

# From Bitterlich Prisms To Thematic Mapper

The Quest To Save Our Bilbies, Foxgloves and Farmlands

Keynote Address To:

Mapping Sciences Institute Australia

1998 National Conference

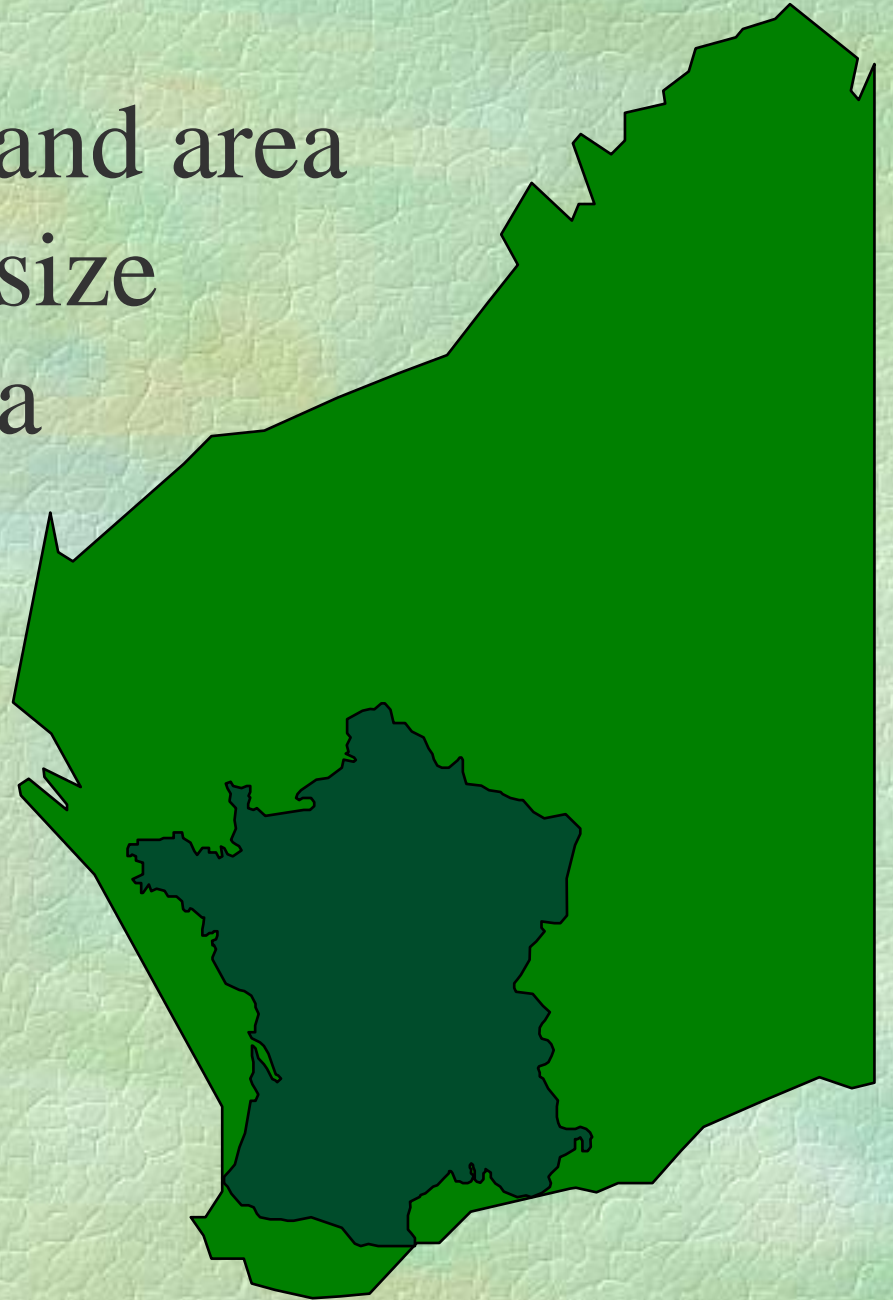
Dr Syd Shea

Executive Director

Department of Conservation and Land Management,  
Western Australia



France occupies a land area  
about a quarter the size  
of Western Australia























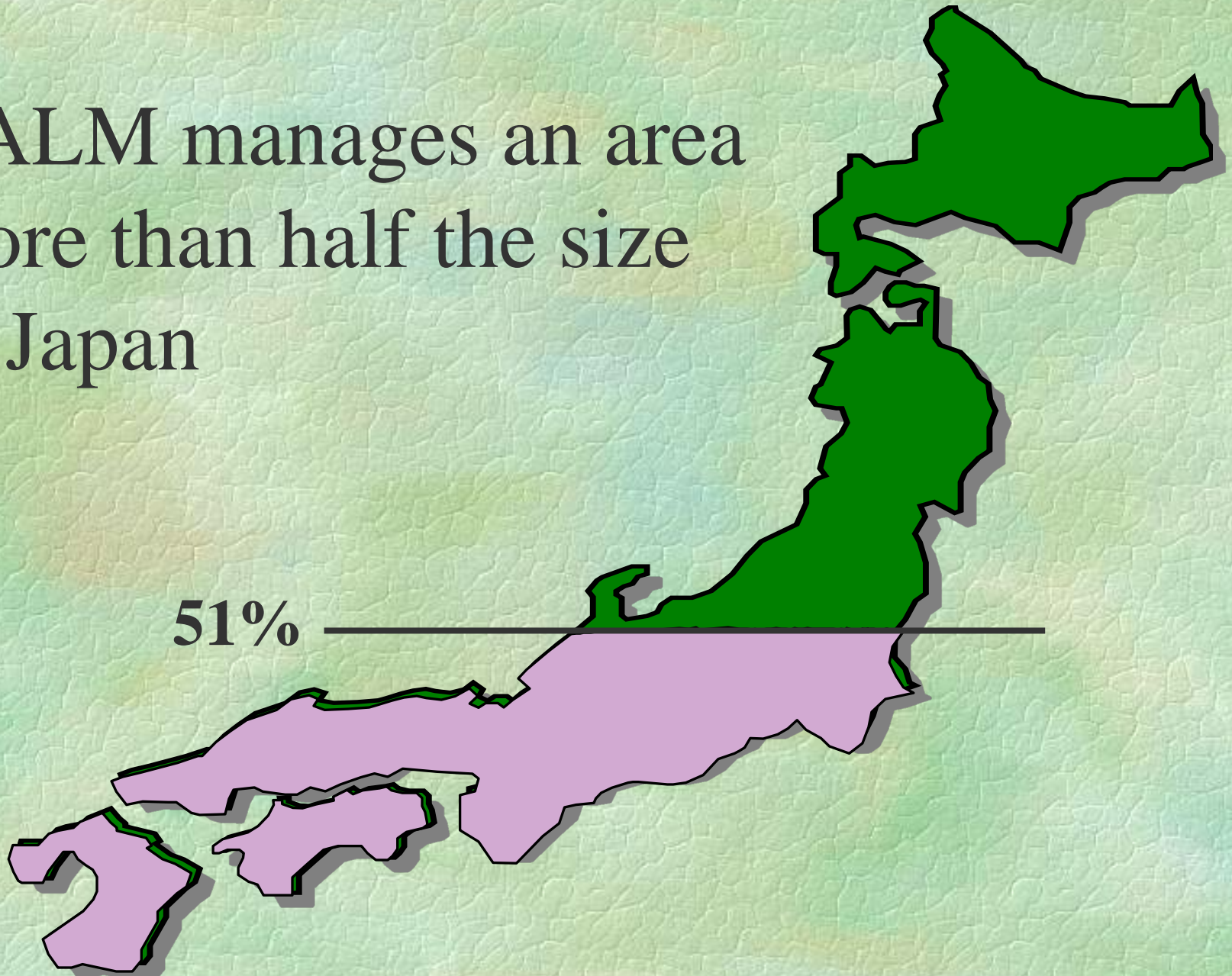




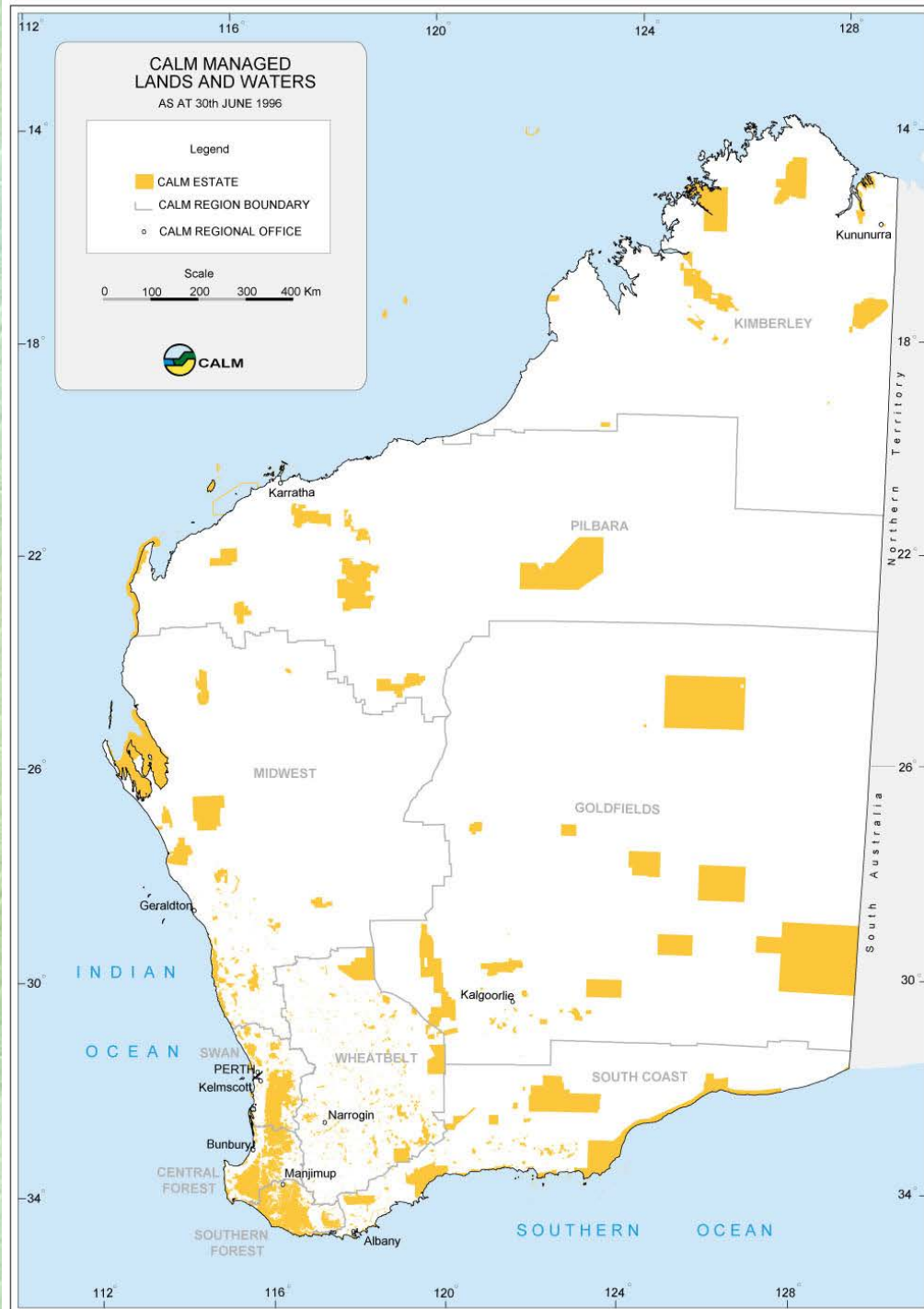




CALM manages an area  
more than half the size  
of Japan

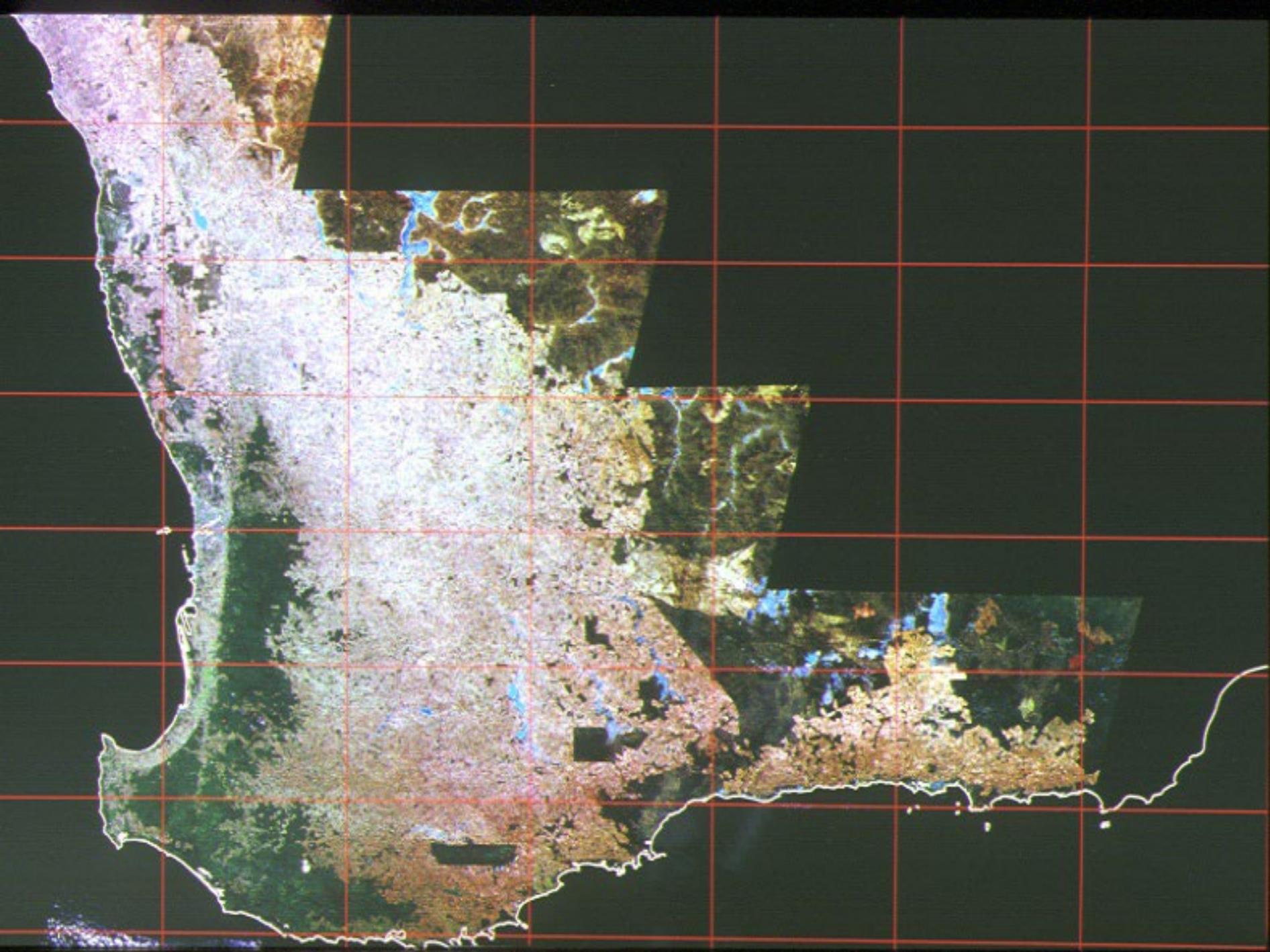


# CALM managed lands and waters



- 
- Integrating the needs of all of the community now and in the future
  - Integrating different sustainable land uses with sustainable conservation
  - Integrating conservation with wealth generation and employment creation
  - Integrating management and scientific skills to achieve these objectives



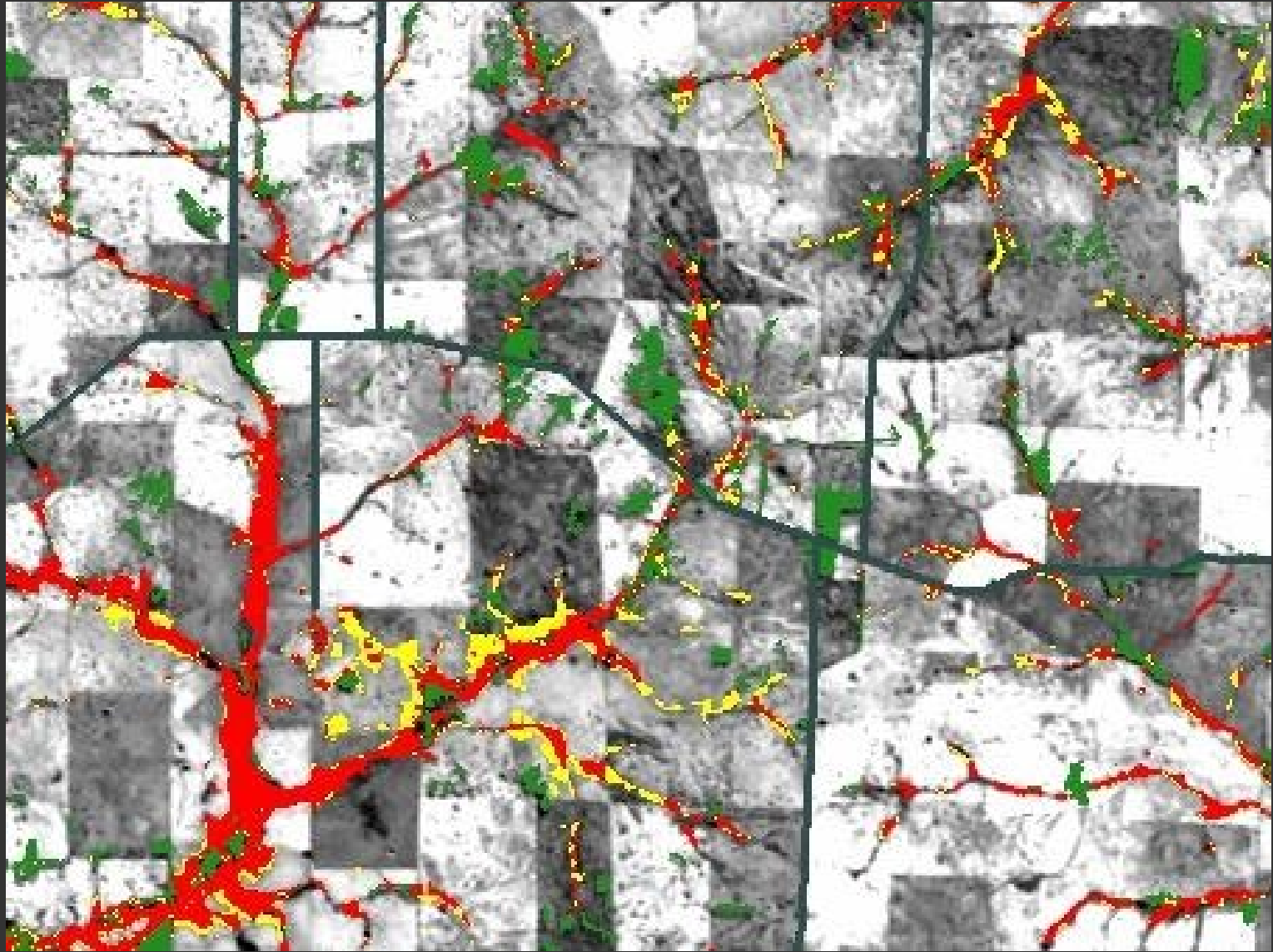




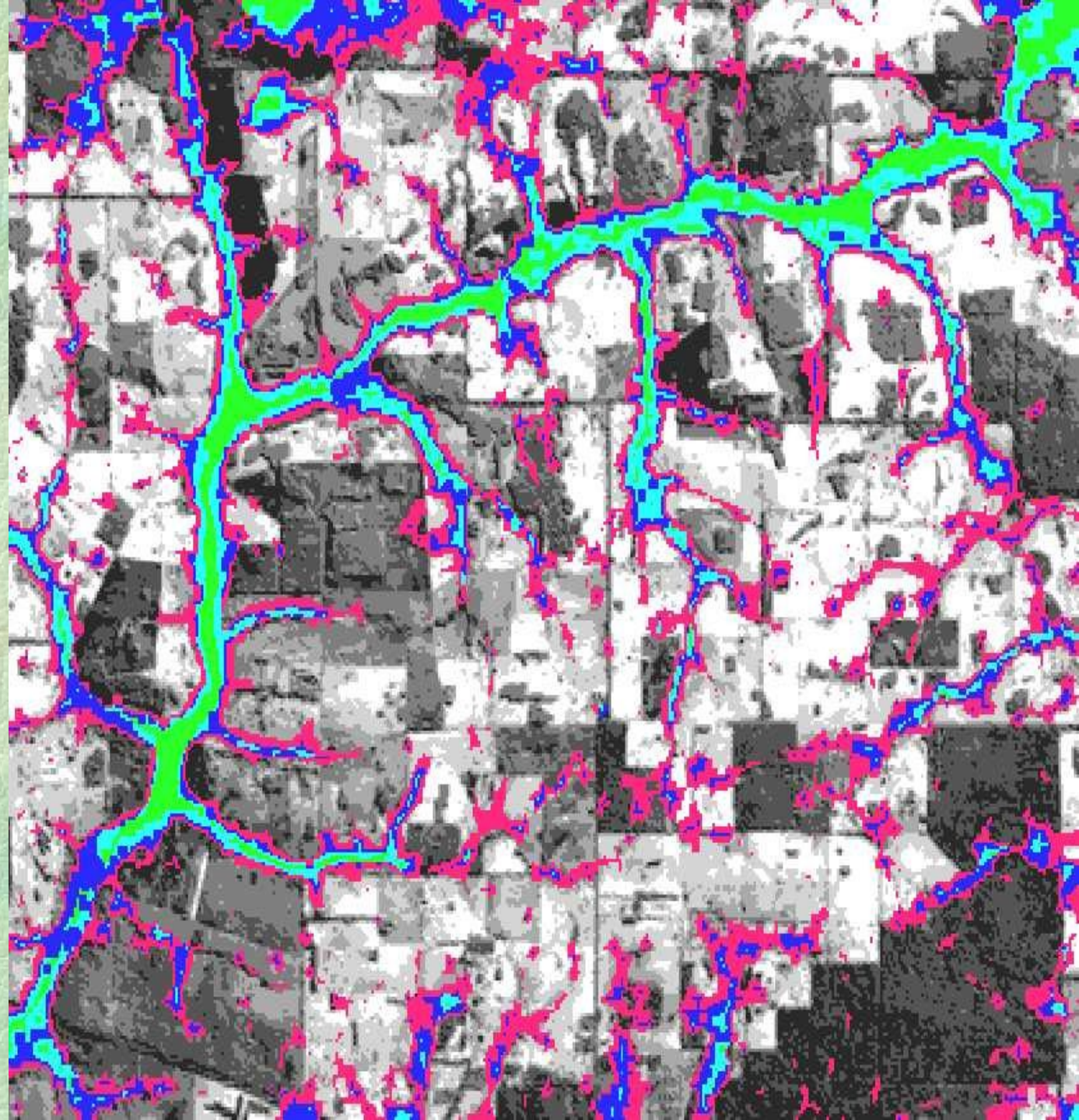








Predicted  
Salinity  
Risk Areas



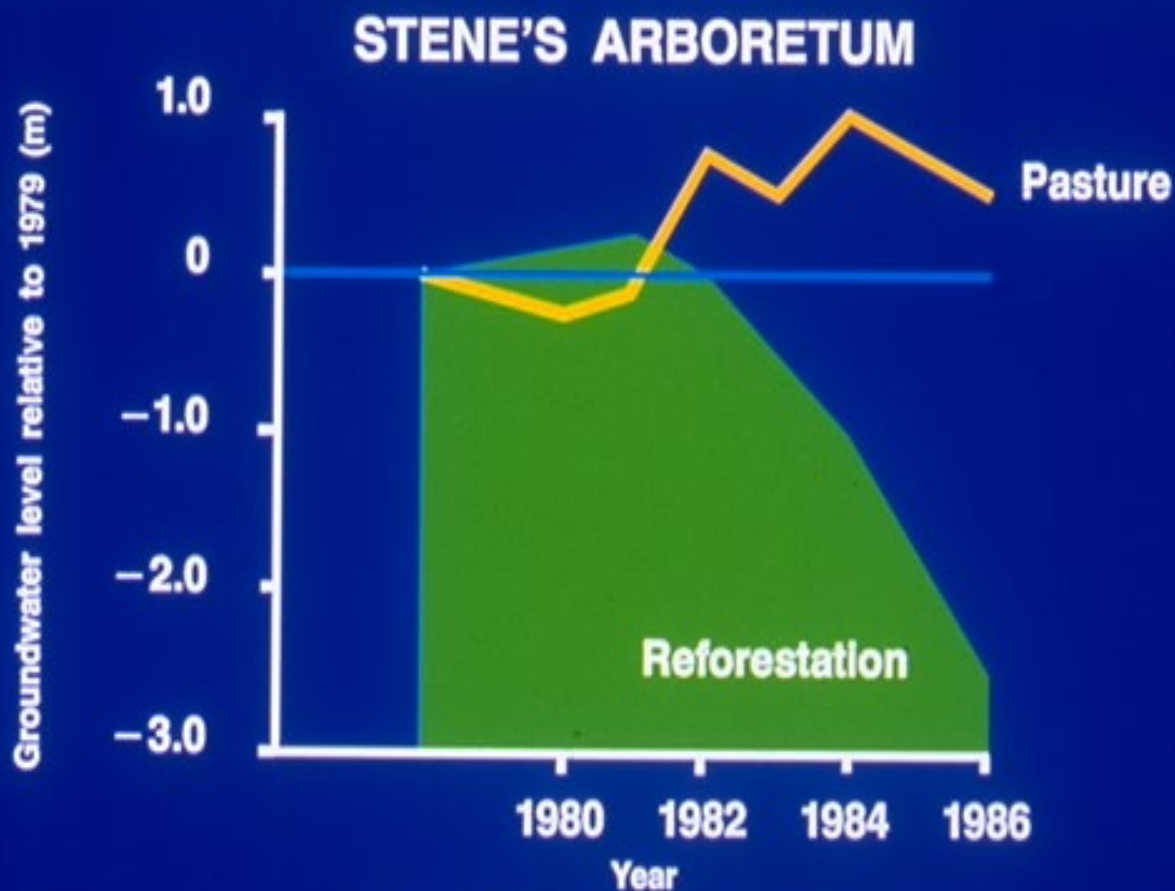






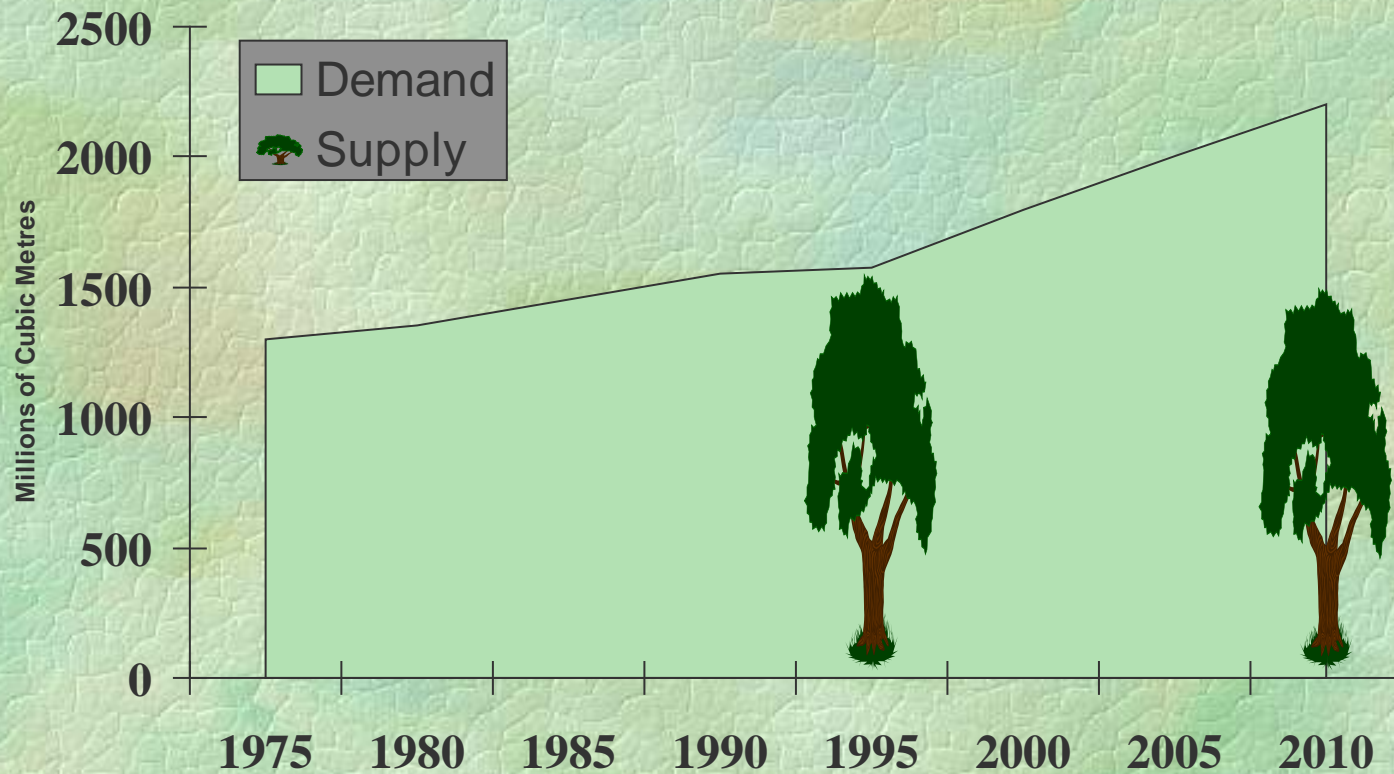


# THE EFFECT OF TREE CROPS ON WATER TABLE LEVELS



Water Authority of Western Australia  
July 1989  
Report No. WS 33

# Global wood demand rises as supply falls



























# CALM SHAREFARMS LOWER WEST

## JACKSON

Nelson Loc's 2868, 2869 & 2870.

### PLANTATION PLAN LEGEND

	P.97 TREE CROP AREA E.globulus G.P.S. CAPTURE.		SEALED ROAD
	P.96 TREE CROP AREA E.globulus G.P.S. CAPTURE.		UNSEALED ROAD
	EXISTING HUSH G.P.S. Capture inside tree crop area only.		POWERLINE, PYLON
	SALT AFFECTED G.P.S. CAPTURE.		SWAMP
	PRIVATE PLANTING		DAM
	CALM PLANTING		WATER POINT
	FENCE		BUILDINGS
	CADASTRAL BOUNDARY G.P.S. CAPTURE		CADASTRAL BOUNDARY NON G.P.S. CAPTURE

### STATISTICAL REPORT

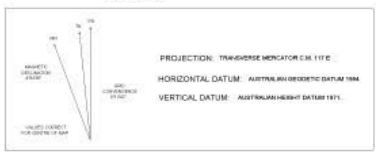
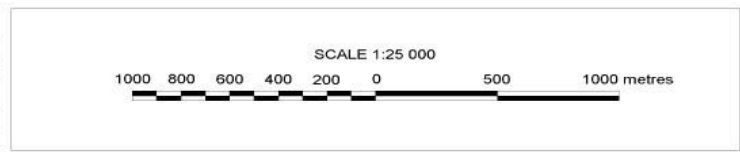

Categories	Area (ha)
P.97 TREE CROP AREA	372.5
<b>TOTAL AREA</b>	<b>372.5</b>

SHIRE: BOYUP BROOK
MAIN ACCESS ROAD: CRAIGIE ROAD
FIRE CONTROL DETAILS
OWNER:
CONTACT:
FIRE CONTROL CONTACTS:
1.
2.
3.
FIREBREAKS
10m BOUNDARY
10m ADJOINING 1st CLASS ROADS
10m ADJOINING 2nd CLASS ROADS
6m INTERNAL BETWEEN COMPARTMENTS
6m INTERNAL

NB - The surrounding location boundaries have been determined using 50 series mapping and are for schematic purposes only, there may be inconsistencies between the G.P.S. plot and the Cadastral data. It is important for the intended use that the matter must be resolved by reference to MBG.  
DEPARTMENTAL PLAN FOR OPERATIONAL USE ONLY.

Part of CALM 1/50 000 map 2230-4  
Part of CALM 1/25 000 map 2230-4SW & SE  
G.P.S. (Global Positioning System).  
The Global Positioning System used is a real time  
differential G.P.S. which obtains accuracy of  $\pm 1.5m$ .

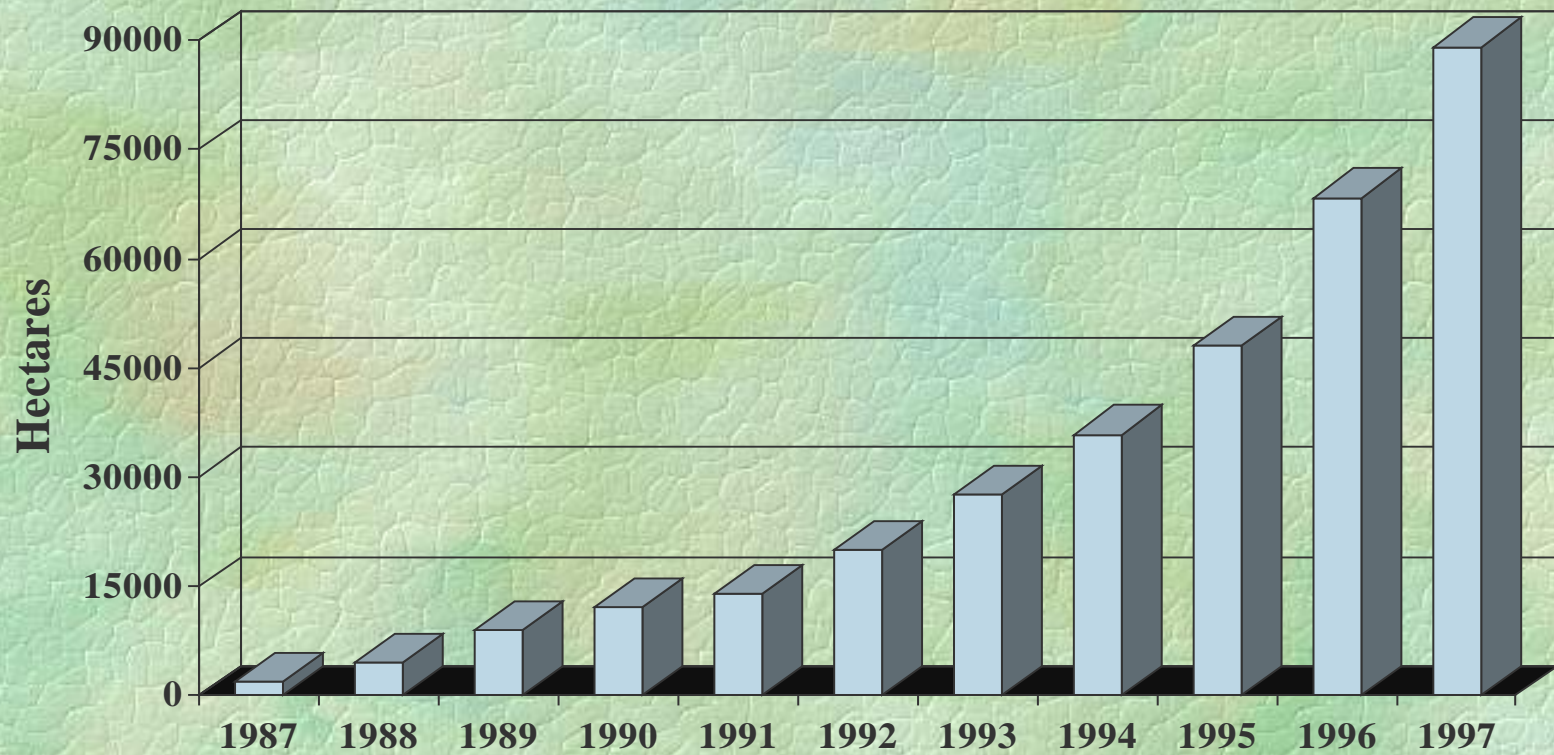
G.P.S. Surveyed By: JOHN MOSAJ	Date: MAY 97
Plan Compiled By: S. MOUNTFORD	Date: JULY 97
Plan Checked By:	Date:

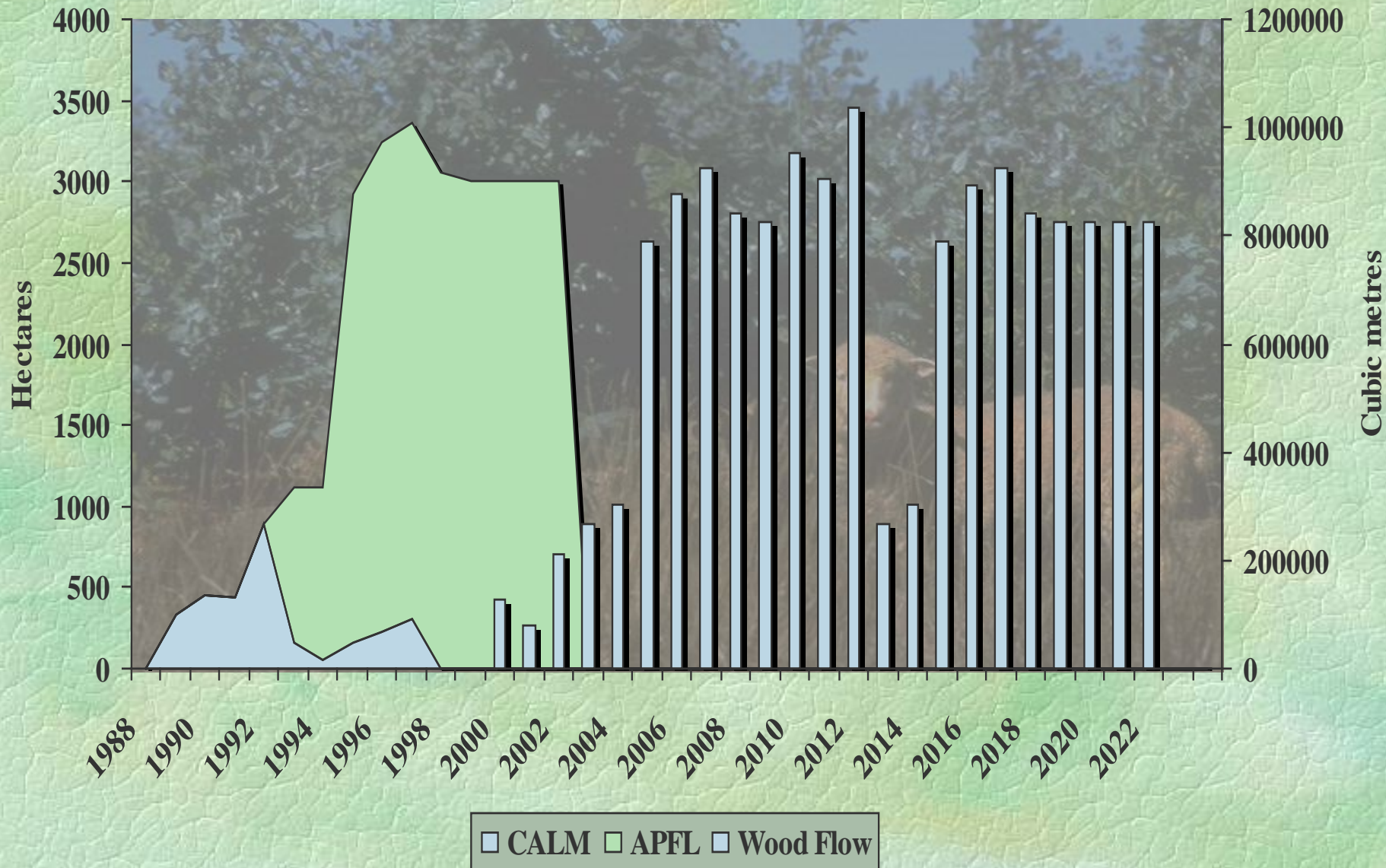
**CALM**  
CONSERVATION AND LAND MANAGEMENT

PREPARED BY: FOREST MANAGEMENT BRANCH UNDER THE DIRECTION OF  
DR. SHYAM SUDHAKAR, DIRECTOR GENERAL OF THE DEPARTMENT  
OF CONSERVATION AND LAND MANAGEMENT, WESTERN AUSTRALIA.  
THE MAPS CONTAINED HEREIN DO NOT CONSTITUTE A CONTRACT.  
THE COPYRIGHT ACT, NO PART MAY BE REPRODUCED BY ANY PROCESS  
WITHOUT THE PERMISSION OF CALM.

# Total area of *E. globulus* in WA



# Area of bluegums planted each year (CALM and APFL) and predicted wood flows



## Investment to date:

- \$20 million

## Investment to complete plantation program:

- \$30 million

## Investment required for harvesting, transport and processing:

- \$20 million to upgrade facilities at Albany Port
- \$15 million for a mill to process the harvested logs
- \$3-4 million for a transport system
- \$16 million for harvesters
- \$12 million for loading machinery
- \$22 million for log trucks



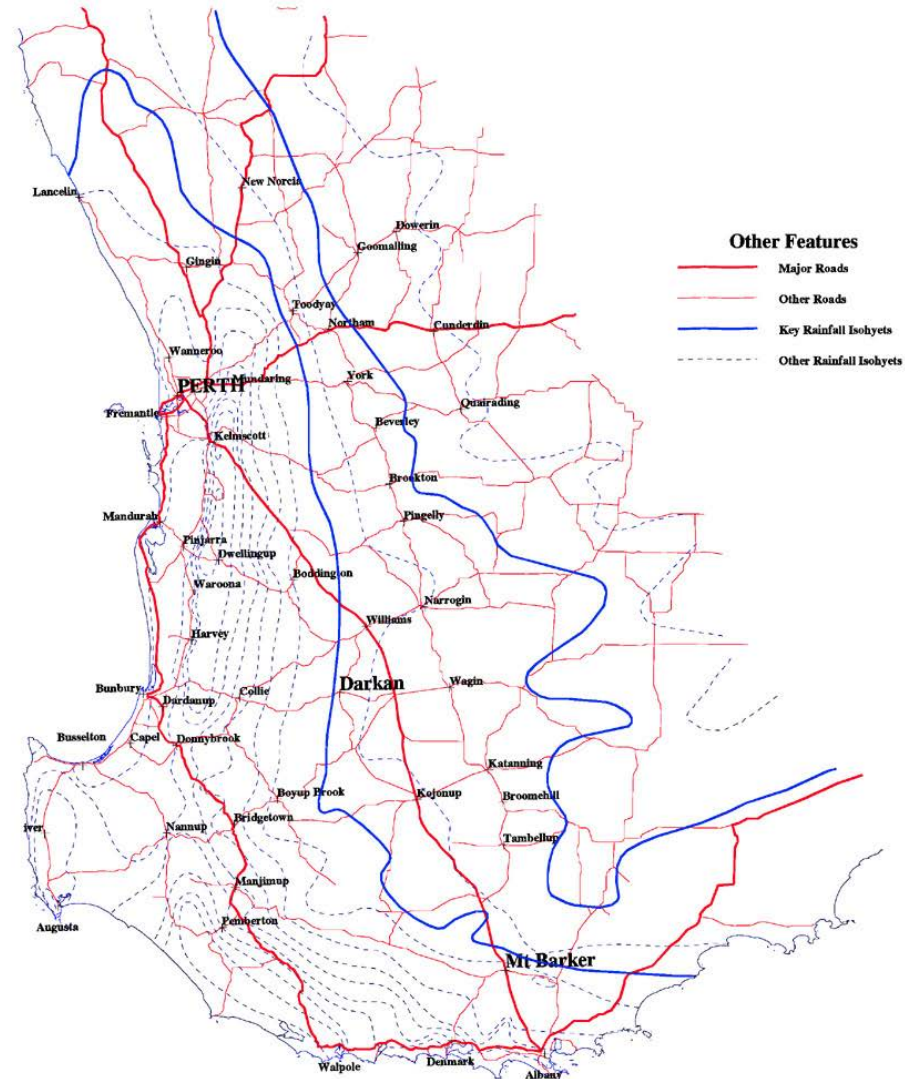






# Rainfall Isohyets for South West of Western Australia

## Average Annual Rainfall Highlighting the 400 and 600 millimetre Isohyets



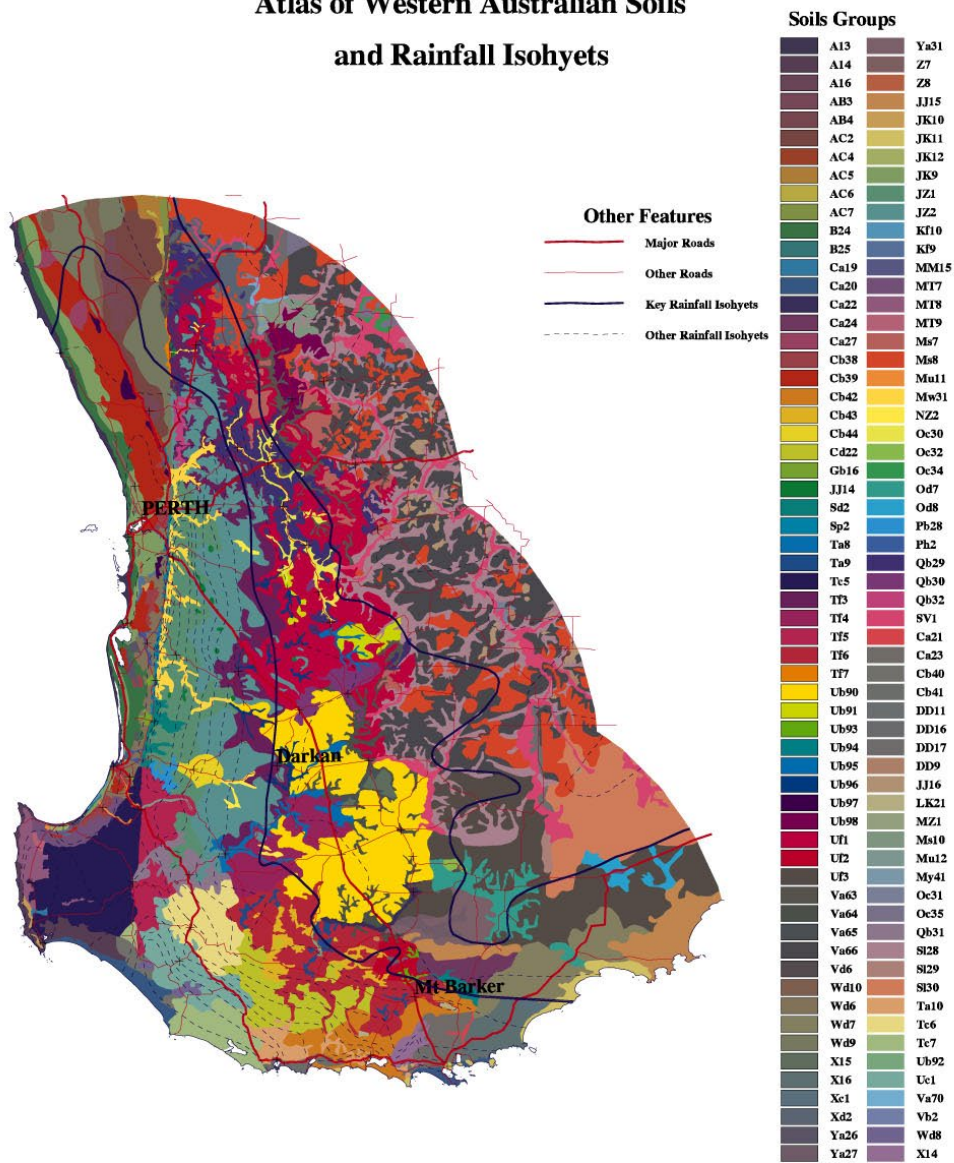
- Other Features**
- Major Roads
  - Other Roads
  - Key Rainfall Isohyets
  - Other Rainfall Isohyets

Scale 1:2500000  
Projection: UTM(Zone50)  
Date: 13/05/1998

Data Sources Used  
TENURE - Department of Land Administration  
VEGETATION - Conservation and Land Management  
SOILS - Agriculture, Western Australia  
RAINFALL - Ministry for Planning

# Atlas of Western Australian Soils

## Atlas of Western Australian Soils and Rainfall Isohyets



Scale 1:3000000

Projection: UTM(Zone50)

Date: 07/05/1998

**Conservation and Land Management**

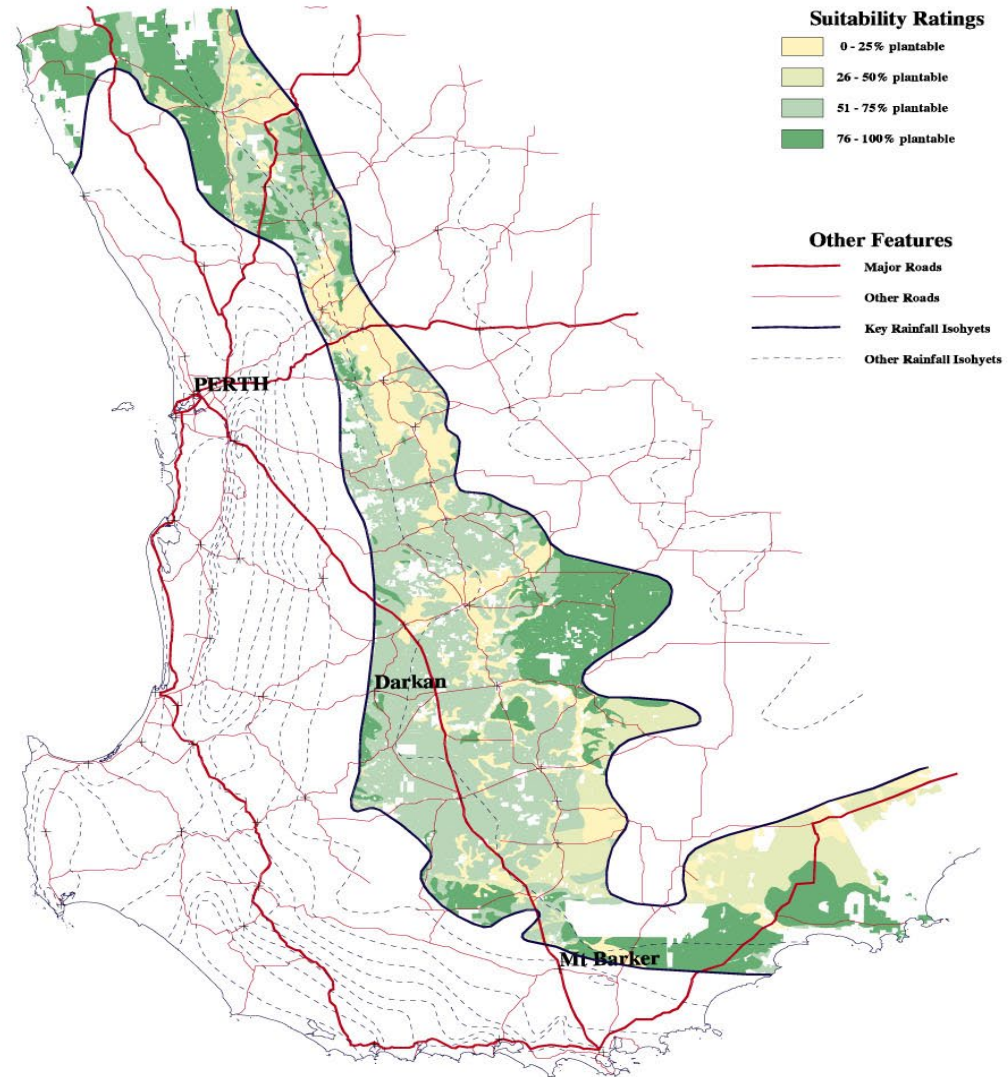
IMB/GISS Job No.98042104-xx2

Data Sources Used

TENURE - Department of Land Administration  
 VEGETATION - Conservation and Land Management  
 SOILS - Agriculture, Western Australia  
 RAINFALL - Ministry for Planning

# Land Suitability Study for Maritime Pine

**Land Suitability Study for Maritime Pine**  
with an average annual rainfall between 400 and 600 millimetres



Scale 1:2500000

Projection: UTM(Zone50)

Date: 07/05/1998

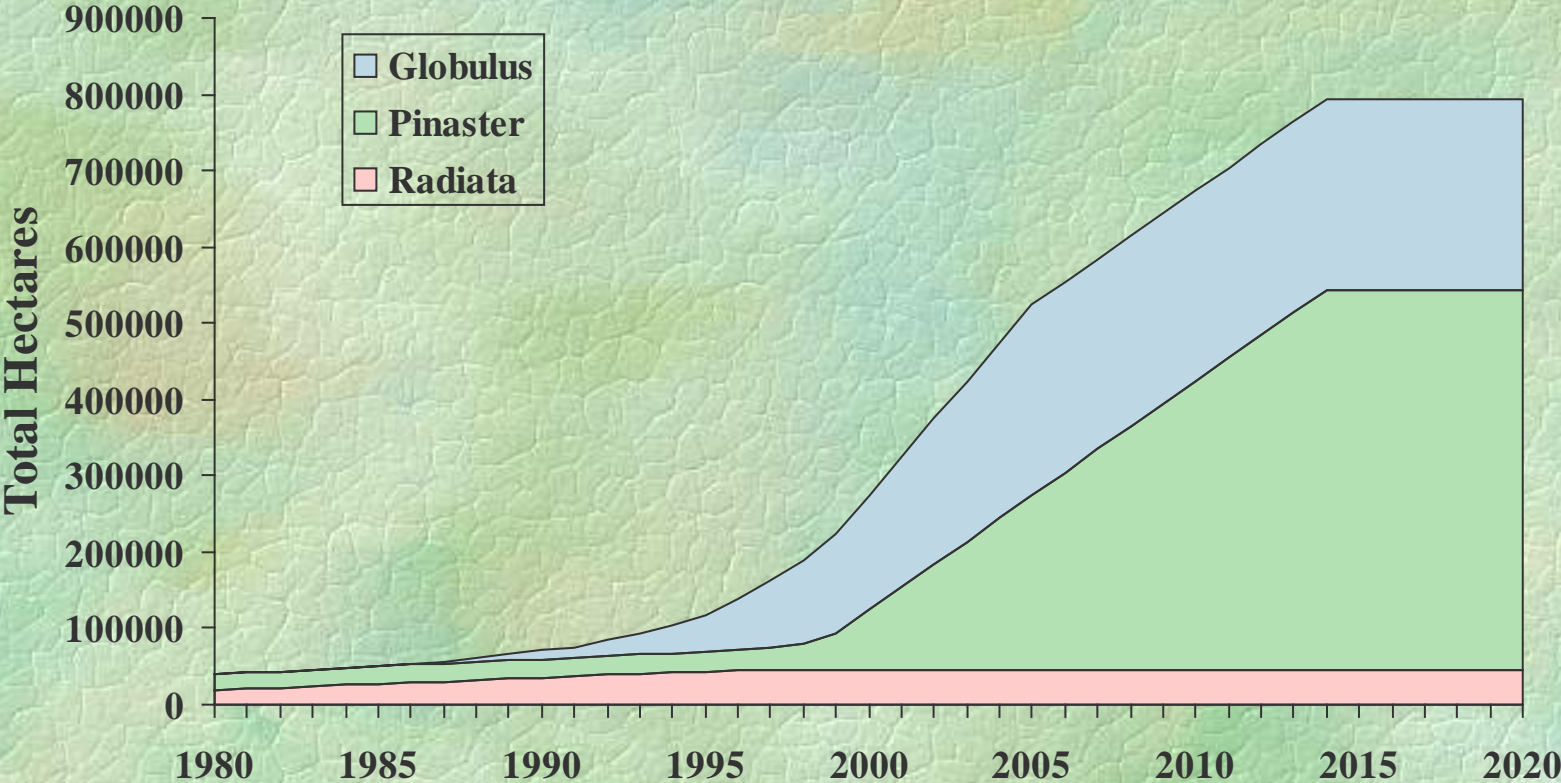
**Conservation and Land Management**

IMB/GISS Job No.98042104-xx1

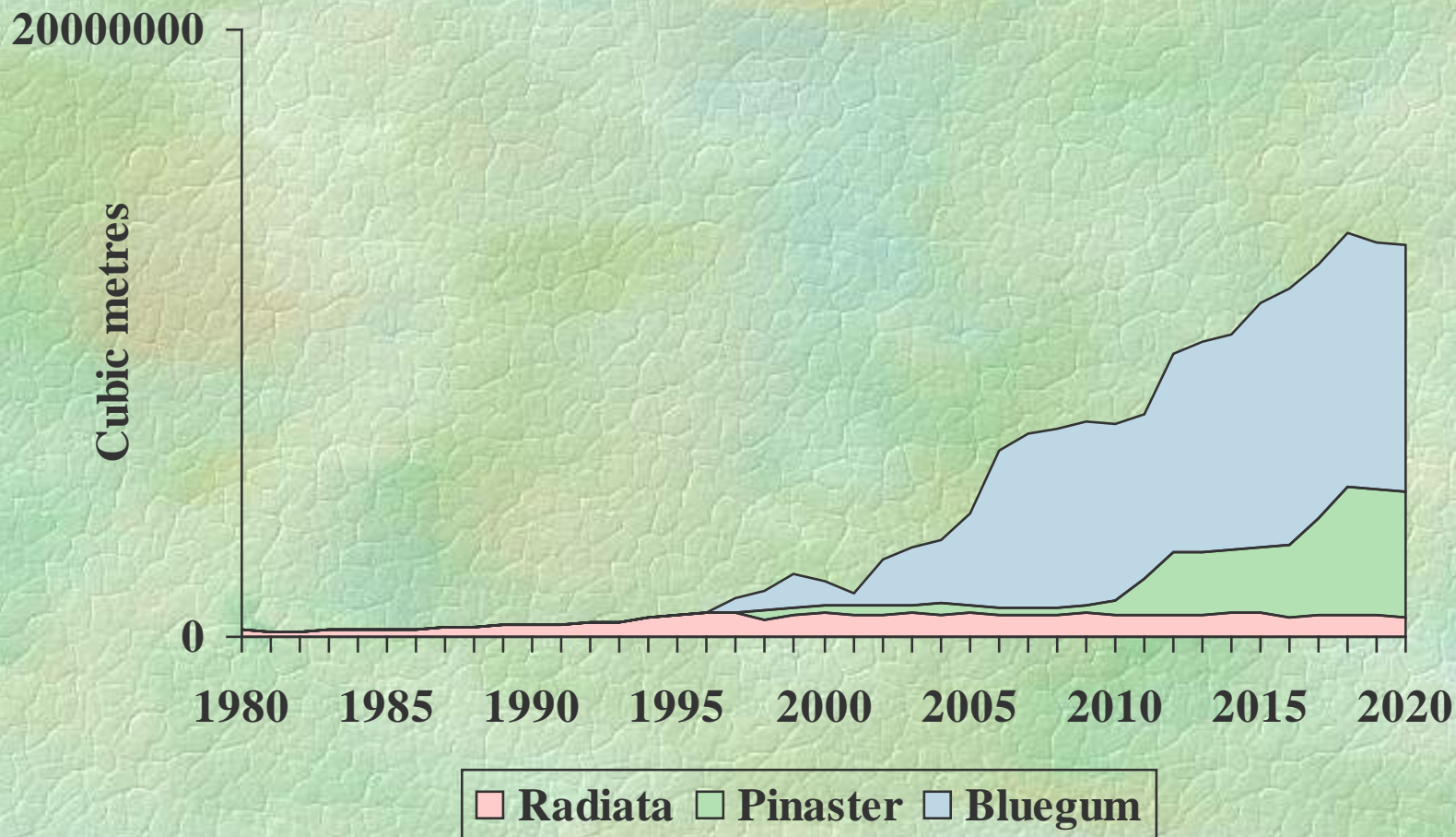
**Data Sources Used**

TENURE - Department of Land Administration  
VEGETATION - Conservation and Land Management  
SOILS - Agriculture, Western Australia  
RAINFALL - Ministry for Planning

# Predicted growth of tree crop plantings in Western Australia

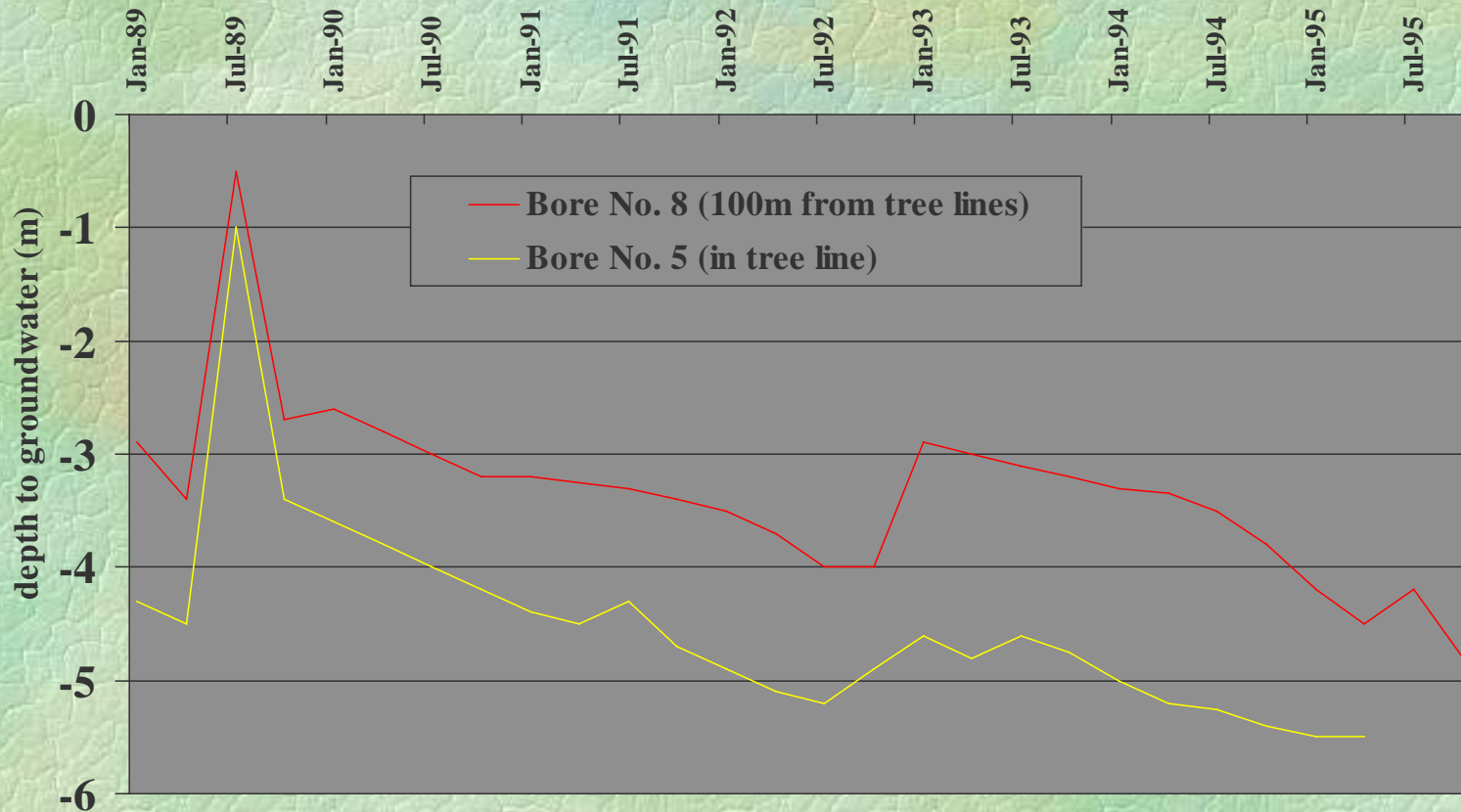


# Current and predicted wood fibre production from tree crops and plantations in Western Australia





# Hydrograph showing groundwater response to alley farming system (after Short and Skinner, 1996)











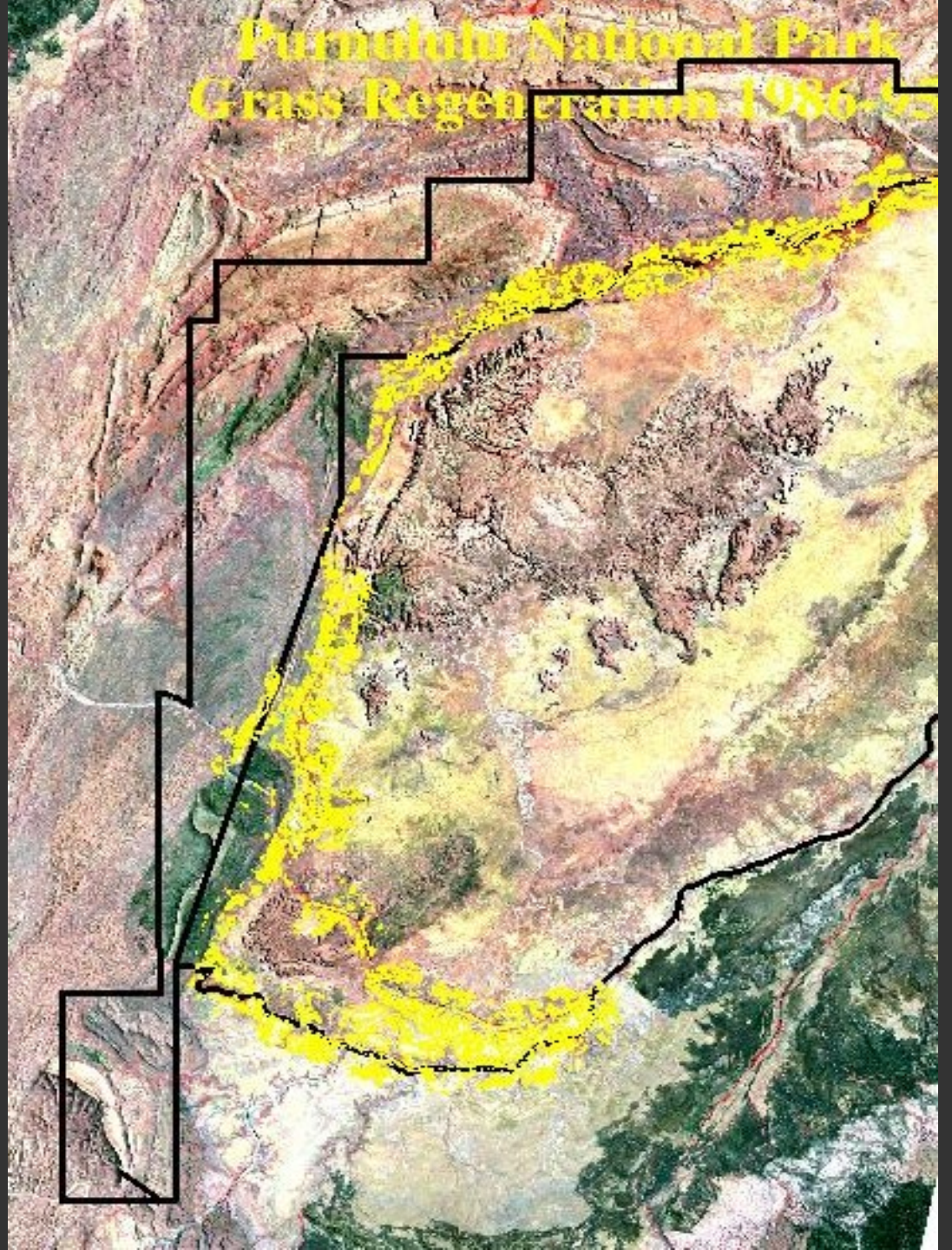






Purnululu National Park  
Grass Regeneration 1986-95

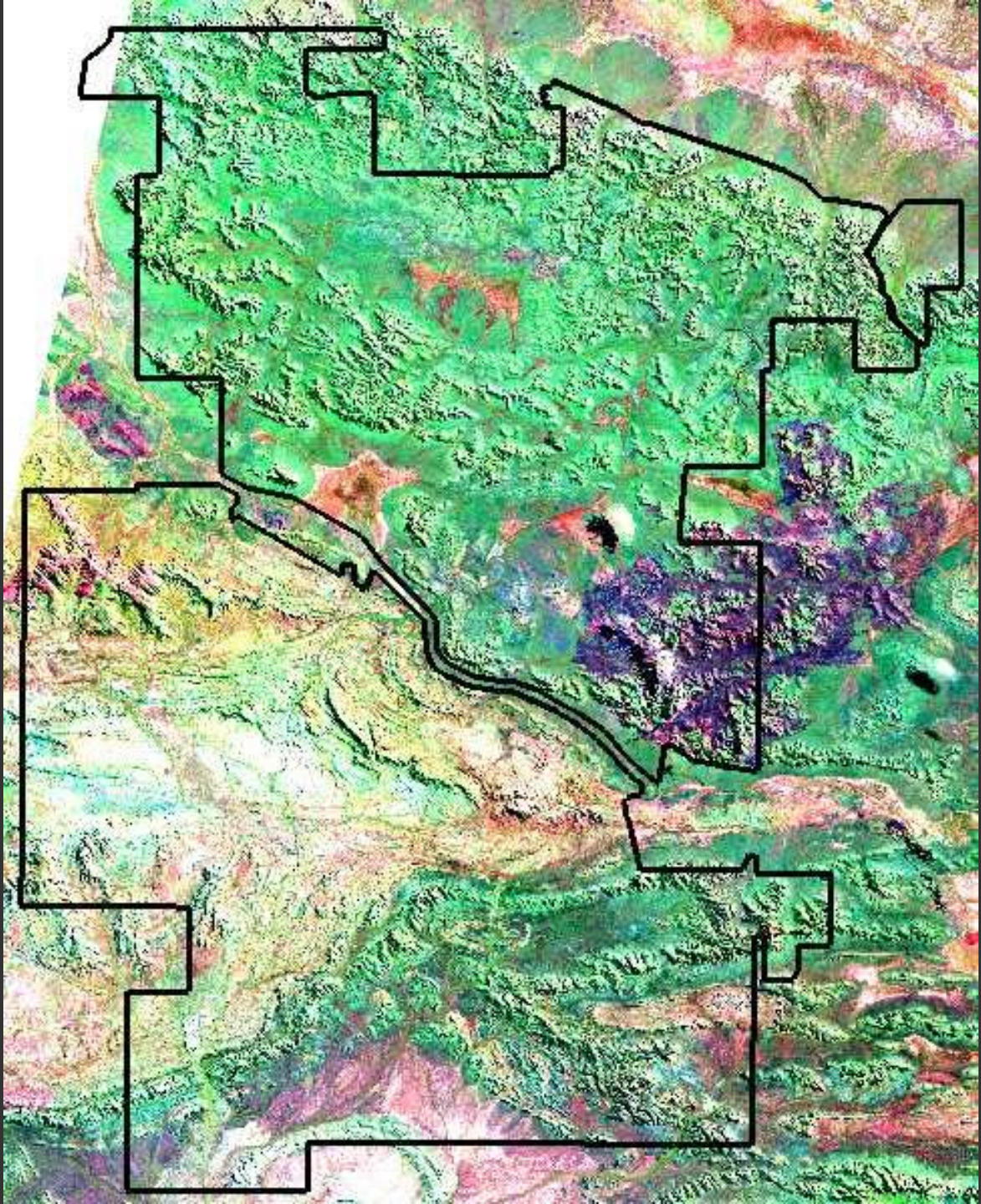
Purnululu National Park  
Grass Regeneration  
1986-95

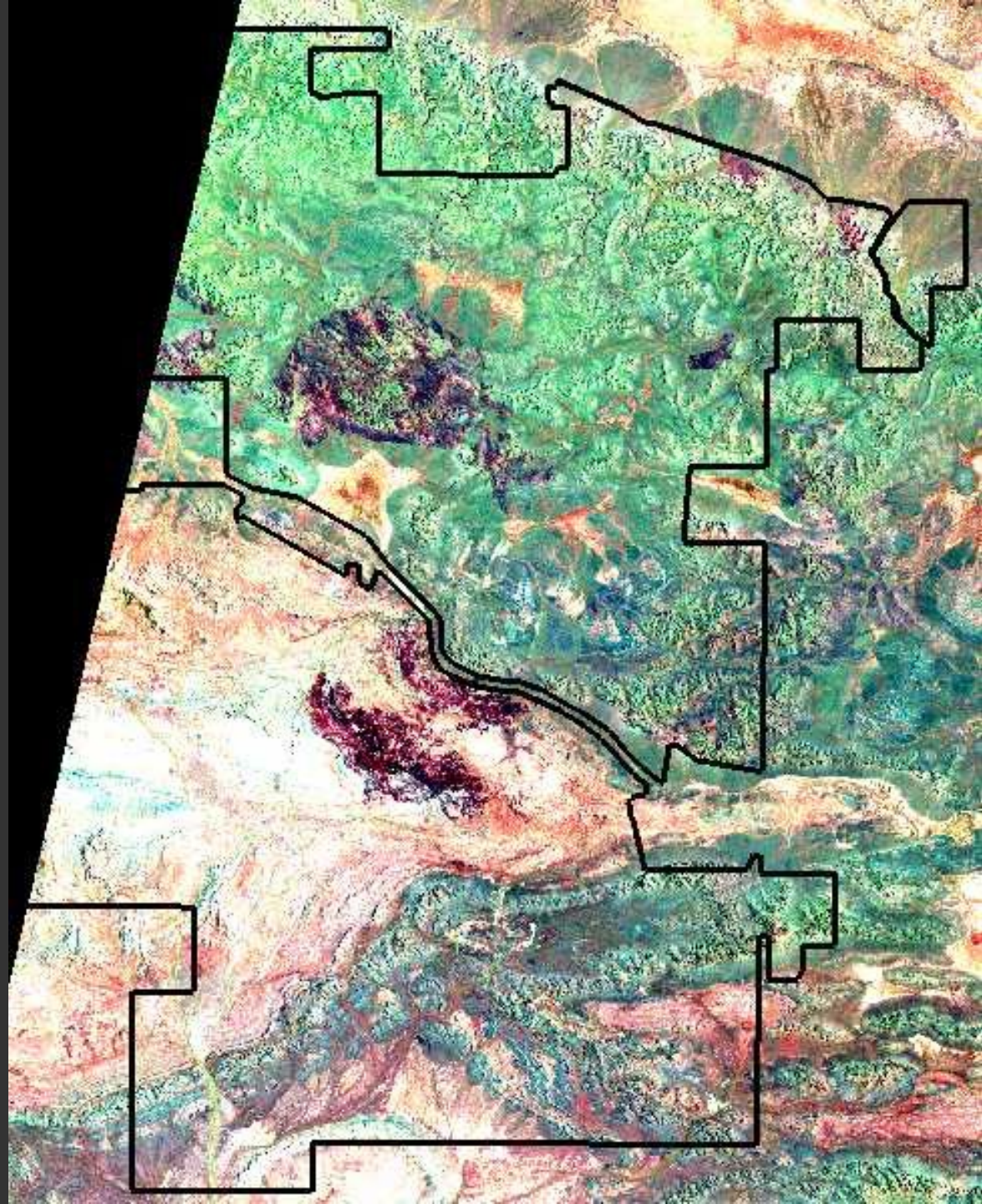


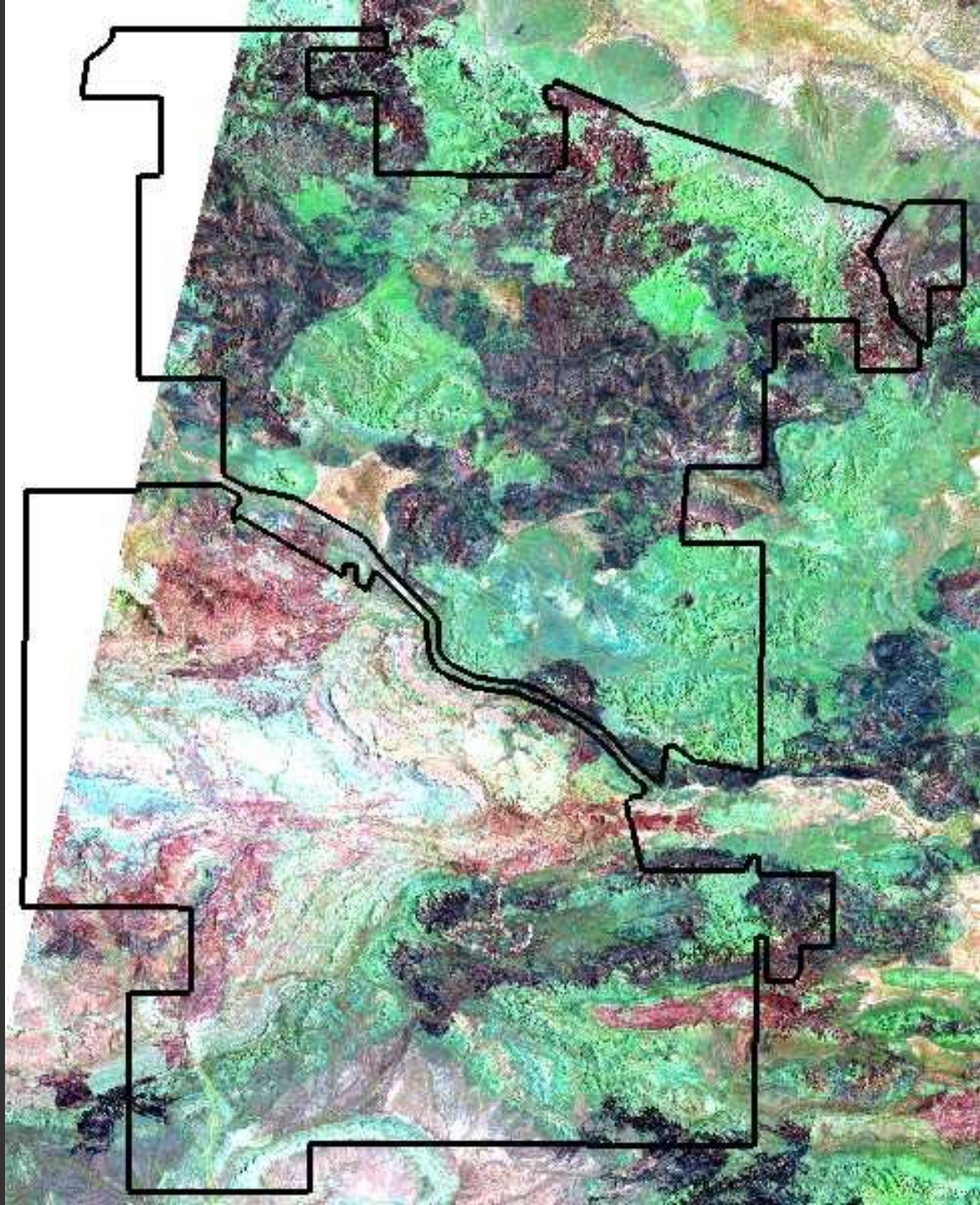






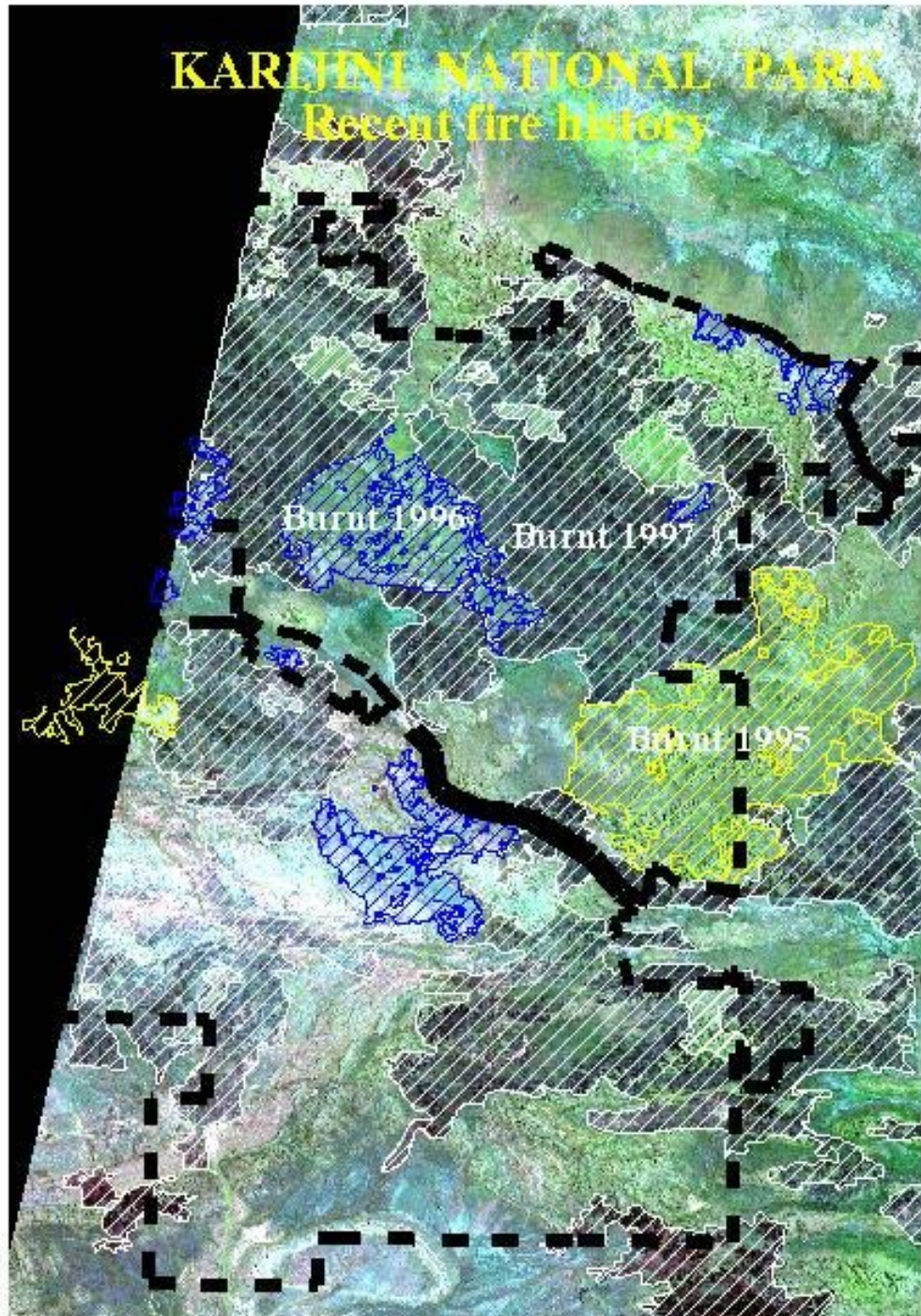




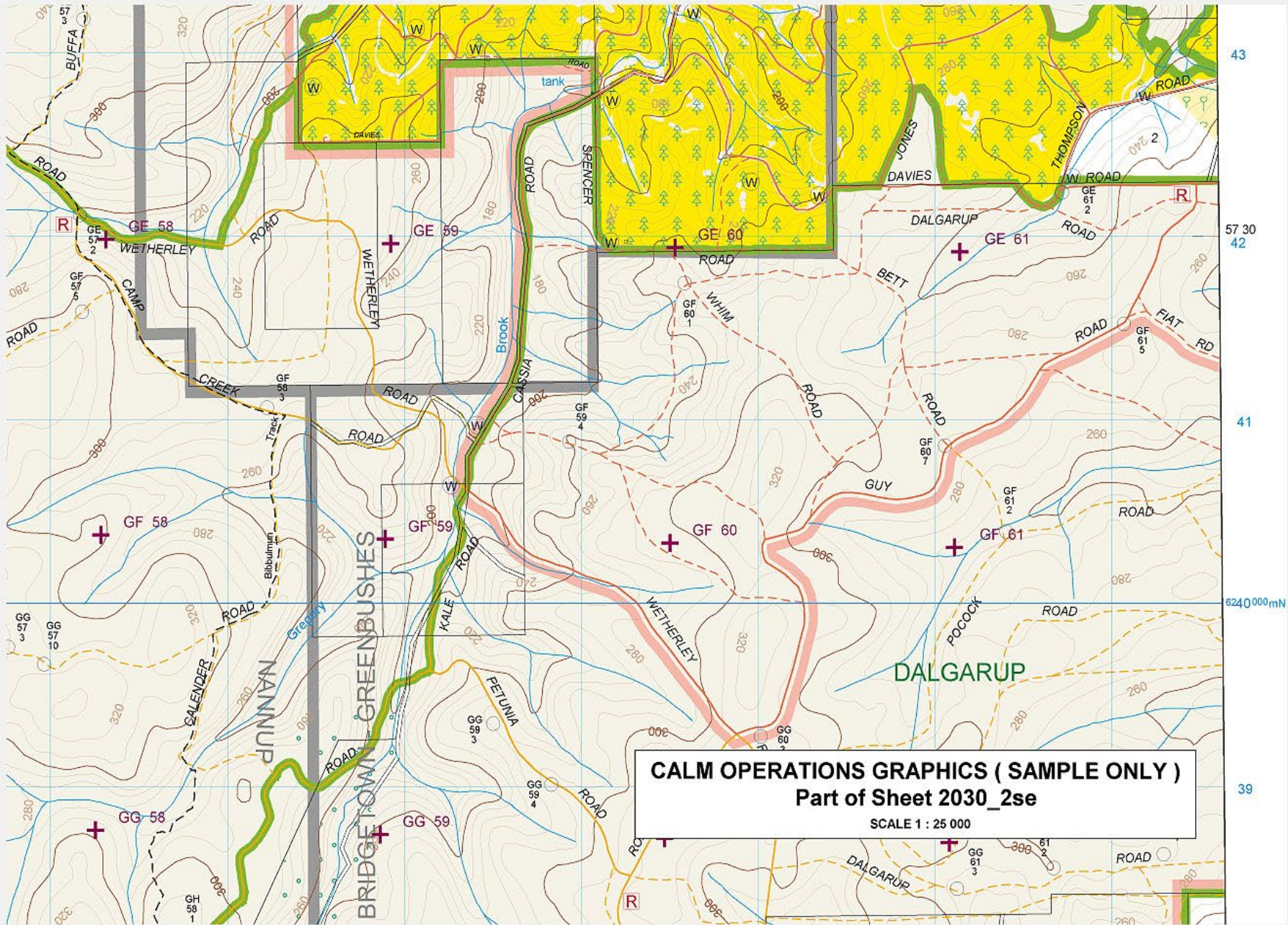


# KARLJINI NATIONAL PARK

## Recent fire history







**CALM OPERATIONS GRAPHICS ( SAMPLE ONLY )**  
**Part of Sheet 2030\_2se**

SCALE 1 : 25 000

43

57 30

42

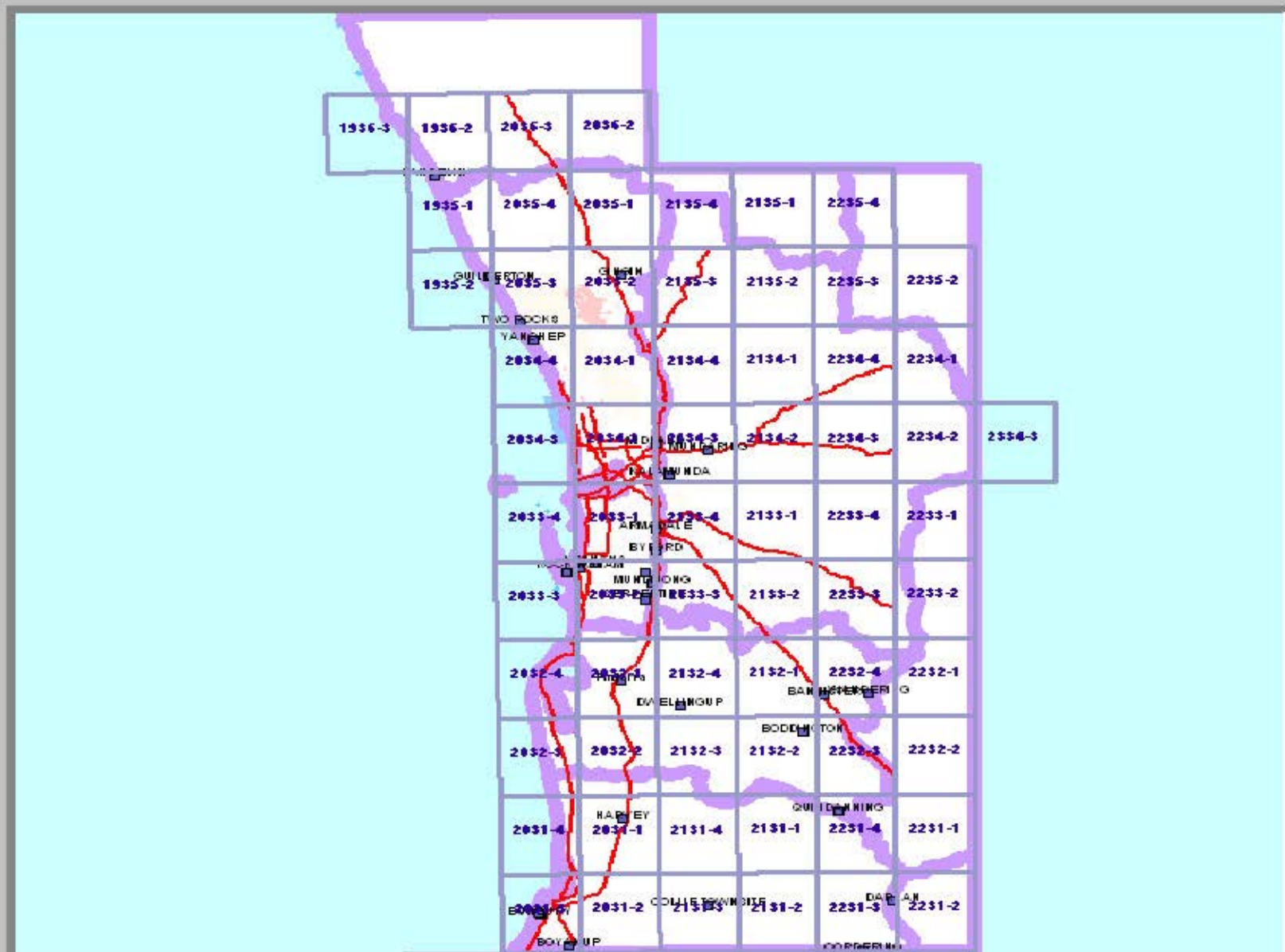
41

624000mN

39



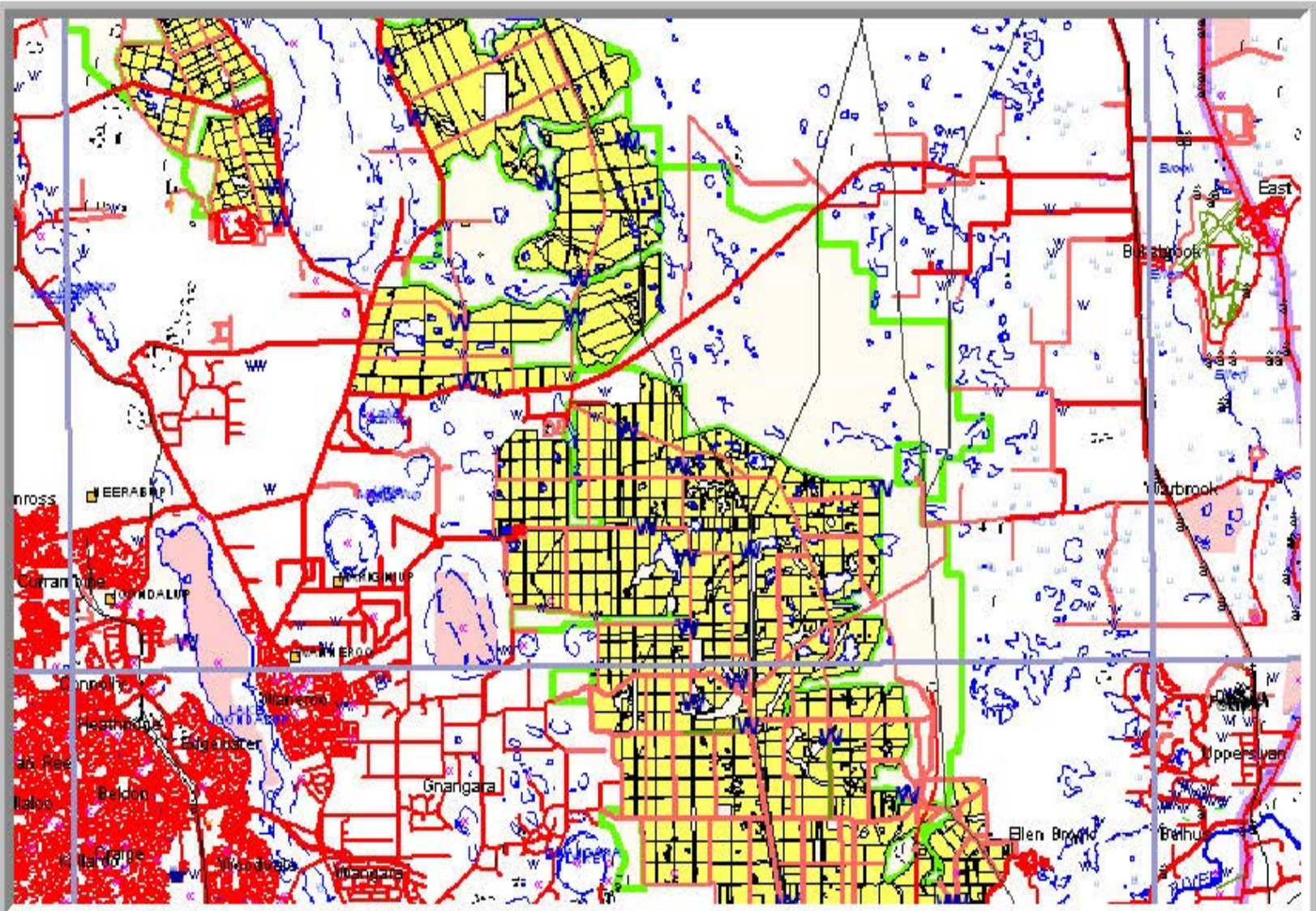
- USRPOINT ▲
- USRLINE
- USRPOLY
- COG\_50K
- FDGRID
- Fuel Age(T)
- Major town (N)
- Minor town (N)
- Suburb (N)
- Building (N)
- Fire tower (N)
- Hyd major (N)
- Hyd minor (N)
- Hyd other (N)
- Power Line (N)
- Mine Sites (S)
- Plantations (N)
- CALM office (S)
- FRS
- Buildings (S)
- Cul feature (S)
- Fire tower (S)
- Cul FRS (S)
- Rec. Sites (N)
- Bridge (S)
- Water points (S)
- Cadastral (P)
- Cul feature (LVS)
- Rds Highway (L)
- Rds 2 Lane (L)
- Rds 1 Lane (L)
- Rds Track (L) ▼





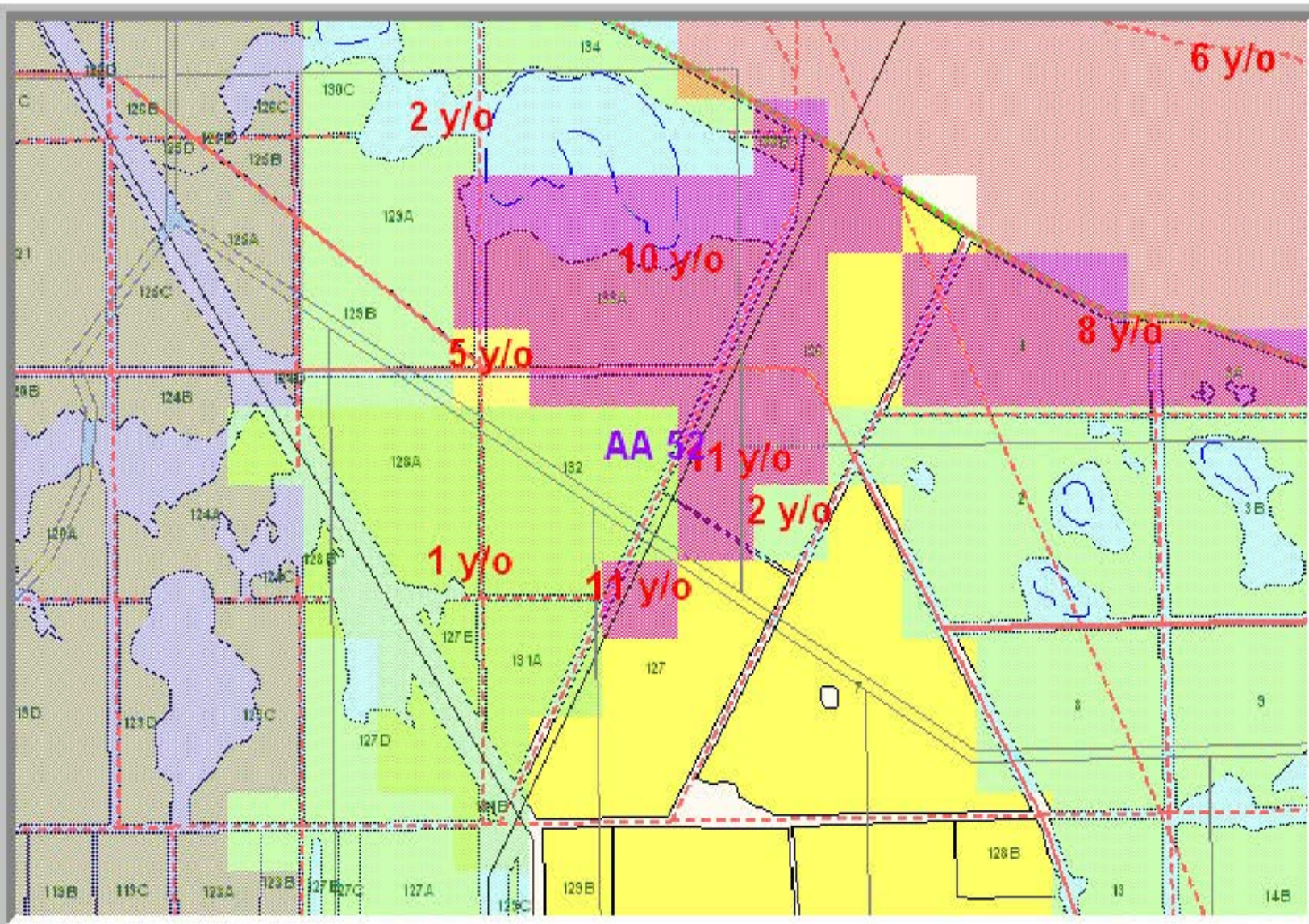


- USRPOINT
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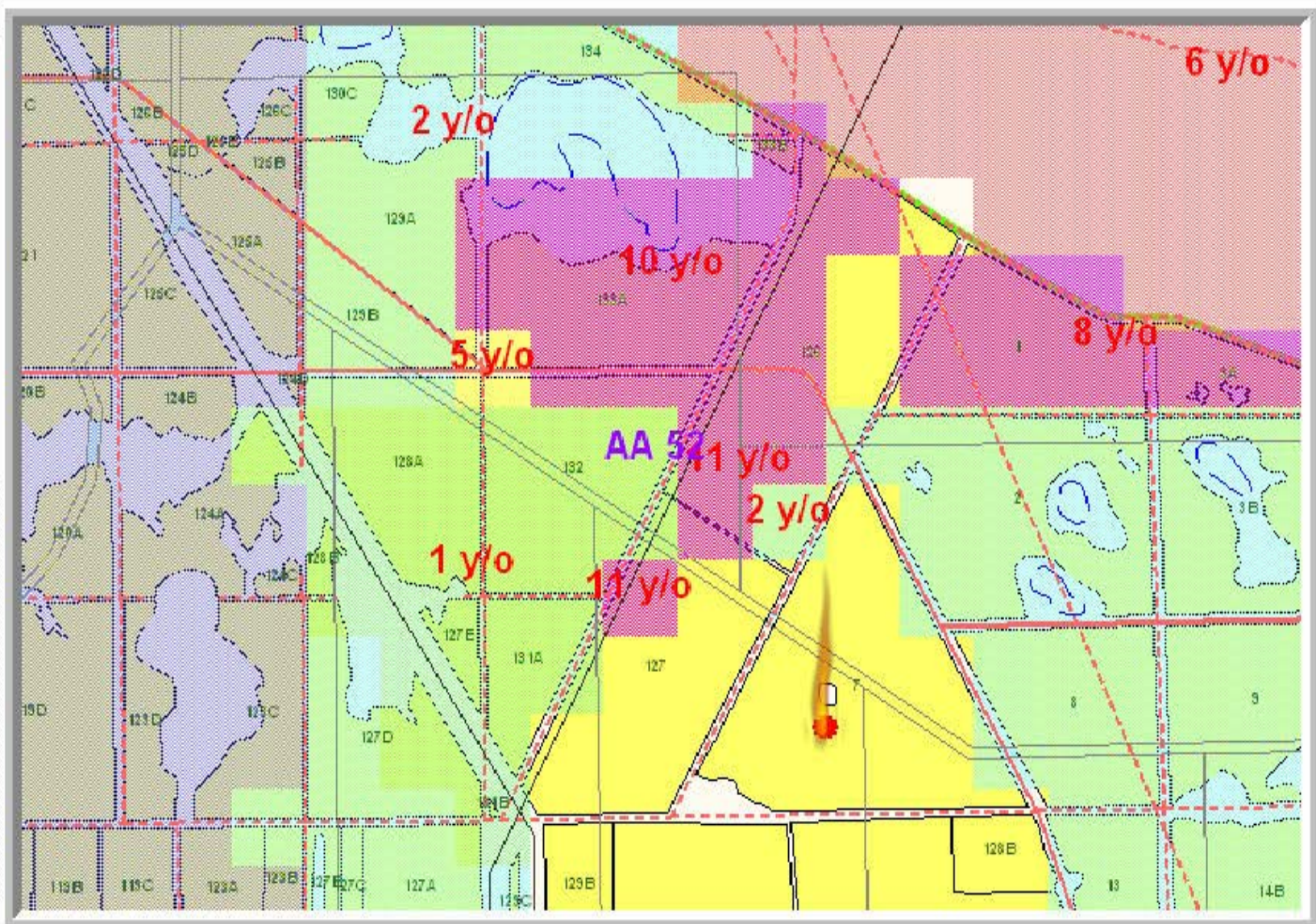


- USRPOINT ▲
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- Rec. Sites (N)





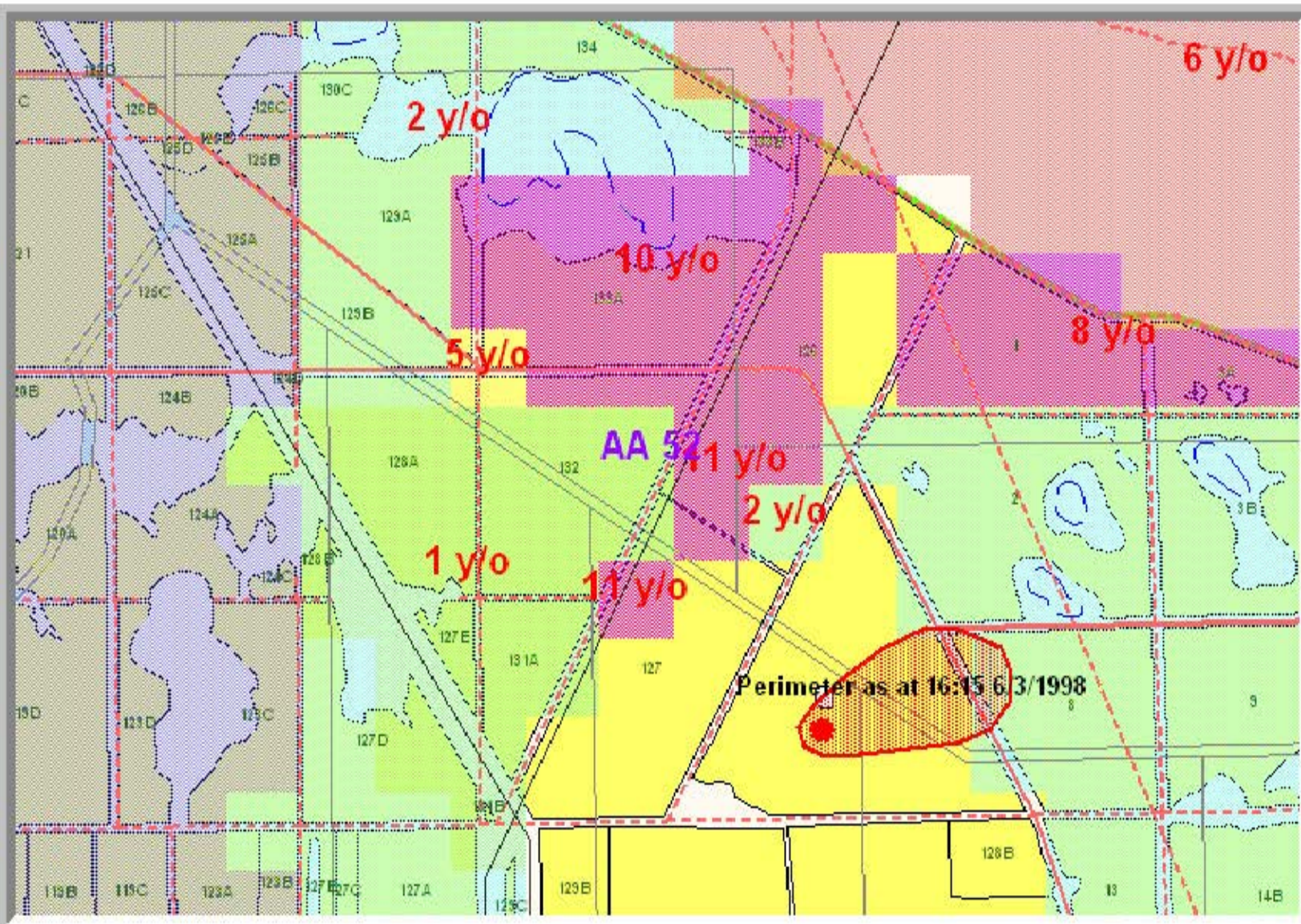
- USRPOINT
- USRLINE
- USRPOLY
- COG\_50K
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- Suburb (N)
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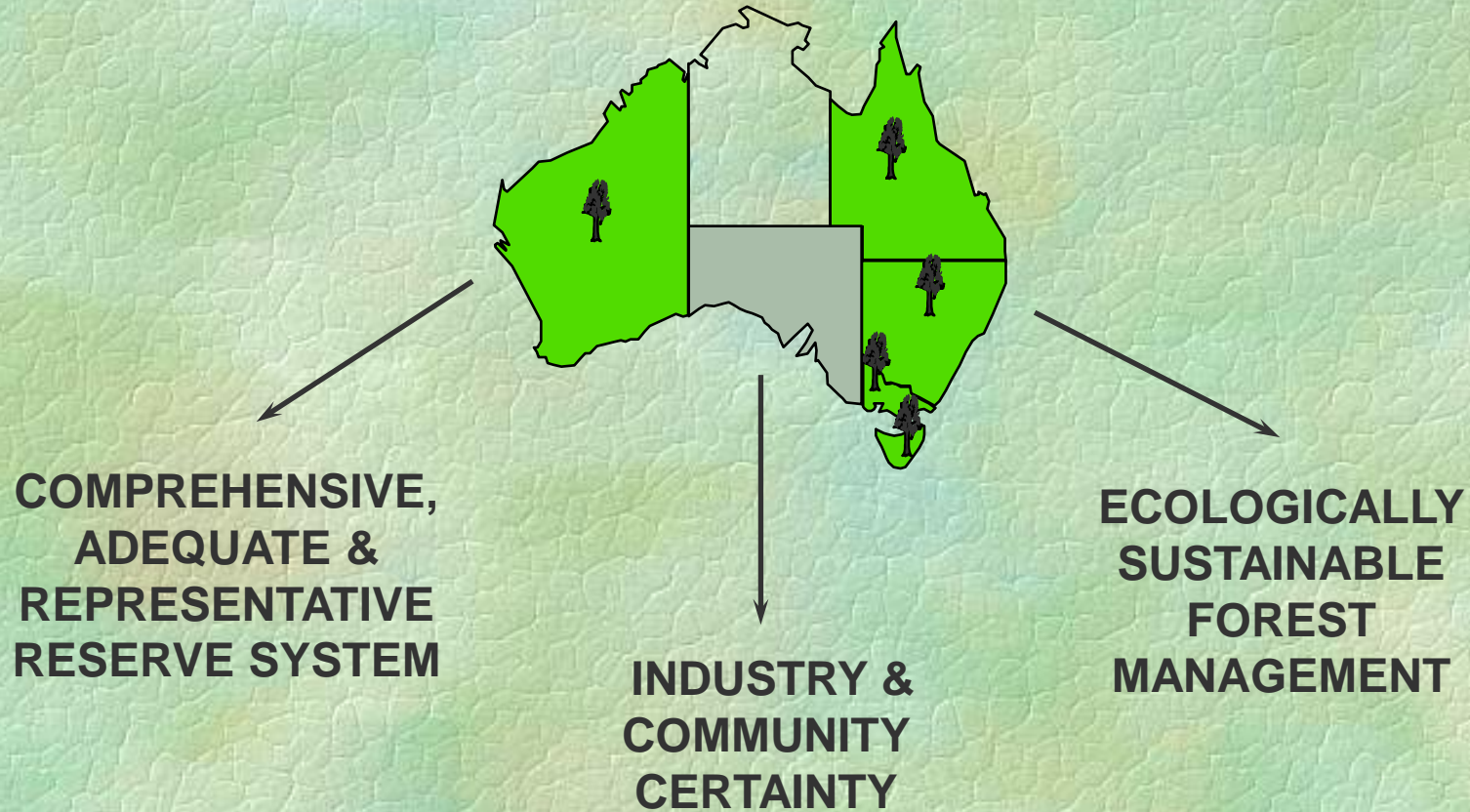


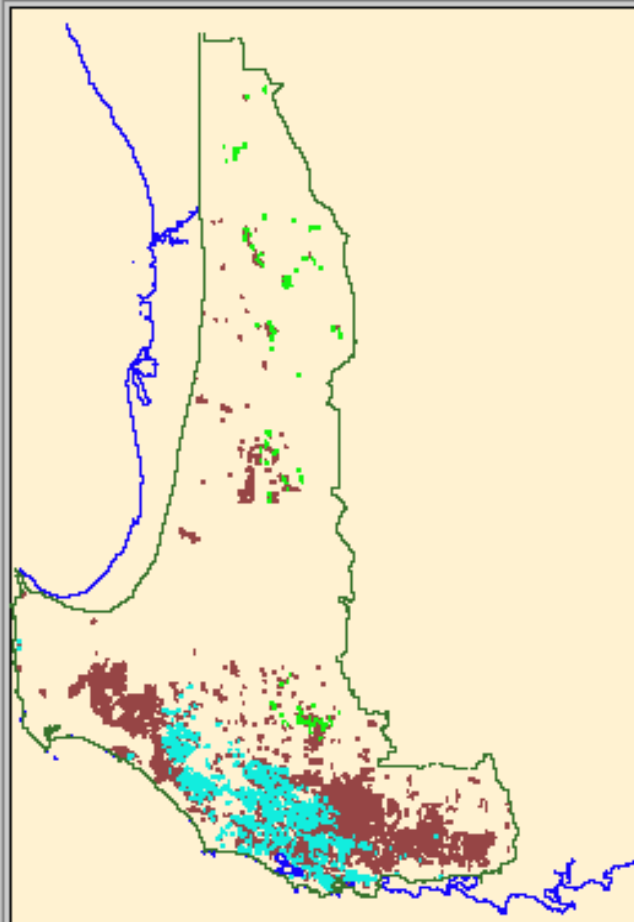


- USRPOINT
- USRLINE
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- Buildings (S)
- Cul feature (S)
- Fire tower (S)
- Cul FRS (S)
- Rec. Sites (N)



# Regional Forest Agreements





**Legend** 3

2	Dark Red	01,03
2	Light Red	13,15
2	Cyan	25,27
2	Green	37,39

Theme 1: RCOAST

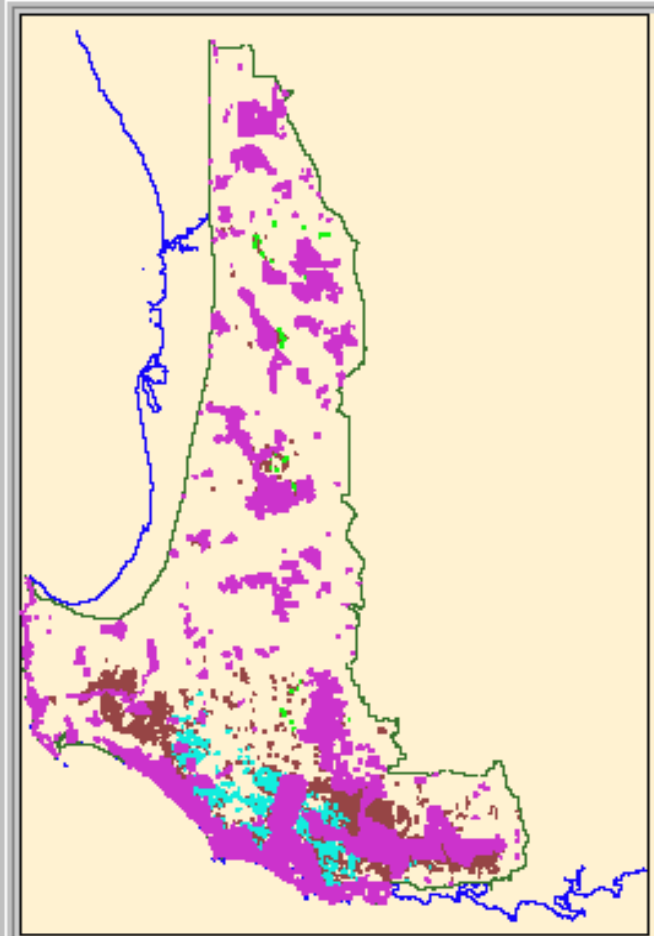
Theme 2: ROLDGTH

Theme 3: RRFA

Theme 4: RSTATUS

Command:

48195.6H



Legend 3

2	01,03
2	13,15
2	25,27
2	37,39
4	01_07

Theme 1: RCOAST

Theme 2: ROLDGTH

Theme 3: RRFA

Theme 4: RSTATUS

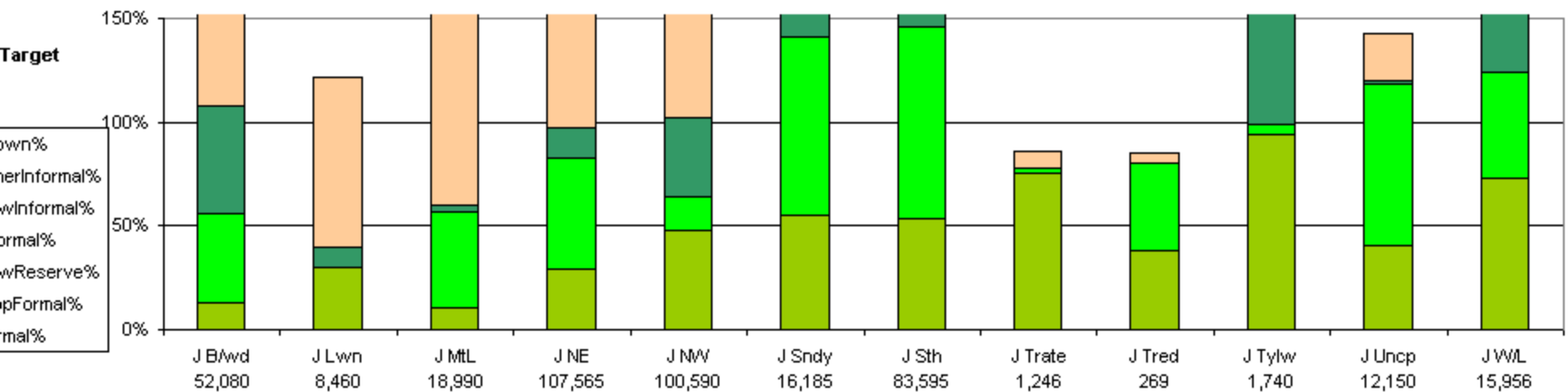
Command:



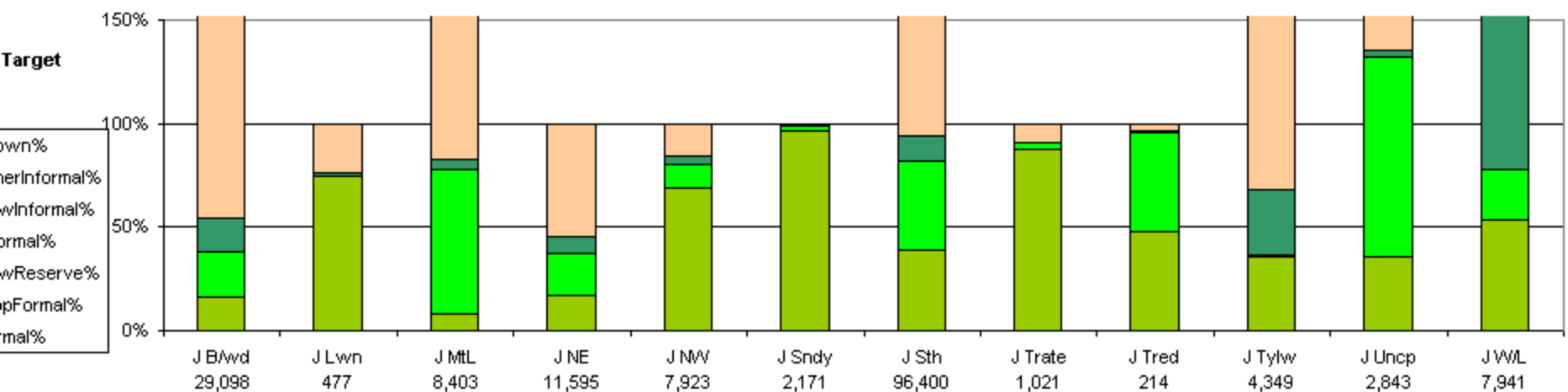
*Approach 3/1 - FMP 1994*

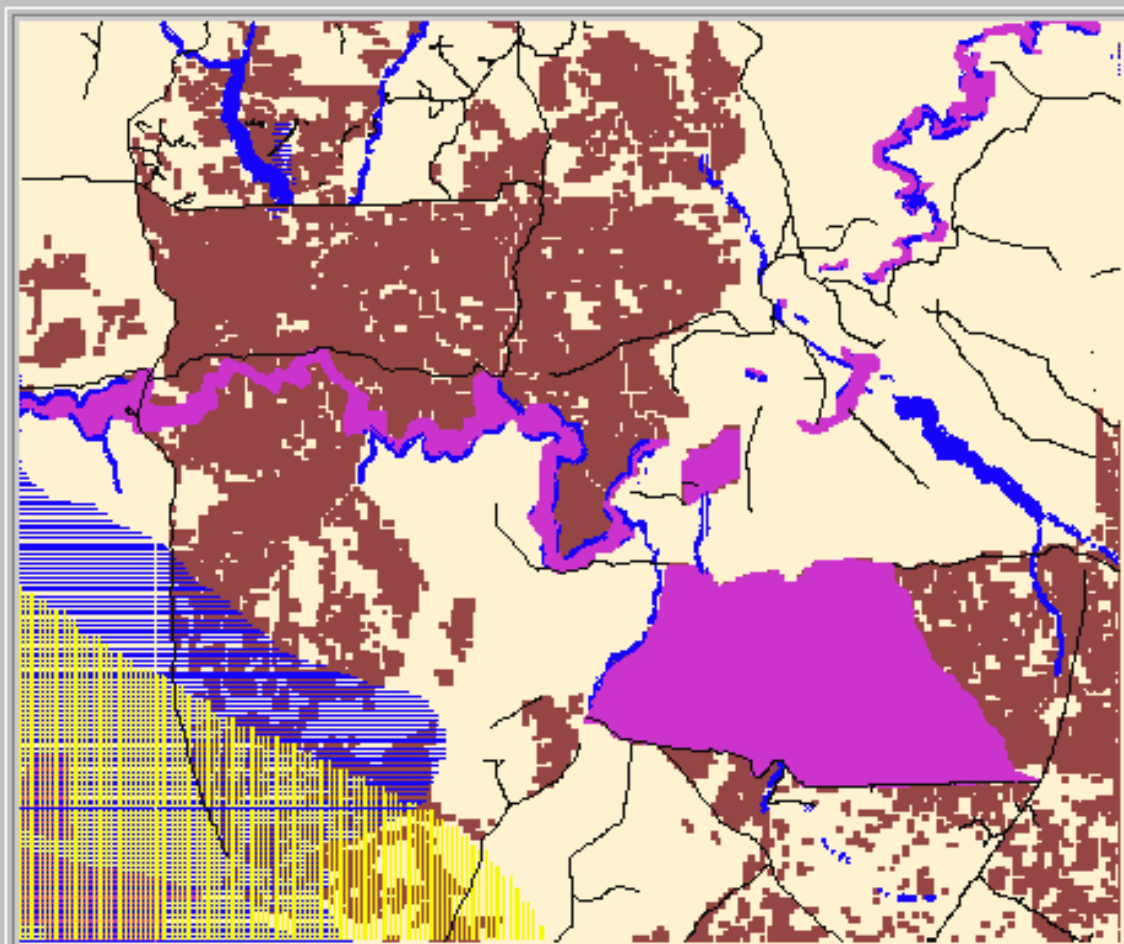
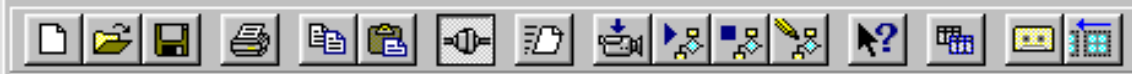
## Jarrah Forest EcoSystems

### Biodiversity Reserves Requirements



### Old Growth Reserves Target Requirements



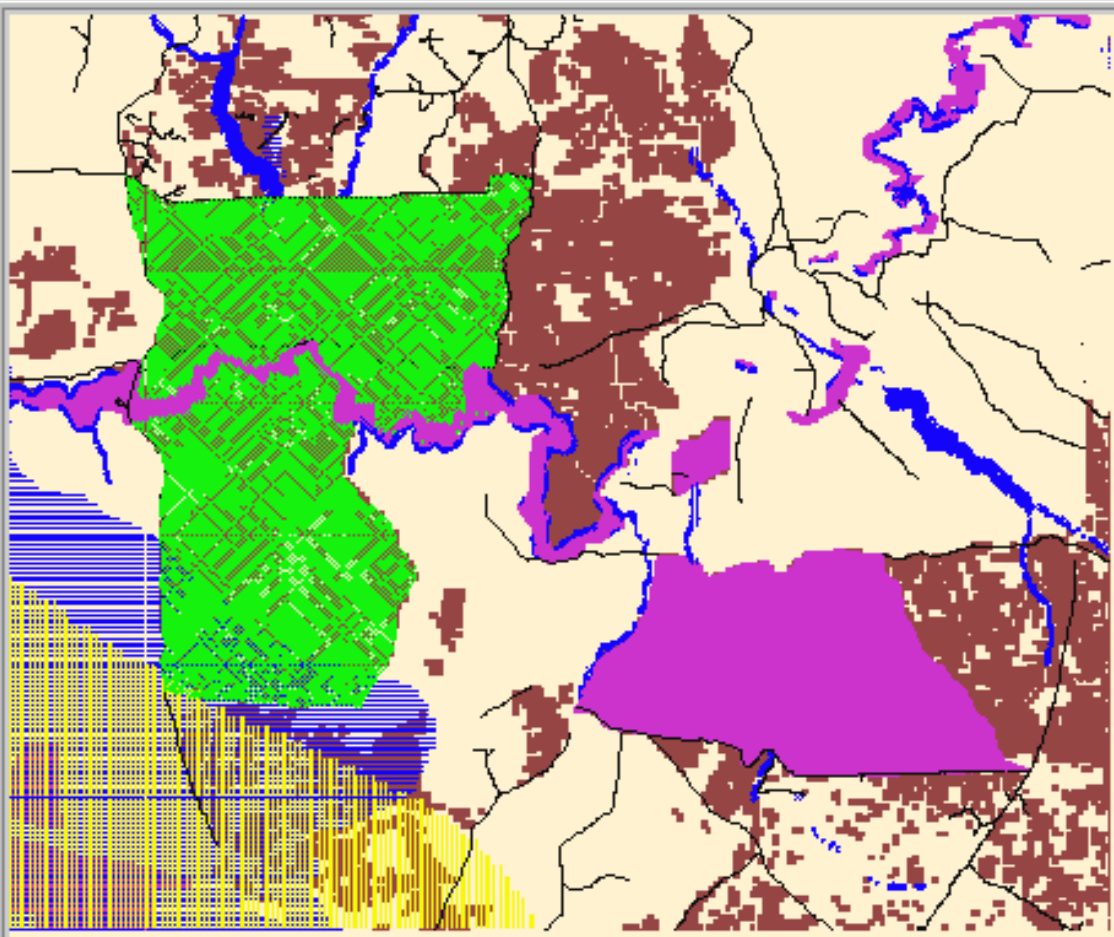


Legend 10

2	09
1	01_07
1	08_11
3	3_5
4	12_16

Theme 1: RSTATUS\_01    Theme 2: ROLDGTH    Theme 3: RFLORA\_ALL    Theme 4: RMINCOMP

Command:  165.1Ha



Legend 10

2	09
1	01_07
1	08,11
3	3_5
4	12_16
1	20

Theme 1: RSTATUS\_01    Theme 2: ROLDGTH    Theme 3: RFLORA\_ALL    Theme 4: RMINCOMP

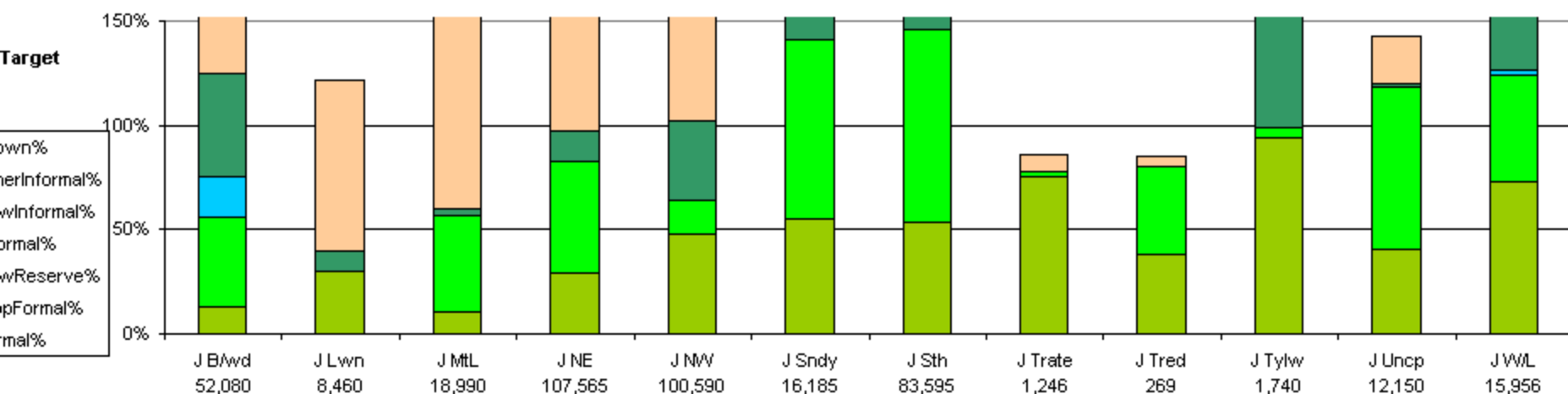
Command:

165.1Ha

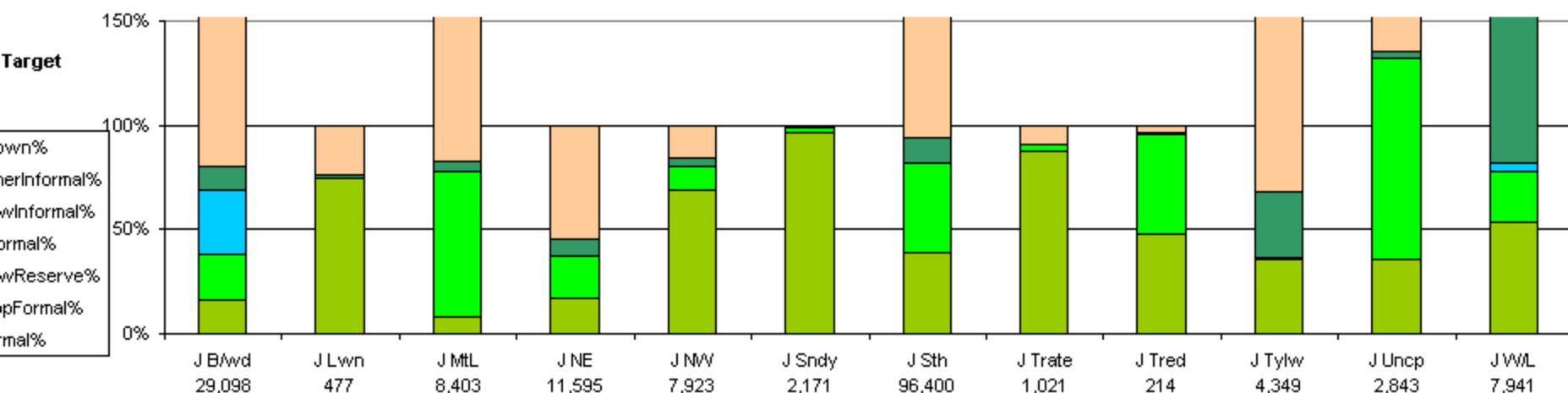
*Draft - Jarrah Blackwood*

## Jarrah Forest EcoSystems

### Biodiversity Reserves Requirements

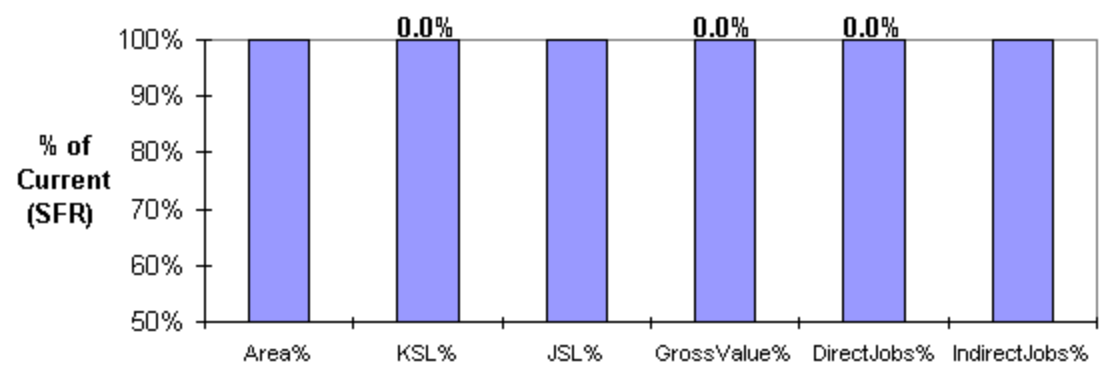
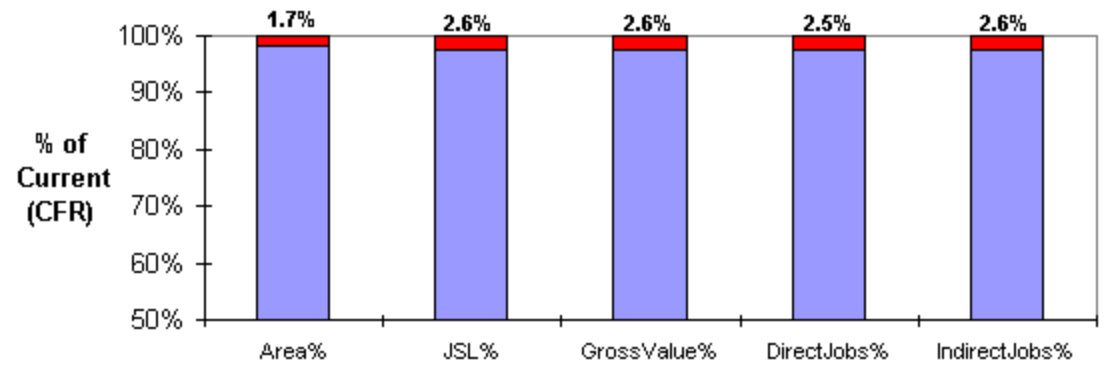
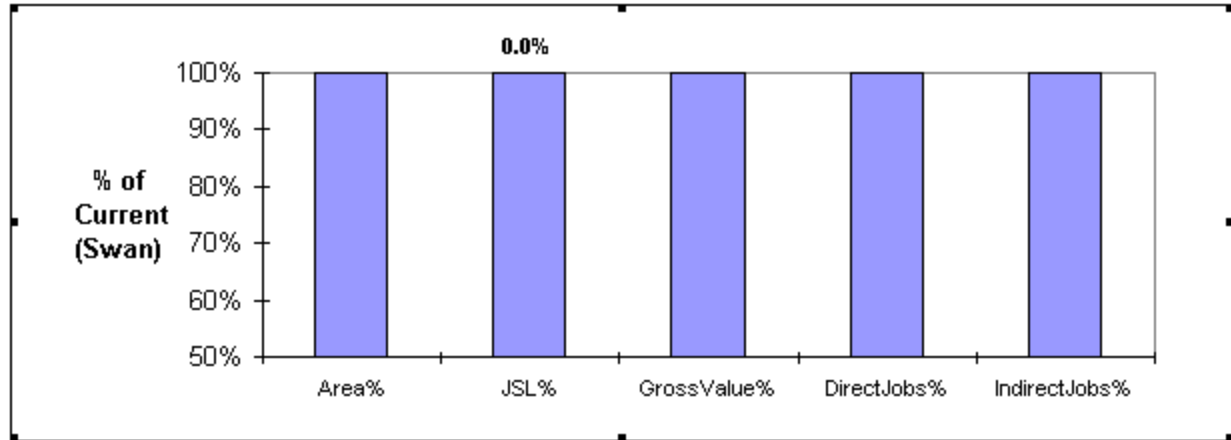
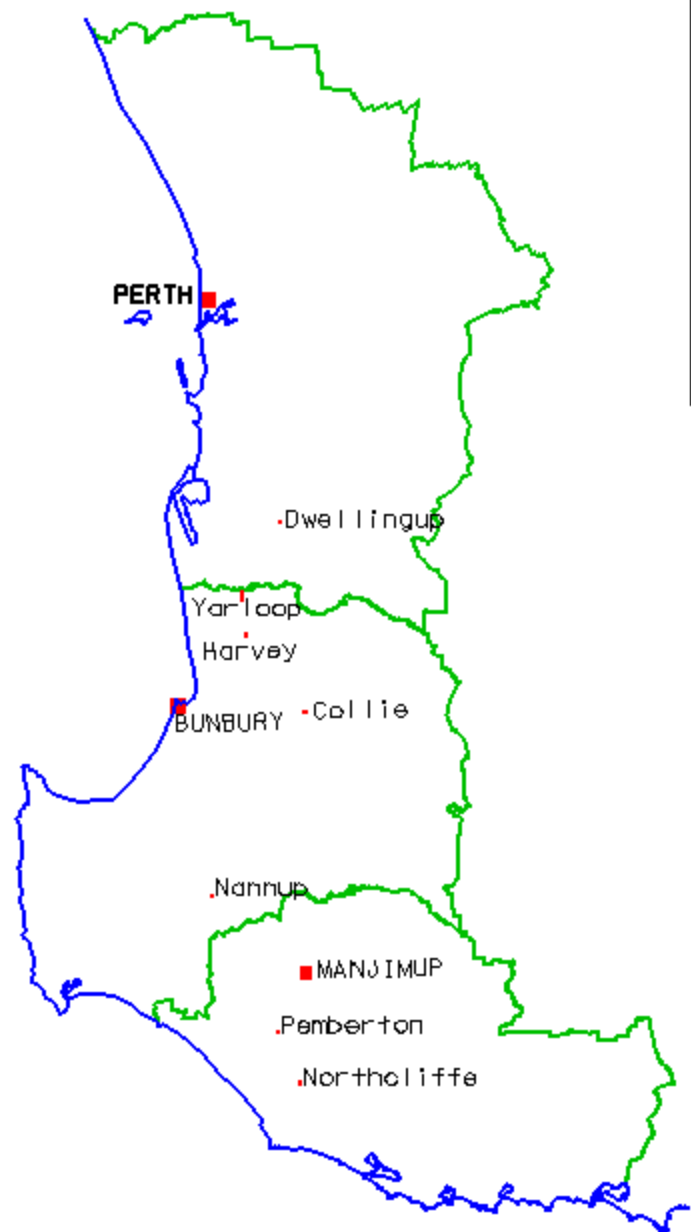


### Old Growth Reserves Target Requirements



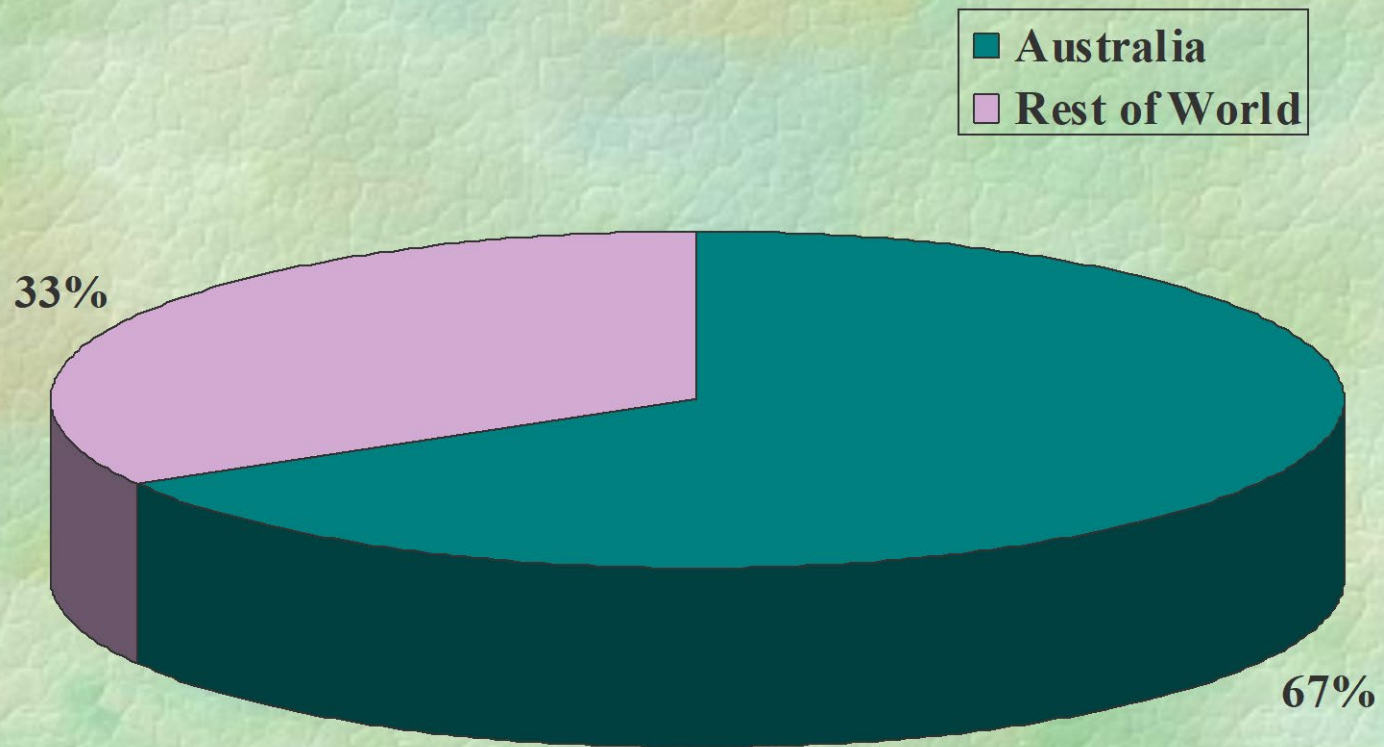
# Timber Industry Impact Analysis

## Draft - Jarrah Blackwood



# Recent mammal extinction

Australia leads the world



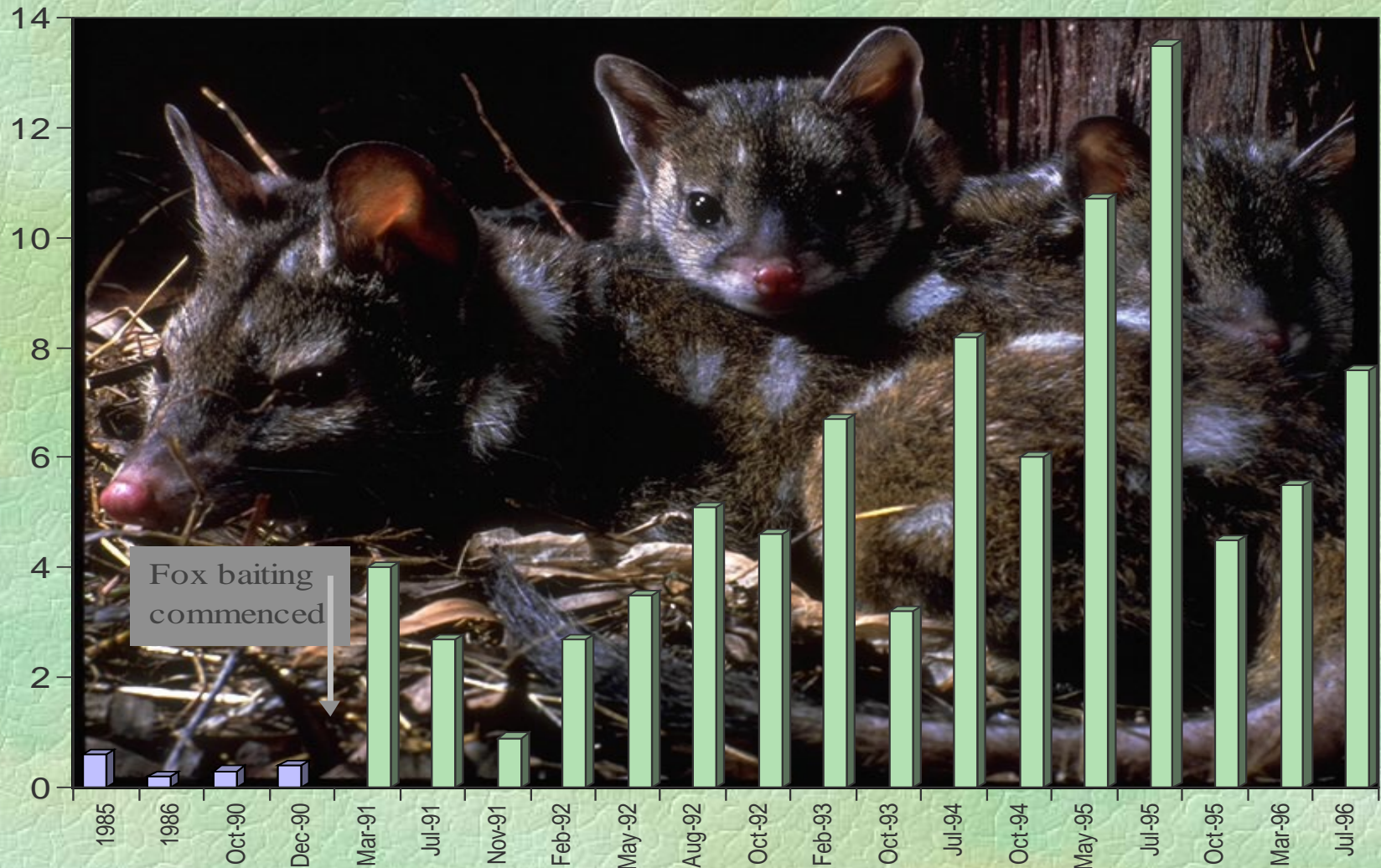




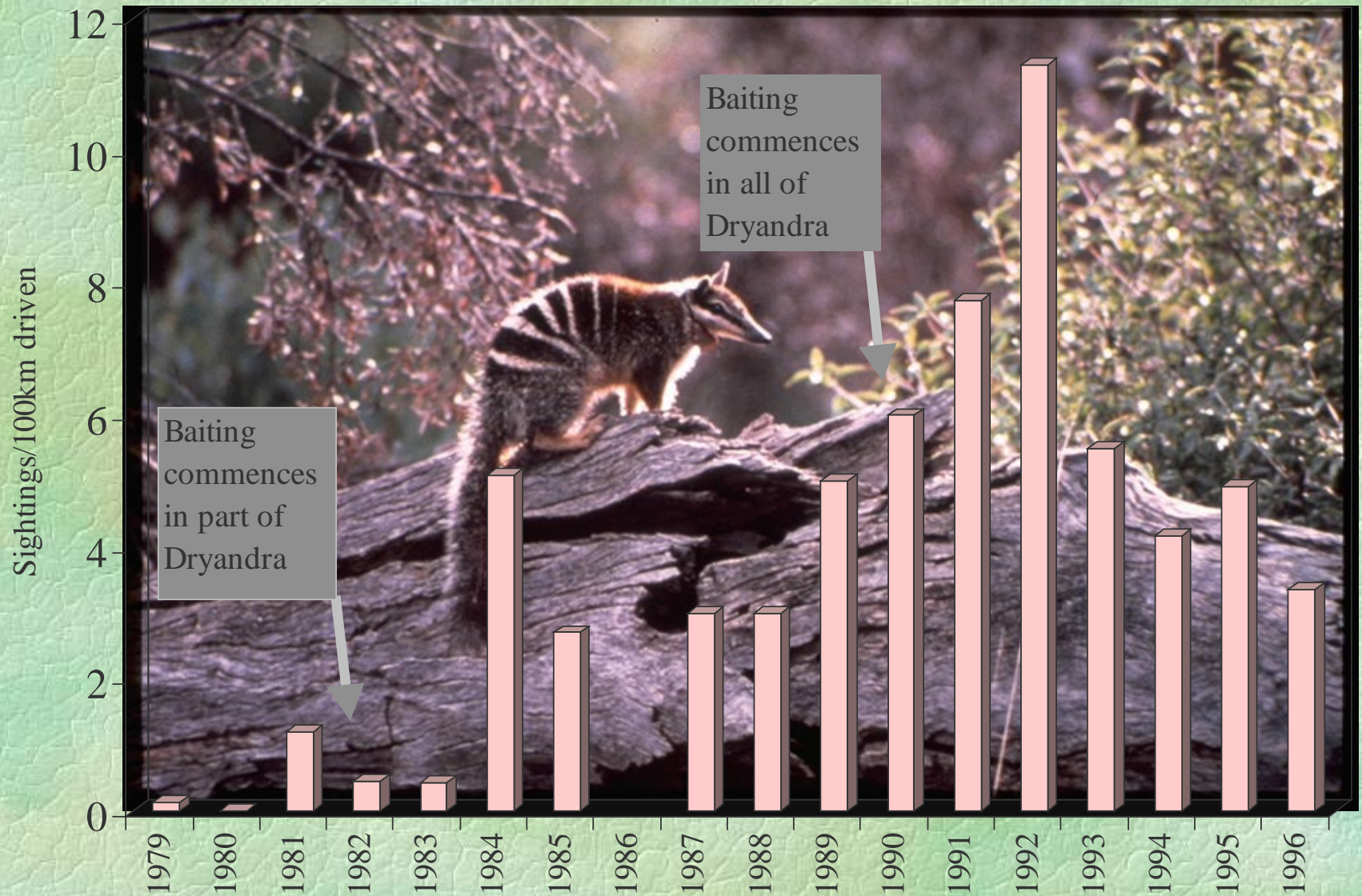




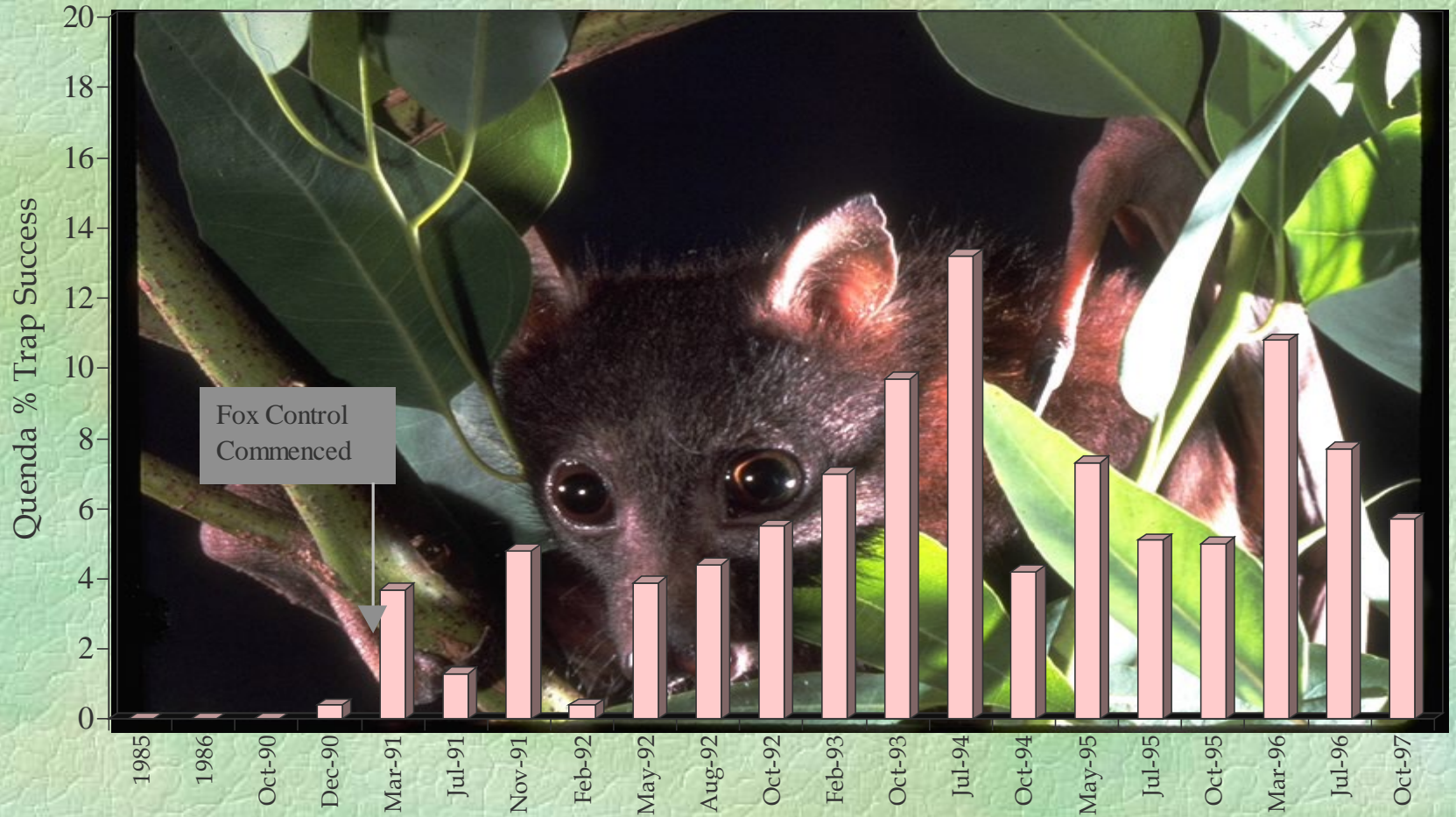
# The impact of fox control on Chuditch at Batailling forest



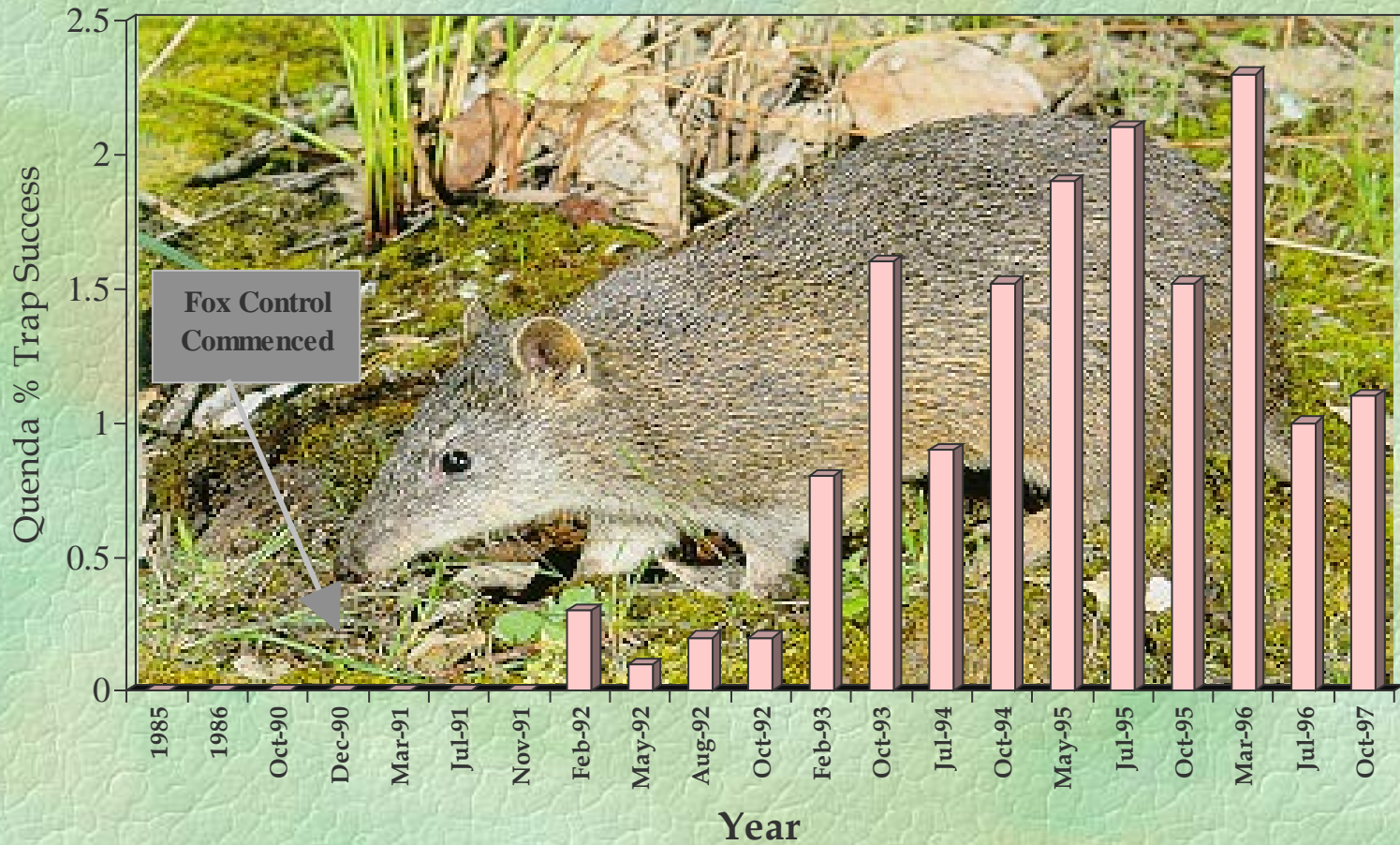
# Numbat Sightings in Dryandra Forest



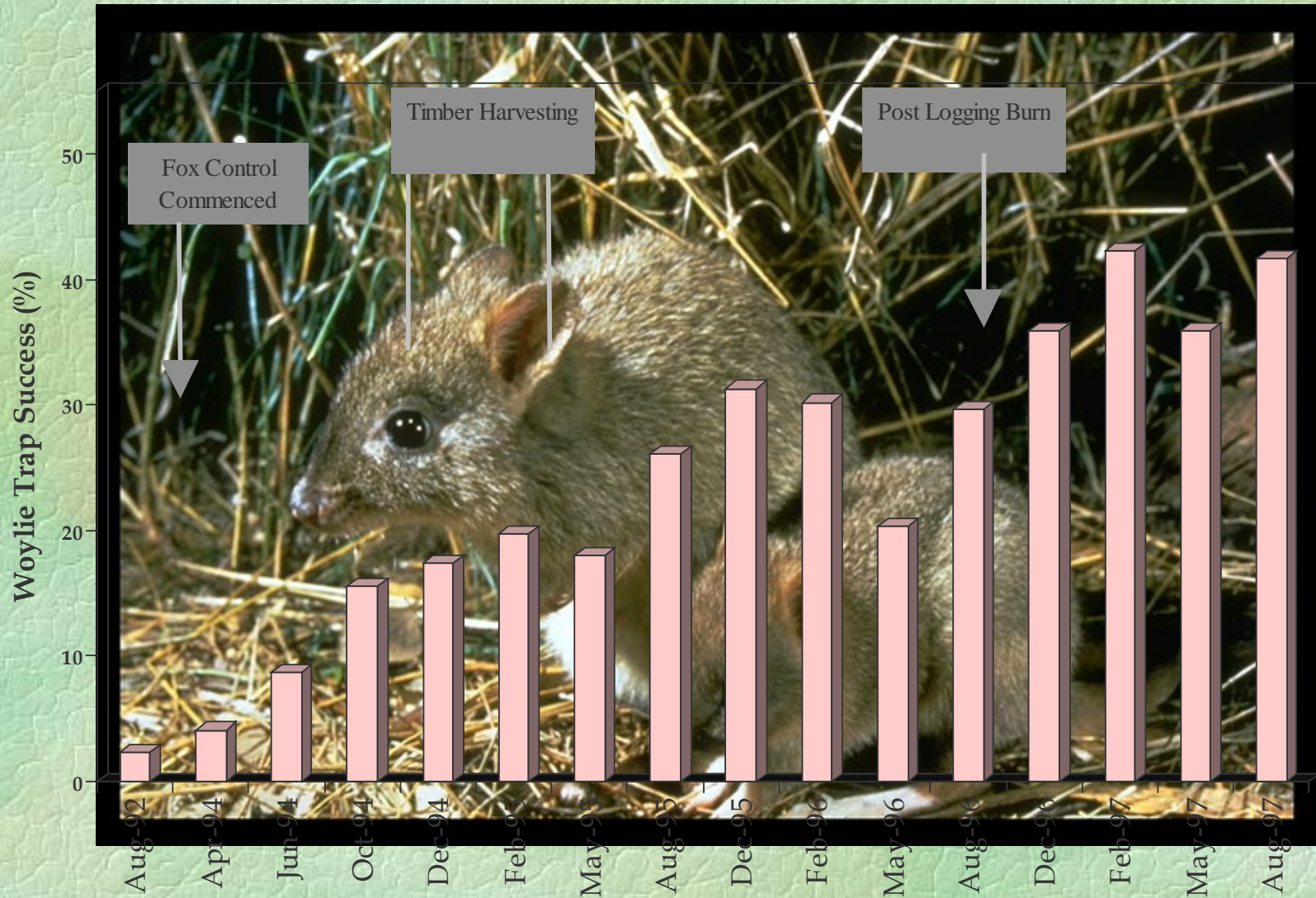
# Brushtail Possum Response To Fox Control- Batalling Forest Block



# Quenda Response To Fox Control Batalling Forest Block



# Kingston Timber Harvesting Study - Trap Success Rates For Woylies Along Road Transects



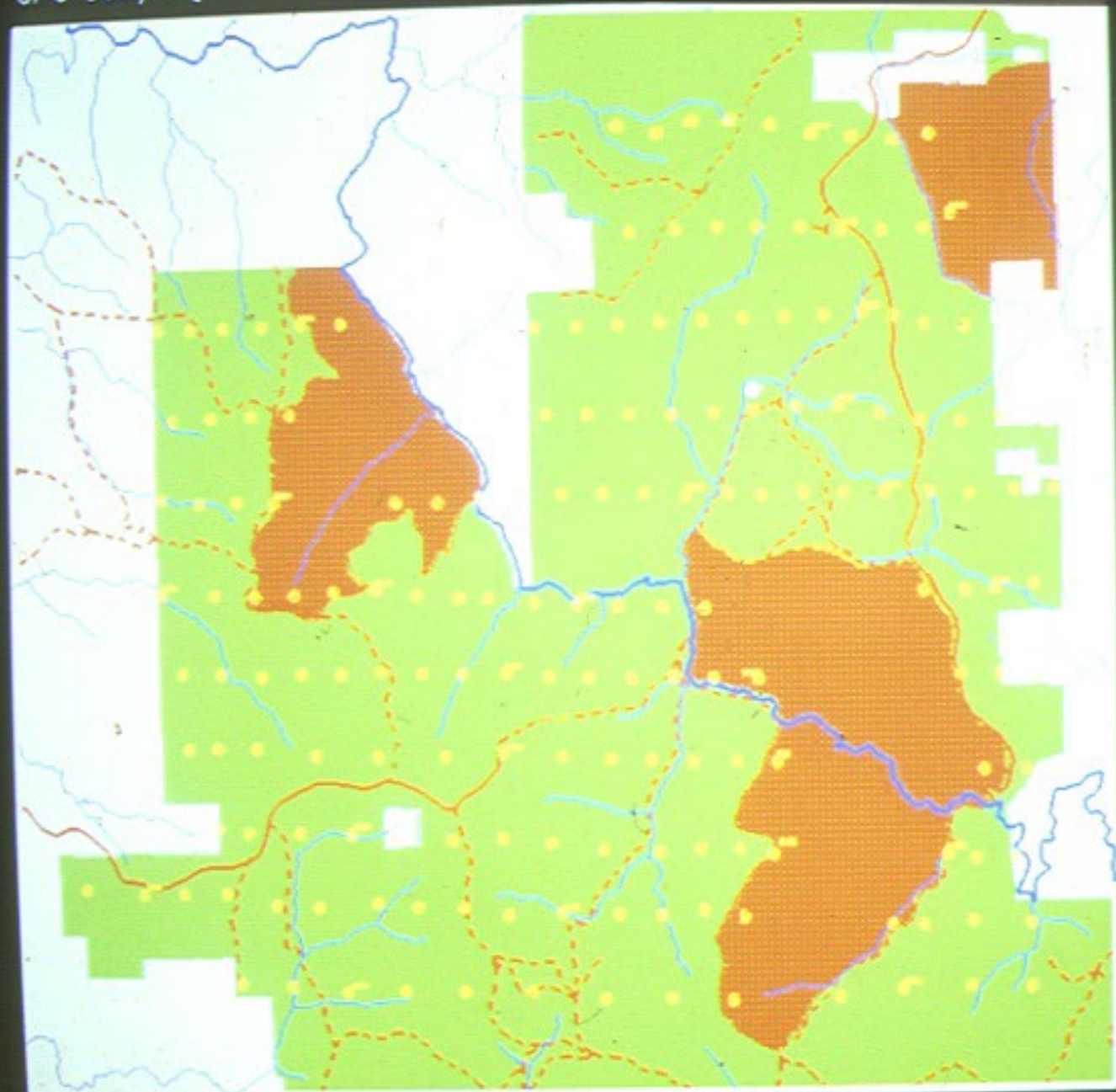
# Tammar Wallaby Sightings - Tutanning Nature Reserve











## LEGEND

- Stream 
- River 
- Minor road 
- Major road 
- Multiple Land Use 
- Conservation 
- Photo points 







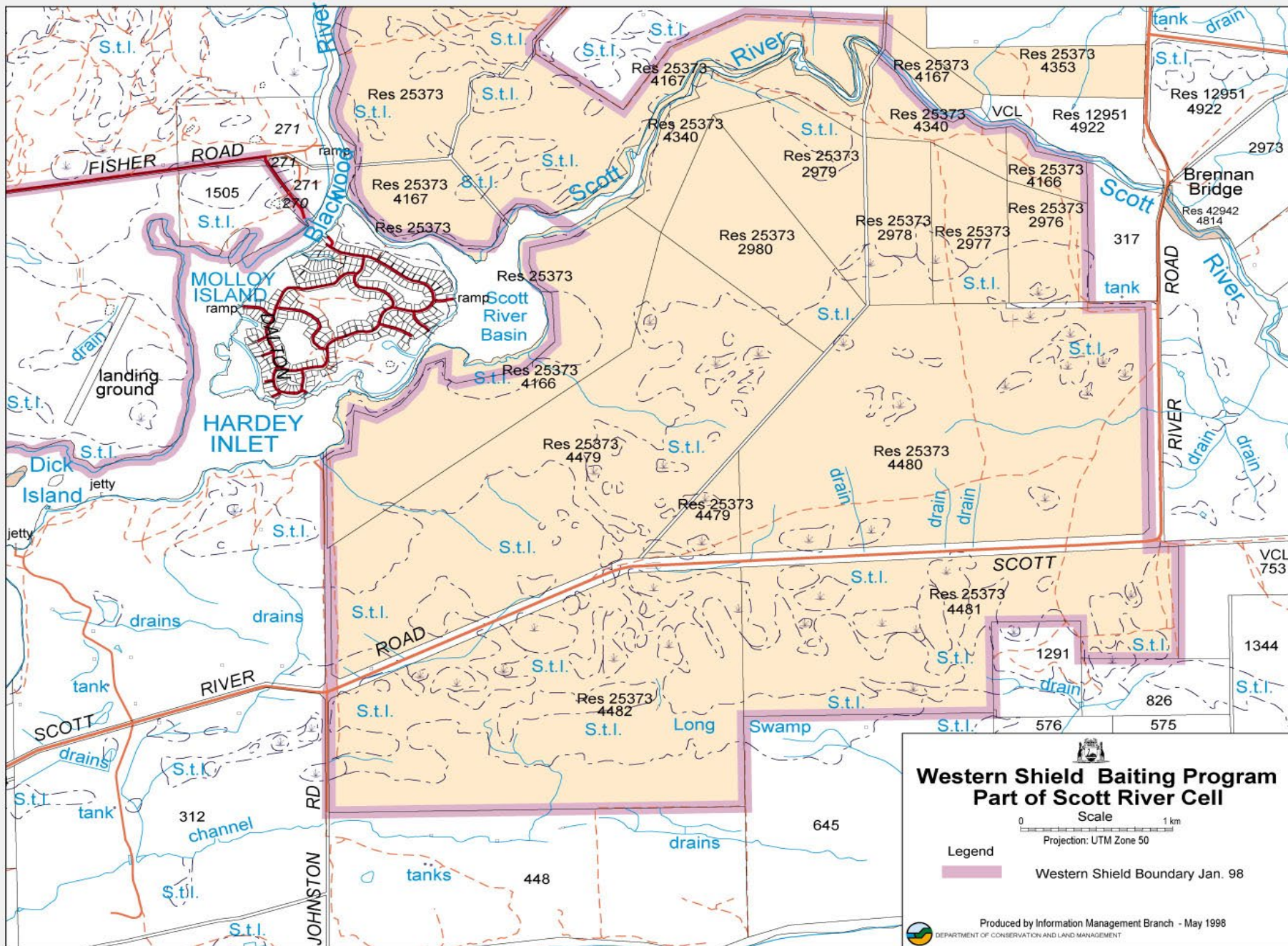











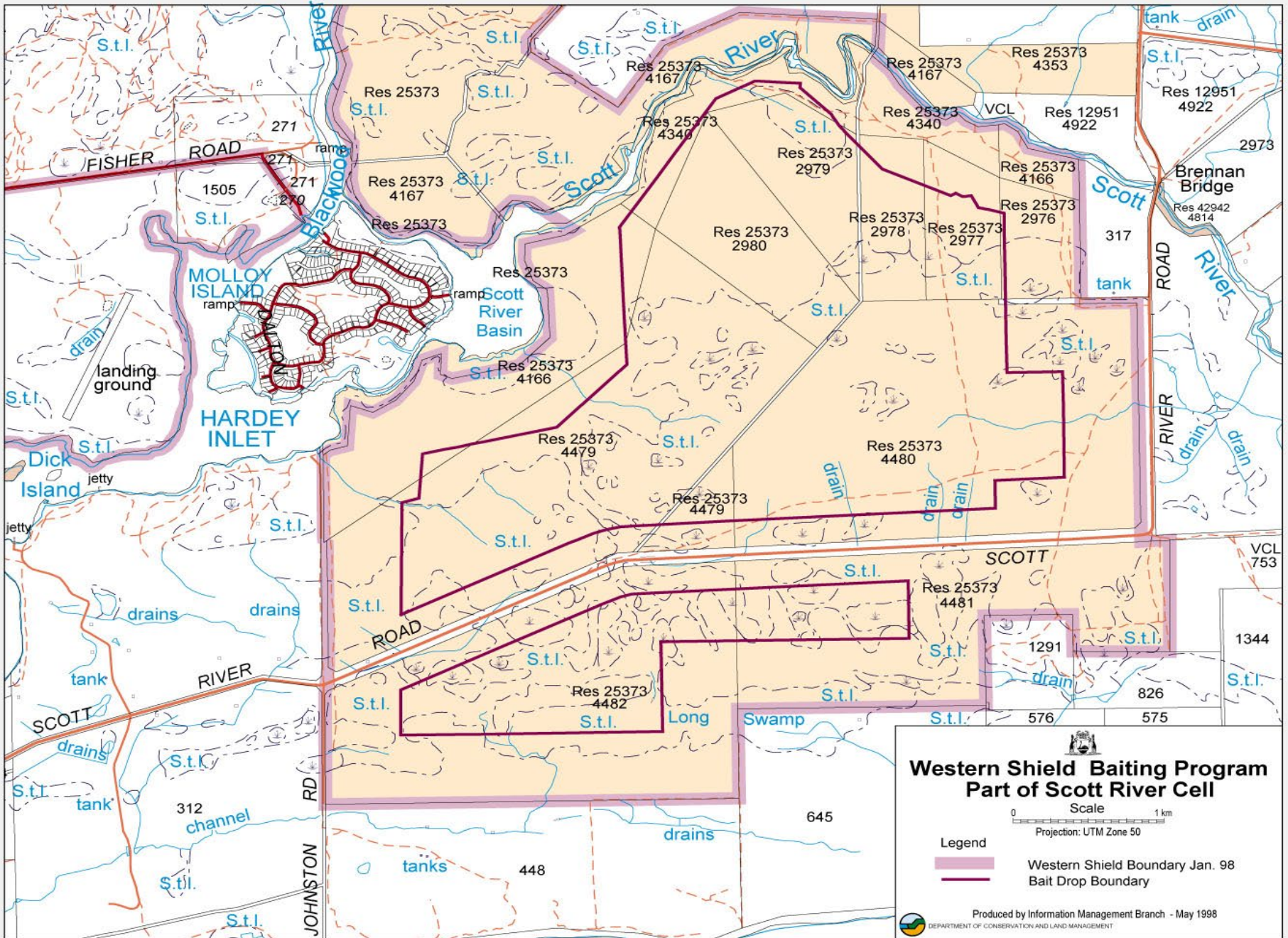


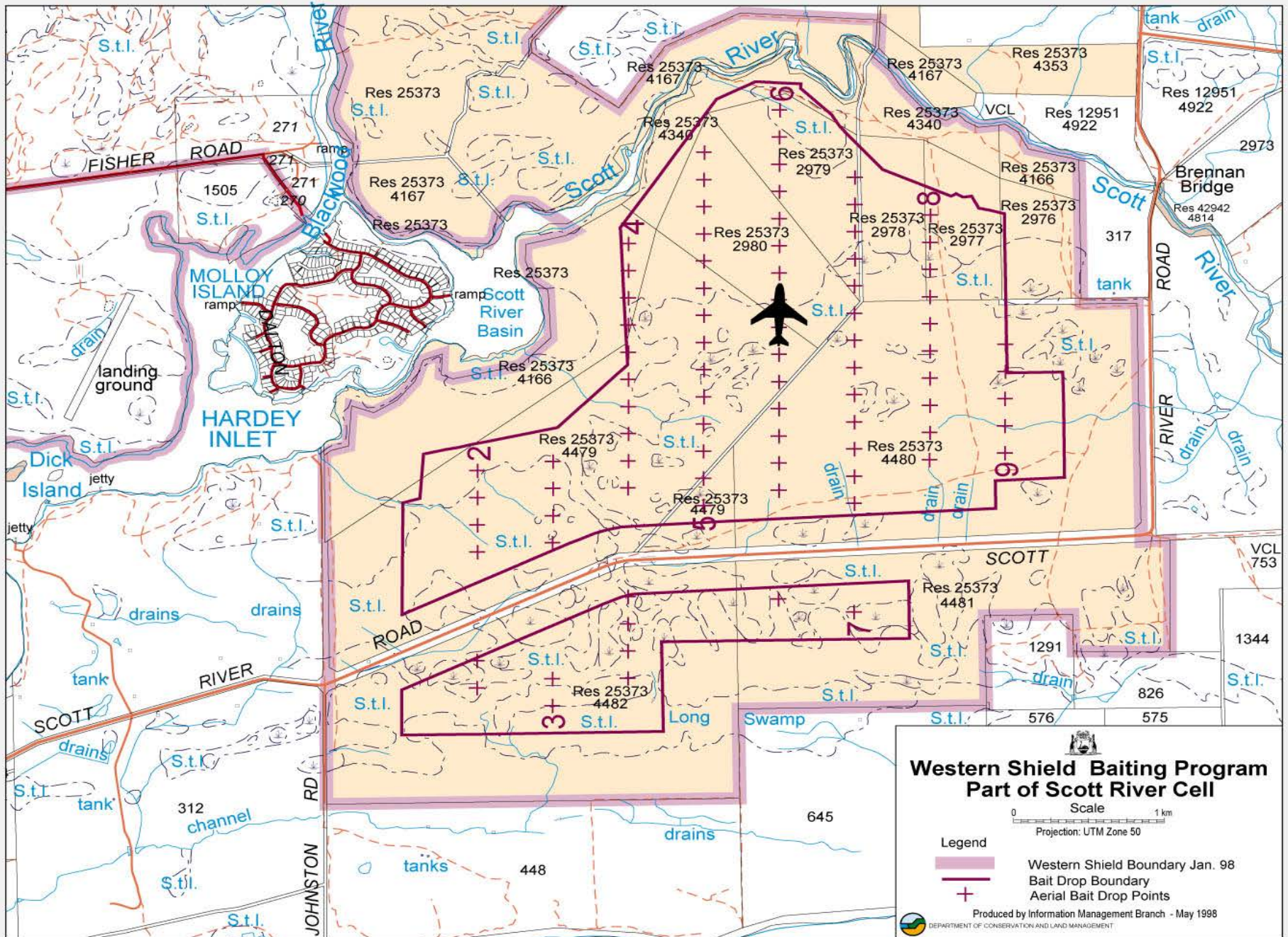
  
**Western Shield Baiting Program**  
**Part of Scott River Cell**


Scale 0 1 km  
 Projection: UTM Zone 50

Legend  
 Western Shield Boundary Jan. 98




Produced by Information Management Branch - May 1998  
DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT





  
**Western Shield Baiting Program**  
**Part of Scott River Cell**

0      Scale      1 km  
 Projection: UTM Zone 50

**Legend**  
 Western Shield Boundary Jan. 98  
 Bait Drop Boundary  
 Aerial Bait Drop Points

Produced by Information Management Branch - May 1998  
DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT











*Introducing the Small Twelve*









*“The thing that hath been, it is that which shall be;  
and that which is done is that which shall be done:  
and there is no new thing under the sun.  
Is there any thing whereof it may be said,  
See, this is new?  
It hath been already of old time, which was before us.”*

***Ecclesiastes 1:9,10***



A cartoon illustration of a forest. In the center, a small character with green skin, wearing a green hat and yellow boots, stands on a path. A large, white, oval-shaped speech bubble originates from the character, containing the word "INTEGRATION" in bold, black, uppercase letters. The forest is filled with tall trees with thick, rounded green canopies and brown trunks. The ground is a light, textured surface. The entire scene is enclosed in a simple black rectangular border.

**INTEGRATION**

