

**Swan Coastal Plain** Spidernet Grevillea  
*Grevillea thelemanniana*



**Southern Jarrah Forest**  
Creeping Banksia *Banksia repens*



**Wheatbelt** Mottlecah *Eucalyptus macrocarpa*



**Mallee Region** Emu Tree or Cork Tree *Hakea franisiana*



June 2009

# Broadway Arboretum Discovery Tour Park Pack



**Northern Sandplains** Acorn Banksia *Banksia prionotes*

## **Broadway Arboretum Discovery Tour Park Pack**

This is your opportunity to influence the future of Broadway Arboretum.



*Grevillea*

The Town of Bassendean has recently received substantial cash-in-lieu money from the subdivision on the corner of Scadden and Troy Streets which, subject to approval of the Minister for Planning, can be used to upgrade the Broadway Arboretum. The Minister for Planning often requires demonstrated public support for expenditure of cash-in-lieu money.

The Town of Bassendean draft Budget proposes that a Concept Plan be prepared for Broadway Arboretum in 2009-10. Normally Concept Plans are put out for public comment, and can be used as a way of demonstrating public support for expenditure of cash-in-lieu money.

## **Bassendean Preservation Group view**

The Bassendean Preservation Group is unashamedly promoting the view that we should continue to implement the vision of the Broadway Arboretum that was developed in 1993, and that this vision should be the primary basis upon which any future Concept Plan is developed.

The Bassendean Preservation Group recognises that some other uses should be catered for at the Arboretum (e.g. the children's playground), and considers that the area should be enhanced by interpretive<sup>1</sup> signage relating to the site's Aboriginal and European heritage.

It is understood that some Councillors consider that the concept of an Arboretum at Broadway should be abandoned. Unless public support to implement the vision is evident, the Concept Plan could come up with anything!

This Broadway Arboretum Discovery Tour Park Pack provides you with information about the Arboretum and the opportunity to express your views through the attached Questionnaire. The Questionnaire should be filled in and returned to the Bassendean Preservation Group.

The Bassendean Preservation Group intends to collate and summarise the questionnaire responses and present the results to the Town of Bassendean. The Bassendean Preservation Group will forward every questionnaire received to the Town of Bassendean with the collated results.

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<sup>1</sup> Interpretive signage helps you to interpret what you see and understand the history of the place.

## Question 1 – Implementing the vision as the predominant use of the Arboretum

The Town of Bassendean's 1993 concept plan for Broadway Arboretum included the following vision<sup>2</sup>:

*“The end result desired is for the vegetation of the sand soils of the South West to be on display in as close to natural form as possible. The reserve will be covered with low forest, woodland scrub and heath representative of each region accessible by natural walk paths. The final product will be attractive to bird life, a useful educational facility and usable by residents and others as a passive recreational facility”.*

Species that grow in sandy regions of the South West of Western Australia were planted by region. The figure below shows the planting proposals shown in the Town of Bassendean's 1993 public consultation document. With one exception, each vegetation type was planted at the locations proposed.



Unfortunately, soon after the Arboretum was first planted staff changed at the Town of Bassendean and the Arboretum concept was never fully implemented. For example, infill planting so that the right density of plants establish to prevent weed invasion and to replace plants that died has never occurred.

<sup>2</sup> The document did not identify this statement as a vision, but it is written like one and expresses clearly what was intended for the Arboretum.

**Arguments in favour** of continuing the Arboretum concept include (not in order of importance):

- i) As noted in the vision, the final product will be attractive to bird life, a useful educational facility and usable by residents and others as a passive recreational facility;
- ii) Research indicates that contrary to popular thinking, humans may be dependent on nature for psychological, emotional, and spiritual needs that are difficult to satisfy by other means. Findings so far demonstrate that access to nature plays a vital role in human health, wellbeing, and development that has not been fully recognised. (see Health Parks, Healthy People at [http://www.parkweb.vic.gov.au/1process\\_content.cfm?section=99&page=16](http://www.parkweb.vic.gov.au/1process_content.cfm?section=99&page=16)). The Broadway Arboretum presents an opportunity to provide a natural environment in a location where the nearest small areas of bushland are more than 1.5km (just under 20 minutes walk) away. The existing pathways (when the bridge is present) provide a nice walk, which helps people keep fit.
- iii) Although initial establishment costs are high, once fully established the maintenance cost of natural areas is significantly lower per hectare than for grass. Lower maintenance costs help reduce rates.
- iv) The Arboretum can be a showcase of Western Australia's beautiful flora that we can proudly show to visitors.
- v) The Arboretum provides an opportunity to grow rare plants.
- vi) Plants from regions in the South West which have lower rainfall than Perth should not require irrigation or watering once established, and most don't need fertiliser. This helps with water conservation and protecting the Swan River from excess nutrients.
- vii) Keeping the Arboretum concept will build on the vegetation that has already established.
- viii) Experience in growing plants at the Arboretum helps identify hardy species and those species which may become weeds. The existing planting has already provided this sort of information for some species.
- ix) The Arboretum concept is compatible with a range of other uses such as the establishment of a demonstration gardens, picnic facilities and public art.

*The Bassendean Preservation Group considers these are strong arguments in favour of implementing the vision, but is prepared to debate the merits of other concepts.*

## Question 2 – Secondary and other compatible uses

The Bassendean Preservation Group considers the following uses are compatible with or could be accommodated in the Arboretum without adversely impacting on implementation of the vision:

- children’s playground. Two other playgrounds are located within 500m so a large playground is probably not needed;
- car parking;
- barbeque and picnic facilities; and
- public art.

Many of the arguments in favour of the Arboretum for Question 1 above also apply to the concept of a Demonstration Garden presenting low water and low fertiliser use plants.

The development of a native demonstration garden at the Broadway Arboretum would show local residents and visitors that native species are attractive, and that they can be successfully used in a range of landscaping styles, for example the cottage and formal styles illustrated below.



*Formal Garden Design Using Native Species*



*Cottage Garden Design Using Native Species*

*The Bassendean Preservation Group considers establishment of a Demonstration Garden at Broadway Arboretum is sufficiently compatible with the vision for it to be a use that should be supported at this site.*

*Large grass areas suitable for a range of uses occur within 500m of the Broadway Arboretum at Anzac Terrace Primary School (two oval sized parcels), Troy Street Reserve, Parmelia Way Reserve and Headley Place Park. The area is already well catered for in this regard and it is considered that additional large grassed areas are not needed.*

### **Questions 3 & 4 Paths and signs**

It is debatable whether additional paths are needed or not – there are probably arguments in both directions. Paths are relatively expensive, but can add interest to the area.

A brief history of the Broadway Arboretum is provided on pages seven to nine of this Park Pack. Information about the area's history and the plants in the Arboretum should be provided on signs so that people can interpret what they see and understand the area around them.

### **Question 5 - Caltrop**

The introduced weed Caltrop (*Tribulus terrestris*) is a particularly nasty weed. It grows hundreds of spiky seeds per plant that each have many sharp spines capable of puncturing bicycle tyres, hurting people not wearing hard-soled footwear, and getting into dog's feet and fur.

It has established in two parts of the reserve and in these areas spreads onto the paths.

It is a summer weed and tends to grow after we have summer rainfall.

It is a difficult weed to eradicate as the seeds survive for many years and there is only a short window of opportunity to control it by spraying. Constant monitoring is required to get the timing of spraying right.

There is no legislative requirement for the Town of Bassendean to control this weed. If eradication is to be achieved, it will only come if the public pressure the Town of Bassendean to control it.

### **Question 6 and 7 - Crime**

It is the Bassendean Preservation Group's experience that the perception of crime in a place differs from person to person and is dependent on a number of factors. For example, it is known that many elderly people feel threatened by youth or Aboriginals in groups. However, the youth or Aboriginals often have no intention of committing a crime, and consider the place to be safe. These questions have been asked to get a better idea of current perceptions of the area.

*The Bassendean Preservation Group would prefer to have minimal lighting and low shrubs just near the roads. This view is based on concerns that the effect of lighting on the frog population at the reserve is unknown (to Group members at least), and there is currently a very healthy population of frogs at the Arboretum.*

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Broadway Arboretum matters - [advandelft@iinet.net.au](mailto:advandelft@iinet.net.au) or see website.

*West Ward Councillors, Mayor and the Town's Administration*

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**Wheatbelt:** Swamp Mallet *Eucalyptus spathulata*



Figure 1 – 1948 Aerial photo with property boundaries from 2009 overlaid. The blue line shows the approximate boundary of Nyibra Swamp.

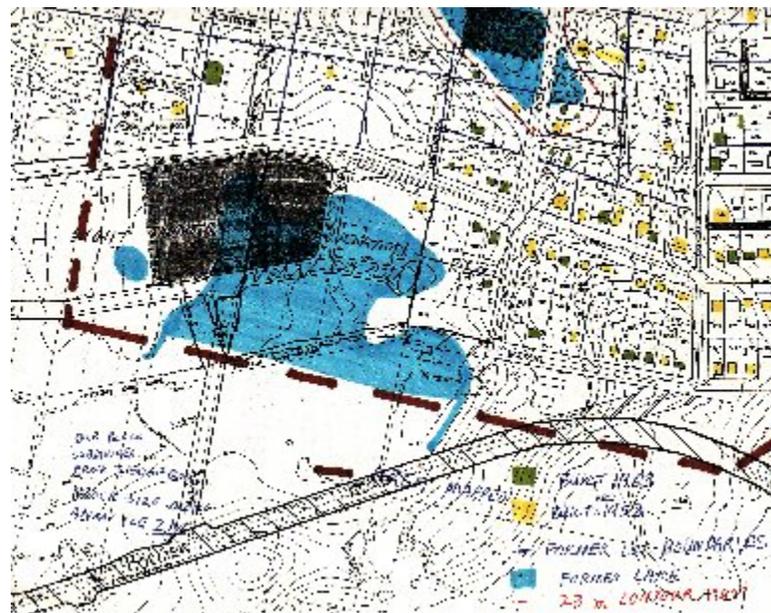


Figure 2

The large size of the Nyibra Swamp wetland is clear in the 1948 aerial photograph (Figure 1). For ease of reference Nyibra Swamp is overlain on a map that shows the current road system and the general development of this locality. (Figure 2).

## ***Aboriginal and European History***

The area now known as Broadway Arboretum was once part of a large lake system known as Nyibra Swamp.

Nyibra Swamp was typically between 0.9 to 1.2m deep during winter and dry during summer. Locals used the area for canoeing.

The Department of Indigenous Affairs records Nyibra Swamp was a hunting site for Aboriginal people.

Eric McCrum, a renowned naturalist in Perth, grew up in Bassendean and remembers Nyibra Swamp being rich in fauna including waterbirds, aquatic fauna and edible crustaceans.

Aerial photography shows Nyibra Swamp was still largely intact in 1963.

Nyibra Swamp was filled with waste sand and “slag” from the Hadwa Iron Foundry which operated through to around 1980. The Foundry made cast iron products by making a wood model of the desired product (e.g. wheels for railway carriages), putting it into a box and packing sand with a high clay content around the model ensuring there were holes for the escape of air and entry of molten iron, and after removing the wooden mould poured in the molten iron. Often the model and sand would be in two halves joined before pouring the molten iron. The sand, and bits of iron from the small diameter holes (known as slag) were taken by truck and dumped at a range of sites in Bassendean, including Nyibra Swamp.

It is believed that between 1963 and 1993 the entire swamp was filled, but aerial photography has not been sourced to verify this. During this period at least two houses were built on the land, with the easternmost house being near the easternmost Morton Bay Fig. The more centrally located house had a driveway of about 60m long which passed the large Morton Bay Fig in the middle of the reserve adjacent to Broadway (*See Figure 2*).

In 1998 the Town of Bassendean’s Town Planning Scheme No. 3 was amended to reserve Broadway Arboretum for Recreation, making it possible to convert the area from its previous Industrial and Residential zoning to public open space.

The concept of the Arboretum was conceived in 1991 by the then Town Engineer Mr Jon Bettink, who had a good knowledge of vegetation of the South West. Members of the Bassendean Preservation Group had a high regard for Mr Bettink’s work and refer to a wetland built for stormwater treatment and detention at the Ashfield Flats as “Lake Bettink”.

The concept was planned and designed to represent plants of the six South-West botanical provinces in sections of the reserve with a central lake. The provinces were separately grouped, signed and connected by walk trails.



*Jon Bettink*

A public consultation document for Broadway Arboretum was produced in 1993, and the concept received strong public support. Council subsequently endorsed the concept of the Broadway Arboretum.

Following Council endorsement the current lake was excavated and much sand and “slag” was removed.

The area was earthworked, planted, and signed in 1993. Mr Bettink left the Town of Bassendean in 1993 to work at the Shire of Busselton.

Unfortunately, it appears that when Mr Bettink left there was no expertise and little maintenance and management effort by Council staff to bring the Arboretum concept to fruition.

Irrigation was installed after significant plant deaths in the first year. There was never any effort to replant the plants that died. The area quickly became weedy.

In 1995, in response to the weedy state of the Arboretum the Bassendean Preservation Group organised community work days to demonstrate to Council that the community cared about the Arboretum. Over 30 community members helped weed the area. On the first community work day 35-45 person hours of work were completed and about one quarter to one-fifth of the area was weeded. Most people were willing to weed on one more occasion, but felt that Council should then do the rest.

Management of the area improved, but certainly not the extent necessary to fully realise the Arboretum concept.

When the area was planted, the Esperance Sandplain vegetation type was located in a road reserve, rather than in the reserve itself. Unfortunately, the road reserve was never officially closed.

In 2008 a Department of Housing and Works subdivision was approved that included utilisation of the road reserve for a road. Acting in accordance with the subdivision approval, the Esperance Sandplain vegetation type was cleared.

One of the outcomes of the Department of Housing and Works subdivision was that cash-in-lieu had to be provided to the value of 10% of the subdivided area. This means that the Town of Bassendean now has substantial funds that, with the approval of the Minister for Planning, can be used to upgrade Broadway Arboretum.



*Banksia*

## Broadway Arboretum - Questionnaire *Please include your contact detail*

Mr. Mrs. Ms. .... Given name ..... Family name .....

Address .....

Email .....

*Please circle your response. Space is provided overleaf for comments.*

1. Do you agree that the 1993 vision for the Arboretum should be the implemented as the predominant use of the Broadway Reserve: YES NO  
*If no, please write your vision overleaf.*
  
2. Secondary or and other compatible uses for the reserve. Please indicate your views below (or overleaf) Existing uses are listed first:
  - a. The playground is ABOUT TOO SMALL SHOULD BE  
RIGHT SMALL REMOVED
  
  - b. The parking area on Broadway is ABOUT TOO SMALL SHOULD BE  
RIGHT SMALL REMOVED
  
  - c. A barbeque and picnic table facilities should be provided. YES NO
  
  - d. A Demonstration Garden presenting low water and low fertiliser using plants suitable for Bassendean's soils should be established. YES NO
  
  - e. Large grassed areas should be provided. YES NO
  
  - f. A significant piece of public art should be placed to refect:
    - i. The flora of the Arboretum YES NO
  
    - ii. The Aboriginal and European History of the park YES NO
  
3. More paths are needed to view the plants. YES NO
  
4. More signs about the plants and the European and Aboriginal Heritage are needed. YES NO
  
5. Caltrop should be eliminated from the Reserve as a priority YES NO
  
6. Crime and antisocial use of the Arboretum is: RARELY A OCCASIONAL REGULAR  
PROBLEM PROBLEM PROBLEM
  
7. In order to reduce crime and antisocial use of the Arboretum I would support:
  - a. improved lighting NOT NEAR THE ALONG THROUGH-OUT  
NEEDED ROAD EXISTING THE PARK  
PATHS
  
  - b. low shrubs only NOT NEAR THE ALONG THROUGH-OUT  
NEEDED ROAD EXISTING THE PARK  
PATHS

