

Pest Control in New Zealand

An overview of deer, pig, cat and rabbit control.

Glen COULSTON



Le 19 sept 2022, auditorium de la CPS, Nouméa

Introduced Pest mammals

- 21 Herbivores
 - Deer - Sika, fallow, red, elk/wapiti, whitetail, rusa and sambar, Himalayan Thar, Chamois
 - Feral goat, Occasionally feral cattle, sheep and horses.
 - Rabbits and hares
 - Wallaby - bennetts, swamp, brushtail rock, parma and darma
- 7 Omnivores
 - Feral Pigs, Possums, Hedgehogs
 - Rats - Ship, Norway, Pacific and mice.
- 5 Carnivores
 - Mustelids – ferret, stoat, weasel
 - Feral cats and occasionally feral dogs

National Situation

Deer Populations:

Prior to 1970s the deer population was in plague numbers de-vegetating many natural areas of New Zealand.

1970-2000 deer numbers were brought down and kept low in NZ by wild venison recovery industry ground and then aerial shooting. In the 2000s the venison export industry collapsed and deer numbers have surged in excess of 1970 numbers in some remote regions of the country. This is exacerbated by an increase in changing land uses providing more habitat.



Pig populations:

Steady increase with more habitats and warmer, wetter conditions suiting this R-selective species. A resurgence in hunting is fostering spread of pigs.

A highly protected food and recreational resource in many rural communities. A lot of regional variation in their value.

Pigs are a significant vectoring agent for the disease (*phytophthora agathus*) called Kauri dieback, as it attacks and kills NZ's ancient Kauri trees (*Agathus australis*). *Tane Mahuta* the largest tree is 2000yrs old tree.



Rabbit populations:

R selective reproduction.

Regional population bounce between plaque numbers and low. Massive variation.

Rabbit Hemorrhagic Disease (RHD) continues to act as a pressure release valve when rabbit populations spike in favourable conditions.

Devastate drier landscapes.



Feral cats:

Deemed to be an invasive and problematic species

Thrive in any habitat without population control. Their cryptic and pervasive presence in the natural environment is rarely seen but always present. Cat lover groups and residential urban areas exacerbate the issue with uncontrolled breeding and rescue attempts and little regulation of cat ownership.

“For every one you see.... there are 40 you do not see”

They are wary, nocturnally driven, and, hard to kill.

Significant impactors of lizards, insects, ground and tree nesting birds and bats.

No legislative regulation of cats in NZ.

A nation with one of the highest rates of domestic cat ownership in the world.

In the space of 7 days, one cat killed a total of 102 short tail bats, and these only the ones that were found. 24 lizards removed from the stomach of one cat.



Feral cat eating a parakeet on Auckland Island ©: Finlay Cox

A changing environment, climate and social context

On peri-urban areas the expansion of lifestyle residential properties have excluded traditional hunting techniques with dogs and made firearms use increasingly difficult.

Vast areas of New Zealand farm land are being revegetated for Carbon storage producing millions of hectares of improved habitat for pests. Forestry companies are having to invest in pest control for protecting their newly planted forests but is only short term to protect plantings and saplings.

For deer and pigs

Recreational, meat and trophy hunting, is increasing because it has got easier to shoot an animal. **Has proven to be inadequate as a management tool on its own.** Too few animals are being harvested.

An ever-increasing environmental conscience in NZ Society.

Many communities now fund their own pest control to protect their natural habitats. Wealthier communities fund pest control while less wealthy undertake the pest control themselves

NZ central and local government agencies have ramped up funding for animal pest management. Supporting landowners with funding grants, and delivering pest control contracts in high value priority areas.

Numbers of professional pest controllers in NZ are increasing as resources by communities, government, farmers and forestry are being put into the problem.

ADAPTIVE MANAGEMENT STRATEGIES

Quadruple bottom line outcomes are required in managing an invasive pest that has become a part of societal fabric:

In New Zealand hunting and gathering of food has always been a strong part of our heritage.

Balancing environmental, cultural, social and economic outcomes and values.

Department of Conservation is the lead agency under the Wild Animal Control Act. **Regional Council's** have powers under the Biosecurity Act as well.

Control intensities are across a spectrum of intensity:

1. **Eradication** in sites of highest biodiversity and isolated populations that can be entirely removed.
2. **Sustained** low density in a wider landscape of high value habitats.
3. **Moderate** numbers in the low value and modified landscapes.
4. **Managed game** on private properties providing higher numbers for recreational and game pursuit.

Resources cannot extend far enough for intensified control everywhere. Social, cultural and economic pressures are strong for easier access to game animals.

Te ara ki mua:

A framework for adaptive management of wild goats, deer, wild pigs, tahr, and chamois

Purpose

This document (Te Ara ki Mua) gives effect to Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy (ANZBS) 2020 as an adaptive framework for managing goats, deer, pigs, tahr, and chamois. Te Ara ki Mua aims to balance the different and sometimes competing values held about these animals and their management.

The challenge

For indigenous biodiversity to thrive, the ecological impacts of goats, deer, pigs, tahr, and chamois need to be managed while respecting the cultural, recreational, and economic values that these animals may provide.

- Introduced wild animals have no natural predators, which means that populations can increase quickly in some places. As a result, maintaining a balanced ecosystem requires management.
- Where there are too many wild animals, they can compromise the resilience, structure, and diversity of forests, shrublands, and native grasslands.
- Overpopulation of wild animals can impact on ecosystems and on the health and quality of the animals, on other species, and can lead to range expansion.

Te ara ki mua values

- Ecological:** Ecological resilience is protected or restored, and endemic biodiversity thrives. Healthier ecosystems are more resilient to the impacts of climate change.
- Cultural:** The people of Aotearoa New Zealand are effective kaitiaki for the mauri of te taiao and are able to exercise their right to access mahinga kai.
- Recreational:** There are social, health, and wellbeing benefits to many people from an involvement in hunting activities.
- Economic:** People prosper through hunting, farming, and commercial activities that rely on access to wild animals. Investment in regenerating shrubland and native plantings is protected.

Scope

This framework applies to wild animals managed under the Wild Animal Control Act 1977: Red deer (*Cervus elaphus scoticus*), Wapiti (*C. elaphus nelson*), Sika deer (*C. nippon*), Sambar (*C. unicolor*), Russa deer (*C. timorensis*), Fallow deer (*Dama dama*), White-tailed deer (*Odocoileus virginianus*), Himalayan tahr (*Hemitragus jemlahicus*), Chamois (*Rupicapra rupicapra*), Wild goats (*Capra hircus*), Wild pigs (*Sus scrofa*).

The Game Animal Council Act 2013 defines deer, tahr, chamois, and wild pigs as game animals. A key objective of the Game Animal Council is to improve the management of game animals for recreation, commerce, and conservation. Wild goats are subject to the Wild Animal Control Act 1977 only and are not part of the Game Animal Council's statutory responsibilities.

Context

Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy 2020

Te Ara ki Mua Framework for adaptive management

- Regional collaborative plans
- Site-based adaptive management
- Monitoring and analysis of impacts of wild animals

Implementation

In partnership with whānau, hapū, and iwi, the Department of Conservation and Game Animal Council will implement this framework. It is guided by the overarching direction of Te Mana o te Taiao ANZBS 2020.

L-R: Forest understorey Impacted by wild animals Photo: Supplied Young feral goat in the tussock Photo: Supplied Red deer group Photo: Supplied Nanny tahr Photo: Supplied Hunter with a rifle, Ashburton Lakes Photo: Supplied

June 2020



ANZBS Goals

Wild animals are actively managed across the sector at present. The ANZBS 2020 describes goals for further reducing the impact of introduced browsers.

2025 The impacts of introduced browsers, including valued introduced species (pigs, deer, tahr and chamois), on indigenous biodiversity have been quantified, and plans for their active management have been developed with Treaty partners, whānau, hapū, iwi, Māori organisations, and stakeholders.

2030 Introduced browsers, including valued introduced species, are actively managed to reduce pressures on indigenous biodiversity and maintain cultural and recreational values.

2050 Introduced browsers, including valued introduced species, have been removed from high priority biodiversity areas and threatened ecosystems and are under ongoing management elsewhere to maintain functioning ecosystems and cultural and recreational values.

Three pou (or pillars) provide direction and focus to guide toward the change needed.

Tiaki me te whakahaumanu: Protecting and restoring

Browsing pressure is reduced where necessary to enhance biodiversity, support ecosystem resilience, and improve the quality of game animals.

- Existing goat control is enhanced and expanded to new sites, especially in areas with vulnerable endemic plant communities.
- Priority sites for adaptive management are identified and site-based plans are developed through engagement and partnership with whānau, hapū, iwi, and stakeholders.
- Collaborative efforts prevent further range expansion by wild animal species.
- Deer-free areas are defended and maintained.
- Capability and capacity for sustainable recreational and commercial harvest is valued and maintained.
- Tahr are managed under the Himalayan Tahr Control Plan 1993, with hunter-led management developed in places.

Whakahau: Empowering action

Efforts are coordinated and capacity is enhanced across the people, organisations, and agencies involved in wild animal management.

- The Department of Conservation fulfils the Minister of Conservation's responsibilities under the Wild Animal Control Act 1977, and works in partnerships with whānau, hapū, iwi, and stakeholders to improve outcomes.
- The Game Animal Council seeks to improve the management of game animals including through the provision of advice to the Minister of Conservation.
- Management plans are developed locally and empower communities and landowners to participate in impactful wild animal management.
- Adaptive management provides a forum for collective action, learning and balancing of different values at place.
- Actions are underpinned by evidence, including mātauranga Māori and science.
- Skill and capacity needs are analysed to inform programmes to develop capability across the sector.
- Hunter-led management is encouraged where applicable.
- New Zealanders have access to quality recreational experiences and hunters are provided the skills and knowledge to hunt safely and successfully.
- Commercial activities that utilise wild animals are supported, contribute to good management outcomes, and are regulated where necessary.
- New Zealanders understand the role of wild animal management to achieve and maintain ecological resilience.

Tūāpapa: Getting the system right

An effective system for wild animal management is the foundation for collective action.

- Management agencies partner with tangata whenua and collaborate with stakeholders at place. Mātauranga Māori is integral to decision-making, design, and delivery.
- Central leadership, oversight, and coordination provide prioritisation and efficient use of resources.
- The impacts of wild animal populations are monitored to inform decision-making at place. Monitoring and analysis are undertaken to understand the outcomes of management on the Te Ara ki Mua values.
- Wild animal management is reviewed at a system level to identify the shifts required for step change in performance. Areas for development or improvement include:
 - Systems for knowledge, science, data, and innovation
 - Systems for prioritising action at place
 - Implementing roles and responsibilities to best effect under relevant legislation
- Legal and policy tools to balance conservation, recreational and commercial interests in hunting

L-R: Successful hunter with stag Photo: Supplied, Red deer hind Photo: Supplied, Wild pig monitored by trail camera Photo: Supplied, Fallow deer buck Photo: Supplied, Successful tahr hunt Photo: Supplied

June 2022



Predator Free 2050 <https://predatorfreenz.org/>

The Predator Free New Zealand Trust was established in 2013 to connect and energise all New Zealanders towards a predator free Aotearoa New Zealand to enable our native species to thrive.

A programme designed to:

Raise awareness

Encourage engagement by every New Zealander and empower collective action.
Develop and design the new tools that will enable species eradication across all of NZ.
Apprentice training programme

Ambitious Goal of eradicating stoats, possums and rats as targets by 2050.

Is it achievable? Yes - “With the Will of the masses - the Way will be found” - Collective action.

NEXT Foundation and ZIP <https://www.nextfoundation.org.nz/project-janszoon-and-taranaki-mounga-project-sign-tomorrow-accord/>

Funding large scale pest control programmes, innovation and research into techniques to assist achieving a PF2050

Pest Control Techniques

THE TOOLBOX

1. Shooting – aerial/ground, thermal night hunting and day hunting.
2. Dogs - indicators, bailers and holding dogs. GPS tracking.
3. Trapping – coral pens, cages, pigbrig nets, kill traps, leghold traps and snares.
4. Technology – AI identification, Thermal Drones, Trail Cameras, Activation sensors and Celium networks.
5. Data Collection
6. Poisoning and Biological – foliar gels, poison baiting, beneficial/acceptable secondary kill aerial 1080 and brodifacoum and pindone baiting, RHD Virus

1. Shooting Techniques

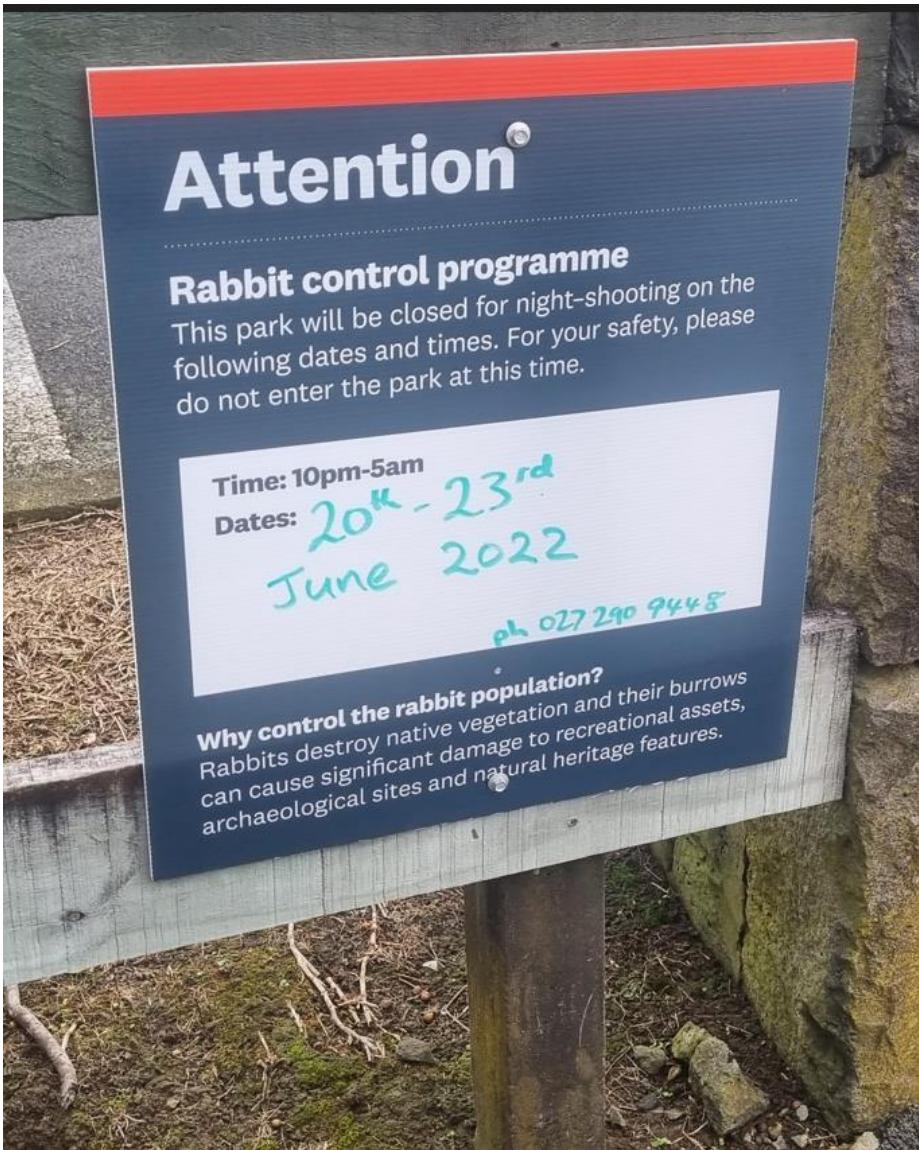


The focus of control operations is to reduce population growth rate and this is achieved by targeting females and young firstly.

Rules and parameters for safe shooting

- In NZ we operate to a safety rule that we do not shoot any animal through a thermal sight at greater than 150m to ensure positive identification. Ideally closing this distance to less than 100m.
- In daylight we operate to 350m shooting range. While longer shots are feasible with new scope technology etc, the risk of missing, wounding and mistaken identity are significantly higher.
- In pest control operations every shot should count as fatal. Misses and woundings educate the population. As a general rule of thumb with herds of multiple animals “engine room” chest shooting is preferred rather than head and neck shots.
- NZ Firearms Safety Code T.A.L.I.C.S.A
- Police Notifications every time

Signage for all Pest control operations







Stealth shooting





“To Hear or Not to Hear” - Use of suppressors.

A must!

Safety Reasons:



Irretrievable hearing loss with every single rifle shot fired that is not suppressed.
Starts in a hunters left ear (if right hand shooting)
So Please talk to me on my right hand side :-)

Earmuffs and plugs are one solution but a hindrance especially as one then cannot hunt and stalk in forested areas with suppressed hearing ability. Also affect sense of balance on uneven ground and greater risk of falls.

Success and effectiveness Reasons:

Suppression reduces disturbance to target animals in mobs enabling more to be shot.

Less disturbance to livestock, horses etc.

Reduces risk of upsetting neighbours and people sleeping around residential areas. Police less likely to get called out to investigate shooting.



Shooting Techniques In Brief

- Utilise time available before an animal spooks to take the steadiest shot possible. Do not rush. Stay calm.
- A sitting/prone/lying position, resting on a solid tree, rifle mounted Bipod, or a free stand tripod increases success.
- Always shoot the lead female animal and females first as it confuses the rest of the animals. Then clean up fawns and stags.
- **Use of Shooting sticks.** Excellent in open country with long shots and time to set up. Essential tool for mass rabbit shooting. A hindrance to carry and set up in forest where snap shooting with only one shot possible and little time to take a lean on a nearby tree.
- **Solo hunting** – stealth, low disturbance to population.
- **Paired hunting** - 2 hunters working in cohesion to intercept or mob shoot. One stalks forward while the other watches for movement and can cover a larger field of fire after initial shots.
- **W.O.D (Wall of Death)** - A teams of shooters working an offensive line in forested areas. Quick knockdown works in confined areas but not effective in large areas.

Aerial pest control



Firearm of choice for aerial work and shooting large groups of animals



AR15 or AR10 suppressed, 30 shot magazine, Aimpoint sight or low power scope
Or, a Semi-auto shotgun with 00 buckshot.

Thermal assisted aerial hunting for search and destroy.

Thermal camera spotting deer-pigs, with dogs, and aerial shooting combination.



Highly regulated by Civil Aviation Authority (CAA)
Helicopter operators have to be approved under the WAC Act.

Shooter, spotter and pilot have to have very clear communication and working relationship. A good pilot does not compromise the shooter by putting the animal in a dangerous shooting zone. The shooter only targets one animal at a time that is set up by the pilot in the correct shooting zone.

Doors are off, seats are removed and the shooter is harnessed into the helicopter to prevent falling out.

All items, ammo boxes etc securely fastened.

Motion sickness is a challenge it is not unsurmountable with training and experience.

Specific Safe shooting zone - The rifle can only be pointed at all times. Never into the cockpit, at the rotors zone, or the skids. Constant awareness when chasing an animal and with the horizon shifting as a helicopter banks and turns.

[Lien 1](#)

[Lien 2](#)

Rifle has modifications to safely eject cartridges.

Meat recovery during pest control operations.

Was used when commercial values made it economical.

Now only used for where animals need removing from sensitive areas such as high public use areas, sports parks etc.

A limited amount is also retrieved where communities request but only from easy access areas.

This is not of any gain for efficiency but is an additional cost for an operations approval.



Thermal shooting

Revolutionised hunting

[Lien 3](#)

[Lien 4](#)



2. Pest Control With Dogs



Use of Dogs

PURSUIT DOGS

Range out and locate target animals.

Bailing dogs – Effective in any landscape but especially in dense forest areas.

Holding dogs – The most effective in dense forest. Will often kill the target if the hunter is not able to get close enough.

Coursing dogs – Require broken landscapes as they chase target animals until they cross open ground and can be shot on the run (or for cats once up a tree or fumigated underground).



Squad goals (Photo: Dave Abbott – Liquid Action Films)

INDICATOR DOGS

Predominantly used on deer, cats, and rabbits. Locating cat dens or flushing from cover. Works within eyesight of dog handler. Inefficient and ineffective in dense forests. Time consuming to cover large landscapes. Dogs will not cast out to search and locate an animal or the animal is hidden in dense cover the dog handler cannot penetrate stealthily.

Why are dogs so good

A dogs nose and tracking capability make it the most effective tool for forest hunting other animals when used correctly

Any breed of dog can be trained to do virtually any task, but some breeds are easier than others to train and control.

Terriers are strongest on pursuit and catching but harder to keep at heel once they find a scent.

Working farm dogs like NZ and Australian heading dogs, huntaway, cattle dogs, border and bearded collies are perhaps the most versatile breed. Fast, hardy/strong, intelligent, stamina

Pointer and Setter breeds are strongest as indicating dogs.

Cross-bred varieties can be variable in nature and skills.

Effective use of dogs is entirely based on the relationship between hunter (dog handler) and dog.

Dogs must be fit and healthy, exercised regularly to prevent injury and remain focussed.

Dogs must be under command and control and specifically trained to finding and catching their target animals only.

Professional Dogs are certified.

National predator dog handler Miriam Ritchie with Crete (trained for cat and stoat detection. Trained to indicate, and, also pursue and kill on command)



DOC dogs on the job (Photo: Dave Abbott – Liquid Action Films)

My own team of find, bail and hold - **Pig specific dogs**



Proof in the kills..



3. Trapping Techniques

Use of Automatic feeders and trail cameras.

Pre- feeding and Minimal disturbance is the key

Pig/Deer Trapping:

Many styles of traps... the best ones on the market

Pig brig, Jagerpro, Corral traps, Drop and Swing door Cages

Cat and Rabbit traps:

Again many varieties on the market

Snaring:

Not used a lot in NZ due to ethics and risks.

They are effective however - used in very controlled and remote locations.

Snares in NZ must have stoppers and spring loading to prevent strangulation, amputations and dislocations. Hunting dogs getting caught in snares has caused a lot of issues.

Trapping Pig Brig



Trapping - Jager MINE - Suitable in agriculture - not suitable wet forest.

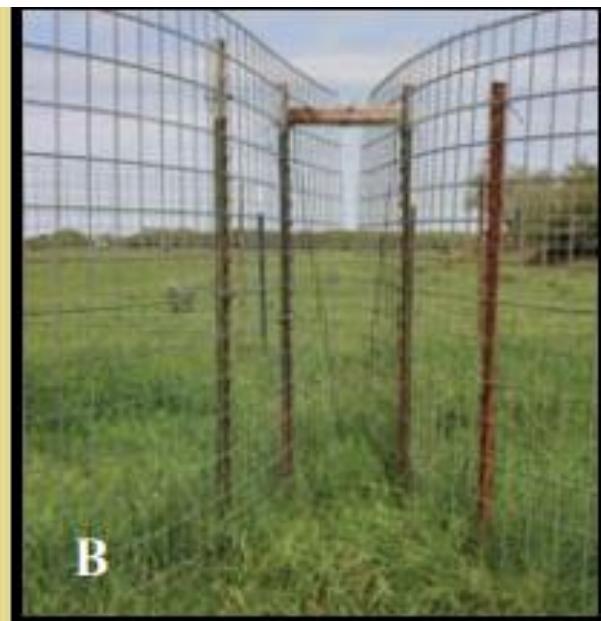


M.I.N.E.® GATE

Gates contain no thresholds and are 8 feet wide with 2 inch by 4 inch welded 6 gauge steel. Gate openings are 40 inches tall by 96 inches wide allowing adults to comfortably feed sideways for maximum conditioning. Double gate locations can be adapted to any trail scenario for trap resistant pigs. The M.I.N.E.® Gate may be triggered from a cell phone, tablet, computer for offsite captures or can be triggered using our hand held remote control from 300 yards for onsite captures.

— [VIEW PRODUCT](#)

Corral Traps



Cage trap



Cat and Rabbit Trapping

Kill Trapping



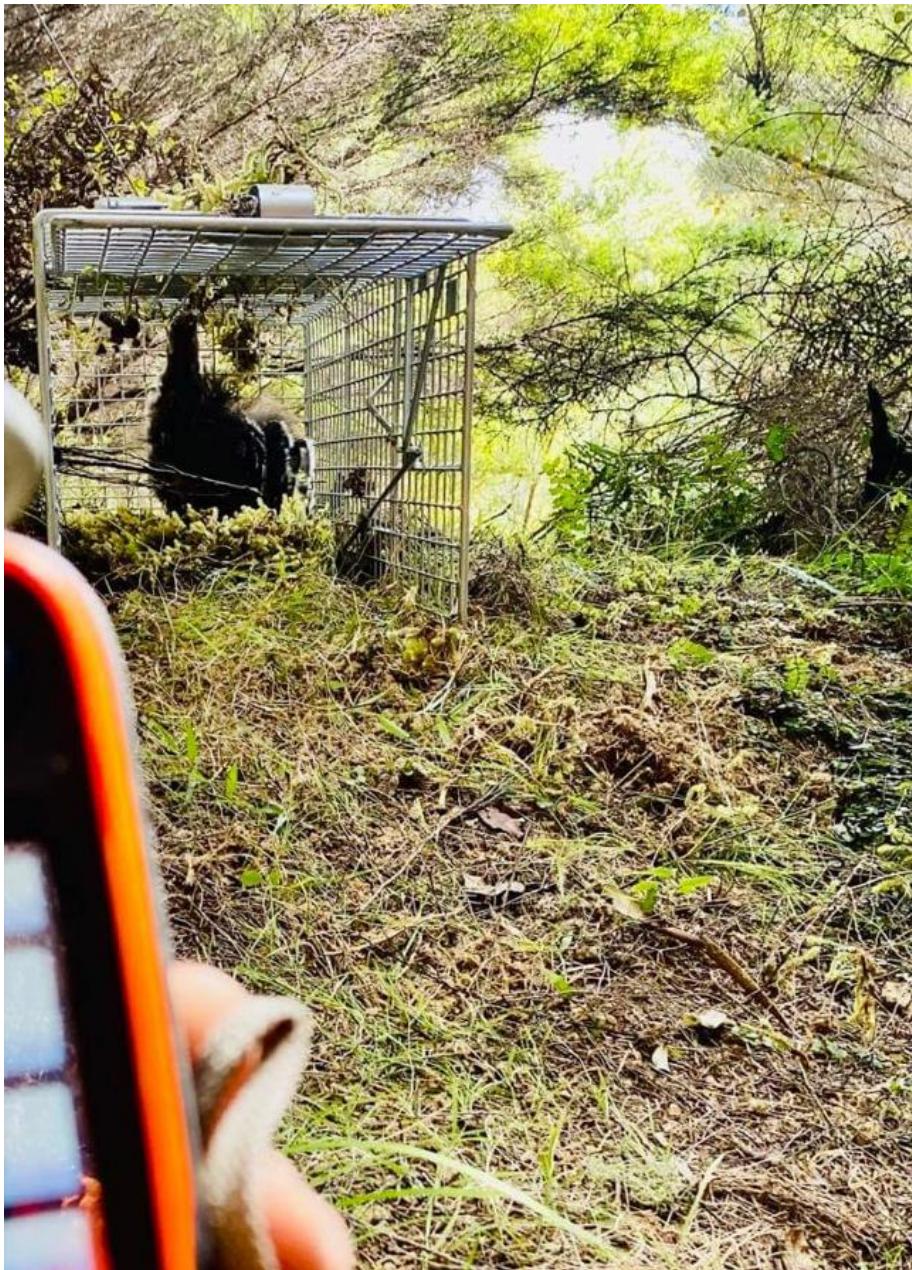


SA2 Kat Trap and SA Modified Coni

NAWAC - Animal ethics approved
SA2 Simplest trap to set safely.
Highly attractive - High encounter rate

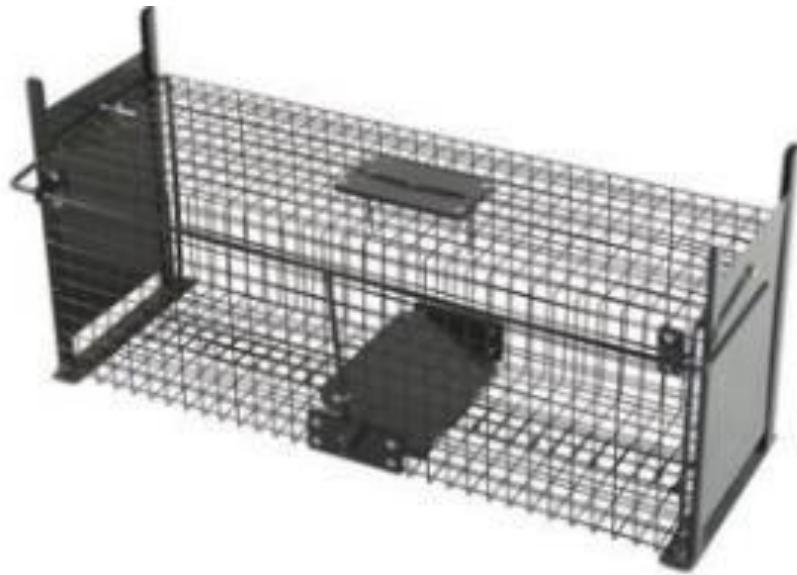






CAGE TRAPS

Large baits for attraction.
Natural floors steel work hidden
and trigger hidden.
Under shade and cover.
Cadium nodes informing when
trap has been activated.



Cat Trapping technique

Kill traps are ideal for lower cost large scale coverage.

Must be set 70+ cm off the ground or with covers to prevent non targets.

Set on ramps ideally < 35 degrees angle and less than 10 cm wide. Traps should be set every 200 metres and at a minimum rate of 1 trap per 20ha of forest.

Traps should be set and checked year-round.

Try different baits; where possible, baits should consist of local food sources used by cats. Effective baits include fresh and salted rabbit/hare/possum/venison, fish (fresh/salted), Cat biscuits/Jellymeat, Fresh eggs, freshly killed mice/rats/ small birds.

Avoid leaving salted lures exposed to Cats as they will avert to this lure and will not go near it again once they taste it. Eg bury old bait, ensure traps are checked regularly as a sprung trap will leave the bait exposed. Pair set traps reduce this.

Cage traps are the most attractive but are costly to service with daily visitation. Often pulsed for a period and to catch known troublesome individuals.

Leg-hold traps need to be set in elevated areas away from ground wildlife.

Live capture traps must be checked daily unless connected to an activation signal node.

All traps need to be stable, also block off rear end entrances to stop pawing and bury all steel surfaces, soften tred plates with soil, leaf litter.

4. Technology advances

Thermalling

Surveillance detection

Eradication and low density operations



FIGURE FOUR | Transects Flight Map



Drone assisted thermal detection

Survey purposes – Portable and quick. More cost effective than a helicopter survey.

<https://youtu.be/arGXo445Ezg>

Hunting application – eradication and low density. Valuable for pair hunting
Extends observation beyond the ridgeline. Allows hunter to see over a hill spot
animals and then stalk in close. Drone operator directs the hunter into a
favourable shooting position via 2 way radio.



5. Data Collection

Techniques and Field tools do not stand alone they need support from data collection to better improve and manage

3 fold benefits to pest control operations.

Safety - Lessons learnt and site hazards awareness is passed on so other workers can be prepared.

Efficiency – lessons learnt improve ways to work and saving time resources for greater outcomes

Effectiveness – Lessons learnt improving the tools and methods for greater outcomes.

Essential - All pest control work requires the use of GPS and data collection for these reasons.

Failure to collect information on results during progress and stages of an operation will ultimately lead to failure of the project to achieve its outcome. Decision makers, managers and supervisors become mis-informed of what is happening on the ground. “The head doesn’t know what the arms and feet are doing”.

Operational data sheets

Mapping

- What are maps good for?

Field workers:

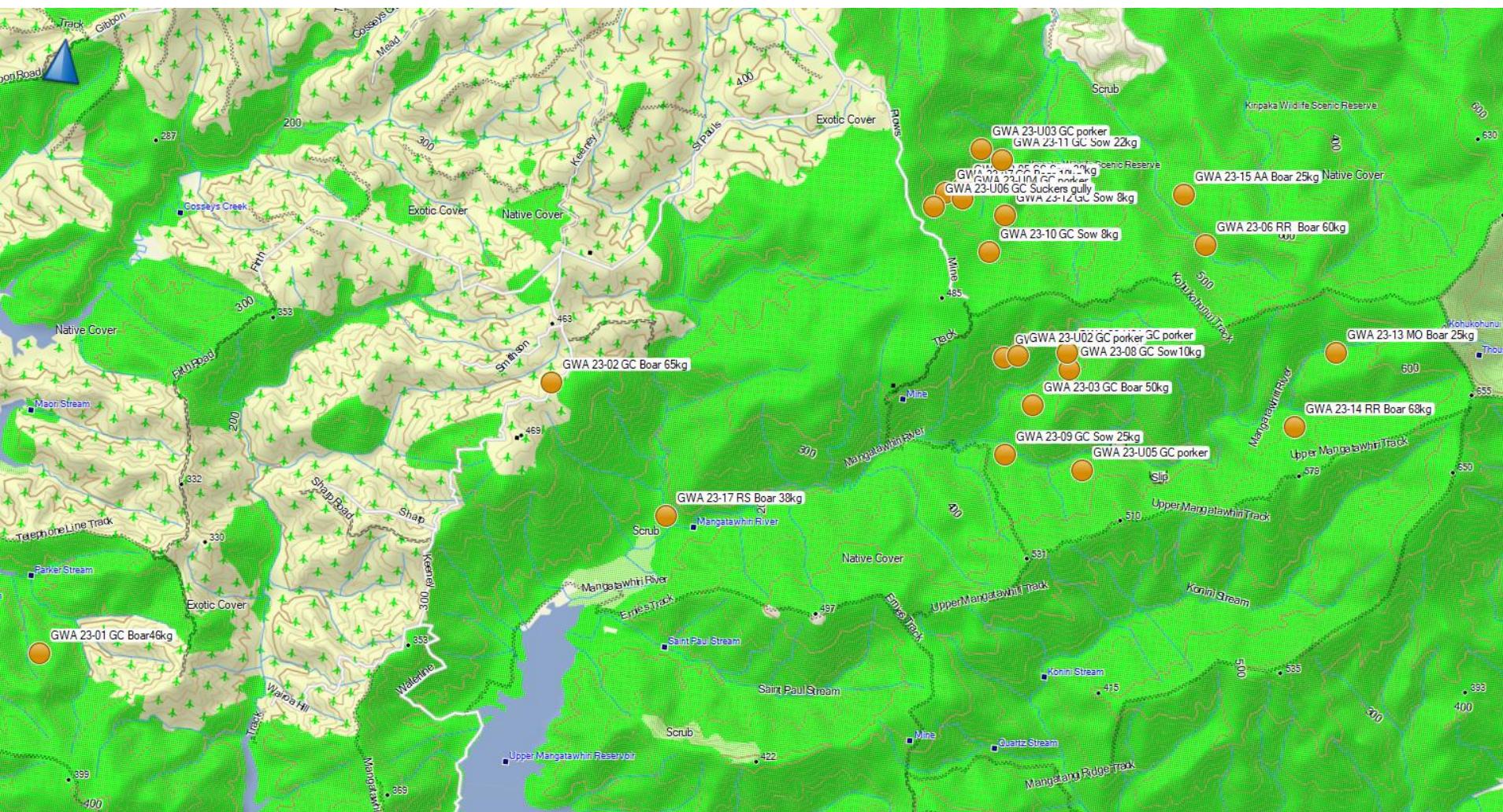
Help relocate individual sites, show site proximities, show access to sites. Assist in defining daily targets for treatment via zonation.

Planners and Managers:

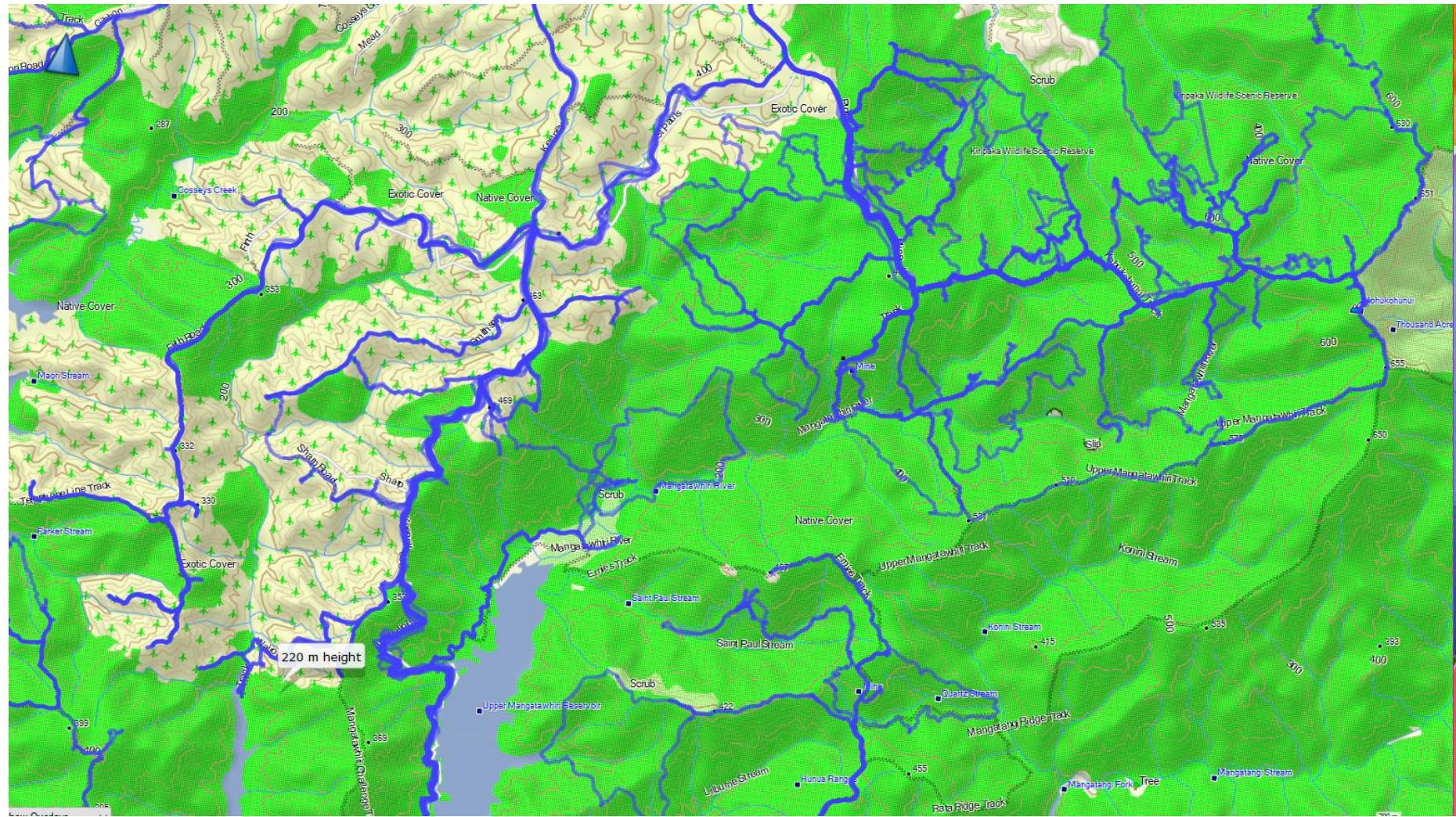
Help with spatial representation of data for reporting and evaluating results. Point data, effort coverage and polygons.

- Use of Technology GIS/GPS improves accuracy.

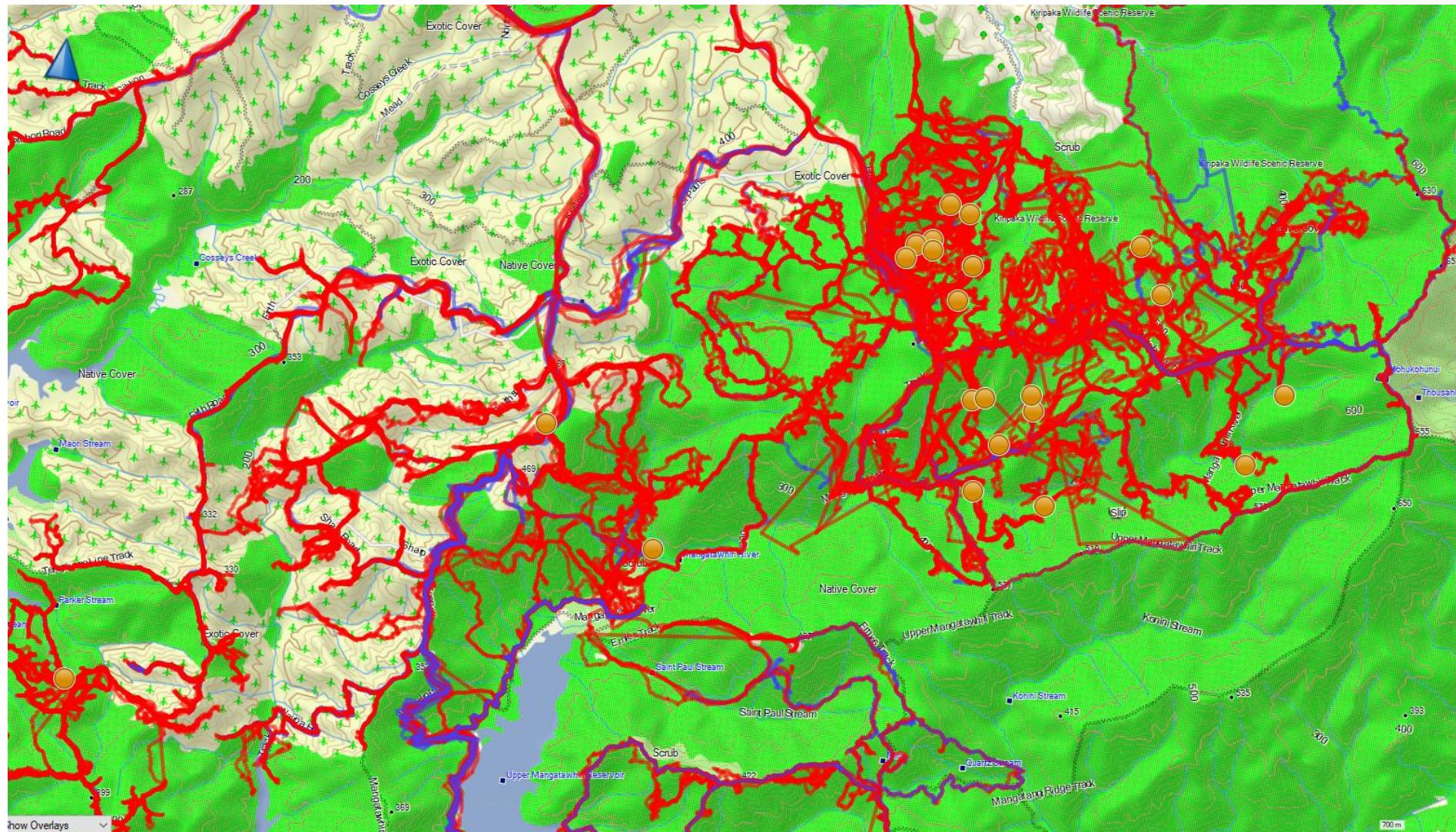
Kill points



Hunter coverage tracks



Dog Tracklogs



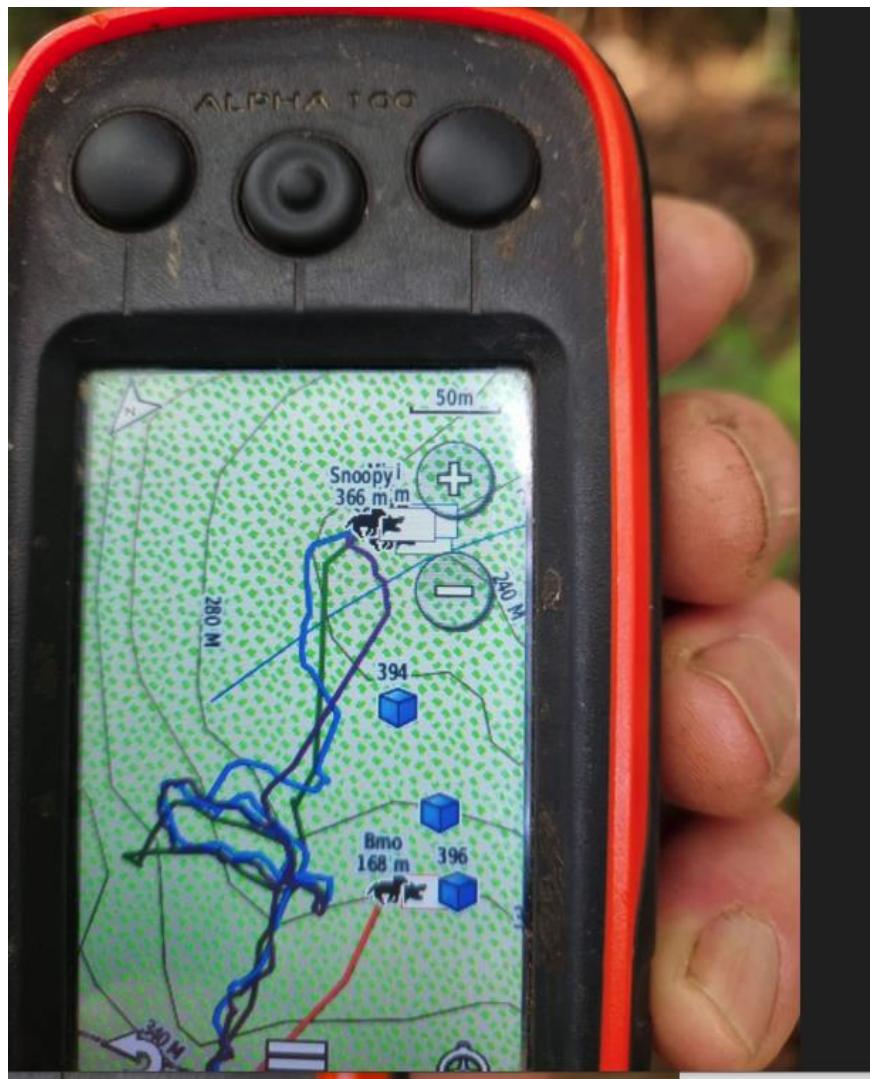


Photo proof audit



Biological data Collection and analysis

DNA - Used for eradications and sustaining very low density populations - not for control work.

Biological data – Jaw collection, population modelling - for understanding population dynamics and habitat response in response to control work. Working out what level of control to sustain.

Habitat and vegetation surveys and monitoring to demonstrate the population control is making a difference.



Legend

- Sika 1
- Sika 2
- Sika 3
- Sika 4
- Sika 5
- Sika 6
- Sika 7
- Sika 8
- ◆ Sika 9
- ◆ Sika 10
- Sika 11
- ▲ Sika 12
- ▲ Sika 13

NZ Topo50 and Satelite



Northland Regional Council

6. Poison Operations

Poisoning ungulates is challenged socially.

Technically difficult to design and deliver a target specific product.

Pigs - Sodium Nitrate has been registered for pig control. Very limited success with its use due to pigs highly adaptative nature.

Deer - Historically 1080 in carrot baits and pellets was very effective on deer as a high bykill to possum and rat control. New regulations and deer not a registered purpose of 1080 use, it forms a small role in deer management now.

High strength 1080 Gels were designed in the 1990s Application risks, and, low demand has seen these products no longer manufactured or registered.

Cats - Possum/Rat/Rabbit 1080 and Brodifacoum operations are used for beneficial secondary poisoning on mammalian predators including cats and feral dogs.

Fumigation

PAPP

In eradication operations poisons have a place in the tool box



Rabbit poisoning

- Pindone – 0.17% laced carrot and pellets - most common and effective.
- 1080 – laced carrot.

Highly effective but worker health risks handling concentrate is high and few operators still set up to apply. A lost tool.

RABBIT BIOCONTROL IN NEW ZEALAND RHDV1 K5



RHDV1 K5

Rabbit Hemorrhagic Disease

Biological

The most effective tool at reducing high density. Traditional techniques require high cost and often cannot contain an eruption season.

Eventually population builds immunity so a new strain needs releasing. Spread by flies and rabbit to rabbit contact.



Fumigation - Cat and Stoat Dens and Rabbit warrens.

Magnesium Phosphide pills

Pills release Phosphine gas into confined space when in contact with moisture



Pest Control Implementation - Human Resources- What really matters.

- What sort of labour and effort do you need to achieve the tasks and objectives?

High investment = Eradication or low residual pest population

Lower investment = High residual pest population

- What kind of skill set do professional hunters need to have? What do you have already - Training needs?
- Labour and resources to supervise, manage and report for the project
- Keeping the managers above informed and happy
- Keeping the field workers happy and motivated

= sustainable projects - resources remainin available longterm and work output remains high to be successful.

In summary:

From my visit to New Caledonia and to some of parks and private areas

For Deer and Pig:

It is apparent at a very quick glance the populations in NC are much more out of balance than in NZ and having severe impacts.

Especially in your priority habitats with difficult access, like the Humid forests.

These sites are the origin of your water resources and the start point for erosion from forest degradation.

It is clear that recreational and meat hunting alone cannot not solve the problem. Professional pest control operators is the only solution in such priority and difficult to access.

The training the past 2 weeks of the first 25 professional pest control operators certainly opens a new era for deer and pig control in your country.



For Rabbits:

- In NZ Rabbits are wide spread therefore Eradication is not possible.
- Fortunately your present situation is not so dramatic, but there are already 30 localized populations presenting a **HUGE RISK** of establishment
- So if you can: Eradicate them!

For Cats:

- They are everywhere from the beach to the highest mountain.
- Focus actions onto priority zones (nesting bird area; fruit bat feeding areas is the key to managing these) along with advocating responsible domestic cat ownership
- Watch this space with the innovations coming from programmes like NEXT and P2050.