FOXES LAIR MANAGEMENT PLAN

RESERVES 20605, 23152 & 39708

WILLIAMS ROAD AND NARRAKINE ROADS, NARROGIN

Adopted by Town of Narrogin
23rd September 2014

Contents

Table of Contents

Appendices

1. Introduction

1.1 Background

During the early development of Narrogin, significant areas of well vegetated, elevated land were left undeveloped to the south/south west of the townsite. This was largely due to fact that the rocky ground conditions were difficult to develop.

Today this area is recognised as three distinct land holdings, which are generally described as:

a) Foxes Lair being between Williams Road and Range Road;
b) The Town Commonage located between Range Road and the Collie Railway; and
c) Railway Dam being between the Collie Railway and Mokine Road.

A plan demonstrating the extent of these reserves is shown overleaf as Figure No 1.

Moves to conserve Foxes Lair first occurred when some 95-100 acres of land was gazetted as Class "A" crown reserve No 20605 in January 1931. This reserve was vested with the Local Authority for the purposes of National Park.

Today, with an area of 64.432ha, Foxes Lair contains significant, high quality remnant vegetation representing a wide range of vegetation community types and wildflowers.

In recent years, the "Friends of Foxes Lair", being a local community group, have significantly assisted the Town in the documentation and management of the reserve. Works undertaken within the reserve by the *Friends of Foxes Lair* have contributed to the sites importance as a Nature Reserve and eco-tourism attraction.

This Management Plan has been prepared to guide the future development and management of Foxes Lair to achieve the identified aims and objectives.

The implementation of all recommendations contained within this Management Plan is the responsibility of the Town of Narrogin. The Town shall however, where appropriate, seek the input and assistance of relevant community groups.

1.2 Vision Statement

"To protect and enhance the conservation values of the Reserve whilst promoting the sustainable use of the reserves for passive recreation, tourism and eco-tourism purposes."

Location Plan of Foxes Lair

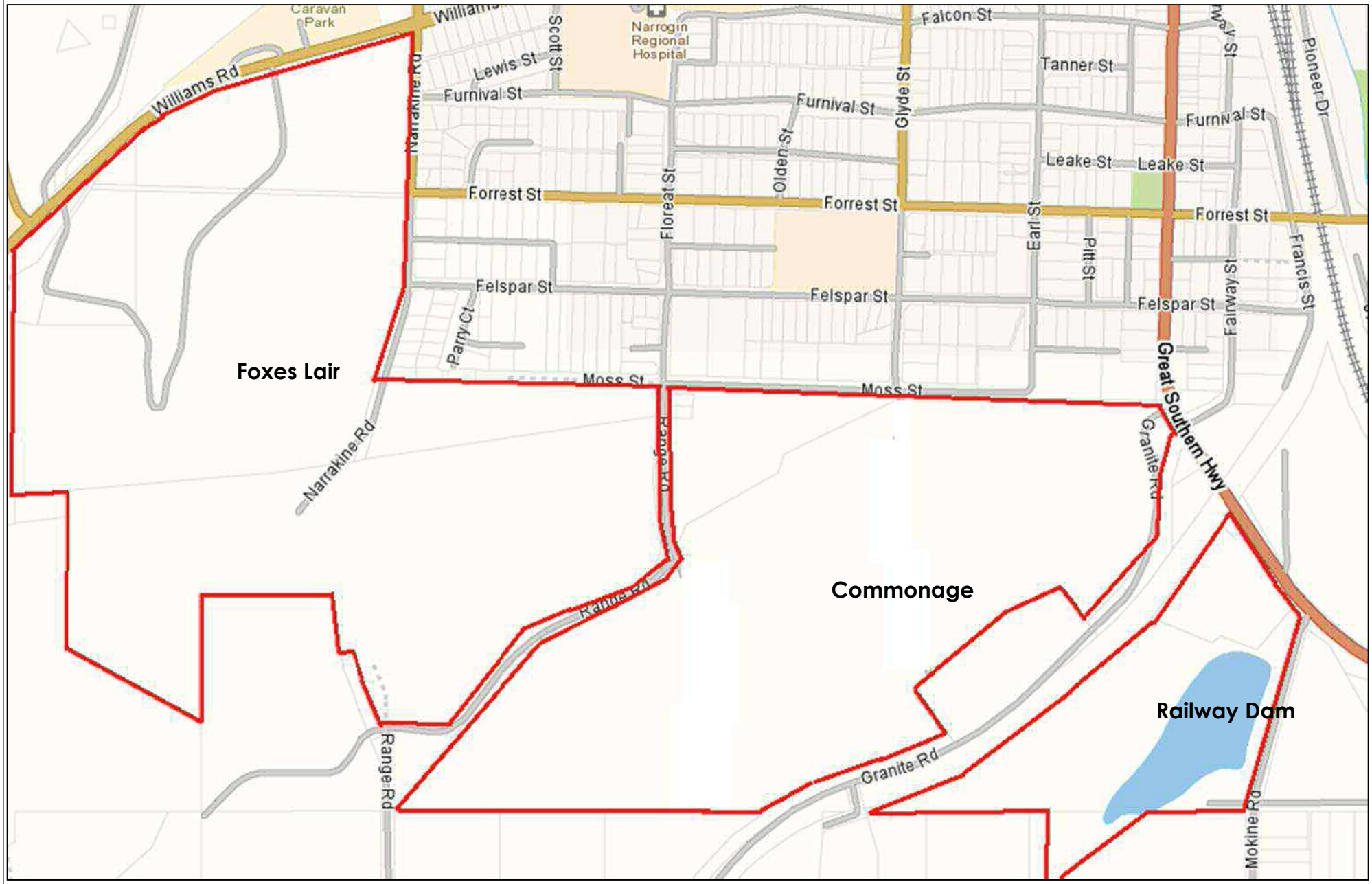


Figure 1

1.3 Aims

The Town of Narrogin has identified the following aims for management of Foxes Lair:

a. to protect and enhance the conservation values of the Reserve

b. to encourage community involvement in management of the Reserve.

c. to manage the reserve so as to reduce the potential threat of fire whilst maintaining vegetation on site ensuring a bushland backdrop is retained for the south western portion of the townsite.

d. to raise community awareness of nature conservation and the importance of protecting remnant vegetation, and

e. to encourage sustainable use of the Reserve for passive recreation, education and eco-tourism purposes.

f. to acknowledge the role that the reserve(s) have played in the history and development of the Narrogin Townsite.

1.4 Objectives

With the assistance of the relevant community groups and members of the public, management of the reserve is intended to achieve the following objectives:

a. To protect and conserve the native vegetation, flora, fauna and habitats located within the reserve;

b. Consolidate work undertaken to date in establishing walking trails, interpretative sites;

c. To facilitate where possible existing tracks and pathways to be suitable for disabled access.

d. To rehabilitate areas of erosion located within the reserve and take action to prevent future erosion;

e. To protect the documented biodiversity of the reserve;

f. to minimise the impact that reserve users have on the natural environment.

g. To minimise weeds, feral animals and the potential for introduction of disease within the reserve.; and

h. To recognise the role that the reserve played in Australia's preparations for War.

2. Reserve Description

2.1 Location & Area

The Foxes Lair Reserves are located on the south side of Williams Road on the western edge of the Narrogin Townsite between Narrakine Road and the western boundary of the Townsite.

With a total area of 64.432ha, the reserve system extends southward to the southern boundary of the townsite and eastward to Range Road.

2.2 Reserve Management Orders

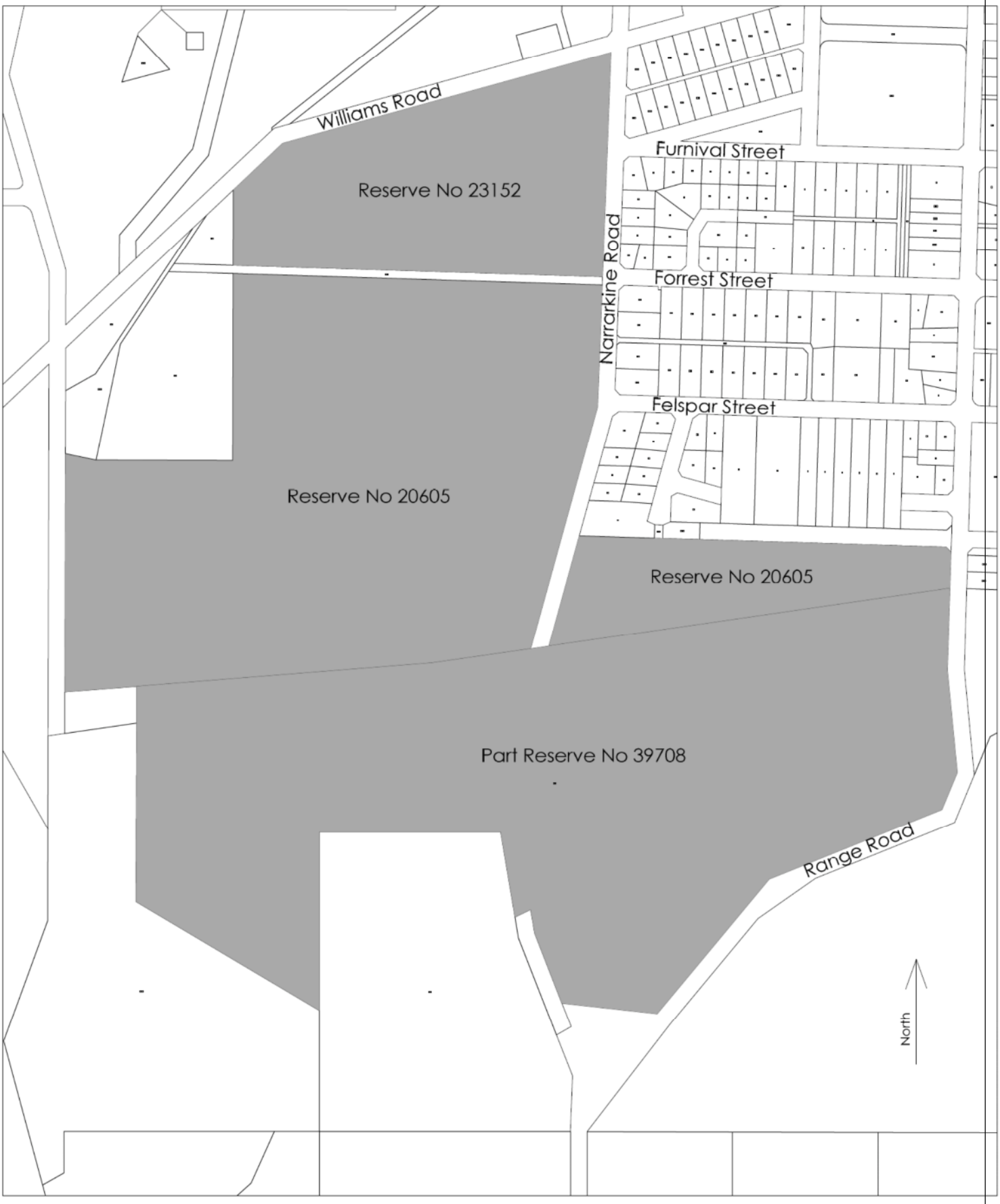
Foxes Lair comprises a total of three reserves, which are described as follows:

i. Reserve 20605 (24.602ha) being an "A" class reserve first created as a National Park on the 27th January 1931. This reserve was vested with the Town for the purposes of "Recreation" and "Parkland" in March 1979;
ii. Reserve 23152 (8.899ha) being an "A" class reserve that was vested with the Town for the purposes of "Recreation" and "Parkland" in March 1979; and
iii. Part Reserve 39708 (30.931ha), being vested with the Town for the purposes of Recreation and Parkland in December 1986.

A plan demonstrating the location of these reserves is shown overleaf as Figure No 1, whilst copies of the reserve Management Orders (vestings) are included at attachment shown at Appendix No 1.

Figure 2

Foxes Lair Reserves



2.3 History of Reserve

During early settlement days of Narrogin, Foxes Lair Reserves formed part of a band of elevated vegetation abutting the southern western corner of the townsite. The area had been left undeveloped largely due to the rocky nature and the difficulties associated with its development.

The northern boundary of this vegetated area was established in the 1890's with the construction of what is now known as Williams Road. The central portion of the vegetated area, being Part Reserve 39708 and Reserve12610, was open up for use a commonage to graze livestock in the 1990's. Today this is area is known as the commonage.

The commonage effectively formed the eastern boundary of the Foxes Lair Reserve.

At the beginning of the First World War in 1914 the Defence Department saw the need to familiarise men with weapons, this move would also help to stimulate military awareness. The Defence Department established a significant army camp and rifle range in the Commonage and constructed a rifle range within the southern portion of Foxes Lair, to the east of what is now Range Road in 1916.

The defence force continued use of the Commonage and the southern portion of Foxes Lair into the 1920's, constructing a wooden tower in place of a 700 yard rifle range. The commonage continued to be used for army manoeuvres until the mid 1940s.

Narrogins first scheme water supply system was constructed at Bottle Creek, located to the west of Foxes Lair. The Bottle Creek reserve, which was officially opened by the then Premier Sir James Mitchell in 1922, effectively created the western boundary for the reserve.

The first efforts to conserve vegetation within Foxes Lair came in January 1931 with the creation of Reserve 20605 (24.602ha) as an "A" class reserve. The reserve, which was vested with the Council as a National Park, now forms the central portion of Foxes Lair.

The name Foxes Lair was first introduced by the Apex Club in the late 1940's, who cleared the present site of the Barbeque Area in order to entertain fellow Apex members from Fremantle in a bush setting.

Also in the late 1940's the Council supported the concept of a flora and fauna sanctuary in accordance with a conservation plan. The Plan addressed such as fire control, prohibiting the picking of wildflowers and dumping of rubbish. Although a committee was formed the Plan was never fully implemented.

The Foxes Lair Reserve was expanded in the in the 1950's when the then Water Supply Department relinquished the vesting of Reserve 23152, which was located between Reserve 20605 and Williams Road.

Complementing the native vegetation within Foxes Lair, the Forrestry Department established an arboretum on just over 4ha of land just north of the Foxes Lair Rifle Range in portion of Reserve 20605.

In the 1960's members of the Narrogin branch of the Tree Society drew attention to the dumping of rubbish, and the haphazard approach to quarrying in the reserve. The Society requested the area be fenced, with no vehicle access. The Tree Society compiled the first comprehensive map for the tree reserve and the Tourist Development Authority assisted Council in developing bush roads to the barbeque area.

In 1971-72, Council applied to the Department of Lands and Surveys to allow a resident to build a home on a quarter acre block to be a warden of the park. This was not supported by the Department.

In 1978 status of Reserve 20605 and 23152 was changed from "National Park" to "Reserve for Recreation".

A comprehensive fire protection plan was prepared in 1986 following a major controlled burn of the reserve in 1973/4 and a series of wildfires in 1982 and 1985.

In the 1990's Council established a new walkway from Foxes Lair to Railway Dam (1995). The bulldozed tracks quickly eroded and attracted 4wd vehicles. This resulted in public outrage culminating in the formation of the "Friends of Foxes Lair", who's primary concern was the protection of this sensitive area. The 1990's also saw the first weed eradication program using government funded community employment programs.

The Friends of Foxes Lair (which officially formed in 1998) prepared a Management Plan to address degradation of the reserve and the establishment of additional walk trails and other facilities. This was plan was implemented over the following ten years by the Friends of Foxes Lair in partnership with the Town of Narrogin, Department of Environment and Conservation and the Central South Naturalist Club.

Further details on the history of the reserve are available in several publications written and compiled by local historian Mr Maurie White. Copies of the publications are available from the Town of Narrogin Library.

2.4 Previous Management Plans

As detailed in section 2.3, the first Management Plan for the Foxes Lair Reserves was prepared in the form of a conservation plan in the 1940's.

Subsequently in the late 1990's the Friends of Foxes Lair prepared a "Track Management Plan" for the establishment of new walk trails. At the same time the plan addressed the need to rehabilitate degraded areas within the reserves.

This plan was reviewed in 2003. The friends of Foxes Lair have continued to implement this plan where ever possible. A copy of the 2003 plan is shown as Appendix No 2.

This Management Plan is the first comprehensive management plan to be prepared for the site since the 1940's.

3. Site Characteristics

3.1 Vegetation

The Western Australian Herberium has confirmed that a substantial number of plant species can be found within foxes lair.

A list of the species is shown at Appendix No 3.

3.2 Wildflowers

The Friends of Foxes Lair have produced the document "Wildflowers of Foxes Lair" detailing the significant number of wildflowers found within the reserve.

A copy of the document is shown as Attachment No 4.

3.3 Native Fauna

The Department of Environment and Conservation documentation confirms that a significant number of native fauna has been identified within the Reserve(s).

A copy of the DEC report is shown as Attachment No 5.

4. Existing Infrastructure

4.1 Existing Access

Access through foxes lair is facilitated by a central road way and numerous walking tracks. Established firebreaks are also be used for both vehicle and pedestrian access through the Reserve(s).

A detailed description of the access ways is provided below, whilst a plan demonstrating the track locations is shown as Figure No 3 on page 12 of this plan.

4.1.1 Vehicle Access

There are four vehicle entrances to the Foxes Lair Reserve(s).

The Primary entrance is located off Williams Road, approximately 200 metres west of Narrakine Road. Numerous signs regarding use of the reserve are located at this entrance. This entrance connects to an internal access road that proceeds southward to the central picnic area (near the centre of the site) and the associated carpark. The internal access can then be used to proceed towards the western boundary, or loop back to the main exit to Williams Road, located approximately 400m west of the main entrance.

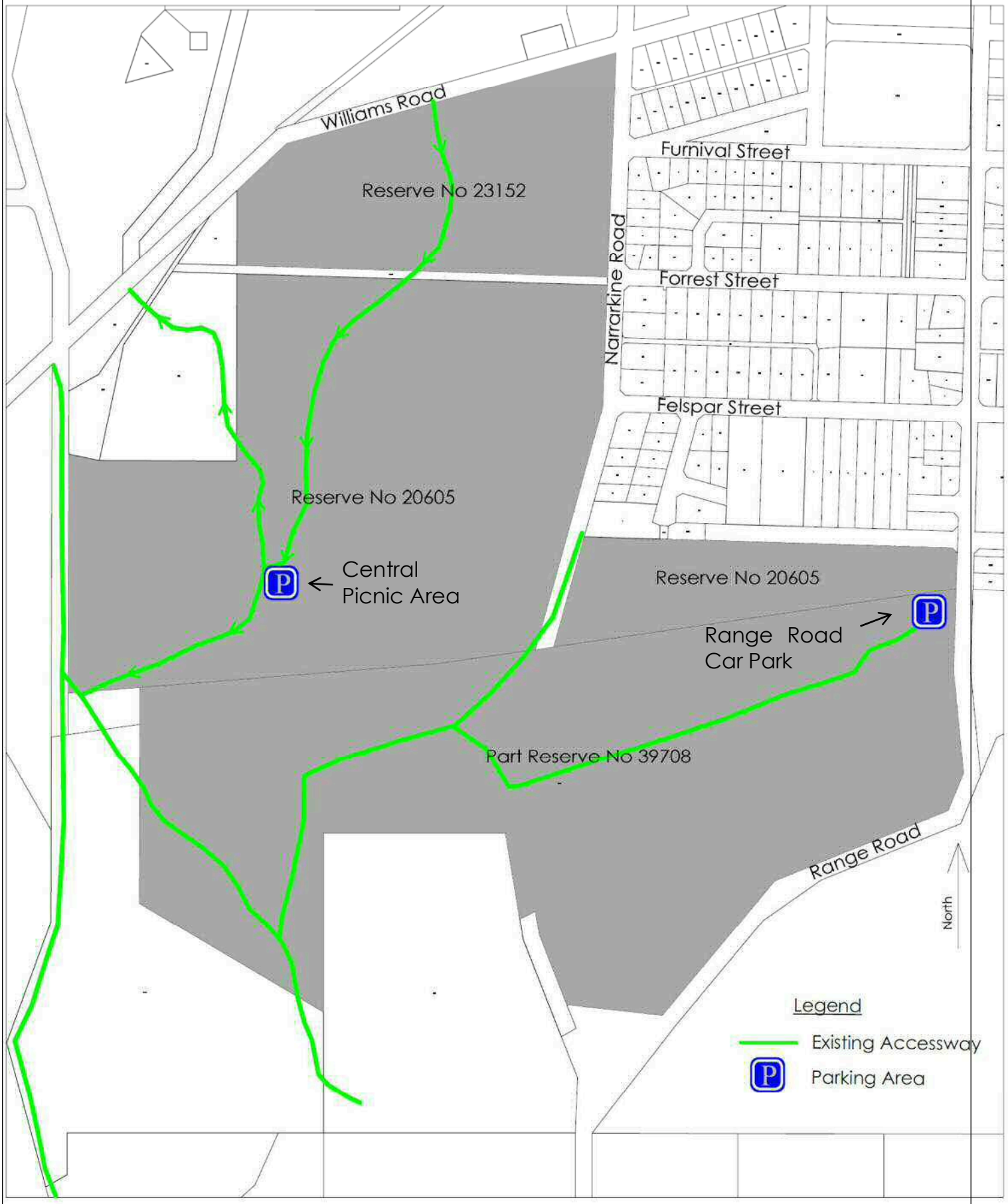
As shown on Figure No 1, a secondary vehicle entrance has been established off Williams Road using what was originally a firebreak, located on the most western boundary of the reserve(s). This track generally continues along the western boundary, facilitating vehicle access to the southern boundary of the reserve.

A firebreak connecting to the southern end of Narrakine Road facilitates vehicle access off Narrakine Road. Whilst the fourth entrance is to a carpark off Narrakine Road. This carpark also connects to to the internal firebreak system, facilitating vehicle access.

A number of firebreaks located within the site connect with the internal access way and walk ways, serving to create fire compartments and ensure good access in the event of a fire. This has unfortunately resulted in to vehicles using these firebreaks and in some cases, walking trails to access the site in areas where public vehicle access is not appropriate.

Foxes Lair Vehicle Accessways

Figure No 3



Scale 1:6,000 (@A4)

4.1.2 Pedestrian Access

Numerous, mainly circular formalised walkways have been established throughout foxes lair. The primary purpose of these walkways is to facilitate public access through the reserve whilst highlighting the range of landscapes to both residents and visitors alike.

These trails are:

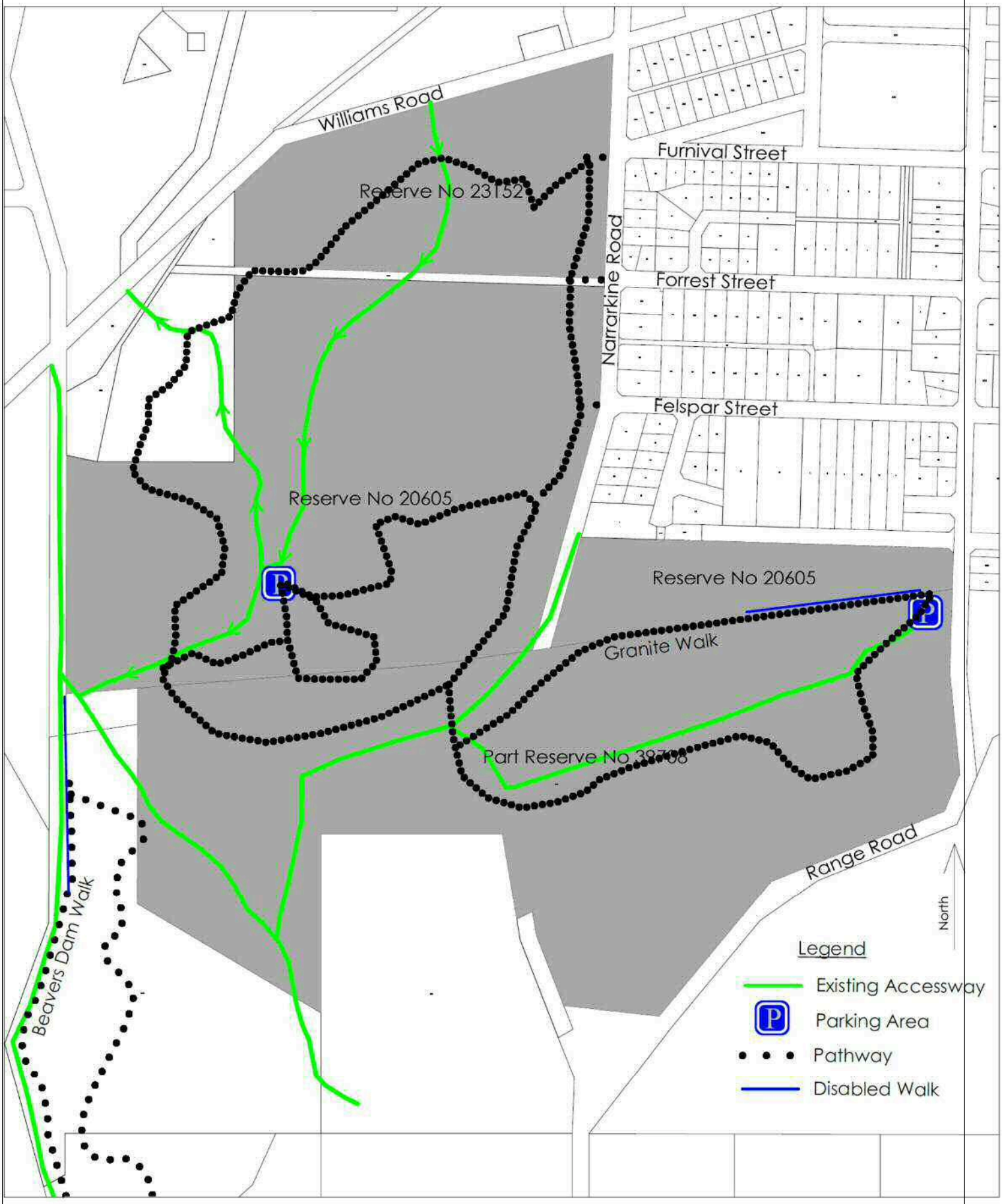
- ***Banksia walk***. Dryandra heath and jarrah, marri, banksia and brown mallet forests.
- ***Breakaway walk***. An easily accessible walk featuring a fine view from the breakaway.
- ***Granite walk***. This walk starts from a small existing car park off Range Road and features attractive granite rock scenery and the arboretum.
- ***Valley walk***. A short attractive walk with elements of all of the above walks.
- ***The Railway Dam walk***. (not done) This walk encompasses the Town of Narrogin's initiative of a walk track linking Foxes Lair with the Railway dam. The proposed route through Foxes Lair has been amended to reduce erosion and provide a more scenic walk.

With the exception of Granite Walk the tracks generally start and finish at the central picnic area and its associated carpark

A Plan demonstrating the location of these paths is shown overleaf as Figure No 4 on page No 14.

Foxes Lair Pathways

Figure No 4



Scale 1:6,000 (@A4)

4.1.3 Disabled Access

Currently there is one area established with disabled access pathways being located adjacent to Range Road, passing the abortoreum.

The 2003 Trails Management Plan contained a recommended for "Wheelchair Walk" to be constructed adjacent to the central picnic area. As stated in the 2003 plan "*This easily accessible walk with many of the above landscape features could be developed from specialised funding sources.*"

The Range Road disabled pathway was developed as an alternative to the proposed Wheelchair Walk.

Although the intent behind the Range Road disabled access is acknowledged, works are still required at the central picnic area to ensure equity of access for disabled persons.

4.1.4 Unauthorised and inappropriate vehicle access

As detailed in section 4.1.1, several firebreaks are connected to the internal road ways and walk trails in Foxes Lair. This has on occasion lead to vehicles (both cars and motorcycles) to inappropriately use these walkways and firebreaks to inappropriately access areas of the reserve.

Additionally off road motorcycles are inappropriately using walkways off Narrakine Road to access the reserve.

Although Bolders have been used to prevent vehicles intruding into the bush from the carpark (refer to photograph below), additional measures are required to ensure vehicles keep to the identified roadway(s).

4.2 Internal Road Infrastructure

The internal access ways within Foxes Lair are of gravel construction with informal swale drains. The Town of Narrogin grades these roads on an annual basis using a bobcat. When required the Shire of Narrogin is contracted to grade using a road grader. This done every 2-3 years.

A number of spur drains have been established to direct water into vegetated promotions of the reserves. Due care is required to ensure that installed drainage does not result in erosion or land degradation.

The majority of firebreaks within the reserve(s) are bare earth. Regular use of the breaks by vehicles is not appropriate given that such use detrimentally impacts on the surface of the firebreaks, reducing their useability during a fire and increasing the potential for erosion.

To prevent vehicle use resulting in erosion, it is recommended all members of the public keep vehicles to the designated roadway and parking areas.

4.3 Parking

Parking is currently provided in three locations, which are described as:

a) A formal car park area located off Range Road (with disabled access);
b) A small informal parking area adjacent to the main entrance; and
c) An informal parking area adjacent to the central picnic area.

It is noted that improvements to the car parking surface would be required to facilitate disabled parking and access to the central picnic.

4.4 Interpretative Signage

Various interpretative signage has previously been erected within Foxes Lair. The style and condition of this signage varies from larger interpretative boards to small signs identifying tree species.

It is recommended that Council's annual budget make allowance for the progressive maintenance and replacement of signage on site.

Additional signage is also required to maximise the potential for Foxes Lair to be a source of education on native flora and fauna.

4.5 Park Furniture

Currently Park furniture is currently very limited within Foxes Lair, consisting of three small shelters located between the Range Road carpark and the arboretum.

A small number of park benches were previously located adjacent to the picnic area, but they along with public bins were previously removed. Additional seating has been established at strategic points along walk trails within the reserve.

It is recommended that consideration be given to the provision of additional park furniture such as seating and bins at the Central Picnic.

4.6 Pathways

The pathways on site are currently of gravel construction are somewhat inconsistent in nature, varying in width and slope. It is recommended that the existing paths, particular those containing sloped ground, gradually be upgraded to provide a higher standard, safer surface for pedestrian use.

4.7 Firebreaks

As detailed in sections 4.1 and 4.2, the majority of firebreaks within the reserve(s) are being used by vehicles. Some of these firebreaks have been upgraded as formal accessways. The accessways are reflected in Figure No 3 on page 12.

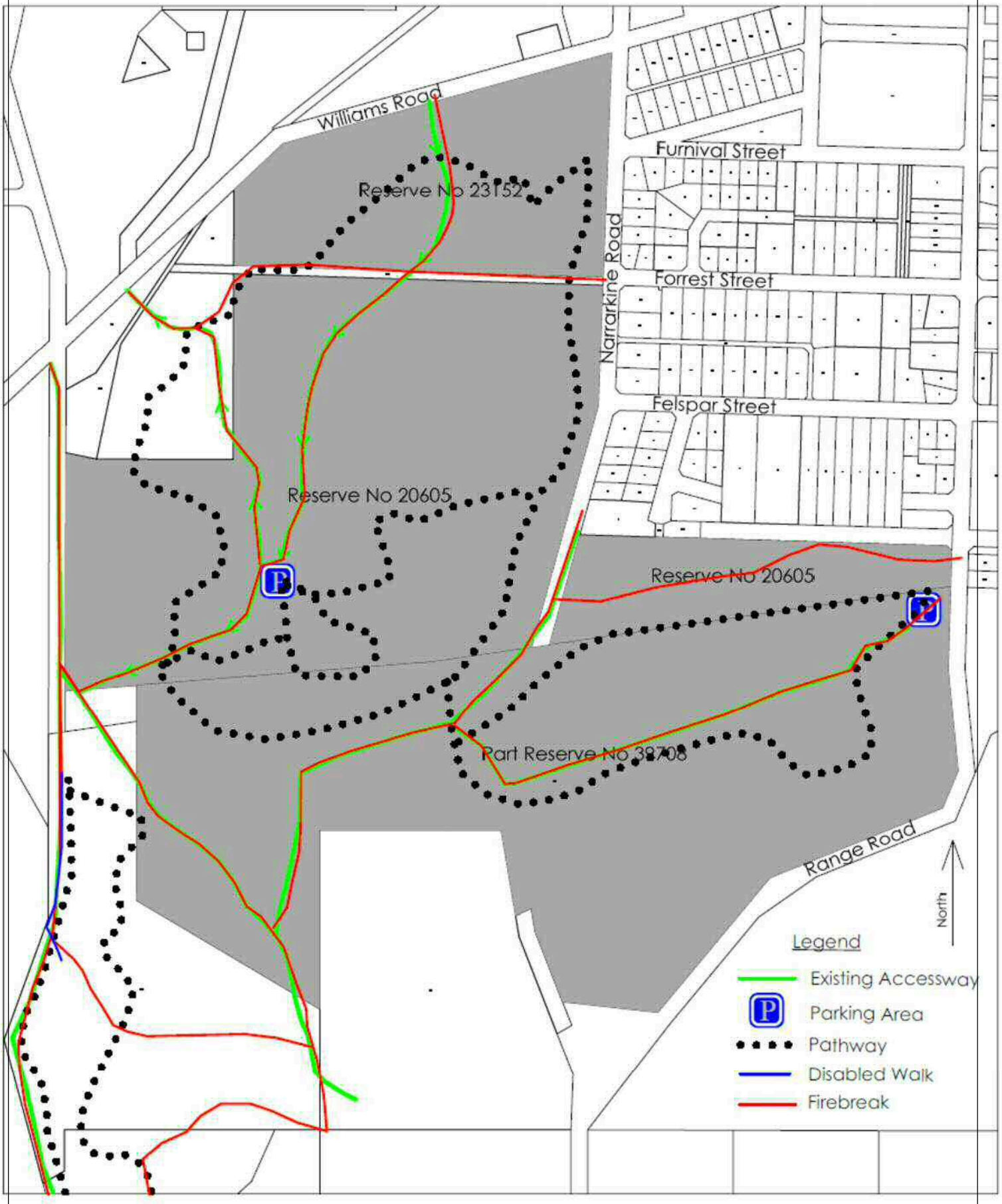
The remainder of the firebreaks have a surface not intended for regular vehicle use. It is therefore recommended that general public vehicle access be prohibited through the installation of appropriate signage, gates and or other barricades such as removable bollards.

This will ensure inappropriate public access is avoided and will protect the trafficable surface, ensuring their suitability for access in the event of a fire or other emergency.

A plan depicted the firebreak system is shown as Figure No 5 on page 18.

Foxes Lair Firebreaks

Figure No 5



Scale 1:6,000 (@A4)

5. Strategic Planning

5.1 Town of Narrogin Strategic Plan

The Town of Narrogins Strategic Plan 2010-12 contains various recommendations relating to both the built and natural environment that must be considered in the preparation and implementation of a Management Plan for the Foxes Lair Reserves.

As detailed in the "Built and Natural Environment" section of the Plan, it is Council's objective to:-

1. Maintain and enhance the natural environment, addressing risk areas.
2. Achieve environmentally sustainable and economically viable management of waste.
3. Achieve a quality built environment that:
    - Enhances Narrogin's appeal for lifestyle and business development
    - Encourages energy efficiency and sustainability

In order to achieve these objectives, the Strategic Plan identifies that it is Council's role to:

- Provide guidance, advice, facilitation and community education.
- Set and enforce standards and comply with statutory regulations.
- Monitor the sustainability of the natural and built environment

Initiatives identified to object these objects include consolidating the viability of "*parks, park recreation equipment and reserves*".

5.2 Rationalisation of Reserves

As detailed in section 3.2, Foxes Lair comprises a total of two whole reservations and portion of a separate reserve. Rationalisation of the reservations is recommended to achieve a single reserve.

6. Management Issues Recommendations

6.1 Fire

The Foxes Lair reserves are well vegetated and have potential to contain a high level of fuel for fire in close. The threat to life and property is particularly high for those homes located in close proximity to the site on the eastern side of Narrakine Road and immediately north of the Arboretum.

A major controlled burn in 1973/74 and a series of wildfires through the reserve proved justification enough to warrant the preparation of a Fire Management Plan in the 1980's.

Firebreaks established in accordance with this plan have largely been retained. Several Fire breaks have since however, been identified as contributing to significant erosion problems within the Reserves. The majority of the breaks have since been closed and are subject to ongoing revegetation.

Given the need to compartmentalise the reserve in accordance with modern fire control practices, some additional fire breaks were established for the 2012/13 fire season and are now being maintained.

A Plan detailing the current firebreaks is shown as Appendix No 6.

Recommendations:

6.1.1 The location and standard of firebreaks be reviewed on an annual basis having regard to advice from the Department of Fire and Emergency Services.

6.1.2 In order to provide an appropriate level of protection to life and property, there is a need to, on an annual basis, minimise the fuel loading within 50 metres of homes located in close proximity to the reserve.

6.1.3 Firebreaks be clearly signposted "No entry – Fire and Emergency Vehicles Only".

6.1.4 Consideration be given to the use of collapsible bollards or fire gates at intersections between the firebreaks and road ways to prevent general members of the public from having access to these areas. Bollards to be lowered and or gates opened on receipt of notice of extreme fire danger.

6.1.5 The Firebreak located on the western boundary be closed to general public vehicles north of Beavers Dam.

6.2 Drainage

There are numerous sites within the reserve where erosion has occurred. In some cases, the establishment of inappropriately located trails and firebreaks has created erosion issues within the Reserves.

Additional drainage infrastructure and or works such as spoon and spur drains are required on some of the internal access roads and walk trails to prevent erosion.

Recommendations:

6.2.1 Annual inspections of the walk trails, access ways and firebreaks be completed to identify areas where erosion is a concern.
6.2.2 Complete maintenance on all culverts, spoon and spur drains as required on an annual basis.
6.2.3 Progressively relocate and rehabilitate any inappropriately located firebreaks.

6.3 Weed Control

There are a number of invasive grasses and other introduced species that have been identified on site, particularly around the periphery of the reserve.

Recommendation:

6.3.1 With the assistance of the Friends of Foxes Lair and the South Central Naturalist Group and the Department of Parks and Wildlife, an audit be undertaken to identify the extent of introduced species within the Reserve(s)
6.3.2 An annual weed spraying/removal program be developed and implemented.

6.4 Use of Off Road Vehicles

Council officers receive numerous reports relating to the riding of both licensed and un-licensed (off-road) motorcycles being ridden through the reserve. Often these riders do not obey the identified speed limit and they leave identified roadways, damaging the environment and posing a threat to pedestrians.

Recommendations

6.4.1 Narrogin Police be requested to assist in the enforcement of the "Control of Vehicles (off road) Act 1978 and prosecute those persons caught using off road vehicles within the reserve.
6.4.2 Additional signage be erected at all entrances to the Foxes Lair Reserve(s) to ensure all uses of the reserve are aware the use of off road vehicles is prohibited within the reserve.

6.5 Licensed Road Vehicles, Roadways & Parking Areas

In addition to off road vehicles, road licensed vehicles have been identified as causing issues within the reserve, largely due to their speed causing a threat to pedestrians and other users of the Reserve(s).

Although speed signs are erected adjacent the main entrance off Williams, this limit is currently not enforceable.

Recommendations:

6.5.1 Local Laws be prepared and introduced to ensure speed limits are adhered to and enforceable.

6.5.2 Appropriate provisions and penalties be included in the Local Laws to specify that it is an offence to drive a vehicle within the reserve unless adhering to the identified road way.

6.5.3 The Narrogin Police be requested to assist the Town in respect of enforcing speed limits within the Foxes Lair Reserves.

6.5.4 An annual maintenance program be prepared and implemented by the Town of Narrogin to ensure vehicle accessways and their associated drainage are appropriately maintained.

6.5.5 Disabled parking bays and their associated access being established within the existing parking areas at Range Road and the Central Picnic Area.

6.5.6 The Town of Narrogin liaise with the Water Corporation over:

- **a) closing the firebreak located on the western boundary to vehicles driven by members of the public; and**
- **b) appropriate signposting of Water Corporation tank access road as restricted access only.**

6.6 Maintenance of Walk Trails

Walks trails within Foxes Lair are largely in good condition thanks to work undertaken by the Friends of Foxes Lair.

That said numerous tracks require attention to address erosion and/or unstable surfaces.

Recommendations:

6.6.1 An annual maintenance program be prepared and implemented by the Town of Narrogin to address erosion and unstable surfaces, ensuring a safe walking environment and disabled access is maintained within the Reserve(s)

6.6.2 An annual works program be identified for the progressive improvement of walk trails and disabled accessways within the reserve.

6.7 Littering

Littering within the reserve has been a well documented and ongoing issue since the 1960's. Currently there are no refuse bins located within the reserve.

Recommendations:

6.7.1 Appropriate Bins with lids being installed adjacent to the exists from the reserve located on Williams Road and Range Road.
6.7.2 Dog Litter Bags be provided adjacent to public bins within the reserve.
6.7.3 Additional Litter control signage be installed at entrances to the Reserve(s) and adjacent to areas of public activity.

6.8 Signage

Information, Regulatory and Interpretative signage has been erected at various located throughout the reserve, being constructed of wood and metal. There is a need to establish maintenance and replacement programs in order to ensure that signage is kept in good condition.

It is also noted that whilst regulatory signage has been erected at the main entrance, there is little or no signage adjacent to pedestrian entrances off Narrakine Road.

Recommendations:

6.8.1 An annual audit be undertaken of signs located within the reserve.
6.8.2 Signage within the Reserve(s) to be progressively replaced to ensure an appropriate standard of signage is maintained;
6.8.3 Additional Interpretative Signage be developed and installed in consultation with the Friends of Foxes Lair and the South Central Naturalist Club.
6.8.4 Additional regulatory signage be erected (ie no off road vehicle signs, including motorbikes) at all entrances to the Reserve(s).
6.8.5 The new interpretative signage detailed in recommendation 6.8.3 include a Town Map identifying the location of public toilets in the town.

6.9 Wood Cutting and other Unauthorised Activities

On numerous occasions, members of the public have illegally removed fire wood from the Reserve(s). With fallen trees and dead wood providing habitat for fauna native to the area, this practice is contrary to the conservation status of the Reserve(s).

A number of other unauthorised and inappropriate activities create regular issues within the reserve. Such activities include:

a) the holding of parties and consumption of alcohol.
b) vehicles (including motorbikes) leaving identified road ways and driving on walk trails and through areas of native vegetation.

Recommendations:

6.9.1 Appropriate local laws should be prepared, implemented and enforced to ensure that unauthorised activities are minimised within the reserve.

6.9.2 The Town of Narrogin Ranger be instructed to continue patrolling of the reserve and Narrogin Police be requested to conduct regular patrols through the reserve to be prevent the practice of holding parties and or consuming alcohol within the Reserve(s).

6.10 Promotion & Education

Continued promotion of Foxes Lair for conservation, education and passive recreation is recommended.

6.10.1 That efforts be made to promote as a Conservation Area with educational and passive recreational opportunities through the website www.bushcare.org.au, Dryandra Country Visitors Centre, the Narrogin Caravan Park and other tourist and accommodation venues within Narrogin;

6.10.2 Once completed the Foxes Lair Management Plan, including the trails plan be placed on the Town of Narrogin's Website.

6.10.3 Community Groups and schools within the Narrogin Community be encouraged to use Foxes Lair as an educational resource in respect of the Narrogin areas natural environment.

6.11 Additional Infrastructure

Consideration should be given to the provision of a suitable standard of infrastructure to maximise the use of the reserve whilst not detracting from its conservation values.

6.11.1 Subject to budget and/or other funding being confirmed, it is recommended that appropriate robust seating and shelters be acquired and installed at the Central Picnic Area and Beavers Dam and to replace other damaged seating on walk trails within the reserve.

6.11.2 A plan for development and use of Beavers Dam be developed in consultation with relevant parties as soon as possible.

6.11.3 A guide to tree species contained within the arboretum be developed as soon as possible to assist in the areas promotion.

6.12 Feral Animal Control

There is a need to control feral animals, particularly cats, within the reserve in order to protect native fauna.

6.12.1 Foxes Lair be included in the Town of Narrogin annual Cat Control Program.

6.13 Review of Management Plan

The Town of Narrogin recognises the Foxes Lair Management as a living document that will require periodical review to ensure ongoing refinement of management practices within the reserve.

6.13.1 That the Foxes Lair Management Plan be reviewed every 3-5 years in consultation with relevant community groups and government agencies.

Attachment No 1

Management Orders (Vestings) for Reserves contained in Foxes Lair

S. 196

LAND ACT, 1933

(Section 33)

VESTING ORDER

File No. 3988/30

I, Air Chief Marshal Sir Wallace Kyle, Knight Grand Cross of the Most Honourable Order of the Bath, Knight Commander of the Royal Victorian Order, Commander of the Most Excellent Order of the British Empire, Companion of the Distinguished Service Order, Distinguished Flying Cross, Knight of Grace of the most Venerable Order of the Hospital of St. John of Jerusalem, Governor in and over the State of Western Australia and its Dependencies in the Commonwealth of Australia, do hereby, in pursuance of the powers enabling me in that behalf, and under and by virtue of the provisions of section 33 of the Land Act, 1933, direct that Class "A" Reserve No. 20605

shall vest in and be held by the Town of Narrogin

in trust for the following objects and purposes (that is to say) "Recreation and Parkland"

subject nevertheless to the powers reserved to me by section 37 of the said Act.

Given under my hand, at Perth,

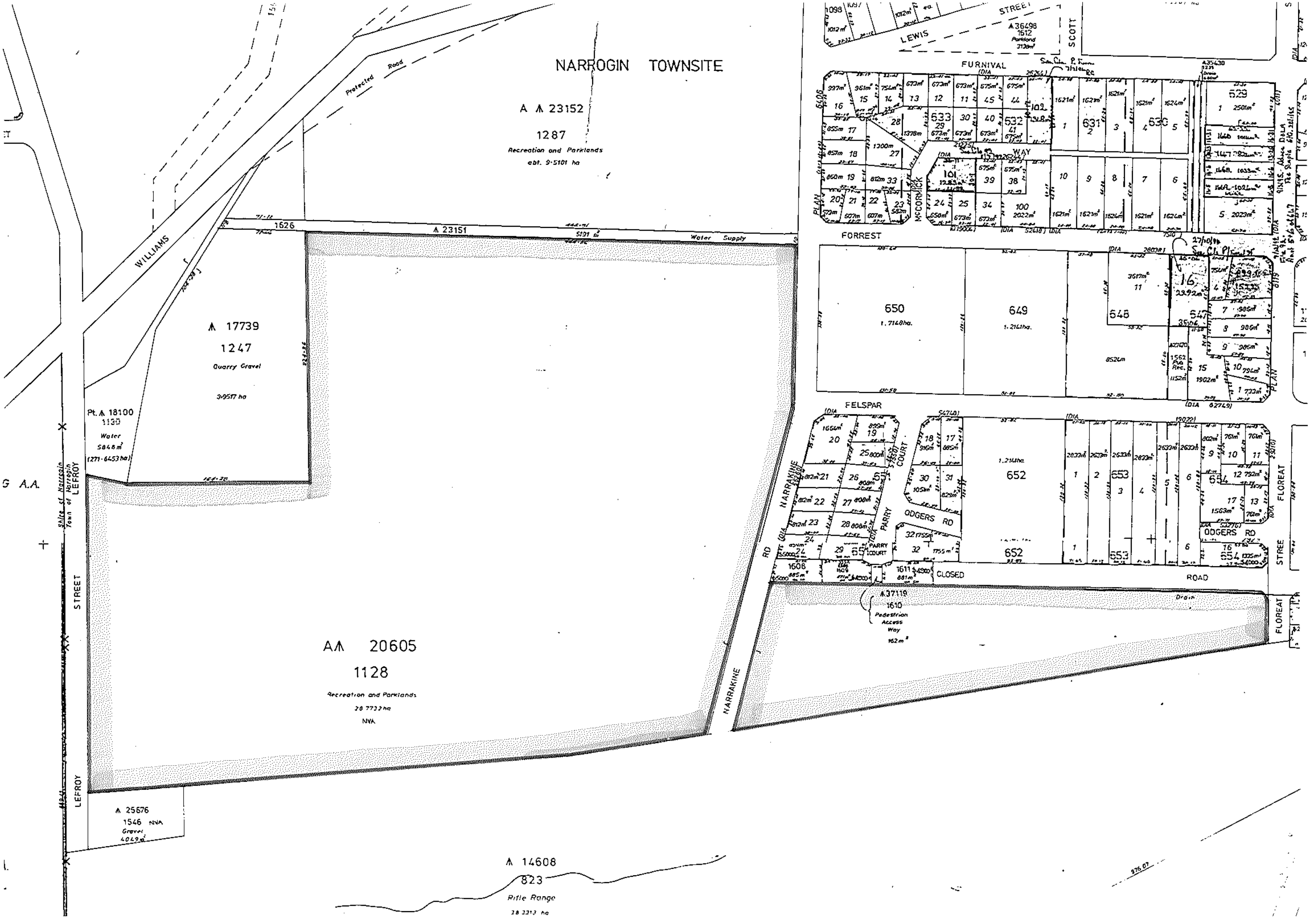
this 21st day

of MARCH 1979

Wallace Kyle

Governor

65329/4/77—500—F370


NARROGIN TOWNSITE
A A 23152
1287
Recreation and Parklands
abt. 9·5101 ha
Protected Road
WILLIAMS
A 23151
1626
Water Supply
A 17739
1247
Quarry Gravel
3·9517 ha
Pt. A 18100
1130
Water
5848 m²
LEFROY
STREET
AA 20605
1128
Recreation and Parklands
28 7732 ha
NVA
A 25676
1546 NVA
Gravel
A 14608
823
Rifle Range
NARRAKINE
RD
ROAD
CLOSED
A 37119
1610
Pedestrian Access Way
162 m²
Drain
FLOREAT
STREET
FORREST
FELSPAR
PARRY COURT
ODGERS RD
McCORMICK
WAY
FURNIVAL
LEWIS
SCOTT
A 36498
1612
Parkland
650
1.7148ha.
649
1.2141ha.
648
652
1.2141ha.
653
654
629
630
631
632
633
PLAN
DIA

S. 196

LAND ACT, 1933

(Section 33)

VESTING ORDER

File No. 3988/30

I, Air Chief Marshal Sir Wallace Kyle, Knight Grand Cross of the Most Honourable Order of the Bath, Knight Commander of the Royal Victorian Order, Commander of the Most Excellent Order of the British Empire, Companion of the Distinguished Service Order, Distinguished Flying Cross, Knight of Grace of the most Venerable Order of the Hospital of St. John of Jerusalem, Governor in and over the State of Western Australia and its Dependencies in the Commonwealth of Australia, do hereby, in pursuance of the powers enabling me in that behalf, and under and by virtue of the provisions of section 33 of the Land Act, 1933, direct that Class "A" Reserve No. 23152

shall vest in and be held by the Town of Narrogin

in trust for the following objects and purposes (that is to say) "Recreation and Parkland"

subject nevertheless to the powers reserved to me by section 37 of the said Act.

Given under my hand, at Perth,

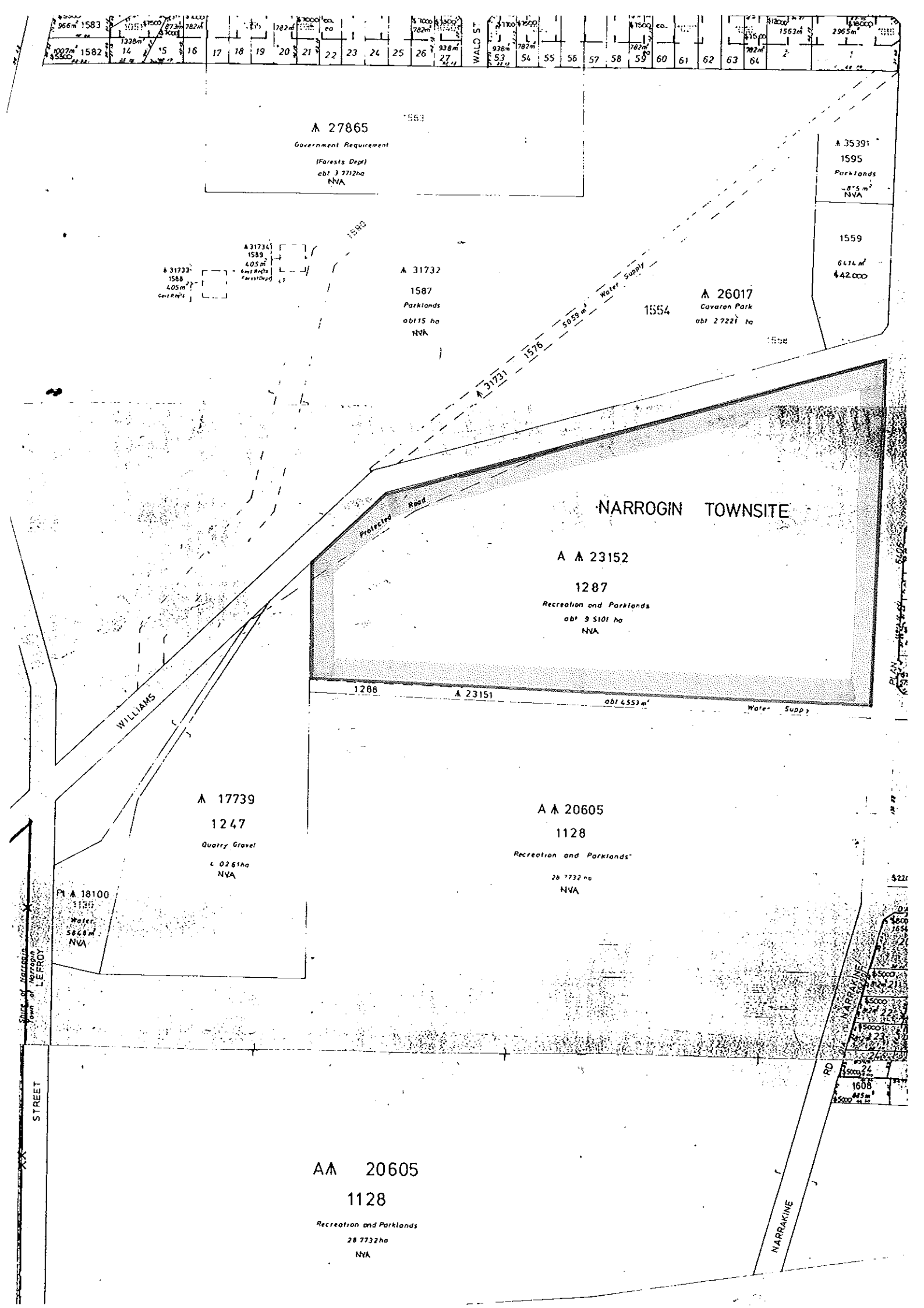
this 21st day

of MARCH 1979

Wallace Kyle

Governor

65329/4/77—500—F370


A 27865
Government Requirement
(Forests Dept)
abt 3 7712ha
NVA
A 35391
1595
Parklands
NVA
1559
A 31734
1589
A 31733
1588
A 31732
1587
Parklands
abt 15 ha
NVA
A 26017
Caravan Park
abt 2 7221 ha
1554
A 31731
1576
5059 m² Water Supply
NARROGIN TOWNSITE
Protected Road
A A 23152
1287
Recreation and Parklands
abt 9 5101 ha
NVA
1288
A 23151
abt 4553 m²
Water Supply
WILLIAMS
A 17739
1247
Quarry Gravel
4 02 61ha
NVA
A A 20605
1128
Recreation and Parklands
28 7732 ha
NVA
Pt A 18100
Water
5648 m²
NVA
Shire of Narrogin
Town of NARROGIN
LEFROY
STREET
WALD ST
NARRAKINE
RD
1608
A A 20605
1128
Recreation and Parklands
28 7732ha
NVA

1f

L.196

LAND ACT, 1933

(Section 33)

VESTING ORDER

File No. 719/986

I, Professor Gordon Reid, Companion of the Order of Australia, Governor of the State of Western Australia, do hereby, in pursuance of the powers enabling me in that behalf, and under and by virtue of the provisions of Section 33 of the Land Act, 1933, direct that Reserve No. 39708 (Narrogin Lot 1627)

shall vest in and be held by the Town of Narrogin

in trust for the following objects and purposes (that is to say)

"Park and Recreation"

subject nevertheless to the powers reserved to me by Section 37 of the said Act.

Given under my hand, at Perth
this 16th day
of DECEMBER 19 86

Gordon Reid
GOVERNOR

DEPARTMENT OF LAND ADMINISTRATION
Cathedral Avenue,
Perth,
Western Australia 6000

Your Ref.

Our Ref. 719/986 CS:JS

Telephone Enquiries 323 1278

Town Clerk
Town of Narrogin
NARROGIN CDO

Dear Sir

NARROGIN LOT 1627

I advise for your information that Executive Council has:-

1. approved of Narrogin Lot 1627 being set apart as Reserve No. 39708 for the purpose of "Park and Recreation".

2. issued an Order in Council directing that Reserve No. 39708 (Narrogin Lot 1627) shall vest in and be held by the Town of Narrogin in trust for the purpose of "Park and Recreation".

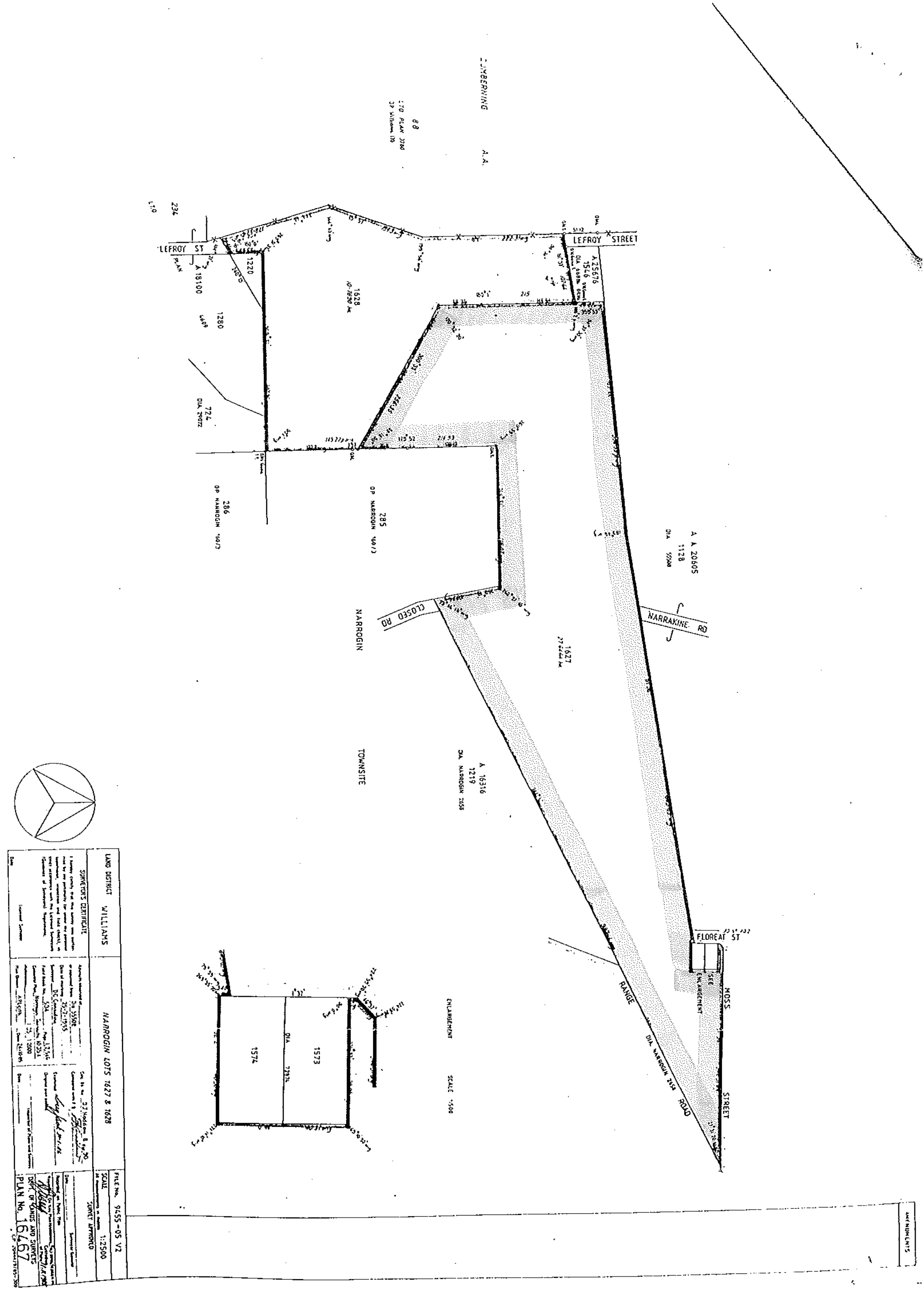
Notice to this effect was published in the Government Gazette of December 24, 1986 and I enclose a print showing the said amendment and the relevant Vesting Order.

Yours faithfully

R W Miskle

DIRECTOR,
LAND OPERATIONS DIVISION

February 4, 1987



LEFROY ST
LEFROY STREET
NARRAKINE RD
CLOSED RD
FLOREAT ST
MOSS STREET
RANGE ROAD
NARROGIN TOWNSITE
A.A.
1628
1627
285
286
1220
1280
724
1573
1574
A 25676
A 18100
A A 20605
1128
A 16316
1219
SEE ENLARGEMENT
ENLARGEMENT SCALE 1:500
LAND DISTRICT WILLIAMS
NARROGIN LOTS 1627 & 1628
SURVEYOR'S CERTIFICATE
FILE No. 9455-05 V2
SCALE 1:2500
SURVEY APPROVED
DEPT OF LANDS AND SURVEYS
PLAN No 16467
AMENDMENTS

Attachment No 2

2003 Foxes Lair Management Plan

FOXES LAIR DRAFT MANAGEMENT PLAN
Version 2 updated June 2003

Contents

1 Introduction

This plan covers

- Rationalisation of tracks.
- Walk tracks and facilities for tourists.
- Bushfire control.
- Controlling erosion and degradation

Unplanned and unregulated maze of tracks in Foxes Lair has degraded the environment and diminishing the reserve's value for picnickers and bushwalkers. There were no defined walk tracks, with the picnic facilities being untidy, frequently vandalised, and a venue for speeding cars.
The Town of Narrogin has adopted this document as a blueprint to improve the value and utility of Foxes Lair.

2 Management plan

2(a)Track classification

Appendix 1 shows the present tracks in Foxes Lair. The tracks have been classified into vehicle access tracks, fire tracks, walk tracks and those in need of closure. Of particular importance is the need to regulate traffic on tracks leading into the picnic area.

Green tracks - one way tracks for general vehicle usage.

Picnic ground. The entry to the picnic ground from opposite the Caravan Park needs to be a one way track to reduce the risk of accidents. (very high priority)

Tourist drive. These tracks allow tourists to slowly drive through the reserve, from the cemetery to Range Road, and back past the arboretum. These tracks would need to be regraded with spur drains to avoid erosion. (medium priority)

All tracks would need a one way, no entry sign, and a speed limit sign

Dotted black tracks - signposted walk tracks.

These are mainly circular walks from the picnic area or a small-proposed car park off Range road (Granite walk and arboretum), that would highlight the various landscapes within the reserve and cater for differing types of visitors. The tracks are covered in more detail in the Walk Track section.

Purple tracks - fire control tracks.

Kept open for fire access but general use limited by earthworks and other inexpensive measures to inhibit use by all but the most determined off road drivers. The location and type of earthwork would need to be determined for each track to avoid vehicles bypassing them and to minimise soil erosion.

The present practice of annual grading of firebreaks should be discontinued and done on a needs only basis with advice from the local fire brigade. Grading tracks has little benefit for fire control. The smooth surface

encourages speeding vehicles and greatly increases the risk of erosion as the tracks redirect and confine storm water runoff.
Appendix 5 shows tracks designated for fire control

Red tracks (C) - closure.
These tracks need to be removed to facilitate traffic control and to reduce soil erosion. (Very high priority). Previous measures using wooden barriers with no entry signs were ineffective, due to 4-WD vehicles bypassing the signs or ramming them.
Considerable progress has been made since the first management plan. Tracks shown as dotted lines have been closed, and those yet to be done as unbroken lines.
On gravelly soils, deep ripping is effective in bringing up boulders that discourage traffic and the rough surface encourages natural regeneration of local vegetation. Tracks on clay or sandy duplex soils need different measures, as the ripped surface is quickly packed down again by 4-WD traffic and the rip lines can cause erosion by concentrating runoff.

Remedial measures will need to be determined for each duplex/clay soil area, but could include a mix of: -

Scattering boulders on the entrance to the tracks. Boulders can often be found at gravel pits.
Constructing earthen check banks across the track, particularly in places where vehicles can't drive around the banks.
Ripping between the banks.
Placing dead vegetation on the tracks.
Laying seed bearing branches on the riplines or planting seedlings grown from locally collected seed (if the above measures are successful).

Required actions are discussed in section 3.

2(b) Walk tracks
Appendices 2, 3, and 4 show the existing and proposed walk tracks for Foxes Lair.

With the exception of the Railway dam walk, the walks follow a circular route of varying distances starting at the picnic area. Most tracks can be set up with minimal cost, by providing coloured directional track markers at strategic points and a bench type seat at the half way point on the longer walks.
These walks will enable visitors and town residents to experience differing landscape features of Foxes Lair.

Banksia walk. Dryandra heath and jarrah, marri, banksia and brown mallet forests.

Breakaway walk. An easily accessible walk featuring a fine view from the breakaway.

Granite walk. This walk starts from a proposed small car park off Range Road and features attractive granite rock scenery and the arboretum.

Valley walk. A short attractive walk with elements of all of the above walks.

The Railway Dam walk. (not done) This walk encompasses the Town of Narrogin's initiative of a walk track linking Foxes Lair with the Railway dam. The proposed route through Foxes Lair has been amended to reduce erosion and provide a more scenic walk.

Wheelchair walk. (not done) Adjacent to the picnic area. This easily accessible walk with many of the above landscape features could be developed from specialised funding sources.

2(c) The main picnic area

The central location of the picnic area enables visitors to readily access the walk trails and main views. Creation of a modified car park has greatly decreased vandalism but further work is required to increase the attractiveness and utility for families and bushwalkers, and to prevent 4 wheel drive vehicles from breaking through to walk tracks. Specific measures are discussed in section 3.

Figure 1 parking bays at picnic ground

2(d) ***The Arboretum.*** An extensive 40 year old arboretum located near Range Road, with over 70 tree species and subspecies, is being renovated by the Friends of Foxes Lair, with the funding assistance from The Blackwood Basin Group and the Town of Narrogin.
The work plan is covered in section 3.

3 Site specific works in management plan.

3.1Granite walk and arboretum

The following tasks are required to complete the project and report to the funding bodies

1. Define parking area using granite boulders from Narrogin dump (Dan Turner).
2. Close track south of the arboretum (Gillian Martelli).
3. present arboretum sign to a position directly opposite granite rocks (Gillian Martelli)
4. Make and erect main Granite walk/ arboretum signs at Range road and parking area. (Steve Gorton, Gillian Martelli).
5. Place Granite Walk trail markers along the Granite walk (Friends of Foxes Lair busy bee).
6. Remove culled tree regrowth (Naturalists Club?)
7. Complete pruning of arboretum trees (Peter White/ Doug Sawkins)
8. Make and erect individual tree signs in arboretum (Peter White/ Steve Gorton / Doug Sawkins)
9. Design and produce brochure for Granite walk/ arboretum (Peter White/ Doug Sawkins/Dave Bicknell)
10. Produce report for Blackwood Basin Group (Doug Sawkins/ Gillian Martelli)

3.2 Parking area and entry road

1. Erect one way and speed limit signs (S. Gannaway)
2. Cart in and place additional boulders at picnic area to stop vehicle breaking through to the walking tracks. (Narrogin shire to donate boulders, G Martelli to write work order when boulders arrive).
3. Information bay near Williams road (Steve Gorton).
4. Sign at picnic area (“please take rubbish with you”, and diagram of walk tracks)

5. Rip discontinued tracks (see next item).

3.3 Breakaway adjacent to track near Chan's property

4-WD vehicles drive up the breakaway face causing severe erosion. Measures to remove this problem could include:

Laying large barriers of concrete, steel, or wood along the road verge, and on top of the breakaway, and rubble on the eroded tracks. Waste materials such as old bridge timbers and railway track could be used.
Closing tracks on the western side of the breakaway.

3.2 Track closure and revegetation

Specific task locations are shown in appendix 6.

3.2.1 track closure. Unwanted tracks have been closed using vegetation barriers, which has greatly reduced vehicle traffic. However trail bikes and 4 wheel drive vehicles continue to move obstructions and drive down walk paths. Specific entry points requiring further work are:-

C1. Narrakine road entrance. Erect existing sign on ground, add " no trail bike, no car " logos, earth bank across entrance.

C2 Forrest street entrance. " No trail bike, no car " logos installed.

C3 Track to southern side of the arboretum. This track needs to be closed (see 3.1). An earth bank placed across the entrance and " no trail bike, no car " logos erected.

C4. These are a major entry points for vehicles to encroach on walk tracks and the picnic area. Earth bank across entrance, " no trail bike, no car " logos erected, track area revegetated.

C5 Earth bank across entrance, " no trail bike, no car " logos erected, track area revegetated.

C6. Tracks from Beavers dam. Earth bank across entrance, " no trail bike, no car " logos erected

C7. Redundant exit track from the picnic area (see appendix 7(a)). This track is still open and needs to be closed as soon as possible to prevent accidents. Deep rip the track to bring up boulders and facilitate revegetation, install a drain across the track to avoid erosion on to the new track, erect earthen banks ad both ends. Vegetation on the track should regenerate naturally if the surface is left rough after ripping.

3.2.2 Revegetation.

R1. The old main roads camp and closed track (see appendix 7(b)). Rip, and revegetate. The Water authority requires access through the old Main roads camp area, so a narrow track needs to be left. This area has the only Banksia prionotes (Acorn banksia) in the reserve. Revegetating with this species would create an attractive feature.

R2. closed tracks adjoining Beavers dam (see appendix 8).. Rip where required and revegetate.

R3. Corner of Williams and Narrakine roads. Control weeds, rip and revegetate.

R4. Old gravel pit(see appendix 9). Rip, and spread overburden that is piled on the edges. This site should then revegetate naturally, but weed control will be required in the future.

3.3 Weed eradication. Exotic weeds infest many areas in the reserve. The Friends of Foxes Lair are locating infested areas, and gradually reducing the problem. Specific areas will be targeted for more intensive action in the future.

Attachment No 3

List of Vegetation on-site
As Identified by
Western Australian Herbarium

Native Plants

Foxes Lair plant species verified by WA Herbarium
Acacia acuminata Benth.
Acacia chrysocephala Maslin
Acacia insolita E.Pritz. subsp. insolita
Acacia lasiocarpa var. sedifolia (Meisn.) Maslin
Acacia microbotrya Benth.
Acacia saligna (Labill.) H.L.Wendl.
Acacia squamata Lindl.
Acacia stenoptera Benth.
Acacia varia var. crassinervis Maslin
Adenanthos cygnorum Diels subsp. cygnorum
Agrostocrinum scabrum (R.Br.) Baill. subsp. scabrum
Allocasuarina huegeliana (Miq.) L.A.S.Johnson
Allocasuarina humilis (Otto & F.Dietr.) L.A.S.Johnson
Allocasuarina microstachya (Miq.) L.A.S.Johnson
Allocasuarina thuyoides (Miq.) L.A.S.Johnson
Amphipogon strictus R.Br.
Amphipogon turbinatus R.Br.
Amyema miquelii (Miq.) Tiegh.
Amyema preissii (Miq.) Tiegh.
Andersonia caerulea R.Br.
Anigozanthos humilis Lindl. subsp. humilis
Anthotium odontophyllum L.W.Sage
Aristida sp.
Astroloma cataphractum A.J.G.Wilson ms
Astroloma ciliatum (Lindl.) Druce
Astroloma compactum R.Br.
Astroloma pallidum R.Br.
Astroloma sp. Tutanning (A.S. George 7779)
Austrodanthonia caespitosa (Gaudich.) H.P.Linder
Austrodanthonia setacea (R.Br.) H.P.Linder
Austrostipa elegantissima (Labill.) S.W.L.Jacobs & J.Everett
Austrostipa mollis (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa semibarbata (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa sp. Marchagee (B.R. Maslin 1407)
Austrostipa variabilis (Hughes) S.W.L.Jacobs & J.Everett
Babingtonia camphorosmae (Endl.) Lindl.
Baeckea crispiflora (F.Muell.) F.Muell.
Banksia arctotidis (R.Br.) A.R.Mast & K.R.Thiele
Banksia armata (R.Br.) A.R.Mast & K.R.Thiele
Banksia fraseri (R.Br.) A.R.Mast & K.R.Thiele var. fraseri
Banksia nivea Labill. subsp. nivea
Banksia nobilis (Lindl.) A.R.Mast & K.R.Thiele subsp. nobilis
Banksia proteoides (Lindl.) A.R.Mast & K.R.Thiele
Banksia sessilis (Knight) A.R.Mast & K.R.Thiele
Banksia sphaerocarpa var. caesia A.S.George
Banksia squarrosa (R.Br.) A.R.Mast & K.R.Thiele subsp. squarrosa
Banksia stuposa (Lindl.) A.R.Mast & K.R.Thiele
Billardiera coriacea Benth.
Billardiera fusiformis Labill.
Billardiera venusta (Putt.) L.Cayzer & Crisp
Blennospora drummondii A.Gray

Dichopogon capillipes (Endl.) Brittan
Dillwynia laxiflora Benth.
Diuris brumalis D.L.Jones
Diuris aff. corymbosa
Dodonaea humifusa Miq.
Dodonaea pinifolia Miq.
Drosera androsacea Diels
Drosera bulbosa Hook.
Drosera erythrorhiza Lindl.
Drosera glanduligera Lehm.
Drosera macrantha Endl. subsp. macrantha
Drosera scorpioides Planch.
Drosera subhirtella Planch.
Eleocharis acuta R.Br.
Elythranthera brunonis (Endl.) A.S.George
Ericksonella saccharata (Rchb.f.) Hopper & A.P.Br.
Eriochilus dilatatus subsp. multiflorus (Lindl.) Hopper & A.P.Br.
Eucalyptus aspersa Brooker & Hopper
Eucalyptus aspersa x falcata
Eucalyptus incrassata Labill.
Eucalyptus loxophleba Benth. subsp. loxophleba
Gastrolobium calycinum Benth.
Gastrolobium dilatatum (Benth.) G.Chandler & Crisp
Gastrolobium obovatum Benth.
Gastrolobium parviflorum (Benth.) Crisp
Gastrolobium retusum Lindl.
Gastrolobium ? spathulatum
Gastrolobium spinosum Benth.
Gastrolobium stipulare Meisn.
Gastrolobium stowardii S.Moore
Glischrocaryon aureum (Lindl.) Orchard
Gompholobium knightianum Lindl.
Gompholobium marginatum R.Br.
Gompholobium tomentosum Labill.
Gonocarpus cordiger Nees
Goodenia coerulea R.Br.
Goodenia pulchella subsp. Wheatbelt (L.W. Sage & F. Hort 795)
Goodenia scapigera R.Br. subsp. scapigera
Goodenia watsonii subsp. glandulosa Carolin
Grevillea leptobotrys Meisn.
Grevillea tenuiflora (Lindl.) Meisn.
Haemodorum discolor T.Macfarlane
Hakea incrassata R.Br.
Hakea lehmanniana Meisn.
Hakea lissocarpha R.Br.
Hakea prostrata R.Br.
Hakea ruscifolia Labill.
Hakea trifurcata (Sm.) R.Br.
Hakea undulata R.Br.
Halgania cyanea Lindl. var. cyanea
Harmogia parviflora Turcz.
Helichrysum leucopsideum DC.

Melaleuca scalena Craven & Lepschi
Melaleuca tuberculata Schauer var. tuberculata
Microcorys subcanescens Benth.
Millotia tenuifolia Cass. var. tenuifolia
Mirbelia dilatata R.Br.
*Moraea miniata Andrews
Neurachne alopecuroidea R.Br.
Neurachne alopecuroidea R.Br.
Olax benthamiana Miq.
Olearia elaeophila (DC.) Benth.
Olearia rudis (Benth.) Benth.
Opercularia vaginata Juss.
Orthrosanthus laxus (Endl.) Benth.
Orthrosanthus laxus var. gramineus (Endl.) Geerinck
Oxalis perennans Haw.
Patersonia juncea Lindl.
Patersonia occidentalis R.Br.
Persoonia quinquenervis Hook.
Petrophile divaricata R.Br.
Petrophile heterophylla Lindl.
Petrophile striata R.Br.
Phebalium ? tuberculosum
Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem.
Phyllanthus calycinus Labill.
Pimelea ciliata Rye subsp. ciliata
Pimelea suaveolens Meisn. subsp. suaveolens
Pittosporum angustifolium Lodd.
Pleurosorus rutifolius (R.Br.) Fee
Poa drummondiana Nees
Podolepis canescens DC.
Podolepis gracilis (Lehm.) Graham
Podolepis lessonii (Cass.) Benth.
Podotheca angustifolia (Labill.) Less.
Prasophyllum gracile Lindl.
Pterochaeta paniculata Steetz
Pterostylis concava D.L.Jones & M.A.Clem.
Pterostylis recurva Benth.
Pterostylis sanguinea D.L.Jones & M.A.Clem.
Pterostylis sanguinea D.L.Jones & M.A.Clem.
Pterostylis scabra Lindl.
Pterostylis sp. inland (A.C. Beauglehole 11880)
Ptilotus declinatus Nees
Ptilotus manglesii (Lindl.) F.Muell.
Ptilotus manglesii (Lindl.) F.Muell.
Ptilotus polystachyus (Gaudich.) F.Muell.
Rhodanthe citrina (Benth.) Paul G.Wilson
Rhodanthe manglesii Lindl.
Rinzia fumana Schauer
Santalum acuminatum (R.Br.) A.DC.
Santalum murrayanum (T.Mitch.) C.A.Gardner
Schoenus minutulus F.Muell.
Schoenus sp.

Senecio quadridentatus Labill.
Sowerbaea laxiflora Lindl.
Sphaerolobium medium R.Br.
Stackhousia monogyna Labill.
Stackhousia scoparia Benth.
Stylidium amoenum R.Br. var. amoenum
Stylidium caricifolium Lindl.
Stylidium leptophyllum DC.
Stylidium piliferum R.Br.
Stylidium pingrupense Lowrie, A.H.Burb. & Kenneally
Stylidium rhynchocarpum Sond.
Stylidium schoenoides DC.
Stylidium tylosum Lowrie & Kenneally
Stylidium uniflorum Sond.
Stylidium zeicolor F.L.Erickson & J.H.Willis
Stypandra glauca R.Br.
Tetraria octandra (Nees) Kuk.
Tetraria sp. Jarrah Forest (R. Davis 7391)
Tetratheca confertifolia Steetz
Tetratheca virgata Steetz
Thelymitra benthamiana Rchb.f.
Thelymitra graminea Lindl.
Thomasia foliosa Gay
Thysanotus patersonii R.Br.
Thysanotus patersonii R.Br.
Thysanotus thyrsoideus Baker
Trichocline spathulata (DC.) J.H.Willis
Tricoryne elatior R.Br.
Tricoryne humilis Endl.
Tripterococcus brunonis Endl.
Trymalium ledifolium var. lineare Rye
Trymalium ledifolium var. rosmarinifolium (Steud.) Benth.
Velleia trinervis Labill.
Verticordia acerosa var. preissii (Schauer) A.S.George
Vittadinia gracilis (Hook.f.) N.T.Burb.
Wurmbea tenella (Endl.) Benth.
Xanthosia atkinsoniana F.Muell.
Xanthosia singuliflora F.Muell.

Appendix No 4

Wildflowers in Foxes Lair

WILDFLOWERS OF FOXES LAIR

NARROGIN

Golden Dryandra (Banksia nobilis)

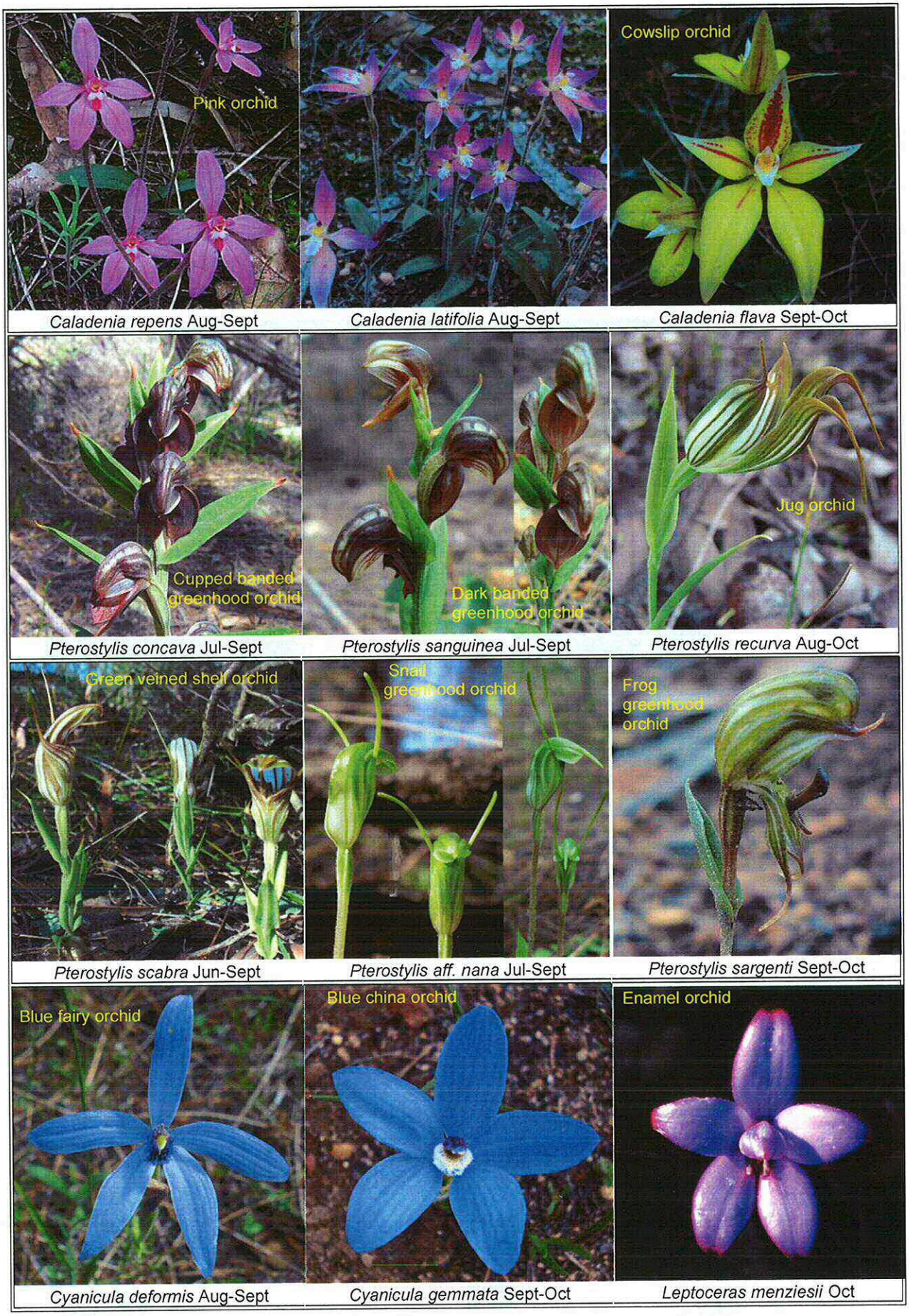
Produced by the Friends of Foxes Lair

Proudly supported by Dryandra Country Visitors Centre and Narrogin Town Council

Foxes Lair

Dryandra Country Visitor Centre

Town of Narrogin love the life



Caladenia repens Aug-Sept | *Caladenia latifolia* Aug-Sept | *Caladenia flava* Sept-Oct

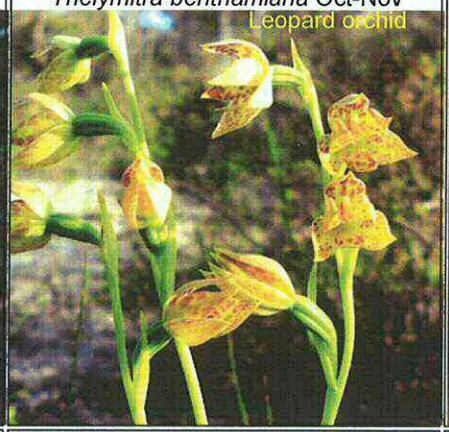
Pterostylis concava Jul-Sept | *Pterostylis sanguinea* Jul-Sept | *Pterostylis recurva* Aug-Oct

Pterostylis scabra Jun-Sept | *Pterostylis aff. nana* Jul-Sept | *Pterostylis sargenti* Sept-Oct

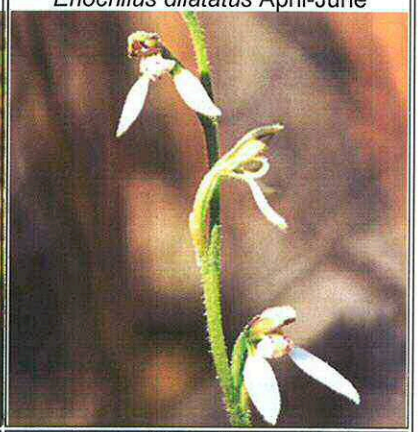
Cyanicula deformis Aug-Sept | *Cyanicula gemmata* Sept-Oct | *Leptoceras menziesii* Oct

Thelymitra macrophylla Oct-Nov

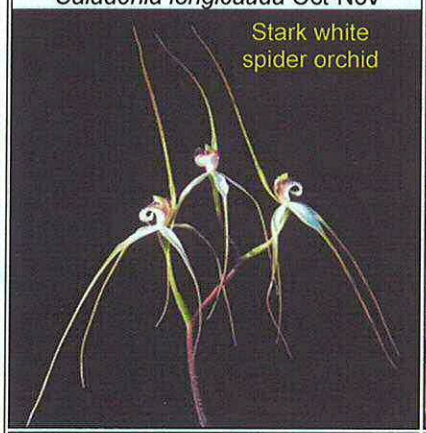
Thelymitra benthamiana Oct-Nov



Eriochilus dilatatus April-June



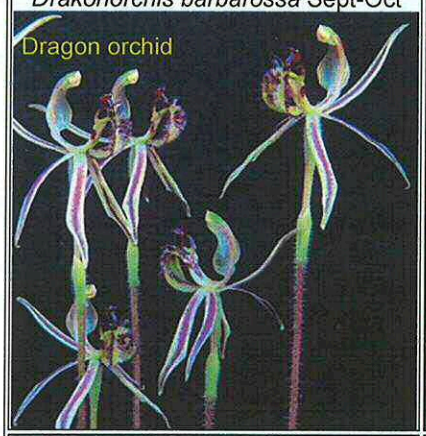
Caladenia longicauda Oct-Nov



Caladenia longiclavata Aug-Sept

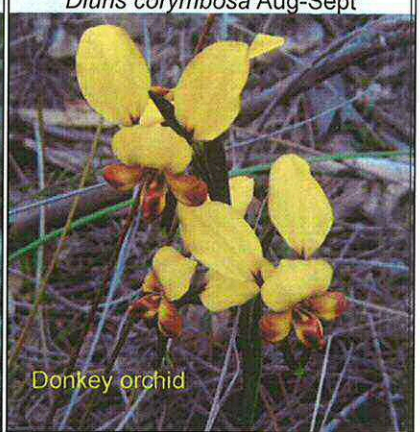
Caladenia xantha Aug-Sept

Drakonorchis barbarossa Sept-Oct



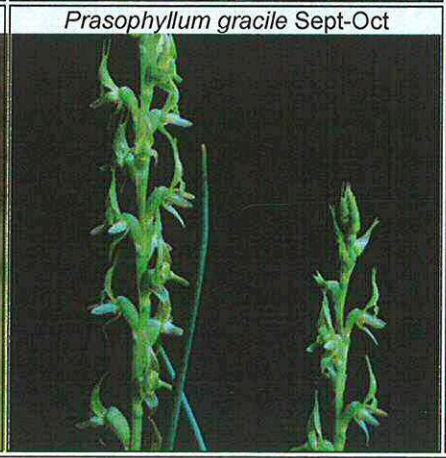
Caladenia falcata Sept

Diuris corymbosa Aug-Sept

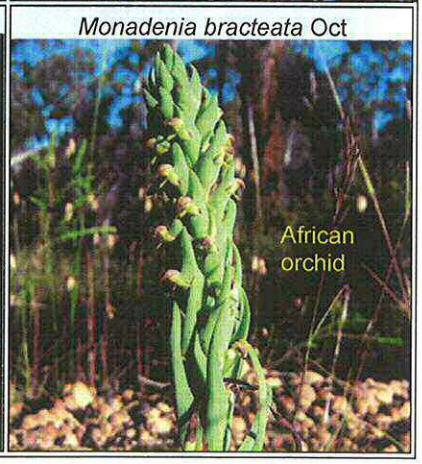


Prasophyllum sargentii Sept-Oct.

Prasophyllum gracile Sept-Oct

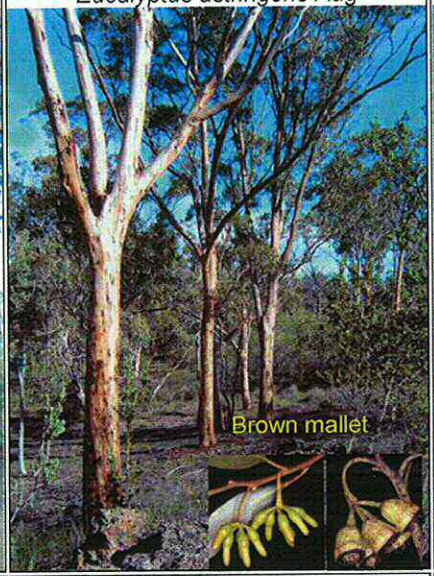


Monadenia bracteata Oct

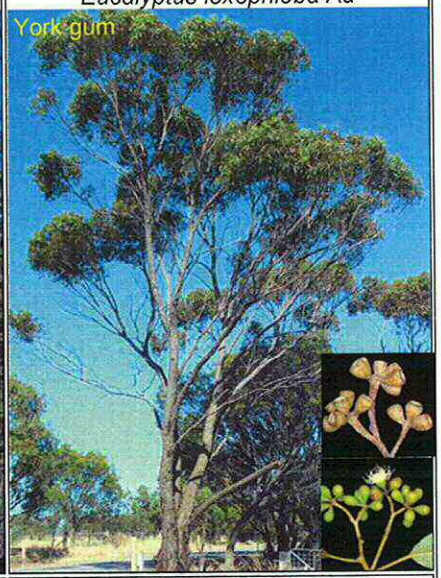


Corymbia calophylla Dec-Jan

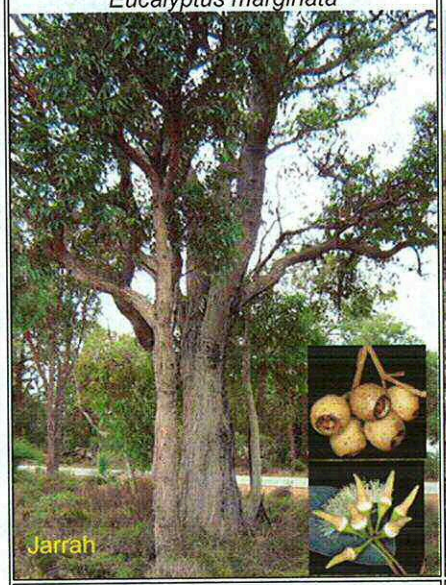
Eucalyptus astringens Aug



Eucalyptus loxophleba Au

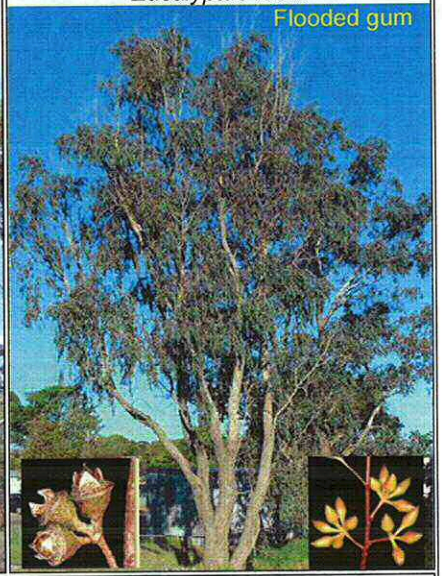


Eucalyptus marginata

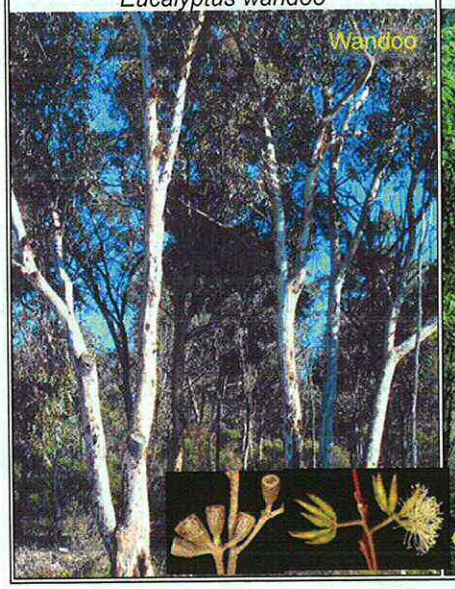


Mallee. *E. aspersa, E. incrassata*

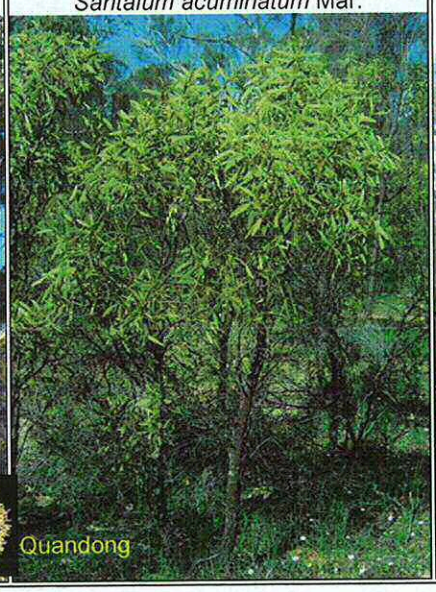
Eucalyptus rudis



Eucalyptus wandoo

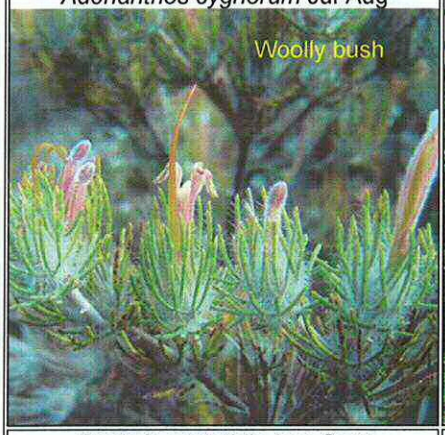


Santalum acuminatum Mar.

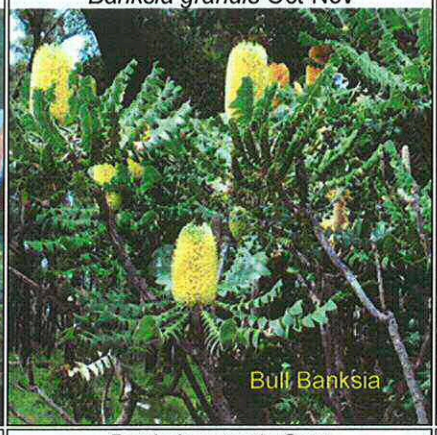


Santalum murrayanum Mar.

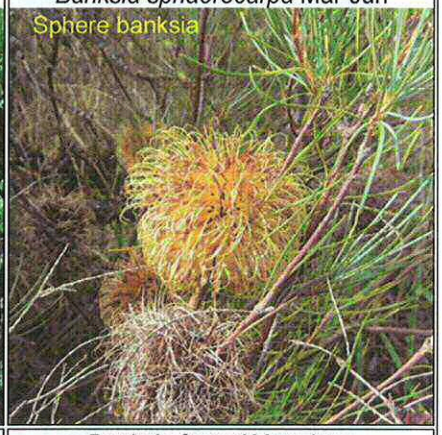
Adenanthos cygnorum Jul-Aug



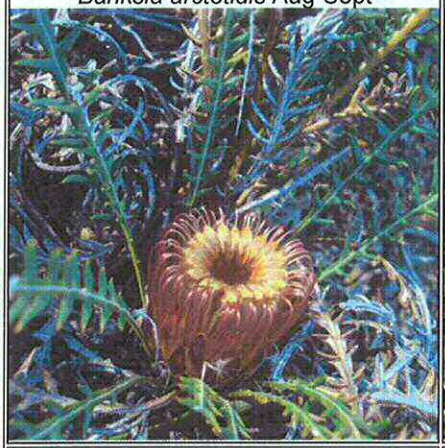
Banksia grandis Oct-Nov



Banksia sphaerocarpa Mar-Jun



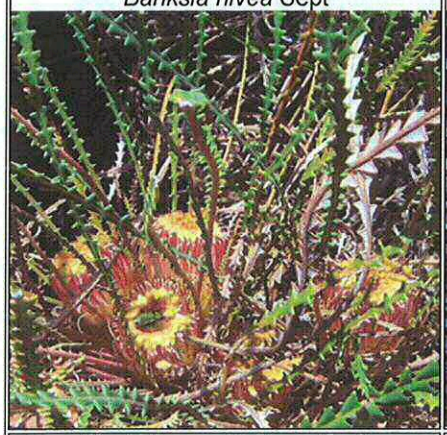
Banksia arctotidis Aug-Sept



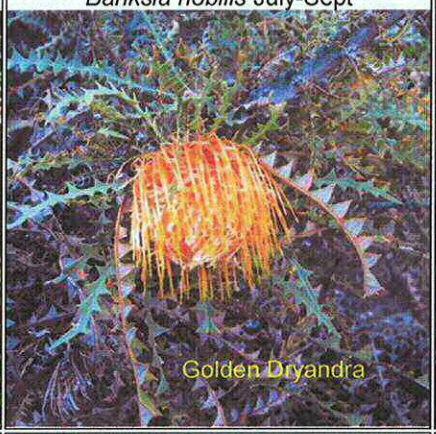
Banksia armata Sept

Banksia fraseri May-June

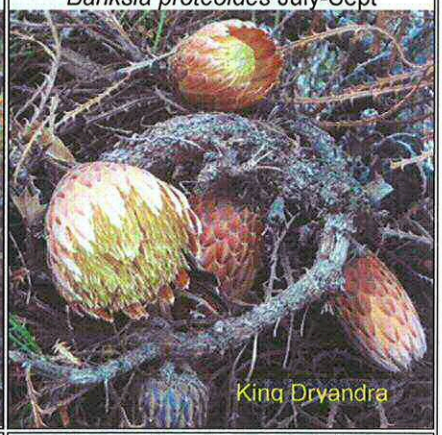
Banksia nivea Sept



Banksia nobilis July-Sept



Banksia proteoides July-Sept



Banksia sessilis June-Sept

Banksia squarrosa Aug-Sept

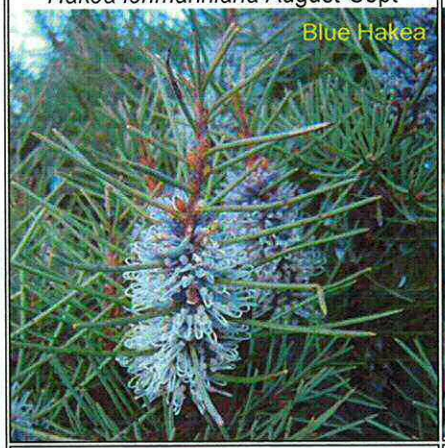
Persoonia quinquenervis Nov

Grevillea leptobotrys Nov-Dec

Grevillea tenuiflora Aug-Sept

Hakea incrassata Aug-Sept

Hakea lehmanniana August-Sept



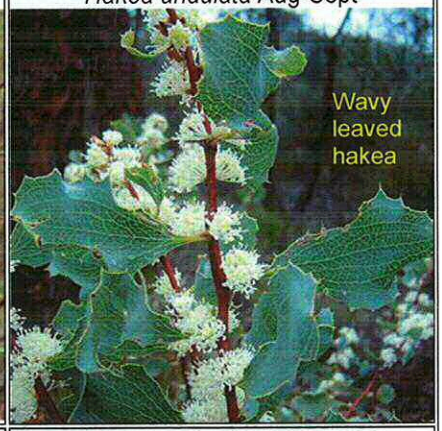
Hakea lissocarpha July-Aug

Hakea prostrata Oct

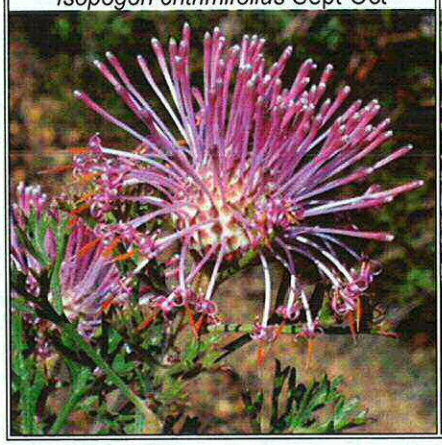
Hakea rusifolia Feb

Hakea trifurcata Aug-Oct

Hakea undulata Aug-Sept

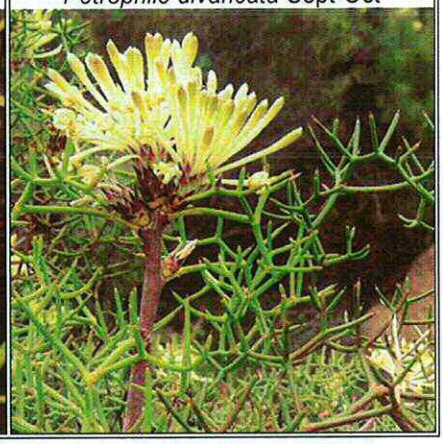


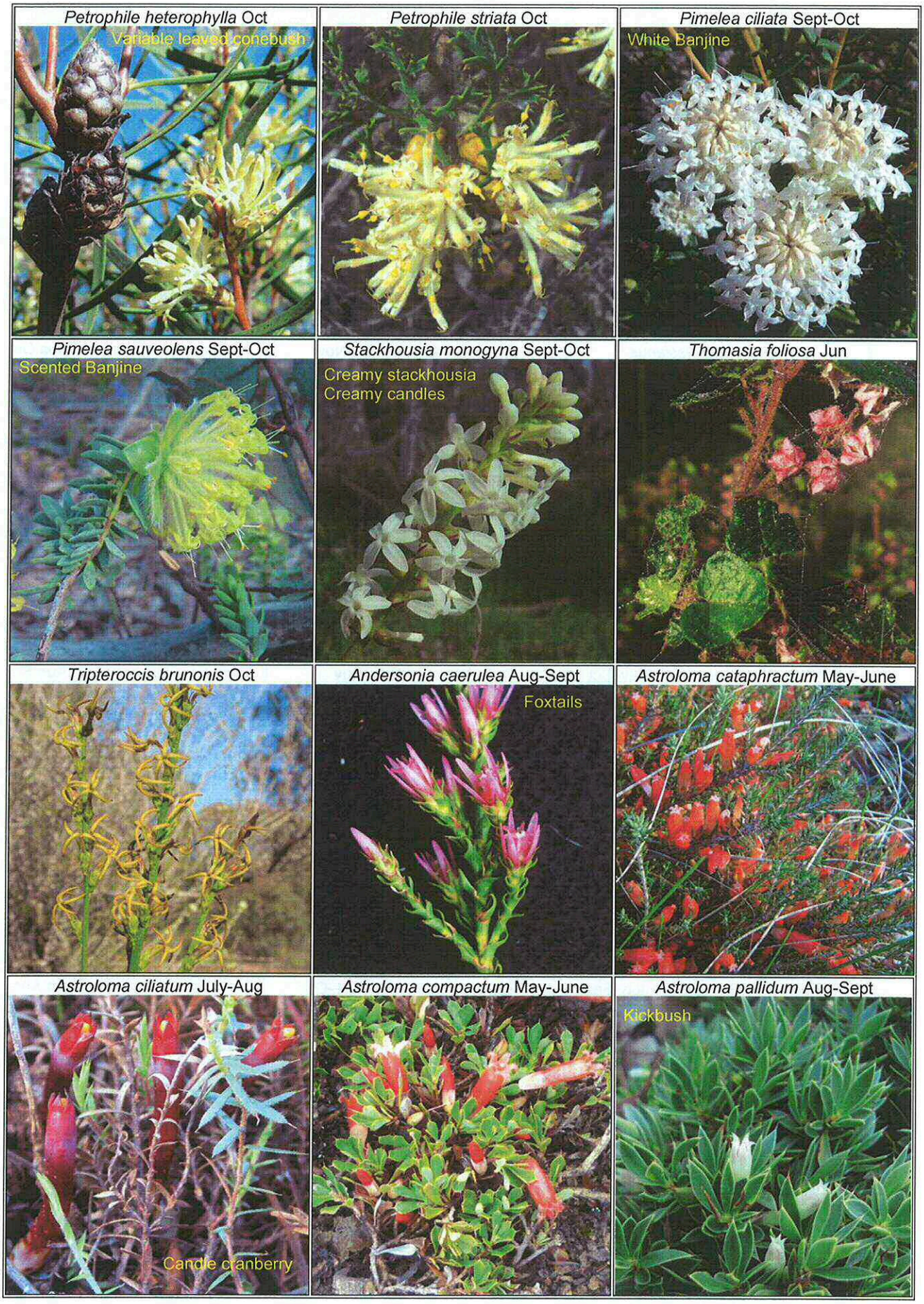
Isopogon crithmifolius Sept-Oct



Isopogon teretifolius Sept-Oct

Petrophile divaricata Sept-Oct



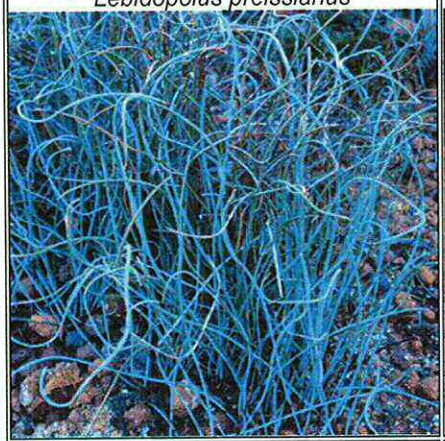

Petrophile heterophylla Oct
Variable leaved conebush
Petrophile striata Oct
Pimelea ciliata Sept-Oct
White Banjine
Pimelea sauveolens Sept-Oct
Scented Banjine
Stackhousia monogyna Sept-Oct
Creamy stackhousia
Creamy candles
Thomasia foliosa Jun
Tripteroccis brunonis Oct
Andersonia caerulea Aug-Sept
Foxtails
Astroloma cataphractum May-June
Astroloma ciliatum July-Aug
Candle cranberry
Astroloma compactum May-June
Astroloma pallidum Aug-Sept
Kickbush

Leucopogon conostephioides June

Leucopogon fimbriatus July-Sept

Leucopogon propinquus April

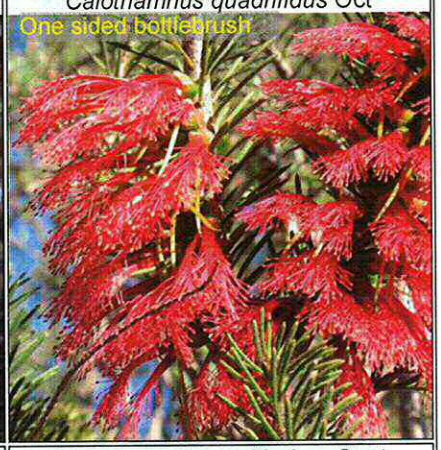
Lebidopolus preissianus



Baeckia crispiflora Oct-Nov

Calothamnus quadrifidus Oct

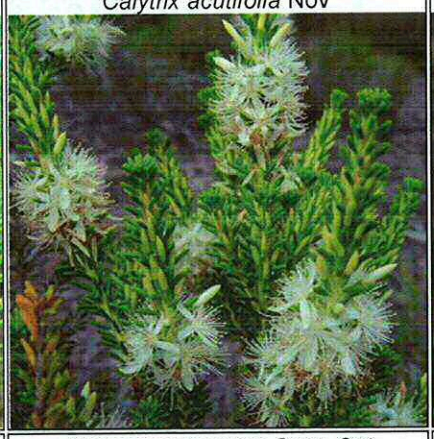
One sided bottlebrush



Calothamnus sanguineus May-Oct

Silky leaf blood flower

Calytrix acutifolia Nov



Calytrix leschenaultia Aug-Sept

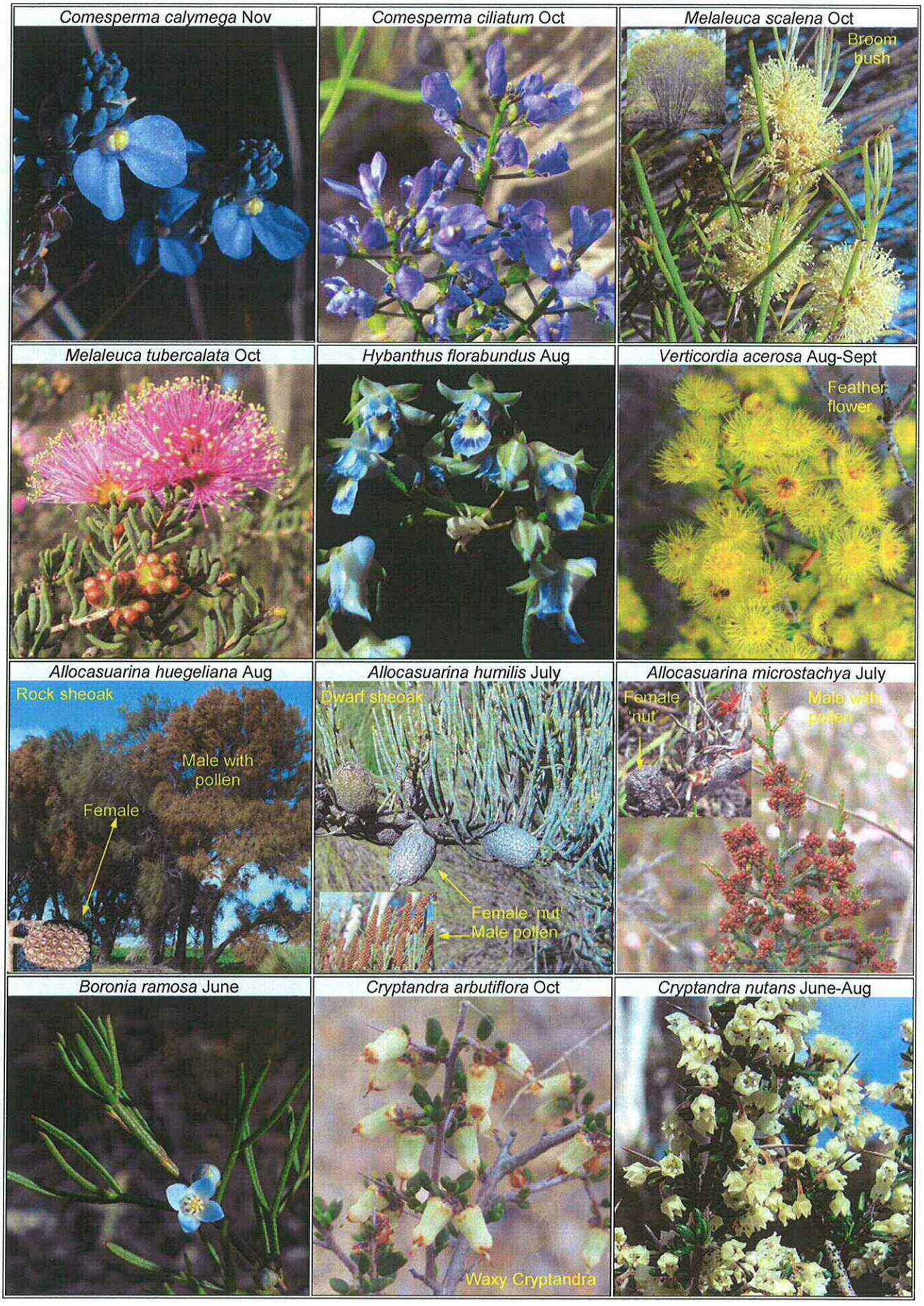
Hypocalymma angustifolia July-Sept

Honey myrtle

Kunzea micromera Sept–Oct

Leptospermum erubescens Aug-Sept

Roadside tea tree

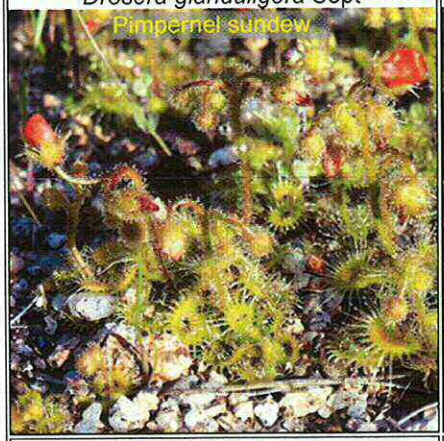

Comesperma calymega Nov
Comesperma ciliatum Oct
Melaleuca scalena Oct
Broom bush
Melaleuca tubercalata Oct
Hybanthus florabundus Aug
Verticordia acerosa Aug-Sept
Feather flower
Allocasuarina huegeliana Aug
Rock sheoak
Male with pollen
Female
Allocasuarina humilis July
Dwarf sheoak
Female 'nut'
Male pollen
Allocasuarina microstachya July
Female 'nut'
Male with pollen
Boronia ramosa June
Cryptandra arbutiflora Oct
Waxy Cryptandra
Cryptandra nutans June-Aug

Drosera androsaceae Sept–Oct

Drosera bulbosa June

Drosera erithrohriza May

Drosera glanduligera Sept



Drosera macrantha Aug-Sept

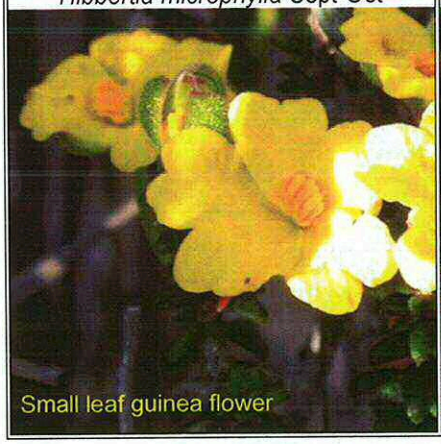
Drosera scorpioides Aug-Sept

Drosera subhirtella Late Sept-Oct

Hibbertia commutata Sept-Oct

Hibbertia enervia Aug-Sept

Hibbertia microphylla Sept-Oct



Hibbertia spicata Sept-Oct

Anthotium odontophyllum Nov-Dec

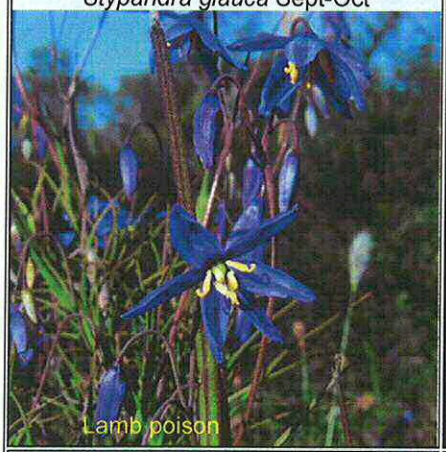
Durell's anthotium

Agrostrinum scabrum Nov

Caesia sp. Oct

Chamaescilla corymbosa Sept-Oct

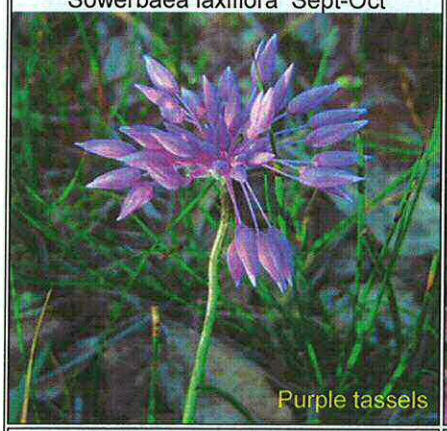
Stypandra glauca Sept-Oct



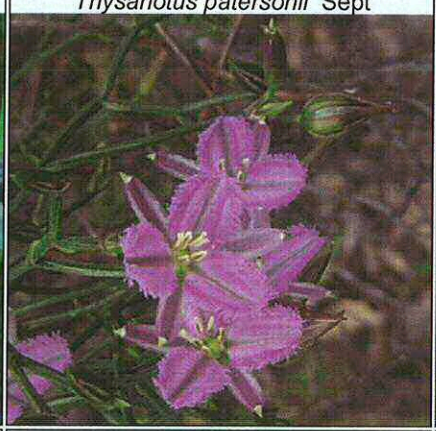
Dianella revoluta Dec-Jan.

Olax benthamiana Sept-Oct

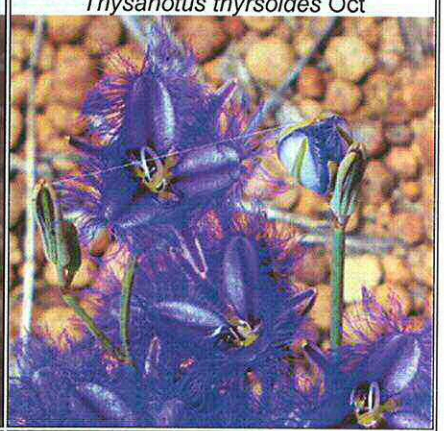
Sowerbaea laxiflora Sept-Oct



Thysanotus patersonii Sept

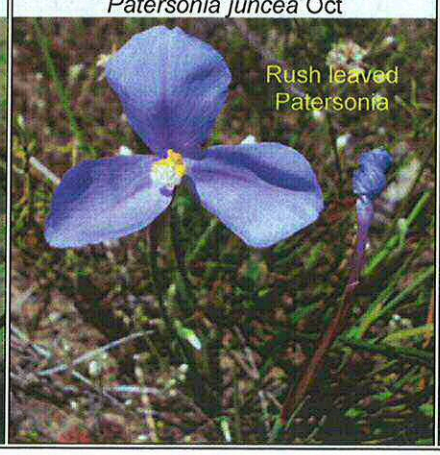


Thysanotus thyrsoides Oct



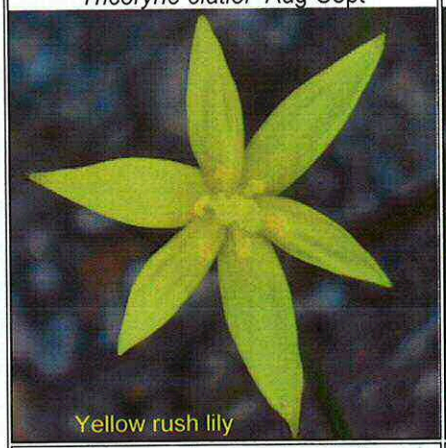
Orthrosanthus laxus Sept

Patersonia juncea Oct



Patersonia occidentalis Nov

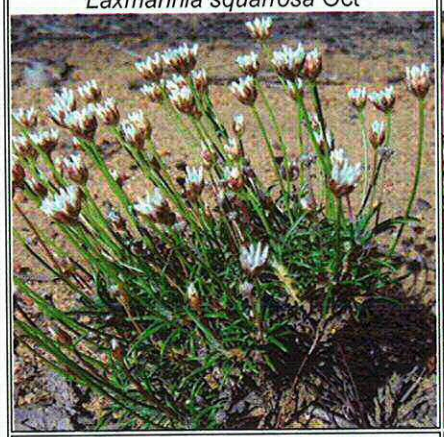
Tricoryne elatior Aug-Sept



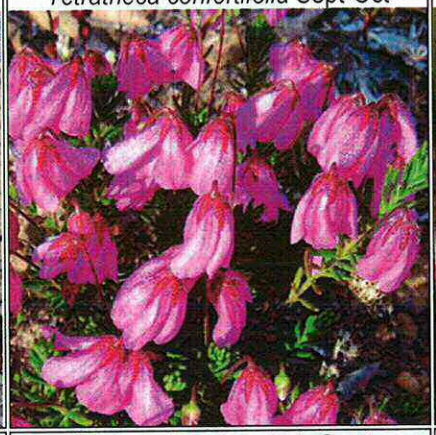
Tricoryne humilis Nov

Xanthorrhoea brevistyla Dec

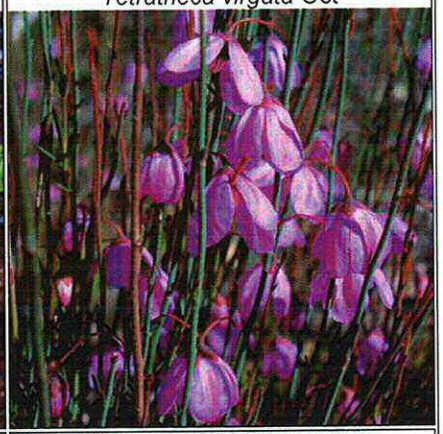
Laxmannia squarrosa Oct



Tetratheca confertifolia Sept-Oct



Tetratheca virgata Oct



Trymalium ledifolium Aug

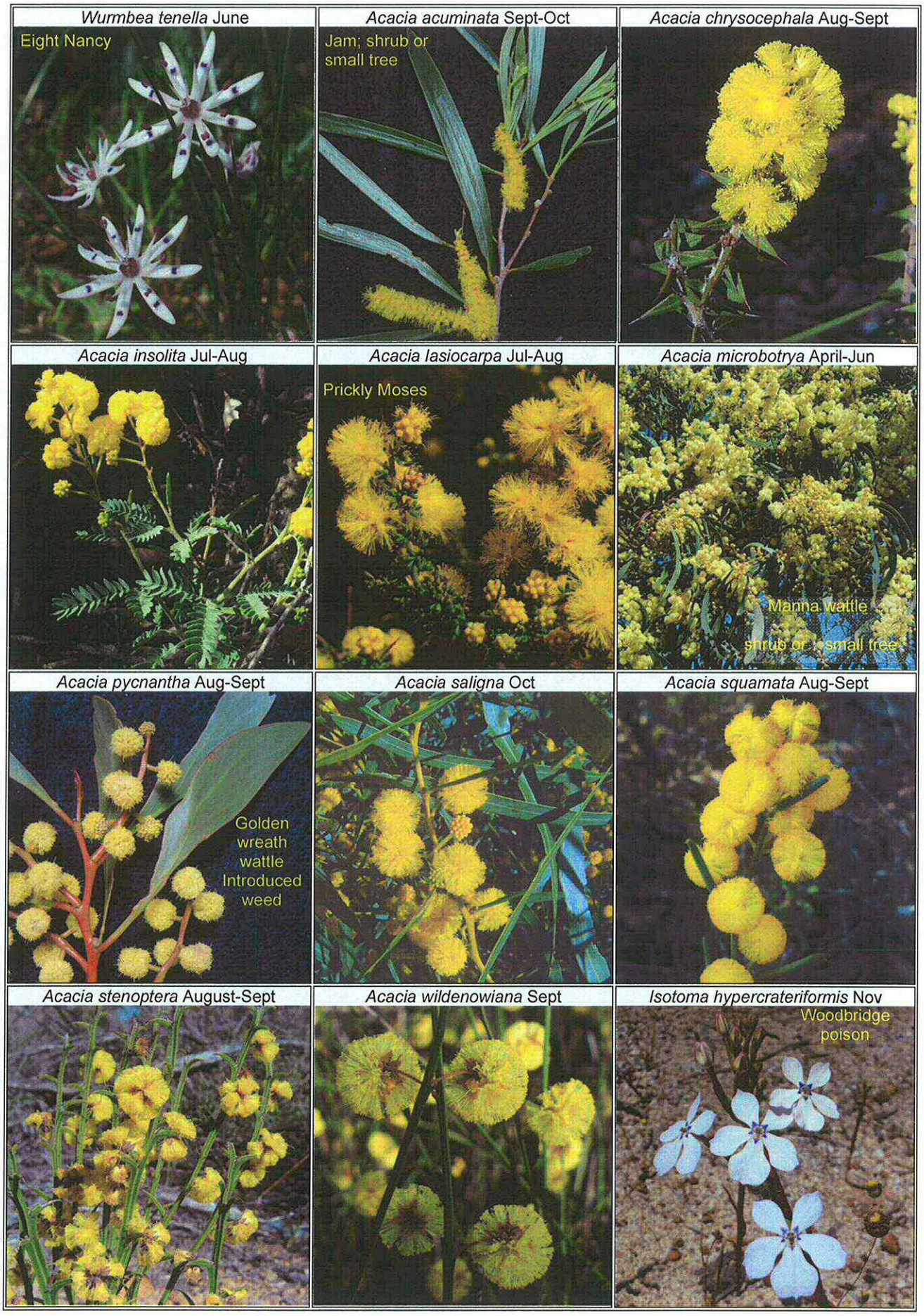
Borya sphaerocephala Sept

Glischrocaryon aureum Oct

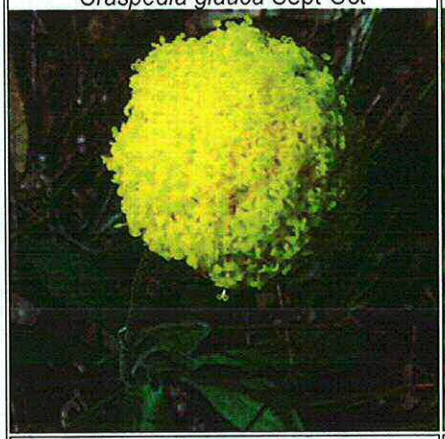
Hemiandra pungens Sept

Hemigenia humilis Oct-Nov

Microcorys subcanescens Oct-Nov


Wurmbea tenella June
Eight Nancy
Acacia acuminata Sept-Oct
Jam; shrub or small tree
Acacia chrysocephala Aug-Sept
Acacia insolita Jul-Aug
Acacia lasiocarpa Jul-Aug
Prickly Moses
Acacia microbotrya April-Jun
Manna wattle
shrub or small tree
Acacia pycnantha Aug-Sept
Golden wreath wattle
Introduced weed
Acacia saligna Oct
Acacia squamata Aug-Sept
Acacia stenoptera August-Sept
Acacia wildenowiana Sept
Isotoma hypercrateriformis Nov
Woodbridge poison

Craspedia glauca Sept-Oct



Hyalosperma glutinosum Sept-Oct

Helichrysum leucopsideum Oct

Lawrencella rosea Sept-Oct.

Olearia paucidentata April-May

Olearia rudis Sept-Oct

Podolepis canescens Oct

Podolepis gracilis Sept-Oct

Podolepis lessonii Sept-Oct

Podotheca angustifolia Oct

Rhodanthe citrina Sept-Oct

Rhodanthe manglesii Sept-Oct

Trichocline spathulata Oct

Native gerbera

Vittadinia gracilis Oct-Nov

Ptilotus declinatus Nov

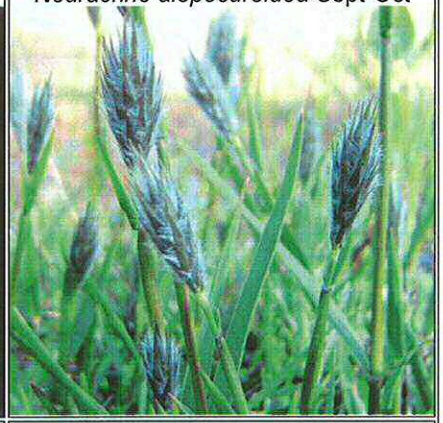
curved mullah mullah

Ptilotus manglesii Nov

Xanthosia atkinsoniana Nov

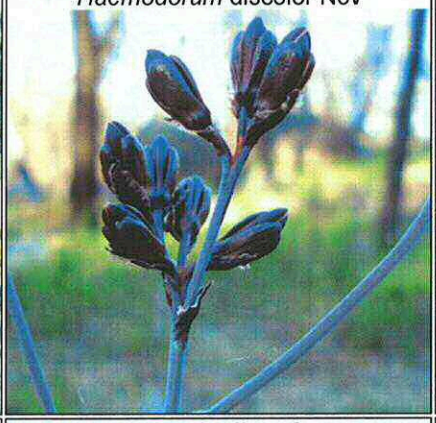
Southern cross

Neurachne alopecuroidea Sept-Oct

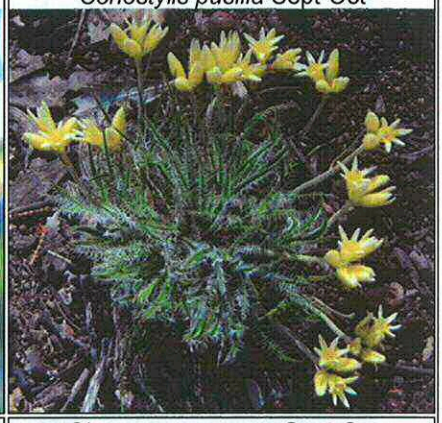


Anigozanthus humilis Sept-Oct

Haemodorum discolor Nov



Conostylis pusilla Sept-Oct

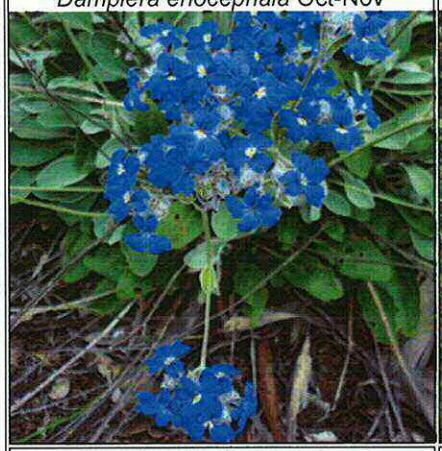


Conostylis setigera Sept-Oct

Lomandra effusa Sept

Chamaexeros serra Sept-Oct

Dampiera eriocephala Oct-Nov



Dampiera fasciculata Sept-Oct

Dampiera lavandulacea Oct

Dampiera lindleyi Aug-Sept

Dampiera linearis Sept-Oct

Dampiera obliqua Sept

Goodenia caerulea Oct-Nov

Goodenia scapigera Oct

Goodenia pulchella Oct

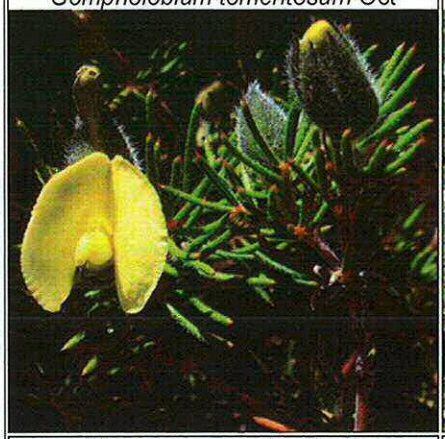
Lechenaultia biloba Sept-Oct

Lechenaultia formosa Sept-Oct

Velleia trinervis Sept-Oct


Bossiaea eriocarpa Sept
Common brown pea
Chorizema aciculare Sept
Needle leaved chorizema
Chorizema dicksonii Sept
Flame pea
Daviesia costata Aug-Oct
Daviesia decurrens Aug-Oct
Daviesia hakeoides Aug-Oct
Dillwynia laxiflora Aug-Sept
Gastrolobium calycinum Sept
York road poison
Gastrolobium parviflorum Sept
Box poison
Gastrolobium spinosum Oct-Nov
Prickly poison
Gompholobium knightianum Sept-Oct
Gompholobium marginatum Sept

Gompholobium tomentosum Oct



Isotropis cuneifolia Oct

Isotropis drummondii Oct

Hovea pungens Jun-Sept

Hovea trisperma Jun-Aug

Hovea chorizemifolia Jun-Aug

Jacksonia alata Oct Nov

Jacksonia epiphyllum Nov

Jacksonia furcellata Nov

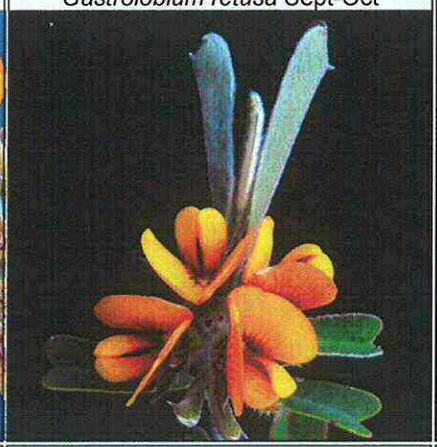
Jacksonia sternbergiana Nov

Kennedia prostrata Sept-Oct

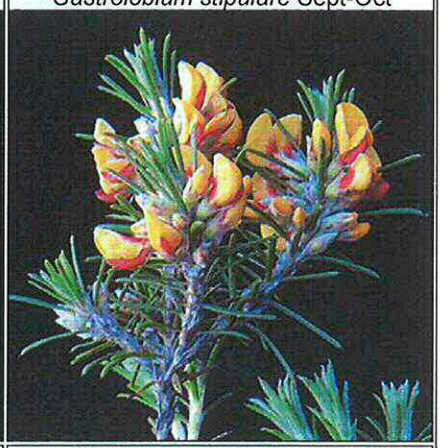
Mirbelia dilatata Oct

Gastrolobium stowardii Sept-Oct

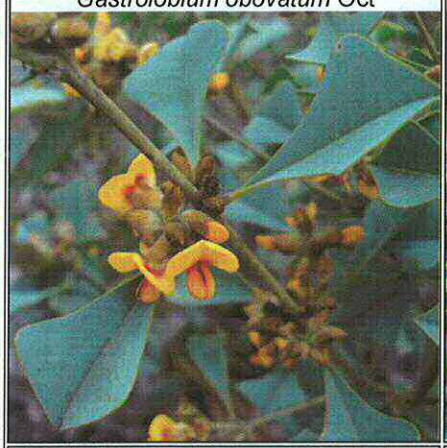
Gastrolobium retusa Sept-Oct



Gastrolobium stipulare Sept-Oct

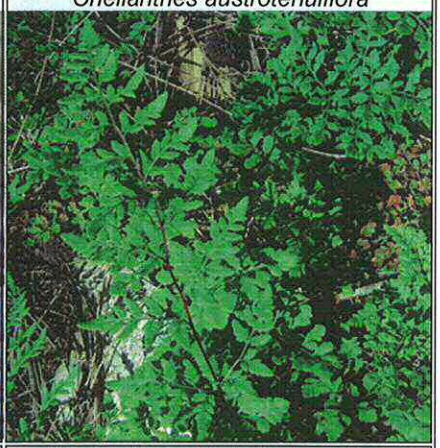


Gastrolobium obovatum Oct



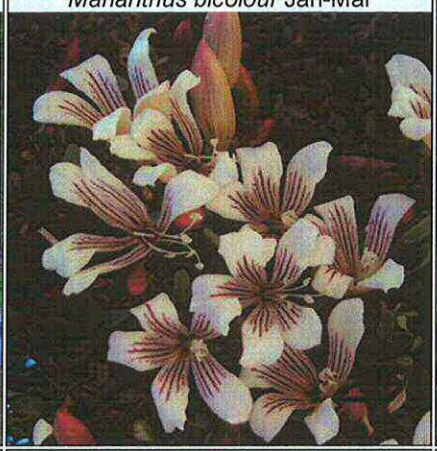
Sphaerolobium medium Sept-Oct

Cheilanthes austrotenuiflora

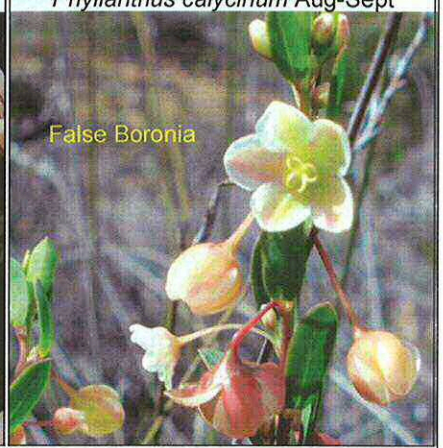


Marianthus drummondiana Oct

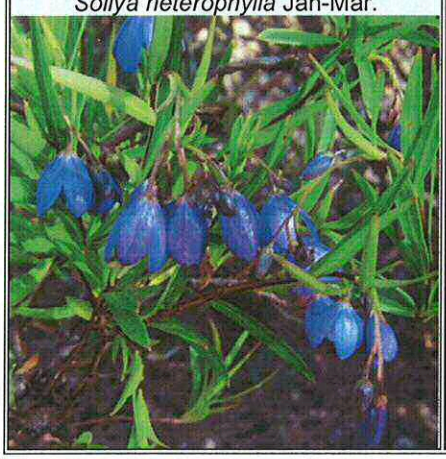
Marianthus bicolour Jan-Mar



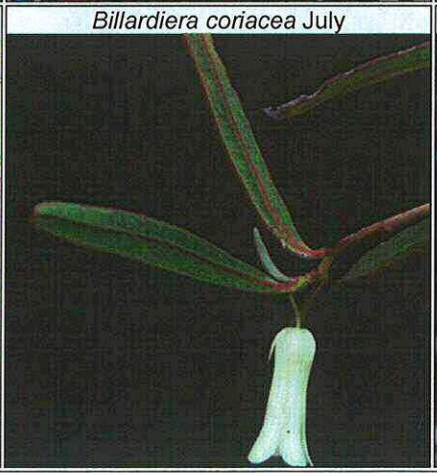
Phyllanthus calycinum Aug-Sept



Sollya heterophylla Jan-Mar.



Billardiera coriacea July



Billardiera sericea Oct


Stylidium amoenum
Lilac triggerplant
Stylidium breviscapum Oct
Boomerang triggerplant
Stylidium calcaratum Oct
Book triggerplant
Stylidium caricifolium Oct
MIlkmaid trigger
Stylidium leptophyllum Oct
Stylidium luteum ssp clavatum Oct
Yellow triggerplant
Stylidium piliferum Oct
Stylidium rhyncocarpum Oct
Black beaked triggerplant
Stylidium schoenoides Oct
Cow kicks
Stylidium tylosum Oct
Stylidium uniflorum Sept-Oct
Pincushion triggerplant
Levenhookia pusilla Oct

Lobelia gibbosa Dec-Jan	*Lobelia rhombifolia* Oct-Nov	*Dodonaea pinifolia* May
		

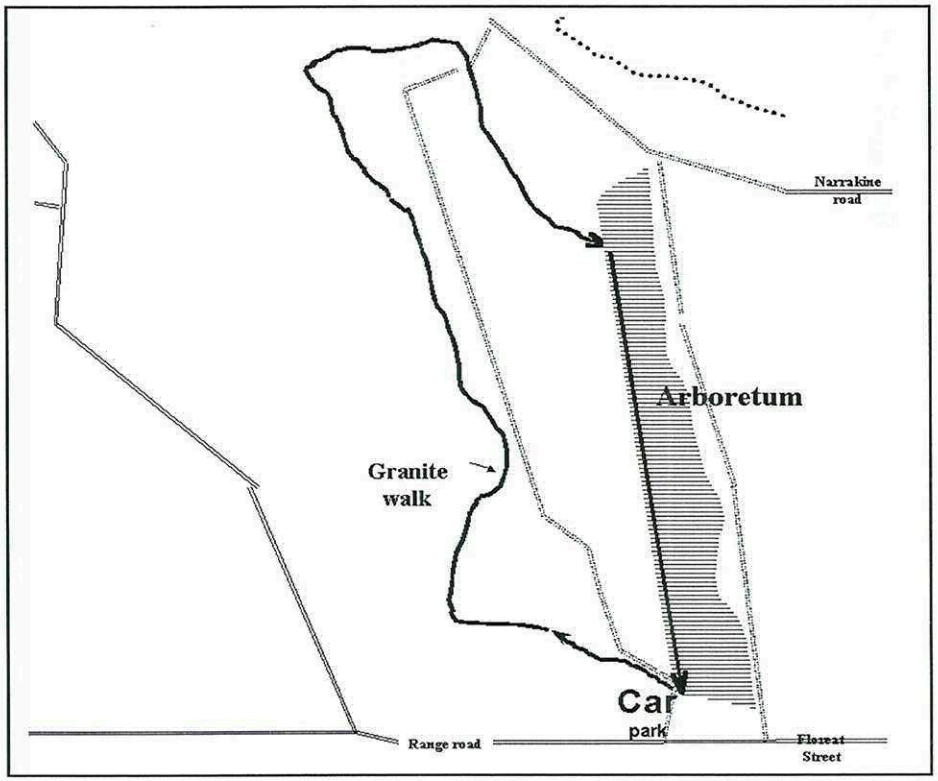
Walking track maps
and arboretum information
on following pages

The Narrogin Arboretum

The Narrogin arboretum was one of more than 50 demonstration plantings established by the then Forests Department, throughout the wheatbelt, in the 1950's and 1960's. The post war agricultural expansion provided opportunities for the introduction of many species of trees. The arboreta were developed to evaluate a range of local, regional, Australian and overseas species that were thought to have promise for planting in the Wheatbelt and goldfields, with a focus on species for quality timber, dust control and for windbreaks

The Narrogin arboretum, smaller than most, was added to over several years as new species became available, with the last trees being planted in 1969. Some species have prospered. Others haven't, though with the passage of time, it is difficult to pinpoint the reasons for failure.

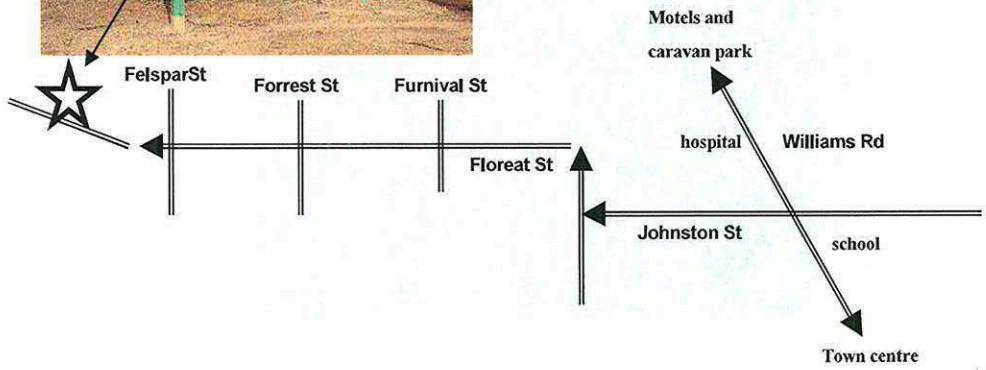
Since the mid 1980's the arboretum became neglected and overgrown until the Friends of Foxes Lair took on the project in 2002. Regrowth and rubbish was removed, with the remaining trees being pruned and pegged. The trees have all been assessed for their current taxonomic status, resulting in some changes from the original species names.



The arboretum was originally laid out as one species per row; 6 seedlings on a 5 x 5m spacing. Over time, failed species were replaced (though not always with the same species) and at some stage; a buffer was planted on three sides.

Arboreta can help with the selection of species, which may be suitable to the area – however, a cautious approach is needed as, at best, an arboretum will tell you what has been successful on that particular site. This may not be a reflection of that species capacity to grow elsewhere in the district. Indeed, great care must be taken when selecting tree species for revegetation work. It also does not explain the reasons for the failure of other species that were planted at the same time, which may have failed due to weed competition or browsing from vermin such as rabbits. The soil types and depths, which vary markedly along the length of the arboretum, would have had a noticeable effect of survival and growth. Other factors which influence success can be seed source and nursery quality. However, the arboretum still provides a valuable insight into the species adaptability and longevity

The best starting point is from the granite carpark. The tree numbers start at eastern end, with the pegs being located on the southern side of the tree. All the surviving trees have been numbered; with other previous planting sites being shown with a small wooden marker, which help define the alignment of the rows.



A guide to the tree species in the Narrogin arboretum

1 *Cupressus arizonica*
Arizona Cypress

2 *Callitris calcarata*
White Cypress Pine

9 *Casuarina glauca*
Swamp sheoak

10 *Eucalyptus stricklandii*
Stricklands gum

11-16 *Eucalyptus longicornis*
Red Morrel

17 *Casuarina glauca*
Swamp Sheoak

20-21 *Eucalyptus largiflorens*
Black box

24 *Eucalyptus loxophleba* subsp. *loxophleba.* York gum

25 *Casuarina glauca*
Swamp Sheoak

27, 30 *Eucalyptus salmonophloia*
Salmon gum

33 *Casuarina glauca*
Swamp Sheoak

35 *Eucalyptus salubris.* Gimlet

37 to be identified

40 *Eucalyptus kondininensis*
Kondinin blackbutt

41 *Casuarina glauca*
Swamp Sheoak

45, 46 *Eucalyptus sargentii* subsp. *sargentii* Salt river gum

47 *Eucalyptus erythronema* subsp. *erythronema* Red flowered mallee

51, 53 – 56 *Eucalyptus occidentalis*
Flat topped yate

58 *Eucalyptus astringens*
Brown mallet

59 *Corymbia citriodora*
Lemon scented gum

60 – 62 *Eucalyptus camaldulensis*
River gum

66 *Eucalyptus kondininensis*
Kondinin blackbutt

68 *Corymbia citriodora*
Lemon scented gum

71 –74 *Eucalyptus dundasii*
Dundas blackbutt

76 *Eucalyptus kondininensis*
Kondinin blackbutt

78 *Eucalyptus stricklandii*
Stricklands gum

84, 85 *Eucalyptus astringens*
Brown mallet

87, 89, 90, 93 *Eucalyptus platypus*
Moort

94 *Eucalyptus astringens*
Brown mallet

95 *Callitris preissii*
Rottnest Island Pine

102 *Eucalyptus melliodora*
Yellow box

105, 106 *Eucalyptus loxophleba* subsp. *loxophleba.* York gum

108, 109 *Eucalyptus stricklandii*
Stricklands gum

113 *Pinus halopensis* Aleppo Pine

114, 116, 117 *Eucalyptus capillosa*
Eastern white gum

118 *Eucalyptus ebbanoensis*
Sandplain mallee

120, 121 *Eucalyptus macrocarpa*
Mottlecah

122 *Pinus pinaster* Maritime Pine

124 *Eucalyptus gardneri*
Blue mallet

131 *Callitris calcarata*
White Cypress Pine

132, 136 *Eucalyptus transcontinentalis.* Redwood

141-143, 245, 146 *Eucalyptus urna*
Merrit

148 *Eucalyptus* "torwood"

150 *Eucalyptus salubris* Gimlet

152, 153, 155 *Eucalyptus kochii* subsp. *plenissima.* Oil mallee

156 *Acacia microbotrya*
Manna wattle

157 *Acacia acuminata* Raspberry Jam Wattle

158 *Pinus pinea* Stone Pine

159, 162 - 164 *Eucalyptus yilgarnensis.* Yorrel

169 *Eucalyptus campaspe*
Silver gimlet

179 *Eucalyptus tetraptera*
Square fruited mallee

185, 187, 188 *Eucalyptus kochii* subsp. *kochii.* Oil mallee

191 *Eucalyptus spathulata* subsp. *spathulata.* Swamp mallet

193, 194 *Eucalyptus kondininensis*
Kondinin blackbutt

198 *Eucalyptus argyphea*
Silver mallet

212 *Eucalyptus loxophleba* subsp. *loxophleba.* York gum

214, 215, 217 *Eucalyptus myriadena*

222, 223, 224, 226 – 227 *Eucalyptus gomphocephala.* Tuart

225 *Eucalyptus spathulata* subsp. *spathulata.* Swamp mallet

229 *Pinus canariensis*
Canary Island Pine

238 *Melaleuca eleuterostachya*

247 *Pinus canariensis*
Canary Island Pine

248 - 253 *Eucalyptus melliodora*
Yellow box

257, 258 *Eucalyptus cernua*
Red flowered moort

265 *Pinus canariensis*
Canary Island Pine

266 –269, 271 *Eucalyptus redunca x Eucalyptus astringens* hybrid

273 *Pinus halopensis* Aleppo Pine

276 *Eucalyptus camaldulensis*
River gum

277 *Eucalyptus stricklandii*
Stricklands gum

278 to be identified

282 *Pinus halopensis.* Aleppo Pine

283 *Pinus canariensis*
Canary Island Pine

294, 295, 297 *Eucalyptus depauperata*

301 *Pinus canariensis*
Canary Island Pine

303, 304 *Eucalyptus* "torwood"

309 *Pinus halopensis* Aleppo Pine

312, 313 *Eucalyptus camaldulensis.* River gum

317, 318 *Pinus halopensis*
Aleppo Pine

319 *Pinus canariensis*
Canary Island Pine

322, 323, 325 *Eucalyptus arachnaea* subsp. *arachnaea*
Black stemmed mallee

327, 335, 336 *Pinus halopensis*
Aleppo Pine

338 – 343 *Eucalyptus cladocalyx*
Sugar gum

344, 353, 361 *Pinus halopensis*
Aleppo Pine

365 *Eucalyptus erythronema* subsp. *erythronema.* Red flowered mallee

368 – 370 *Pinus halopensis*
Aleppo Pine

371 372, 375 –376 *Eucalyptus erythronema* subsp. *erythronema*
Red flowered mallee

377 378 *Pinus halopensis*
Aleppo Pine

384 *Corymbia calophylla* var. *rosea.* Red flowering gum

386 *Pinus halopensis.* Aleppo Pine

396 *Eucalyptus cinerea*
Argyle apple

402 *Pinus halopensis.* Aleppo Pine

403- 405, 408 *Eucalyptus leucoxylon* Yellow gum

409 *Corymbia maculata*
Spotted gum

415- 417, 419, 420 *Eucalyptus spathulata* subsp. *spathulata*
Swamp mallet

423, 425, 426 *Eucalyptus kochii* sens. lat. Oil mallee

427, 428 *Eucalyptus sideroxylon*
Red ironbark

439 - 444 *Eucalyptus decipiens*
Moit

445 – 447 *Acacia pendula*

449 *Corymbia calophylla.* Marri

452, 453 *Eucalyptus lesoueffi*
Goldfields blackbutt

458 – 460 *Eucalyptus desmondensis* Desmond mallee

464 *Acacia microbotrya*
Manna wattle

465 – 470 *Eucalyptus grossa*
Coarse leafed mallee

472 – 477 *Eucalyptus leptopoda* subsp. *arctata.* Tammin mallee

479 – 482 *Eucalyptus preissiana*
Bell fruited mallee

485 – 486 *Eucalyptus kingsmillii* subsp. *kingsmilli*

487 *Corymbia calophylla.* Marri

490 *Eucalyptus tetraptera*
Square fruited mallee

491 *Eucalyptus pyriformis*
Dowerin rose

492- 495, 497 *Eucalyptus crucis* subsp. *crucis*
Southern Cross mallee

509 *Eucalyptus kruseana*
Bookleaf mallee

510 – 512 *Eucalyptus maculata*
Spotted gum

517 *Eucalyptus globulus*
Tasmanian blue gum

521 *Eucalyptus globulus* subsp. *bicostata.* Southern blue gum

525 *Allocasuarina huegeliana*
Rock sheoak

533 *Eucalyptus decurva*
Slender mallee

534, 536, 537, 539 *Eucalyptus macrandra* River yate

541 *Eucalyptus sideroxylon*
Ironbark

542 *Eucalyptus aspratilis*
Soak yate

544 *Eucalyptus sideroxylon*
Ironbark

545 *Corymbia calophylla* Marri

547 – 552 *Eucalyptus ebbanoensis* subsp. *ebbanoensis*
Sandplain mallee

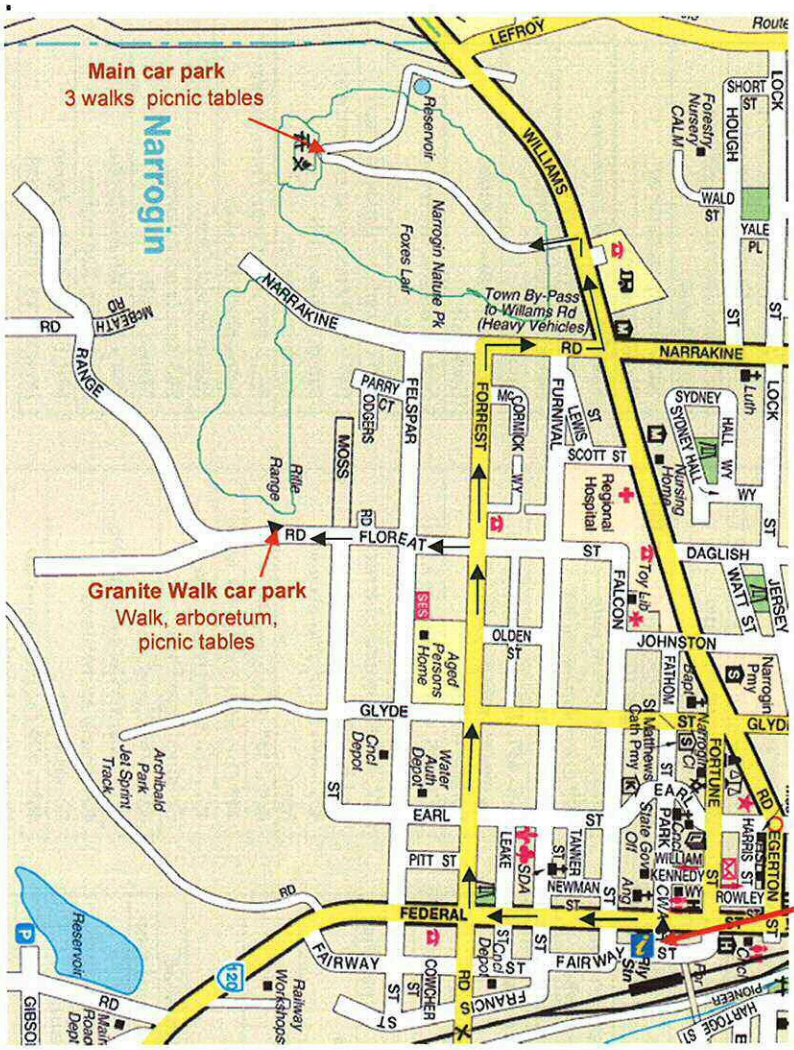
552 – 557 *Eucalyptus lane – poolei*
Salmonbark Wandoo

560 to be identified

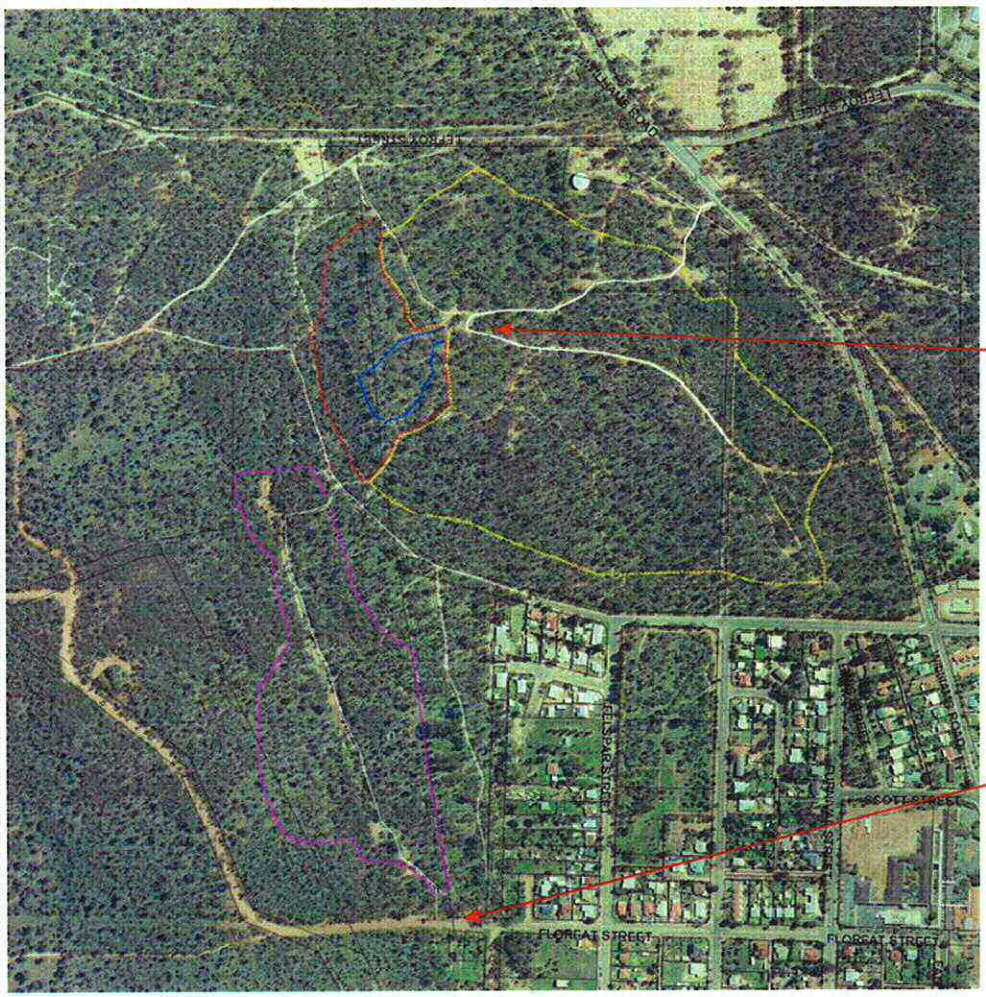
563 *Acacia microbotrya*
Manna wattle

564 – 567, 569 *Eucalyptus leptophylla.* Red mallee

570, 572 – 574 *Eucalyptus acmenoides* Tallow wood



There are two car parks located in Foxes Lair. Arrows on the map show the route from the Dryandra Country Visitor Centre to both sections of the park



Foxes Lair Nature Park walk trails

These walks start at the main car park

Breakaway Walk	**10 min 400 m**
Valley Walk	**20 min 800 m**
Banksia Walk	**40 min 2.1 km**

Granite Walk	**30 mins 1.2km**

The first section of this walk adjoins the arboretum and leads to picnic tables and an information bay

Attachment No 5

Native Fauna in Foxes Lair

AMPHIBIANS

NatureMap
Mapping Western Australia's biodiversity

NatureMap Species Report

Created By Peter White on 14/05/2012

Kingdom Animalia
Core Datasets Only Yes
Species Group Amphibians
Method 'By Circle'
Centre 117°10' 00" E,32°55' 59" S
Buffer 2km
Group By Family

Family	Species	Records
Myobatrachidae	1	3
TOTAL	**1**	**3**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Myobatrachidae					
1.	25420	*Myobatrachus gouldii (Turtle Frog)*			

Conservation Codes
T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

[1] For NatureMap's purposes, species flagged as endemic are those whose records are wholely contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

MAMMALS

NatureMap
Mapping Western Australia's biodiversity

NatureMap Species Report

Created By Peter White on 14/05/2012

Kingdom Animalia
Core Datasets Only Yes
Species Group Mammals
Method 'By Circle'
Centre 117°10' 00" E,32°55' 59" S
Buffer 2km
Group By Family

Family	Species	Records
Burramyidae	1	1
Dasyuridae	3	7
Macropodidae	2	3
Muridae	1	1
Myrmecobiidae	1	14
Peramelidae	1	3
Phalangeridae	1	3
Vespertilionidae	3	3
TOTAL	**13**	**35**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Burramyidae					
1.	24086	*Cercartetus concinnus (Western Pygmy-possum)*			
Dasyuridae					
2.	24098	*Phascogale calura (Red-tailed Phascogale)*		T	
3.	24108	*Sminthopsis crassicaudata (Fat-tailed Dunnart)*			
4.	24111	*Sminthopsis gilberti (Gilbert's Dunnart)*			
Macropodidae					
5.	24132	*Macropus fuliginosus (Western Grey Kangaroo)*			
6.	24133	*Macropus irma (Western Brush Wallaby)*		P4	
Muridae					
7.	24223	*Mus musculus (House Mouse)*			
Myrmecobiidae					
8.	24146	*Myrmecobius fasciatus (Numbat)*		T	
Peramelidae					
9.	24153	*Isoodon obesulus subsp. fusciventer (Quenda)*		P5	
Phalangeridae					
10.	24158	*Trichosurus vulpecula subsp. vulpecula (Common Brushtail Possum)*			
Vespertilionidae					
11.	24186	*Chalinolobus gouldii (Gould's Wattled Bat)*			
12.	24194	*Nyctophilus geoffroyi (Lesser Long-eared Bat)*			
13.	24206	*Vespadelus regulus (Southern Forest Bat)*			

Conservation Codes
T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

[1] For NatureMap's purposes, species flagged as endemic are those whose records are wholely contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

REPTILES

NatureMap
Mapping Western Australia's biodiversity

NatureMap Species Report

Created By Peter White on 14/05/2012

Kingdom Animalia
Core Datasets Only Yes
Species Group Reptiles
Method 'By Circle'
Centre 117°10' 00" E,32°55' 59" S
Buffer 2km
Group By Family

Family	Species	Records
Boidae	1	1
Diplodactylidae	2	2
Elapidae	5	21
Gekkonidae	1	1
Pygopodidae	3	8
Scincidae	5	5
Typhlopidae	3	6
TOTAL	**20**	**44**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Boidae					
1.	25240	*Morelia spilota subsp. imbricata (Carpet Python)*		S	
Diplodactylidae					
2.	24918	*Crenadactylus ocellatus subsp. ocellatus*			
3.	24978	*Oedura reticulata*			
Elapidae					
4.	25242	*Acanthophis antarcticus (Southern Death Adder)*		P3	
5.	25253	*Parasuta gouldii*			
6.	25261	*Pseudechis australis (Mulga Snake)*			
7.	25259	*Pseudonaja affinis subsp. affinis (Dugite)*			
8.	25266	*Simoselaps bertholdi (Jan's Banded Snake)*			
Gekkonidae					
9.	24980	*Christinus marmoratus (Marbled Gecko)*			
Pygopodidae					
10.	24995	*Delma australis*			
11.	25766	*Delma fraseri (Fraser's Legless Lizard)*			
12.	25008	*Pygopus lepidopodus (Common Scaly Foot)*			
Scincidae					
13.	30893	*Cryptoblepharus buchananii*			
14.	25047	*Ctenotus impar*			
15.	25096	*Egernia kingii (King's Skink)*			
16.	25100	*Egernia napoleonis*			
17.	25109	*Eremiascincus richardsonii (Broad-banded Sand Swimmer)*			
Typhlopidae					
18.	25271	*Ramphotyphlops australis*			
19.	25273	*Ramphotyphlops bituberculatus*			
20.	25288	*Ramphotyphlops waitii*			

Conservation Codes
T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

[1] For NatureMap's purposes, species flagged as endemic are those whose records are wholely contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

Native Plants

Foxes Lair plant species verified by WA Herbarium
Acacia acuminata Benth.
Acacia chrysocephala Maslin
Acacia insolita E.Pritz. subsp. insolita
Acacia lasiocarpa var. sedifolia (Meisn.) Maslin
Acacia microbotrya Benth.
Acacia saligna (Labill.) H.L.Wendl.
Acacia squamata Lindl.
Acacia stenoptera Benth.
Acacia varia var. crassinervis Maslin
Adenanthos cygnorum Diels subsp. cygnorum
Agrostocrinum scabrum (R.Br.) Baill. subsp. scabrum
Allocasuarina huegeliana (Miq.) L.A.S.Johnson
Allocasuarina humilis (Otto & F.Dietr.) L.A.S.Johnson
Allocasuarina microstachya (Miq.) L.A.S.Johnson
Allocasuarina thuyoides (Miq.) L.A.S.Johnson
Amphipogon strictus R.Br.
Amphipogon turbinatus R.Br.
Amyema miquelii (Miq.) Tiegh.
Amyema preissii (Miq.) Tiegh.
Andersonia caerulea R.Br.
Anigozanthos humilis Lindl. subsp. humilis
Anthotium odontophyllum L.W.Sage
Aristida sp.
Astroloma cataphractum A.J.G.Wilson ms
Astroloma ciliatum (Lindl.) Druce
Astroloma compactum R.Br.
Astroloma pallidum R.Br.
Astroloma sp. Tutanning (A.S. George 7779)
Austrodanthonia caespitosa (Gaudich.) H.P.Linder
Austrodanthonia setacea (R.Br.) H.P.Linder
Austrostipa elegantissima (Labill.) S.W.L.Jacobs & J.Everett
Austrostipa mollis (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa semibarbata (R.Br.) S.W.L.Jacobs & J.Everett
Austrostipa sp. Marchagee (B.R. Maslin 1407)
Austrostipa variabilis (Hughes) S.W.L.Jacobs & J.Everett
Babingtonia camphorosmae (Endl.) Lindl.
Baeckea crispiflora (F.Muell.) F.Muell.
Banksia arctotidis (R.Br.) A.R.Mast & K.R.Thiele
Banksia armata (R.Br.) A.R.Mast & K.R.Thiele
Banksia fraseri (R.Br.) A.R.Mast & K.R.Thiele var. fraseri
Banksia nivea Labill. subsp. nivea
Banksia nobilis (Lindl.) A.R.Mast & K.R.Thiele subsp. nobilis
Banksia proteoides (Lindl.) A.R.Mast & K.R.Thiele
Banksia sessilis (Knight) A.R.Mast & K.R.Thiele
Banksia sphaerocarpa var. caesia A.S.George
Banksia squarrosa (R.Br.) A.R.Mast & K.R.Thiele subsp. squarrosa
Banksia stuposa (Lindl.) A.R.Mast & K.R.Thiele
Billardiera coriacea Benth.
Billardiera fusiformis Labill.
Billardiera venusta (Putt.) L.Cayzer & Crisp
Blennospora drummondii A.Gray

Dichopogon capillipes (Endl.) Brittan
Dillwynia laxiflora Benth.
Diuris brumalis D.L.Jones
Diuris aff. corymbosa
Dodonaea humifusa Miq.
Dodonaea pinifolia Miq.
Drosera androsacea Diels
Drosera bulbosa Hook.
Drosera erythrorhiza Lindl.
Drosera glanduligera Lehm.
Drosera macrantha Endl. subsp. macrantha
Drosera scorpioides Planch.
Drosera subhirtella Planch.
Eleocharis acuta R.Br.
Elythranthera brunonis (Endl.) A.S.George
Ericksonella saccharata (Rchb.f.) Hopper & A.P.Br.
Eriochilus dilatatus subsp. multiflorus (Lindl.) Hopper & A.P.Br.
Eucalyptus aspersa Brooker & Hopper
Eucalyptus aspersa x falcata
Eucalyptus incrassata Labill.
Eucalyptus loxophleba Benth. subsp. loxophleba
Gastrolobium calycinum Benth.
Gastrolobium dilatatum (Benth.) G.Chandler & Crisp
Gastrolobium obovatum Benth.
Gastrolobium parviflorum (Benth.) Crisp
Gastrolobium retusum Lindl.
Gastrolobium ? spathulatum
Gastrolobium spinosum Benth.
Gastrolobium stipulare Meisn.
Gastrolobium stowardii S.Moore
Glischrocaryon aureum (Lindl.) Orchard
Gompholobium knightianum Lindl.
Gompholobium marginatum R.Br.
Gompholobium tomentosum Labill.
Gonocarpus cordiger Nees
Goodenia coerulea R.Br.
Goodenia pulchella subsp. Wheatbelt (L.W. Sage & F. Hort 795)
Goodenia scapigera R.Br. subsp. scapigera
Goodenia watsonii subsp. glandulosa Carolin
Grevillea leptobotrys Meisn.
Grevillea tenuiflora (Lindl.) Meisn.
Haemodorum discolor T.Macfarlane
Hakea incrassata R.Br.
Hakea lehmanniana Meisn.
Hakea lissocarpha R.Br.
Hakea prostrata R.Br.
Hakea ruscifolia Labill.
Hakea trifurcata (Sm.) R.Br.
Hakea undulata R.Br.
Halgania cyanea Lindl. var. cyanea
Harmogia parviflora Turcz.
Helichrysum leucopsideum DC.

Melaleuca scalena Craven & Lepschi
Melaleuca tuberculata Schauer var. tuberculata
Microcorys subcanescens Benth.
Millotia tenuifolia Cass. var. tenuifolia
Mirbelia dilatata R.Br.
*Moraea miniata Andrews
Neurachne alopecuroidea R.Br.
Neurachne alopecuroidea R.Br.
Olax benthamiana Miq.
Olearia elaeophila (DC.) Benth.
Olearia rudis (Benth.) Benth.
Opercularia vaginata Juss.
Orthrosanthus laxus (Endl.) Benth.
Orthrosanthus laxus var. gramineus (Endl.) Geerinck
Oxalis perennans Haw.
Patersonia juncea Lindl.
Patersonia occidentalis R.Br.
Persoonia quinquenervis Hook.
Petrophile divaricata R.Br.
Petrophile heterophylla Lindl.
Petrophile striata R.Br.
Phebalium ? tuberculosum
Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem.
Phyllanthus calycinus Labill.
Pimelea ciliata Rye subsp. ciliata
Pimelea suaveolens Meisn. subsp. suaveolens
Pittosporum angustifolium Lodd.
Pleurosorus rutifolius (R.Br.) Fee
Poa drummondiana Nees
Podolepis canescens DC.
Podolepis gracilis (Lehm.) Graham
Podolepis lessonii (Cass.) Benth.
Podotheca angustifolia (Labill.) Less.
Prasophyllum gracile Lindl.
Pterochaeta paniculata Steetz
Pterostylis concava D.L.Jones & M.A.Clem.
Pterostylis recurva Benth.
Pterostylis sanguinea D.L.Jones & M.A.Clem.
Pterostylis sanguinea D.L.Jones & M.A.Clem.
Pterostylis scabra Lindl.
Pterostylis sp. inland (A.C. Beauglehole 11880)
Ptilotus declinatus Nees
Ptilotus manglesii (Lindl.) F.Muell.
Ptilotus manglesii (Lindl.) F.Muell.
Ptilotus polystachyus (Gaudich.) F.Muell.
Rhodanthe citrina (Benth.) Paul G.Wilson
Rhodanthe manglesii Lindl.
Rinzia fumana Schauer
Santalum acuminatum (R.Br.) A.DC.
Santalum murrayanum (T.Mitch.) C.A.Gardner
Schoenus minutulus F.Muell.
Schoenus sp.

Senecio quadridentatus Labill.
Sowerbaea laxiflora Lindl.
Sphaerolobium medium R.Br.
Stackhousia monogyna Labill.
Stackhousia scoparia Benth.
Stylidium amoenum R.Br. var. amoenum
Stylidium caricifolium Lindl.
Stylidium leptophyllum DC.
Stylidium piliferum R.Br.
Stylidium pingrupense Lowrie, A.H.Burb. & Kenneally
Stylidium rhynchocarpum Sond.
Stylidium schoenoides DC.
Stylidium tylosum Lowrie & Kenneally
Stylidium uniflorum Sond.
Stylidium zeicolor F.L.Erickson & J.H.Willis
Stypandra glauca R.Br.
Tetraria octandra (Nees) Kuk.
Tetraria sp. Jarrah Forest (R. Davis 7391)
Tetratheca confertifolia Steetz
Tetratheca virgata Steetz
Thelymitra benthamiana Rchb.f.
Thelymitra graminea Lindl.
Thomasia foliosa Gay
Thysanotus patersonii R.Br.
Thysanotus patersonii R.Br.
Thysanotus thyrsoideus Baker
Trichocline spathulata (DC.) J.H.Willis
Tricoryne elatior R.Br.
Tricoryne humilis Endl.
Tripterococcus brunonis Endl.
Trymalium ledifolium var. lineare Rye
Trymalium ledifolium var. rosmarinifolium (Steud.) Benth.
Velleia trinervis Labill.
Verticordia acerosa var. preissii (Schauer) A.S.George
Vittadinia gracilis (Hook.f.) N.T.Burb.
Wurmbea tenella (Endl.) Benth.
Xanthosia atkinsoniana F.Muell.
Xanthosia singuliflora F.Muell.

Attachment No 6

Adopted Management Plan

Foxes Lair Management Plan

Adopted 23rd Septmber 2014