

# St James feral cat bait trial update

## April 2025

### Background

Feral cats present a significant threat to New Zealand's native fauna. Currently there are no methods available to control feral cats at landscape scale. The Department of Conservation is developing a new bait to address this issue.

In winter 2024 a trial of this new bait was carried out in the Edwards Valley of the St James Conservation Area. The purpose of this trial was to test the efficacy of the bait when sown aerially from a helicopter. This followed two previous hand laid trials which showed that the bait is effective at controlling feral cats without native birds and deer consuming it. The Edwards Valley site was chosen as it has high numbers of feral cats and the risk to native species is low, with no kea present.

### Baiting Summary

The bait used in this trial was an 18g rabbit meat sausage, with each bait containing 4.5mg of sodium fluoroacetate (1080, 0.025%).

Within the study site baits were applied manually from a helicopter on a 100m-by-100m grid over a 5000-ha treatment area, with one bait applied at each point. A sample of baits were also hand laid in front of trail cameras to monitor interactions of animals with the bait.

In mid-August a prefeed application was undertaken in which non-toxic bait was aerially applied across the treatment area to cue feral cats into the food source.



New feral cat bait used in toxic trial.

Source: DOC

This was followed by the application of toxic bait in early September with 4863 toxic baits aerially deployed across the treatment area.

### Monitoring Summary

To monitor the effectiveness of the trial, a sample of feral cats in the treatment area were captured in June and fitted with GPS-VHF collars so they could be monitored through the trial.

Additionally, feral cats were monitored using a grid of trail cameras in the treatment area to allow us to determine the abundance of feral cats before and after the toxin application.

Tracking tunnels were used to monitor the effect of the operation on the mustelid population with surveys undertaken before and after the operation in July and September.

Trail cameras were also used to observe how animals interact with the bait.



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## Results

### Feral cat control

At the time of bait application, ten of the feral cats fitted with GPS-VHF collars were within the treatment area. Nine of these feral cats consumed bait and died following the toxin application.

Camera surveys found that following the application of toxin, feral cat detections in the treatment area decreased to nearly undetectable levels, with 63 feral cat detections in July before toxin was applied, and just one detection in the survey following toxin application.

For comparison during the same period in the nontreatment site, where bait was not applied, there were 13 feral cats detections in the July survey and 7 in the September survey.

Over this period there was also a decrease in stoat detections in the nontreatment site, with 99 stoat detections in the July survey and 23 in the September survey, considerably higher than the number of stoat detections in the treatment area.



Stoat detected on trail camera in the treatment area.



Feral cat fitted with GPS-VHF collar captured at a monitoring camera in the treatment area during pre-operational monitoring.

Ferret activity declined by 100% in the treatment area with nine detections prior to bait application and none following. In the nontreatment area the number of ferret detections increased from one in the July survey to 14 in the September survey.

Table showing number of detections of species in camera surveys in July before bait application in the treatment area and in September following bait application.

| Species   | Treatment Area |       | Nontreatment Area |       |
|-----------|----------------|-------|-------------------|-------|
|           | Before         | After | Before            | After |
| Feral cat | 63             | 1     | 13                | 7     |
| Stoat     | 66             | 3     | 99                | 23    |
| Ferret    | 9              | 0     | 1                 | 14    |

### Mustelid control

Tracking tunnel monitoring of mustelids (weasels, stoats, ferrets) showed a decline in tracking rates following the toxin application. Mustelid tracking indices in the treatment area were 9% (SE±5) before the application and 0% after. This was also observed in camera surveys with 66 stoat detections prior to toxin application, and 3 following.

## Bait consumption

Monitoring of individual baits using trail cameras observed consumption of non-toxic and toxic bait by feral cats, hedgehogs, mice and possums, while stoats were observed removing bait.

Pigs were captured on cameras twice, with animals in both encounters ignoring the bait. One deer was observed to encounter bait and only sniffed the bait.

The only native species captured on bait uptake cameras were the harrier and New Zealand pipit. In the eight observations of New Zealand pipit with bait, all individuals ignored the bait. Harrier were observed consuming non-toxic prefeed bait, however the three encounters of harrier with toxic bait showed them investigating the bait but not fully consuming it. Harrier activity in the treatment area did not change from before to after bait application, with 16 harrier detections in the camera survey before bait application and 19 following.

## Next steps

- Further analysis of feral cat GPS collar data and density modelling are being undertaken and will be presented in the operational report and in a scientific paper.
- To continue to gather data for this bait a second trial has been undertaken at Macraes Flat in Otago in March 2025, and a third trial is planned for winter 2025 in Southland.
- Monitoring of bait and carcasses in the treatment area is underway to determine when the caution period can be lifted.

## Managing Risk

The treatment area is still under a caution period with monitoring being undertaken to determine when this can be lifted, and normal activity can resume. It is estimated that the caution period will be in place for ten months following bait application.

1080 is poisonous to humans and domestic animals, dogs are particularly susceptible and at risk until poisoned carcasses have broken down.

Warning signs are in place indicating that pesticide residue may still be present in baits and carcasses, these will be removed once the risk has passed.

Do not take dogs into the treatment area until the caution period is over, and warning signs have been removed.

Risks can be eliminated by following these rules:

- DO NOT touch bait
- WATCH CHILDREN at all times
- DO NOT take dogs into or near the operational area. Poison baits and carcasses are DEADLY TO DOGS.
- DO NOT EAT animals from this area or within the buffer zone outside this area. The standard buffer zone is 2km for deer and pigs, 200m for rabbits and 1km for hares and possums.

## Contact us

For more information please contact:

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## Trial Site

This map outlines the treatment area where the feral cat bait trial was undertaken in August-September 2024 in the St James Conservation Area.

