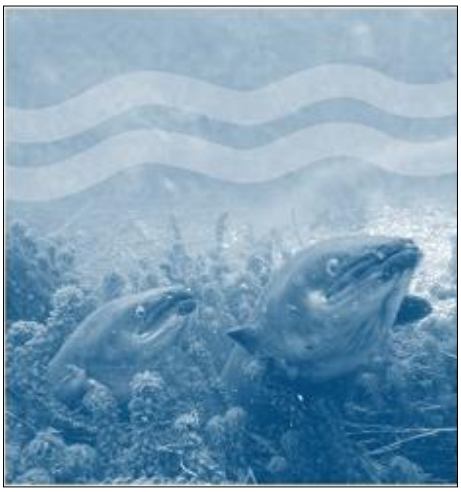


Environmental Programme

for

Lake Tarawera Pest Control Community Group

File Reference Number:	3520127
Date:	May 2021
Location:	Lake Tarawera, Rotorua

BAY OF PLENTY REGIONAL COUNCIL
TOI MOANA

Environmental Programme

This Environmental Programme sets out environmental protection activities and commitments agreed to by the landowner referred to below (**Landowner**) and the Bay of Plenty Regional Council (**Regional Council or BOPRC**), sometimes together with other partners. The Bay of Plenty Regional Council co-funds environmental protection and enhancement work to reflect the public good to our regional community of a clean and healthy environment.

Landowner contact details	
Landowner(s): Multiple landowners (approximately 500 residential and private properties), several Māori land blocks e.g. Rotomahana Parekarangi No.6B (Otumutu Island) and Rotomahana Parekarangi No. 6G2B (Kariri Point)	**Postal address:** 322 Ocean Beach Road, Mount Maunganui, 3116
Contact person: Richard Noke	**Role:** Community Group Coordinator
Phone: 029 575 0943	**Email:** nokemeister@icloud.com
Site address: Multiple addresses (see map)	**Legal description and title details:** Multiple titles (see map)

Bay of Plenty Regional Council contact details	
Officer responsible: Shane Hona	**Address:** PO Box 364, Whakatāne 3158
Job title: Biosecurity Officer	**Office location:** Rotorua
Phone: 0800 884 881 extn 7582, or 027 3189 320	**Email:** Shane.Hona@boprc.govt.nz

Project Manager			
Name: Richard Noke	**Address:** 322 Ocean Beach Road Mount Maunganui, 3116	**Phone:** 029 575 0943	**Email:** nokemeister@icloud.com

Programme purpose

The overall purpose/goal of this Environmental Programme (EP) is to continue to support the Lake Tarawera Pest Control Community Group (LTPCCG) in:

- Protecting flora and fauna around the Spencer Road and Tarawera Road areas of Lake Tarawera for the enjoyment of present and future generations.
- Providing opportunities for community involvement, education and awareness in protecting and enhancing native biodiversity.

Site description and location

This EP relates to work being carried out by the LTPCCG within the Tarawera settlement, Spencer Road properties, Rotorua Lakes Council reserves and lakeside, and West of the lake encompassing Te Mu Drive, the Buried Village and the refuse transfer station (Figure 1).

The LTPCCG project area consists of ~200 ha within the Tarawera Catchment and is made up of approximately 500 residential, private and multiple-owned Māori land properties, as well as Rotorua Lakes Council reserves (e.g. Stoney Point and Rangiuru Bay; Tarawera Landing).

The northern section of the project area (Te Miro Point to the end of Spencer Road) is considered to be a Priority Biodiversity Site (Site # 9018), due to the presence of an important population for the threatened native mistletoe *Tupeia antarctica* (second largest in the Bay of Plenty region). A map showing the Priority Biodiversity Area is shown in Appendix 1.

The project area overlaps with and compliments the area where the Tarawera Landcare 2115 Community Group undertake pest plant control and restoration of Kariri Point and other areas around Spencer Road under separate EP's. Kariri Point is a prominent peninsula which has high cultural and archaeological values along with ecological values (though not currently considered a Priority Biodiversity Site).

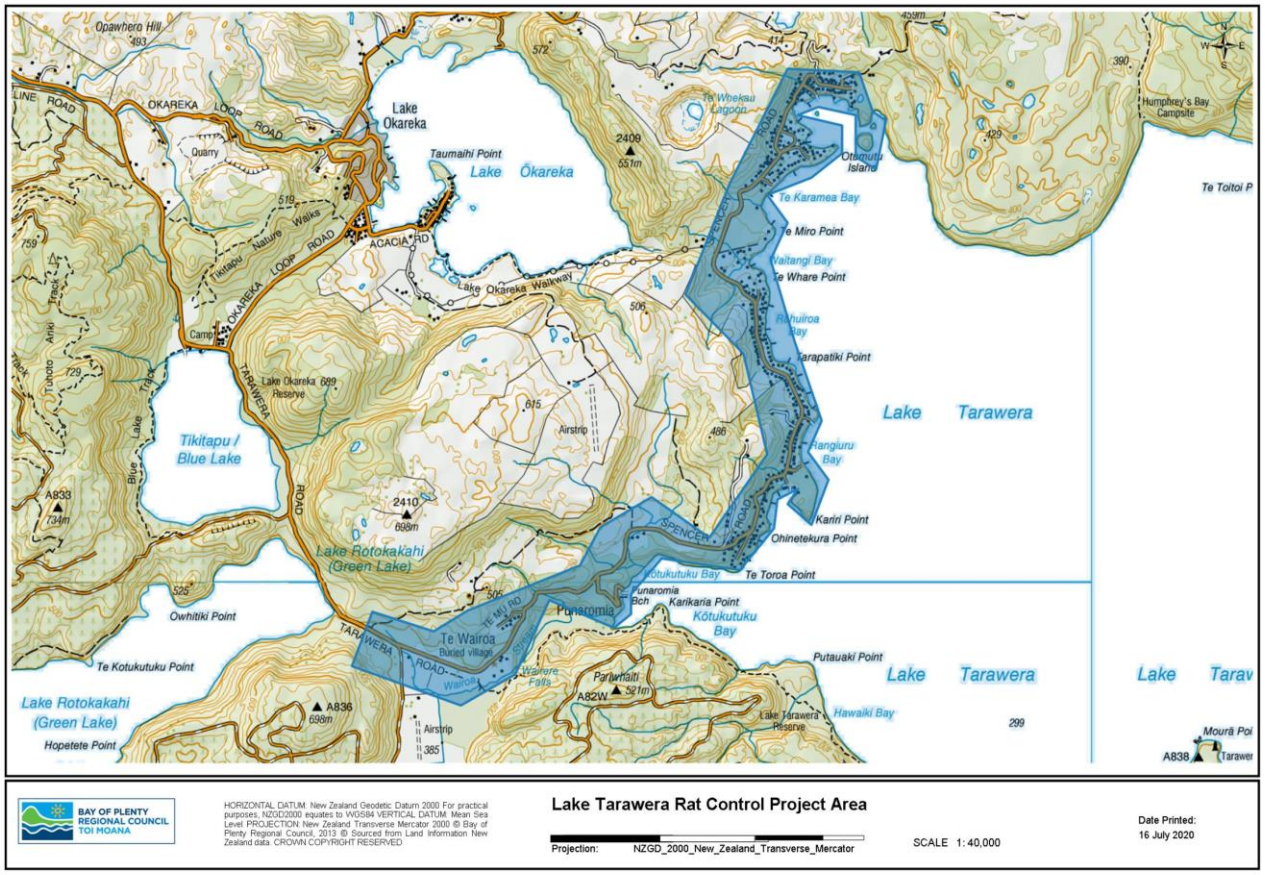


Figure 1: Project location map (approximate)

Ecological objectives (outcomes sought)

- To maintain or improve abundance/breeding of native forest birds (e.g. tui, bellbird).
- To maintain or improve dabchick breeding through predator control (primarily rat control).

Operational objectives

- Maintain and improve/expand existing network of bait stations and traps.
- Maintain effective partnerships with agencies, landowners and community groups.
- Promote community involvement in and awareness of protecting native biodiversity.
- Review activities annually and amend to meet best practice where necessary/beneficial.
- Record locations of all baits stations and traps using GPS (assigning unique identifiers).
- Collect bait take and trap catch data from each bait station/trap and share with BOPRC.

Ecological significance

Representativeness – Moderate

The project area contains indigenous lowland vegetation within At Risk (20-30% indigenous cover left) and Under-protected LENZ environments (> 30 % left and 10-20% protected). The potential ecosystem is MF7-1 (tawa – mangeao forest) which is heavily reduced in the region but not threatened (estimated 38 % of natural extent remaining).

It also contains a number of lake-margin wetlands which are a 'Naturally Uncommon Ecosystem' type ranked vulnerable at a national level (Holdaway et al, 2012). Clarkson and King (1987) identified mahoe on Rotomahana mud erupted in the 1886 at Kariri Point as one of the vegetation type inadequately represented in the protected areas of the ecological district in 1987.

Rarity and distinctiveness – High

The project area contains native mistletoe - *Tupeia antarctica* (At Risk-Declining), Northern rata (Threatened - Nationally Vulnerable), New Zealand dabchick/weweia (Threatened - Nationally Vulnerable*)* and spotless crake (At Risk - Declining), and the site may also contain At Risk lizard species and Nationally Critical long-tailed bats (pekapeka-tou-roa; *halinolobus tuberculatus*).

Ecological context – High

Properties in northern section of the project area (Te Miro Point to end of Spencer Road) are adjacent to the Miller Road Scenic Reserve and properties in the southern section (around Te Wairoa) are adjacent to the Tarawera Landing Scenic Reserve.

The project area is part of the area defined by Rotorua District Council as "Lakes A Zone" in the district plan. The "Lakes A Zone" is an area of the Rotorua district containing lakes that are considered to be of **national importance**. Because of its significance it is zoned differently to the rest of this district.

Ecological values

Vegetation

1) **Private land and lake margins (including lake side reserves)**

The eruption of Mount Tarawera in 1886 destroyed much of the forest from the area covered in this EP. Therefore much of the native forest in this location has regenerated since the eruption and is thus dominated by pioneer species such as kamahi and rewarewa.

A survey of vegetation within lake side reserves between Te Toroa Point and Otumutu Lagoon was completed by Wildland Consultants in 2016[1]. Fourteen vegetation and habitat types were identified and mapped, including māhoe-mamaku-whauwhaupaku-kohuhu-kamahi-crack willow forest (10.35 ha / 43%), residential lawns and ornamental trees and shrubs, parks (8.75 ha / 37%) and black wattle-rimu/mamaku/mapou-whauwhaupaku/wheki forest (2.17ha / 9%).

Lake margin wetland vegetation between Te Toroa Point and Otumutu Lagoon includes areas of raupo reedland and *Schoenoplectus tabernaemontani* reedland and, on the immediate land-water interface there is water purslane (*Ludwigia palustris*)*,* water forget-me-not (*Myosotis laxa* subsp. *caespitosa*), *Azolla filiculoides*, *Myriophyllum propinquum,* and starwort (*Callitriche stagnalis*).

The majority of the mistletoe population growing between Te Miro Point and the end of Spencer Road occurs on private residential properties and is therefore significantly reliant on the action of individual landowners for protection. As part of a wider project, the Department of Conservation undertook mistletoe censuses at Lake Tarawera in 2001 and 2016. Of interest here, is the decline of *Tupeia antarctica* and the increase in the number of *Ileostylus micranthus*. *Tupeia* numbers declined by 54 % (from 656 to 303 plants). It is encouraging to note that the number of *Ileostylus* has increased by a factor of 9, or nine times the number surveyed in 2001 (from 2 to 18 plants)[2].

[1] Wildland Consultants 2016. DRAFT Restoration Plan for the Spencer Road part of the Lake Tarawera Catchment. Contract report 4152b prepared for Lake Tarawera Ratepayers Association and Tarawera Landcare 2115. December 2016.

[2] Cashmore, Paul (Department of Conservation) personal communication 24/08/2020

A likely cause of the decline is that a significant proportion of host species had been reported as either having died or having been cut down / trimmed. An example of this was the report of a home owner that stated that a large plum tree (*Prunus spp*) had fallen over recently (reported 27/01/2016) and crushed a stand of *Pseudopanax arboreum* that had played host to at least 33 *Tupeia* in 2001. Considering the relatively small sample size (656), a loss of 33 plants represents an approximate 5% decline in the overall population of *Tupeia antarctica*. Quite significant for an individual host[2].

Other causes of mistletoe population decline can include:

- Habitat modification through the proliferation of invasive and to a lesser extent native vines and other weed species.
- Host removal.
- Decline in the local population of pollinating birds and insects linked to an increase in exotic predator numbers.
- Increased possum browse.

2) Kariri point (Rotomahana Parekarangi No. 6G2B):

Kariri Point is well forested and has an informal path leading from behind the boat sheds and up to the Spencer Mausoleum. The vegetation reflects that which has re-established since Mount Tarawera erupted in 1886, destroying much of the existing vegetation in nearby areas.

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.

A survey of Kariri Point was undertaken by Wildland Consultants in 2017[3]. This survey identified six vegetation and habitat types are listed below. Sixty five indigenous vascular plant species and 52 adventive species were recorded. For more information on the vegetation and flora of this site refer to the Wildland Consultants (2016) report.

Kariri Point Vegetation Types:

- Robinia/mahoe-kotukutuku-whauwhaupaku forest (4.33 ha).
- Mahoe-kohuhu-mamaku forest (0.94 ha).
- Old man's beard vineland (0.31 ha).
- Yorkshire fog-old man's beard exotic grassland (0.01 ha).
- Kanuka forest (0.13 ha).
- Crack willow-mahoe-pigeonwood forest (0.06 ha).

[3] Wildland Consultants 2017. Operational plan for ecological restoration implementation at Kariri Point, Lake Tarawera. Contract report no. 4152a. Prepared for Lake Tarawera Ratepayers Association and Tarawera Landcare 2115. February 2017.

Birds

Five minute bird count surveys have been carried out at Kariri Point and Spencer Road five times between 2003 and 2016[4]. To date 36 bird species have been recorded during these surveys, including 19 native species and 17 introduced species. These surveys detected a range of common terrestrial bird species such as tui, bellbird and kereru; as well as various waterbird species which utilise the lake shore vegetation for roosting and nesting.

Water bird species present include New Zealand dabchick (weweia; *Poliocephalus rufopectus* - Threatened-Nationally Vulnerable), New Zealand scaup (papango; *Aythya novaeseelandiae*), Australian coot (*Fulica atra australis*), and black swan (*Cygnus atratus*).

Dabchick counts have been undertaken by Lake Tarawera Rat Control Community Group for a number of years. Unfortunately much of this data is not currently available for analysis. However as an example, between 2011 and 2014, dabchick numbers counted increased from 132 to 206.

Bats

Long-tailed bats (pekapeka-tou-roa; *Chalinolobus tuberculatus*) are likely to forage around Kariri Point and surrounds. Trees containing cavities may provide roosting sites for bats, although this is less likely given the forest type here is comparatively young and small in stature.

Lizards

There is little information on the current status and distribution of lizard species around Lake Tarawera. However, three sightings of lizard (mokomoko) species have been made in the Lake Tarawera catchment in recent years, comprising forest gecko (*Mokopirirakaugranulatus*, At Risk-Declining), green gecko (*Naultinus elegans*, At Risk-Declining), and speckled skink (*Oligosoma infrapunctatum*), At Risk-Declining). One or more of these species may be present at Kariri Point in low numbers.

[4] Hudson, J 2003. Kariri Point. Five minute bird counts & management recommendations. Ecosystem Restorations;

Hudson, J 2005. Kariri Point Five Minute Bird Counts – 2005. Ecosystem Restorations;

Hudson, J 2005. Spencer Road Bird Monitoring Lake Tarawera. Ecosystem Restorations;

Richardson, C 2008. Bird Monitoring – 2008 Five Minute Bird Counts Spencer Road, Lake Tarawera;

Richardson, C 2008. Bird Monitoring 2008 (Five Minute Bird Counts) Kariri Point; Te Rua a Umukaria, Lake Tarawera;

Richardson, C 2011. Lake Tarawera Bird Monitoring – 2011 Five Minute Bird Counts Spencer Road;

Richardson, C 2011. Lake Tarawera Bird Monitoring – 2011 Five Minute Bird Counts Kariri Point; Te Rua a Umukaria;

Richardson, C 2016. Spencer Road – Lake Tarawera Bird Monitoring – 2016 Five Minute Bird Counts

Richardson, C 2016. Kariri Point – Lake Tarawera Bird Monitoring – 2016 (Five Minute Bird Counts)

Threats

Pest animals – High

The main threats to biodiversity values are pest animals, particularly possums and rats. Stray or feral cats and mustelids (ferrets, stoats and weasels) are also likely to move through the area particularly at times when rat numbers build up.

Dama wallabies (which periodically enter this area from the neighbouring forested areas), possums and rats have an impact on the native vegetation, through browsing vegetation, fruit and seed, and it is suspected that possums are the main contributors to pohutukawa dieback on Otumutu Island. Possums could also be having an impact on the mistletoe population here.

Rats, cats and mustelids will prey on bird, lizards and large invertebrates. Rabbits and hares may have an impact by browsing on native regeneration and restoration plantings. Wasps are also present in low numbers.

Organised pest control targeting rodents began in June 2000 and was carried out by volunteers to reduce a major rodent infestation in the settlement at the time. Regular pest control has continued since then and still targets rodents in an effort to prevent further infestations, improve the general environment and continue to enhance the native birdlife. A network of around 500 bait stations is currently serviced fortnightly throughout the year.

Rat control is expected to be improving breeding/survival outcomes for forest birds including kereru, tui, and bellbird which are important for pollination and vitality of the *Tupeia antartica* population. Rat control is also expected to improve the breeding success and survival rate for wetland birds such as dabchick, spotless crake and fernbird.

To further benefit these wetland bird species, consideration could be given to implementing mustelid control along the shoreline vegetation, as well as around the Spencer Road-end wetland (Wildlands 2016).

Pest plants – Medium

A range of pest plant species are present in and around the lake edge reserve, at Kariri Point and on neighbouring properties. A list of key pest plant species for monitoring and management are provided by Wildlands 2016[1]. High priorities for control listed in this report include agapanthus, old man's beard, climbing spindleberry, elaeagnus, yellow flag iris and crack willow.

Pest plant control in the project area is currently managed through separate projects with work undertaken by the Tarawera Landcare 2115 community group with the support of Bay of Plenty Regional Council.

Proposed Works

Description of Works

The community group is keen to continue to maintain and service the existing bait station and trap infrastructure at Lake Tarawera with a primary focus on rat control, and a secondary focus on possum control (in areas where native mistletoes are growing). In addition they want to expand this rat control network to fill in gaps and undertake control in new areas e.g. lake edge reserves.

Pest animal control

- Permission to be sought in year 1 of this project from all land owners/occupiers in the project area. Options for project involvement include direct involvement e.g. landowners/occupiers service pest control devices on their own land. Or permission is given to community group members to service pest control devices on behalf of landowners/occupiers.
- Health and Safety plan to be renewed in year 1 of this project by LTPCCG.
- All pest control devices to have their locations recorded by GPS, and assigned a unique identifier (alpha numeric code).
- All pest control devices to be set up in a data collection app (to be provided by Bay of Plenty Regional Council). Quantity of bait used and number/types of animals killed to be recorded in this app.
- Pest control devices (bait stations and kill traps/boxes) to be maintained as required throughout the duration of this EP. Damaged devices and non-host-specific devices to be replaced with host-specific devices as needed.
- Bait stations to be refilled, and traps checked fortnightly by the community group.
- Rat relative abundance index to be monitored by tracking tunnels.
- Outcome monitoring to be undertaken by:
    - Dabchick monitoring
    - 5 minute bird counts
    - Backyard bird counts
    - Photo points

Estimated programme costs

The estimated costs of each activity in this Environmental Programme are set out below, along with the share of each cost to be paid by each funding partner. All costs exclude GST. The Bay of Plenty Regional Council bases its annual programme of works on the financial year starting 1 July through to 30 June.

					Cost Share	
Activity	**Unit**	**Quantity**	**Rate**	**Cost**	**BOPRC**	**Care Group**
2020/2021						
Pest Animal Control (pesticide)	Unit	80	$85	$6,800	$6,800	$0
Pest Animal Control (labour)	Hours	430	$35	$15,050	$0	$15,050
Rat Bait Stations & Traps (materials)	Unit	1	$600	$600	$600	$0
Trap Box Construction (labour)	Hours	25	$35	$875	$0	$875
Possum Traps & Lure (materials)	Unit	20	$75	$1,500	$1,500	$0
GPS bait station & trap box locations (labour)	Hours	8	$35	$280	$0	$280
Monitoring Materials (rats)	Unit	1	$150	$150	$150	$0
Monitoring Labour (rats)	Hours	9	$35	$315	$0	$315
5-Minute Bird Count Survey	Unit	1	$1,800	$1,800	$1,800	$0
Dabchick Monitoring - expenses	Unit	3	$60	$180	$180	$0
Dabchick Monitoring - labour	Hours	30	$35	$1,050	$0	$1,050
Thank You Morning tea for volunteers	Unit	1	$100	$100	$100	$0
Total				**$28,700**	**$11,130**	**$17,570**
2021/2022						
Pest Animal Control (pesticide)	Unit	80	$85	$6,800	$6,800	$0
Pest Animal Control (labour)	Hours	430	$35	$15,050	$0	$15,050
Rat Bait Stations & Traps (materials)	Unit	1	$600	$600	$600	$0
Trap Box Construction (labour)	Hours	25	$35	$875	$0	$875
Possum Traps & Lure (materials)	Unit	20	$75	$1,500	$1,500	$0
GPS bait station & trap box locations (labour)	Hours	8	$35	$280	$0	$280
Monitoring Materials (rats)	Unit	1	$150	$150	$150	$0
Monitoring Labour (rats)	Hours	9	$35	$315	$0	$315
5-Minute Bird Count Survey	Unit	1	$1,800	$1,800	$1,800	$0
Dabchick Monitoring - expenses	Unit	3	$60	$180	$180	$0
Dabchick Monitoring - labour	Hours	30	$35	$1,050	$0	$1,050
Training - Intro to Predator Trapping Methods Level 3	Unit	1	$180	$180	$180	$0
Thank You Morning tea for volunteers	Unit	1	$100	$100	$100	$0
Total				**$28,880**	**$11,310**	**$17,570**
2022/2023						
Pest Animal Control (pesticide)	Unit	80	$85	$6,800	$6,800	$0
Pest Animal Control (labour)	Hours	430	$35	$15,050	$0	$15,050
Rat Bait Stations & Traps (materials)	Unit	1	$600	$600	$600	$0
Trap Box Construction (labour)	Hours	25	$35	$875	$0	$875
Possum Traps & Lure (materials)	Unit	10	$75	$750	$750	$0
GPS bait station & trap box locations (labour)	Hours	8	$35	$280	$0	$280

Monitoring Materials (rats)	Unit	1	$150	$150	$150	$0
Monitoring Labour (rats)	Hours	9	$35	$315	$0	$315
5-Minute Bird Count Survey	Unit	1	$1,800	$1,800	$1,800	$0
Dabchick Monitoring - expenses	Unit	3	$60	$180	$180	$0
Dabchick Monitoring - labour	Hours	30	$35	$1,050	$0	$1,050
Thank You Morning tea for volunteers	Unit	1	$100	$100	$100	$0
Total				**$27,950**	**$10,380**	**$17,570**
2023/2024						
Pest Animal Control (pesticide)	Unit	80	$85	$6,800	$6,800	$0
Pest Animal Control (labour)	Hours	430	$35	$15,050	$0	$15,050
Rat Bait Stations & Traps (materials)	Unit	1	$600	$600	$600	$0
Trap Box Construction (labour)	Hours	25	$35	$875	$0	$875
GPS bait station & trap box locations (labour)	Hours	8	$35	$280	$0	$280
Monitoring Materials (rats)	Unit	1	$150	$150	$150	$0
Monitoring Labour (rats)	Hours	9	$35	$315	$0	$315
5-Minute Bird Count Survey	Unit	1	$1,800	$1,800	$1,800	$0
Dabchick Monitoring - expenses	Unit	3	$60	$180	$180	$0
Dabchick Monitoring - labour	Hours	30	$35	$1,050	$0	$1,050
Thank You Morning tea for volunteers	Unit	1	$100	$100	$100	$0
Total				**$27,200**	**$9,630**	**$17,570**
2024/2025						
Pest Animal Control (pesticide)	Unit	80	$85	$6,800	$6,800	$0
Pest Animal Control (labour)	Hours	430	$35	$15,050	$0	$15,050
Rat Bait Stations & Traps (materials)	Unit	1	$600	$600	$600	$0
Trap Box Construction (labour)	Hours	25	$35	$875	$0	$875
GPS bait station & trap box locations (labour)	Hours	8	$35	$280	$0	$280
Monitoring Materials (rats)	Unit	1	$150	$150	$150	$0
Monitoring Labour (rats)	Hours	9	$35	$315	$0	$315
5-Minute Bird Count Survey	Unit	1	$1,800	$1,800	$1,800	$0
Dabchick Monitoring - expenses	Unit	3	$60	$180	$180	$0
Dabchick Monitoring - labour	Hours	30	$35	$1,050	$0	$1,050
Thank You Morning tea for volunteers	Unit	1	$100	$100	$100	$0
Total				**$27,200**	**$9,630**	**$17,570**
Total Cost Programme				**$139,930**	**$52,080**	**$87,850**

Consultation

Tarawera Rat Control Community Group has carried out consultation with Karen Walmsley from Tūhourangi.

Shane Hona (Bay of Plenty Regional Council) undertook consultation with Ngāti Rangitihi (Ken Raureti) and Tūhourangi tribal authority (Ngarepo Eparaima).

Archaeological consideration

Desktop analysis undertaken by the Biosecurity Officer has identified listed or recorded archaeological sites in the project area (Appendix 3). However it is unlikely that the proposed works described in this Environmental Programme will destroy, disturb or modify any archaeological site. An Accidental Discovery Protocol has been included in Appendix 2 should any discoveries be made during the proposed works.

Monitoring of Works

This section specifies the type and frequency of compliance and operational monitoring which will allow assessment of the efficacy of the Work Programme.

Pest animal control monitoring

Monitoring pest numbers pre and post-control using tracking tunnels for rats will be undertaken on an annual basis to provide an index of pest numbers (Appendix 5).

Table 1 Monitoring of works

Compliance activities	Programme
Animal pest control	**Tarawera Rat Control Community Group:** Tracking tunnels **–** rat activity index.

Monitoring of outcomes

The major restoration actions should be monitored so that the progress of the restoration can be assessed and management can be altered (if required) as the project progresses. For this project monitoring of birds should be carried out and photo-points would also be valuable for recording improvements in forest regeneration (if any).

Bird monitoring

This project is intended to result in sustaining and/or increasing populations of indigenous bird species. Five-minute bird counts will be used for monitoring long-term changes in relative abundance of birds at the site. This method involves recording all birds seen or heard from a point over a five minute period. Monitoring will take place annually from exactly the same locations each time (at the same time of day) and results can be compared over a number of years (Appendix 6).

Dabchick numbers will also be monitored via counts following the methodology previously used so that results can be compared over a number of years (Appendix 7).

Garden bird surveys following the Landcare Research methodology (https://gardenbirdsurvey.landcareresearch.co.nz/) will also be undertaken by community group

members. Following this methodology will allow results to be compared over a number of years and also allow a comparison of bird populations with other areas.

Table 2 Outcome monitoring types and timing

Monitoring type	Year 1 2020/2021 measure	Year 2 2021/2022 measure	Year 3 2022/2023 measure	Year 4 2023/2024 measure	Year 5 2024/2025 measure
Dabchick Counts	✓	✓	✓	✓	✓
5 Minute Bird counts	✓	✓	✓	✓	✓
Backyard Bird counts	✓	✓	✓	✓	✓
Photo-points of forest understory	✓	✓	✓	✓	✓

Environmental Programme Agreement

This agreement to carry out environmental protection activities and commitments under this Environmental Programme, is entered into by the parties in mutual good faith to safeguard and promote environmental benefits. To ensure understanding of the responsibilities and obligations, the following clauses apply:

Grant money and Funding

To be provided on completion of the works based on actual cost with an invoice for verification, or upon milestones as set out in this Environmental Programme. Actual costs paid will not exceed estimated costs unless prior written agreement has been obtained from the Regional Council.

Ongoing maintenance and responsibilities

The Regional Council will have no long-term responsibility or obligation for works supported through this Environmental Programme. Works will require maintenance, and natural processes (i.e. floods and weather events) can mean that some works will require fixing or replacement over time.

The Regional Council assumes no responsibility or obligation under the Health & Safety at Work Act 2015 in relation to the works or Land, except as may be separately agreed between the parties or when a Regional Council employee, contractor or agent is undertaking works. For the avoidance of doubt, if the Regional Council will not be controlling the works, the Landowner accepts they are the person controlling the place of work for the purposes of the health and safety obligations.

The Landowner is responsible for all ongoing management and maintenance of works, including:

Monitoring and managing the successful establishment of plantings, and ensuring no harvesting or clear felling of the planting occurs,

Ensuring the protection, maintenance and enhancement of biodiversity with regard to the goals and objectives of this Environmental Programme,

Re-vegetation plantings will be maintained free of competing weeds until plants are well established,

Undertake such measures from time to time in the control of pest plants or other exotic species that may compromise biodiversity protection and ecological values,

Fences will be maintained in a sound condition to exclude stock, and

Stream works undertaken for erosion control will be checked by the Landowner on a regular basis for integrity and effectiveness and debris and gravel build up will be cleared.

The Landowner will consult and take account of the views of the Regional Council in regard to any proposed development activity, significant change in land use, or the grant of third party rights over the Land, which may directly impact on the goals and objectives of this Environmental Programme.

The Landowner will notify the Regional Council of any pending change of ownership or subdivision of the Land, to facilitate an up-to-date record of Landowner details. The Regional Council may require, at its discretion, a Deed of Covenant to be signed by any incoming owner of the Land acknowledging the obligations in this Environmental Programme.

Monitoring

The Regional Council will, at its expense, periodically monitor the integrity and effectiveness of the works and activities contemplated under this Environmental Programme.

Upon request and with reasonable timeframes, the Landowner will allow access to the property for Regional Council personnel or agents for evaluation and monitoring purposes.

Public Access

No public access to the Landowner's property is given or implied by this Environmental Programme.

Counterparts

This agreement may be executed in any number of counterparts each of which is to be deemed an original, but all of which together are to constitute a single instrument. A party may enter into this agreement by executing any counterpart of it and exchanging such counterpart, including by way of electronic or facsimile copy.

Encumbrance

Required when BOPRC Grant total value is $35,000 or more, if a Priority Biodiversity site is involved or if the BOPRC staff member considers the protection of the public investment will add value; exceptions to be signed off by General Manager.

General Encumbrance

The Regional Council requires this Environmental Programme to bind the current and future owners of the Land. If requested by the Regional Council, the Landowner agrees to take all necessary steps to grant an encumbrance to give effect to this requirement. The encumbrance will be prepared and formally registered on behalf of the Regional Council against the Certificate of Title of the Land to its satisfaction and at its expense. The encumbrance is to be registered as a first ranking charge, unless the necessary documents are entered into with other chargeholders to satisfy the Regional Council's requirements as to ongoing registration.

The encumbrance instrument is effective upon date of registration and remains valid, until discharged by consent of the Regional Council.

The Regional Council will pay up to $400 (excluding GST) of the Landowners' legal fees incurred in relation to authorising the registration of the encumbrance, and the Regional Council will pay the registration fees for the encumbrance instrument. Any other costs incurred by the Landowner, including obtaining the necessary consents of other chargeholders, obtaining legal advice, or legal fees in excess of the limit agreed above will be the responsibility of the Landowner.

Should the Landowner choose to subdivide, otherwise alter the Land, or request any variation to the Environmental Programme or encumbrance, the Landowner agrees to pay the reasonable costs of the Regional Council (including its legal costs on a solicitor client basis) in providing its consent, and any variation to the Environmental Programme or encumbrance.

Queen Elizabeth II Open Space Covenant

The Regional Council requires this Environmental Programme to bind the current and future owners of the Land. In addition to this Agreement, the landowner will also enter into an Open Space Covenant with The Queen Elizabeth II National Trust under section 22 of the Queen Elizabeth the Second National Trust Act 1977. The parties agree that this Environmental Programme may be attached to the covenant which will be registered against the Certificate of Title of the Land under that legislation.

Māori Land

The Regional Council requires this Environmental Programme to bind the current and future owners of the Land. If requested by the Regional Council, the Landowner agrees to take all necessary steps to grant an encumbrance to give effect to this requirement. The encumbrance will be prepared by the Regional Council to its satisfaction and registered at its expense.

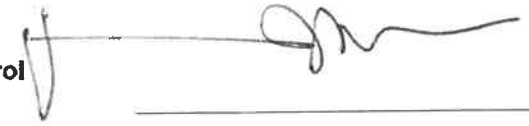
Following execution of the encumbrance, the Landowner will facilitate and apply for noting of the encumbrance by the Māori Land Court against the Māori Land Registry or Title of the Land under relevant provisions of Te Ture Whenua Māori Act 1993 or substituting legislation. A copy of the Māori Land Court noting of the encumbrance will be supplied to the Regional Council.

Dispute Resolution

Any dispute concerning the subject matter of this Environmental Programme and/or the nature, implementation or satisfaction of terms of this Agreement, will be settled by full, frank and good faith discussions and negotiation between the parties. If the dispute is not resolved through that process, the parties may engage in facilitation or mediation through an agreed process.

This Environmental Programme and Agreement has been entered into by:

Richard Noke
Trustee
Lake Tarawera Rat Control Community Group

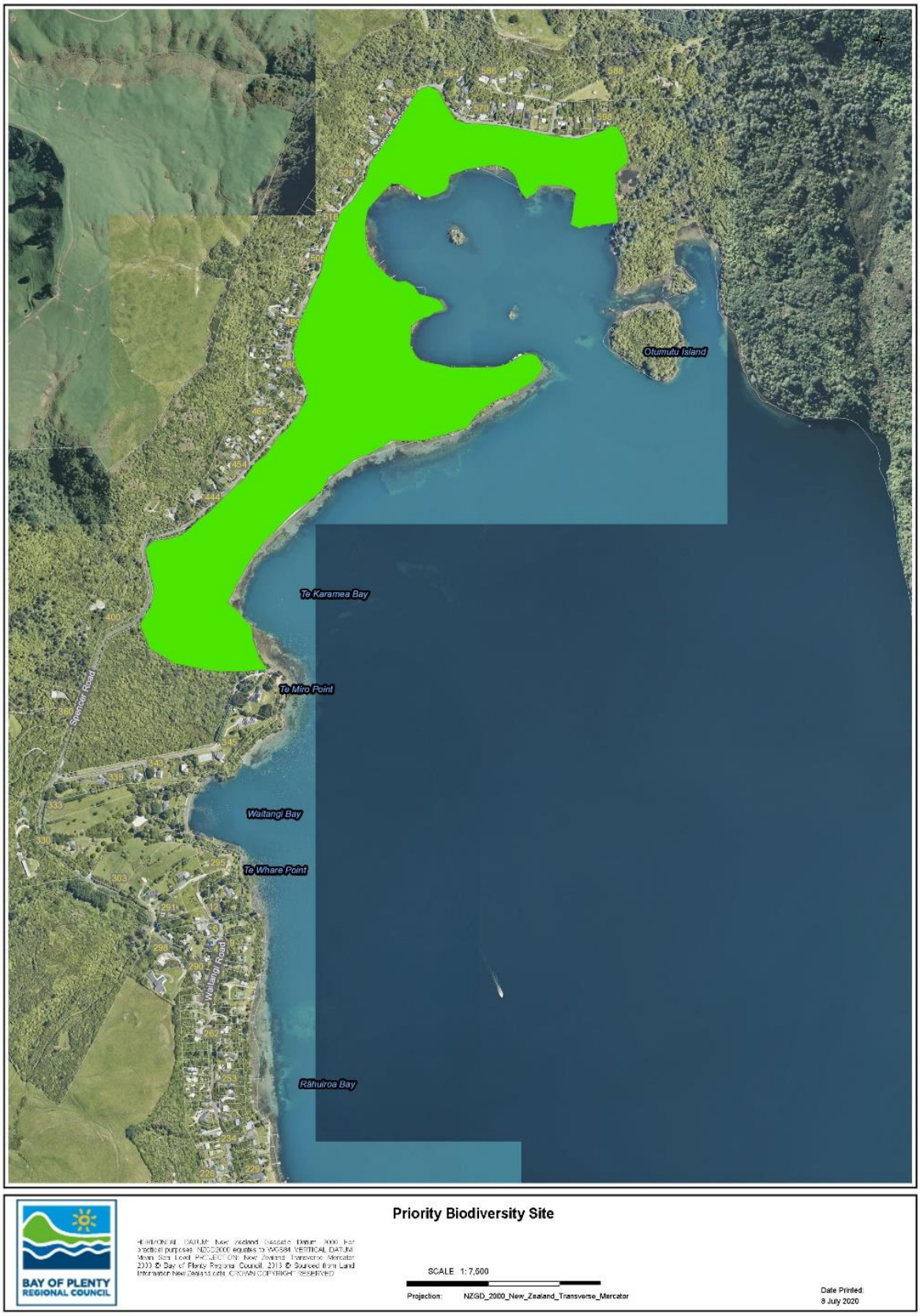


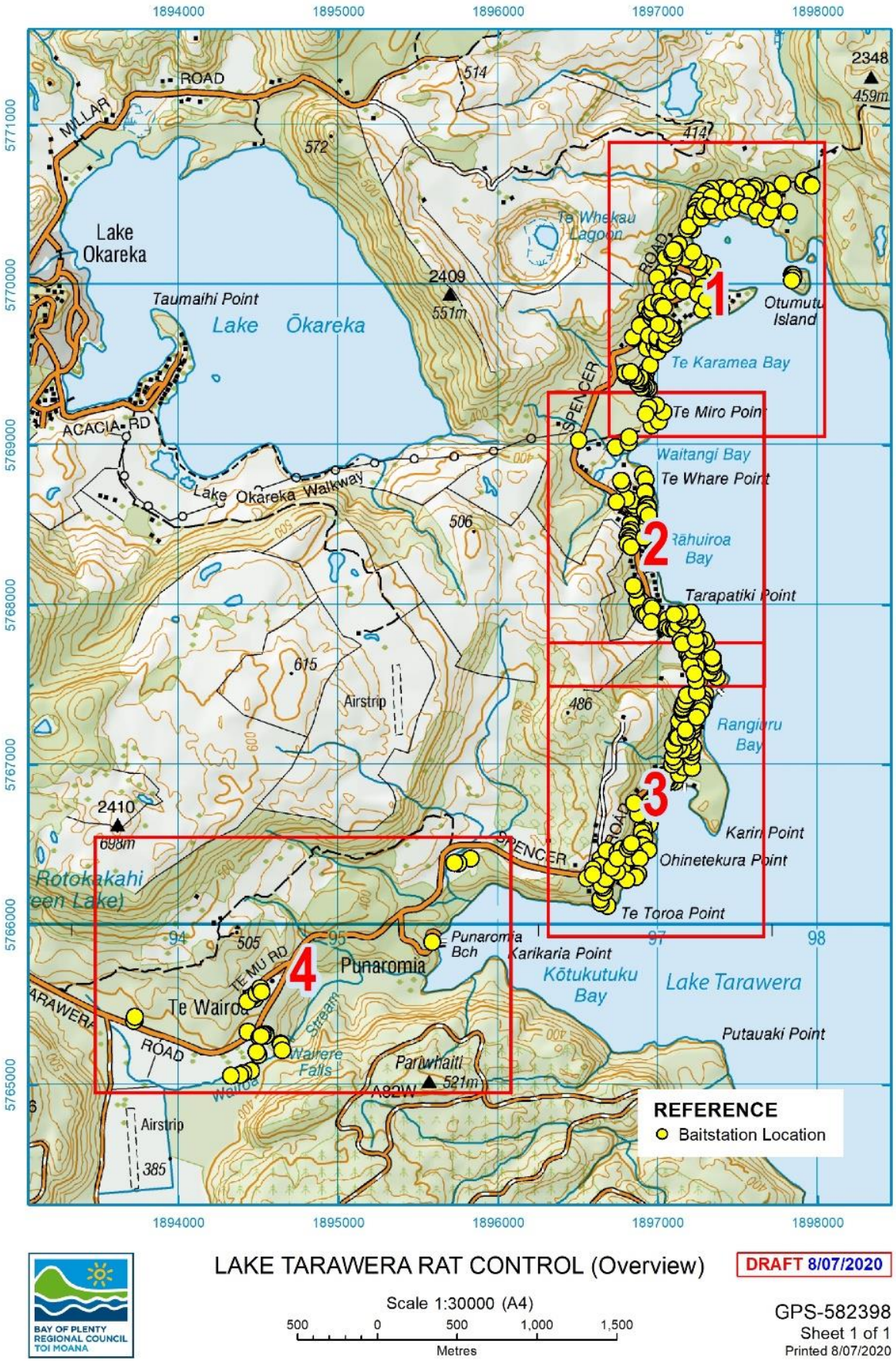
Date: May 31 2021

Helen Creagh
Rotorua Catchments Manager
Bay of Plenty Regional Council

Date: 31 May 2021

Appendix 1: Map of protection areas and work sites





BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

LAKE TARAWERA RAT CONTROL (Overview)

DRAFT 8/07/2020

Scale 1:30000 (A4)

500 0 500 1,000 1,500

Metres

GPS-582398

Sheet 1 of 1

Printed 8/07/2020

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

MAP 1 - LAKE TARAWERA RAT CONTROL

DRAFT 8/07/2020

Scale 1:7500 (A4)

100 0 100 200 300 400 500

Metres

GSP-582398

Sheet 1 of 4

Printed 8/07/2020

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

MAP 2 - LAKE TARAWERA RAT CONTROL

DRAFT 8/07/2020

Scale 1:7500 (A4)

100 0 100 200 300 400 500

Metres

GSP-582398

Sheet 2 of 4

Printed 8/07/2020

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

MAP 3 - LAKE TARAWERA RAT CONTROL

DRAFT 8/07/2020

Scale 1:7500 (A4)

100 0 100 200 300 400 500

Metres

GSP-582398

Sheet 3 of 4

Printed 8/07/2020


1894000
1895000
1896000
5766000
5765000
SPENCER ROAD
TARAWERA ROAD
Lake Tarawera
Karikaria Point
Punaromia
TE MU ROAD
Wairoa Stream
TARAWERA ROAD
Te Wairoa
REFERENCE
Baitstation Location
HORIZONTAL DATUM: New Zealand Geodetic Datum 2000
For practical purposes, NZGD2000 equates to WGS84
VERTICAL DATUM: Moturiki
PROJECTION: New Zealand Transverse Mercator 2000
© Bay of Plenty Regional Council, 2020
© Sourced from Land Information New Zealand data.
CROWN COPYRIGHT RESERVED
BAY OF PLENTY REGIONAL COUNCIL TOI MOANA
MAP 4 - LAKE TARAWERA RAT CONTROL
Scale 1:10000 (A4)
100 0 100 200 300 400 500
Metres
DRAFT 8/07/2020
GSP-582398
Sheet 4 of 4
Printed 8/07/2020

Appendix 2: Archaeological Sites, Koiwi (Human Skeletal Remains) & Taonga (Artefacts) Accidental Discovery Protocol

If archaeological sites, koiwi or taonga are uncovered or suspected during any ground disturbance or routine management works the following process will be followed by all persons.

If in doubt, stop and ask.

Procedure:

1. All work shall cease immediately at the site of discovery.

2. Secure the area to prevent further damage. **DO NOT** remove any material from the site. Advise Shane Hona (Bay of Plenty Regional Council) 0800 884 881 x7582 or 027 3189 320, email: shane.hona@boprc.govt.nz.

3. The Bay of Plenty Regional Council (Shane Hona) will notify appropriate archaeologist (currently Lynda Walters, phone: 07 3046127 or 027 4721467, email: lynda@insitu-heritage.co.nz). Depending on the archaeologist's advice, the Bay of Plenty Regional Council (Shane Hona) will notify Heritage New Zealand.

Contact: Heritage New Zealand Regional Archaeologist. Lower Northern Area Office phone +64 7 577 4530, email: infolowernorthern@heritage.org.nz

4. Shane Hona (Bay of Plenty Regional Council) shall notify Ngarepo Eparaima (Tūhourangi) and Ken Raureti (Ngāti Rangitihi) to determine what further actions are appropriate to safeguard the site or its contents.

Contact:
Ngarepo Eparaima: 027 291 3002; email: admin@tuhourangi.iwi.nz
Ken Raureti: 027 231 3957 email: raureti@xtra.co.nz

5. If clearly identifiable human skeletal remains are uncovered the Bay of Plenty Regional Council (Shane Hona) shall immediately advise the NZ Police (this is a legal requirement following the discovery of any human skeletal material).

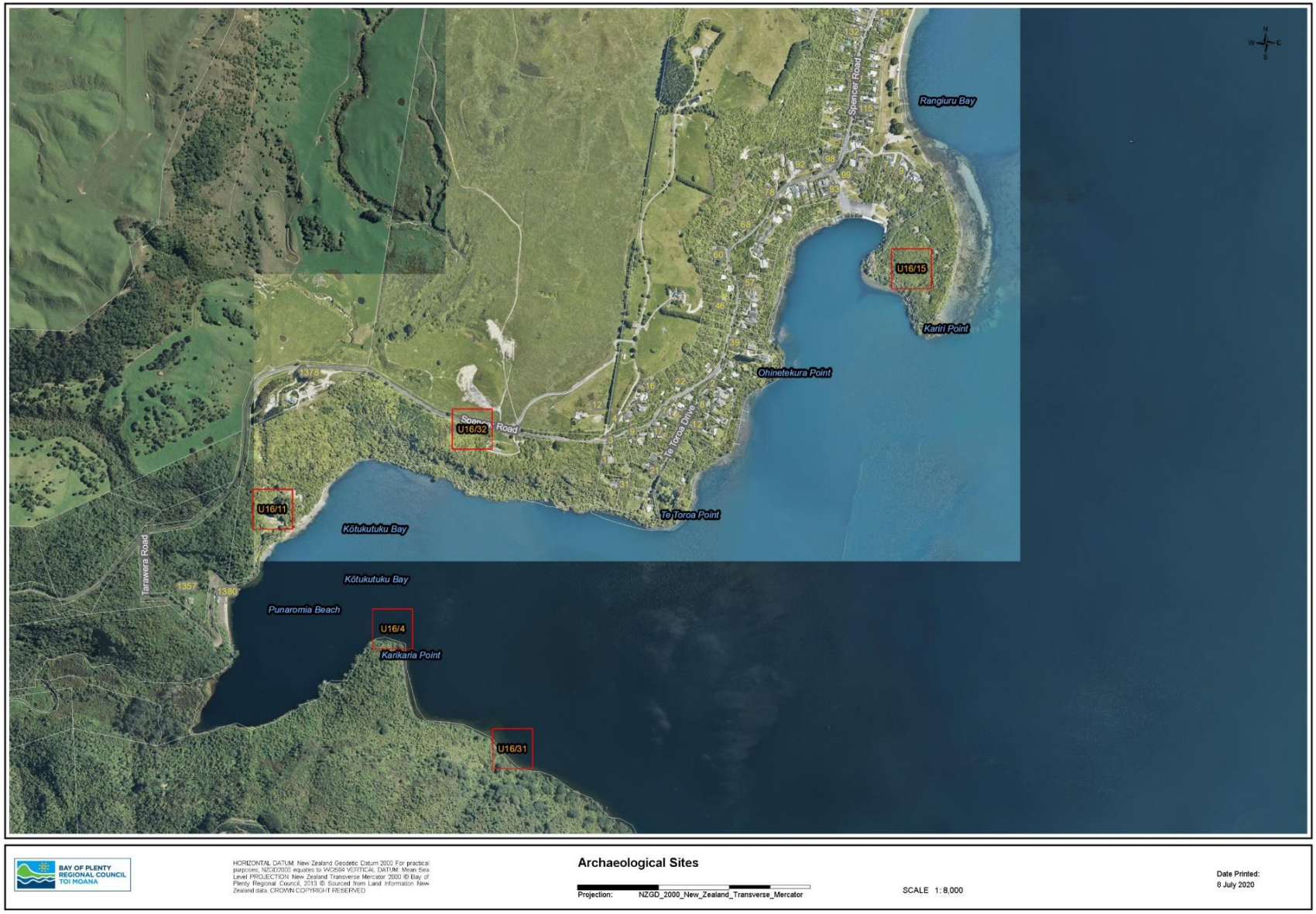
6. Works affecting the site shall not resume until Heritage New Zealand, the Police (if skeletal remains are involved) and Tūhourangi and Ngāti Rangitihi have each given approval for work to continue.

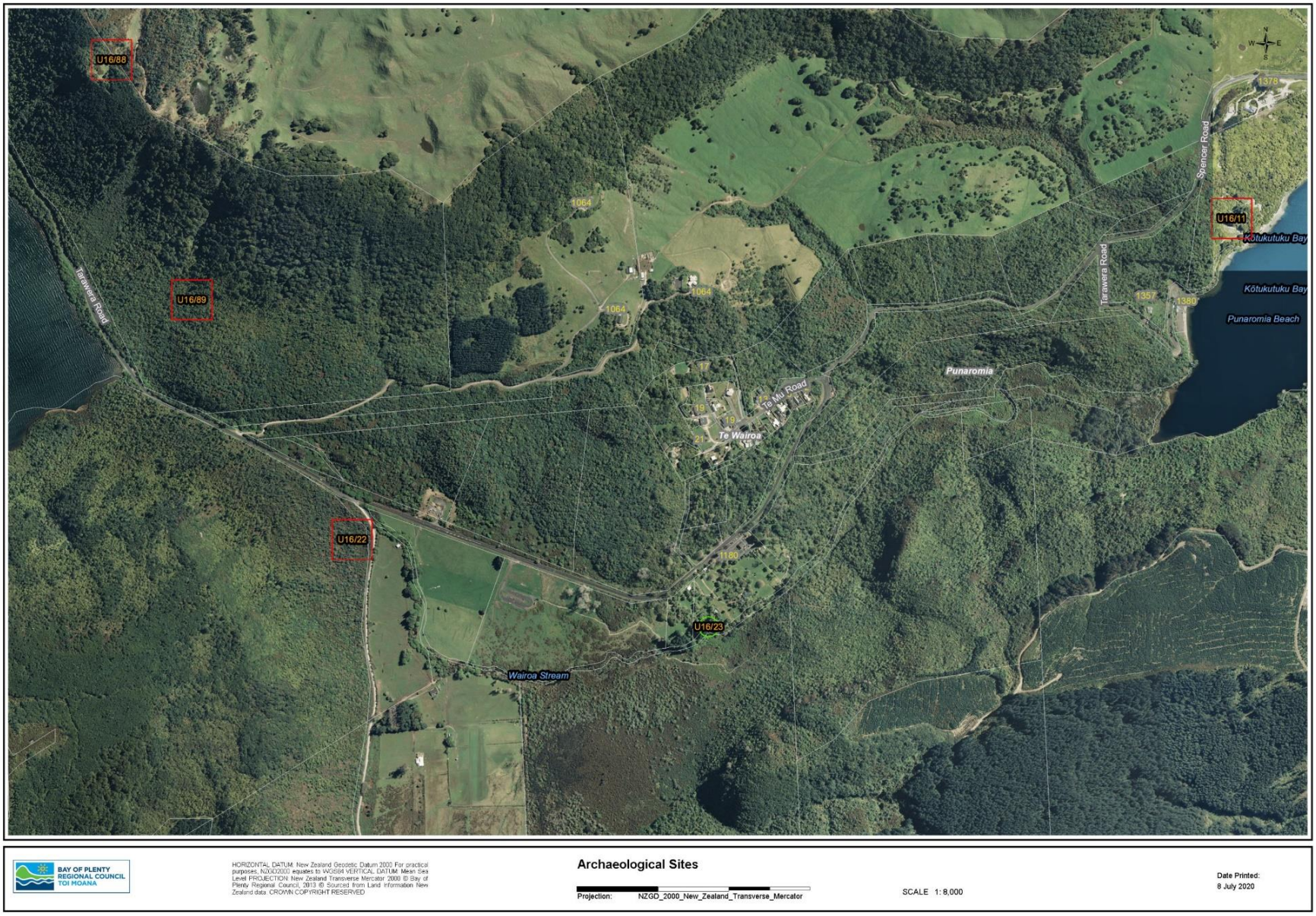
7. If advised by Heritage New Zealand that an authority is required, no further work that will affect the site shall be undertaken until the authority is granted and any conditions are met.

Appendix 3: Archaeological Sites in Project Area (Summary & Maps)

Code	Location	Brief Description
U16/8	Otumutu Island	Pā. Buried under 1886 volcanic ejecta
U16/61	Te Karamea Bay	Pā with ditch & bank defences
U16/60	By #345 Spencer Rd	Pā site. Remnants of ditch & bank
U16/187	360 Spencer Rd	Oval shaped grindstones in stream bed
U16/15	Kariri Point	Pā. Buried under 1886 volcanic ejecta. Spencer mausoleum
U16/32	By new marae site	Kainga/settlement. Buried under 1886 volcanic ejecta
U16/11	Kotukutuku bay	Rock paintings of canoe & lizard
U16/23	Buried village	Many sites, including stone carved store house


Te Whekau Lagoon
Spencer Road
Ronald Road
Cliff Road
Spencer Road
Wallangi Road
U16/8
U16/8
Otumutu Island
U16/61
Te Miro Point
U16/187
U16/60
Wallangi Bay
Te Whare Point
Rāhuiroa Bay
Archaeological Sites
SCALE 1: 8,000
Projection: NZGD_2000_New_Zealand_Transverse_Mercator
Date Printed:
8 July 2020
BAY OF PLENTY REGIONAL COUNCIL


Rangiuru Bay
Spencer Road
U16/15
Kariri Point
Ohinetekura Point
1378
Spencer Road
U16/32
Te Toroa Drive
Te Toroa Point
U16/11
Kōtukutuku Bay
Tarawera Road
1357
1380
Kōtukutuku Bay
Punaromia Beach
U16/4
Karikaria Point
U16/31
BAY OF PLENTY REGIONAL COUNCIL TOI MOANA
HORIZONTAL DATUM: New Zealand Geodetic Datum 2000. For practical purposes, NZD02000 equates to WGS84 VERTICAL DATUM: Mean Sea Level. PROJECTION: New Zealand Transverse Mercator 2000. © Bay of Plenty Regional Council, 2013. © Sourced from Land Information New Zealand data. CROWN COPYRIGHT RESERVED
Archaeological Sites
Projection: NZGD_2000_New_Zealand_Transverse_Mercator
SCALE 1: 8,000
Date Printed: 8 July 2020


U16/88
U16/89
U16/22
U16/23
U16/11
Tarawera Road
Tarawera Road
Spencer Road
Te Wairoa
Te Mu Road
Punaromia
Punaromia Beach
Kōtukutuku Bay
Kōtukutuku Bay
Wairoa Stream
1064
1064
1064
1378
1357
1380
1180
19
19
21
BAY OF PLENTY REGIONAL COUNCIL TOI MOANA
HORIZONTAL DATUM: New Zealand Geodetic Datum 2000 For practical purposes, NZGD2000 equates to WGS84 VERTICAL DATUM: Mean Sea Level PROJECTION: New Zealand Transverse Mercator 2000 © Bay of Plenty Regional Council, 2013 © Sourced from Land Information New Zealand data. CROWN COPYRIGHT RESERVED
Archaeological Sites
Projection: NZGD_2000_New_Zealand_Transverse_Mercator
SCALE 1: 8,000
Date Printed:
8 July 2020

Appendix 4: Environmental Programme Task List

Threat	Current Circumstance	Proposed Initiatives	Priority	Year 1	Year 2	Year 3	Year 4	Year 5
Invasive Animal Control	A wide range of pest animal species are likely to be present on various properties within the project area.	Control animals with a primary focus on rats.	H	Community to undertake pest animal control with a primary focus on rats (via baiting & trapping)	Community to undertake pest animal control with a primary focus on rats (via baiting & trapping)	Community to undertake pest animal control with a primary focus on rats (via baiting & trapping)	Community to undertake pest animal control with a primary focus on rats (via baiting & trapping)	Community to undertake pest animal control with a primary focus on rats (via baiting & trapping)
Invasive Weed Control	Invasive weeds are a significant current threat many properties in the project area (e.g. Kariri Point).	Control pest plants as resources allow **(undertaken through a separate project).**	M	Refer to Pest Plant Community Projects (e.g. Kariri Point BMP document)	Refer to Pest Plant Community Projects	Refer to Pest Plant Community Projects	Refer to Pest Plant Community Projects	Refer to Pest Plant Community Projects
Restoration Planting	Planting may be required in some areas where weed clearance occurs	Restoration planting as resources allow **(undertaken through a separate project).**	L	Refer to Pest Plant/Restoration Community Projects	Refer to Pest Plant/Restoration Community Projects	Refer to Pest Plant/Restoration Community Projects	Refer to Pest Plant/Restoration Community Projects	Refer to Pest Plant/Restoration Community Projects

Appendix 5: Rat Monitoring Protocol

- Number of lines: 3 lines
- Number of tunnels per line: 10 tunnels
- Spacing: At least 50 metres apart.
- Locating tunnels: Put the tunnels under cover. Rats are less likely to frequent open areas where they would be exposed to predators such as morepork.
- Continue to use fixed locations of tracking tunnels: Once positioned, it is important to leave the tunnels in the same spot each year.
- Timing: once per year (in spring). Or if resources allow, do twice per year (spring and autumn).
- Stick to the same date(s) every year give or take a week or so.
- Avoid doing rat monitoring during wet weather. It actually doesn't make a big difference to rats but it is less fun for your volunteer observers.
- Setting up the tracking cards:
- Use "pre-inked" cards
- Use Peanut butter as bait (same brand of peanut butter for all cards. Use a small amount of peanut butter bait (a thumbnail-sized blob)) in the middle of the ink pad. Do all tunnels the same.
- Securing the tracking cards: Use a thumb tack or paper clip to secure the tracking card in place. This is a good idea as it makes it less likely that a possum will pull the card out to access the peanut butter.
- Make sure both ends of the tunnels are clear, with no rank grass or weeds blocking entry.
- Each tunnel needs to have a unique number and this should be written on the upper surface of the tracking card along with the date (best done when you put the cards out while they are dry).

- GPS tracking tunnel locations: Each tunnel location plus its unique identifier number needs to be recorded and entered into the BOPRC Care Group tracking app.

- Identifying prints on tracking cards: This guide from Landcare Research is excellent (BOPRC can provide assistance if required): https://www.landcareresearch.co.nz/__data/assets/pdf_file/0005/127472/22_How-to-read-prints-from-tracking-tunnels.pdf

- Results: Count the number of cards tracked by each species and express that as a percentage out of 100 (e.g. number of cards with "x:" species tracks / total number of cards x 100).

- If there is rat or mouse poo on the card, but no prints, this counts as presence of rat and/or mouse.

- Invertebrates and lizards: Count large invertebrate footprints and look for geckos and skinks too, as these will hopefully increase over time as a result of the ongoing pest control.

Appendix 6: 5 Minute Bird Count Monitoring Method

Surveys will be undertaken at Kariri Point and Spencer Road. Standard five-minute bird count (5MBC) methodology, (Dawson & Bull; 1975) to be used for these surveys. Bird counts will be carried out in November between 9:00 am and 1:00 pm (NZ standard time), to be consistent with previous counts and to avoid both the dawn chorus and the quiet afternoon periods. All counts will be conducted in fine, still conditions with no rain. Weekend days will be avoided due to the extra noise, traffic and activity typical at that time of the year. The same count stations will be used for these surveys as were used in 2005, 2008, 2011 and 2019 and will be located using existing residential house numbers.

Kariri Point

Count stations spaced approximately 200 m apart around the peninsula will be used to survey birds from. Observations of birds seen or heard within a 100 m radius of a count station over a five-minute period will be recorded. The time, date, and weather conditions (sun, wind, temperature, and precipitation) will be recorded at each count station. Note: Not all count stations are at 200 m spacings on Kariri Peninsula, but have been used each survey historically, so will continue to be used going forward, for consistency.

Spencer Road

Count stations are spaced approximately 200 m apart along Spencer Road and several side roads are where the 5MBCs will take place. Birds seen or heard within a 100 m radius of a count station over a five-minute period will be recorded. The time, date and weather conditions (sun, wind, temperature, precipitation) will be recorded at each count station for each 5MBC carried out.

Kariri Point Count Station Locations

Station #	Approximate Location of Count Station	GPS Co-ordinates
1	Open area, grass reserve, near lake.	1897305 / 5767040
2	Under forest canopy	1897417 / 5766851
3	Under forest canopy	1897417 / 5766661
4	Under forest canopy	1897353 / 5766595
5	Under forest canopy	1897301 / 5766745

6	Under forest canopy	1897296 / 5766941
7	Open area, grass reserve, near lake, boat ramp.	1897204 / 5766900

Spencer Road Count Station Locations

Station #	Approximate Location of Count Station	GPS Co-ordinates
1	19 Spencer Road	1896679 / 5766343
2	33 Spencer Road – Junction	1896839 / 5766464
3	54 Spencer Road	1896867 / 5766728
4	75 Spencer Road	1896998 / 5767326
5	93 Spencer Road	1897146 / 5764960
6	133 Spencer Road	1897192 / 5767147
7	152 Spencer Road	1897242 / 5767388
8	165 Spencer Road	1897291 / 5767614
9	177 Spencer Road	1897205 / 5767788
10	199 Spencer Road	1897116 / 5767901
11	225 Spencer Road	1896953 / 5768038
12	248 Spencer Road	1896875 / 5768254
13	265 Spencer Road	1896883 / 5768429
14	10 Waitangi Road	1896897 / 5768666
15	450 Spencer Road	1896934 / 5769684

16	1 Ronald Road	1897370 / 5769874
17	Solitaire Lodge entrance	1897151 / 5769920
18	510 Spencer Road	1897124 / 5770164
19	524 Spencer Road	1897210 / 5770353
20	537 Spencer Road	1897267 / 5770469
21	568 Spencer Road	1897477 / 5770531
22	588 Spencer Road	1897737 / 5770594
23	581 Spencer Road	1897764 / 5770499

Appendix 7: Dabchick Monitoring Protocol

The monitoring area at Lake Tarawera has been split into 5 zones so as to allow a better understanding of how many dabchicks a zone can hold and also how the dabchicks move around.

The 5 zones are (see attached map):

I: a): Otumutu Bay, lagoon and island;

b) Otumutu to Humphries Point

II: Moura Point to Putauaki Point (Hole in the Wall at entrance to Landing Bay)

III: Putauaki Point to Kariri Point

IV: Kariri Point to Te Miro Point (off Brian Perry's Place)

V: Miro Point to "Solitaire" Point

Record the actual numbers of dabchick birds congregated together:

- Singles – record as 1
- Pairs – record as 2
- Groups – record actual number e.g. 4, 5, 13 etc.

Dabchick Survey Outline

Note that Graeme Young gdy@outlook.co.nz coordinates annual Dabchick surveys for the Rotorua lakes so he can be contacted for more information regarding this, and survey results should be sent to him too.

- Single annual count conducted in April (autumn)
- Counts done in the middle two weeks of each month
- Three counts done on separate days within these two weeks
- Counts done during fine, calm weather
- Waves less than half a metre
- Counts done in good visibility, good daylight
- Time of day for counts does not matter as long as there is good light to see by

Also:

- Any nests found or suspected during surveys marked and reported to DoC office immediately
    - Oct and Jan are most likely months to find nests
- Use inconspicuous marking 10m+ from actual nest site
    - Mark nest from a point on the shore
- Note distance and bearing to the nest site from the nest marker placed on the shore
- Do not disturb the nest site or nesting adults

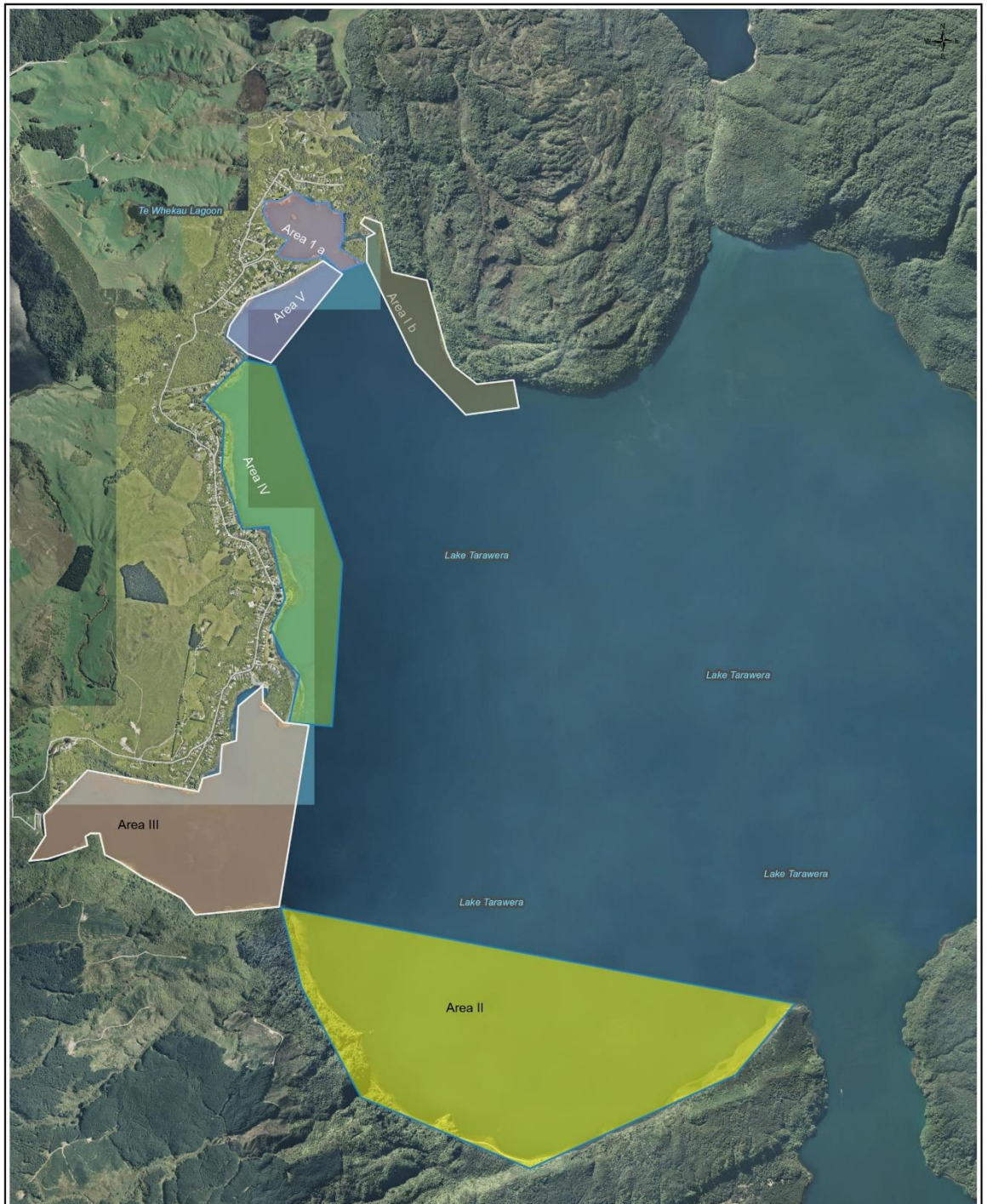
Methods:

- Survey assigned lake (or part thereof) from a motor-boat or kayak travelling 30-100 m from shore at a speed slow enough to identify and count all dabchicks present.
    - Note: it may be possible to survey some lakes or parts of lakes on foot from the shore using binoculars or spotting scopes; this will have to be determined in the field
    - Shore vs boat survey may also have to be determined by who has access to boat/kayak
- Map all dabchicks with an “x” on the map provided, with the number of individuals written next to the “x”
    - Count juveniles separately. If, for example, there are two adults and one juvenile write 2+1 next to the “x” on the map
    - Note: on the data sheet, distinguish juveniles into age classes of downy chicks vs older juveniles/sub-adults if possible
    - Watch carefully for juveniles being carried on an adult’s back, as they can be very difficult to see. The adult may appear slightly “puffed up” and will be loath to dive
    - Also watch for birds that seem pale at first glance; they are probably sub-adults with fawn rather than chestnut breasts, and may or may not be with parents
    - When entering a new area, ***look well ahead*** for dabchicks. Dabchicks will tend to dive away and it pays to scan all water about ***three times*** to look for them

- Record counts on the datasheet provided
    - Record overall flock counts as per map
    - Also record dabchicks by age class if possible
- At the end of each count, write a brief summary of the count on the data sheet including:
    - Lake surveyed
    - Date of survey
    - Weather
    - Time at the beginning and end of the count
    - Names of count personnel
    - Type of boat used
    - Features of the habitat which might explain the distribution of the birds you have counted
    - Anything unusual or of interest
- If a nest is found, or a nest site is suspected due to adult behaviour, note and/or mark (inconspicuously) the location as above; take a GPS reference if possible

Notes:

- DoC needs the group to organise itself. This will require:
    - Organising the crew of volunteers for each count, i.e.,
        - Ensuring a boat and skipper (if needed)
        - Ensuring a confident/experienced dabchick observer
        - Ensuring a scribe
        - Choosing a fine, calm day for the survey
        - If the lake is to be divided into parts for counting,
            - Ensure skippers know start and end points for their survey area so there is no overlap in counting dabchicks
            - Ensure entire lake is counted on the same day for each survey
    - Providing data sheets
    - Collecting data from observers immediately after each survey
    - Clarifying any queries immediately, i.e., while survey is still fresh in the minds of the observers
    - Passing raw data sheets and maps to DoC contact person quarterly, at the conclusion of all three counts
    - (this does not preclude the group from keeping copies, and performing any data analyses they might be interested in doing)
- Provide the name of the Contact Person for the group to DoC


Te Whekau Lagoon
Area 1 a
Area V
Area I b
Area IV
Lake Tarawera
Lake Tarawera
Area III
Lake Tarawera
Lake Tarawera
Area II

Appendix 8: Lake Tarawera Mistletoe Location Maps

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

Projection and Grid Information
HORIZONTAL DATUM: New Zealand Geodetic Datum 2000
For practical purposes, NZGD2000 equates to WGS84
VERTICAL DATUM: Moturiki
PROJECTION: New Zealand Transverse Mercator 2000

Mistletoe plant locations - Tarawera

Scale 1:3,650 (A3)

0.07 0 0.07 0.13 0.2
Kilometres

623852_TaraweraMistletoePlantLocations
Sheet 1 of 2
Printed 7/10/2020

BAY OF PLENTY REGIONAL COUNCIL TOI MOANA

Projection and Grid Information
HORIZONTAL DATUM: New Zealand Geodetic Datum 2000
For practical purposes, NZGD2000 equates to WGS84
VERTICAL DATUM: Moturiki
PROJECTION: New Zealand Transverse Mercator 2000

Mistletoe plant locations - Tarawera

Scale 1:3,000 (A3)

0.06 0 0.06 0.11 0.17

Kilometres

623852_TaraweraMistletoePlantLocations
Sheet 2 of 2
Printed 7/10/2020

Objective ID: A3520127

Appendix 9: Possum Trapping Protocol

- Trap type: Sentinel Possum Kill Trap with “Dave Edwards modifications” to make them easier and safer to use and reset.
- Trap Locations: As close to mistletoe plants as possible (Appendix 8).
- Bait type: “Smooth in a Tube” lure, made by Connovation. Or similar product.
- Trap setting instructions are described here: www.youtube.com/watch?v=h4VanCz8feQ Using Dave Edwards resetting tool is recommended.
- Trap checking frequency: the more frequently that traps can be checked and reset if required, the better. Checking traps every 4 days would be ideal but may not be possible depending on trap location, and volunteer availability.
- One issue with all possum traps is rats, mice and invertebrates eating the bait, which reduces possum interaction with the kill traps. Having a rat trap or similar device near a sentinel trap will help prevent this happening. This is more of an issue as possum numbers get lower and it therefore takes longer for a possum to encounter a trap.
- For more information on the modifications to this trap and how to best use them, please contact Dave Edwards, Email: djedwards@xtra.co.nz Phone: 07 544 0885.