Proposals for the Reservation of some INLAND ECOTYPES

August, 1973

FORESTS DEPARTMENT
PRODUCTION
PROTECTION
RECREATION
CONSERVATION
WESTERN AUSTRALIA

PPh

PROPOSALS FOR THE RESERVATION OF SOME INLAND [illegible]

INTRODUCTION

The woodlands of the Eastern Goldfields region of this State constitute a biological resource which is of scientific value to the world as well as to Western Australia. These species have the capacity to form relatively tall woodlands under low rainfall regimes, to produce substantial volumes of wood and to regenerate adequately after cutting. The dominant vegetation is mainly Eucalyptus, generally endemic to the region, and represents diversity in habit, inflorescence and habitat adaptation which is rarely equalled elsewhere in the world.

These woodlands have played an important part in the State's development by providing fuel and mining timber in enormous quantities for the goldmining industry. Exploitation began in 1887 with the discovery of the Yilgarn goldfields. For approximately 40 years mining operations on the Golden Mile depended solely on wood fuel for their power. During the 1930's a change was initiated with the introduction of oil fuel and by 1960 wood fuel was entirely displaced by oil on all mines. It is estimated that the total firewood and mining timber consumed by the goldmining industry since its inception is of the order of 30 million tonnes.

As the demand for mining timber declined, other items of forest produce such as fenceposts and the production of honey came into prominence. Seed of many of the inland species has been in constant demand, both for local use and for supply to overseas countries, particularly those bordering the Mediterranean Region. It was not until the 1930's that firm control of bush operations became possible by the introduction of licenses for mining timber and firewood contractors, with royalty being charged for the various classes of produce. Special conditions applied to the licences and covered girth limits, proper utilisation, avoidance of damage to roads and fences and restrictions on cutting near homestead and shearing-shed paddocks, wells, windmills, waterholes and rivers.

In 1971, 686,000 hectares of Timber Reserves and State Forest within the Region were cancelled, the need for such large Reserves having declined with the great reduction in demand for firewood and mining timber within the Goldfields.

Renewed activity within the Eastern Goldfields, following the discovery of nickel and increases in gold prices, now place the value of the woodlands into a new perspective. The protective and aesthetic qualities of the vegetation are appreciated by the new inhabitants and shelter, outdoor recreation and resource conservation have a new emphasis.

DEPARTMENTAL PLANNING

Current interest by the Forests Department in this woodland resource focuses primarily on preservation and recreation values. Representative samples of important ecosystems are being surveyed and selected with the objective of reservation for biological, aesthetic and recreational values. Particularly it is considered essential that valuable gene pools and seed sources for the major eucalypts be preserved. Areas formerly reserved as State Forest generally contain the only uncut segments of the vegetation and include sites of maximum biological value.

Virtually all interesting areas have been intensively pegged for mining purposes and future reservation must concede that in most instances biological preservation and mining development should co-exist. This is feasible provided that the areas selected are sufficiently large and reservation is as State Forest, which provides for multiple use of an area. Field studies reveal that deep mining may be carried out without the absolute destruction of major biological values. Open cast mining is more destructive, requires greater control but is still tenable provided reserves are large and reservation legislation allows for full consideration of multiple use.

Management of the reserves will completely prohibit cutting, shooting and new grazing pressures. Grazing on

pastoral leases within reserve boundaries will be decreased where possible by discussion with lessees. Fire protection is not necessarily a problem on many areas which will be sufficiently large to accommodate natural fire cycles. Protective practices are required on the western reserves where denser ground vegetation and zoning for recreational access increases the fire hazard. Initially, this submission proposes six areas for reservation as State Forest. It is expected that further submissions for at least three other reserves will be tendered within twelve months. Ecotypes not included in the current submission but under review represent the Acacia aneura vegetation, the Eucalyptus comitae-vallis complex and sandalwood Santalum spicatum in the Perenjori area.

PROPOSED RESERVES

Six reserves totalling some 37,100 hectares have been selected for this purpose. These are titled as Randells, Majestic, Forrestiana, Brockway, Kangaroo Hills and Kambalda (see map). Specific details on each reserve and a map are provided in the body of the report. All except Forrestiana have been pegged for Mineral Claims, Prospecting Areas and Gold Mining Leases, details of which are provided in the Appendix.

Some of the proposed reserves have been included on account of their ecological diversity (Kambalda, Brockway, Kangaroo Hills and Randells); some for the preservation of seed sources and gene pools (Forrestiana, Brockway and Kangaroo Hills); and others for the preservation of virgin plant communities (Majestic, Randells, Kambalda and Brockway). All of these reserves have considerable value for tourism and recreation. The recommended tenure is as State Forest. Management objectives would include protection from fire and from cutting, conservation of ecological communities and gene pools and limited recreational development in selected areas. Costs of demarcation and the construction of firelines is estimated at about $2,600.

MAJOR EUCALYPT SPECIES CONTAINED IN PROPOSED RESERVES

Species	RESERVE					
	Randells	Majestic	Kambalda	Kangaroo Hills	Brockway	Forrest-iana
E. brockwayi					x	
campaspe				x		
elastroides	x	x	x	x		
clelandii				x		
umosa				x	x	
dundasii					x	
remophila						x
flocktoniae					x	x
forrestiana						x
goniantha						x
gracilis				x		
griffithsii	x	x	x	x		
leptocalyx						x
lesouefii	x	x	x	x	x	
occidentalis						x
oleosa obtusa	x	x	x	x		
reduncа						x
salmonophloia	x	x	x	x	x	
salubris	x	x	x	x		
salubris glauca			x	x	x	
stricklandi	x	x	x			
torquata			x	x	x	
transcontinentalis	x	x	x	x		
websteriana			x	x		

RANDELLS

OUTSTANDING CHARACTERISTICS

The area proposed for reservation represents one of the few islands of virgin forest in the sea of eucalypt regrowth general to the Goldfields. It has excellent communities of salmon gum and goldfields blackbutt together with a variety of other relatively undisturbed vegetative types typical of the eastern goldfields. Development of Pittosporum and Myoporum is excellent. Aesthetic and biological values are of a high order. The proposed reserve is of sufficient size for experimental work to be carried out.

LOCALITY, TENURE AND ENCUMBRANCES

The proposed reserve, bordered blue on the plan, is situated some 80km east of Kalgoorlie and is accessible from the Trans-line road which is some 3km to the north (Plan 41/80). The area of about 16,700 hectares covers part of Pastoral leases 395/635 (Mt. Monger Station) and 3114/617 (Cowarna Downs Station). It also includes Reserves 9695 (Common.), 12923 (Water Catchment), 11662 (Water) and 9885 (Recreation). None of these reserves is vested. Mineral claims in the north-west, east, central and south central portions cover about one quarter of the proposed reserve, and are detailed in the Appendix.

DESCRIPTION

The topography is flat to undulating and the area is reasonably well wooded. (Aerial photographs Kurnalpi Run 8, 23/4/68 Nos. 122 and 124; and Widgiemooltha, Run 1, 10/2/68, No. 198 refer). The two main communities are the Eucalyptus lesouefii woodland-shrub type on the gently rising, sandy earths and the virgin E. salmonophloia - saltbush savannah on the lower slopes. E. salubris, E. Stricklandi and E. celastroides are associates of E. salmonophloia on the heavier soils. On the lighter soils of the slopes, E. griffithsii and E. oleosa obtusa occur. Small, almost

pure communities of E. transcontinentalis are found on scattered sites. The area also carries fine stands of Pittosporum, Brachychiton, Myoporum and Casuarina cristata. Parts of the area are occupied by salt flats and others are bare due to heavy overgrazing in the recent past. The establishment of regeneration on these areas could pose serious problems. Old mine workings such as the 'Mighty Rumble' and others could be of some attraction for tourists.

The area is an excellent and picturesque example of the native vegetation representative of a large area of woodland east of Kalgoorlie. The size of the reserve promises achievement of the management objectives.

OBJECTIVES OF MANAGEMENT

1. Maintenance of habitat of tree and understorey species.
2. Restricted public access for tourism.
3. Preservation for scientific study purposes.
4. Prohibition of cutting and hunting in the area.
5. Fire protection only to allow natural successional influences.
6. Control of roading and clearing operations which could be associated with justifiable allowances for mining on the area.
7. Restriction of future grazing as is practicable.

Demarcation of external boundaries by a trafficable track four metres wide is recommended. The estimated cost would be $1,100.

MAJESTIC

OUTSTANDING CHARACTERISTICS

The value of this area lies not so much in any outstanding examples of the main species or in the presence of any particularly rare associated species (i.e. Randells and Kambalda). However the reserve illustrates what salmon gum woodlands once were, how regeneration following clear cutting often failed and how soil disturbances may lead to excellent regeneration. Proximity to Kalgoorlie offers high recreational potential.

LOCALITY, TENURE AND ENCUMBRANCES

The proposed reserve is located some 48km east of Kalgoorlie, with the Trans-line road forming its northern boundary (Plan 49/80). The area is about 2550 hectares, all of which is under Lease 395/627 (Mt. Monger Station). No other Reserves are involved. Some 80 percent of the proposed reserve is pegged for mineral claims, the only exception being the south-eastern portion. Current Mineral Claims are tabled in the Appendix.

DESCRIPTION

The topography is generally flat, with patchy woodland in the northern portion, but with rather better woodland in the central to southern parts. (Aerial photograph Kurnalpi, Run 8, 24/4/68 No. 116 refers). The area consists of the previous State Forest plus an extension of the southern boundary to include a cut over area which has very poor regeneration. This furnishes a comparison with the maiden bush further north.

The main vegetational types consist of open stands of Eucalyptus lesouefii woodland, flats with scattered salmon gums (E. salmonophloia) and thickets of scrub. In the southern portion there is a fine example of virgin E. salmonophloia - saltbush woodland. Other species are

similar to those described for Randells.

By virtue of its proximity to Kalgoorlie, its aesthetic and educational qualities, the proposed reserve has considerable potential for recreation.

OBJECTIVES OF MANAGEMENT

1. Complete restriction of cutting and shooting.
2. Restriction of grazing as practicable.
3. Provision for fire protection as necessary.
4. Control of surface mining and clearing and roading associated with deep mining.
5. Experimentation to demonstrate requirements for eucalypt regeneration.

External boundaries would be demarcated by a trafficable fireline at a cost of approximately $300.

FORRESTIANA

OUTSTANDING CHARACTERISTICS

An excellent area to ensure the preservation of the valuable Eucalyptus forrestiana species which is threatened by agricultural clearing.

LOCALITY, TENURE AND ENCUMBRANCES

Location 445 is situated some 5km north of Scaddan on the Esperance-Norseman road, which forms its eastern boundary (Plan 402/80). It is currently part of Reserve 24952 (Natives) vested in the Hon. Minister for Native Welfare. Four 412 hectare blocks (Locations 439, 440, 445 and 614) have been set aside for aboriginal farmers, but have not been developed as yet. No mineral claims have been pegged to the present time.

DESCRIPTION

The topography is flat and the species include E.forrestiana, E. occidentalis, E. leptocalyx, E. eremophila, E. redunca, E. goniantha and the mallee E. flocktoniae. Location 445 is preferred to any of the others since it has a frontage to the bitumen road, includes E. occidentalis, which is absent on the other blocks and has areas which could be readily developed as picnic or rest sites. The quantity and quality of mature E. forrestiana is better than that on all other blocks.

OBJECTIVES OF MANAGEMENT

1. Preservation of a suitable remnant of the E. forrestiana habitat as a seed source and study area.
2. Preservation of associated eucalypt and other vegetation types.
3. Prohibition of cutting, grazing and hunting.
4. Protection from fires.

The area would require a 20 metre fire break to be constructed on the western and southern boundaries, at an estimated cost of $160.

BROCKWAY

OUTSTANDING CHARACTERISTICS

The proposed reserve is ecologically diverse, very pleasing aesthetically and constitutes a refuge for two important species -- Eucalyptus brockwayi and Eucalyptus dundasii. Situated on Highway No. 1 this reserve could be a valuable tourist attraction for the Norseman district.

LOCALITY, TENURE AND ENCUMBRANCES

The proposed reserve is located some 12km south of Norseman and is east of the Norseman-Esperance Road, which forms part of the western boundary (Plan 350/80). The area is some 3770 hectares. Part is under Lease 3114/515 (Wooleenyer Station) and it includes part of Reserve 13140 (Common.) which is not currently vested. Mineral claims have been pegged through the centre portion of the proposed reserve and details appear in the Appendix. There are some mine workings in the area, mainly for tin.

DESCRIPTION

Topography is hilly to undulating and this is by far the most scenic of the reserves which are proposed. The vegetation is primarily open woodland with some very fine stands of virgin E. brockwayi in places. There are also excellent examples of regeneration of E. salubris, E. brockwayi, E. flocktoniae and E. dundasii. Other species include E. torquata, E. dumosa and E. lesouefii.

OBJECTIVES OF MANAGEMENT

1. Maintenance of habitat and seed sources for E. brockwayi and E. dundasii and E. flocktoniae.
2. Prohibition of cutting and shooting.
3. Restriction of grazing as practicable.
4. Zoning to allow for recreation and tourism.

5. Protection from fire.
6. Control of mining operations on the area.
7. Demarcation of the northern boundary at a cost of about $100.

Reservation of this area and the purposes of management have been discussed with the Norseman Shire. They favour the proposal.

KANGAROO HILLS

OUTSTANDING CHARACTERISTICS

The objective of reservation is primarily to preserve habitats and seed sources of E. campaspe and E. clelandii. Although not as well wooded as other reserves, the area contains diversity in topography and vegetation, is close to Coolgardie and is studded with old gold mining shows. It includes the old townsite of Burbanks and has tourist and recreational potential.

LOCALITY, TENURE AND ENCUMBRANCES

The proposed reserve is situated just south of Coolgardie and is bounded on the north-west by the Victoria Rocks road and on the south-east by the Nepean road (Plans 39 and 50/80) The area of some 6,940 hectares covers part of Lease 3114/754 (Bullabulling) and 395/900 (Calooli) stations, as well as Vacant Crown Land. It also includes part of Reserve 19211 (Timber - Saldalwood), 5346 (Common.), 8191 (Common.), 4772 (Recreation) and part of the Burbanks townsite. None of these is vested. Apiary sites 1839 and 2112 are situated on the proposed reserve. The whole area is covered by mineral claims (Appendix) and an area just to the south is currently being mined by the Australia Feldspar Company using open cast methods.

DESCRIPTION

The area is undulating with a range known as Kangaroo Hills traversing almost the whole of the proposed reserve. The area is sparsely wooded; (photographs Kalgoorlie, Run 8, 22/4/68, No. 130 and Boorabbin, Run 1, 20/2/68, No. 90 refer) Several diverse plant communities are represented. On the undulating rises E. clelandii, E. griffithsii and E. oleosa obtusa occur; with E. torquata and E. websteriana being found on the rockier ridges. E.salmonophloia, E. campaspe

and E. salubris grow in the heavier loams in the valley floors. Both E. dumosa and E. transcontinentalis are found on the ecotones between these communities.

Acacias are frequent in the shrub layer, mainly A. graffiana and A. acuminata. Associates which also occur include Santalum spicatum and S. acuminatum and species of Eremophila, Scaevola and Atriplex.

OBJECTIVES AND MANAGEMENT

1. Preservation of habitat and seed source for E. campaspe and E. clelandii.
2. Prohibition of cutting and shooting.
3. Restriction of grazing where practicable.
4. Restriction of burning to natural occurrences.
5. Zoning to prevent conflict between recreation and habitat preservation.
6. Control of clearing and roading activities of future mining in the area.

The proposed reservation has been discussed with the Coolgardie Shire who view the proposal favourably. Demarcation costs are estimated as $270.

KAMBALDA

OUTSTANDING CHARACTERISTICS

The major values of this reserve lie in the presence of virgin bush, ecological diversity and proximity to Kambalda. The reserve has high potential for habitat preservation and recreation.

LOCALITY, TENURE AND ENCUMBRANCES

This area is located between one and six km west of the Kambalda West townsship, with the Kambalda road passing through the extreme south western corner of the proposed reserve (Plan 40/80). The area of 6,700 hectares is partly under Lease 3114/907 (Mandilla Station) and the remainder is vacant Crown Land. Apiary site No. 1694 is located on the proposed reserve. The whole area is held under mineral claims and details are provided in the Appendix.

The area marked 'A' on the plan has been requested for future extension of the Kambalda West Townsite and will be released for that purpose when required.

DESCRIPTION

The topography is gently undulating with several creeks draining into Lake Lefroy (Aerial photograph, Widgiemooltha, Run 2, 23/4/68 No. 86 refers).

Diverse vegetative associations show sharp contrasts between the woodland-shrub, savannah woodland, Brachychiton-shrubland and saline flats communities. The open, virgin woodland contains E. lesouefii and E. griffithsii on the slopes with E. torquata and E. websteriana on the rockier ridges. The savannah woodland is dominated by E. salmonophloia with which are associated E. lesouefii, E. oleosa obtusa, E. celastroides, E. transcontinentalis and Melaleuca pauperiflora. On the heavier textured soils E. stricklandi and Brachychiton gregorii occur. E. salubris glauca is to be found on the heavy clays along the drainage channels.

Much of the area has been heavily overgrazed. Demarcation costs are estimated to be some $700.

Being in such close proximity to the Kambalda township the site has a real potential as a recreation and conservation area, but may suffer abuse if not managed by a responsible authority.

OBJECTIVES AND MANAGEMENT

1. Prohibition of cutting and shooting on the reserve.
2. Restriction of grazing as practicable.
3. Zoning for multiple use to include habitat preservation, tourism, walking and camping.
4. Control of fire due to public use.
5. Control of clearing and roading associated with future mining.

The proposed reservation has been discussed with the Western Mining Corporation who would like to see the Forests Department assist in the retention of the natural vegetation in the area.

APPENDIX I

MINING TENEMENTS

Following is a list of the mining tenements applied for on each proposed reserve area. Mineral Claims and Mineral Leases (M.C. & M.L.) are for an unlimited length of time and are held until surrendered or cancelled. The area is usually 300 acres.

Prospecting areas (P.A.) are held for 12 months with an option of renewal for 6 months. The area is usually 24 or 48 acres. Gold mining leases are held for 21 years with an option of renewal for a further 21 years. The area is usually 24 acres.

1. <u>RANDELLS RESERVE</u>

M.C. 592Y (part)
" 594Y (part)
" 591Y
" 593Y
" 852Y
" 853Y
" 854Y
" 856Y
" 858Y
" 859Y
" 667Y
" 668Y
" 669Y
" 670Y
" 671Y
" 672Y
" 673Y
" 722Y
" 723Y
" 724Y
" 711Y
" 712Y
" 713Y
" 714Y
" 176Y
" 717Y
" 718Y
" 695Y (part)
" 694Y (part)
" 798Y
" 791Y
" 792Y
" 793Y (part)
" 696Y (part)
" 656Y
" 655Y.

P.A. 1573Y
" 1574Y

M.C. 661Y
" 663Y
" 662Y
" 664Y
" 665Y
" 666Y
" 725Y
" 726Y
" 727Y
" 7287 (part)
" 733Y
" 734Y (part)
" 137Y
" 468Y

G.M.L. 1098Y
" 1303Y
" 1302Y
" 925Y
" 928Y
" 942Y
" 1272Y
" 1301Y
" 946Y
" 945Y
" 977Y
" 929Y
" 947Y
" 939Y
" 25/1357
" 1101Y
" 813Y
" 1291Y
" 1297Y
" 1296Y
" 1288Y
" 1290Y
" 1295Y
" 1316Y
" 1006Y
" 907Y
" 916Y

APPENDIX I

2. MAJESTIC RESERVE

M.C.	97Y	(part)	G.M.L.	458Y	PA25/1582
"	384Y	(part)	"	2630Y	25/1583
"	86Y		"	420Y	25/1581
"	87Y		"	557Y	25/1356
"	85Y		"	2496Y	
"	88Y		"	2499Y	
"	121Y		"	2857Y	
"	120Y		"	422Y	
"	367Y		"	421Y	
"	256Y		"	2498Y	
"	257Y		"	423Y	
"	268Y		"	424Y	
"	126Y		"	425Y	
"	128Y		"	426Y	
"	199Y				
"	200Y				

3. KAMBALDA RESERVE

M.C.	2208	(part)	M.C.	2200	
"	2209		"	2201	
"	2210		"	2202	
"	2211		"	2203	
"	2212		"	2204	(part)
"	2213		"	1187	
"	2214		"	1185	
"	2215		"	1186	
"	2216		"	2258	(part)
"	2217		"	2222	
"	2218		"	2223	
"	2219		"	2224	
"	2220		"	2225	
"	2221	(part)	"	2226	
"	2193	(part)	"	2227	
"	2194	(part)			
"	2195	(part)			
"	2196	(part)			
"	2197				
"	2198				
"	2199				

4. KANGAROO HILLS RESERVE

M.C.	1718	(part)	M.C.	1702		M.C.	1712	(part)
"	1719	(part)	"	1705		"	1769	(part)
"	1722		"	1708		"	1768	(part)
"	1723		"	963		"	1767	(part)
"	1724		"	962		"	2359	
"	2365		"	1733	(part)	"	1739	(part)
"	2364		"	1711		"	1738	(part)
"	1931		"	1709		"	3767	
"	1726		"	1706		"	3766	
"	1728		"	1703				
"	1729		"	1700		M.L.	26	
"	1752		"	1773				
"	1930		"	1774		G.M.L.	5554	
"	1929		"	1775		"	833	
"	1763		"	1776		"	900	
"	1713		"	2361		"	862	
"	1710		"	2362		"	1647	
"	1707		"	1765		"	963	
"	1704		"	1766		"	1474	
"	1701		"	1731		"	1176	
"	1928	(part)	"	1770		"	3334	
						"	3754	

APPENDIX I

G.M.L.	273	G.M.L.	4104		PA8352
"	2109	"	2657		PA8403
"	950	"	3971		PA8411
"	1760	"	4398		
"	3714	"	3772		
"	5423	"	4362		
"	5422	"	5752		
"	5421	"	5753		
"	2344	"	5758		
"	2862	"	3029		
"	5819	"	3317		
"	5710	"	3302		
"	5820	"	3172		
"	5350	"	3225		
"	1707	"	5761		
"	901	"	5862		
"	893	"	5792		
"	759	"	5776		
"	1860	"	5777		
"	782A	"	5721		
"	1487	"	5961		
"	1123	"	5605		
"	2167	"	5718		
"	968	"	4484		
"	768	"	5825		
"	2507	"	5828		
"	2832	"	5827		
"	2143	"	5780		
"	1122	"	5824		
"	3946	"	5826		
"	1702	"	5339		
"	3200	"	5783		
"	4073				

5. BROCKWAY RESERVE

M.C.	65	G.M.L.	1436	G.M.L.	1415
"	66	"	1437	"	1486
"	68	"	342	"	696
"	93	"	341	"	195
"	94	"	1414	"	212
"	63/2492	"	1423		
"	63/2493 (part)	"	1542		

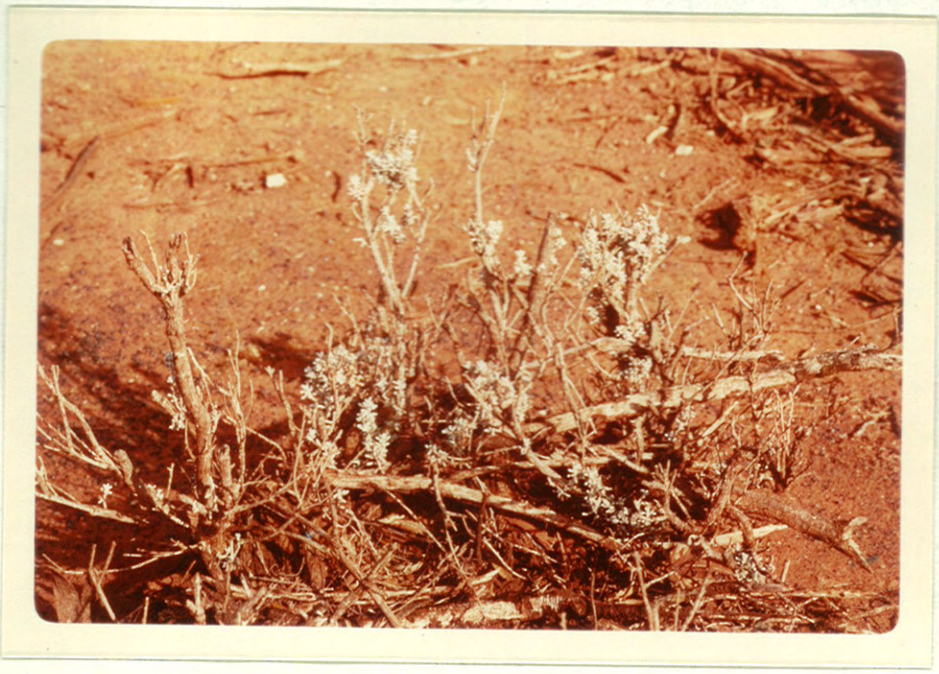
6. FORRESTIANA RESERVE

No mineral claims.

Regeneration in gravel pit near MAJESTIC

Eucalypt regeneration in gravel pit near MAJESTIC

MAJESTIC (South) Failure of regeneration following early cuttings, stumps can be seen.



RANDELLS overgrazed saltbush

RANDELLS
saltbush protected
from grazing

RANDELLS
virgin myoporum and
salmon gum

MAJESTIC South eastern corner.
Regeneration of E. salmonophloia following soil disturbances

MAJEXTIC Site with high recreational value.

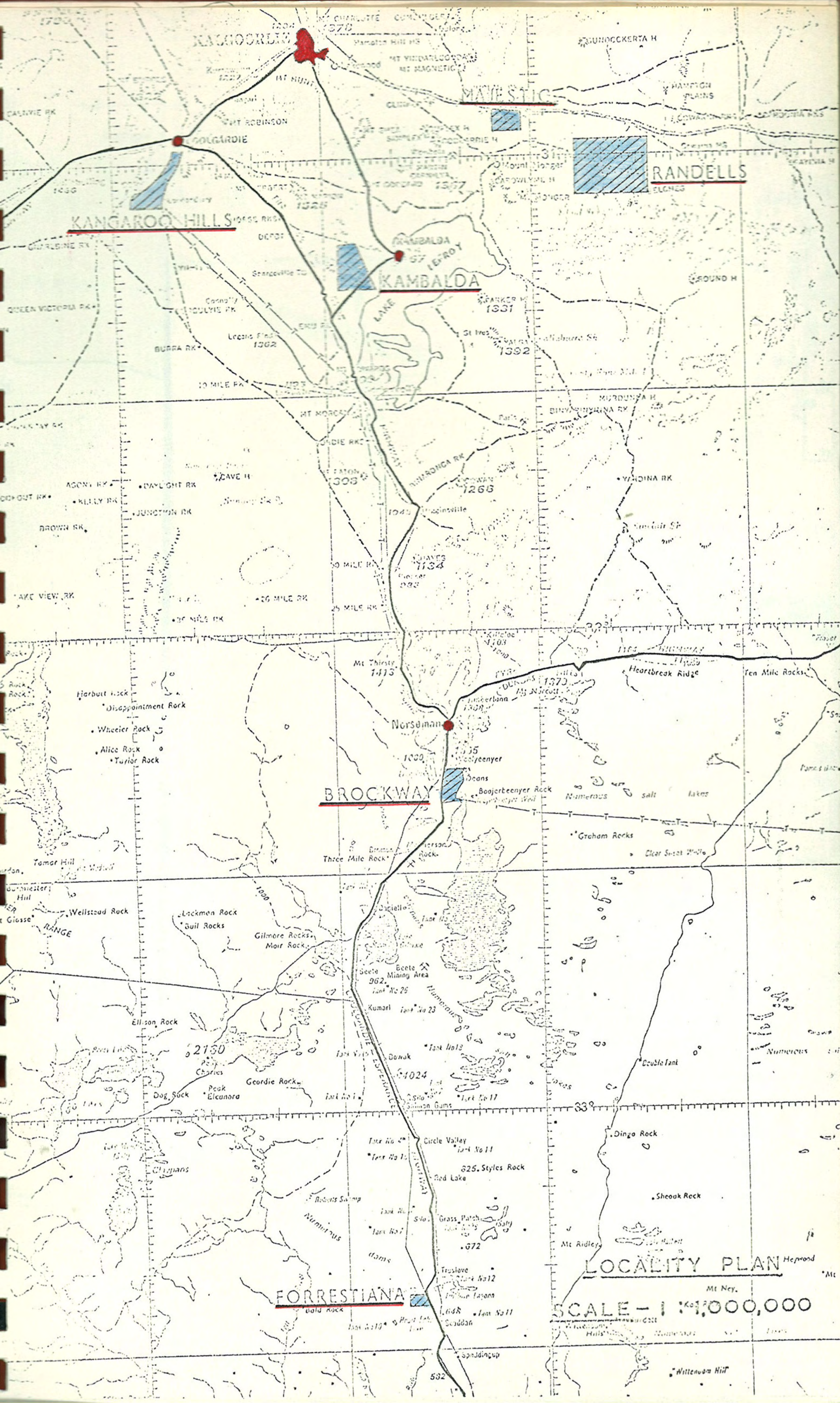
BROCKWAY E. brockwayi

BROCKWAY E. dundasii

E. lesouefii

E. flocktoniae

E. dundasii



KALGOORLIE
MAJESTIC
RANDELLS
COOLGARDIE
KANGAROO HILLS
KAMBALDA
LAKE LEFROY
MT ROBINSON
Mount Monger
Norseman
BROCKWAY
FORRESTIANA
Heartbreak Ridge
Ten Mile Rocks
Harbutt Rock
Disappointment Rock
Wheeler Rock
Alice Rock
Taylor Rock
Woolyeenyer
Boojerbeenyer Rock
Numerous salt lakes
Graham Rocks
Three Mile Rock
Wellstead Rock
Lackmon Rock
Bull Rocks
Gilmore Rocks
Moir Rock
Beete Mining Area
Kumarl
Ellison Rock
Geordie Rock
Dog Rock
Peak Eleanora
Double Tank
Dingo Rock
Circle Valley
Styles Rock
Red Lake
Grass Patch
Sheoak Rock
Mt Ridley
Scaddan
Speddingup
Wittenoom Hill
LOCALITY PLAN
SCALE – 1 : 1,000,000

PROPOSED RANDELLS FOREST RESERVE

PIPECLAY PEAKS

122°15'

40943

7057

HAWKE HILL

30728

23871

11332

15031

28013

"The Dog" Gap

Red Peak Flat

COWARNA DOWNS

6920

3399

2023.3

STATION

RED PEAK GULLY

(1795)

75M

332
1575

ex rds 5214, 1795 & 12923, 4.9885 & 2535 & 12065.

(5214)

9695

395
635

BARE HILL

Common

8500

12923

50000

Track

(2535)

Catchment Water (Act)
1275 a
78M

9885
Recreation
10 ac.

11662
Water
5 ac.

12065

PIPE TRACK

30 LKS. Wide

27987

9271.7

H A M P

E COOLGARDIE G F

E85

M4 Mt BELCHES

MT MONGER STN.

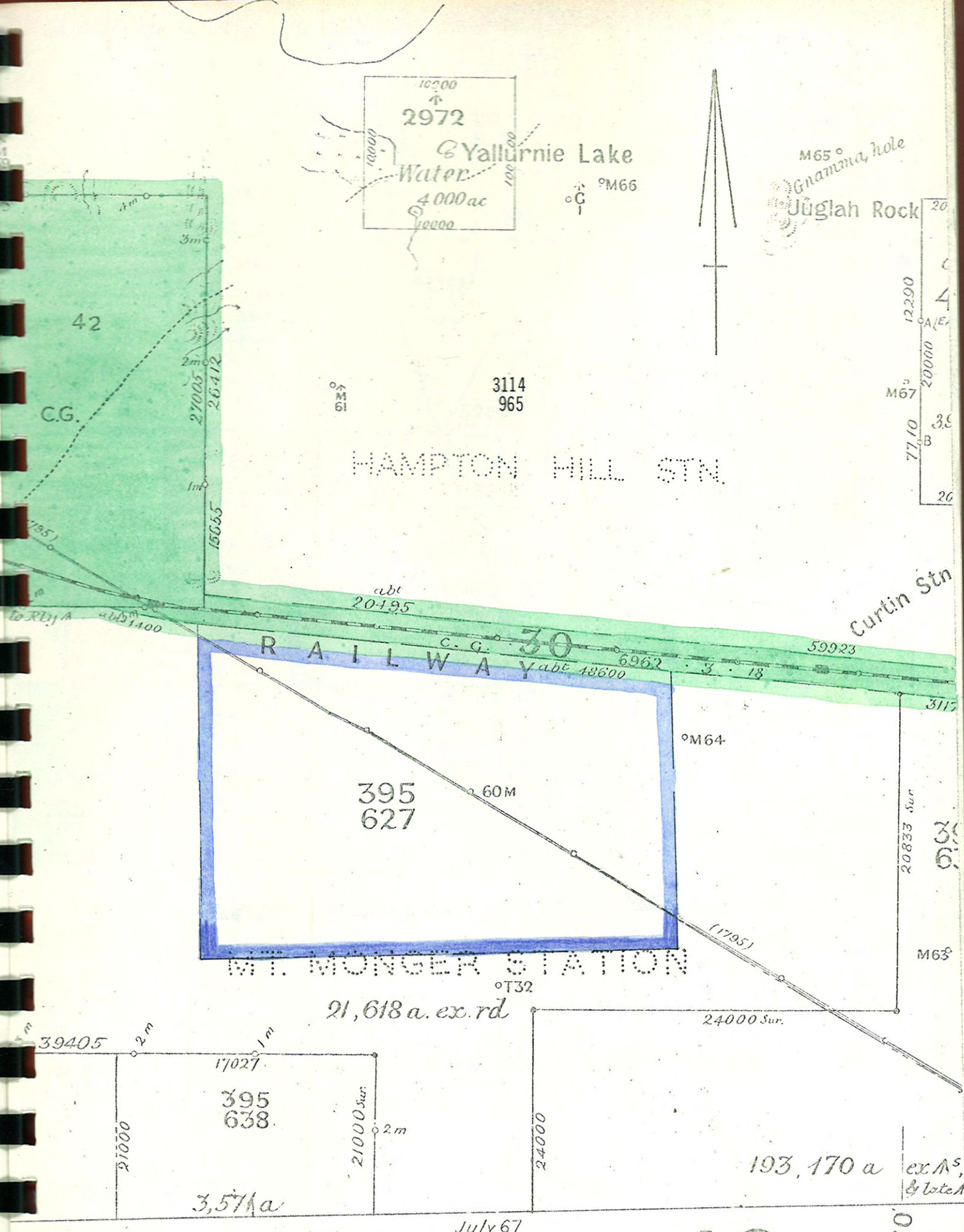
12065
Water
10 ac.

193,170 a

8358

AREA ABT. 16,700 ha.

SCALE : 1:63360



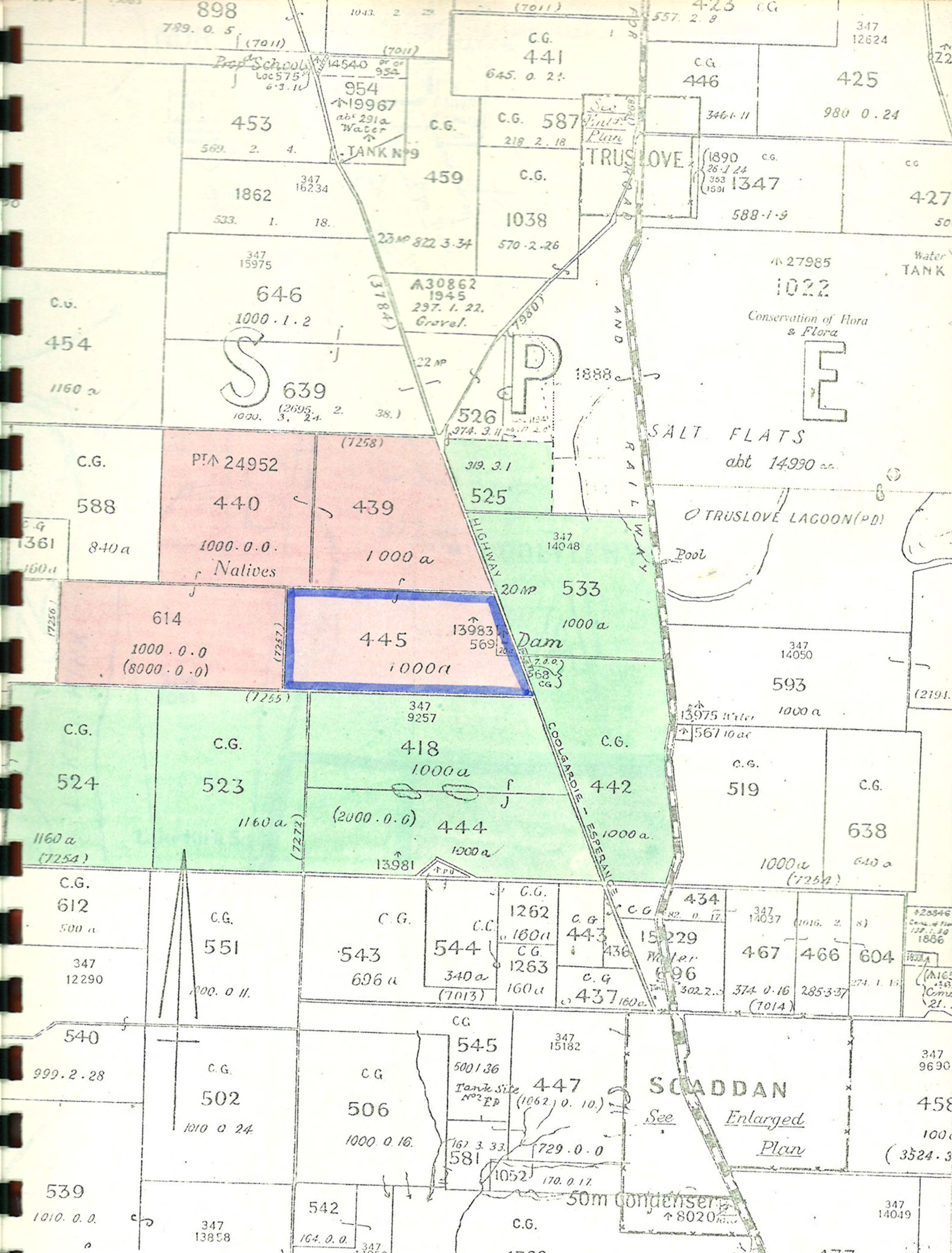
49/80

PROPOSED MAJESTIC FOREST RESERVE

AREA ABT. 2550 ha.

SCALE : 1:63360

ON PLAN 49/80

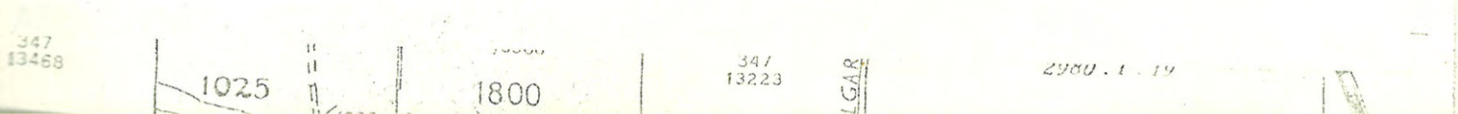


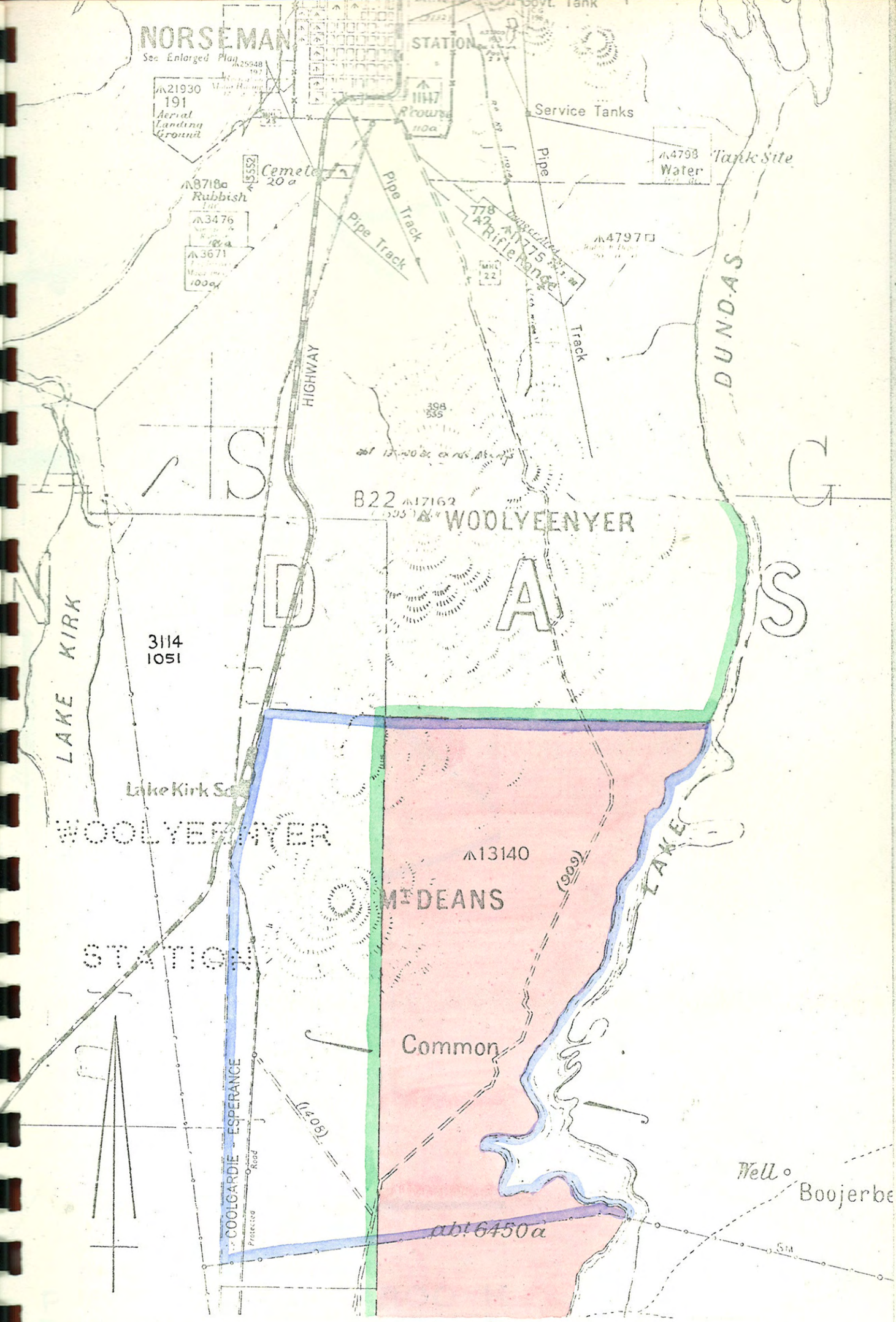
PROPOSED FORRESTIANA FOREST RESERVE

AREA ABT. 412 ha.

SCALE : 1:63360

ON PLAN 402/80





PROPOSED BROCKWAY FOREST RESERVE

AREA ABT. 3770 ha.

SCALE : 1 : 63360

ON PLAN 350/80

ab

P H LINE (920)

GREAT EASTERN HIGHWAY

Ball

Caloolli

7712 · 2 · 38

1921H

8

21914

Flat Granite Rock

CALOOLI

3114
468

abt. 68,200 ac. ex A's, rds, rlys & M.H.L.

H10

8

1921H

28547

Timber

E74 (1685)

17177 Trig

COMET HILL

Hac

7,712 · 2 · 38

40000

3114
463

CALOOLI

18008

3114
754

H11

N6
H12

BULLABULLING

STATION

B2

B3

8843
Experimental Farm
184 A. 0 R.

9611
194 A. 0 R.
Explosives

3597
150 A. 0 R.
Slaughter Ha

2228
P.U.
ac 652

100a

1011 2
Safety Zone H9

(1334)

See Enlarged Plan

8693
R Course

COOLGARDIE

356 380 400

2526

9135

3142
Water

13741

(12

350

343

COOLGARDIE
8-10

RL78

COOLGARDIE
2-10

7304
Quarantine
22.0

5346

5346

TINDALS
Common

Common
6.400 ac
BAKER

39561

8 Water

7324

ab 2900

16060
Breakaways

L83

3M

Track

(916)

Pipe track
50 Acs wide

5M

RIFLE RANGE

10752

6810
Sanitary

(1307)

BURBANKS
363 M. 3 C.
See Enlarged Plan

1323

HILLS

Cgt Closed

ab. 68,200 ac. ex A's, rds, & M.H.L. 63 & rly

KANGAROO

(916)

9677

18816

6545

4772
Recn

A 8191

abt. 1275 ac.

Common

3465

(9415)

80 100

3033

13760

2790

9250

LONDONDERRY
366 M. 10 C.
See Enlarged Plan

(1281)

17037

3116
3199

10M

24263

11610

abt 4825a

(abt. 8568 ac.)

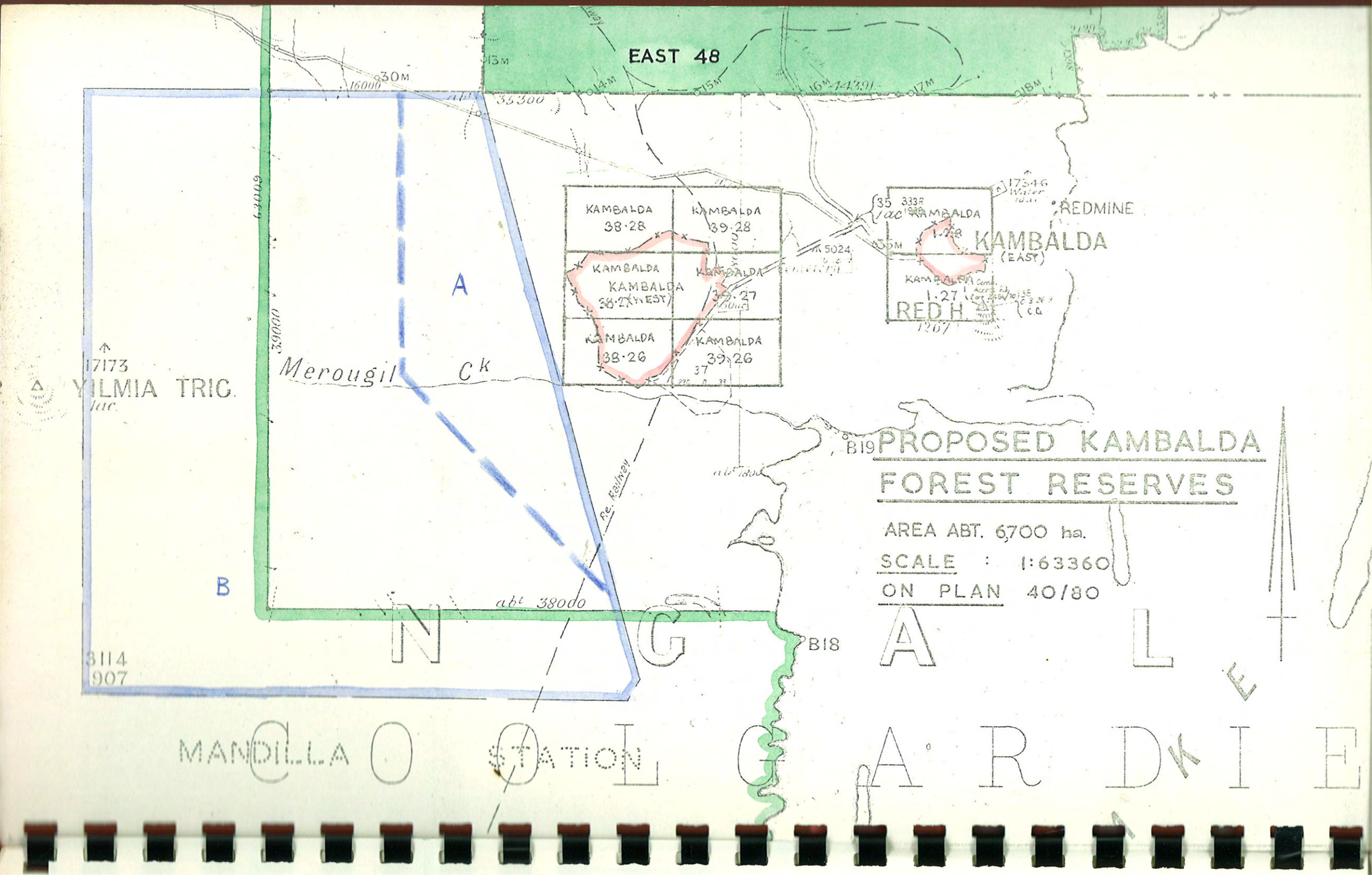
22084

12665

9121

PROPOSED KANGAROO HILLS
FOREST RESERVE

WOOL


EAST 48
KAMBALDA 38·28
KAMBALDA 39·28
KAMBALDA 38·27 (WEST)
KAMBALDA 39·27
KAMBALDA 38·26
KAMBALDA 39·26
KAMBALDA 1·28
KAMBALDA (EAST)
KAMBALDA 1·27
REDMINE
RED H
Merougil Ck
YILMIA TRIG.
PROPOSED KAMBALDA FOREST RESERVES
AREA ABT. 6,700 ha.
SCALE : 1:63360
ON PLAN 40/80
A
B
B18
B19
MANDILLA STATION
NGADARLE