



Photo: Northwest Ruahine monitoring 2025 Credit: Kawakawa Environmental

Managing introduced wild animals

2025-26 Annual Operational Report: Wild Deer Management in Ruahine Forest Park



Department of
Conservation
Te Papa Atawhai

**Te Kāwanatanga
o Aotearoa**
New Zealand Government

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Executive summary

2025-26 marked the transition from planning to implementation of the Ruahine Adaptive Wild Deer Management Plan 2025-2030. During the year, DOC, iwi and hapū, hunters, industry and communities continued to work together to reduce deer numbers and improve understanding of deer distribution, management effectiveness, and ecosystem response across Ruahine Forest Park. A total of **1,075 deer were removed** through coordinated management activities, alongside continued monitoring, engagement and programme development.

Key achievements

- Completed the Ruahine Adaptive Wild Deer Management Plan 2025-2030, establishing the long-term framework for deer management in Ruahine Forest Park.
- **Removed 1,075 deer** through DOC-led aerial management, an NZDA-led management hunt, and commercial harvest incentive.
- Commenced further ecological monitoring in the Northwest Management Unit (MU) to establish baseline information and assess ecological response to sustained deer management in the park's primary management area.
- Strengthened partnership and collaboration with iwi and hapū, hunters, industry, landowners and communities, including continued engagement through the Ruahine Deer Advisory Group.
- Developed the 2026-27 Annual Operational Plan, using experience from this year to guide the next phase of implementation.

Looking ahead

The 2026-27 programme will continue coordinated deer management and complete ecological monitoring fieldwork. Priorities include strengthening the contribution of recreational hunting, improving access and focusing hunting effort in priority areas, and using monitoring results to guide future management. Treaty partnership and collaboration with iwi, hunters and other partners will continue to underpin delivery.

Introduction

Purpose of this report

This report summarises progress made during 2025-26 towards implementing the Ruahine Adaptive Wild Deer Management Plan 2025-2030 and delivering the actions set out in the 2025-26 Annual Operational Plan. It forms part of an adaptive management cycle that enables us to plan, act, learn and adjust our approach over time

Background

Ruahine Forest Park contains extensive indigenous forests, wetlands, waterways and alpine environments that are valued for their biodiversity, cultural significance and recreational opportunities. While recreational hunters remove substantial numbers of deer from the park each year, monitoring and field observations show that deer continue to have significant impacts on many forest ecosystems. High browsing pressure can limit regeneration of palatable plant species and affect the condition and resilience of native habitats.



Photo: Deer browse in Kawhatau 2026. Credit: Steve Bolton

Achievements for 2025/26

Completion of the Ruahine Adaptive Wild Deer Management Plan

Completion of the Ruahine Adaptive Wild Deer Management Plan 2025-2030 was a major milestone for wild deer management in Ruahine Forest Park. Developed through engagement with iwi and hapū, the Deer Advisory Group and other stakeholders, the plan provides a shared long-term framework for managing deer impacts while recognising ecological, cultural, recreational and community values.

The plan provides the foundation for annual planning, management, monitoring and reporting over the next five years. Its adaptive approach enables results, monitoring and partner and stakeholder input to inform future management decisions.

Ehara taku toa i te toa takitahi, engari he toa takitini.

Success is not the work of an individual, but the work of many.



Photo: Discussing wild deer management with neighbouring landowners 2026. Credit: DOC

Partnership and collaboration

Managing deer impacts at the scale required in Ruahine Forest Park relies on collaboration. During 2025-26, DOC worked with iwi and hapū, hunters, industry, landowners and community groups to support implementation of the Ruahine Adaptive Wild Deer Management Plan and identify opportunities to improve management outcomes.

Key initiatives included:

- Supporting a New Zealand Deer Stalkers Association (NZDA)-led management hunt.
- Supporting the development of an iwi-led hunt to increase community participation in wild deer management.
- Worked with landowners and partners to clarify public access along the Makaretu Stream and improve communication between landowners and park users seeking access to Purity Hut.
- Working alongside iwi and hapū through field visits, hui and regular engagement to support implementation of the Ruahine Adaptive Wild Deer Management Plan.
- Built relationships with rural communities through catchment care groups, landowner meetings and community events.
- Maintained engagement with a broad range of stakeholder groups including Regional Councils, the Ruahine User Group and the Ruahine Whio-Kiwi Collective.

Deer Advisory Group

The Deer Advisory Group continued to provide advice and bring together perspectives from iwi and hapū, hunters, industry, conservation, farming, recreation and community interests. During 2025-26 members contributed to finalisation of the Ruahine Adaptive Wild Deer Management Plan, reviewed management results and provided input into future programme priorities and operational planning.



Photo: Ruahine Deer Advisory Group 2025, credit: DOC

Wild deer management

Wild deer management combined DOC-led aerial management in the Northwest MU, an NZDA-led management hunt, and commercial harvest. Together, these management activities removed **1,075 deer in 2025-26**, compared with **951 deer in 2024-25**.

Table 1. Wild deer removed by management activity, 2024-25 and 2025-26.

Management activity	Deer removed 2024-25	Deer removed 2025-26
DOC-led aerial management (Northwest MU)	727	857
NZDA management hunt	81	70
Commercial harvest	143	148
Total	951	1,075

- DOC-led aerial management continued to focus intensive effort within the Northwest MU and accounted for the majority of wild deer removed.
- The NZDA management hunt operated across multiple management units in Ruahine Forest Park, supporting recreational hunter participation in deer management.
- The commercial harvest incentive continued to test opportunities to increase the contribution of commercial operators to deer management.

Detailed results, maps and operational observations for each management activity are provided in **Appendix 2**. Comparative information on management cost and effort is provided in **Appendix 3**.



Photo: Hunters attend a pre-flight briefing, NZDA Management Hunt, March 2026. Credit: NZDA

Monitoring, evidence, and learning

What we know

The best available park-wide information on deer abundance and browse impacts remains the monitoring completed in 2023 and reported in 2024¹. The monitoring identified widespread browse impacts and relatively high deer abundance across many parts of Ruahine Forest Park. Operational observations, community feedback, hunter observations and discussions with iwi continue to support the conclusion that deer remain over-abundant in many parts of the park.

Monitoring undertaken in 2025-26

Monitoring commenced in the Northwest MU in late 2025 using the Seedling Ratio Index (SRI), which measures the effects of browsing on forest regeneration, and the Faecal Pellet Index (FPI), which provides an index of relative deer abundance. Field work will be completed and analysed during 2026–27.

Northwest MU monitoring was initiated to establish baseline information and assess ecological response to sustained deer management in the park's primary management area.

Building for the future

Development of an ecological monitoring framework, structured around the park's six management units, is a priority action in the 2026-27. This work was deferred while the Ruahine Adaptive Wild Deer Management Plan was finalised, ensuring future monitoring aligns with the plan's objectives and management priorities.



Photo: Wild deer in the Northwest Management Unit 2025. Credit: Kawakawa Environmental

¹ [Wild animal monitoring - Ruahine Forest Park](#) (DOC report 2024)

Looking ahead

The focus for 2026-27 is to build on the foundations established through completion of the Ruahine Adaptive Wild Deer Management Plan. Continued management, completion of Northwest MU monitoring, development of a park-wide ecological monitoring framework, and stronger partnerships will support adaptive management and help guide future deer management decisions.

Key priorities include:

- 1. Continue and refine coordinated deer management**
 - Maintain concentrated DOC-led management in the Northwest MU, with 50 hours of aerial hunting planned.
 - Continue the commercial harvest incentive with a target of 250 deer and support further recreational hunter-led management hunts.
 - Work with hunters, iwi, the Game Animal Council, landowners, and other partners to reduce barriers to recreational hunting and increase deer harvest, by improving access and focusing hunting effort where it can make the greatest contribution to deer management outcomes.
- 2. Complete Northwest MU monitoring and develop a monitoring framework**
 - Complete monitoring field work and analysis in the Northwest MU to establish baseline information and assess ecological response to sustained deer management in the park's primary management area.
 - Develop a park-wide monitoring framework. The initial focus will be development of the ecological monitoring component. Cultural and social dimensions of monitoring will continue to be explored with iwi, hunters, communities and other stakeholders.
- 3. Strengthen engagement and partnerships**
 - Continue supporting active iwi participation in programme development, implementation and future monitoring.
 - Maintain the Deer Advisory Group as a key forum for engagement, information sharing and collaborative problem-solving.
 - Continue developing relationships with Ruahine hunters, landowners, communities, catchment care groups and relevant agencies as opportunities for collaboration emerge.
- 4. Improve programme learning:** Use operational results, monitoring and stakeholder feedback to refine future management actions.



Photo: NZDA Ruahine Management Hunt March 2026. Credit: NZDA

Appendix 1. Progress against the 2025-26 Operational Plan

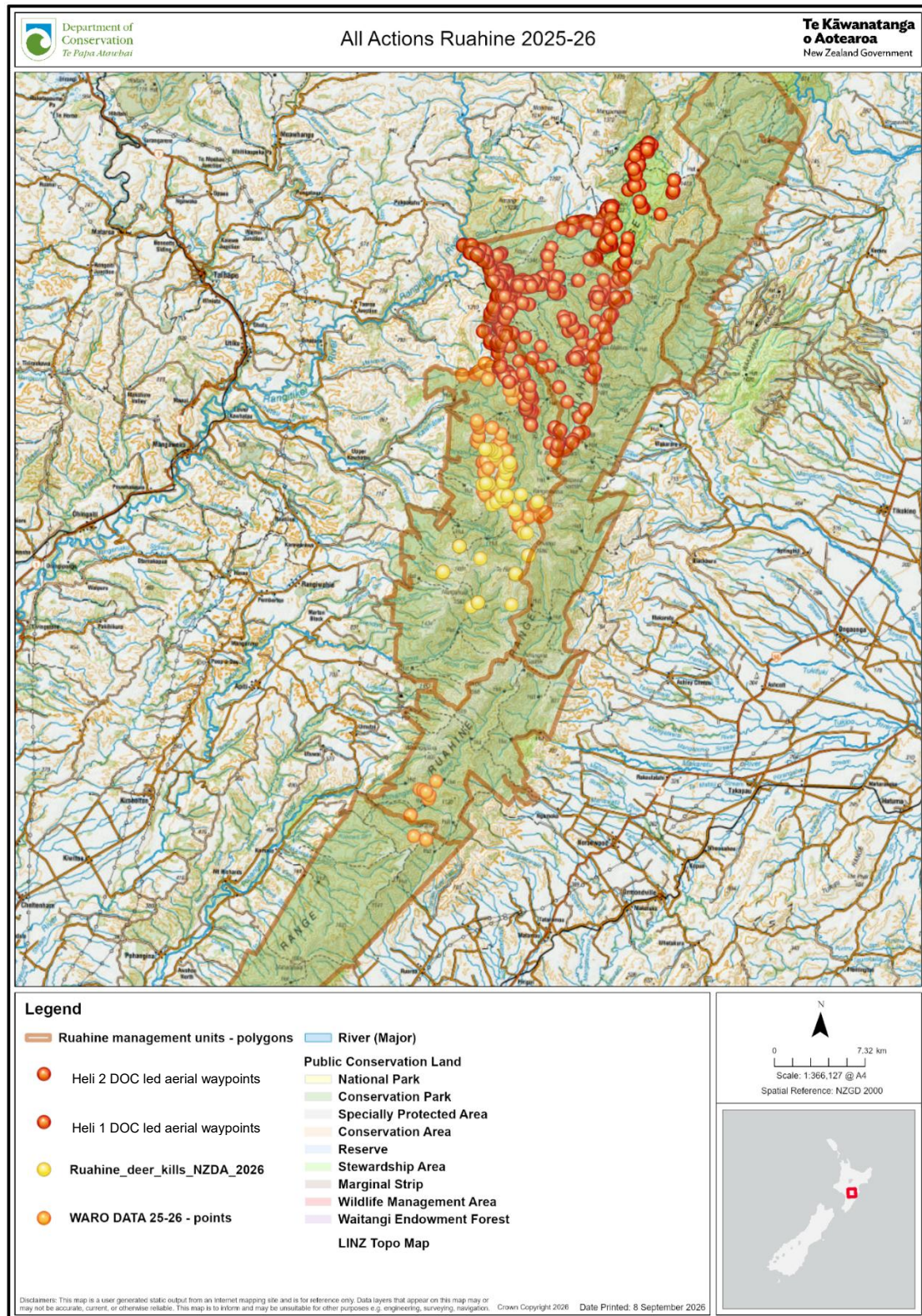
Table 2. Progress against the actions identified in the 2025-26 Annual Operational Plan.

Area	Action	Who	When	Status	Progress
Working together	Continue to build relationships with iwi/hapū to enable incorporation of Te Ao Māori concepts and storytelling	Iwi & DOC	Ongoing	In progress	A hui hosted by Tamatea Pokai Whenua provided a basis for strengthening iwi relationships around shared Ruahine interests.
	Delivery of planning wānanga with iwi/hapū	Iwi & DOC	Jun 2026	In progress	Iwi Māori DAG members explored options for greater participation, including iwi-led hunts and cultural monitoring.
	Explore design, delivery workshop about wild meat harvest	DOC & Deer Advisory Group	Jun 2026	Not completed	Need to be reviewed in 2026-27.
	Continue to facilitate meetings and communications for the Deer Advisory Group	DOC	Ongoing	In progress	Meetings held October 2025 and June 2026 with online sessions initiated from 2026. Regular email news updates were maintained through 2025-26.
	Examine opportunities to overcome barriers to recreational and commercial hunting sectors from contributing to management that benefits conservation outcomes	DOC & Deer Advisory Group	Dec 2025	In progress	Work continued to improve access and identify barriers to recreational and commercial hunting, such as pesticide settings affecting commercial harvest. A submission to Horizons Regional Council Regional Pest Management Plan has been prepared (by DOC) on pesticide use. Attendance at Ruahine User Group meetings broadened engagement with park users and other stakeholders.
	Connect with surrounding landowners, rural communities and Regional Councils	DOC	Mar 2026	In progress	Worked with landowners and partners to clarify public access along the Makaretu Stream and improve contact arrangements between Purity Hut access landowners and park users. Continued engagement with Manawatū catchment care groups and established regular contact with Horizons and Hawke's Bay Regional Council representatives to align management activities where relevant.
Planning	Define management units and prioritise management, hunting effort, and monitoring across Park	DOC	Jun 2026	Completed	Six management units were defined in the Deer Plan. These will guide monitoring and prioritisation of management effort, with intensive management currently focused on the Northwest MU.
Deer management	Continue to enable recreational hunter-led management hunts and explore ways hunters can contribute	NZDA, GAC, & DOC	Jun 2026	Completed	Supported the NZDA management hunt in March 2026.
	Incorporate iwi/hapū-led management hunt	DOC & Iwi	Jun 2026	In progress	Iwi Māori DAG members met to explore options for iwi-led management hunts and associated actions.
	Develop a system or survey to get feedback on the recreational hunting experience	NZDA, GAC, & DOC	Jun 2026	Carried forward	Recreational hunter experience and participation measures will be considered through development of the monitoring framework.

	Continue to implement a wild meat processor incentivisation operation incorporating lessons learned into the new contract	DOC, & commercial industry	Jul 2026	Completed	Commercial harvest incentives were implemented and maintained throughout 2025-26 to support ongoing participation by the commercial sector.
	Continue to implement DOC-led aerial and ground hunting operations at NW management unit	DOC	Jul 2026	Completed	DOC-led deer management continued in the Northwest Management Unit during 2025-26.
Monitoring & reporting	Collate and analyse kill and track log data from hunting activities, ensure this information is sharable and accessible on the website	DOC Wild Animals Team	Jul 2026	Completed	Data were collected from all management activities and reported through this annual report.
	Analyse and report on monitoring of browse impact at priority MU to assess efficacy of actions	DOC Monitoring Team	May 2026	In progress	Monitoring within the Northwest Management Unit commenced in 2025-26, with fieldwork and analysis continuing into 2026-27.
	Development of monitoring framework for Park	DOC Monitoring Team	May 2026	Carried forward	Development was delayed while the Ruahine Adaptive Wild Deer Management Plan was completed. The ecological monitoring framework is prioritised for 2026-27.
	Produce operational report for 2025-26	DOC & Deer Advisory Group	Jul 2026	Completed	2025-26 Annual Operational Report completed September 2026.
	Develop annual operation plan for 2026-27	DOC & Deer Advisory Group	Jul 2026	Completed	2026-27 Annual Operational Plan completed in August 2026.

Appendix 2. Detailed deer management results 2025-26

This appendix provides detailed operational results for the three deer management activities. The map below shows recorded deer removal locations across these activities.



DOC-led aerial management

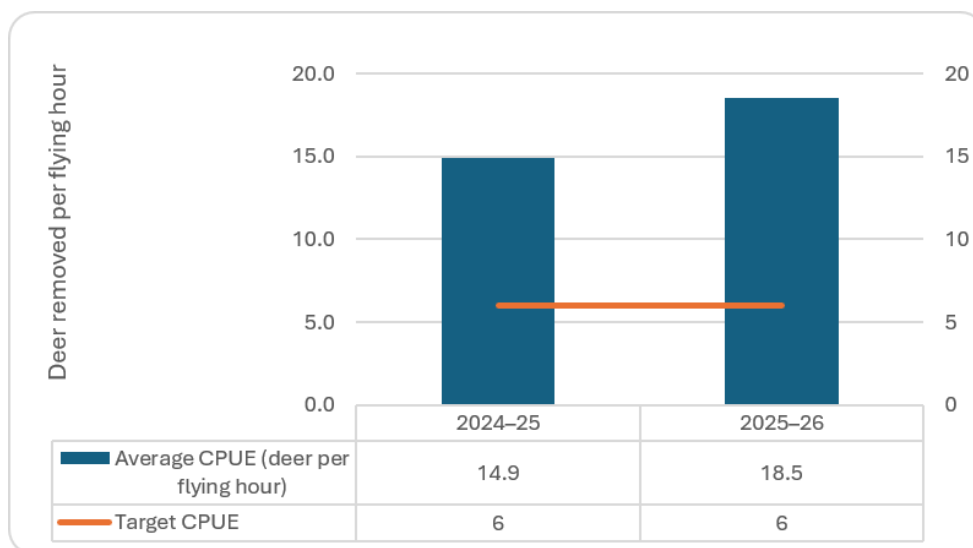
The Northwest Management Unit (MU) remained the focus of DOC-led deer management in 2025–26. This approach concentrates sustained management effort within a defined priority area, rather than spreading DOC control across Ruahine Forest Park. The Northwest MU contains important biodiversity values and overlaps the Northern Ruahine priority ecosystem area.

The purpose of this work is to reduce deer abundance sufficiently to support ecological recovery, while building our understanding of the level and duration of management effort needed to achieve and maintain deer suppression.

Summary 2024-25 2025-26:

	2024-25	2025-26
Deer removed	727	857
Hunting runs completed	15	18
Hunting hours flown (excludes ferry)	49	46.3
Average CPUE ² deer removed flying hour	14.9	18.5

The operational target is to reduce catch per unit effort (CPUE) to less than 6 deer removed per flying hour within the allocated hunting hours. This operational benchmark was based on DOC's operational best practice and is not a threshold for ecological recovery. CPUE provides an operational indicator of the number of deer being encountered and removed for the effort applied. It is not a direct estimate of deer abundance across the whole management unit.

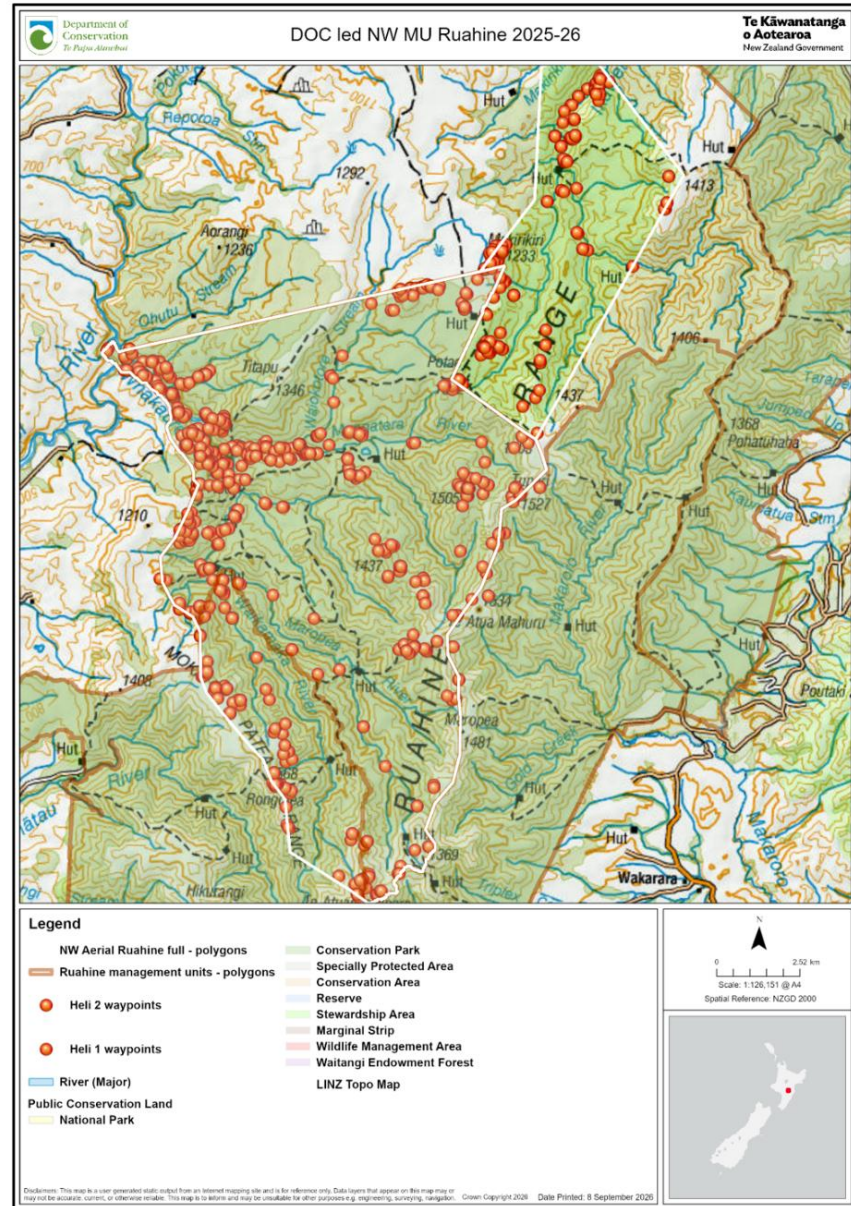


Average CPUE increased from 14.9 deer per flying hour in 2024–25 to 18.5 in 2025–26 and remains well above the operational target of less than 6 deer per flying hour. The reason for this increase is uncertain. Possible contributing factors include increasing operator experience and familiarity with the management area, as well as the timing of individual hunting runs.

² CPUE = Catch Per Unit Effort, measured here as the number of deer removed per flying hour

Findings and implications

- CPUE remains above the suppression target, indicating that continued management effort is required.
- Deer continued to be encountered around areas with abundant feed, including slips, clearings and river faces.
- Deer were easier to detect and remove in open and semi-open terrain than in dense forest. This difference will continue to be considered when planning and assessing aerial management effort.
- Control was limited to DOC-administered land. Movement of deer between public conservation land and adjoining private land may influence management outcomes, highlighting the importance of engagement with neighbouring landowners and complementary management across land tenures.
- By June 2026, operators reported finding fewer deer in some previously productive areas and were ranging more widely through the operational area, although overall CPUE remained relatively high.



NZDA-led management hunt

DOC continued supporting the NZDA-led management hunt by enabling helicopter landings and supporting helicopter transport costs. The management hunt:

- Occurred over 4 days from 5-9 March 2026
- Involved 30 volunteer recreational hunters operating across 11 sites (see map) targeting hinds
- Collected information on hunter effort and movement across the hunt areas, alongside harvest data.

Findings and implications

70 deer were removed in total. However, several factors had an impact on the number of deer removed including:

- Poor weather required a date change, which created challenges for coordinating volunteer hunters.
- Hunter effort was likely spread across too many sites relative to the number of deer removed. Future hunts may cost less and achieve better results by concentrating effort in fewer priority areas.
- There was some operational overlap with DOC-aerial management and the management hunt in the Northwest MU, indicating that timing and coordination could be improved.
- 61 deer were removed from southern sites, compared with 9 from northern sites.
- The lower number removed from northern sites may partly reflect the timing and overlap of management activities.
- There are also opportunities to coordinate with adjoining landowners to facilitate access to some areas of the park and improve meat recovery where practical.



Commercial harvest

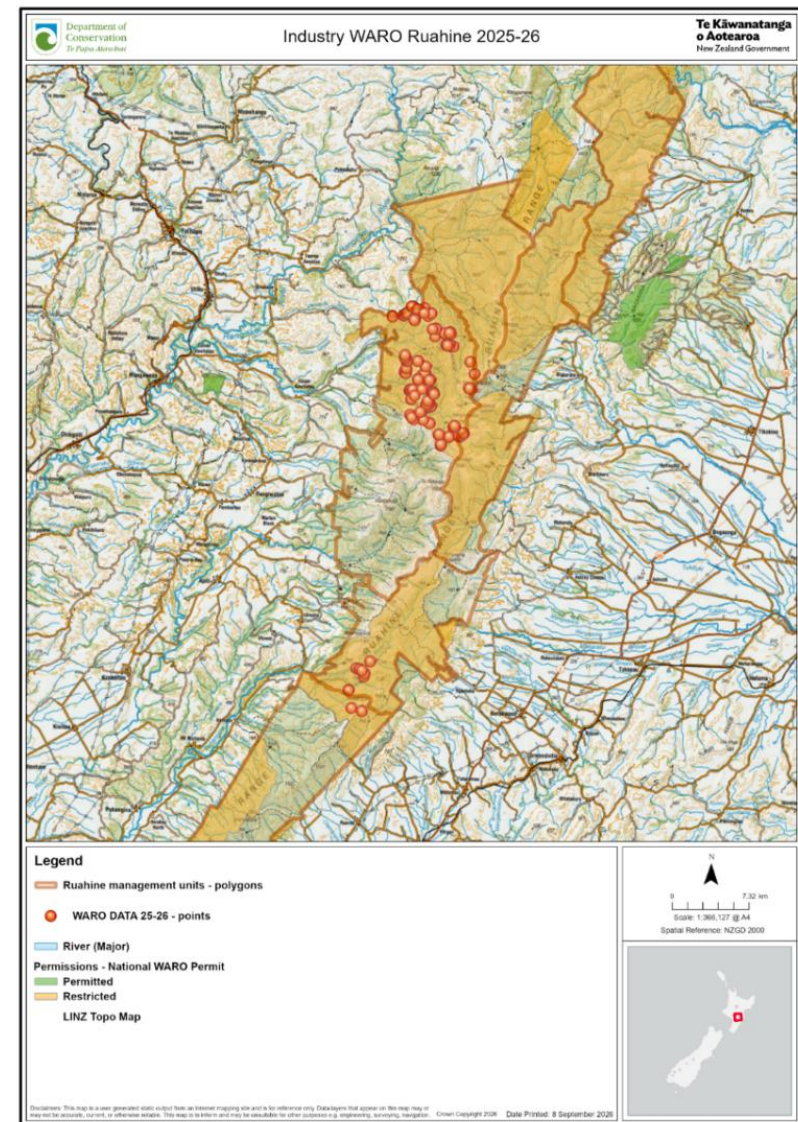
Commercial harvesting through a meat industry/WARO contract continued this year to increase opportunities for industry to help reduce deer abundance and impacts and improve conservation outcomes in Ruahine Forest Park. Harvest occurred under normal WARO permit conditions and seasonal restrictions – the WARO season starts May 1 and ends November 31 annually in Ruahine. The contract included a target harvest of 500 deer. It sought to encourage harvest of lighter-weight animals through incentive payments for qualifying hinds under 44 kg and stags under 41 kg.

Findings and implications

From 1 July 2025 to 30 June 2026, **148 deer were harvested**. Several factors impacted the number of deer able to be harvested including:

- The National Predator Control Programme completed stage 2 in northern Ruahine March 2025, with the pesticide cautionary period of 4 months restricting some areas available for commercial harvest.
- Alternative harvesting opportunities on private land were generally more commercially attractive, reducing operator participation within Ruahine Forest Park.
- The current incentive and contract settings may not yet be sufficient to offset the higher costs and logistical challenges associated with harvesting deer within the park.
- Poor spring weather further limited harvest opportunities before the WARO season closed at the end of November 2025.

Despite not meeting the original target, the contract re-established commercial harvesting within the park after activity had previously declined to zero.³ The contract will continue in 2026-27 with a revised target of 250 deer.



³ See: [Wild Animal Recovery Operations data: Managing introduced wild animals](#)

Appendix 3. Deer management metrics

This appendix presents selected measures of management effort, cost, and deer removal across the main deer management activities undertaken in 2025–26. The deer management methods have different objectives and are not directly comparable. Results should therefore be interpreted alongside the specific purpose and operational context of each activity.

- **DOC aerial management:** Intensive deer reduction in priority biodiversity areas.
- **NZDA management hunt:** Deer removal and recreational hunter engagement.
- **Commercial harvest:** Testing industry contribution to long-term deer management.

Total deer removed. This figure compares deer removals by management method in 2024-25 and 2025-26.

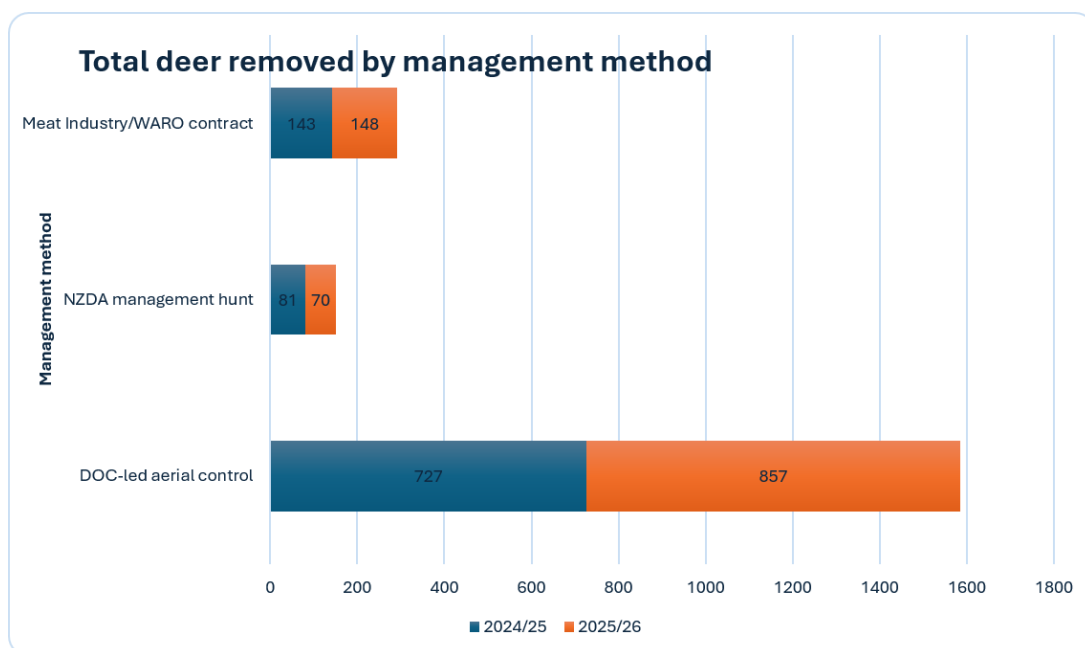


Table 3. Costs for each management method.

Management action	Deer removed	DOC cost	2025-26 DOC cost/deer	Other contributions	2025-26 total recorded cost/deer
DOC-led aerial	857	\$139,592	\$163	0	\$163
NZDA (southern area only)	61	\$15,904	\$261	\$2,060	\$294
Commercial harvest	148	\$15,424	\$104	0	\$104

The management methods have different objectives, scales and operating constraints. Costs and deer removed should therefore be considered alongside the purpose and context of each activity, rather than as a direct comparison of management effectiveness.

Note: The 2025-26 NZDA figure represents the southern component of the management hunt only (61 deer). The whole-hunt figure is excluded to provide a clearer representation of the costs associated with this component of the activity; the northern component of the hunt (9 deer) is excluded in this analysis.

Table 4. Catch per unit effort (CPUE)

Management method	2024–25	2025–26	Unit
DOC-led aerial management	14.9	18.5	deer/flying hour
Commercial harvest	7.2	7.8	deer/hunting hour
NZDA management hunt	1.36	0.71	deer/hunter-day

CPUE measures the number of deer removed relative to hunting effort. CPUE is included to show changes in deer removed relative to effort within each management method over time. It is calculated differently for each method and can be influenced by hunting location, access, weather and operational design. CPUE should therefore not be used to compare performance between management methods or interpreted as a direct measure of deer abundance.

Note: NZDA CPUE is based on recorded hunter effort, with one hunter-day equivalent to eight hunter-hours. The 2025/26 figure is based on 70 deer removed over 790 recorded hunter-hours (98.75 hunter-days) for the entire hunt.

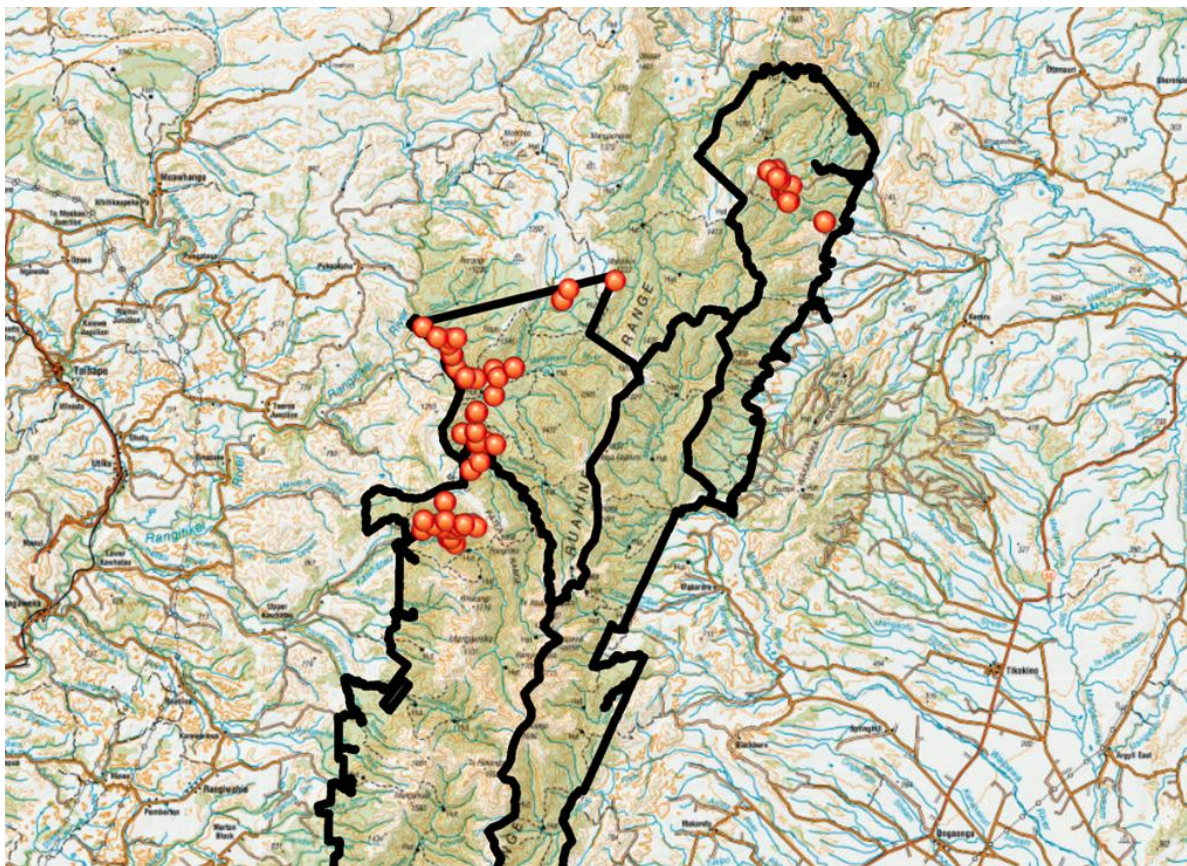
Appendix 4. Thermally Assisted Aerial Control (TAAC) assessment

In June 2026, additional funding enabled DOC to undertake a targeted Thermally Assisted Aerial Control (TAAC) assessment across three areas of Ruahine Forest Park. This was the first use of TAAC in the park. The assessment improved understanding of deer and goat distribution while enabling targeted control where appropriate.

The assessment covered Whakaurekou in the Northwest Management Unit, Big Hill in the Northeast Management Unit, and the Kawhatau catchment in the West Management Unit. Consistent with management priorities, control focused on deer within the Northwest Management Unit, while surveys in the Northeast and West Management Units were focused on goat control with a secondary objective to improve understanding of deer distribution across those management units. Wild goat detections were controlled where encountered.

Results

- 6.5 detection flight hours were completed
- 113 deer detections were recorded by contractors using the TAAC methodology (detections, not estimates of unique animals)
- 63 deer were controlled within the Whakaurekou assessment area in the Northwest Management Unit
- 5 goats were detected and controlled in the Northeast Management Unit



Map: Whakaurekou, Big Hill and Kawhatau coverage & detections deer/goats June 2026

Table 5. Deer detection rates

Area	Detection rate (deer detection per flight hour)
Big Hill (Northeast MU)	10.0
Whakaurekou (Northwest MU)	17.8
Kawhatau (West MU)	31.1

Detection rates varied considerably across the three assessment areas, reflecting differences in terrain, vegetation cover, and deer abundance. As the assessment was not designed to provide standardised comparisons between sites, detection rates should be interpreted as indicative only. Nevertheless, the results provide a useful snapshot of deer distribution across the assessment areas and will help inform future monitoring and management priorities. As this was the first use of TAAC in Ruahine Forest Park, the methodology may be considered for future monitoring, although its relatively high cost would need to be weighed against the benefits it provides.



Photo: Mob of wild deer spotted on land adjacent to Ruahine Forest Park, May 2026. Credit: DOC