

MANAGEMENT PLANNING REPORT

RESERVE NO.689

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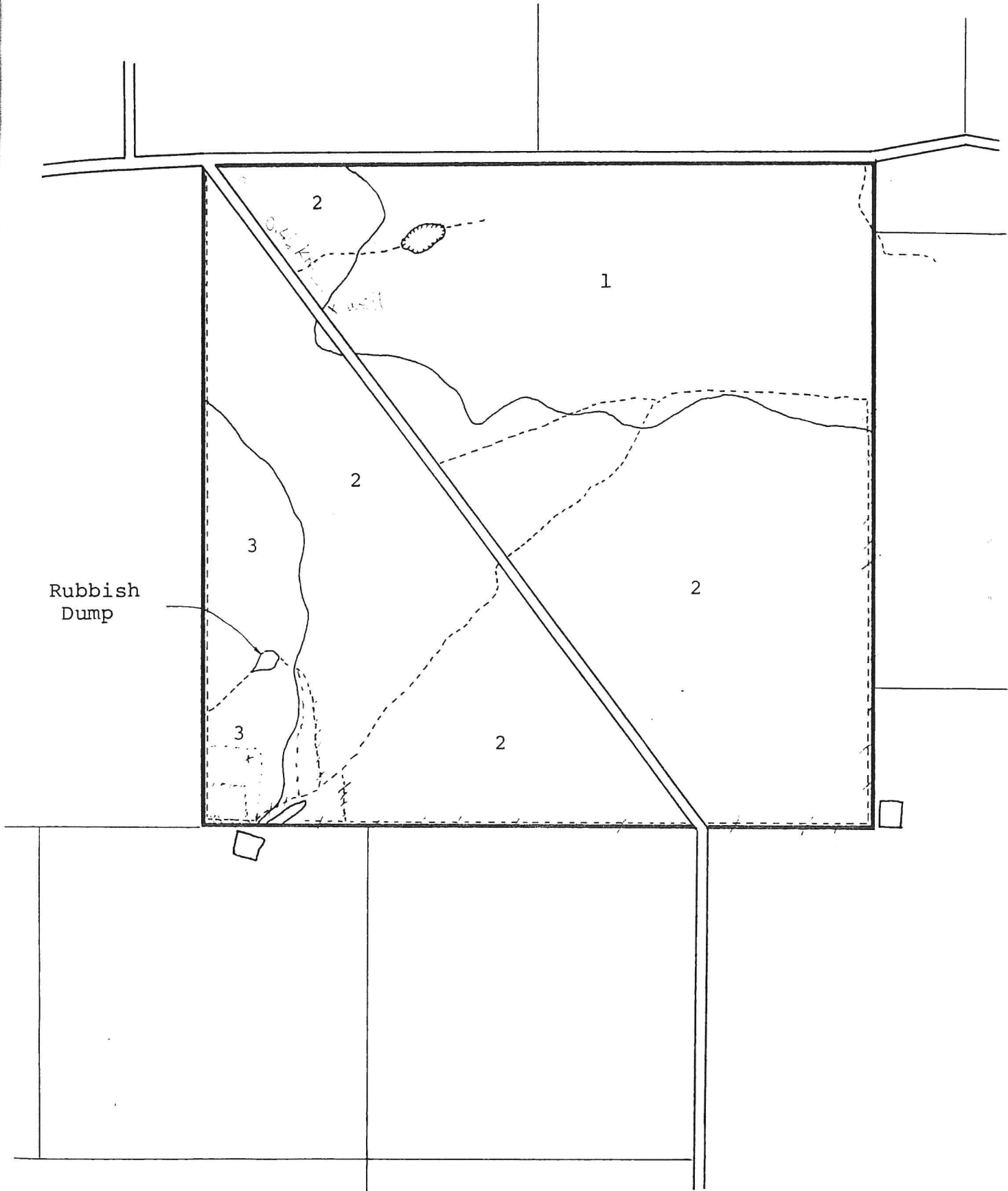
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RESERVE NO. 689



Gravel Pit



Firebreak/track

Vegetation Associations shown on Map

AREA 1.

York Gum and Jam low woodland.

AREA 2.

Mature Salmon Gum and Gimlet woodland.

AREA 3.

Melaleuca thicket - (second swamp).

TABLE 1: VEGETATION CLASSIFICATION AS USED IN WHEATBELT SURVEY

LIFE FORM/HEIGHT CLASS	CANOPY COVER			
	DENSE ^d 70-100%	MID-DENSE ^c 30-70%	SPARSE ⁱ 10-30%	VERY SPARSE ^r 2-10%
T Trees >30m M Trees 15-30m LA Trees 5-15m LB Trees <5m	Dense Tall Forest Dense Forest Dense Low Forest A Dense Low Forest B	Tall Forest Forest Low Forest A Low Forest B	Tall Woodland Woodland Low Woodland A Low Woodland B	Open Tall Woodland Open Woodland Open Low Woodland A Open Low Woodland B
KT Mallee tree form KS Mallee shrub form	Dense Tree Mallee Dense Shrub Mallee	Tree Mallee Shrub Mallee	Open Tree Mallee Open Shrub Mallee	Very Open Tree Mallee Very Open Shrub Mallee
S Shrubs >2m SA Shrubs 1.5-2.0m SB Shrubs 1 0-1.5m SC Shrubs 0.5-1.0m SD Shrubs 0.0-0.5m	Dense Thicket Dense Heath A Dense Heath B Dense Low Heath C Dense Low Heath D	Thicket Heath A Heath B Low Heath C Low Heath D	Scrub Low Scrub A Low Scrub B Dwarf Scrub C Dwarf Scrub D	Open Scrub Open Low Scrub A Open Low Scrub B Open Dwarf Scrub C Open Dwarf Scrub D
P Mat plants H Hummock Grass GT Bunch grass >0.5m GL Bunch grass <0.5m J Herbaceous spp.	Dense Mat Plants Dense Hummock Grass Dense Tall Grass Dense Low Grass Dense Herbs	Mat Plants Mid-Dense Hummock Grass Tall Grass Low Grass Herbs	Open Mat Plants Hummock Grass Open Tall Grass Open Low Grass Open Herbs	Very Open Mat Plants Open Hummock Grass Very Open Tall Grass Very Open Low Grass Very Open Herbs
VT Sedges >0.5m VL Sedges <0.5m	Dense Tall Sedges Dense Low Sedges	Tall Sedges Low Sedges	Open Tall Sedges Open Low Sedges	Very Open Tall Sedges Very Open Low Sedges
X Ferns Mosses, liverwort	Dense Ferns Dense Mosses	Ferns Mosses	Open Ferns Open Mosses	Very Open Ferns Very Open Mosses

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WYALKATCHEM SHIRE

RESERVE NO. 689

1. INTRODUCTION

Reserve No. 689 is located in the centre of the Shire, ca. 6 km due east of Wyalkatchem Townsite and ca. 2 km north-west of Korrelocking Siding. It is shown on lithograph 2335-1-Wyalkatchem.

The Reserve was originally gazetted on 19th June 1884 for the purpose of 'Stopping Place for Teams'. On the 3rd February 1922 this was changed to 'Water' and vested in the Minister for Water Supply, Sewerage and Drainage. During the 1970s the Wyalkatchem Shire Council became very concerned about stock on the Reserve. They realized at the time that the area had potential as a Nature Reserve, but contended that grazing activities were causing damage and disturbance to the flora and fauna. In 1978 the Public Works Department initiated action to terminate their grazing agreement with A. and T. Tyler after it had been confirmed that the Shire's contention was valid. The Department of Fisheries and Wildlife was then requested to establish whether the flora and fauna within the Reserve justified any change in its purpose. The resultant inspection and report from the District Wildlife Officer confirmed that the area did indeed have considerable conservation value.

It then became apparent that the Wyalkatchem Shire Council wished to retain control of the proposed Nature Reserve.

This was opposed by the Department of Fisheries and Wildlife on the grounds that under the provisions of the Wildlife Conservation Act, all Nature Reserves should be vested in the Western Australian Wildlife Authority. Subsequent liason between the Department's Nature Reserve Management Planning Section and the Shire Council resulted in a compromise solution whereby the Reserve, together with three other Nature Reserves in the Shire, would be jointly vested. The Shire also agreed to appoint a salaried officer as part time caretaker and Honourary Wildlife Officer. (This approach represents a radical departure from normal Departmental policy, and is viewed as an "Experiement in Co-operative Management of Nature Reserves.)

On the the Reserve's purpose was amended to Conservation of Flora and Fauna with vesting in the Western Australian Wildlife Authority and the Shire of Wyalkatchem.

2. PHYSICAL CHARACTERISTICS AND RELATIONSHIPS

Reserve No. 689 is square, 258.9988 hectares in area, and has a perimeter of ca. 6.5 km. The highest point is in the north-eastern corner where the altitude is 350 metres above sea level and the lowest point is in the south-western corner at just over 300 metres above sea level. The Reserve lies in gently undulating country and is surrounded on all sides by cleared fenced farmland apart from a small uncleared area of Jam woodland to the north-east (about 20 hectares and grazed). A well-maintained gravel road cuts more or less diagonally across the Reserve from the north-western corner, dividing the area into two near-equal parts. Another gravel road (and a water pipe-line) run alongside the Reserve's northern boundary. Large dams are located just off the Reserve at each of the two southern corners. The Reserve can best be approached from Wyalkatchem Townsite along Road.

3. SOILS AND VEGETATION

Light coloured sandy clays and sandy loams occupy most of the Reserve where the mature Salmon Gum and Gimlet woodlands predominate. To the north-east the higher ground is characterised by an open York Gum and Jam association on red-brown loams, with extensive areas of exposed granite paving and outcrop. A seasonal swamp supporting dense Melaleuca thicket occupies a strip along the southern half of the western boundary.

AREA 1.

York Gum/Jam 'Low Woodland A'/'Open Low Woodland A'.

York Gum, Eucalyptus loxophleba Low Woodland/Open Low Woodland ca. 8 to 15 metres height, over Jam, Acacia acuminata ca. 4 to 8 metres height, over dry 'Low Grass'. Open grassy areas within this association are characterised by shallow soils with expanses of exposed granite rock.

AREA 2.

Salmon Gum/Gimlet 'Woodland'

Mature Salmon Gum, Eucalyptus samonophloia and Gimlet, Eucalyptus salubris Woodland, ca. 15 to 25 metres in height, with York Gum, Eucalyptus loxophleba becoming an important component in the north-west corner. This over 'Scrub' composed mainly of ^{leafless Balan} (Exocarpos aphyllus) and ^{a small Quandong} Santalum acuminatum. Sparsely distributed lower shrubs include Acacia acuaria, Acacia hemiteles, Acacia erinacea, ^{Dusk Daisy-blue} Clearia muellerii, and ^{Salt-tolerant} Atroplex sp.

AREA 3.- (Seasonal Swamp)

Melaleuca - 'Thicket'

Floor Herb

Melaleuca uncinata and Melaleuca viminea Thicket ca. 2 to 3 metres in height, over an open understory. The vegetation is more open with mallees becoming a component along the western side.

*Erythronema + Loxopholis
E. perianth*

4. FAUNA

Birds: - (Names follow those recommended by the R.A.O.U.)

White-necked Heron
Brown Falcon
Galah
Long-billed Corella
Port Lincoln Ringneck
Elegant Parrot
Horsefield's Bronze-Cuckoo
Rainbow Bee-eater
Tree Martin
Richard's Pipit
White-winged Triller
Red-capped Robin
White-browed Babbler
Chestnut-rumped Thornbill
Yellow-rumped Thornbill
Crimson Chat
White-fronted Chat
Zebra Finch
Australian Magpie-lark
Black-faced Wood-swallow
Australian Magpie
Australian Raven

Black-billed Woodswallow

Birds previously recorded on Reserve No. 689.

~~Letter-winged Kite~~ not likely!

Whistling Kite

Australian Kestrel

Common Bronzewing

Red-tailed Black-Cockatoo

Black-faced Cuckoo-shrike

Willie Wagtail

Pied Butcherbird

Singing Honeyeater (21-6-84)
Grey Butcherbird (21-6-84)

Native Mammals

~~None specifically recorded~~ Grey Kangaroo, Coat (21-6-84)

Exotic Species

Rabbits - one sighted - some signs.

5. PAST MANAGEMENT, USE AND FIRE HISTORY

Reserve No. 689 has a history dating back for almost one hundred years. It was originally gazetted as a "Stopping Place for Teams" in 1884 prior to becoming a Water Reserve in 1922. Despite the fact that the surrounding lands were cleared at an early date, the Reserve itself remains in good condition. The large areas of Salmon Gum and Gimlet woodland have suffered very little from past timber removal and there is virtually no sign of disturbance to the resident breeding parrot population.

More recently the area was subjected to grazing which resulted in some damage to the understory vegetation. The stock has since been removed, though ~~an internal fence line~~ is still standing in the south-western corner of the removed Feb. 1984 Reserve.

Other detrimental human activities include gravel removal from the northern side and rubbish dumping at one site in the dry swamp area alongside the western boundary. (This rubbish has accumulated over many years and is made up exclusively of farm related materials). Vehicle tracks are also evident on the Reserve although they are now little used. Introduced grasses and weeds are present along the edges of the Reserve and around the rubbish dump and gravel pit.

Past management involved the construction of firebreaks along the Reserve's perimeter. The western break is still well maintained, but the southern and eastern sides are now overgrown. A cleared strip also runs alongside the northern boundary pipeline. Neighbouring farmers are fire-conscious and have adequate breaks around their paddocks. Their boundary fencing is excellent along the western and southern sides of the Reserve but poor along the eastern boundary. There is no fence between the Reserve and the road on the northern side.

No specific fire history information is available for the Reserve, but examination of the vegetation and aerial photographs suggest that the area has not been burnt for many years.

6. NATURE CONSERVATION VALUES

Reserve No. 689 is unquestionably one of the most important nature reserves in the Shire. It contains three distinct habitats, including some superb Salmon Gum and Gimlet woodland, York Gum and Jam low woodland, and winter wet swampland dominated by dense Melaluca thickets. Its overall size and habitat diversity mean that it is likely to hold a stable mammal and reptile fauna as well as providing refuge for resident and migratory birds. No

formal mammal and reptile trapping programme has yet been attempted, but thirty bird species have been recorded on two brief inspections. Parrots are especially abundant and breed in the woodlands which cover most of the Reserve. (It is worth noting here that woodlands in general provide by far the most important habitat for lizards, and on average contain more species than do mallees, shrublands, heaths or lithic complexes.*) The fact that the area has not sustained a fire for a considerable time also increases the chance that small native marsupials may still survive.

The Reserve is aesthetically pleasing, free from rubbish except for the dump on the western boundary. Through the summer months the area is dry, but in winter open pools develop in the south-western corner where a dam wall impedes the flow along a natural drainage line. Two stone-lined wells on the Reserve are of historical interest and they suggest that there may also be an underground water table.

*Reference:- Kitchener et al. "Lizard Assemblage and Reserve Size and Structure in the Western Australian Wheatbelt - Some Implications for Conservation".

7. MANAGEMENT OBJECTIVES

Management of the Reserve will be directed towards maintaining its nature conservation values as a Key Site representing mature Salmon Gum and Gimlet woodland. Its close proximity to Wyalkatchem Townsite make it an obvious choice for low key environmental educational development.

7.1 FIRE PROTECTION

This is to be consistent with the need to protect the assets of adjacent landholders while at the same time maintaining the biological values of the Reserve.

7.2 GRAVEL PIT RESTORATION

The restoration of the area damaged by gravel mining to as near its original state as possible.

7.3 RUBBISH DISPOSAL

The disposal of accumulated rubbish on the western boundary of the Reserve.

7.4 REMOVAL OF INTERNAL FENCING

The removal of internal fencing erected in the past when the Reserve was the subject of a grazing agreement.

7.5 USE OF THE RESERVE FOR EDUCATION AND RESEARCH

To encourage the use of the Reserve for environmental education, and research likely to increase knowledge of the Reserve, its Flora and Fauna.

8. MANAGEMENT

8.1 FIRE PROTECTION - RATIONALE

No prescribed burning is planned for the Reserve during the currency of this Plan. Past grazing by stock has denuded much of the understory and it is important that this vegetation be allowed to recover. As the Reserve has not sustained a fire for many years there is every chance that relict populations of native marsupials may still survive. Management therefore will involve the upgrading and maintenance of the existing peripheral firebreak system.

8.2 FIRE PROTECTION MEASURES

The firebreak alongside the western boundary will be maintained to its present standard. The overgrown breaks along the southern and eastern sides will be upgraded and kept free of vegetation.

8.3 GRAVEL PIT RESTORATION

The area degraded by gravel extraction will be surface ripped to encourage vegetation regeneration.

8.4 RUBBISH DISPOSAL AND REMOVAL OF INTERNAL FENCING

The farmers rubbish on the western boundary will be removed and transported to the nearest official rubbish tip. This will require liason between the Shire, the Department of Fisheries and Wildlife and the adjacent farmer to arrange equipment and personal for the operation. At the same time the internal fenceline in th south-western corner will also be pulled down and disposed of in the same manner.

8.5 USE OF RESERVE - EDUCATION

A self-guiding Nature Trail will be set out for this Reserve, highlighting points of special biological and historical interest. Pamphlets describing the route will be printed and made available at the Wyalkatchem Shire Council Office. It is hoped that this service will be utilised by schools and interested members of the public.*

8.6 NATURE RESERVE SIGNS

Wooden routed signs will be erected at the north-eastern and north-western corners of the Reserve, and on the southern boundary close to the main point of access. The signs will conform to the standard specifications for Department of Fisheries and Wildlife Nature Reserve signs.

9. MANAGEMENT - GENERAL

During the currency of this Plan the Department of Fisheries and Wildlife may, with the approval of the Chairman of the Western Australian Wildlife Authority, undertake or authorise such other work and research as may be seen to be necessary or desirable to properly promote the stated objectives of management of the Nature Reserve.

*The pamphlet will also provide information on the location of other Nature Reserves in the Shire.

10. ACKNOWLEDGEMENTS

In this report the vegetation descriptions follow B.G. Muir's key devised for Wheatbelt vegetation. Bird nomenclature follows those names recommended by the R.A.O.U. My personal thanks are due to Dr. S.D. Hopper, Mr A.J.M. Hopkins, Ms Judith Brown and staff of the Western Australian Herbarium for identifying plant specimens collected in the field.

S. Jam + Gimlet







RESERVE PHOTOGRAPHS

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Photographs showing typical Salmon Gum woodland on the Reserve.

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- (A) Area of predominantly Gimlet woodland
- (B) Melaleuca spp. seasonal swamp. Note open understory

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Two views of the rubbish dump located in the Melaleuca spp. seasonal swamp