

FOOT AND MOUTH DISEASE OUTBREAK SIMULATION.



Is it possible to locally eradicate feral pigs?

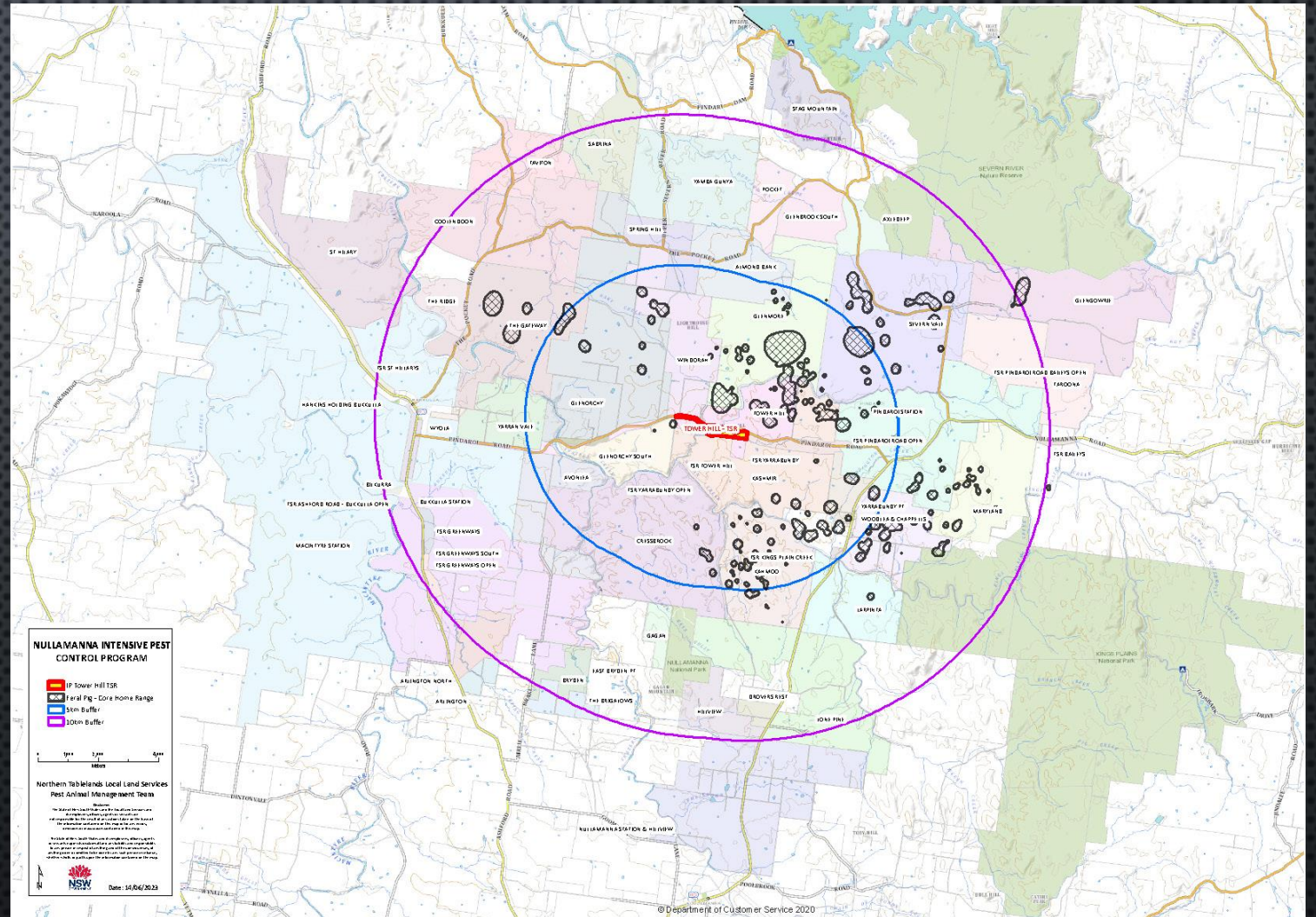


L. MARSHALL, M. TARRANT, E. KEYTE, D. MARSHALL



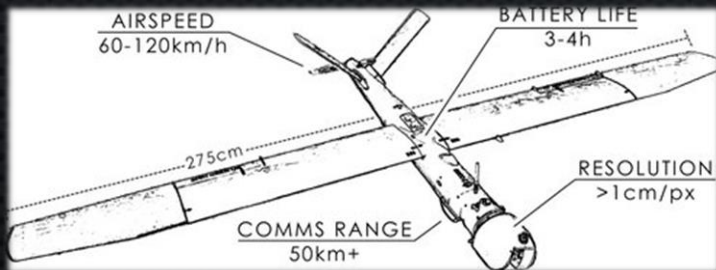
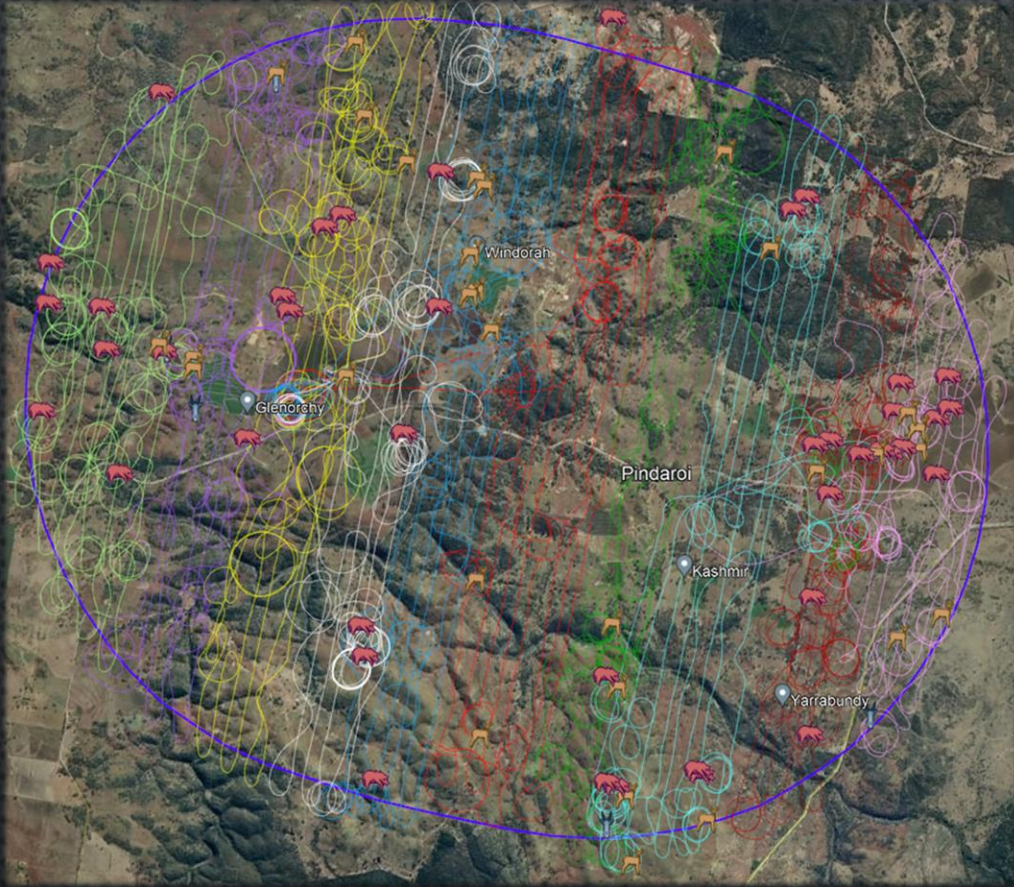
Why here (Nullamanna)?

- Known population of cloven hoofed pest animals (feral deer, feral pigs and unmanaged feral goats)
- Variation in land use (private and public lands)
 - Cropping
 - Grazing (sheep & cattle)
 - Intensive livestock (feedlots)
 - Public and private conservations'lifestyle' blocks
- Historical data
 - Multiple aerial shooting programs
 - GPS collaring & camera monitoring
- Engaged (partially) community



Total area size: 66,334 ha

MONITORING - THERMAL/IR DRONE SURVEY



- 10,500 ha surveyed
- 5 'survey nights'
- 2 flights/night; 10 flights in total
- 166 animals detected:
- 69 feral pigs
- 78 deer
- 9 goats



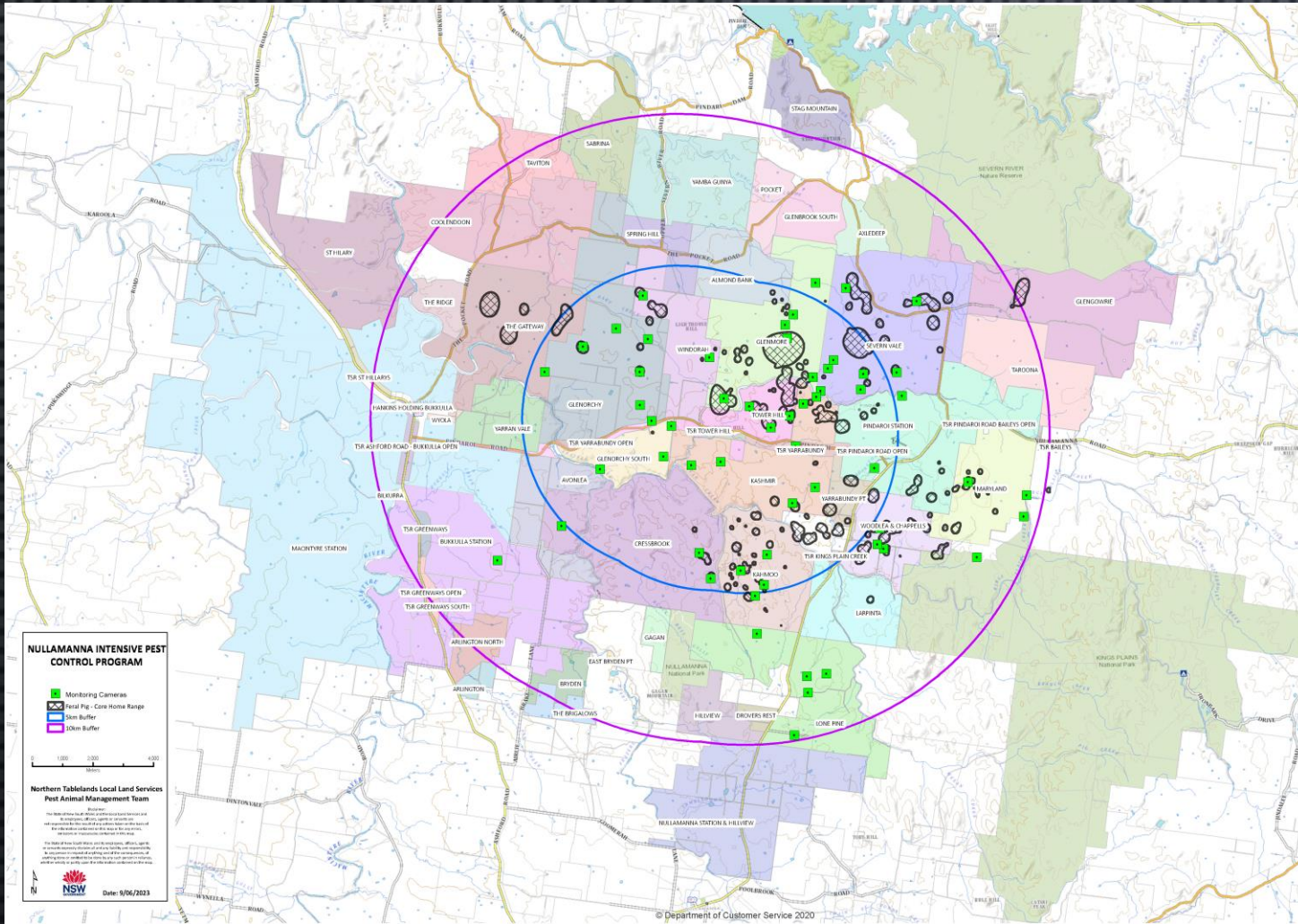
GPS FERAL PIG COLLARING

17 PIGS COLLARED

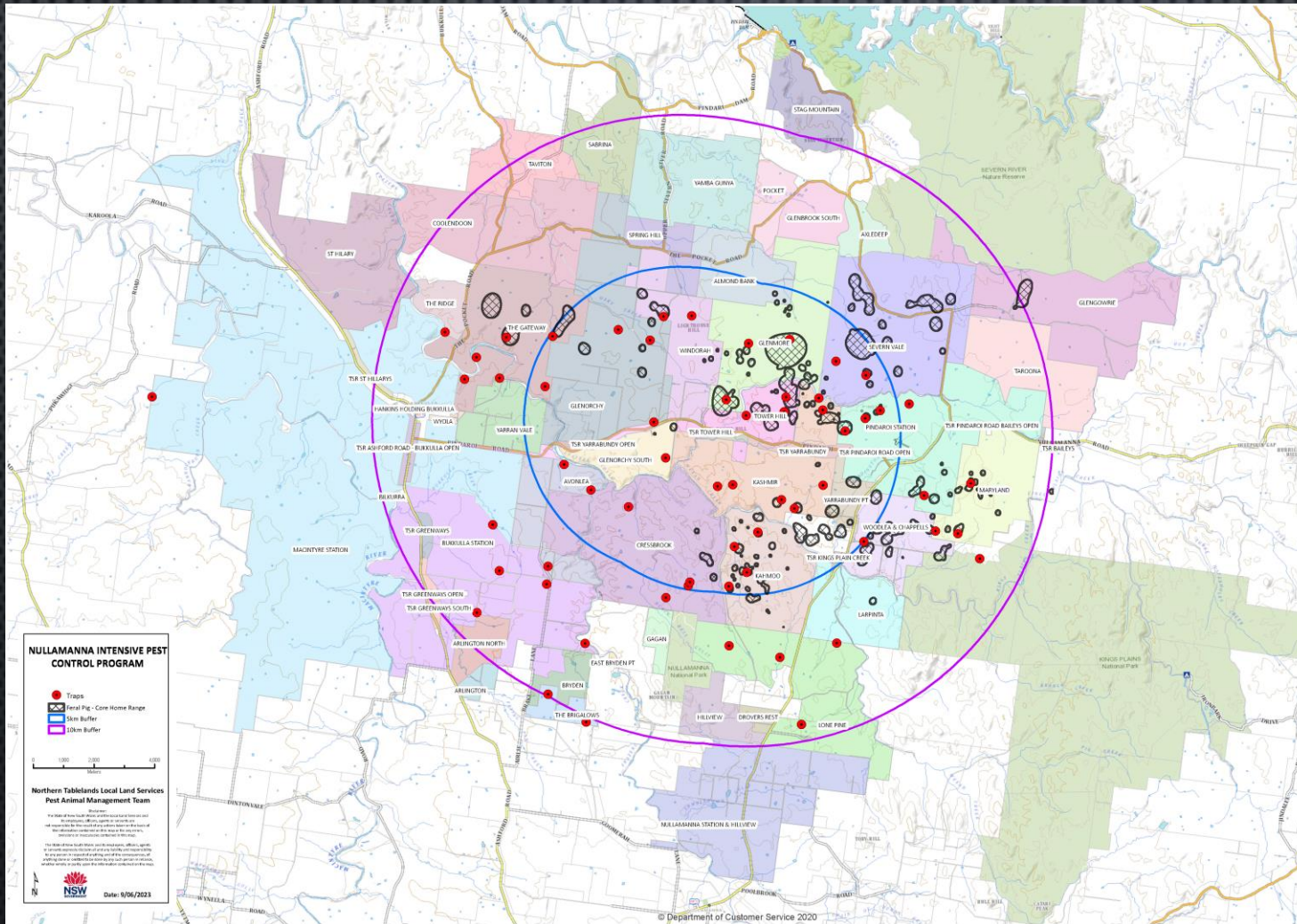
- GEOFF
- PETE
- CLAYTON
- WENDY
- MARY
- ROWAN
- BILLY
- POLLY
- TAMMY
- SHELL BELL
- HUTCHO
- LIGHTNING MCQUEEN
- RON BURGUNDY
- MICK
- BULL
- SAM
- BAZ



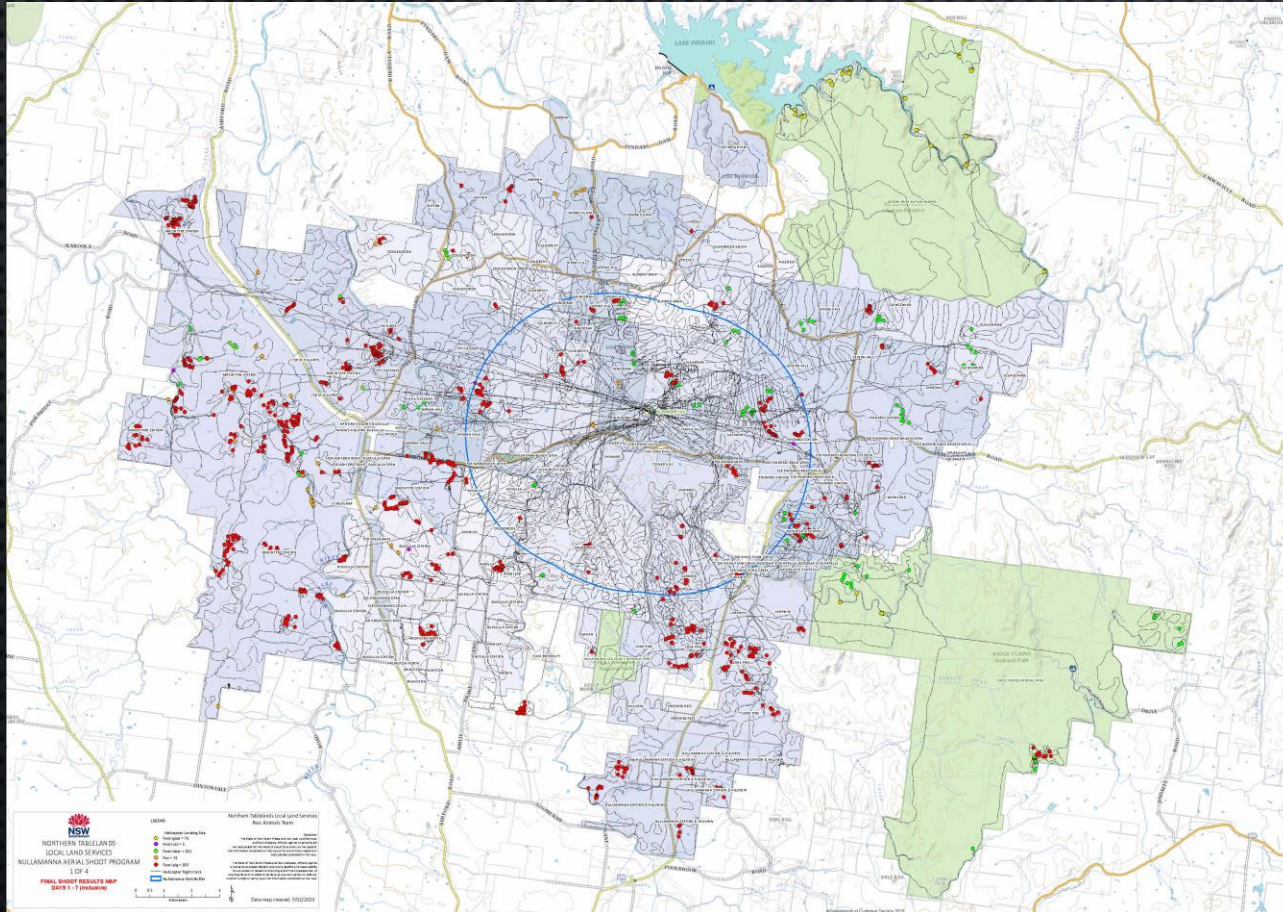
MONITORING – REMOTE CAMERAS



62 TRAPS ACROSS THE LANDSCAPE!



AERIAL SHOOT 1 (1ST – 7TH FEBRUARY 2023)



- 44 Holdings

- 12 TSRs






- 3 National Parks

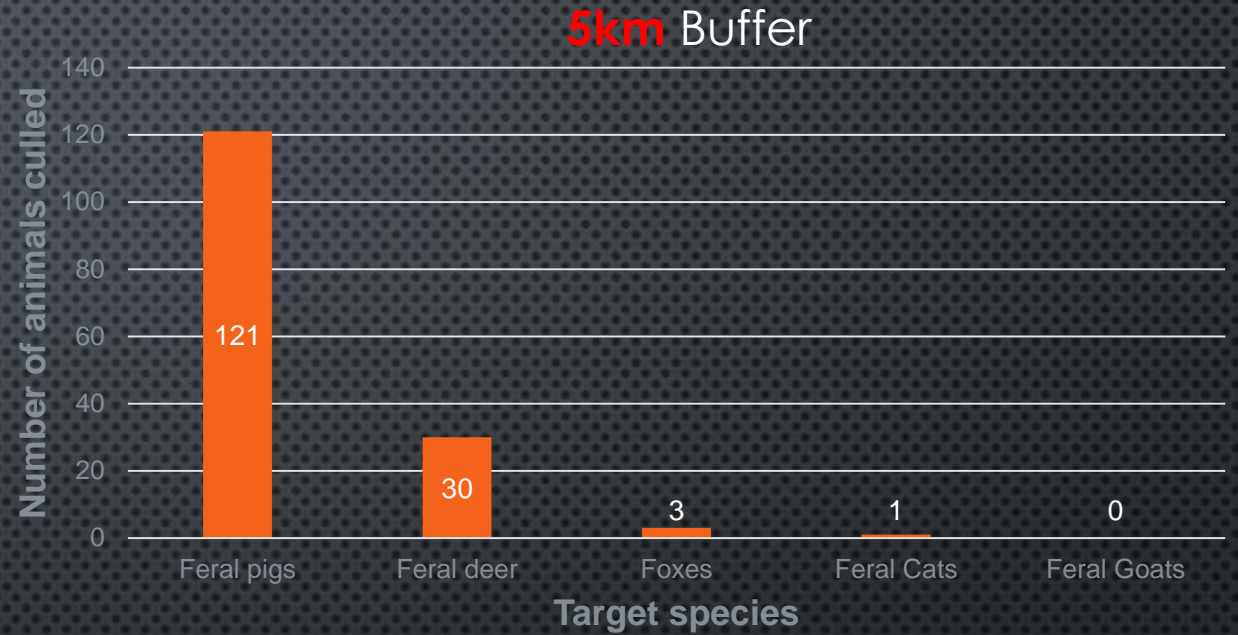
Opportunity to apply:

- Feral pig 'core home range'






- Active GPS collar locations

AERIAL SHOOT 1 (1ST – 7TH FEBRUARY 2023)

-  121 feral pigs
-  30 feral deer (fallow)
-  3 foxes
-  1 feral cat
-  0 feral goats (NPWS & 1 PP)

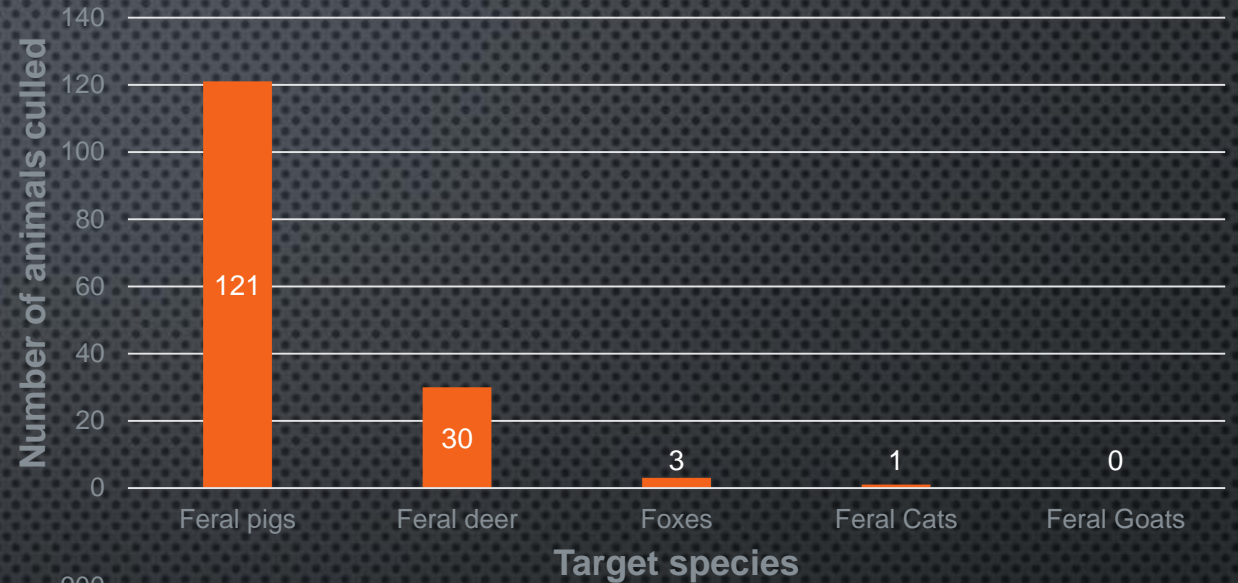


AERIAL SHOOT 1 (1ST – 7TH FEBRUARY 2023)

-  121 feral pigs
-  30 feral deer (fallow)
-  3 foxes
-  1 feral cat
-  0 feral goats (NPWS & 1 PP)

-  833 feral pigs
-  101 feral deer
-  31 foxes
-  3 feral cats
-  75 feral goats

5km Buffer








FERAL PIG TRAPPING (FEBRUARY)








- 43 Pigs destroyed






AERIAL SHOOT 2 (1ST – 7TH MARCH 2023)

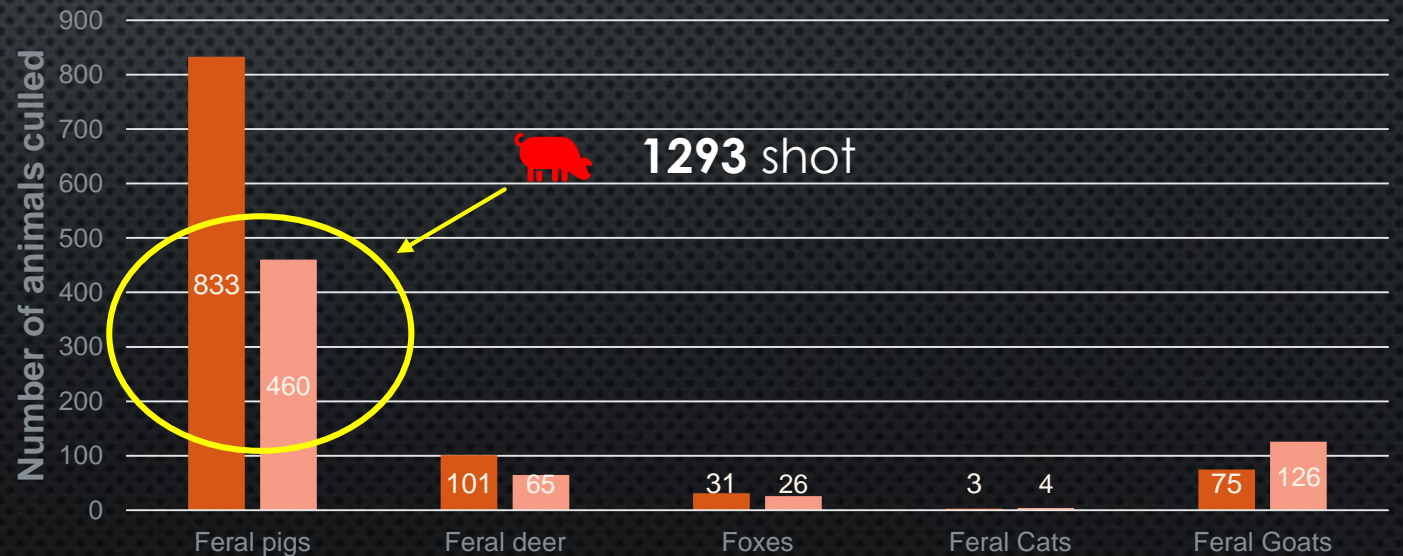
-  88 feral pigs
-  6 feral deer (fallow sp.)
-  3 foxes **5km Buffer**
-  0 feral cats
-  46 feral goats (NPWS & 1 PP)



AERIAL SHOOT 2 (1ST – 7TH MARCH 2023)

-  88 feral pigs
-  6 feral deer (fallow sp.)
-  3 foxes **5km Buffer**
-  0 feral cats
-  46 feral goats (NPWS & 1 PP)

-  460 feral pigs
-  65 feral deer (fallow sp.)
-  26 foxes Overall Site
-  4 feral cats
-  126 feral goats (NPWS & 1 PP)




FERAL PIG TRAPPING (MARCH)

MARCH - **24** PIGS DESTROYED

OVERALL TRAPPING TALLY = **67**




AERIAL SHOOT 3 (27TH MARCH - 2ND APRIL 2023)

 25 feral pigs

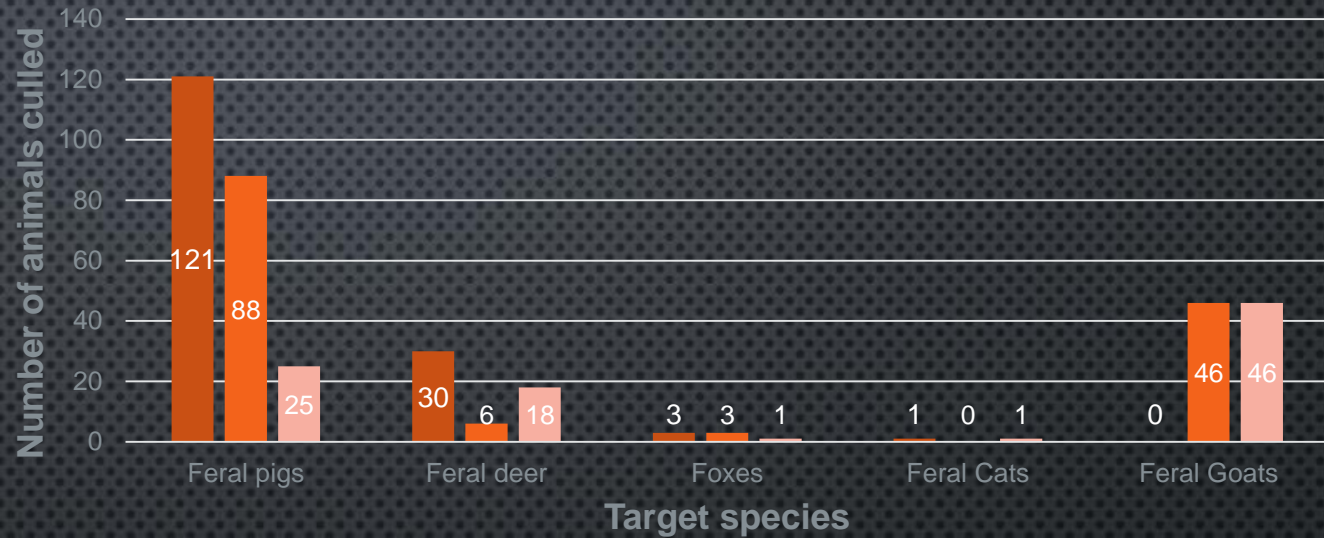
 18 feral deer (fallow sp.)

 1 foxes






 1 feral cats

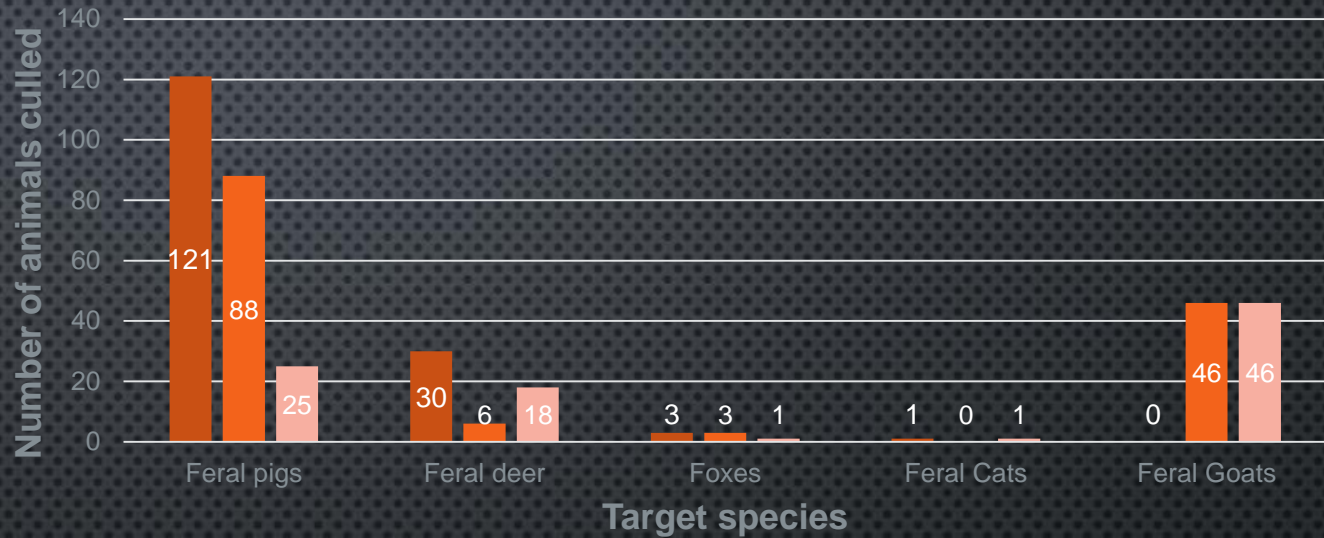
 46 feral goats






5km Buffer

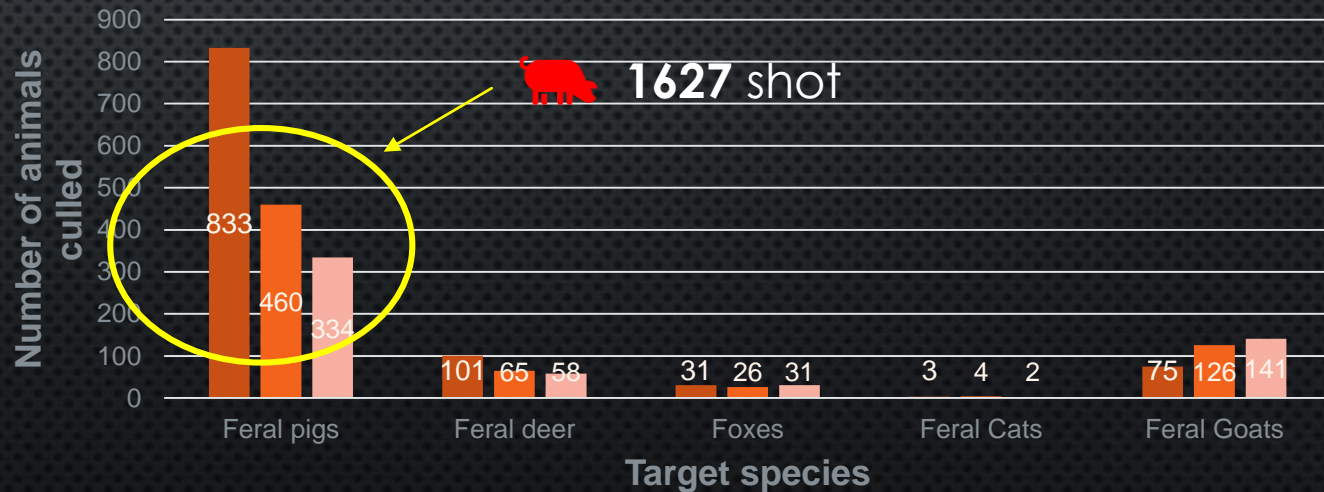


AERIAL SHOOT 3 (27TH MARCH - 2ND APRIL 2023)

-  25 feral pigs
 -  18 feral deer (fallow sp.)
 -  1 foxes
 -  1 feral cats
 -  46 feral goats
- 5km Buffer



-  334 feral pigs
 -  58 feral deer (fallow sp.)
 -  31 foxes
 -  2 feral cats
 -  141 feral goats
- Overall Site



FERAL PIG TRAPPING (APRIL)

APRIL - **23** PIGS DESTROYED


OVERALL TRAPPING TALLY = **90**



AERIAL SHOOT 4 (2ND MAY– 7TH MAY 2023)

 25 feral pigs

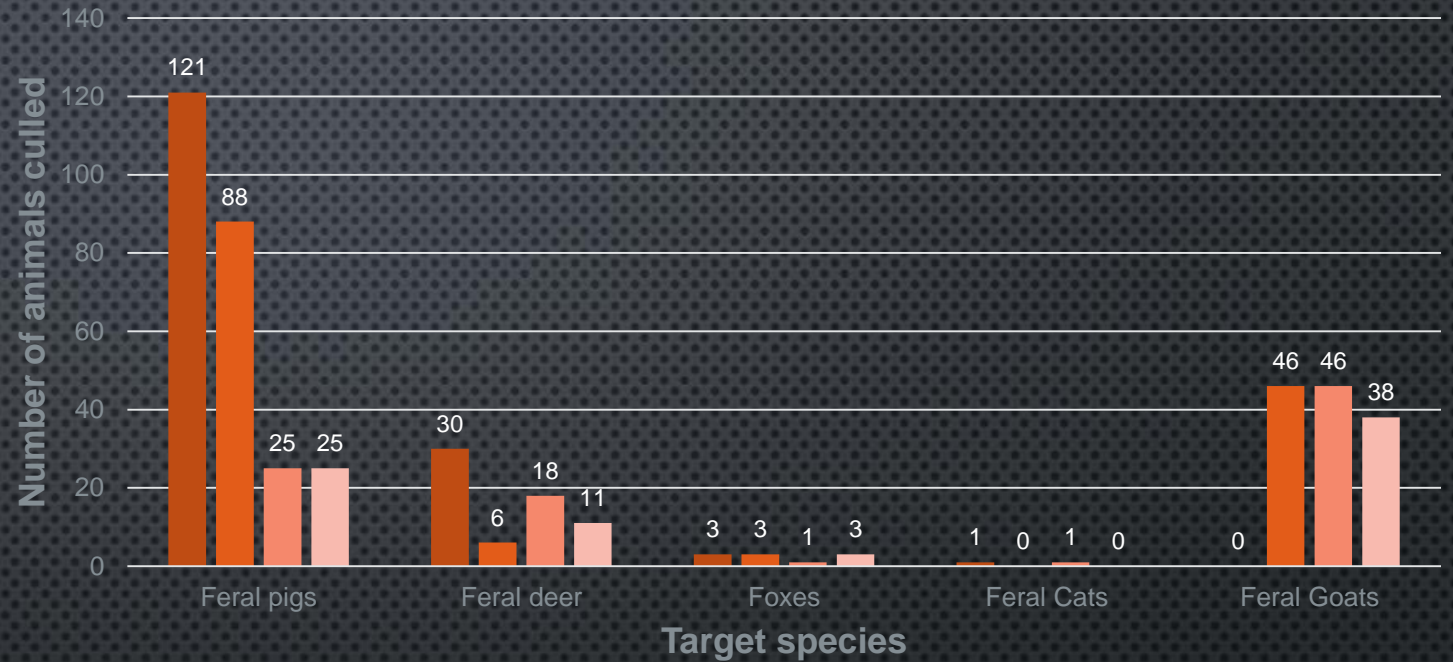
 11 feral deer (fallow sp.)

 3 foxes






 0 feral cats

 38 feral goats






5km Buffer



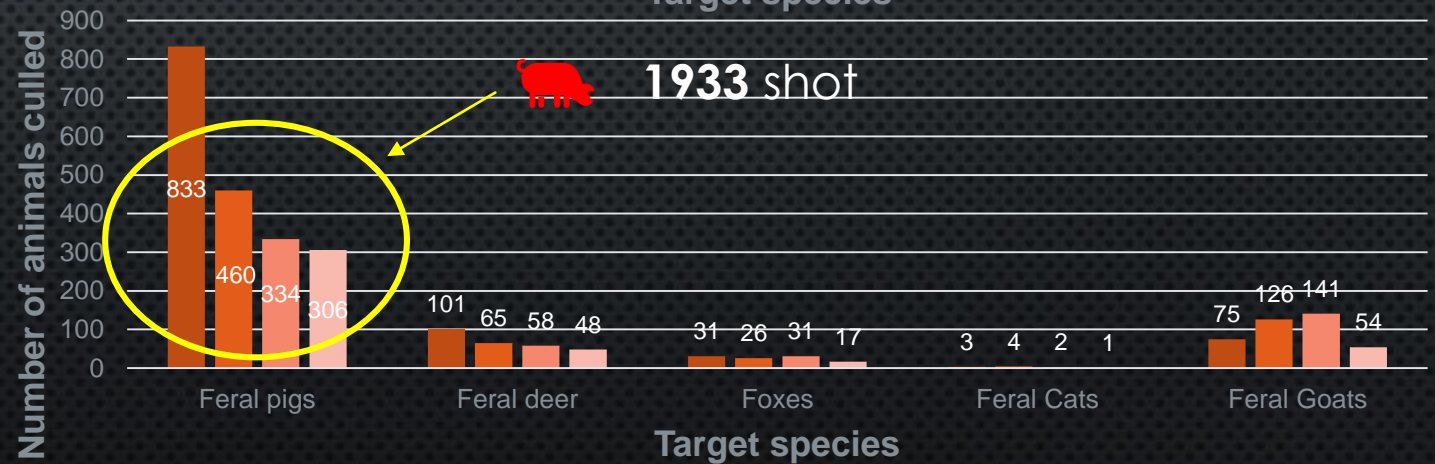
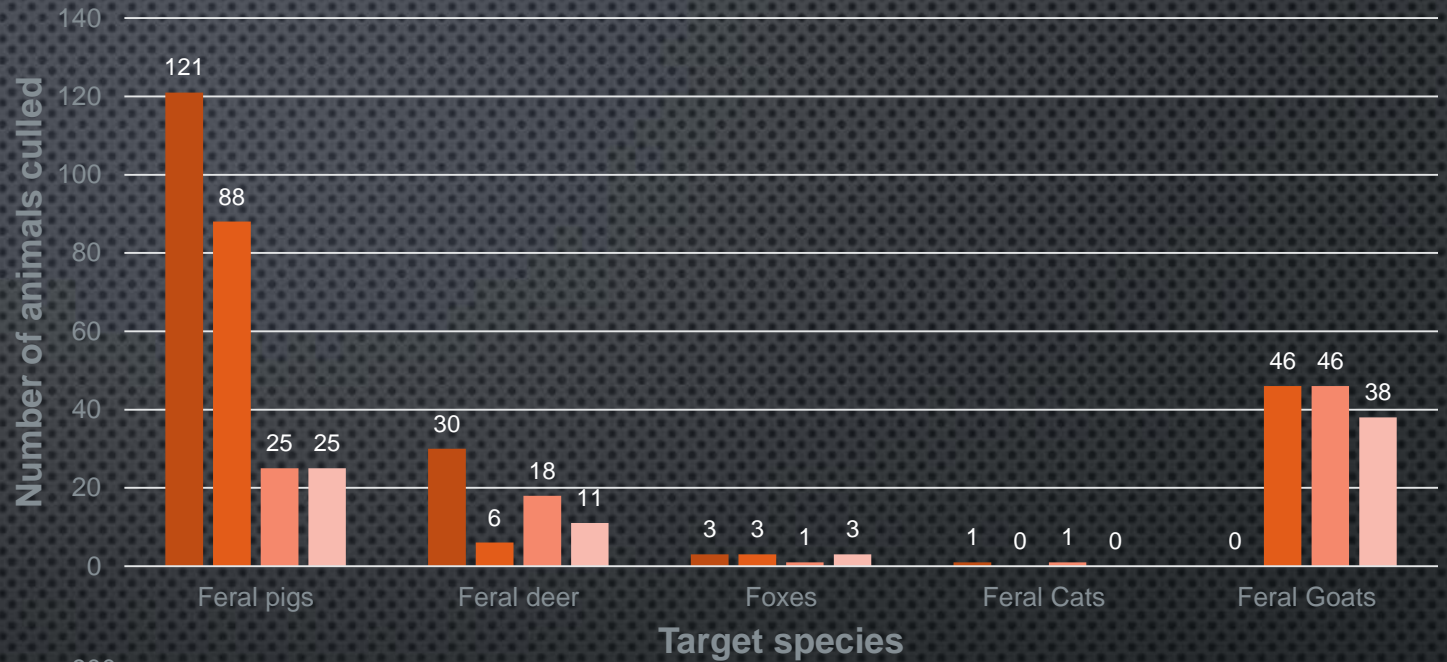
AERIAL SHOOT 4 (2ND MAY– 7TH MAY 2023)

-  25 feral pigs
-  11 feral deer (fallow sp.)
-  3 foxes
-  0 feral cats
-  38 feral goats

5km Buffer

-  306 feral pigs
-  48 feral deer (fallow sp.)
-  17 foxes
-  1 feral cats
-  54 feral goats

Overall Site



FERAL PIG TRAPPING (MAY)

MAY – **2** PIGS DESTROYED

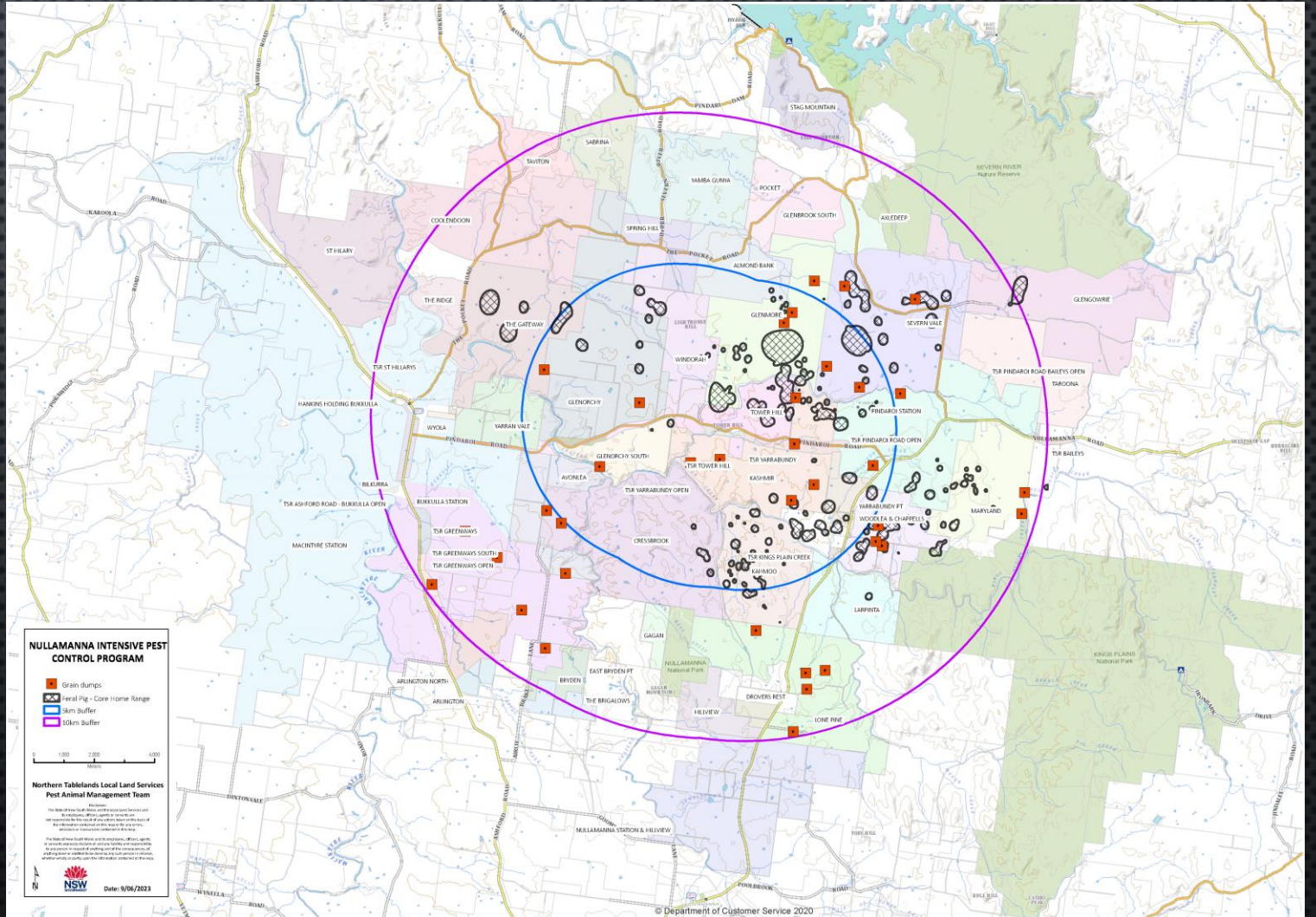
OVERALL TRAPPING TALLY – **92**



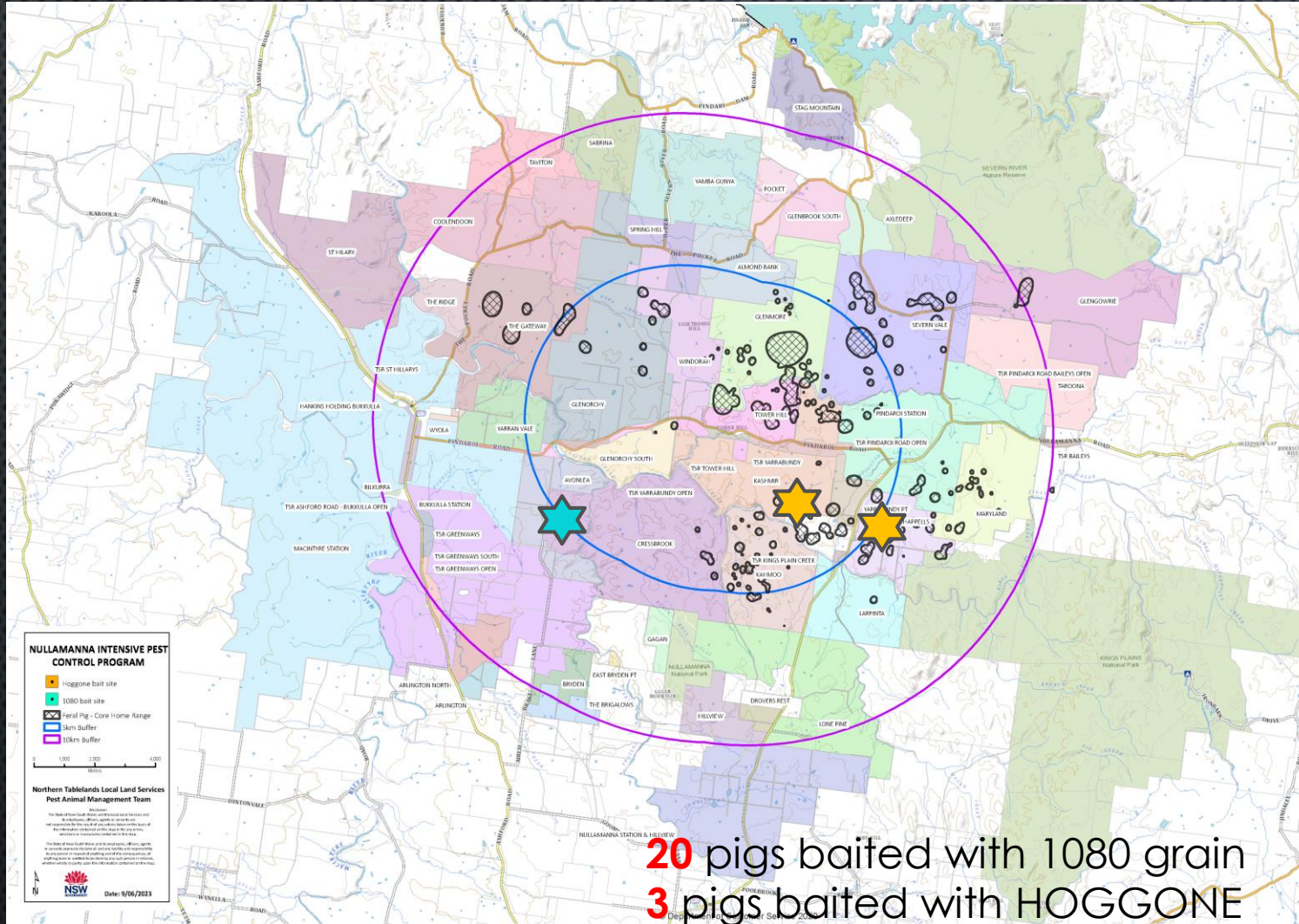
BAITING (1080 & HOGGONE)



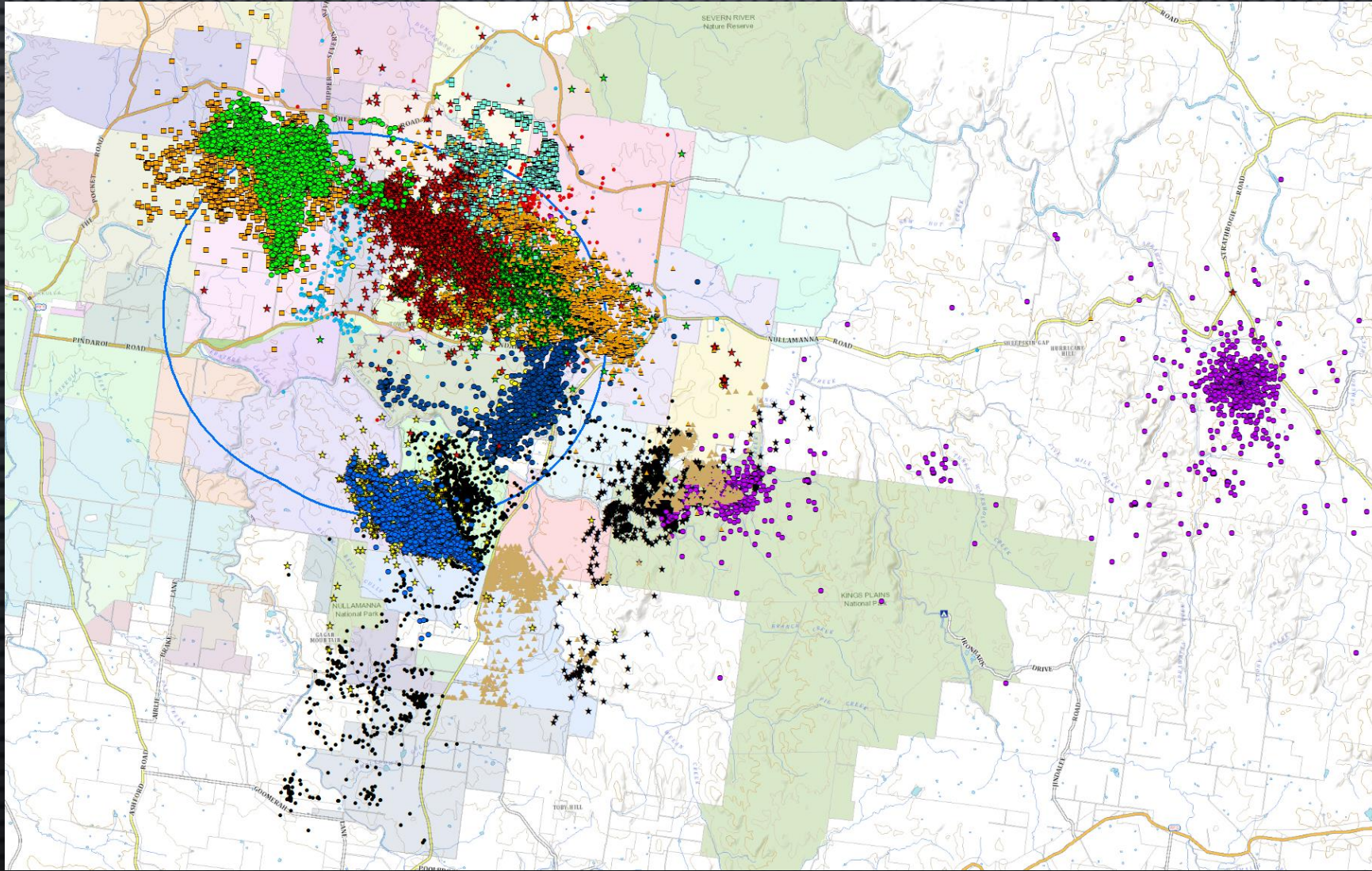
32 GRAIN DUMPS



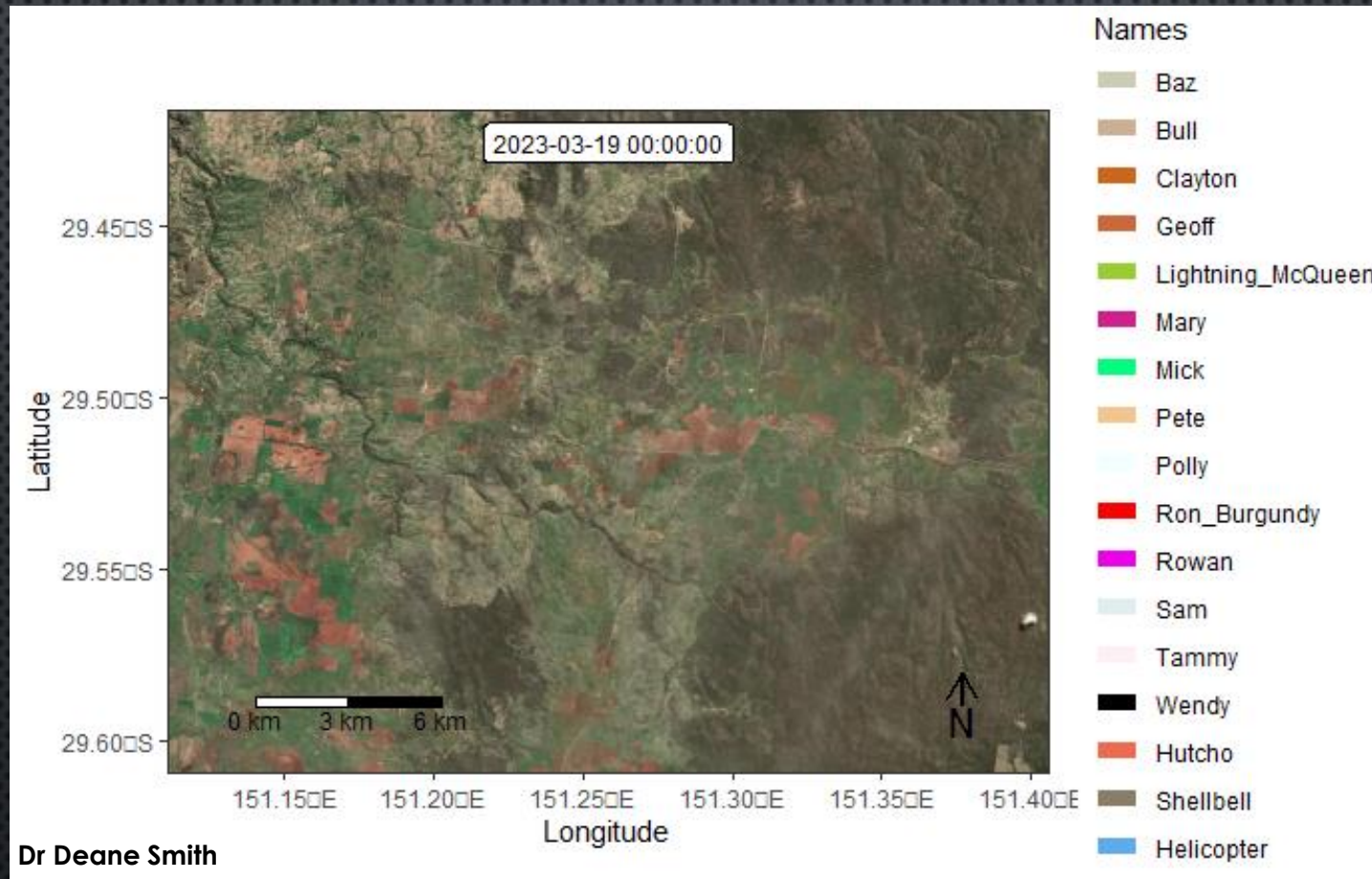
BAITING (1080 & HOGGONE)



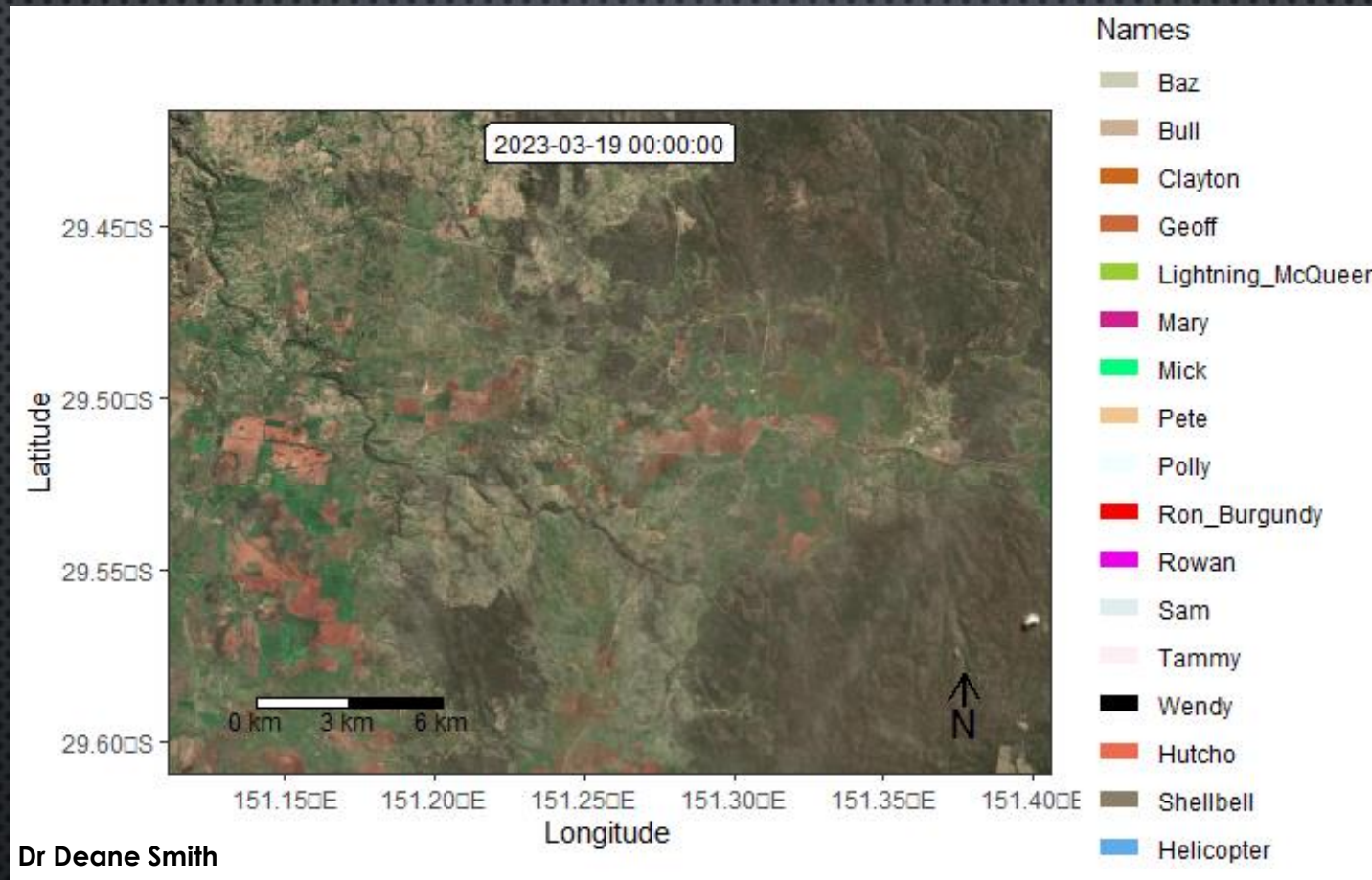
COLLARED PIG MOVEMENTS



AERIAL SHOOT WITH FERAL PIG INTERACTION

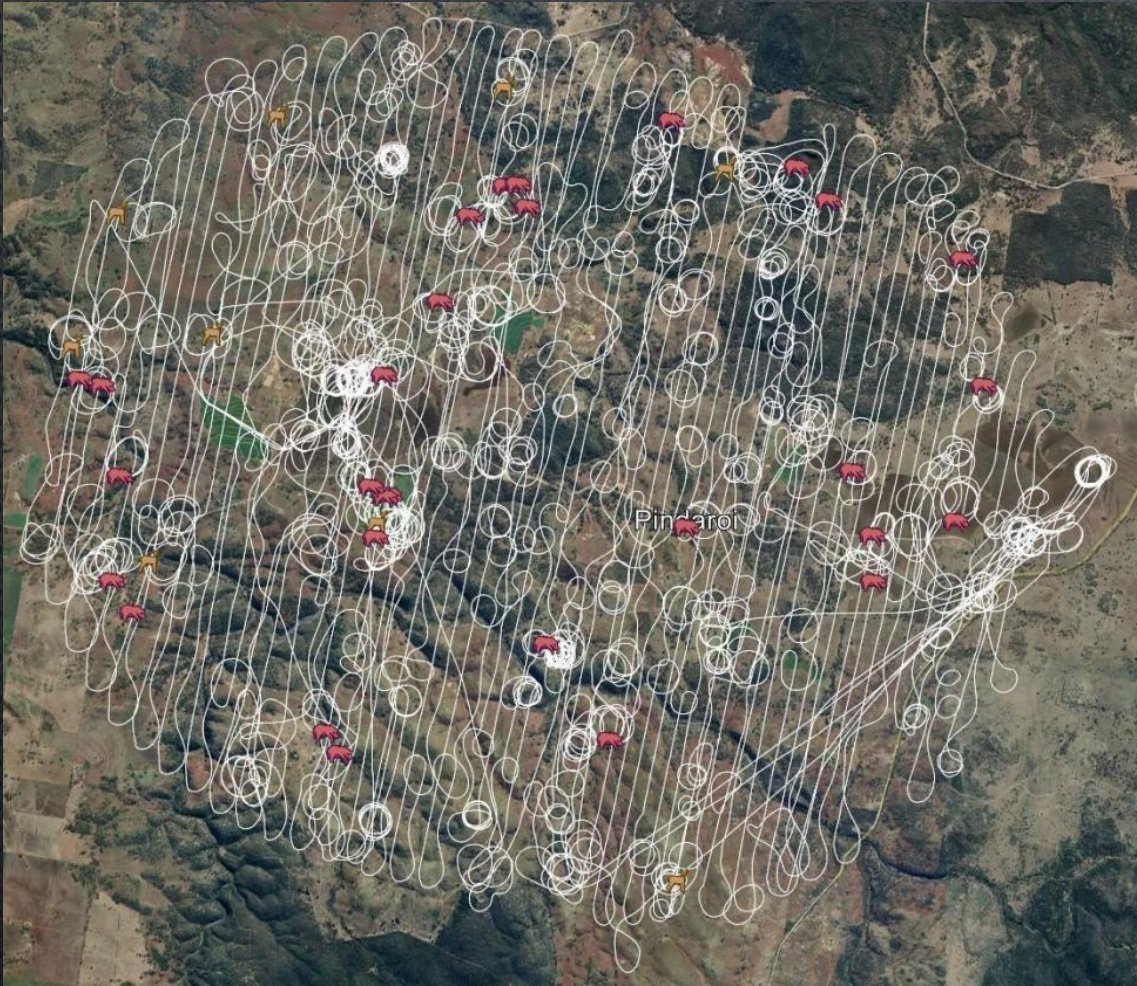


AERIAL SHOOT WITH FERAL PIG INTERACTION



	February Shoot	March Shoot	April Shoot	May Shoot
# Pigs Collared	13	16	17	17
# Identified by shooting team	1	5	4	5
# Identified with GPS collar cords.	11	10	8	8
Judas effect	6	5	3	5

MONITORING - THERMAL/IR DRONE RESULTS



Pre control

69

Post control

29

Population drop of **60%**

WHAT HAVE WE LEARNT?

- IF FMD WAS TO HIT THE AMOUNT OF EFFORT NEEDED TO CONTROL PIGS IS **HUGE!**
- WE NEED TO USE A COMBINATION OF ALL FERAL PIG CONTROL TECHNIQUES – THERE IS NO SILVER BULLET
- THE IMPORTANCE OF MONITORING
- THE SWITCH UP



CONTACT INFORMATION



LACHLAN MARSHALL

PHONE: 0406 301 368

EMAIL: LACHLAN.MARSHALL@SQLANDSCAPES.ORG.AU