

Aorangi Goat Control 2022



- 04 May Aerial Track
- Aorangi Goats Escapes
- Aorangi Goats Kills
- Aorangi Goats Lone Judas
- Aorangi Goats Judas Unseen
- Collar Positions



Aorangi Goat Control Report Feb 22



Overview

Silver Bullet Contracting was employed by Jamie Fitzgerald (DOC Masterton) to conduct 133.5 effective hunting hours of goat ground control in the Aorangi Forest Park from 31/01/22 – 04/03/22. The aim of the project was to target areas that were previously known and areas the Judas goats had shown as goat hot spots. Hunting was completed using a mixture of indicating and bailing dogs. Hunting was conducted in two main areas being Makara and Tauanui.

Makara

The Makara block received 46.5 effective hunting hours and was completed between the 31st of January and 4th of February by s9(2)(a) 8 goats were killed on Te Munga Station and 20 goats were killed in PCL at a rate of .6 goat/hunter hour.

The access to the Makara PCL block through Te Munga and the ability to move freely around on Te Munga to glass into areas where the goats are, makes the job 10 times easier than without. The goats seem to be isolated, and although one would assume there is reinvasion from Wairangi Station and downstream in the Makara Stream, it may be minimal. The Judas goat tracking seems to back this up, showing that he stayed in the areas that goats were killed.

I believe that the best approach to killing the goats in this area is by having one hunter glass the hillside that the other hunter is hunting. The hunter glassing should also be equipped with a long-range rifle to be able to take safe shots that present themselves. Moving around and conventionally hunting over indicating dogs is difficult in the steep terrain laden with Gorse and thick Manuka but if someone can aid by directing the hunter, then it saves a lot of groundwork.

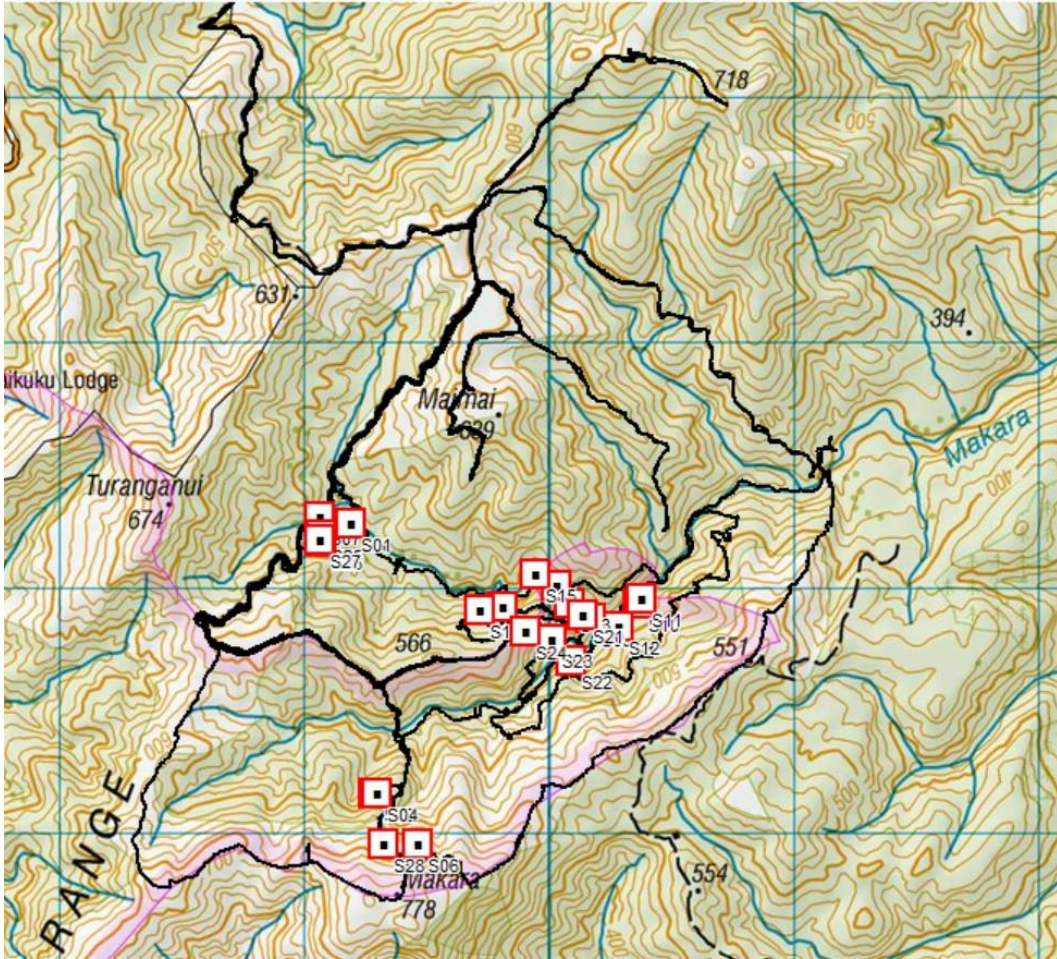
Tauanui

The Tauanui block received 87 effective hunting hours and was completed between the 28th of February and 4th of March by s9(2)(a) and s9(2)(a). Only 1 goat was killed at a rate of .01 goat/hunter hour.

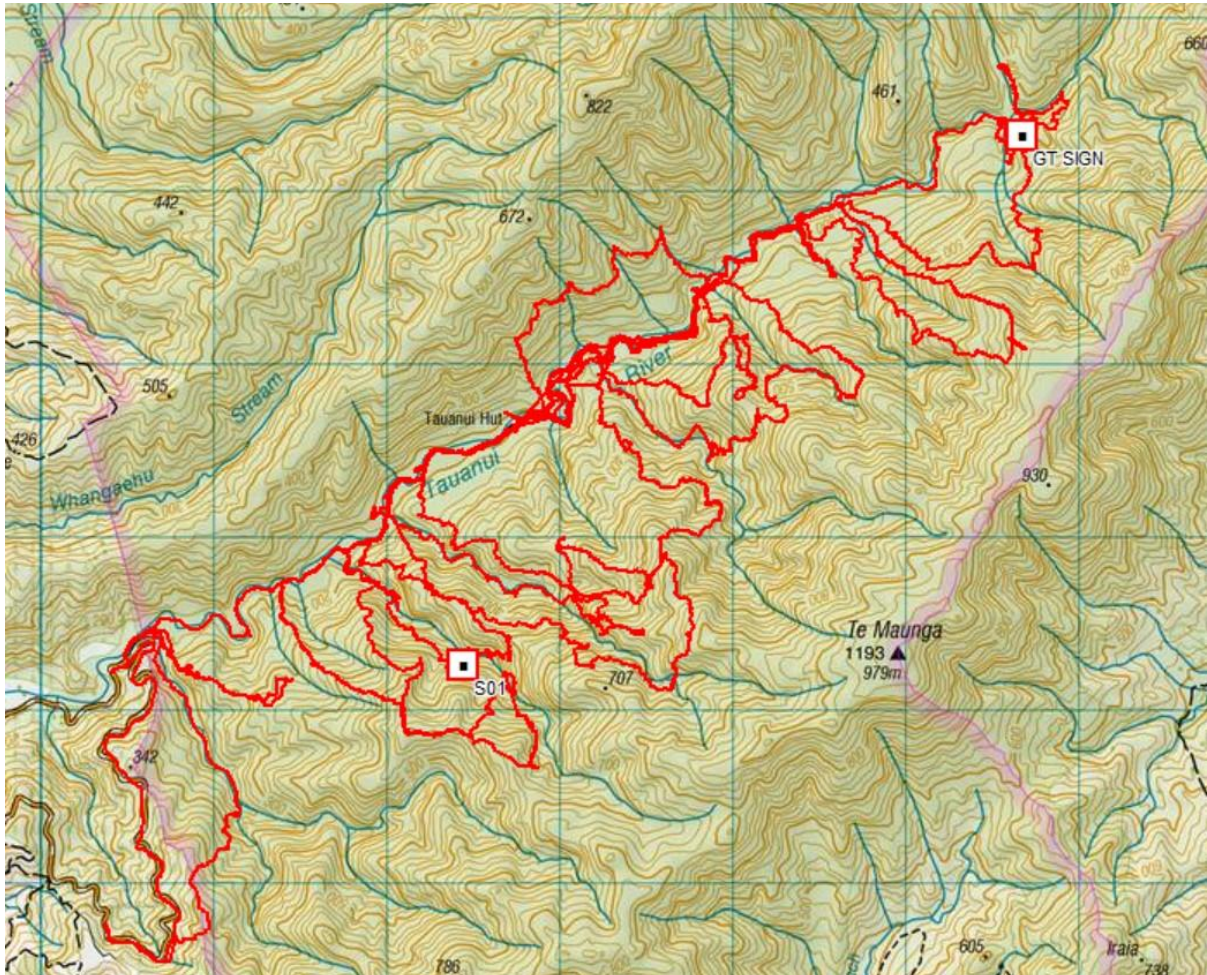
The access to the block was by LUV and a basecamp was set up in the Tauanui Hut area. This worked well and saved a lot of lost time walking up and down the river.

I had identified the Tauanui Hut area last financial year as holding high goat numbers compared to the rest of the Aorangi and needed a more intense hunting effort. After this round of hunting it appears the goat numbers are not as high as I had previously thought. Hunting targeted all of the goat hot spots and while some sign was found in all the likely places it was in general lightly spread. Some goat sign was found in area that was not known as a hot spot nor been visited by the Judas.

Makara Jan22 Tracks and Waypoints



Tauanui February 22 Tracks and Waypoints



Recommendations Moving Forward

In the Tauanui our hunting was not focused on following up on the Judas goats but I now believe the area holds low enough numbers that this will be an effective method. Ideally, if the tracking collars could be set to attempt to ping every hour while work is being done in the area this would give enough indication of where the Judas are without needing to use the TR4 unit.

I believe, there would still be at least 20 goats left in the Makara block. If there were more funding to become available before the end of the financial year, then 100 hours split between 2 hunters would go a long way toward really hurting the population provided there is minimal reinvasion.

Still, the foremost area that is of concern are the creeks to the Northwest of Tauanui. I believe these areas have traditionally held goat populations and as far as I am aware received little hunting pressure in the last couple of years. It would be good to get an idea of just how high the numbers are in the area and what sort of hunting effort needed to reduce the numbers.

Deer numbers in areas of the park are high. These areas should be identified and while I don't suggest targeting the deer, I believe they should also be killed when encountered.

Interactions with Locals

The only interactions with locals were on s9(2)(a) [REDACTED] was very supportive and access through the s9(2)(a) [REDACTED] is key to effectively controlling the goat populations in Makara.

Incidents, Near Misses and Hazards

There were no incidents, near misses or new hazards identified.

Recommendations for Health and Safety/Operational Improvements

Originally, access into the Tauanui area was to be by quad. DOC policy changed during the course of the financial year and this was no longer possible, so access into the Tauanui area was supplied by DOC Masterton's LUV. In the future I would supply my own LUV.

06/03/22

s9(2)(a) [REDACTED]

Silver Bullet Contracting Ltd

Aorangi Ground Control Report Sep 20



Overview

Silver Bullet Contracting was employed by Jamie Fitzgerald (DOC Masterton) to conduct 108 effective hunting hours of goat control in the Aorangi Forest Park from 21/09/20 – 25/09/20. The aim of the project was to follow up on Judas goats that had been released in the park previously. Hunting was conducted in three main areas – Washpool Hut, Tauanui and Dry River. A total of 10 goats were killed using a mixture of indicating and bailing dogs by three hunters.

Recommendations Moving Forward

The park is large and conventional ground hunting is not highly effective with such a small amount of time. The terrain that goat normally inhabit, high populations of Pigs and Deer and the Judas Goats themselves also make ground hunting more time consuming. Although, all of this considered it does have a surprisingly low goat population.

As there are a number of Judas Goat already in the park and a number more to be released, I propose that to utilise the asset most effectively a helicopter with thermal should be used. The Goats attached to the Judas should be shot from the helicopter. By doing this routinely it will form a picture of where the higher goat populations reside and areas that are likely not inhabited by Goats. Areas that are highlighted as having the highest goat populations should then be targeted with more intensive ground hunting than has previously been done. The ground hunting should target goats attached to the Judas but more importantly other areas that have been previously regularly visited by the Judas and also survey other terrain in the general area that have not been visited by the Judas. This is important because if there are expanding populations in the area that the Judas is not visiting then they will go unchecked.

Of course, costing is always an issue and I am unsure of what the contractors DOC Masterton are engaging are charging for thermal work to be done. Ideally, it would be tied in with other helicopter work that is being done in the area at the time and hopefully three hours flying time would get around all of the roughly fifteen Judas.

Interactions with Locals

Very few of the locals/landowners were met with by me or Silver Bullet Contracting workers. Most landowner liaison was done by Jamie Fitzgerald and we had no negative interactions surrounding this. We were left a message by who we assume were recreational hunters one day when hunting Washpool Hut area that they had on an occasion previously, sighted goats in the side creek near Tauanui Hut.

Incidents, Near Misses and Hazards

There were no incidents, near misses or hazards.

Recommendations for Health and Safety/Operational Improvements

The only thing that I could obviously see improved was the Judas aerial. In the past I have used one that can be made into two pieces so that it can be transported easily in a day bag. It is a terrible thing to carry as it is and hinders hunting with it. If I was employed for the job again, I would see if I could borrow DOC Taranaki's one or invest in the equipment myself if improvements to the Masterton one couldn't be made.

27/09/20

s9(2)(a)

Silver Bullet Contracting Ltd

Aorangi Goat Control 2022



Summary

142 hunter hours were spent within the Aorangi Forest Park targeting feral goats. The primary methodology was to locate Judas goats using Lotek GPS data and telemetry tracking equipment, assisted by use of indicator and bailing dogs.

Four goats were confirmed killed during the operation, with a fifth goat likely to have been killed but unable to be located in dense vegetation and bluffs. Prior to the ground hunting operation, a further seven goats had been killed by aerial shooting.

Two collars were recovered from dead Judas goats. The first collar was recovered near Mt Barton, cause of death is unknown. The second collar was recovered near Sutherlands Hut, due to the popularity of the area, and proximity to the hut and tracks, it is suspected to have been killed by a recreational hunter. A third Judas goat that had taken up residence outside of the forest park was killed on Homeburn Station, the carcass became hung up on a bluff and the collar could not be recovered safely without climbing equipment.

Hunter effort

Date	Hours	Hunters	Location	Notes
17/5/22	16	s9(2)(a) s9(2)(a)	Stone wall basin Mt Barton	No signal from collars 68 or 51. Recovered collar 2
18/5/22	25	s9(2)(a) s9(2)(a) s9(2)(a)	Homeburn Station White Rock Station Bull Hill	One Judas goat killed Homeburn. (collar 18, unable to be recovered) No signal from collars 58 or 61 White Rock No goats encountered Bull Hill
19/5/22	19	s9(2)(a) s9(2)(a)	Sutherlands Hut Makara River	Collar 59 (dead) detected could not be located. 3 goats killed (2 nannies, 1 kid Makara Stream. One brown nanny, one cream billy escaped)
20/5/22	16	s9(2)(a) s9(2)(a)	Tauanui catchment	1 goat killed with Judas 16 No signal from collar 24
24/5/22	18	s9(2)(a) s9(2)(a)	Mangatoetoe Washpool	No signal from collars 53, 66, 20, or 57 Dead goat observed approximately 1km upstream from hut.
25/5/22	16	s9(2)(a) s9(2)(a)	Stonewall Washpool	Goats 51 and 68 spotted together in Stonewall near coast

					No signal from collars 66, 20, or 57
26/5/22	16	s9(2)(a)	Tauanui		No signal from collars 24, 66, 20, or 57
		s9(2)(a)	Washpool		
27/5/22	16	s9(2)(a)	Sutherlands Hut		Recovered collar 59, hung up in bluff.
		s9(2)(a)	Makara River		No more goats encountered in Makara River.
					One goat heard on Wairangi Station

Method

Collar positions were regularly reviewed via the Lotek webservice website and the most recent fix exported to an operational map. A hunt was planned to give the highest probability of detecting a signal from a particular collar using telemetry equipment. Frequencies from all nearby collars were also scanned throughout each hunt.

ID	Frequency	Channel	Last fix	Last position	Lat	Long	X	Y	Comments
83596	160.16	4	#####	Bull Hill	-41.3459	175.3433			Spotted
83597	160.26	14	#####	DOC office					
83601	160.34	22	#####	Waihora	-41.3632	175.2803			Spotted
83600	160.32	20	#####	Head of Washpool	-41.4612	175.3128			No signal
83602	160.36	24	#####	Te Munga Highpoint					
85595	160.65	53	#####	Kawakawa South Branch					
85596	160.67	55	#####	Tauanui	-41.4058	175.2664			
85599	160.73	61	#####	Blue Rock Road	-41.3487	175.3726			No signal
85600	160.78	66	#####	Washpool Hut vicinity					
83595	160.14	2	#####	Ngapotiki	-41.5585	175.3442			
83598	160.28	16	#####	Tauanui	-41.4186	175.304			Spotted

83599	160.3	18	#####	Homeburn Station	-41.5244	175.3499	
85594	160.63	51	#####	Stone Wall	-41.6013	175.3221	Detect
85597	160.69	57	#####	Washpool Station	-41.4868	175.2407	
85598	160.71	59	#####	Sutherlands Hut	-41.4417	175.3402	
85601	160.8	68	#####	Stone Wall	-41.588	175.3194	

Confirmed kills

Species	Age	Sex	X	Y	Date
Goat	Mature	F	5400372	1796055	18/5/22
Goat	Mature	F	5410997	1799375	19/5/22
Goat	Juvenile	F	5411401	1799696	19/5/22
Goat	Juvenile	F	5410986	1799369	19/5/22

Escapes

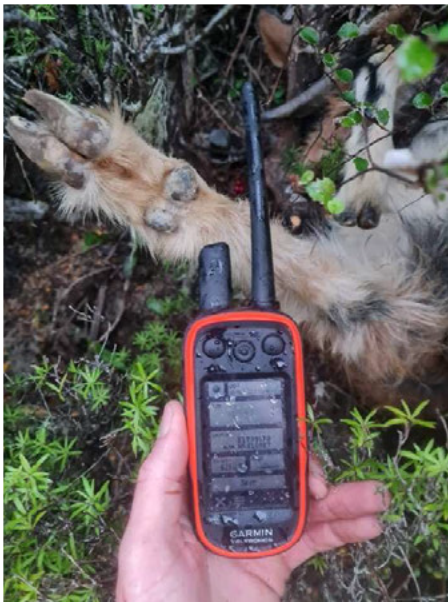
Species	Age	Sex	X	Y	Date
Goat	Mature	M (Cream)	5410997	1799375	19/5/22
Goat	Mature	F (Brown)	5410997	1799375	19/5/22

Other observations:

1. One dead goat was seen in Washpool Stream, 1km upstream from Washpool Hut 1792077,5406352
2. Birdlife was abundant throughout the areas worked. Tui, Kereru, Bell Birds, Fantails observed in high numbers. Kakariki heard.
3. Deer are abundant throughout the forest park, several sightings and animals spooked. Deer abundance interferes with use of dogs not trained to be goat specific.

Photos:

Goat Kills





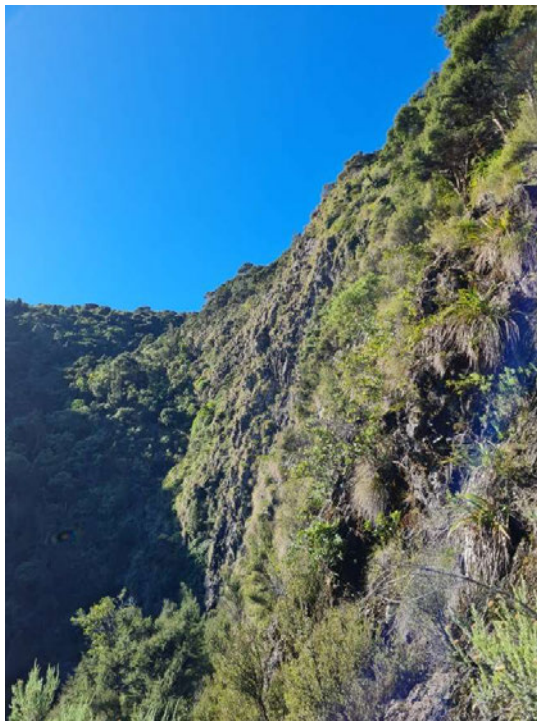
Judas 59



Judas 18



Judas 18 location



Dead Goat Washpool



Operational Map



Recommendations / observations

Our observations are that goats are in very low numbers throughout the control area and overall that DOC's historic control efforts have been appropriate for the habitat and animal abundance. We believe the aerial, followed by ground hunting is an optimal strategy that enables goats to be targeted in varying habitats.

Implementing the following refinements would enable most efficient allocation of resources for both aerial and ground hunting efforts.

Collar update intervals: To effectively allocate ground and aerial hunting resources it is critical to have collars set to update their positions at regular intervals, preferably daily if possible. This would enable positions to be reviewed the night before a particular goat is targeted, providing hunter with the best possible data and potentially saving mis spent time in areas goats are no longer inhabiting. It may be more cost effective to reallocate budget to reviewing and management of data and additional travel expenses, this would likely reduce the ground hunting hours by allowing hunters to take advantage of goats as they travel through opportune locations, likely reducing the overall cost. We observed that lone Judas goats were highly transient, but less mobile if mobbed with other goats. On different occasions throughout the operation goats were recorded travelling over 7km between collar updates

Land owner communication: Adjoining land owners we spoke to were not aware of the Judas operation. One farmer mentioned they had seen a Judas goat, and would have shot it if they had a rifle at the time. Increasing comms with adjoining land owners may mitigate against potential loss of Judas goats, and potentially assist with access.

Buffer zone: - Goat abundance increases to the east of the Aorangi Forest Park. Rough stream and Cape River may be acting as corridors for reinvasion from densely populated areas near White Rock Road. A buffer zone in this key area would likely reduce incursions to the Forest Park.

Incidents

1. No incidents occurred during this operation.



Supplejack Contracting

Aorangi Goat Control

2022-23

AORANGI GOAT CONTROL USING AERIAL,
GROUND BASED AND JUDAS GOATS

Supplejack Contracting – Be Great Outdoors
A highly capable team offering a range of services in a rugged and remote environment

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Summary

Goat control has been completed in the Aorangi Forest park, removing a total of 13 goats. 354 ground hunter hours and five aerial hours were spent within the Aorangi Forest Park targeting feral goats. The primary methodology was to locate Judas goats using Lotek GPS data and telemetry tracking equipment. Both ground and aerial operations were undertaken to locate Judas goats. All of the Judas goats identified were found to be alone.

Results indicate the Judas collars are reaching the end of their service life. Attempts to find several collars were unsuccessful, from both ground and the air. During the operation, collars were recovered from three goats two found dead, one shot and recovered during the ground operation.

Community 'tip offs' have proven to be beneficial to control efforts. We have received credible reports of three additional goat kills, public reports have also directly contributed to helping hunters locate goats.



Hunter effort

Aerial

Date	Hours	Location	Notes
19/2/2023	3.7	Aorangi South East	<p>Located Goat 4 near Bull Hill, did not visually identify through dense canopy.</p> <p>No Judas signals received from Tauanui catchment.</p> <p>No cattle or goats detected Ruakokapatuna – Makara Stream</p> <p>Located Goat 51, seen alone.</p> <p>Detected Goat 68 on Kawakawa Station, did not visually identify.</p>
6/3/2023	1.3	White Rock - Waihora	<p>No cattle or goats detected Ruakokapatuna – Makara Stream</p> <p>Goat 57, recovered from Homeburn Station (killed and unrecovered from bluff during previous operation)</p> <p>Four goats killed Waihora stream</p> <p>No Judas signals detected Waihora stream</p>

Week	Hours	Location	Notes
8/3/2023 – 12/3/2023	21	Tauanui	Goat 55, found dead recovered collar.
13/3/2023 – 19/3/2023	139	Tauanui, Ruakokapatuna Bull Hill	<p>Fours goat killed Tauanui, (includes Goat 16, collar not transmitting, Goat 82 No record, very old)</p> <p>One goat escape Tauanui.</p> <p>Two goats killed Makara Stream</p> <p>Goat 4, located alone near Bull Hill</p>
20/3/23-27/3/23	140	Mangatoetoe, Kawakawa, Washpool,	Two goats killed Ruakokapatuna

		Ruakokapatuna, Poley Stream	No Judas signals or goat sign detected in other areas.
24/4/23-30/3/23	54	Waihora Stream, Tauanui	One goat Killed Waihora Stream Goat 22, detected on trail camera, could not be located.

Method

Collar positions were regularly reviewed via the Lotek webservices website and the most recent fix exported to an operational map. A hunt was planned to give the highest probability of detecting a signal from a particular collar using telemetry equipment. Frequencies from all nearby collars were also scanned throughout each hunt.

Tracking Judas goats was unproductive during this control cycle. This was due to several factors, although results indicate the collars are reaching the end of their service period. Of the collars deployed, three were reliably updating their position to the Lotek server, and could be detected using VHF. Two of the three were located alone, the third was located on private land.

Any known hot spot areas where there were no Judas goats present were hunted aerially and by ground using indicating and bailing dogs.

Collar Summary

ID	Frequency	Channel	Last fix	Last position	Comment
83596	160.16	4	14/3/2023	Bull Hill	Located alone - ground hunting
83597	160.26	14		Depot	
83601	160.34	22	28/12/2022	Waihora	Battery suspected to be flat. Detected by recreational hunter trail camera at 1792363,5422384 on 19/2/23. No signal detected from ground or aerial hunting.
83600	160.32	20	26/3/2020	Washpool	Battery suspected to be flat or killed - Offline
83602	160.36	24		Depot	Offline
85595	160.65	53		Depot	Offline
85596	160.67	55		Depot	Found dead Tauanui Stream
85599	160.73	61	22/12/2020	Blue Rock Stream	Battery suspected to be flat or killed - Offline
85600	160.78	66		Depot	Offline
83595	160.14	2	28/4/2023	Depot	

83598	160.28	16	9/9/2022	Depot	Shot and recovered Tauanui Stream. Collar not transmitting. Goat shot with two others in same area as most recent location.
83599	160.3	18		Depot	Recovered from bluff (shot on private land during 2021-22)
85594	160.63	51	25/3/2023	Stone Wall	Located alone. This goat predominantly travels the sea face between the Nagwi lighthouse and the Stonewall basin. Two goats were shot by recreational hunters in the same area that this goat occupies
85597	160.69	57	8/11/2022	Whatarangi	Suspected shot. Goat was seen alive with two others and reported by s9(2)(a) approximately at the time of last position update. Collar has remained in same position but could not be detected by VHF. Collar was displaying as 'online during operation, but has since gone off line.
85598	160.71	59		Depot	
85601	160.8	68	30/4/2023	Kawakawa Station	Goat has remained in same location in Jacobs ladder creek.

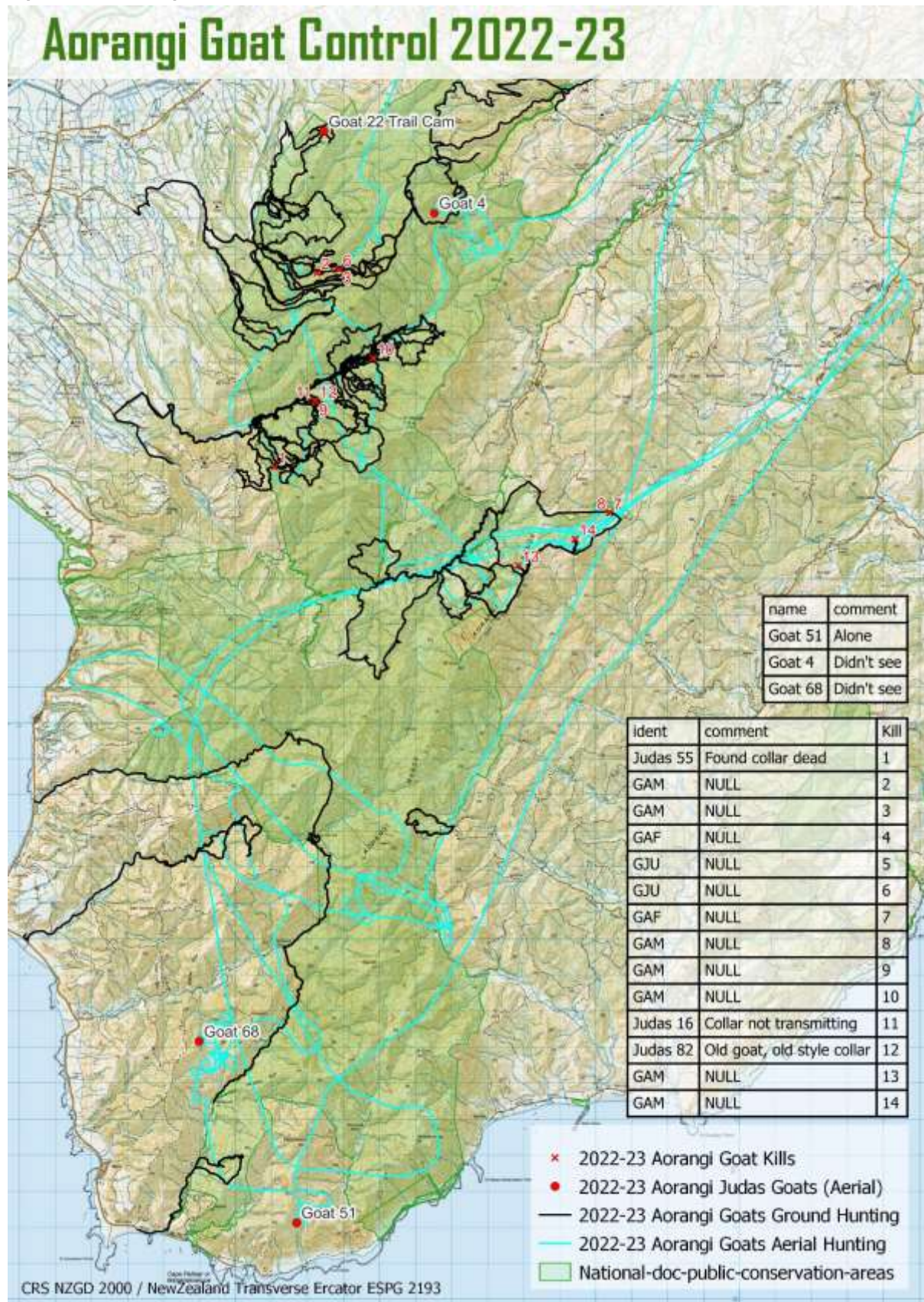


Above: goat 22 trail camera image and position

Other observations:

1. Birdlife was abundant throughout the areas worked. Tui, Kereru, Bell Birds, Fantails observed in high numbers. Kakariki heard.
2. Deer are abundant throughout the forest park, several sightings and animals spooked. Deer abundance interferes with use of dogs not trained to be goat specific.

Operational Map



Recommendations / observations

Our observations are that goats are in very low numbers throughout the control area and overall that DOC's historic control efforts have been appropriate for the habitat and animal abundance. We believe the Judas goat program using both aerial, and ground hunting is an optimal strategy that enables goats to be targeted in varying habitats.

Implementing the following refinements would enable most efficient allocation of resources for both aerial and ground hunting efforts.

Judas Goats – Recovering the remaining collars for servicing and redeploying new goats is recommended.

Collars have been active since 2019, the probability of recovering the remaining collars will be significantly reduced if they fail while they are still in the field.

Data provided by the Judas goats is decreasing in reliability. There are only three remaining collars that are functioning well enough that the goat can reliably be located. One other goat (22) can reasonably be assumed to be alive and could be feasibly recovered with a targeted operation

All of the remaining goats have been detected alone, Judas goats can become reclusive after living in isolation for long periods. None of these goats had paired with wild goats for the previous two control cycles, despite other goats being killed in the same vicinity.

Recovery of the remaining collars and redeployment of new Judas goats throughout the park is likely the most productive use of resources.

Note: No position updates or VHF signals have been detected from the Judas goats released during 2021-22

Areas of interest – The following areas should have new Judas goats deployed.

1. Waihora and Tauanui Streams remain hot spots, with several goats removed from each catchment.
2. Ruakokapatuna, specifically the Makara Stream and Mt Ross areas are reinvasion risks. Goats are in moderate populations in adjoining private land along the Eastern Aorangi boundary, although more concentrated to the north.
3. Washpool, A dead goat was found by a supplejack hunter during 2021-22 there has been no Judas goat known to be active in this catchment since 2020

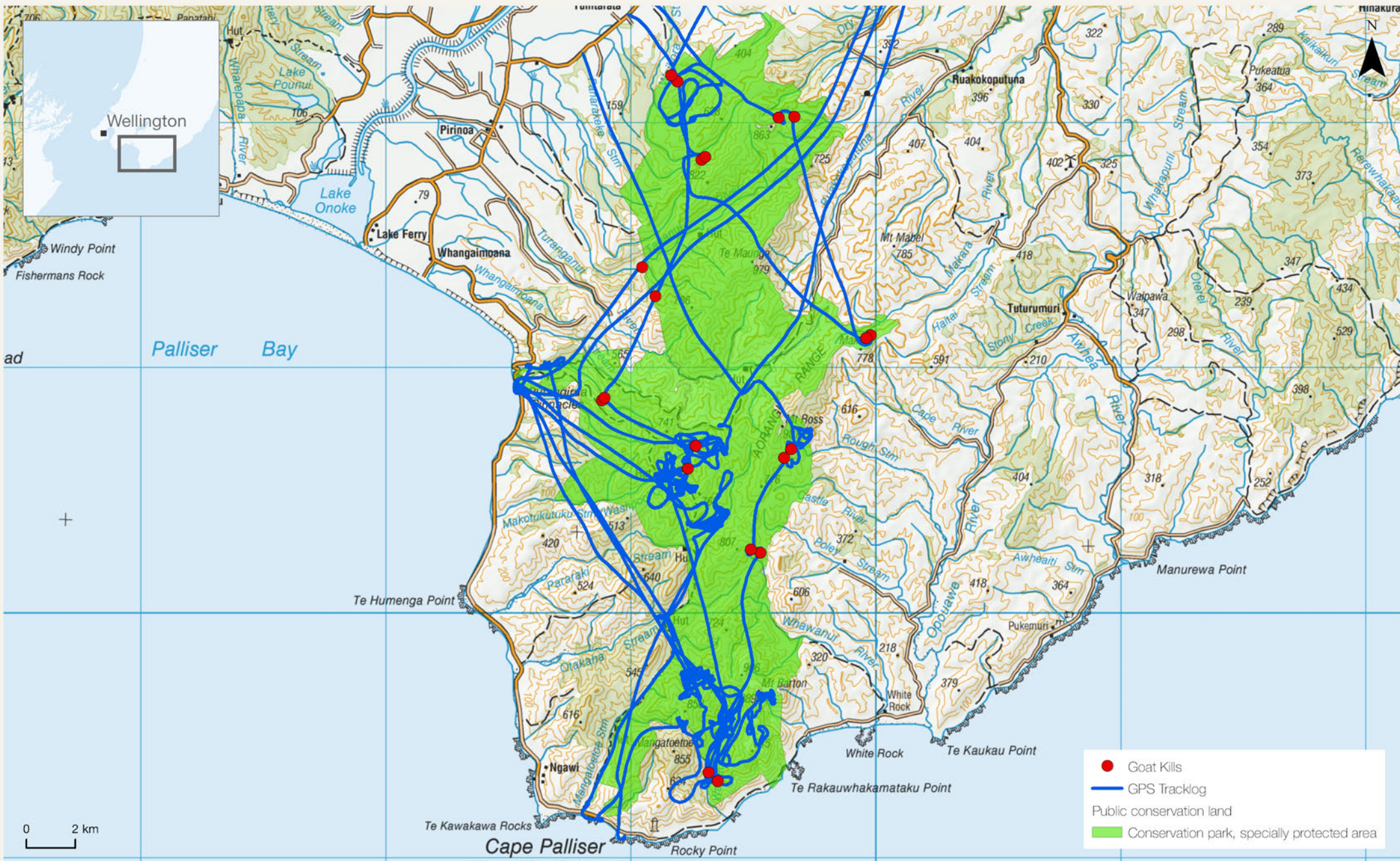
Community – Community engagement via social media should be utilised to source information.

During this control operation public there have been several reports of goat sightings have led directly to removal of unknown goats. Specifically, engagement of recreational hunters through popular pages would likely produce additional data that would otherwise be lost.

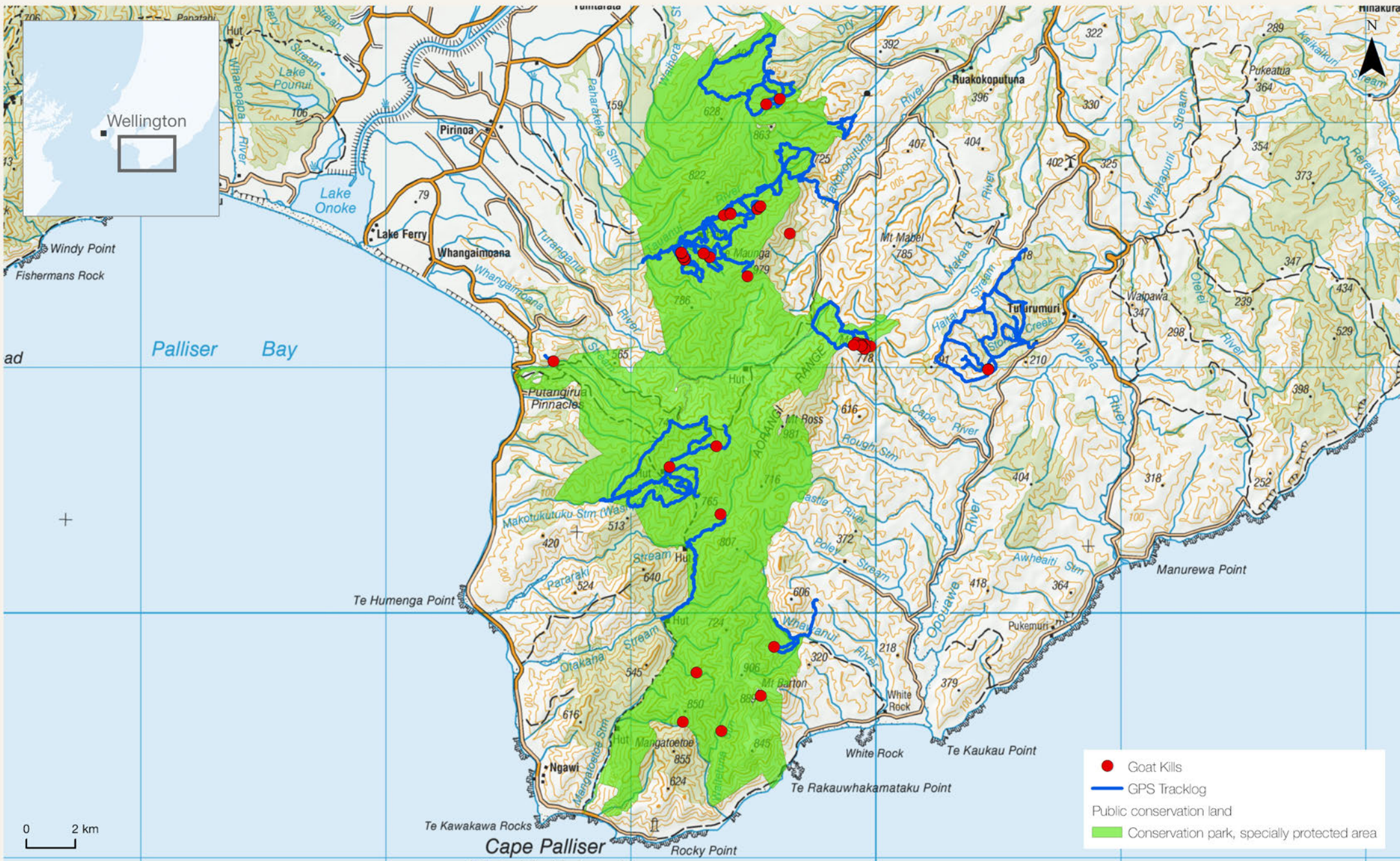
Use of social media relating to this operation is not permitted under the current contract.

Incidents

1. One GPS device was water damaged during this operation resulting in the loss of some tracklog data.

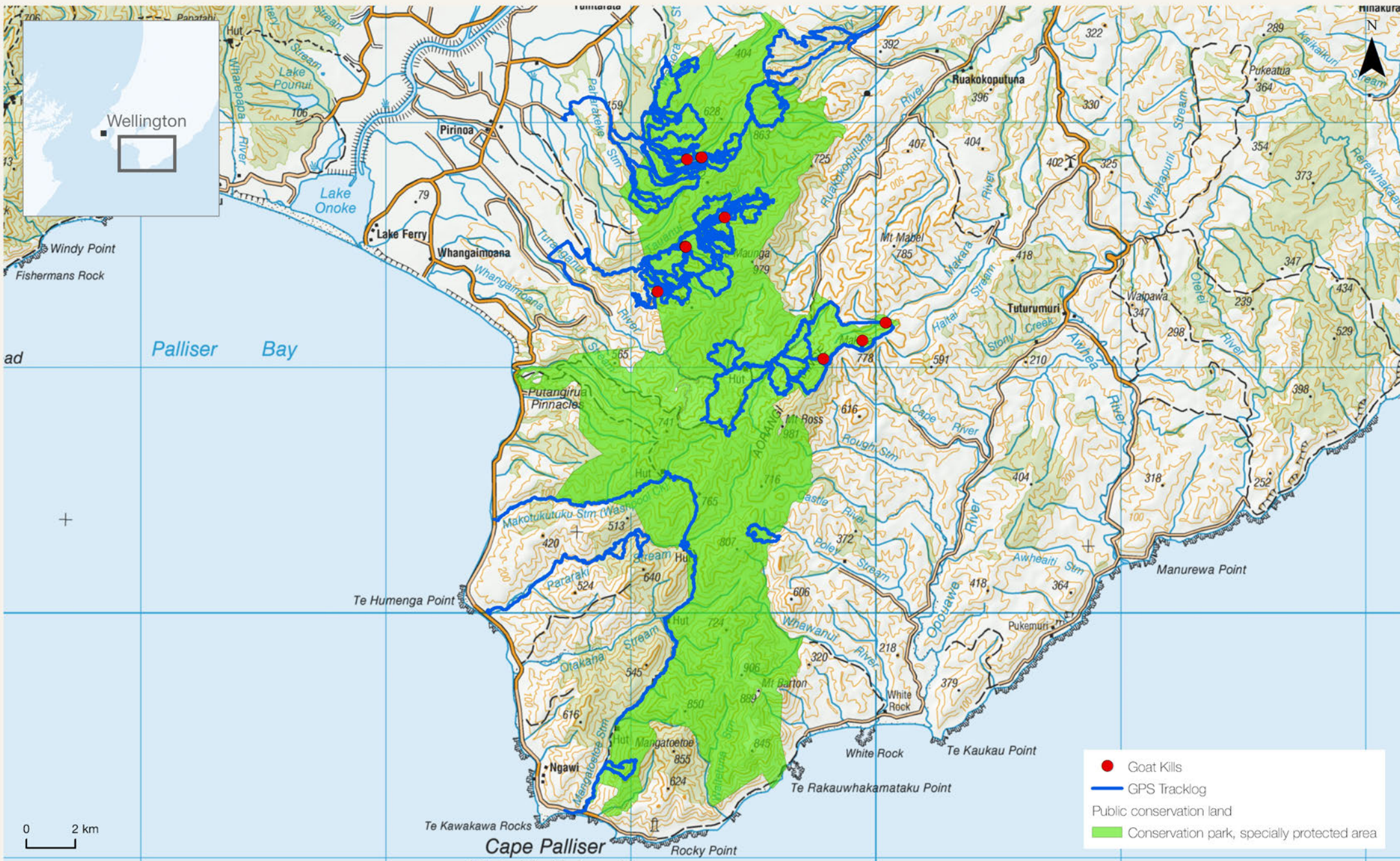


Aorangi Forest Park Aerial Ungulate Control 2020 - 2021



Aorangi Forest Park Ground Ungulate Control 2020 - 2021





Aorangi Forest Park Ground Ungulate Control 2022 - 2023

