survive and shade out bulrushes if the wetland is not often burnt.

Some Melaleucas are bushes, such as the Robin Red-breast shrub (*Melaleuca lateritia)* which has a stunning red bottlebrush-like flower providing a food source for birds and insects.

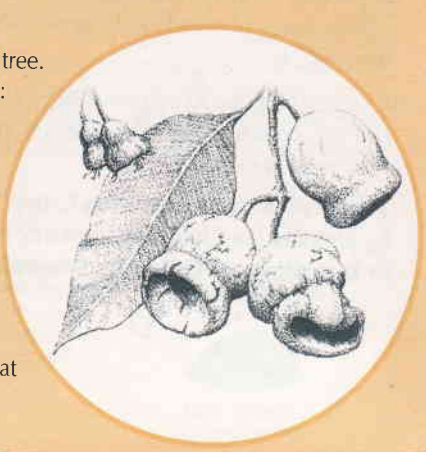
MARRI *(Eucalyptus calophylla)*

IDENTIFICATION

Marri trees are easily identified by their 'honky nuts'. They also have a chequered bark.

ECOLOGICAL VALUES

Marri is a most remarkable tree. Some of its values include:



Food for fauna

- The flowers' abundant nectar and pollen attract Lorikeets, Silver-eyes, honeyeaters, bees, ants, beetles, moths and other insects.
- Port Lincoln Ringnecks ('Twenty-eight' parrots) eat the softer, immature nuts.
- White-tailed Black Cockatoos eat seeds from inside the nuts.
- Insects such as Long-horned Beetles, burrow into the trunk causing kino (the 'gum') to ooze out.

Heritage

- May Gibbs' gum-nut babies 'Snugglepot' and 'Cuddlepie' are closely associated with the marri's nuts.
- Aboriginals used flowers to make a sweet drink. Other parts were used to cure diarrhoea.

Other values

- Sheer beauty - *calophylla* 'means 'beautiful leaf'. The leaves are a different colour on each side and have close-spaced parallel lateral veins spreading from the mid-rib at a high angle.
- The Marri is an excellent shade tree, growing to 30 metres.

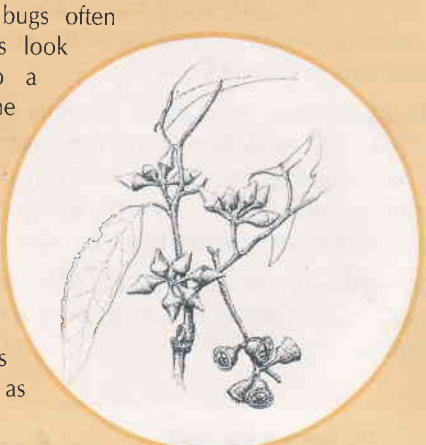
FLOODED GUM *(Eucalyptus rudis)*

IDENTIFICATION

Flooded Gums are 'half-box' trees - the bark on the larger branches and trunk is persistent and therefore rough, while the upper branches have a deciduous and smooth bark. Trees with this 'half-box' characteristic on low lying land or near streams, with the nuts like those illustrated below, can be confidently identified as Flooded Gum.

ECOLOGICAL VALUES

The value of the leaves to insects such as leaf miners, scale insects, aphids and bugs often make Flooded Gums look brown or ailing to a European eye, but the tree invariably continues to grow.



The leaf-eating insects provide food for a range of predatory insects and birds. Aboriginals ate the waxy, sugary scales on the leaves as well as the insect underneath.

In older trees, deep hollows form which may be used as homes by birds, possums or bats. The Flooded Gum is like a reef or rainforest in that it supports many animal species.