

September 2025

Vertebrate Pest Management Program

Deer control – Round 1 update

The Department of Primary Industries and Regional Development (DPIRD) recently undertook a feral deer control operation at Harvey and Esperance. This report summarises Round 1 of these operations. Round 2 is scheduled for mid-2026.

Background

In Western Australia, Deer are declared pests under the *Biosecurity and Agriculture Management Act 2007* and associated regulations.

Land managers are legally required to control declared pests including feral deer. However, there are few effective methods for feral deer. DPIRD aims to develop and refine control tools suited to WA conditions by targeting feral deer at selected sites.

DPIRD conducted thermal surveys in three locations in 2023 and 2024. Following this, funding was secured in 2024 to trial control methods for feral deer in WA.

The project goal is to establish effective control methods using multiple approaches. Planning occurred over two years, with the first round of operations undertaken between July and August 2025 in the Esperance and Harvey regions.

Deer populations in WA

Three species of feral deer are found in WA: fallow, red and rusa. Rusa deer are found only in the Harvey region, where eradication is our objective.

Feral deer were introduced to WA through deliberate release or escaping from deer farms. WA's current populations are closely tied to former deer farm locations, though many have spread considerably.

Impacts of deer

Feral deer are a significant pest in Australia, with an estimated national population between 1 to 2 million.

Feral deer cost the economy approximately \$91.3 million annually through agricultural damage, control efforts, vehicle collisions, and train impacts (Centre for Invasive Species Solutions).

Deer damage ecosystems by overgrazing, competing with native fauna and livestock, damaging crops and infrastructure, impacting water and soil quality, and spreading diseases—including those affecting livestock and humans. Their populations can grow by 35% annually, making proactive control essential.

To effectively stop this rapid growth, the number of feral deer removed must exceed the rate of population increase. Aerial culling is currently the most cost-effective control tool.



Thermal assisted aerial culling

To improve the effectiveness and accuracy of feral deer control, the project utilised Thermal-Assisted Aerial Control (TAAC), an advanced method that builds on traditional aerial culling techniques.

TAAC involves the use of high-resolution, manually operated thermal imaging technology from the helicopter, enabling the precise detection and targeting of animals that may be hidden by vegetation. It is especially useful during periods of low solar radiation (e.g., early morning or late evening), typically allowing for 3 to 4 hours of operation per day.

On heavily overcast days, extended operations are possible due to improved thermal contrast.

The operation was conducted by a highly skilled and experienced team, including a professional pilot and a dedicated thermal camera operator, ensuring accuracy and safety throughout the deployment.





Key benefits of TAAC include:

- Improved identification and targeting of animals, even from a distance.
- Enhanced ability to track animals through dense scrubland and forested areas.
- Easier reacquisition of scattered herds.
- Accurate identification of non-target species.
- Comprehensive data capturing.

Project area

The project area covered multiple tenured lands, including small / peri urban and large agricultural properties, local and state government managed lands, and areas of cultural heritage. Consent was secured from all landholders, and an interagency agreement with the Department of Biodiversity, Conservation and Attractions ensured robust governance and compliance with state legislation.

The area was divided into sections for systematic helicopter grid searches. Grid transect spacing varied based on coverage needs and daily objectives. Each section accounted for property boundaries, infrastructure, buffer zones, special features, and no-shoot areas. Live mapping technology in the aircraft ensured that buffer zones and no-shoot areas were clearly visible and strictly adhered to.

Personnel

Experienced DPIRD officers, all nationally trained aerial marksmen, conducted the operation. These officers brought a high level of skill and proficiency to the operation.

The culling was conducted from a AS 350 'Squirrel' helicopter, with marksmen and thermal camera operators positioned on the edge of the aircraft. Despite operating in very cold conditions, they continuously scanned the landscape below for signs of deer using thermal imaging across the project area.

Animal welfare

A primary objective of the project was to uphold the

highest standards of animal welfare throughout all culling operations. DPIRD's feral animal control procedures are specifically designed to align with National Guidelines, placing animal welfare at the forefront of all activities. An independent veterinarian conducted an audit during the operation to ensure that animal welfare standards were met.

Deer monitoring and sampling

DPIRD scientists sampled 59 deer from the control operations to gather critical biological data. The team collected information on reproduction characteristics, demographics, and genetic profiles, aiming to improve understanding of feral deer biology and inform future management strategies.

Preliminary findings revealed a strong female bias in the sampled population, with over 65% of all sampled animals being female. Notably, 51% of these females showed signs of having reproduced within the past six months. These insights are expected to play a key role in shaping more effective and targeted control measures.



2024 Operational summary

From 23 July to 5 August:

- 524 deer were humanely culled.
- No wounded animals escaped.
- Welfare outcomes were independently verified by a veterinarian.
- The majority of deer were located in dense scrub and bushland, with TAAC significantly improving detection.
- Pre-cull monitoring occurred between in 2023 and 2024; post-cull monitoring is currently underway.
- 79% of animals were removed from state managed lands.
- In Esperance, approximately 59% of red deer within the control areas were removed.
- In Harvey, approximately 70% of the rusa deer within the shoot area were removed, however there were large areas where control was not conducted.

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