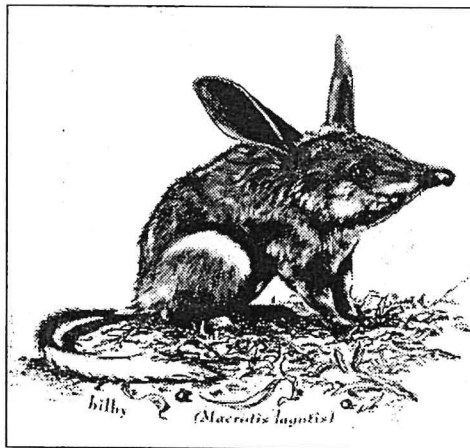




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WESTERN AUSTRALIA

# western shield

## SPEAKERS KIT



# **SPEAKER'S KIT**

## *Western Shield*

*Bringing our wildlife back from the brink of extinction*

Foxes and cats are making a meal of Western Australia's wildlife, they have already contributed to the extinction of ten native mammals with dozens more species threatened.

CALM has successfully pioneered programs to control foxes to prevent further extinctions. This work has now been expanded into the world's biggest campaign against feral predators, to save native animals and return them to areas where they once thrived.

**Slide 1:** "Western Shield" --- bringing wildlife back from the brink of extinction --- is the boldest wildlife recovery initiative ever attempted.

### **THE WESTERN SHIELD PROGRAM**

**Slide 2:** Map of Western Australia highlighting areas

- With an annual budget of \$1.4 million, the Western Shield program will cover nearly five million hectares of land operating in areas as diverse as Cape Range National Park near Exmouth, Peron Peninsula at Shark Bay, the south-west forests, the south coast, the edge of the Wheatbelt and inland arid regions.

**Slide 3:** The three elements

- It has three elements:
  1. increasing fox baiting to a scale never before attempted;
  2. developing and implementing effective broad scale cat control techniques to protect existing wildlife; andreturning native animals to former habitats and former abundance.

**Slide 4.** Farm land clearing

- Before European settlement WA was abundant with native flora and fauna. Farm land clearing was the major cause of habitat destruction and fragmentation which has caused the loss of species.

**Slide 5. Some other causal factors -- stock, feral animals, weeds, burning**

- The introduction of farming animals such as sheep and cattle and feral animals such as goats and rabbits into the Australian environment has also caused habitat destruction. The introduction of exotic plants and changes to burning regimes may also be a cause of loss of species. However, by far the greatest immediate impact on native wildlife has been demonstrated to be predation by foxes.

**Slide 6. The European Red Fox**

- Introduced for the sport of hunting. Fox predation has been demonstrated to be a major threatening process to the continuing survival of native species in the weight range of 35 g to 8 kg.

**Slide 7. Spread of fox in Australia**

- The fox now occupies the entire southern two thirds of the continent. The decline of native animals has been correlated with the expansion of the fox occurrence.

**Slide 8. Feral cats**

- Cats have been on the mainland before white settlement. They contribute to extinction in arid areas, particularly arid adapted animals. They do not survive well in the SW where it is wetter and vegetation is more dense.
- A special cat bait is presently being developed. It is a meat bait with an additive that makes it attractive to cats. Good success (>80% kill) in trial at Peron (Project Eden) at Shark Bay and on the Nullarbor.

Western Australia has natural advantages in controlling these two predators and combined with the expertise and skills of research we can reverse much of the decline in our native species.

**Slide 9. Gastrolobium plants**

- Poison bush that contains the poison fluoroacetate --manufactured synthetically under the name 1080. Heartleaf is a representative of a group of native plants belonging to the genus Gastrolobium. This genus of native plants contains 1080. Native animals have co-evolved with these plants and as a result have very high tolerances to 1080 - they are able to metabolise the 1080 faster than it can affect their organ function.

- Each large bush of heartleaf can contain up to 1200 mg of 1080. We put 4.5 mg in each bait and place one bait to every 20 ha. Usually bait 4 times per year in large areas in Jan, March, June, Sept. Smaller reserves will be baited more frequently - monthly.

**Slide 10. Meat baits.**

- 120 gm meat, dried down to 45 gm. Very hard - biltong - appearance. About the size of a packet of cigarettes.

**Slide 11. Baiting sign.**

- During baiting all targets will be sign posted to inform the travelling public that they are entering a baited zone. Pets should not be permitted to roam. Baits are very attractive to domestic dogs and are fatal if ingested. There is no antidote and no safe period during the year when dogs can be allowed to roam.

Within a few years, it's expected that up to 30 native fauna species will be significantly more abundant and more widespread than they are today. Pioneering research by CALM scientists has shown that effective fox control leads to a recovery in the number and range of many species of native animals, from mammals such as Numbats, Woylies, Chuditch and rock-wallabies, to ground-nesting birds and some reptiles.

The results of some of these studies are illustrated in the following slides.

**Slide 12. Woylie at Batalling Forest**

- Results where baiting has been undertaken for 5 years.

**Slide 13. Rock wallaby sightings - Nangeen Hill (near Kellerberrin)**

**Slide 14. Numbat sightings - Dryandra Woodland**

- The decrease and plateau of population levels after 1993 occurred because the numbat population has now completely filled the available habitat and is sustained at the carrying capacity of the site.

**Slide 15. Percentage of traps containing chuditch before and after fox baiting in Batalling Forest near Collie**

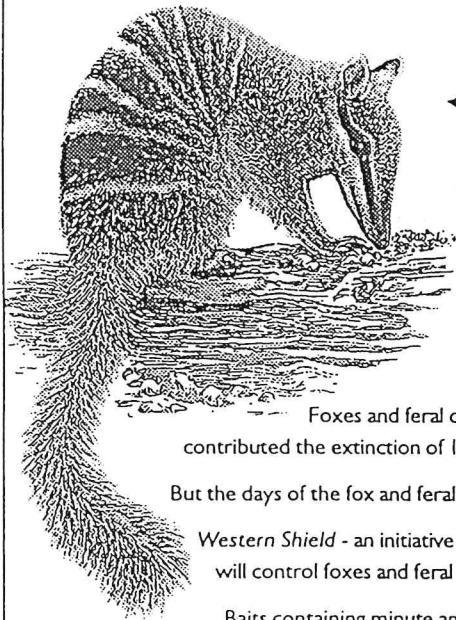
**Slide 16. Medium size mammal trap success at Batalling Forest near Collie**

We hope to have the same success with the following animals which are typical of the WA fauna that Western Shield will protect.

- Slide 17. **Chuditch** - widespread occurrence but at low levels in the forest areas, has responded well to baiting operations.
- Slide 18. **Dibbler** - small animal now only found in very scattered populations in the heaths of the south coast. Used to have a far more extensive range.
- Slide 19. **Red tailed Phascogale** - only now found in reserves of the Wheatbelt - responding well to fox control. Is affected by cat predation.
- Slide 20. **Numbat** - an animal that feeds exclusively on termites and is active when the termites are active - mid morning and afternoon - responding very well to fox control at Dryandra. Has been subject to cat predation when re-introduced to the arid shrublands at Karroun Hill north west of Southern Cross.
- Slide 21. **Bilby** - only now found in remote areas of the arid lands. Used to be found in the Wheatbelt and toward the south coast. Can be re-introduced if foxes and cats are controlled.
- Slide 22. **Quenda** - southern brown bandicoot. Still found in areas of the forest but at very low levels. Uses dense vegetation in creeks and swamps to avoid predation. In baited areas it is expanding into the other parts of the jarrah forest where it used to be common.
- Slide 23. **Western barred bandicoot** - now only found on islands off Shark Bay.
- Slide 24. **Burrowing bettong or Boodie** - only surviving on off shore islands near Shark bay. Will be re-introduced to its former range from Karratha to Esperance.
- Slide 25. **Rufous hare wallaby or mala** - now only found on the offshore islands of Shark bay. Will be re-introduced over its former range.
- Slide 26. **Banded hare wallabies** - only found on islands off Shark bay. will be reintroduced to its former range across the SW.
- Slide 27. **Tammar** - used to be widespread throughout the south west . Now only found in a few populations in the forest and Wheatbelt reserves where fox control is undertaken.

- Slide 28. **Black flanked rock wallaby** - now only found in a few Wheatbelt & desert reserves and at Cape Range NP at Exmouth. Extremely threatened by fox predation. Responds well to fox control.
- Slide 29. **Quokka** - common on Rottnest but uncommon on the mainland. Few scattered populations still exist in swamps in the jarrah forest. Will expand if foxes can be controlled.
- Slide 30. **Ring tail possum** - susceptible to fox predation when they are on the ground. Very clumsy on the ground and easily taken by foxes. Have responded well to fox control and have been re-introduced to several sites where they have become locally extinct.
- Slide 31. **Heath rat** - not recovering as fast as would have been expected in baited areas. This may be due to cat predation.
- Slide 32. **Shark bay mouse** - only exists on offshore islands. Being re-introduced to Peron. Could be affected by cat predation.
- Slide 33. **Mallee fowl** - used to be common across the Wheatbelt. Habitat clearing has contributed to its decline, but those surviving in reserves and remnants are threatened by foxes and cats that take the young as they emerge from the nest.
- Slide 34. **Carpet python** - is affected by direct fox predation when found in the open and are affected by lack of food as the fox reduces the natural food such as woylies available to the python. They are responding very well to baiting at Dryandra.
- Slide 35. **Western Swamp tortoise** - worlds rarest tortoise.
- Slide 36. **Predator proof fence at Twin Swamps NR** -protects Western Swamp tortoise from fox predation. Effective but very expensive - \$25,000 per km - and has a high maintenance requirement.
- Slide 37. **Possum in a trap.**
- Our aim is not to just kill foxes but to increase the population of native animals. We don't monitor the fox population, as this would be very difficult, but we do monitor the native wildlife population for signs of recovery.
  - We monitor the recovery of native fauna in baited areas by regular trapping, marking (ear tags etc) and releasing animals. Community are encouraged to become involved in these activities.

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# At last – a shield for native wildlife

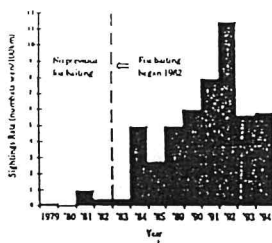
Foxes and feral cats are making a meal of our native wildlife. They have contributed the extinction of 10 native mammals and have pushed a further 31 to the brink.

But the days of the fox and feral cat are numbered.

*Western Shield* - an initiative by the Department of Conservation and Land Management - will control foxes and feral cats on nearly 5 million hectares of WA's conservation lands.

Baits containing minute amounts of a naturally-occurring poison will be distributed throughout target areas.

Numbat sightings in Dryandra Woodland



Co-ordinated baiting over several years will allow surviving native animals to recover in numbers and return to areas where they once roamed in abundance.

Our native animals have a high tolerance to the poison - foxes, cats and pet dogs don't. So if you are visiting areas that have been baited - they are clearly sign-posted - leave your pets at home.

For more details on *Western Shield*, contact your local CALM office or browse the *Western Shield* information package on the Internet [http://www.calm.wa.gov.au/projects/west\\_shield.html](http://www.calm.wa.gov.au/projects/west_shield.html)

In the northern jarrah forest, Alcoa of Australia is sponsor of *Western Shield* through Operation Foxglove.

**western shield** *Bringing wildlife back from the brink of extinction*  
 DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

# WESTERN SHIELD Foxbaiting Strategy

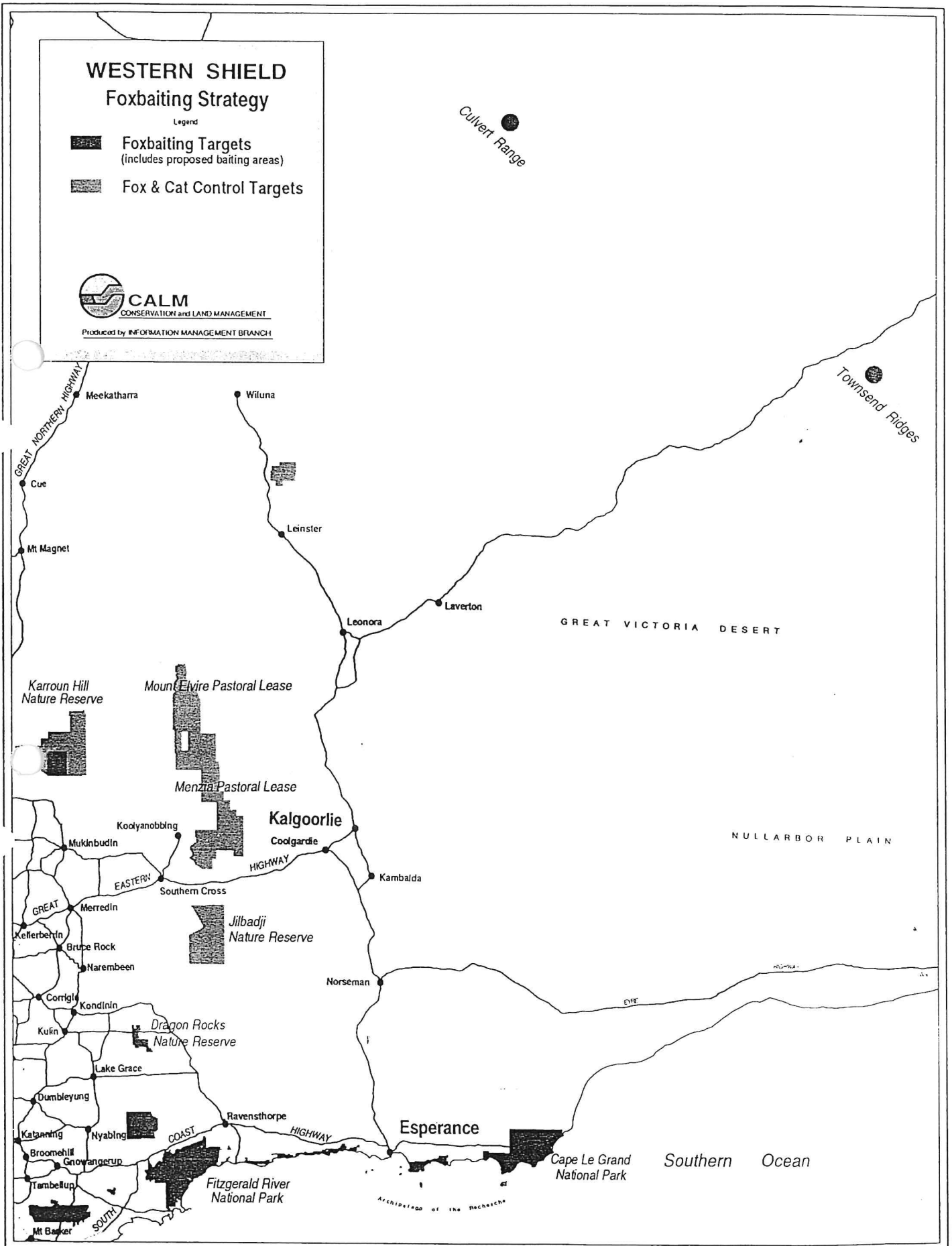
Legend

-  Foxbaiting Targets  
(includes proposed baiting areas)
-  Fox & Cat Control Targets



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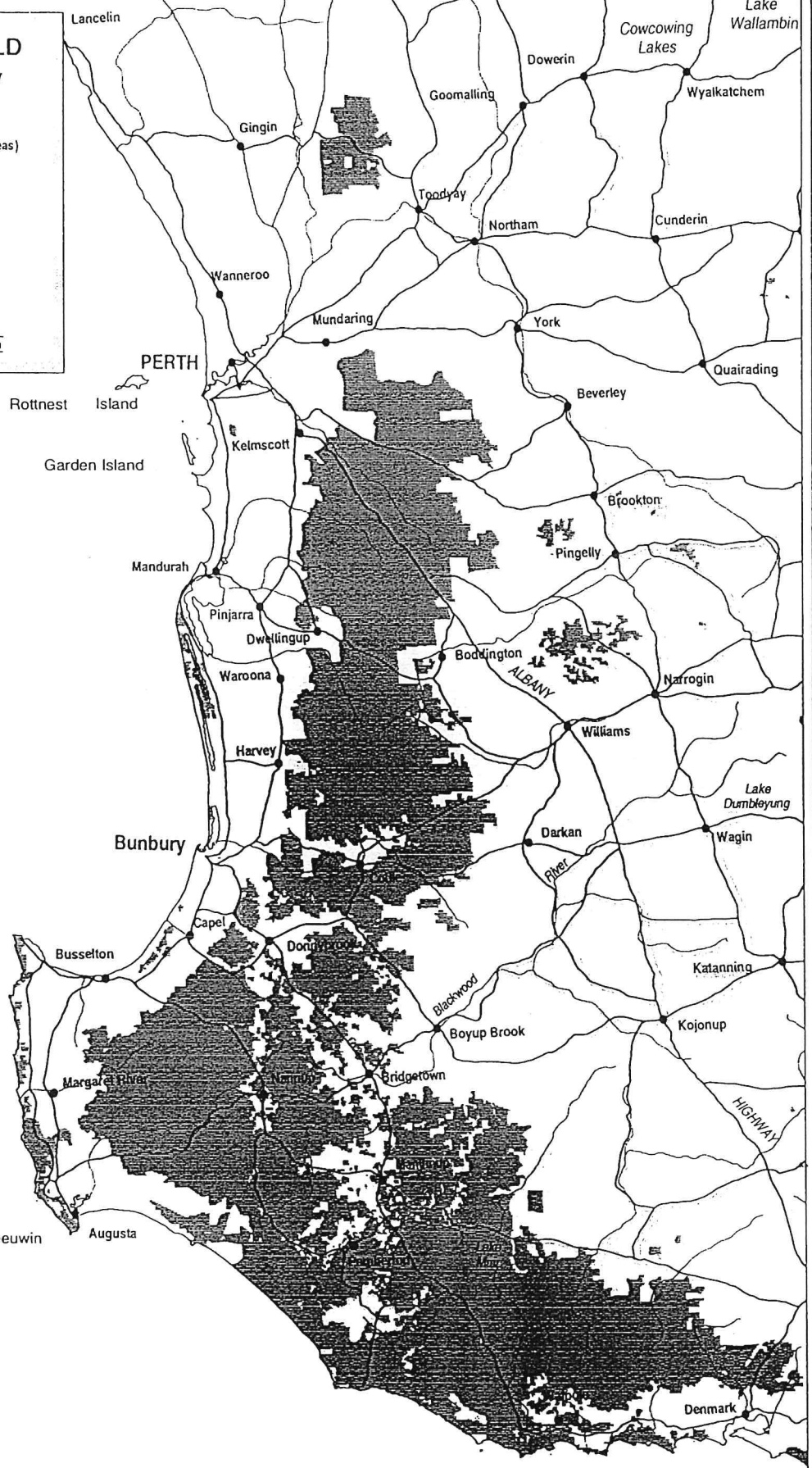
# WESTERN SHIELD Foxbaiting Strategy

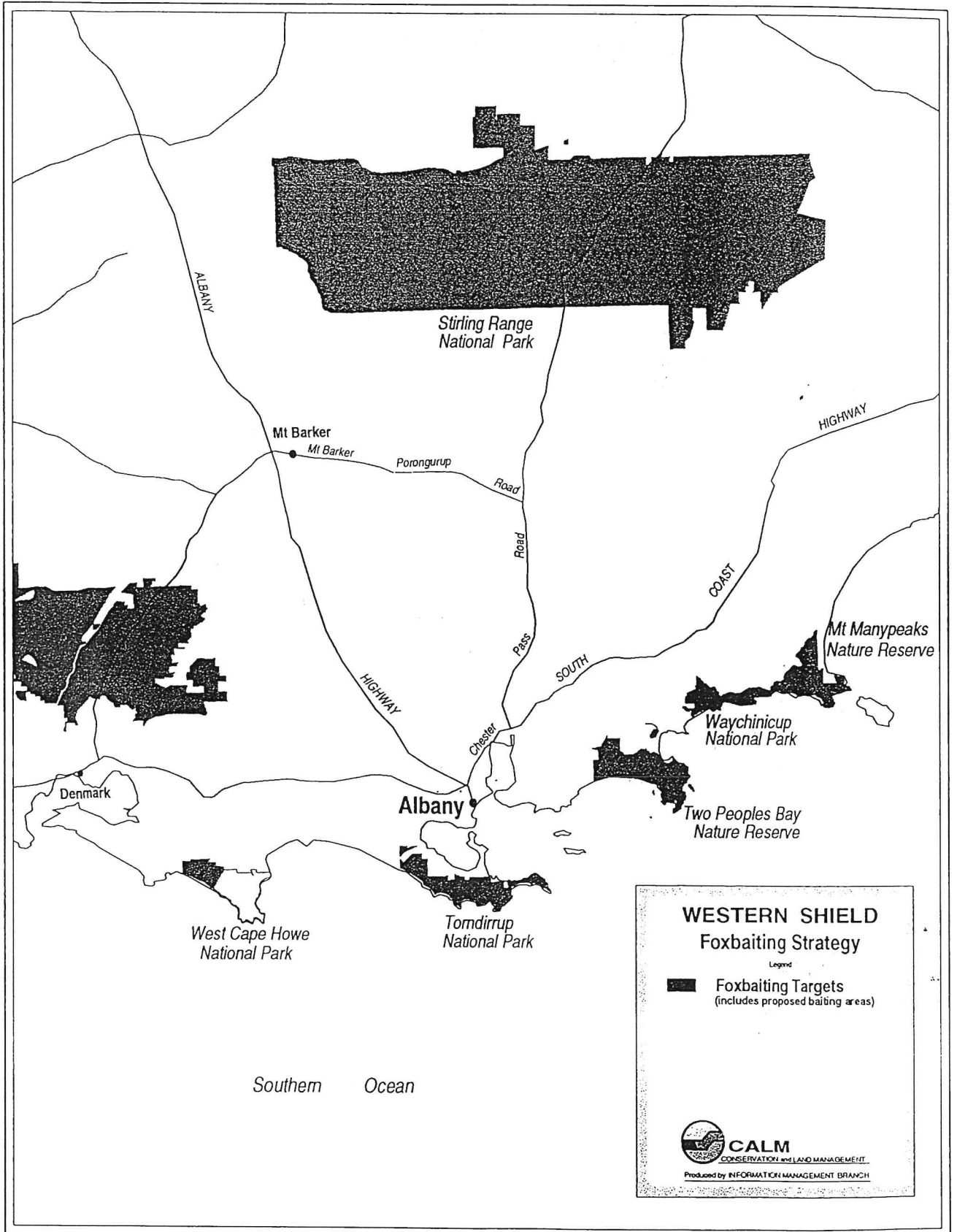
Legend

 Foxbaiting Targets  
(includes proposed baiting areas)




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**WESTERN SHIELD**  
**Foxbaiting Strategy**

Legend

 **Foxbaiting Targets**  
 (includes proposed baiting areas)

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# WESTERN SHIELD

## Feral, Predator Baiting Strategy



- INCREASE FOX BAITING
- EFFECTIVE BROAD SCALE CAT CONTROL
- REINTRODUCE RARE NATIVE ANIMALS









# Spread of the Red Fox in Australia.









# 1080 POISON RISK



**DANGER**

FOX BAITs of dried meat containing 1080 POISON have been laid in this vicinity.

1080 is poisonous to humans and domestic animals.

Contact your local CALM office for information on Western Shield Wildlife Recovery Program.

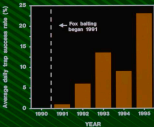
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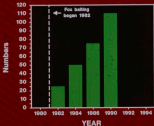
Department of Conservation and Land Management

*Caring ... Naturally*

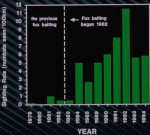
# WOYLIE TRAP SUCCESS AT BATALLING FOREST



# ROCK-WALLABY SIGHTINGS NANGEEN HILL (NEAR KELLERBERRIN)

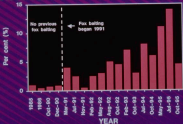


# NUMBAT SIGHTINGS IN ORYANDRA WOODLAND





# PERCENTAGE OF TRAPS CONTAINING CHUDITCH BEFORE AND AFTER FOX BAITING IN BATALLING FOREST



# PERCENTAGE OF TRAPS CONTAINING MEDIUM-SIZED MAMMALS BEFORE AND AFTER FOX BAITING IN BATALLING FOREST

