

KARIRI POINT - Lake Tarawera -

BIRD MONITORING - 2016

(Five Minute Bird Counts)

KARIRI POINT; Te Rua a Umukaria



View of Kariri Point – south side.

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For the Bay of Plenty Regional Council (BOPRC).

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SUMMARY

A series of 5 Minute Bird Counts (5MBC) were undertaken at Kariri Point in December 2016 as a form of outcome monitoring, to help measure the success of pest control carried out, targeting rodents.

The 2016 survey repeats previous 5MBC surveys in 2008 and 2011 and is only slightly different to the 5MBC counts of 2003 and 2005 which were taken from the same count stations, but with no lake birds counted (2005) and with 8 count stations used on only 1 day of surveying (2003). Results from all past surveys are I feel comparable.

This was the fifth 5MBC survey to be carried out at Kariri Point in the past 13 years. Results over this time have shown a consistent increase in bird numbers, but little change to the number of bird species present since 2008.

The Lake Tarawera Pest Control Group (LTPCG), are a volunteer group of mostly residents, linked to the Tarawera Rate Payers Association. They organise and carry out pest control on Kariri Peninsula and most properties along Spencer Road throughout the year. Their work is supported and sponsored by the Bay of Plenty Regional Council (BOPRC).

The pest control carried out on private properties along Spencer Road no doubt contributes to and benefits the bird life at Kariri Point.

INTRODUCTION

Kariri Point Reserve (Te Rua a Umukaria) is a peninsula on the western side of Lake Tarawera, approximately 15 hectares in size. The land tenure is divided; part council reserve, part Maori land and part private property. A mausoleum for the Spencer family stands on a high point in the forest near the head of the peninsula. Kariri Peninsula is a beautiful feature in the landscape, central to the Tarawera community and with a rich Maori and early colonial history.

The Iwi for this area is Tuhourangi. Kariri Peninsula being a place of great significance to them. *see Appendix 3, page 14.*

A large grassed reserve area, car park, boat ramp, jetty and swimming beach are on the northern side of the peninsula and are part of the Stoney Point Reserve. Boat sheds, car park area, toilet block, boat ramp and jetty are on the southern side of the peninsula, known as Boatshed Bay. Approximately 1.25 hectares of well vegetated private property, (with several houses) is situated between the two grassed reserve areas and adjoining the forested peninsula.

The sheltered, easy access and boat launch area at Boatshed Bay and expansive reserve and swimming beach of Stoney Point Reserve make this whole peninsula a busy recreational site throughout the year.

The peninsula itself is well forested and has an informal path leading from behind the boat sheds and up to the Spencer Mausoleum. Forest canopy is dominated by Mahoe (*Melicytus ramiflorus*), with some mature emergent Robinia /Black Locust trees (*Robinia pseudoacacia*). Robinia is the main non-native tree species present. The main sub-canopy species is Kawakawa (*Macropiper excelsum*). Tree and ground fern species are present in some places – especially on the northern side. Few seedlings are present and the forest floor is completely open in some areas, especially behind Boatshed Bay. Regenerating forest species are more obvious on the northern side of the peninsula and almost completely absent on the south side. Mahoe leaf-litter covers the ground throughout. Pest plant species Old Man's Beard (*Clematis vitalba*) is growing vigorously in light wells where mature Robinia trees have fallen and Tradescantia (*Tradescantia fluminensis*) covers the forest floor behind Boatshed Bay toilet block.

Pest control:

Pest control at Kariri Point Reserve involves LTPCG volunteers regularly checking and topping up approximately 20 bait stations, positioned around the forested part of the peninsula. The toxic baits used are Ditrac wax block baits, which are secured in bait stations on a vertical wire rod. Ditrac is a rodenticide containing the anticoagulant diphacinone, which is effective at killing rats and mice. The LTPC Group organise and carry out pest control throughout the year and are sponsored by the Bay of Plenty Regional Council (BOPRC).

Report:

This report covers the 5MBC survey that took place in December 2016 at Kariri Point Reserve, results of the survey and my thoughts on the findings. I have included some

background information regarding the land, people involved and previous surveys. This is not a scientific report. 5MBCounts are an index measure, used in this instance to monitor bird abundance over time, as well as changes in bird density and species.

METHOD

Standard five-minute bird count (5MBC) methodology, (Dawson and Bull; 1975) was used for this survey.

Count stations spaced approximately 200 metres apart around the peninsula were used to survey birds from. Observations of birds seen or heard within a 100 metre radius of a count station over a five-minute period were recorded. The time, date, and weather conditions (Sun, wind, temperature, and precipitation) were recorded at each count station.

The same count stations were used this 2016 survey as were used in 2005, 2008 and 2011 and located using G.P.S. co-ordinates. Fourteen 5MBCounts were made from seven stations over two days. *See Appendix 2. Page 14.*

Bird counts were carried out between 9.00am and 1.00pm (NZ standard time) to be consistent with previous counts, and to avoid both the dawn chorus and the quiet afternoon periods. All counts were undertaken on fine days with calm weather conditions. Weekend days were avoided due to the extra noise, traffic and disturbance often generated by weekend recreation in this area.

NB – Not all count stations are at 200 metre spacings on Kariri Peninsula, but have been used each survey historically, so I have kept using them for consistency.

Table 1:

Bird Species Observed & Count Results: 2003 - 2016

Spp Number	Common Name	Scientific Name	2003	2005	2008	2011	2016
1	Kereru	<i>Hemiphaga novaeseelandi</i>	0	0	3	3	2
2	Tui	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>	3	14	38	40	72
3	Kingfisher	<i>Halcyon sancta vagrans</i>	7	2	7	4	2
4	Bellbird	<i>Anthornis melanura oneho</i>	1	6	6	14	11
5	Shining Cuckoo	<i>Chrysococcyx lucidus lucidus</i>	0	4	10	8	12
6	Silvereye	<i>Zosterops lateralis lateralis</i>	3	0	26	21	17
7	Fantail	<i>Rhipidura fuliginosa placabilis</i>	3	16	8	13	8
8	Grey Warbler	<i>Gerygone igata</i>	8	14	21	17	14
9	Black-backed Gull	<i>Larus dominicanus dominicus</i>	0	0	3	2	3
10	Gull, Red-billed	<i>Larus novaehollandiae</i>	0	0	0	3	0
11	Shag, Little	<i>Phalacrocorax melanoleucos brevirostris</i>	0	0	1	1	0
12	Shag, Black	<i>Phalacrocorax carbo nova</i>	0	0	0	1	2
13	Pukeko	<i>Porphyrio porphyrio melanotus</i>	0	0	1	0	0
14	Australian Coot	<i>Fulica atra</i>	0	0	3	19	19
15	Mallard Duck	<i>Anas spp</i>	0	0	3	0	0
16	Scaup	<i>Aythya novaeseelandiae</i>	3	0	19	26	119
17	Dabchick	<i>Poliocephalus rufopectus</i>	2	0	1	5	14
18	Black Swan	<i>Cygnus atratus</i>	11	0	2	18	7
19	Goose, Canada	<i>Branta Canadensis maxima</i>	0	0	0	5	0
20	Swallow, Welcome	<i>Hirundo tahitica neoxena</i>	0	0	0	24	8
21	Australasian Harrier	<i>Circus approximans</i>	0	0	0	1	0
22	Magpie	<i>Gymnorhina tibicen (sp)</i>	2	0	0	0	2
23	Eastern rosella	<i>Platycercus eximius</i>	0	0	0	1	1
24	Californian Quail	<i>Callipepla californica</i>	0	2	2	3	0
25	Myna	<i>Acridotheres tristis</i>	3	0	1	1	3
26	Blackbird	<i>Turdus merula</i>	8	20	37	29	30
27	Thrush, Song	<i>Turdus philomelos</i>	4	10	6	5	3
28	Starling	<i>Sturnus vulgaris</i>	1	2	4	4	4
29	Yellowhammer	<i>Emberiza citronella</i>	0	0	2	0	0
30	Chaffinch	<i>Fringilla coelebs</i>	5	38	42	25	34
31	Goldfinch	<i>Carduelis carduelis</i>	0	0	0	3	2
32	Greenfinch	<i>Carduelis chloris</i>	4	0	0	4	6
33	House Sparrow	<i>Passer domesticus</i>	9	0	6	10	31
34	Hedge Sparrow	<i>Prunella modularis</i>	0	0	2	1	4
		Total Bird Numbers →	77	128	254	311	425
		Total Bird Species →	17	11	25	30	26

NB: 15 unknown fledglings were heard during the 2016 counts.

RESULTS

Results of the 2016 5MBCs: -

- A total of 425 birds were counted over two days from fourteen count stations.
- An average of 30.4 birds were counted per station (this includes water birds).
- 26 different species of bird were counted during this 5MBC survey.

The 5MBCs took place on two days in December (4 days apart) from seven count stations positioned around the peninsula. A total of fourteen counts were made.

Results of this 2016 5MBC show an increase in bird's present, but a decrease in the number of bird species present compared to the previous survey. Species recorded included a mix of water birds, forest passerines and introduced garden/farmland passerines. There was a noticeable increase in the number of scaup, dabchicks and tui. Numerous fledglings of different species were seen or more often heard. Over half the species counted were native birds, six of these are endemic.

Native bird species counted: - 17

Introduced bird species counted: - 13

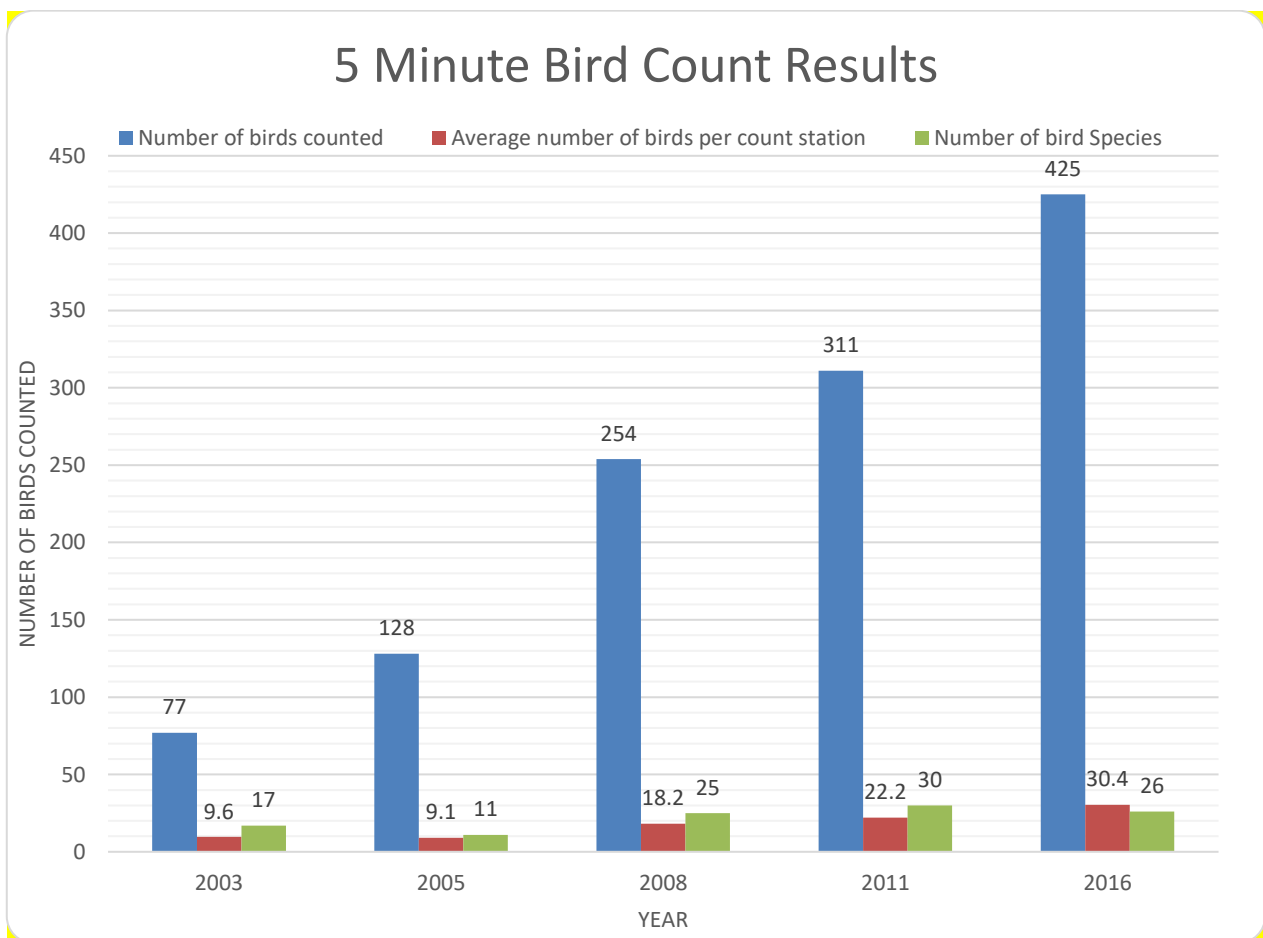


Figure 1. Bird Count Results; 2003 - 2016.

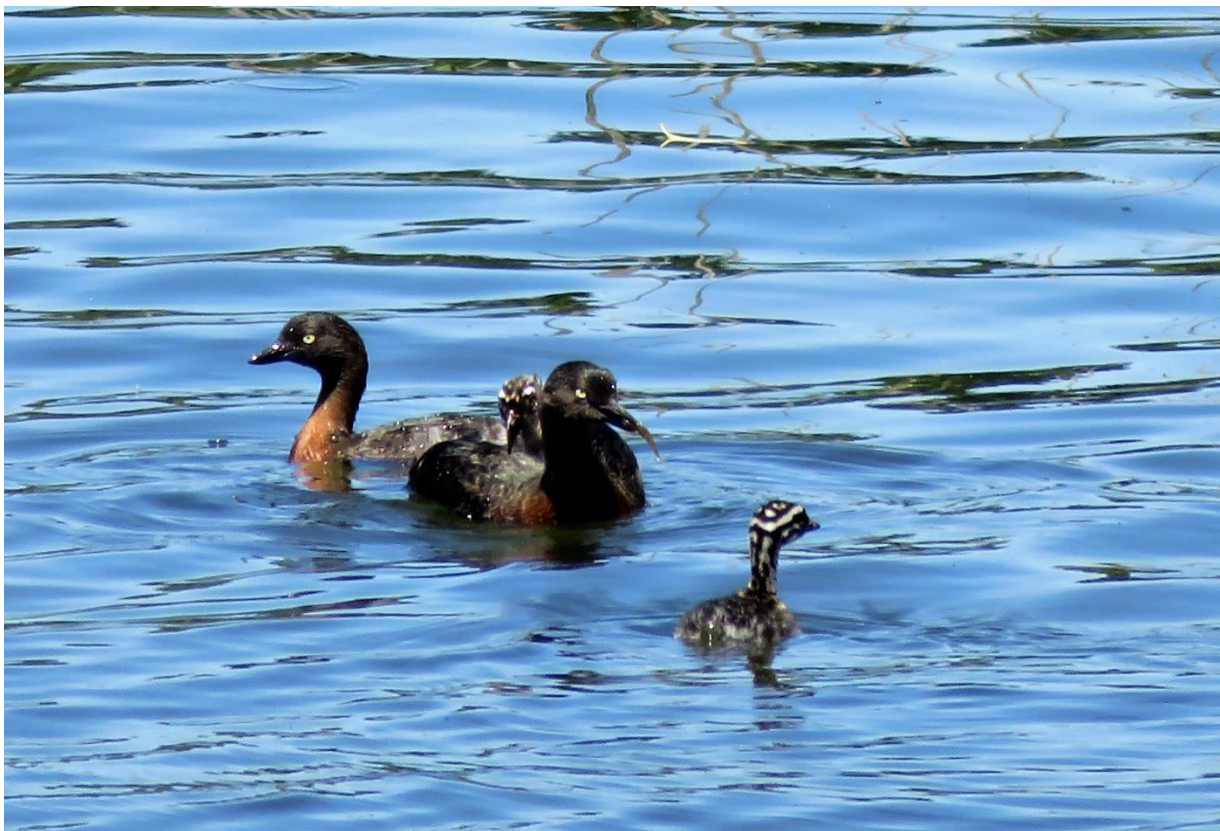
Previous 5MBC Results:

2011 - 30 species of bird were counted over two days in November, from fourteen count stations. A total of 311 birds were counted, with an average of 22.2 birds per count station (including water birds).

2008 - 25 species of bird were counted over two days in November, from fourteen count stations. A total of 254 birds were counted, with an average of 18.2 birds per count station (including water birds).

2005 - 11 species of bird were counted over two days in November, from fourteen count stations. A total of 128 birds were counted, with an average of 9.1 birds per count station (No water birds were included).

2003 - 17 species of bird were counted on one day in October at eight count stations. A total of 77 birds were counted, with an average of 9.6 birds per count station (this includes water birds).



Dabchick family on the lake, January 2017

DISCUSSION

Survey results –

I was surprised by the increase in total bird numbers for this survey as I did expect numbers to be close to the 2011 results. The large flocks of scaup have skewed total bird numbers somewhat, as they are probably not there all year, but were observed numerous times off Stoney Point Reserve, during Nov and Dec 2016. Good numbers of Scaup, Dabchicks and Tui can I think, be attributed to the pest control carried out along Spencer Road since 2000 (approx. 7Kms).

Pest animal control –

The bait stations on Kariri Peninsula did not look like they had recently been used, no baits were seen in any of the stations on any of my visits and some stations need repairing. At least 3 rabbits were seen on each visit and I have been told by residents that a) wallabies are frequently seen on the Reserves in the evenings and b) there are lots of possums around the general Spencer Road area. Browse by rabbits, wallabies and possums would account for the degraded state of the forest floor and general lack of seedlings and regeneration. Bait stations on Kariri Peninsula are for controlling rodents.

Pest plants –

The most obvious and vigorous pest plant species observed on Kariri Peninsula during the 2016 5MBCs were Old Man's Beard (*Clematis vitalba*) and Tradescantia (*Tradescantia fluminensis*). Old Man's Beard was growing vigorously in light wells created by fallen Robinia trees. Tradescantia was growing in a dense lush mat just inside the forest behind the Boatshed Bay toilet block.



Photos showing pest plants Old Man's Beard vine in a light well smothering vegetation (left) and Tradescantia ground cover – doing just that (right).

CONCLUSION

1. Bird numbers (abundance) and species (types) are reasonably good, despite the degraded state of this forest.
2. Although bird numbers are higher than previous surveys, the numbers are skewed somewhat but the large number of scaup encountered (large groups of scaup were present on all visits I made to the area during November and December).
3. The increased number of birds counted in this survey, especially of scaup, dabchick and tui, is most likely due to the ongoing pest control along Spencer Road (since the year 2000), as well as any pest control on Kariri Peninsula.
4. The forest and environment at Kariri Point appears degraded - noticeable since the 2011 5MBCounts were conducted and most likely due to browse from possums, rabbits and wallabies.
5. The pest plant species Old Man's Beard (*Clematis vitalba*) and Tradescantia (*Tradescantia fluminensis*) are growing vigorously and are more obvious than in 2011.



Photo showing the general condition of Kariri Peninsula forest - little regeneration occurring

RECOMMENDATIONS

The first two recommendations remain the same as in 2011.

- That this community initiated and driven project be encouraged to continue.
- That information be provided to the public regarding this community project, to increase awareness of what is being done, why and the benefits of this work. Information / interpretation panels could be placed on each side of the peninsula where public use of jetties, boat ramps and car parks is most concentrated. Information on Dabchicks would be worth including, to help increase awareness of this uncommon endemic waterbird species. Dabchicks are present in good numbers on Lake Tarawera due (most likely) to the pest control carried out along Spencer Road near the lake edge – where Dabchicks nest. Information about the peninsula itself, including Maori and colonial history would also be valuable and of interest to visitors.
- That effort be made to re instigate regular control of rodents by way of bait stations.
- That possums, rabbits and wallabies be controlled on Kariri Peninsula.
- That effort be made to re instigate pest plant control on the peninsula as Old Man's Beard and Tradescantia are growing vigorously. They smother native vegetation and spread easily.
- That the 2016 and previous 5MBC reports for Kariri Point be made available to the LTPCG. I think these reports would provide useful information to the Group and inspire them in the good work they do.
- That the 2016 and previous 5MBC reports be made available to the Iwi of Kariri Peninsula – Tuhourangi. I believe sharing this information with Iwi would benefit all.

ACKNOWLEDGEMENTS

I would like to acknowledge the Lake Tarawera Pest Control Group for all the good work they have and are doing in the settlement of Tarawera. Their efforts over time have improved the habitat and birdlife there, increased conservation awareness and inspired people within and outside the Tarawera community. Thanks to Peter Fahey, Liz Simms and Mike Savage for sharing information regarding the Lake Tarawera Pest Control Project.

I would like to acknowledge the Bay of Plenty Regional Council for sponsoring and supporting this project, including reporting; Shane Hona was my contact person in the Rotorua Office of the BOPRC.

I would like to acknowledge and thank Alan Skipworth , Chair of the Tuhourangi Tribal Authority, for permission to include information on Kariri Peninsula from their 2011 Environment Resource Management Plan.

I would also like to acknowledge and remember Bob Scopes, who was a well-known, loved and respected member of the Lake Tarawera community. Bob initiated pest control at Kariri Point in 2000 and worked with the Regional Council and local volunteers to keep it going. Sadly, Bob died in October 2012 but fortunately his vision lives on.

REFERENCES

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Tūhourangi Tribal Authority - Enhanced Iwi Environment Resource Management Plan. July 2011

APPENDIX: 1

BIRD SPECIES OBSERVED; KARIRI POINT: 2003 - 2016

	Common & Maori Name		Scientific Name
1	Kereru / Kukupa/NZ pigeon	•	<i>Hemiphaga novaeseelandi</i>
2	Tui	•	<i>Prothemadera novaeseelandiae novaeseelandiae</i>
3	Kingfisher / Kotare	•	<i>Halcyon sancta vagrans</i>
4	Bellbird / Korimako	•	<i>Anthornis melanura oneho</i>
5	Shining Cuckoo / Pipiwaharuroa	•	<i>Chrysococcyx lucidus lucidus</i>
6	Silvereye / Touhou	•	<i>Zosterops lateralis lateralis</i>
7	Fantail / Piwakawaka	•	<i>Rhipidura fuliginosa placabilis</i>
8	Grey Warbler / Riroriro	•	<i>Gerygone igata</i>
9	Black-backed Gull / Karoro	•	<i>Larus dominicanus dominicus</i>
10	Gull, Red-billed / Tarapunga	•	<i>Larus novaehollandiae</i>
11	Shag, Little /Kawaupaka	•	<i>Phalacrocorax melanoleucos brevirostris</i>
12	Shag, Black / Kawau	•	<i>Phalacrocorax carbo nova</i>
13	Pukeko /Swamp hen	•	<i>Porphyrio porphyrio melanotus</i>
14	Australian Coot	•	<i>Fulica atra</i>
15	Mallard Duck		<i>Anas spp</i>
16	Scaup /Papango	•	<i>Aythya novaeseelandiae</i>
17	Dabchick / Weweia	•	<i>Poliiocephalus rufopectus</i>
18	Black Swan		<i>Cygnus atratus</i>
19	Goose, Canada		<i>Branta Canadensis maxima</i>
20	Swallow, Welcome	•	<i>Hirundo tahitica neoxena</i>
21	Australasian Harrier /Kahu	•	<i>Circus approximans</i>
22	Magpie, Australian		<i>Gymnorhina tibicen (sp)</i>
23	Eastern rosella		<i>Platycercus eximius</i>
24	Californian Quail		<i>Callipepla californica</i>
25	Myna		<i>Acridotheres tristis</i>
26	Blackbird		<i>Turdus merula</i>
27	Thrush, Song		<i>Turdus philomelos</i>
28	Starling		<i>Sturnus vulgaris</i>
29	Yellowhammer		<i>Emberiza citronella</i>
30	Chaffinch		<i>Fringilla coelebs</i>
31	Goldfinch		<i>Carduelis carduelis</i>
32	Greenfinch		<i>Carduelis chloris</i>
33	House Sparrow		<i>Passer domesticus</i>
34	Hedge Sparrow /Dunnock		<i>Prunella modularis</i>

•Designates native bird species

APPENDIX: 2

Count Stations

Count Stations	G.P.S Co-ordinates	Location
1	1897305 5767040	Open area, grass reserve, near lake.
2	1897417 5766851	Under forest canopy
3	1897417 5766661	Under forest canopy
4	1897353 5766595	Under forest canopy
5	1897301 5766745	Under forest canopy
6	1897296 5766941	Under forest canopy
7	1897204 5766900	Open area, grass reserve, near lake, boat ramp.

APPENDIX: 3

Brief Maori history of Te Rua a Umukaria / Kariri

Cultural significance to Tūhourangi

Rotomahana-Parekarangi is a site of great cultural significance to Tūhourangi. Keeping in mind the awarding of Rotomahana-Parekarangi 6A to Tūhourangi in 1887, it is also worth noting historical incidents further contributed to Tūhourangi's occupation of Rotomahana-Parekarangi. Te Umukaria, the father of Wahiao and Hinemoa and father-in-law of Tutanekai was killed along with others by a combined force of Ngāti Apumoana, Ngāti Pūkiao, Ngāti Tuteata and other hapū at Motutawa. His head was taken and placed in a cave at Tarawera which was then named Te Rua a Umukaria following this incident. Some years later this site was given to Reverend Spencer for an Anglican mission – it was renamed Kariri.¹ However, prior to the gifting of the site Wahiao had taken revenge for the death of Te Umukaria by assembling an army at Te Pukeroa (where he was living at that time), under the mana of Tūhourangi, his brother-in-law Tutanekai and his brother Tawakeheimoa. They successfully defeated these hapū at Titaka pā where they killed many Ngāti Apumoana including the chiefs Tunoke, Tutoa, Mokaiketariki and Tuwhakura. Wahiao returned to Te Pukeroa with his son Taupopoki while Tutanekai, Hinemoa and Tawakeheimoa returned to Mokoia Island

Extract from - Tūhourangi Tribal Authority - Enhanced Iwi Environment Resource Management Plan. July 2011

APPENDIX: 4

Kariri Point
(Te Rua a Umukaria)



Aerial photo of Kariri Point, showing bird-count stations (red dots)