

Omataroa Rangitaiki No. 2 Trust - Kiwi Call Survey 17-21 June 2011

Prepared by Paula Williams, Project Kiwi Trust



Bay of Plenty Regional Council
Operations Publication 2012/01

February 2012

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*Working with our communities for a better environment
E mahi ngatahi e pai ake ai te taiao*





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Cover Photo:
Omataroa Forest. Photographer – Ian Tarei

Acknowledgements

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Part 1: Introduction

1.1 Local, regional and national significance

Scientific name: apteryx mantelli

Common name: Eastern North Island Brown Kiwi

Threat status: 4-serious decline (NZ Threat Classification System lists 2005) i

1.2 National context

Numbers and distribution of kiwi are in rapid decline on the two main islands of New Zealand. Radio-telemetry studies at a number of unmanaged sites indicate that the North island Brown kiwi is declining at an alarming rate of 5.8% per year – approximately halving every decade.

This decline is mainly due to intense predation of young kiwi in their first three to eight months by stoats (*mustela ermine*) and cats (*felis catus*). It is likely that all maintained kiwi taxa are declining at a similar rate, as the main agents of decline are widespread.

As populations decline, the rate of decline in the effective population size accelerates; populations become fragmented and sex ratios become skewed.

Omataroa Rangitāiki No. 2 Trust supports a Kiwi recovery programme on its own land and contributes to achieving two goals identified in the New Zealand Biodiversity Strategy:

- **Goal one: Community and Individual Action; Responsibility and Benefits**
Omataroa Rangitāiki No. 2 Trust's current course of action is an example of co-ordinated iwi action to conserve biodiversity. Omataroa Rangitāiki No. 2 Trust is a vehicle for communities and individuals to share in conserving our national icon, the kiwi.
- **Goal Three: Halt the decline in New Zealand's indigenous biodiversity**
Omataroa Rangitāiki No. 2 Trust's work ensures the ongoing presence of Eastern North island Brown Kiwi within the Trust's land.

Omataroa Rangitāiki No. 2 Trust contributes to achieving goals and objectives identified in the Kiwi Recovery Plan 2008 – 2018:

- **Long Term Recovery Plan**
To restore, and wherever possible, enhance the abundance, distribution, and genetic diversity of all kiwi taxa.
- **4.2.1 – Management**
Goal 1.2: To halt the overall decline of great spotted kiwi, tokoeka and brown kiwi.
- **4.2.2 – Community Relations and Engagement**
Goal 2.1: To increase and sustain community-led projects in kiwi recovery for all species and across a broad range of sectors of the New Zealand society.

- **Objective 5.1 – Best Practice**
To ensure that kiwi management is undertaken to a consistent and high standard.
- **Objective 9.1 – Minimum Secure Populations**
To secure a minimum of 500 pairs of brown kiwi (all taxa), great spotted kiwi and Fiordland tokoeka, from the relevant agents of decline.
- **Action 9.1**
Control relevant pests of all managed sites with populations above 200 pairs, and 30% of sites with populations between 50 and 200 pairs where management is based on BNZ Operations Next Egg only (brown kiwi, great spotted kiwi and tokoeka) by 2018.
- **Action 9.2**
Maximise effectiveness and efficiency of predator control at currently managed sites for Coromandel and eastern brown kiwi through reviewing existing management and/or increase in effort by 2010 and then throughout the term of the plan.

Part 2: Kiwi Call Survey

The first kiwi call survey on Omataroa Rangitaiki No 2 trust land was conducted during 2011.

A kiwi call survey is one of the measures that can help assess the kiwi population of an area, and once the data has been collected over years, it helps assess population trends.

The call survey consists of listening from nine sites, between 6:00-8:00 pm, for three consecutive nights (weather permitting).

It is intended that the kiwi call survey will continue to be conducted annually as one of the measures to assess population trends.

Outcome one: To conduct a call survey annually, starting the third Friday of June, ensuring data is recorded accurately.

Outcome two: To collate the call survey data.

Outcome three: To analyse the data, reflect on current practice and consider future implications for the project.

2.1 Kiwi call survey sites 2011

Site number	Location	Leader	Listen for
1	Kiwi Nui Road	Ian	
2	Faraway Track – Far End	Rangi	
3	B-Line Turnoff	Fran	09, 10, 16, 25, 35, 79
4	Backers Walk	Hami	
5	Miro Road – Campsite	Bob	
6	Marker 7	Tyler	
7	Faraway Track – First Site	Rick	18 Male, 15 Juv, 23 Juv, 30 Sub
8	Miro Road – Skid Site	Spirit	08, 58
9	Faraway Track – Site Three	Loui	

Many skilled volunteers have travelled long distances to show their support for the work undertaken on the Omataroa Rangitāiki No. 2 Trust's land, and to ensure that the work undertaken here is valued and continues.

We would like to thank the following people:

- The entourage from the Lake Waikaremoana Hapū Restoration Trust, the Williams family from Kuaotunu, as well as our very dependable locals and landowners.
- A big thank you to Awakeri Hot Springs for providing accommodation, cooking facilities, amenities and fantastic thermal pools, at a reduced rate, to all of our volunteers. Thank you also for letting the two kiwi dogs stay on site.

Part 3: Discussion

The first call survey conducted for the Omataroa Rangitāiki No. 2 Trust was a success on a number of fronts.

- 1 The number of volunteers that made the survey possible was outstanding and all have offered to return in the following years to continue to make it a success.
- 2 We heard a number of kiwi that were not on transmitters. This was significant as we thought we had most of the birds in the block on transmitters and this shows that there are more birds in the block than what was first thought.
- 3 There were more male/female pairings heard than what was first thought.
- 4 Nick Gillingham is currently collating the call survey data to work out the mean number of call per hour.

Part 4: Volunteers

	Name	Address	Phone
1-2	Ian and Karen Tarei	C/- Post Office Te Teko	07 322 8799
3	Fran Vercoe	16 Marshall Street Kawerau	
4-6	John, Judith and Hamiora Stretch	13 Tauhe Tarei Street Te Teko C/- Te Teko Post Office	027 848 9968
7-12	Rangi, Huia, Rangiteaorere, Whatonga, Kokako and Hokioi Raki	C/- Post Office Te Teko	
13	Kare-kare Tarei	Edgecumbe Road Te Teko	
14	Akima Tarei	Edgecumbe Road Te Teko	
15	Jury Waikato	Galatea Road Te Teko	
16-18	Paddy, Miracle Charm and Leighon Tarei	Victoria Avenue Whakatāne	
19	Te Nika Daykin	Kirk Street Kawerau	
20	Matepo Waikato	Te Mahoe Village Te Teko	
21	Kui Waikato	Te Mahoe Village Te Teko	
22	Sarah and Ethan Comisky	10 James Street Whakatāne	
23	Nick Chase	Tu Wharetoa Kawerau	
24	Omataroa Netball Club		
25-26	Marama and Penetito Moses	332 Galatea Road Te Teko	022 603 6477
27	George Waikato	409 Galatea Road Te Teko	
28	Eve Reuben	Edgecumbe Road Te Teko	
29	Georgie Tarei	9 Marshall Street Kawerau	
30	Mary Tarei	9 Marshall Street Kawerau	
31	Clare Rakei	Tūwharetoa Street Kawerau	
32	Rik Keys	Wairaka Road Whakatāne	
33	Tuhana Vercoe	Marshall Street Kawerau	
34	Vina Sisley	Marshall Street Kawerau	

35	Raynor Tarei	11 Tauhe Tarei Street Te Teko	
36-37	Michelle Winiata and Riki Winitana	6 Kaitawa Village RD 5 Tuai Lake Waikaremoana 4195 C/- Twin Lakes Store	021 1750 468 (06) 837 3803
38-40	Big Bob, Pauline and Richard Waiwai	7 Rotten Row RD 5 Tuai Lake Waikaremoana 4195	(06) 837 3846
41	Tyler Kopa	4 Kaitawa Road RD 5 Tuai Lake Waikaremoana 4195	021 048 4885
42	James Wairua Stevens	3 Piripaua Village RD 5 Tuai Lake Waikaremoana 4195	
43	Loui Mitchell	14 Aniwaniwa Road RD 5 Tuai Lake Waikaremoana 4195	
44-46	John, Paula and Solomon Williams	470 Waitaia Road Whitianga 3592	021 2482 900 021 382 900

Part 5: Kiwi call survey budget

The success of the call survey relies heavily on its volunteer capacity. This year, 46 volunteers, from as far north as Whitianga and as far south as Lake Waikaremoana contributed their skills, equipment and time to help provide a scientific platform for the Trust to help direct future decision-making.

Volunteers are valued at a rate of \$17.00 per hour. Volunteers are not charged out for the duration of the call survey, they are charged on a basis of contributing an average of 20 hours during the call survey period.

Whilst the actual costs of running a call survey equated to 14% of the total costs, the intangible costs, largely made up of voluntary labour equated to a staggering 85% of the total call survey costs.

Call Survey Costs, including intangible costs		
Actual costs	Food	\$2,000
	Accommodation	\$1,700
	General resources	\$200
	Total actual costs	\$3,900
Intangible costs	Voluntary labour for call survey	\$17,600
	Kiwi tracking equipment provided	N/A
	Travel costs for volunteers	\$4,000
	Food and drink volunteers provided	\$2,000
	Co-ordination of call survey	\$400
	Total intangible costs	\$24,000
	Total call survey costs	\$27,900

Kiwi tracking equipment is not costed as while it is an invaluable and required piece of equipment, kiwi practitioners take them home with them. A yagi aerial and a TR4 has a combined costs of approximately \$1500.00.

Part 6: Actions requiring attention

The following actions need to occur to make the most of the call survey data:

Outcome one: To collate the call survey data.

Outcome two: To analyse the data, reflect on current practice and consider future implications for the project.

Once this has been completed, it will be added to this report.

In addition:

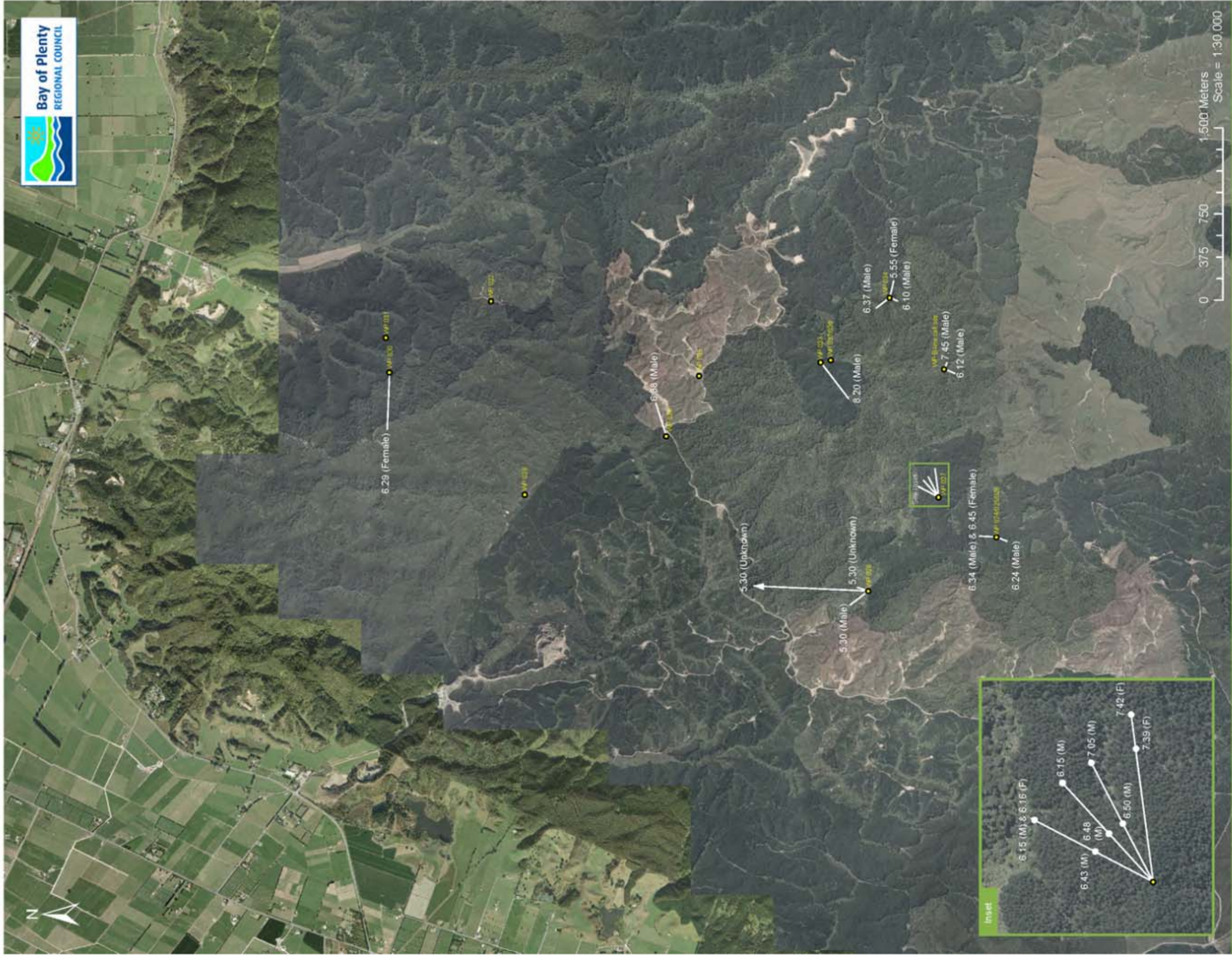
- 1 It is suggested that Fran Vercoe is trained how to collate and interpret the call survey data by Pim de Monchy (Bay of Plenty Regional Council), on behalf of the Omataroa Rangitāiki No. 2 Trust.
- 2 It is suggested that the trustees of the Omataroa Rangitāiki No. 2 Trust support the call survey becoming an annual event to help ascertain the kiwi population on Trust land.
- 3 It is suggested that the trustees of the Omataroa Rangitāiki No. 2 Trust financially support the call survey by covering the costs for the co-ordinator of the vent (\$400.00).
- 4 That the third Friday of June be accepted as the start date of all future call surveys.
- 5 That 15 June – 18 June 2012 be accepted as the call survey dates for next year.

Appendices

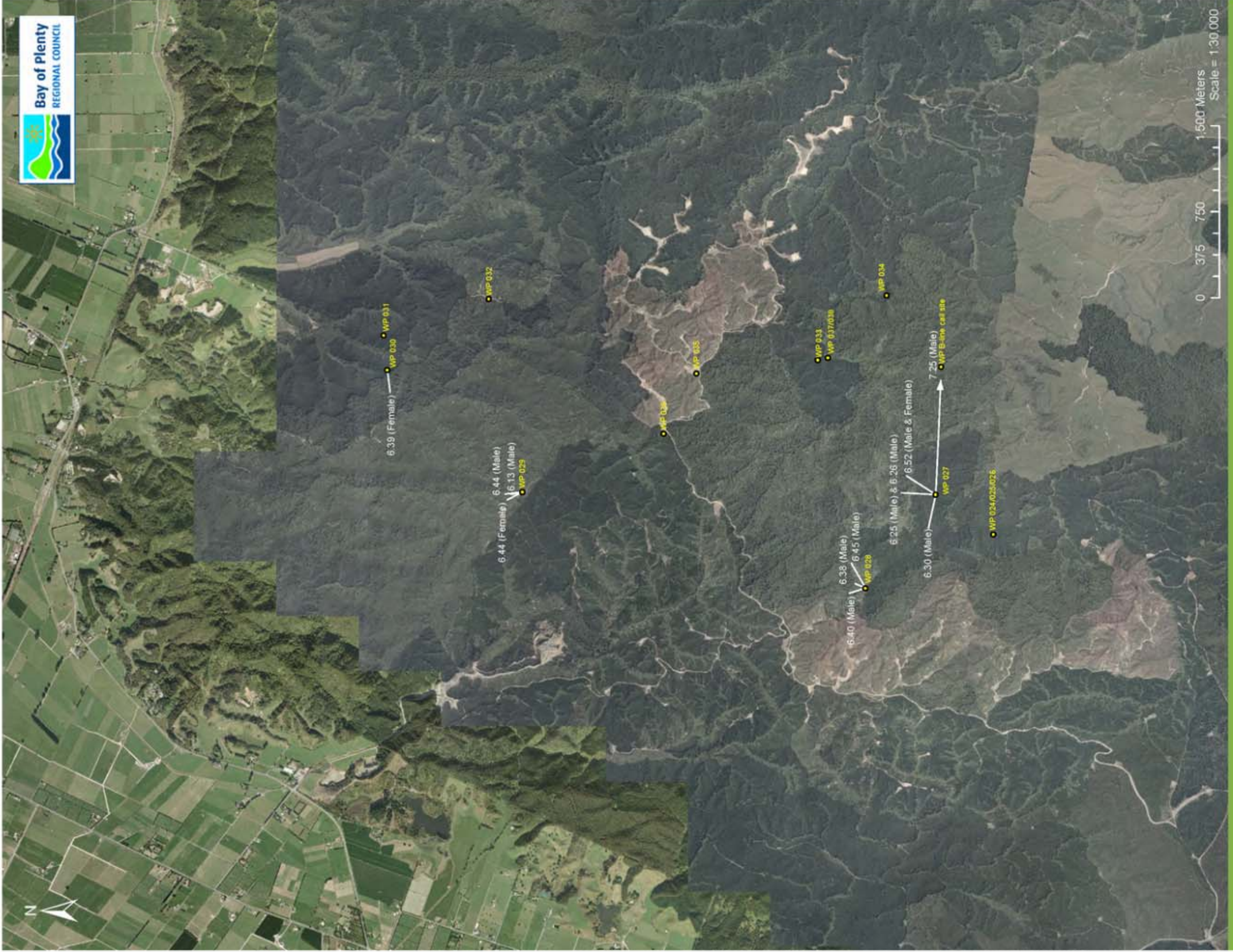
Appendix 1 – Survey results

Date	site	listen #	time	direction	distance	observer	male	female	wind strength	rain	temp	cloud	ground cor	noise	moon
17/06/11	1	1				ian axe	nil calls	nil calls	moderate	light	cold	cloudy	damp	loud	nil
18/06/11	1	2	18.13	345	100	ian axe	nil calls	1	mod -strong	nil	cold	cloudy	damp	moderate	nil
18/06/11	1	2	18.44	350	150	ian axe		1	mod -strong	nil	cold	cloudy	damp	moderate	nil
18/06/11	1	2	18.44	330	150	ian axe		1	mod -strong	nil	cold	cloudy	damp	moderate	nil
19/06/11	1	3				ian jono	nil calls	nil calls	strong	heavy	cool	cloudy	wet	loud	nil
17/06/11	2	1	18.15	25	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	18.15	45	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	18.16	25	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	18.43	25	100	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	18.48	45	100	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	18.50	60	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	19.05	60	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	19.39	80	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
17/06/11	2	1	19.42	80	200	rangi		1	moderate	light	cold	cloudy	damp	quiet	nil
18/06/11	2	2	18.25	0	200	rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
18/06/11	2	2	18.26	0	300	rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
18/06/11	2	2	18.30	280	300	rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
18/06/11	2	2	18.52	30	300	rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
18/06/11	2	2	18.52	30	300	rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
18/06/11	2	2	19.25	90		rangi jono		1	strong	light	cold	cloudy	wet	quiet	nil
19/06/11	2	3	18.45	80	200	rangi		1	strong	light	warm	cloudy	wet	quiet	nil
17/06/11	3	1	18.12	200	100	fran		1	light	light	warm	cloudy	damp	quiet	nil
17/06/11	3	1	19.45	110	60	fran		1	light	light	warm	cloudy	damp	quiet	nil
18/06/11	3	2				fran	nil calls	nil calls	strong	light	cold	cloudy	wet	moderate	nil
19/06/11	3	3				fran	nil calls	nil calls	strong	heavy	cold	cloudy	wet	moderate	nil
17/06/11	4	1	18.29	270	450	hami		1	light	light	warm	cloudy	damp	moderate	nil
18/06/11	4	2				hami	nil calls	nil calls	light	light	warm	cloudy	wet	moderate	nil
19/06/11	4	3				hami	nil calls	nil calls	strong	mod	warm	cloudy	wet	very	nil
17/06/11	5	1	17.55	100	150	bob		1	nil	nil	cool	cloudy	dry	quiet	nil
17/06/11	5	1	18.10	200	75	bob		1	nil	nil	cool	cloudy	dry	quiet	nil
17/06/11	5	1	18.37	320	150	bob		1	nil	nil	cool	cloudy	dry	quiet	nil
18/06/11	5	2				bob	nil calls	nil calls	mod	light	warm	cloudy	wet	moderate	nil
19/06/11	5	3	18.30	120		bob		1	light	light	cool	cloudy	wet		nil
19/06/11	5	3	18.38	220		bob		1	light	light	cool	cloudy	wet		nil
19/06/11	5	3	18.54	230		bob		1	light	light	cool	cloudy	wet		nil
17/06/11	6	1	18.38	70	300	tyler		1	light	light	cool	cloudy	damp	light	nil
18/06/11	6	2				tyler	nil calls	nil calls	mod	light	cold	cloudy	wet	moderate	nil
19/06/11	6	3				tyler	nil calls	nil calls	mod	light	cool	cloudy	wet	moderate	nil
17/06/11	7	1				rik	nil calls	nil calls	light	light	cool	cloudy	damp	quiet	nil
18/06/11	7	2	18.38	20	100	rik		1	strong	light	cold	cloudy	wet	moderate	nil
18/06/11	7	2	18.40	340	150	rik		1	strong	light	cold	cloudy	wet	moderate	nil
18/06/11	7	2	18.45	58	250	rik		1	strong	light	cold	cloudy	wet	moderate	nil
19/06/11	7	3				rik	nil calls	nil calls	mod	mod	cold	cloudy	wet	moderate	nil
17/06/11	8	1	18.20	230	400	spirit		1	light	nil	cool	cloudy	damp	moderate	nil
18/06/11	8	2				spirit	nil calls	nil calls	mod	light	warm	cloudy	damp	moderate	nil
19/06/11	8	3				spirit	nil calls	nil calls	mod	light	warm	cloudy	wet	moderate	nil
17/06/11	9	1	18.24	200	100	loui		1	light	light	cold	cloudy	damp	moderate	nil
17/06/11	9	1	18.34	0	100	loui		1	light	light	cold	cloudy	damp	moderate	nil
17/06/11	9	1	18.45	0	150	loui		1	light	light	cold	cloudy	damp	moderate	nil
18/06/11	9	2	18.24			loui		1	light	light	warm	cloudy	damp	moderate	nil
18/06/11	9	2	18.34			loui		1	light	light	warm	cloudy	damp	moderate	nil
19/06/11	9	3				loui	nil calls	nil calls	strong	light	cold	cloudy	damp	moderate	nil
Results represent listening for two hours per night over three nights per site															
Total listening = 54															
Total calls = 38															
Average call rate per hour = 0.7															

Appendix 2 – Maps



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m2005 - 30/06/2011



Omataroa Kiwi Listening Survey

Night of 18/06/2011

Legend

- WP 000
- 6.12 (Male)

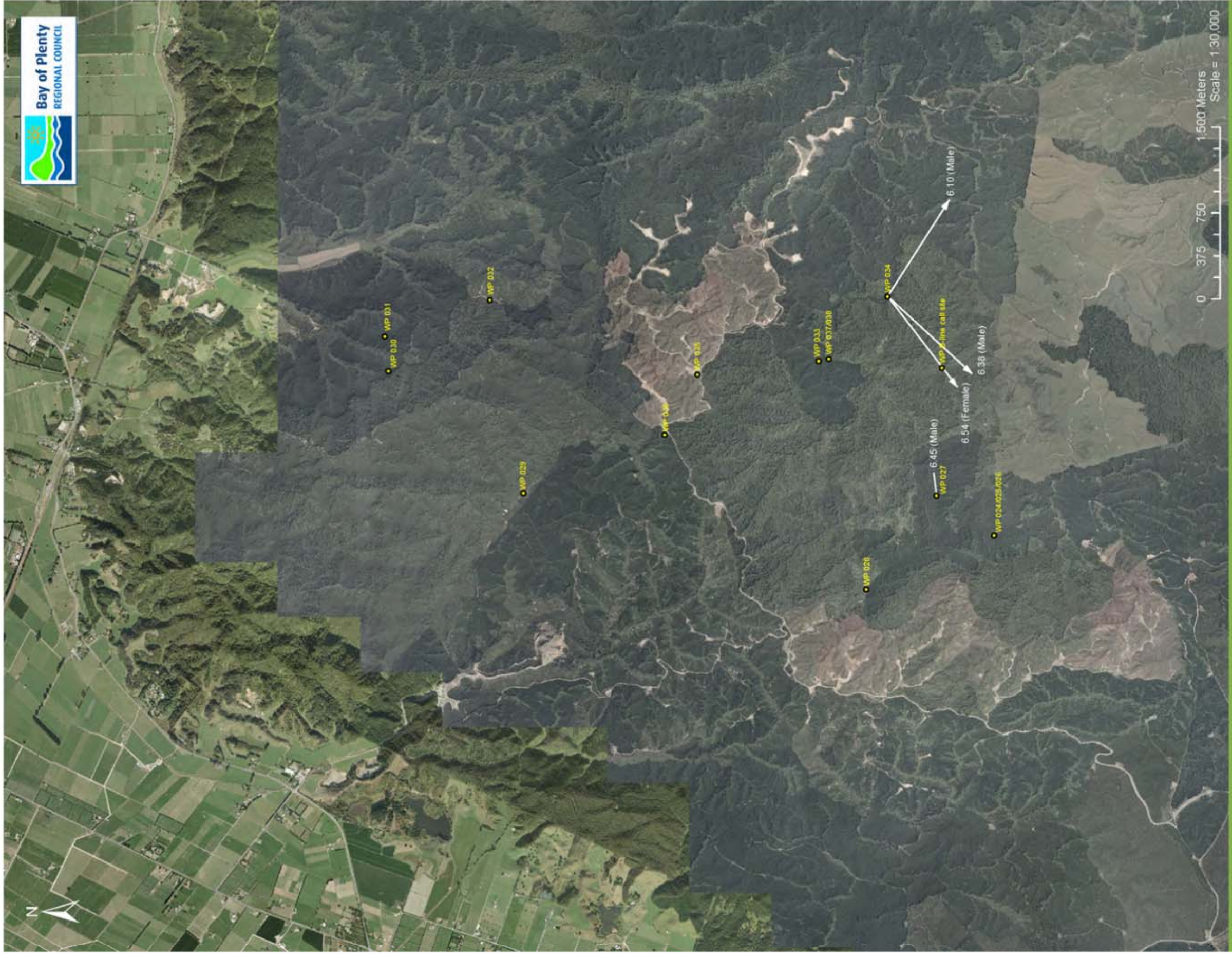
Listening Site Location and Site Number

Detected Kiwi, Time Detected (pm) and their Gender

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m2005 - 30/06/2011



Omataroa Kiwi Listening Survey

Night of 19/06/2011

Legend

- WP 000 Listening Site Location and Site Number
- 6:12 (Male) Detected Kiwi, Time Detected (pm) and their Gender

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m2005 - 30/06/2011

