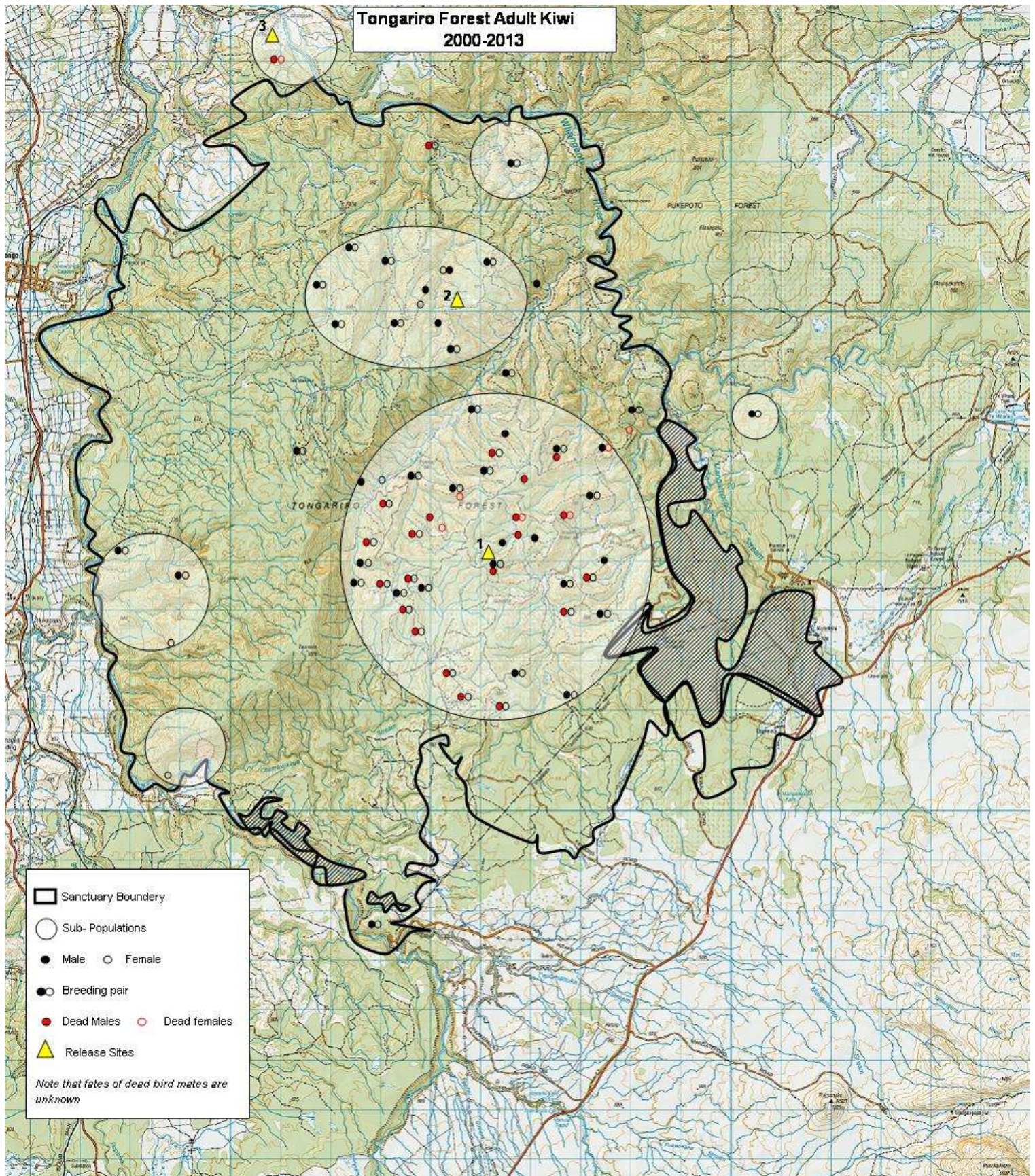


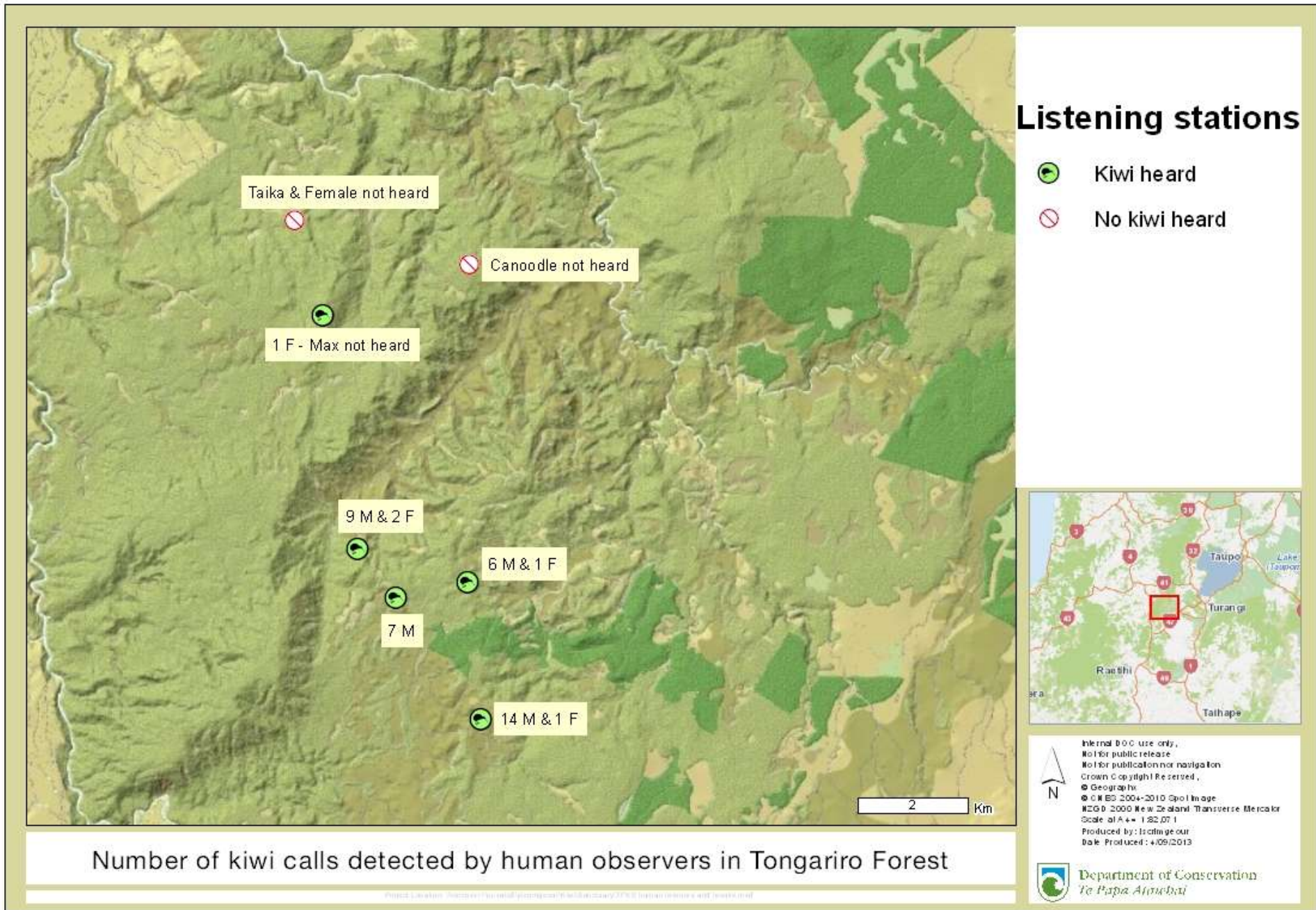
# APPENDICES

APPENDIX 1: MAP SHOWING KNOWN ADULT KIWI LOCATIONS IN TONGARIRO FOREST KIWI SANCTUARY\*



\*Most of the adult deaths occurred on the eastern side of the Tongariro Forest during the ferret incursion, of 2009 to 2011.











**Call recorder locations**

-  Kiwi recorded
-  No kiwi recorded



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 NZGD 2000 New Zealand Transverse Mercator  
 Scale of A4 = 1:82,071  
 Produced by: Isotimgeour  
 Date Produced: 4/09/2013



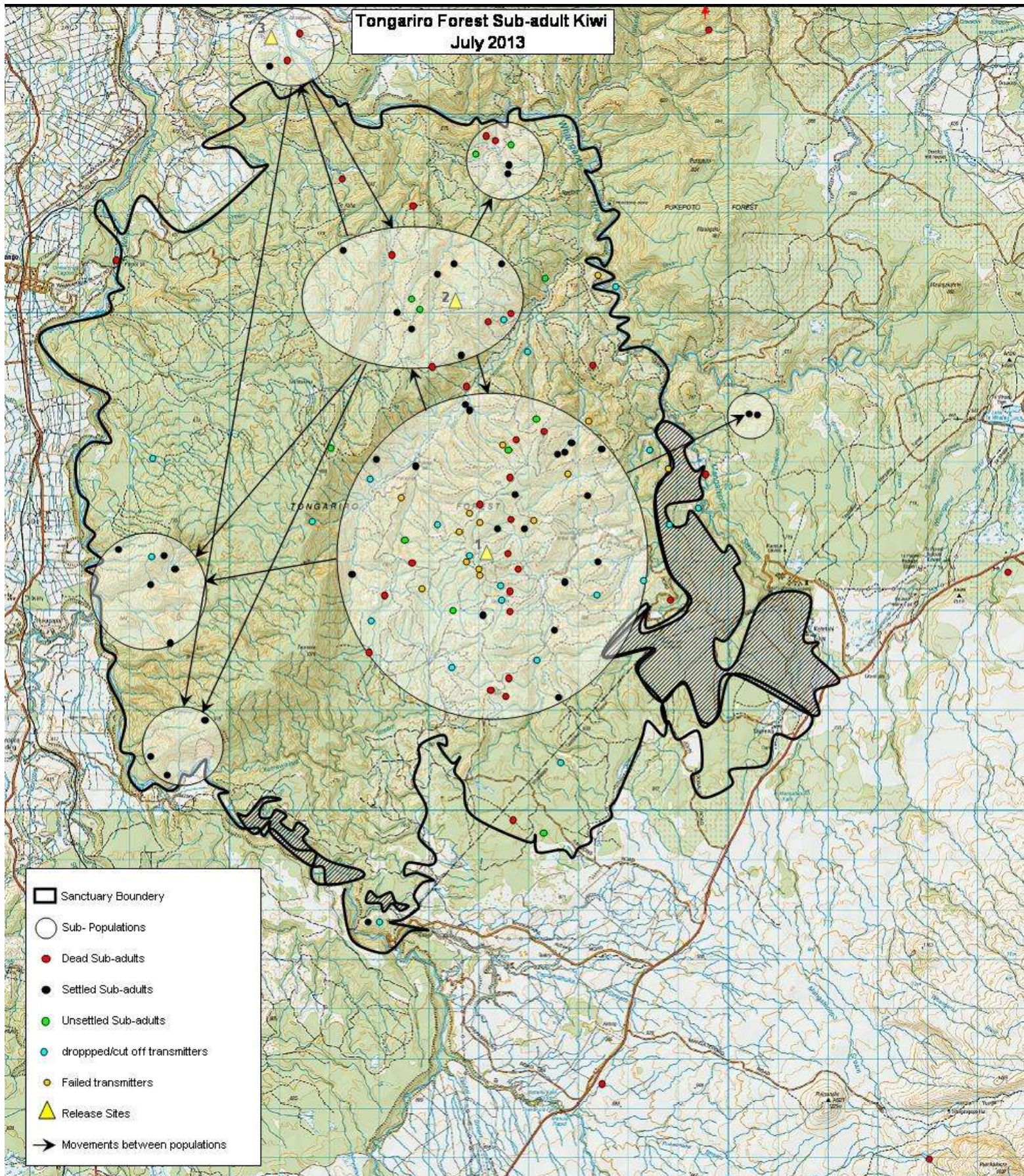
Department of Conservation  
*Te Papa Atihua*

Number of kiwi calls detected by automatic call recorders in Tongariro Forest

Map of Location: Tongariro National Park, New Zealand. All rights reserved.



APPENDIX 4: MAP SHOWING MONITORED SUB ADULT KIWI LOCATIONS IN TONGARIRO FOREST KIWI SANCTUARY





APPENDIX 5: KIWI CHICK SUMMARY

Egg I.D.	Estimated hatch date	Wild hatch / ONE	First Recorded Weight (g)	Date of Tx on	Last recorded weight (g)	Date of last recorded weight	Outcome	Date of Outcome	Age at outcome (days)
Fo5	22-Sep-12	ONE	283	10-Oct-12	283	10-Oct-12	<b>DEAD, mustelid predation</b>	30-Oct-12	38
Lg24	22-Sep-12	ONE	371	10-Oct-12	1050	24/05/2013	Reached sub-adult status	24-Mar-13	183
Hr6	28-Sep-12	ONE	308	15-Oct-12	355	15/11/2012	<b>DEAD, mustelid predation</b>	19-Dec-12	82
Mx30	07-Oct-12	ONE	346	24-Oct-12	346	24-Oct-12	DEAD, misadventure	27-Nov-12	51
Lg25	07-Oct-12	ONE	345	24-Oct-12	800	21/02/2013	DEAD, unknown cause	23-Mar-13	167
Dn5	13-Oct-12	ONE	332	31-Oct-12	460	4/12/2012	DEAD, unknown cause	07-Jan-13	86
Gu6	14-Oct-12	ONE	328	31-Oct-12	425	04/12/12	<b>DEAD, mustelid predation</b>	19-Dec-12	66
L34	16-Oct-12	ONE	340	31-Oct-12	340	31-Oct-12	<b>DEAD, mustelid predation</b>	27-Nov-12	42
Rk7	16-Oct-12	ONE	306	31-Oct-12	306	31-Oct-12	<b>DEAD, mustelid predation</b>	27-Nov-12	42
L35	22-Oct-12	ONE	386	09-Nov-12	386	09-Nov-12	<b>DEAD, mustelid predation</b>	11-Dec-12	50
PP16	22-Oct-12	ONE	363	09-Nov-12	430	3/12/2012	<b>DEAD, mustelid predation</b>	02-Jan-13	72
KK1	22-Oct-12	ONE	378	09-Nov-12	980	18/04/2013	Reached sub-adult status	23-Apr-13	183
KK2	24-Oct-12	ONE	354	09-Nov-12	810	15/04/2013	Reached sub-adult status	25-Apr-13	183
Gu7	26-Oct-12	ONE	346	09-Nov-12	385	4/12/2012	<b>DEAD, mustelid predation</b>	07-Jan-13	73
Tew8	29-Oct-12	WH	315	22-Nov-12	340	20/12/2012	DEAD, unknown cause	07-Jan-13	70
Mr14	01-Nov-12	ONE	283	21-Nov-12	900	25/03/2013	Reached sub-adult status	03-May-13	183
Rk8	05-Nov-12	ONE	351	21-Nov-12	351	21-Nov-12	<b>DEAD, mustelid predation</b>	19-Dec-12	44
Tew9	14-Nov-12	WH	310	22-Nov-12	390	21/12/2012	DEAD, unknown cause	07-Jan-13	54
Lg 26	04-Jan-13	WH	500	30-Jan-13	530	11/03/2013	DEAD, unknown cause	30-Apr-13	116
Pm7	05-Jan-13	WH	200	25-Jan-13	200	25-Jan-13	<b>DEAD, mustelid predation</b>	31-Jan-13	26
D51	16-Jan-13	WH	280	24-Jan-13	360	27/02/13	DEAD, unknown cause	15-Mar-13	58
Lg 27	25-Jan-13	WH	280	30-Jan-13	280	30-Jan-13	<b>DEAD, mustelid predation</b>	01-Mar-13	35
Mx32	25-Jan-13	WH	330	14-Feb-13	1100	9/07/2013	Reached sub-adult status	27-Jul-13	183
Dn7	31-Jan-13	WH	270	18-Feb-13	270	18-Feb-13	Dropped Tx	05-Apr-13	64
Mr16	01-Feb-13	WH	280	18-Feb-13	820	12/07/2013	Reached sub-adult status	03-Aug-13	183
D52	01-Feb-13	ONE	312	19-Feb-13	312	19-Feb-13	DEAD, unknown cause	05-Mar-13	32
Tai14	13-Feb-13	WH	295	06-Mar-13	750	31/07/2013	Reached sub-adult status	15-Aug-13	183

**APPENDIX 6: A COMPARISON OF KIWI CHICK OUTCOMES AND KAPLAN-MEIER SURVIVAL ESTIMATES FOR THE SEVEN BREEDING SEASONS, 2005-2013\***

	2005-2006	2006-2007	2007-2008	2008-2009	2010-2011	2011-2012	2012-13
	Pre - 1080	Immediately Post 1080	1 Year Post 1080	2 years Post 1080	Pre - 1080	Immediately Post 1080	1 year Post 1080
<b>Total Number Monitored</b>	11	21	19	23	25	25	27
Survival to sub-adult status >183 days	1	12	5	5	5	10	7
Alive (currently <183 days)	0	0	0	0	0	1	0
Deaths - predation	6	7	4	15	16	7	11
Deaths - Natural / misadventure and/or unknown	1	0	3	2	1	7	8
Dropped transmitter	1	2	5	0	3	0	1
Transmitter failure	1	0	2	1	0	0	0
Removed from forest due to injury	1	0	0	0	0	0	0
<b>Kaplan-Meier Survival Estimate (95% Confidence Intervals)</b>	<b>0.267</b> (0.048 - 0.563)	<b>0.690</b> (0.435 - 0.848)	<b>0.589</b> (0.320 - 0.782)	<b>0.215</b> (0.077 - 0.398)	<b>0.188</b> (0.066 - 0.356)	<b>0.440</b> (0.245-0.619)	<b>0.272</b> (0.123 - 0.453)

*\*Data from the 2009/10 season is not included as chicks were crèched in Warrenheip, a 16ha predator proof fenced area of bush near Cambridge, Waikato*

APPENDIX 7: NUMBER OF BIRD COUNTS HEARD FOR DIFFERENT BIRD SPECIES 2002 – 2013\*

\*Non-treatment seasons (pre-aerial 1080) are a darker colour (maroon); the seasons post treatment are shown in light blue

