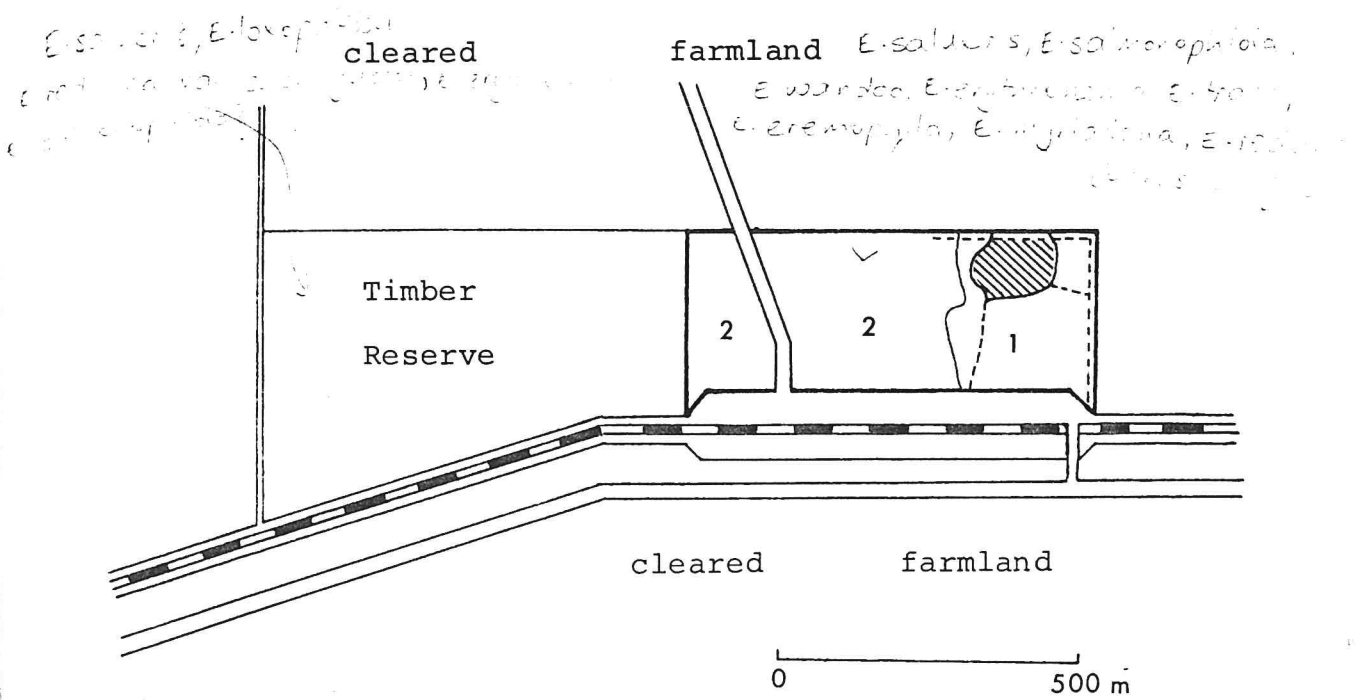


MANAGEMENT PLANNING REPORT

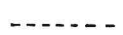
RESERVE NO. 34385

Andrew A.E. Williams

NEMBUDDING



Reserve boundary



Major tracks and firebreaks



Gravel excavation

VEGETATION ASSOCIATIONS SHOWN ON MAP

AREA 1.

Casuarina acutivalvis Thicket.

AREA 2.

Mixed Eucalyptus Woodland.

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	Dense Tall Forest	Tall Forest	Tall Woodland	Open Tall Woodland
M	Trees 15-30m	Dense Forest	Forest	Woodland	Open Woodland
LA	Trees 5-15m	Dense Low Forest A	Low Forest A	Low Woodland A	Open Low Woodland A
LB	Trees <5m	Dense Low Forest B	Low Forest B	Low Woodland B	Open Low Woodland B
KT	Mallee tree form	Dense Tree Mallee	Tree Mallee	Open Tree Mallee	Very Open Tree Mallee
KS	Mallee shrub form	Dense Shrub Mallee	Shrub Mallee	Open Shrub Mallee	Very Open Shrub Mallee
S	Shrubs >2m	Dense Thicket	Thicket	Scrub	Open Scrub
SA	Shrubs 1.5-2.0m	Dense Heath A	Heath A	Low Scrub A	Open Low Scrub A
SB	Shrubs 1.0-1.5m	Dense Heath B	Heath B	Low Scrub B	Open Low Scrub B
SC	Shrubs 0.5-1.0m	Dense Low Heath C	Low Heath C	Dwarf Scrub C	Open Dwarf Scrub C
SD	Shrubs 0.0-0.5m	Dense Low Heath D	Low Heath D	Dwarf Scrub D	Open Dwarf Scrub D
P	Mat plants	Dense Mat Plants	Mat Plants	Open Mat Plants	Very Open Mat Plants
H	Hummock Grass	Dense Hummock Grass	Mid-Dense Hummock Grass	Hummock Grass	Open Hummock Grass
GT	Bunch grass >0.5m	Dense Tall Grass	Tall Grass	Open Tall Grass	Very Open Tall Grass
GL	Bunch grass <0.5m	Dense Low Grass	Low Grass	Open Low Grass	Very Open Low Grass
J	Herbaceous spp.	Dense Herbs	Herbs	Open Herbs	Very Open Herbs
VT	Sedges >0.5m	Dense Tall Sedges	Tall Sedges	Open Tall Sedges	Very Open Tall Sedges
VL	Sedges <0.5m	Dense Low Sedges	Low Sedges	Open Low Sedges	Very Open Low Sedges
X	Ferns	Dense Ferns	Ferns	Open Ferns	Very Open Ferns
	Mosses, liverwort	Dense Mosses	Mosses	Open Mosses	Very Open Mosses

MANAGEMENT PLANNING REPORT
WYALKATCHEM SHIRE

NEMBUDDING RESERVE - No. 34385

1. INTRODUCTION

Nembudding Reserve, No. 34385 (Avon Location 28535 and 28536) borders on the northern side of Nembudding Siding some 12.25 kilometres due east of Wyalkatchem Townsite. It is shown on lithograph 2435-IV-Yelbeni.

The Reserve was gazetted for the Conservation of Flora and Fauna on 19th November 1976 and vested in the Shire of Wyalkatchem. Prior to this the area had been set aside for the Nembudding Townsite. This is one of three Reserves in the Shire which is due to be vested jointly in the Shire and the Western Australian Wildlife Authority as an experiment in co-operative management.

2. PHYSICAL CHARACTERISTICS AND RELATIONSHIPS

Nembudding Reserve is rectangular in shape, its longer axis running east and west. It covers an area of only 14.1613 hectares with an external perimeter of 1.8 km. To the west the Reserve borders on Timber Reserve No. 24105, although their common boundary is not demarkated on the ground. Elsewhere the surrounding lands have been cleared. The railway line (Nembudding Siding) abuts the Reserve's southern boundary. The Reserve itself is gently undulating with an altitude variation of less than 10 metres. The best route of access is along the main Wyalkatchem Trayning Road which parallels the railway line. There is also a gravel surfaced road from the north which cuts through the western third of the Reserve.

3. SOILS AND VEGETATION

There are two distinct soil types found on this Reserve. About 70% of the area is characterised by light coloured clay-loams usually with a proportion of sand. At the eastern end of the Reserve, the remaining portion is made up of laterite gravel mixed with clay. Two major vegetation types can be readily distinguished. The bulk of the Reserve supports a mixed Mallee/Woodland formation while the gravel area to the east supports a tall Casuarina dominated Thicket. The following descriptions apply.

AREA 1.

Casuarina 'Thicket'

Casuarina acutivalvis dominated 'Thicket', ca. 3 to 4 metres in height. The understory is virtually absent.

AREA 2

Mixed Eucalyptus Woodland

Scattered Salmon Gum E. salmonophloia, Gimlet E. salubris, and Wandoo E. wandoo, ca. 15 to 22 metres in height over patchily distributed Mallee/Open Mallee formations in which E. erythronema, E. redunca and E. transcontinentalis are prominent. This over sparse low shrubs to ca. 1 metre, common examples being Acacia erinacea, Accacia hemiteles and Melaleuca cardiophylla (*Umbrella bush*)

E. eremophila
E. myriadena

4. FAUNA

Birds

Crested Pigeon
Galah

Galah

Port Lincoln Ringneck
Elegant Parrot
Red-backed Kingfisher
Tree Martin
White-winged Triller
Red-capped Robin
Willie Wagtail
Crimson Chat
White-fronted Chat
Black-faced Woodswallow

(Names are those recommended by the R.A.O.U.)

Mammals

Echidna - One adult seen on border of Timber Reserve.
Exotic species - One Rabbit.

5. PAST MANAGEMENT, USES AND FIRE HISTORY

Nembudding Reserve has suffered in the past from very considerable degradation. At the eastern end of the Reserve the gravel deposits have been extensively mined for road maintenance purposes and this has resulted in the loss of about 30% of the Casuarina acutivalvis association. The Reserve has also suffered from excessive rubbish dumping. Truck loads of earth fill and other assorted debris have been deposited all over the western third of the Reserve. It seems likely that much of this originated from construction work on Nembudding Siding.

Where the Reserve adjoins cleared farmland, (i.e. the northern and eastern borders) farmers fencing and breaks are well maintained. Peripheral breaks on the Reserve itself exist only along the eastern and part of the northern boundaries. Internal tracks are numerous in the heavily littered area. There are also two well developed tracks which provide access to the gravel excavations.

No evidence of recent fire is discerable either from the 1972 aerial photography or from observations on the ground. The area has been grazed in the past according to the local Wildlife Officer.

6. NATURE CONSERVATION VALUES

Nembudding Reserve, though small, is an important area for a number of reasons. It contains two basic vegetation associations, a Casuarina acutivalvis thicket and a variable mixed Eucalyptus woodland in which Salmon Gum, Wandoo and Gimlet are represented with several mallee species. The Reserve provides habitat for both resident and migratory birds. At the time of inspection Tree Martins were nesting in the hollow limbs of some of the mature eucalypts, and White-fronted Chats had newly fledged young. Echidna (Tachyglossus aculeatus) diggings were numerous, and one adult was observed near the western boundary. Although no reptiles were specifically recorded, the eucalyptus woodland undoubtedly provides suitable habitat. There is also no evidence of recent fire.

This Nature Reserve borders on a similar sized Timber Reserve (No. 24105) to the west. This area is in excellent condition and has not suffered the rubbishing and gravel destruction so prevalent on Nembudding Reserve. The value of the Nature Reserve would be enormously increased by the inclusion of this neighbouring Timber Reserve.

7. MANAGEMENT OBJECTIVES

The management of this Reserve will be directed towards maintaining its biological values. Primary importance is placed on the need to repair the damage resulting from past human mis-use. In this Plan the Nature Reserve and adjoining Timber Reserve will be viewed as a single management unit. Provisions for management include the following:

7.1. RUBBISH DISPOSAL

To remove the accumulation of earth fill and other assorted rubbish from the Reserve.

7.2. GRAVEL PIT RESTORATION

To restore the area denuded by gravel excavation to as near its original state as possible.

7.3. FIRE PROTECTION

To protect the Reserve from fire. This is to be consistent with the need to protect the assets of adjoining landholders, to prevent the occurrence of wildfires on the Reserve, and to suppress such wildfires as may occur. The Department of Fisheries and Wildlife's ability to provide a fire fighting presence on the Reserve is subject to the appointment of the proposed Wongan Hills Reserve Management Team.

7.4. PROTECTION FROM PESTS, ANIMAL AND WEED CONTROL

To protect the Reserve and surrounding farmland from damage as a result of infestation with animals and plants which are declared from time to time under the provisions of the Agricultural and Related Resources Protection Act.

8. MANAGEMENT

8.1. RUBBISH DISPOSAL

The removal of the massive quantity of rubbish on the Reserve will be undertaken as a combined operation between the Shire and the Department of Fisheries and Wildlife. Trucks and earth moving equipment will be

needed to load and transport the materials to the local tip. Where understory plant species have been destroyed by earth mounds light surface ripping will be carried out to encourage water absorption and regeneration of seeds.

8.2. GRAVEL PIT RESTORATION

The extensive gravel pit will be surface ripped, and its steep sides levelled out as much as possible. Seeds from the surrounding Casuarina association will be randomly spread over the degraded area in an attempt to start regrowth. The two access tracks will also be closed and surface ripped to encourage regeneration.

8.3. FIREBREAK CONSTRUCTION AND MAINTENANCE

The perimeter firebreak on the northern border of the Reserve will be extended to meet the gravel road which passes through the western end of the Reserve (see Map). This section and the existing breaks will be maintained and kept free of vegetation. The boundary between the Nature Reserve and the adjoining Timber Reserve will not be firebreaked. (However provision is made in this Plan for the construction of perimeter breaks along the northern and western sides of the Timber Reserve, should its purpose be amended to Conservation of Flora and Fauna.)

8.4. NAMING OF THE RESERVE

It is proposed that the name 'Nembudding Reserve' be changed to 'Nembudding Nature Reserve' and this submitted to the Nomenclature Advisory Committee of the Department of Lands and Surveys for adoption and gazettal as the official name for the Reserve.

8.5. SIGNS TO BE ERECTED

Signs identifying the Reserve will be erected at the south eastern corner of the Reserve, and also on the northern boundary where the gravel road enters the Reserve. The signs will conform to standard specifications for Department of Fisheries and Wildlife Nature Reserve signs.

9. MANAGEMENT - GENERAL

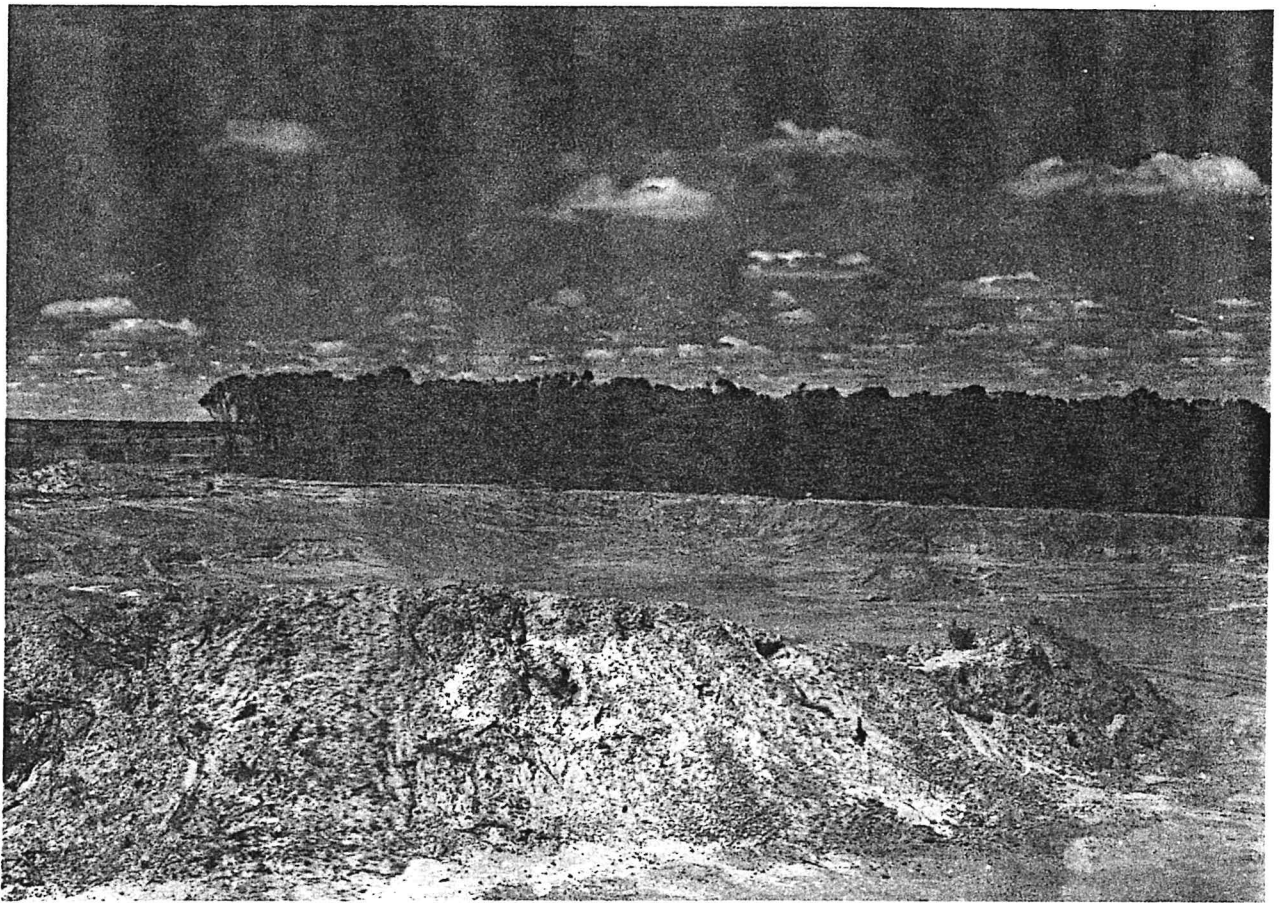
During the currency of this Plan the Department of Fisheries and Wildlife may, with the approval of the Chairman of the Western Australian Wildlife Authority, undertake or authorise such other work or action as may be seen to be necessary or desirable to properly promote the stated objectives of management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

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 and Ms Judith Brown for identifying plant specimens collected in the field. Some specimens were sent to the Western Australian Herbarium for comparison with their material their material.

RESERVE PHOTOGRAPHS

- A. Extensive gravel excavations near the eastern end of the Reserve. Note the Casuarina acutivalvis thicket in the background.
- B. Casuarina acutivalvis thicket. The open understory is typical of this association.
- C. Mixed Mallee/Woodland formations over a sparse low understory. The taller woodland species are Eucalyptus wandoo and Eucalyptus salubris. Photograph taken east side of the bisecting gravel road.
- D. Woodland area western end of the Reserve. Note extensive rubbish and earth 'fill'.



B



C.



D.

