

# Western Shield Plan 2017 – 2026



February 2017



Department of  
Parks and Wildlife



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**Cover left to right:**

Captive bred numbat for release at Dryandra Woodland  
*Photo - Tony Friend/Parks and Wildlife*

Monitoring introduced predators in Nambung National Park  
*Photo - Beren Spencer/Parks and Wildlife*

Fox taking Pro bait  
*Photo: Parks and Wildlife*

Eradicat® baits  
*Photo: Steve Toole/Parks and Wildlife*

Measuring a reptile during Western Shield monitoring at Julimar forest block  
*Photo - Ashley Millar/Parks and Wildlife*



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Parks and Wildlife**



Western Shield Plan: 2017-2026

Version: 1.0

Last Updated: February 2017

Custodian: Ashley Millar, Western Shield Coordinator

Approved by:

Jason Foster, Director Forest and  
Ecosystem Management

Review date: 2026

Version number	Date approved	Approved by	Brief Description
0.1	November 2016	Manager Ecosystem Health Danielle Wiseman	Draft full detailed plan
1.0	20 February 2017	Acting Director Jason Foster	Revised to abbreviate plan

## Background

Western Australia has a diverse native fauna, including nearly 200 mammal species and subspecies, around 850 birds, 550 reptiles and 80 amphibians, more than 1800 fish, and hundreds of thousands of invertebrates. Many are endemic to Western Australia and new species continue to be discovered.

Western Australia's fauna is subject to various processes that threaten their survival and abundance, or that of the ecological communities and habitats they rely on. These processes often operate in concert and on a regional or landscape scale.

Predation by foxes and feral cats is one of the greatest threats to our native fauna, particularly to small mammals (weighing between 0.35 and 5.5 kilograms). Native ground nesting birds, such as the western ground parrot, noisy scrub-bird and malleefowl and some reptile species, are also at high risk.

Since 1977, fox baiting using 1080 poison has been carried out by the Department of Parks and Wildlife and predecessor departments in an effort to protect native wildlife. Operation Foxglove, as part of research and recovery projects in the Wheatbelt, Upper Warren and northern jarrah forest, baited an area of around 700,000 hectares. This research demonstrated foxes could be successfully reduced, and baiting was expanded to other areas of the State under the renamed *Western Shield* program (1996). *Western Shield* now covers an area of 3.8 million hectares across Western Australia and is one of Australia's largest wildlife recovery programs.

Over the last 10 years, the effect of feral cat predation has become evident when the populations of some threatened species (woylie, numbat and black-flanked rock-wallaby) that had recovered with fox baiting, started to decline. *Western Shield* is integrating Parks and Wildlife's feral cat bait, *Eradicat*<sup>®</sup> with fox baiting in an effort to reduce the impact of feral cats on our native fauna.

## Purpose

The *Western Shield Plan 2017 - 2026* puts forward objectives aimed at recovering and sustaining wild populations of native fauna in Western Australia threatened by predation from foxes and feral cats.

## Principles

*Western Shield* is underpinned by:

- fauna recovery through ongoing effective landscape scale management of foxes and feral cats;
- native fauna population enhancement through translocation;
- management which is adaptive and informed by scientific evidence from research and monitoring;
- collaboration with industry, non-government organisations and community to promote native fauna conservation.

## Legislative and policy context

Parks and Wildlife is responsible for implementing and administering the *Biodiversity Conservation Act 2016*, *Conservation and Land Management Act 1984* and the *Wildlife Conservation Act 1950* that together provide the lawful basis for biodiversity conservation in Western Australia.

Parks and Wildlife prepares and implements corporate policies to assist in fulfilling the department's vision and goals, including Corporate Policy 12 *Management of pest animals* and Corporate Policy 35 *Conserving threatened species and ecological communities*. The *Framework for Fauna Conservation* complements this strategic direction by setting key principles to guide prioritisation of fauna conservation actions undertaken by the department.

In 2015, the Australian Government released the *National Threatened Species Strategy*, which identifies predation by foxes and feral cats as a key threat to native fauna and highlights a number of Western Australian mammals and birds at risk.

## WESTERN SHIELD PLAN 2017 – 2026

<b>WHY</b>			
<b><i>To recover and sustain wild populations of Western Australian native fauna threatened by foxes and feral cats.</i></b>			
<b>WHAT</b>			
<b>Objective 1:</b> Maintain or increase the extent, size and/or number of known populations of key native fauna species at Western Shield sites.	<b>Objective 2:</b> Reduce the impact of fox and feral cat predation on native fauna at Western Shield sites.	<b>Objective 3:</b> Conduct research to improve the efficacy of fox and feral cat management for fauna recovery.	<b>Objective 4:</b> Build and maintain partnerships, community awareness, and support for the Western Shield program.
<b>HOW</b>			
<ul style="list-style-type: none"> <li>• Monitor the distribution and population trajectory of selected native fauna.</li> <li>• Undertake translocations of native fauna and other recovery actions.</li> <li>• Ensure delivery of fox and/or feral cat management at Western Shield sites where translocations have occurred or are due to occur.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and prioritise departmental lands requiring fox and feral cat management to support Objective 1.</li> <li>• Facilitate effective management of foxes and feral cats.</li> <li>• Monitor foxes and feral cats to measure management effectiveness and adapt on-ground actions accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>• Undertake research to guide adaptive management, address knowledge gaps and improve on-ground fox and feral cat management.</li> </ul>	<ul style="list-style-type: none"> <li>• Actively pursue community and private partnerships which value add to our management (e.g. neighbour baiting, sponsorships).</li> <li>• Promote community awareness of Western Shield through relevant media and educational programs (e.g. <i>Nearer to Nature</i>).</li> <li>• Foster community involvement in the program through volunteer opportunities.</li> </ul>
<b>OUTCOME</b>			
<ul style="list-style-type: none"> <li>• The extent, size and number of key native fauna populations at Western Shield sites are maintained or improved.</li> </ul>	<ul style="list-style-type: none"> <li>• The impact of fox and feral cat predation on native fauna is reduced at Western Shield sites.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved knowledge of fox and feral cat management that can be applied operationally to promote fauna recovery.</li> </ul>	<ul style="list-style-type: none"> <li>• Partnerships that value add to our management and community awareness and support for Western Shield.</li> </ul>

**Western Shield program: Measures of success**

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1. No loss of key native fauna species\* (presence) at *Western Shield* sites compared with identified non-baited sites as a result of fox and feral cat management.

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2. Population size of key native fauna\* maintained or improved at *Western Shield* sites compared with identified non-baited sites.

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3. Reduce the occupancy of foxes by at least 50 per cent at selected *Western Shield* sites when compared with identified non-baited sites.

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4. Reduce the occupancy of feral cats by at least 30 per cent at selected *Western Shield* sites when compared with identified non-baited sites.

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5. Maintain and increase the area of fox and feral cat control on lands adjacent to *Western Shield* sites with partners and/or neighbours.

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6. Increase community awareness of the impact of foxes and feral cats on native fauna and of *Western Shield*.

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\*Note: A subset of native fauna and the sites where these will be monitored will be identified in the Western Shield Monitoring Plan

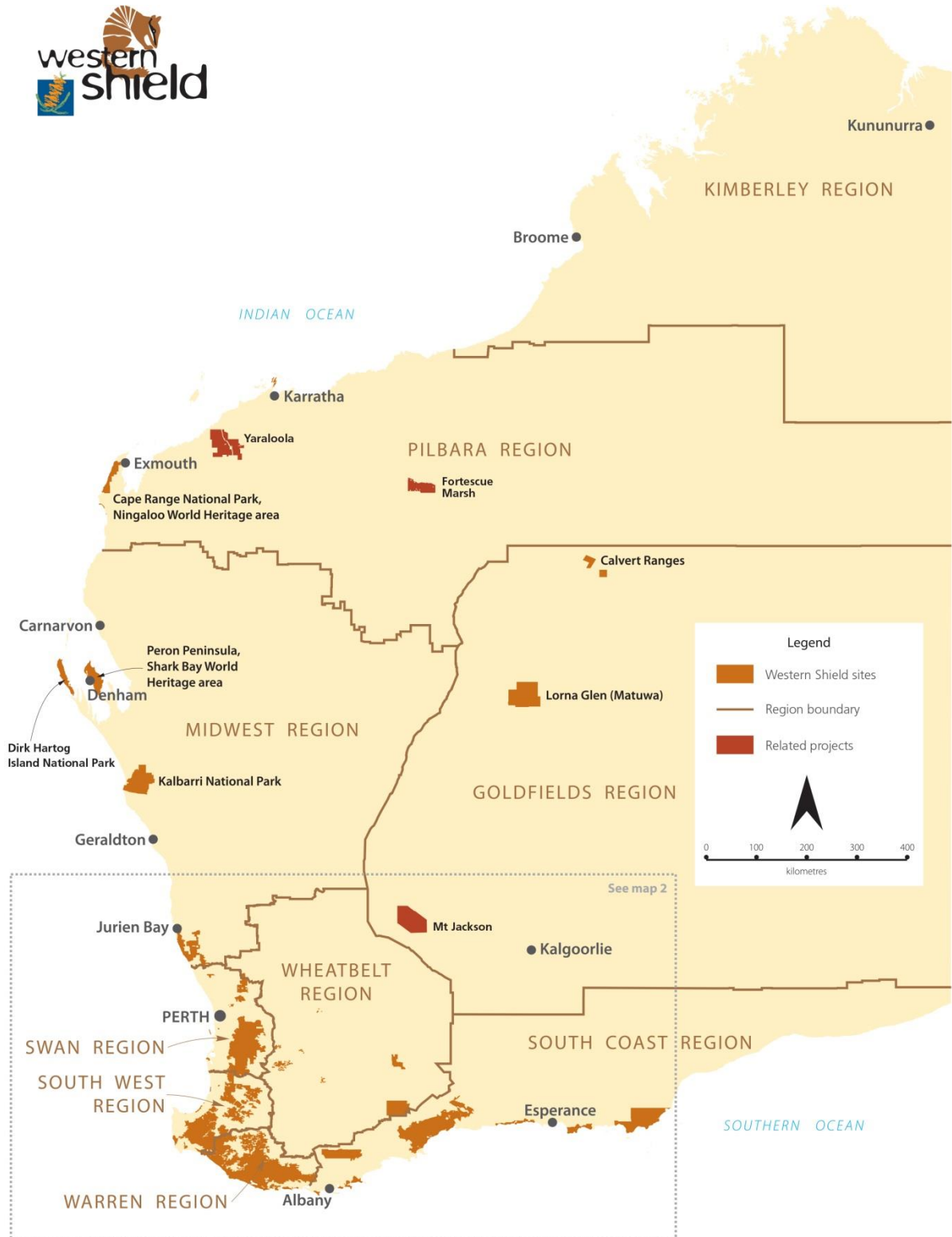


Figure 1 Western Shield statewide baiting sites.

Note: Related projects are identified in this plan as those projects that aim to conserve *Western Shield* key species or where there is a direct research learning that will be applicable to the program (e.g. feral cat control prescription for an area). These projects are funded separately to the Western Shield program.



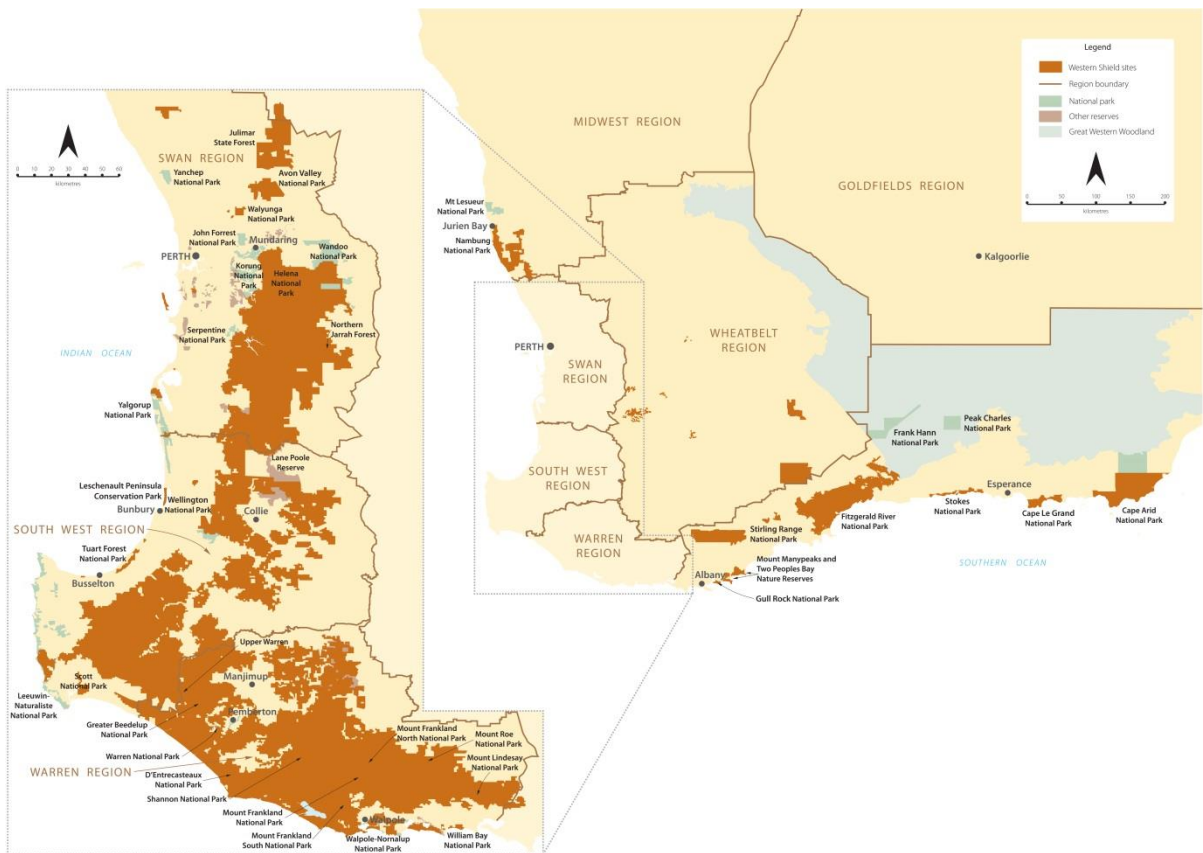


Figure 2 Western Shield baiting sites, southern Western Australia. Inset: Enlargement of south-western coastal area.

### Key native fauna species targeted for recovery through *Western Shield*

The key native fauna species to be targeted for recovery (table following) were identified through a prioritisation process that considered the conservation status of native fauna, distribution, vulnerability to introduced predators and likelihood of recovery with introduced predator control. Together with site feasibility criteria, this list informs the priorities for baiting and will be periodically reviewed and adjusted if necessary to adapt to program outcomes and new information.

Common name	Scientific name
woylie	<i>Bettongia penicillata ogilbyi</i>
chuditch	<i>Dasyurus geoffroii</i>
quenda	<i>Isoodon obesulus fusciventer</i>
tammar wallaby	<i>Macropus eugenii derbianus</i>
western brush-wallaby	<i>Macropus irma</i>
bilby	<i>Macrotis lagotis</i>
numbat	<i>Myrmecobius fasciatus</i>
black-flanked rock-wallaby	<i>Petrogale lateralis ssp lateralis</i>
quokka	<i>Setonix brachyurus</i>
golden bandicoot	<i>Isoodon auratus</i>
dibbler	<i>Parantechinus apicalis</i>
Gilbert's potoroo	<i>Potorous gilbertii</i>
brush-tailed mulgara	<i>Dasyercus blythi</i>
northern quoll	<i>Dasyurus hallucatus</i>
water rat	<i>Hydromys chrysogaster</i>
brush-tailed phascogale	<i>Phascogale tapoatafa ssp.</i>
western ringtail possum	<i>Pseudocheirus occidentalis</i>
western mouse	<i>Pseudomys occidentalis</i>
heath mouse	<i>Pseudomys shortridgei</i>
western ground parrot	<i>Pezoporus flaviventris</i>
noisy scrub-bird	<i>Atrichornis clamosus</i>
Australasian bittern	<i>Botaurus poiciloptilus</i>
hooded plover	<i>Charadrius rubricollis</i>
western bristlebird	<i>Dasyornis longirostris</i>
malleefowl	<i>Leipoa ocellata</i>
fairly tern	<i>Sterna nereis nereis</i>
Dirk Hartog Island emu-wren	<i>Stipiturus malachurus hartogi</i>
green turtle	<i>Chelonia mydas</i>
loggerhead turtle	<i>Caretta caretta</i>
hawksbill turtle	<i>Eretmochelys imbricata bissa</i>
flatback turtle	<i>Natator depressus</i>
western swamp tortoise	<i>Pseudemydura umbrina</i>