



Department of Biodiversity,
Conservation and Attractions

Forest Management Plan 2024-2033

FMP News, Kambarang edition

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Coordinator, FMP

G'day everyone

We're continuing to drive progress on the Forest Management Plan 2024–2033 (FMP), building on the strong foundations laid in its first year.

The ecological thinning program, initiated as a response to climate change, is also progressing. Planning and delivery of the 2025 program is well underway, and the Ecological Thinning Plan can be viewed on the [FMP website](#). The indicative plan was finalised with the input of Noongar Regional Corporations, government agencies, and key stakeholders.

This work is supported by expanded forest health monitoring and adaptive management trials, and the FMP is being integrated into DBCA's Management Effectiveness System to ensure structured performance evaluation.

The Fire Research Collaboration is also moving forward. This initiative aims to investigate the ecological impacts of fire

consultation with a broad academic network, and updates on this important work will be shared in future editions.

Thank you to everyone who has contributed to the FMP's delivery so far, we look forward to sharing more progress with you throughout the year. We're also reviewing the frequency of FMP News to ensure each edition provides timely and valuable updates.

Cheers



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Enhancing forest health through ecological thinning and climate-resilient management

As part of our commitment to forest health and climate resilience under the FMP, the ecological thinning program continues to deliver important outcomes. Since its commencement in March last year, 2,030 hectares of densely stocked regrowth forests have been thinned across the south-west to improve forest structure and support biodiversity.

Detailed pre-operational planning has been completed for 10 forest enhancement areas (FEAs), supported by the measurement of 248 strategic inventory plots in regrowth jarrah, karri, and post-mining rehabilitation areas. These plots are essential for tracking the ecological outcomes of thinning activities over time.

To support planning and monitoring, high-resolution aerial imagery has been captured across more than 150,000 hectares. In addition, advanced sensor technologies are being used to assess forest condition and vulnerability to climate change. These tools are helping refine thinning prescriptions through adaptive management trials, ensuring treatments are tailored to the specific ecological needs of each site.

In parallel, research has been initiated to explore the role of ecological thinning in climate adaptation, examining its effects on hydrology, soil health and herbicide efficacy. The integration of the FMP into DBCA's Management Effectiveness System will ensure structured performance evaluation and continuous improvement in forest management practices.

Together, these efforts reflect a science-led, adaptive approach to restoring forest resilience and conserving biodiversity in our changing climate.



Image credit: Frances Andrijich.

Forest Health Monitoring Program (FHMP)

Author: Shaun Molloy, DBCA Biodiversity and Conservation Science, FHMP Monitoring Coordinator

The Forest Health Monitoring Program (FHMP) provides a contemporary, integrated and cost-effective framework for monitoring forest health in the south-west over the life of the FMP. Monitoring is being undertaken at multiple scales.

1. Landscape scale: Monitoring across south-west forest ecosystems, primarily using satellite and aerial imagery.
2. Fixed site network: A network of representative monitoring sites that are monitored through a suite of technologies including Remote Piloted Aircraft (RPA) mounted LiDAR (Light Detection and Ranging), environmental DNA (eDNA), eco-acoustic and camera trapping approaches, and on-ground observational methods. This data will support and inform the landscape scale activities.
3. Targeted components: Complementary research projects, usually undertaken in partnership with stakeholders, designed to address monitoring issues not adequately covered by our landscape scale or site network scale activities, such as the monitoring of species or communities, or the results of management actions.

What has been achieved to date?

Over the past year, we have defined our objectives, timelines, methodologies and the scientific foundations of the program, as outlined in the [FHMP Implementation Plan](#), which can be downloaded from the [FMP website](#).

- A methodology for selecting representative monitoring sites was developed, and a network of 100 fixed monitoring sites has been established.
- Standardised procedures for capturing and processing RPA LiDAR imagery are in development, with flights underway to collect vegetation structure data.
- Floristic surveys were completed at approximately one-third of all sites last spring. Teams continue their site visits to record structure and health, and to measure woody debris.
- While fauna surveys are yet to commence, a pilot study was conducted last year to investigate the utility of downward-facing cameras for monitoring reptiles and small mammals.

sequencing.

- Eco-acoustic recording devices have been deployed twice at 85 fixed sites to monitor forest acoustic communities. Data processing and analysis are ongoing.



Above: The FHMP team use a wide range of equipment to monitor. Image credit: DBCA

Fire Research Collaboration: Advancing science for forest resilience

The Fire Research Collaboration (FRC) is a key initiative under the FMP, designed to investigate the ecological impacts of bushfires and prescribed burning across south-west forests. Managed by DBCA's Fire Science Program, the FRC establishes a ten year scientific research program that supports biodiversity conservation without compromising operational fire management responsibilities.

Since its launch in mid-2024, the FRC has brought together DBCA scientists and university researchers to co-design research projects that explore fire's influence on flora, fauna, soils and ecosystem processes. A major milestone was the August 2024 research prioritisation workshop, where 45 experts collaboratively developed and ranked 59 research questions. These questions span themes such as threatened species recovery, fire severity impacts, climate-stress interactions, and the value of unburnt refugia.

Top-ranked priorities include understanding:

- What are the population dynamics of threatened fauna in relation to time since fire and does this depend on fire severity?
- What are suitable fire intervals for vulnerable ecosystems?
- How are plant and ecosystem responses to varying fire intervals or season influenced by the timing and severity of climate events (drought, heatwaves, die-off)?
- Which ecosystems are most vulnerable to fire (i.e., have slowest responses, are least resilient, or most severely impacted)?
- What attributes render ecosystems most vulnerable to effects of varying fire regime elements (season, severity, interval, mosaic)?

Supporting Foundation 1 of the FMP, Noongar cultural heritage and management partnerships, Noongar elders and experts were invited to guide research design and implementation. To support knowledge sharing with stakeholders, DBCA recently met with the WA Forest Alliance (WAFA) to present details of the FRC program. The meeting included a tour of the Kings Park laboratories, where WAFA representatives viewed the facilities supporting fire ecology research and discussed opportunities for future collaboration.

Following this, the FRC team also met with members of the Bushfire Front (BFF) to share an overview of

the program. The meeting enabled a constructive discussion, with BFF members sharing insights from their experience in fire management. These conversations contribute to a broader understanding of fire's role in forest landscapes and to help inform future research directions.

Stay tuned for updates as the FRC progresses and contributes to evidence-based, climate-resilient forest management.



Above left: Dr Ryan Tangney, Research Scientist (on left), led the Kings Park laboratory tour for WAFA.

Above right: Pictured from left to right are Dr Joe Fontaine (Murdoch), A/Prof Rob Davis (ECU), Dr Tim Doherty (DBCA), Rick Sneeuwjagt (BFF), John Clarke (BFF), Dr Ryan Tangney (DBCA), Frank Battini (BFF), Roger Underwood (BFF) and Dr Ben Miller (DBCA). Image credit: Angela Reimers/DBCA

Sniffing out threats: detector dogs join the fight against dieback

Much of the work delivered across DBCA supports the forest health goals of the FMP. Among the most innovative developments is the deployment of scent-detection dogs to combat the spread of *Phytophthora cinnamomi* (Phytophthora dieback); a soil-borne pathogen responsible for irreversible damage to native vegetation across the south-west.

Dieback affects approximately 40% of native species in the south-west bioregion, with susceptibility among threatened species exceeding 56%. With no known cure, early detection and containment are critical. Dieback detector dogs, like New South Wales' Alice and Echo are trained to identify *Phytophthora cinnamomi* with high accuracy and speed.

Their work directly supports multiple FMP objectives, including:

- Foundation 2: Forest health and resilience - Enhancing early detection in high-risk and remote areas, including conservation reserves and threatened flora translocation sites.
- Foundation 3: Science and adaptive management - Contributing to forest health monitoring and informing management responses through integration with the Forest Health Monitoring Program (FHMP).
- Operational hygiene - Screening machinery and materials at hygiene checkpoints to prevent inadvertent spread during forestry, fire response, and mining operations.

The dogs were recently showcased in regional workshops across the Swan, South West, and Warren regions, where DBCA staff from Sustainable Forest Management, Nature Conservation, and Ecosystem Health teams joined private sector and mining representatives to explore future applications. These sessions generated valuable feedback and identified opportunities to integrate detector dogs into existing dieback mapping and management strategies.

Dieback detector dogs can work in diverse environments, from bushland to botanic gardens, demonstrating their adaptability and value in real-world conservation scenarios. Their presence has also

This initiative forms part of a broader national project led by DBCA and supported by a \$1.3 million grant from the Australian Government's Saving Native Species Program to build dieback dog capacity across Australia. Two new WA detector dogs, Milo and Kelly, trained by TATE Animal Training Enterprises, will soon be ready for on-ground disease assessments with their new handlers; selected by DBCA through a competitive grant process.

As the FMP continues to evolve, these four-legged conservationists are helping us strengthen biosecurity, engage communities, and build a more resilient forest future, one sniff at a time.

🐾 Watch the dogs in action on our [YouTube channel](#)



Discover ForestCraft: A new way to learn about forest management

We're excited to introduce [ForestCraft](#), a new online game developed in collaboration with DBCA's Nearer to Nature education team and the FMP team. Designed for primary school-aged students, ForestCraft offers an interactive and engaging way to explore the challenges and opportunities of forest management in Western Australia.

Supporting the FMP, the game introduces players to key forest health issues such as dieback disease, feral animals, and bushfire. It also highlights the role of ecological thinning to improve forest resilience and biodiversity.

As students play, they make decisions about how to manage a virtual forest and observe the outcomes of their choices over time. The game encourages critical thinking and adaptive management, allowing players to test different strategies and learn how forest ecosystems respond to various management methods.

Whether you're a teacher, parent, or simply curious about forest management, we invite you to explore ForestCraft and share it with the young learners in your life.



Kambarang: A season of colourful blooms and animal activity

We've now entered Kambarang, the Noongar season from October to November. It's a vibrant time in the south-west, with warming temperatures and longer days gently nudging us toward summer.

Across the landscape, wildflowers are putting on a spectacular show. Purples, pinks, and oranges burst into bloom, joining the yellows and creams of earlier months. Native orchids, kangaroo paws, and other striking species flourish, transforming the bush into a colourful mosaic.

It's also a lively time for wildlife. Reptiles begin to stir from their winter rest, and many birds are busy feeding their young. You might spot a bobtail lizard (Yoorng) soaking up the sun or hear the chatter of honeyeaters and parrots weaving through the canopy.

Kambarang signals a period of growth and renewal. Forest ecosystems respond with bursts of energy, and the seasonal shift supports the natural cycles of life across the region.

As we move through Kambarang, the energy of the season reminds us of the resilience and vitality of south-west forests, and the importance of continuing to care for Country through thoughtful, collaborative management.

Cover image: Credit: Frances Andrijich

DBCA acknowledges the Noongar people as the Traditional Owners within the Forest Management Plan area in the south-west of Western Australia and respects the continuing connection and importance of forests to their cultural, physical and spiritual health.



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