



AGENDA

Ngā Poutiriao ō Mauao Meeting Friday, 3 December 2021

**I hereby give notice that a Ngā Poutiriao ō Mauao Meeting will be held
on:**

Date: Friday, 3 December 2021

Time: 9.30am

**Location: Tauranga City Council
Kowhai Meeting Room
91 Willow Street
Tauranga**

**Marty Grenfell
Chief Executive**

Terms of reference - Ngā Poutiriao ō Mauao

Membership

Members

The Joint Board is comprised of eight members being;

- Four representatives appointed by the Mauao Trust:

s 7(2)(a) - Privacy

 (Chair) (Ngāti Pukenga)

s 7(2)(a) - Privacy

 (Ngai Te Rangi)

s 7(2)(a) - Privacy

 (Ngāti Ranginui)

s 7(2)(a) - Privacy

 (Waitaha a Hei)

- Four representatives appointed by Tauranga City Council: (these members will be appointed for a term subject to Council triennial elections)

s 7(2)(f)(ii)

The following staff members are appointed by the Council as the representatives of Tauranga City Council to fill the two remaining Council positions on Ngā Poutiriao ō Mauao, subject to limitations. The limitations are related to the staff being appointed as members only to fulfil the quorum requirements in the unlikely event that one or both of the commissioners are unavailable for a scheduled meeting of Ngā Poutiriao ō Mauao. The staff are named in the order of preference:

s 7(2)(f)(ii)

Quorum

Four members; comprised of at least two members who have been appointed by the Mauao Trust and at least two members appointed by Tauranga City Council

Meeting frequency

The Joint Board shall meet as necessary in order to carry out its functions but it will be no less than two times per year.

The Joint Board will also meet with the Mauao Trust together, and with Tauranga City Council elected members, at least once per year

Scope

- The purpose of the Joint Board is to give effect to the purpose of the Mauao Trust to protect and preserve the mauri of Mauao to ensure the natural, physical and cultural integrity of Mauao is maintained. In achieving this purpose, the Board will:
 - Act in accordance with the guidance from the Mauao Trust on matters relating to mauri and tikanga of Mauao.

- Act consistently with the principles of Te Tiriti o Waitangi/the Treaty of Waitangi (as outlined in the Tauranga City Council and Iwi/Hapu Protocols) and its statutory obligations under the Reserves Act 1977.
- Cooperate in partnership with a spirit of good faith, integrity, honesty, transparency and accountability.
- Actively work together using shared knowledge and expertise.
- Engage early on issues of known interest to either of the parties.
- Enable and support the use of te reo and tikanga Maori.
- Acknowledge that the parties' relationship is evolving.
- Have particular regard for the interests of the Tauranga community.

Purpose

- The functions of the Joint Board will be to:
 - Develop and review a Mauao Reserve Management Plan in accordance with the process outlined in the Memorandum of Understanding for Mauao Historic Reserve and Mauao Joint Administration Board (Ngā Poutiriao ō Mauao - The Guardians of Mauao) (the MOU).
 - Allocate funding provided to the Joint Board in accordance with the Funding Agreement in the MOU towards the implementation of projects that are in or consistent with the Mauao Reserve Management Plan and towards the day to day operation of Mauao.
 - Secure approval of the Mauao Trust to the Mauao Reserve Management Plan before the Joint Board approves the plan.
 - Ensure the contractual arrangements are being managed consistently with the policies, objectives of the Mauao Reserve Management Plan.
 - Identify, approve and oversee the implementation of projects either identified in or consistent with the objectives of the Mauao Reserve Management Plan.
 - Ensure the contractual arrangements are being managed consistently with the policies, objectives and strategies of the Joint Board and the Mauao Reserve Management Plan.
 - Provide to and/or seek advice from the Mauao Trust and Minister of Conservation on matters affecting Mauao and on achievement of the Mauao strategic objectives, in particular the Joint Board shall seek guidance from the Mauao Trust on tikanga related matters.
 - Consider and recommend to the Mauao Trust requests for concessions, leases and licences for all activities on Mauao and if the Mauao Trust approves the request, undertake the process for the issuing and administration of the concession, lease or licence for the particular activity.

Meeting Procedures

- The Joint Board may regulate its own procedures, subject to:
 - The Joint Board operating on a preferred basis of consensus decision making. If this is not achieved, then resolutions may only be actioned by the Joint Board where this is agreed by a 75% majority of the members present and voting at a meeting.
 - No business shall be transacted at any meeting of the Joint Board unless at least a quorum of members (whether voting or not) is present at the meeting during the whole time at which business is transacted.

Power to Recommend

- To Council, Mauao Trust and/or any standing committee as it deems appropriate.

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1 OPENING KARAKIA

2 APOLOGIES

3 PUBLIC FORUM

3.1 s 7(2)(a) - Privacy - Port of Tauranga

4 CHAIRPERSON'S REPORT

4.1 Chairperson's Verbal Report

5 ACCEPTANCE OF LATE ITEMS

6 CONFIDENTIAL BUSINESS TO BE TRANSFERRED INTO THE OPEN

7 CHANGE TO ORDER OF BUSINESS

8 CONFIRMATION OF MINUTES

8.1 Minutes of the Ngā Poutiriao ō Mauao meeting held on 22 September 2021

File Number: A13093735

Author:

s 7(2)(f)(ii)

Authoriser:

RECOMMENDATIONS

That the Minutes of the Ngā Poutiriao ō Mauao meeting held on 22 September 2021 be confirmed as a true and correct record.

ATTACHMENTS

1. Minutes of the Ngā Poutiriao ō Mauao meeting held on 22 September 2021



MINUTES

**Ngā Poutiriao ō Mauao Meeting
Wednesday, 22 September 2021**

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MINUTES OF TAURANGA CITY COUNCIL
NGĀ POUTIRIAO Ō MAUAO MEETING
HELD AT THE TAURANGA CITY COUNCIL, KAIMAI ROOM, 91 WILLOW STREET,
TAURANGA
ON WEDNESDAY, 22 SEPTEMBER 2021 AT 9.30AM

PRESENT:

s 7(2)(a) - Privacy

s 7(2)(f)(ii)

s 7(2)(a) - Privacy

s 7(2)(a) - Privacy

s 7(2)(f)(ii)

ALSO PRESENT:

s 7(2)(a) - Privacy

IN ATTENDANCE:

s 6 - Maintenance of law

s 7(2)(f)(ii)

s 7(2)(f)(ii)

1 OPENING KARAKIA

s 7(2)(a) - Privacy opened the meeting with a Karakia.

2 APOLOGIES**COMMITTEE RESOLUTION NG3/21/1**

Moved: s 7(2)(f)(ii)

Seconded: s 7(2)(a) - Privacy

That apologies from s 7(2)(f)(ii) be received and accepted.

CARRIED**3 PUBLIC FORUM****3.1** s 7(2)(a) - Privacy

A copy of the presentation for this item can be provided upon request.

Key Points

- The Mount Maunganui Lifeguard Service provided a 24/7, 365 days per year call-out squad. The squad responded to 111 incidents on the beach and also on Mauao.
- On average, one call was received per fortnight for an incident on Mauao. This was increasing every year.
- The Squad had identified communication as a significant issue. Messages received were unclear; patients or people relaying messages about an incident on Mauao often did not know the names of tracks and could not accurately or clearly give directions to their approximate location e.g. a message was received about a person on the side track with breathing difficulties. When the Squad was unable to locate the person on the side track, it was realised that the caller had actually meant that the person was at the Sidetrack Café.
- It was important that the Squad was able to locate a patient as quickly as possible.
- The Mount Lifeguard Service had developed a Rapid Response Plan for Mauao. There were

currently over 100 existing man-made wooden structures on Mauao. The concept was to have a coloured numbered sign fixed to each man-made wooden structure.

- There were also a number of sites of historical significance on Mauao and input would be requested from the Kaitiaki for appropriate locations to place the signs in these areas.
- When a patient called 111 for assistance, they could be directed to the nearest man-made wooden structure to provide the coloured number to the operator. The operator would transfer this information through to the first responder who would then be able to accurately pinpoint the patient's location, reducing the response time.
- The size of the signs would fit comfortably on most wooden posts. The colour would be for those who were potentially dyslexic, and the numbers were for those who were potentially colour blind. No two numbers would repeat.
- The request to the Kaitiaki of Mauao was to allow the Mount Maunganui Lifeguard Service to provide the best service that they possibly could and put the Mauao rescue system in place.

In response to questions

- Concern was raised that this could result in a proliferation of signs and it was important to integrate and align this into signage work that was already happening. Tauranga City Council (TCC) staff would work with Ngā Poutiriao ō Mauao and the Mount Maunganui Lifeguard Service on this.

The Chair thanked s 7(2)(a) - Privacy for their presentation.

Staff Action

- Staff to coordinate and work with Ngā Poutiriao ō Mauao and the Mount Maunganui Lifeguard Service on the signage for the proposed Mount Maunganui Lifeguard Service Rapid Response Plan.

3.2 s 7(2)(a) - Privacy Oi/Grey-faced Petrel long-term monitoring on Mauao

A copy of the presentation for this item can be provided upon request.

Key Points

- Oi or the Grey-faced Petrel had been monitored on Mauao since 1989. The birds had been studied at various levels over that time. Currently, the project was very reduced because the Oi were not in good shape in terms of numbers.
- Procedures that had been put in place on the maunga had helped and were needed to remain in perpetuity.
- The key animal preventing the Oi from surviving long term was the rat.
- Over 1000 people had volunteered and helped on the project over the years.
- Adult birds arrived in April to nest and lay eggs. Around 200 eggs were laid on Mauao per year; eggs hatched in August/September. For every 100 eggs laid, 50 hatched and around 30 chicks fledged. If rats were in abundance in any particular year, the fledgling rate could drop to below ten.
- The birds nested in burrows, either dug themselves or in amongst the rocks, and always under pohutukawa.
- The Oi were a nighttime species and so were rarely seen.
- Monitoring of the birds would continue.

In response to questions

- There were around 500 to 700 pairs using the Mount. The distribution of the burrows was changing due to erosion. A lot of erosion had occurred on the Matakana side and lots of burrows had been lost. The north eastern flanks of Mauao were concentrated burrow areas and well used by the birds.

- Birds only laid one egg per year.
- Chicks hatched in August/September and fledged in January. The birds were very unsociable at fledging time.
- Motuotau Island was rat free. The island was New Zealand's closest pest-free off-shore island. A combination of wave action and wind prevented a lot of animals from landing there, but they occasionally did. The island had an ongoing trapping regime to keep it pest free.
- Statistics of what was being monitored would be shared through the Operational Report.

The Chair thanked s 7(2)(a) - Privacy for his presentation and his long and ongoing commitment to looking after the Oi on Mauao.

3.3 s 7(2)(a) - Privacy - Mountford Consultants - Takitimu North Link proposal to survey, salvage, and relocate lizards to Mauao

A copy of the presentation for this item can be provided upon request.

Key Points

- Mountford Consultants provided ecological advice planning and were making a request associated with the new Takitimu North Link roading project that was due to begin at the end of this year. Their role in the project was to implement a lizard management plan for any indigenous lizards that may be found along the project footprint.
- There were eleven sites along the proposed road where the lizards were found.
- Lizards would be salvaged from the area before the vegetation clearance of the site, using a combination of hand searching as well as traps. The main aim was to avoid death or injury to indigenous lizards.
- It was most likely that copper and rainbow skinks would be found. Ornate skink, forest and elegant gecko may also be found but this was less likely.
- A permit from the Department of Conservation (DOC) was required to capture and translocate lizards and this was currently being applied for. As well, permission from the Mauao Trust to use Mauao as a mobile release site for the lizards was required.
- Mauao had been chosen as the release site as it had the right habitat requirements, had an existing indigenous herpetofauna population and had an existing pest control programme.
- Consultation had already been undertaken with Te Paerangi, a multi iwi/hapu group who were the main contacts for the entire project, and they were supportive of the initiative.
- Support was now being sought from Ngā Poutiriao ō Mauao for Mauao to be used as a release site.

In response to questions

- This project was within the context of Mauao being one of the last bastions of a natural habitat. Mauao as a wildlife sanctuary had been previously discussed and this initiative would take Mauao in this direction by default.
- Through the Lizard Management Plan process and the Wildlife Authority application, DOC may request that there was additional enhancement work undertaken at the release sites to help support the released lizards.
- It was not known how many lizards would be found.
- It was suggested that conversations with iwi/hapū groups on the Mauao side of the harbour needed to take place as they were not part of the Te Paerangi group. It was also suggested that this presentation be made to the Mauao Trust as well.
- The initiative also needed to align with TCC's Development Plan for Mauao.

Contacts for Ngā Poutiriao ō Mauao, the Mauao Trust and TCC were provided to s 7(2)(f)(ii) to progress conversations regarding the initiative.

The Chair thanked s 7(2)(a) - Privacy for their presentation.

4 CHAIRPERSON'S REPORT

4.1 Chairperson's verbal report

Chair [s 7(2)(a) - Privacy]

Key Points

- The Te Manawataki o Mauao App, a soundtrack that represented the rhythm of Mauao, had been put together as part of the Tauranga Arts Festival. The App would be available to download from 21 October 2021.
- [s 7(2)(a) - Privacy] had released his short film titled Taiao which included photography from Mauao. [s 7(2)(a) - Privacy] has sought and received permission to film on Mauao and had also been granted permission to use the Mauao text font.

COMMITTEE RESOLUTION NG3/21/2

Moved: [s 7(2)(a) - Privacy]

Seconded: [s 7(2)(f)(ii)]

That Ngā Poutiriao ō Mauao receives the Chairperson's report.

CARRIED

5 ACCEPTANCE OF LATE ITEMS

It was requested that a discussion be held regarding people straying off the tracks on Mauao and climbing up through the bush. It was agreed that discussion would take place under section 11 of the agenda – Discussion of Late Items.

6 CONFIDENTIAL BUSINESS TO BE TRANSFERRED INTO THE OPEN

Nil

7 CHANGE TO ORDER OF BUSINESS

Nil

8 CONFIRMATION OF MINUTES

8.1 Minutes of the Ngā Poutiriao ō Mauao meeting held on 2 June 2021

COMMITTEE RESOLUTION NG3/21/3

Moved: [s 7(2)(a) - Privacy]

Seconded: [s 7(2)(f)(ii)]

That the minutes of the Ngā Poutiriao ō Mauao meeting held on 2 June 2021 be confirmed as a true and correct record.

CARRIED

9 DECLARATION OF CONFLICTS OF INTEREST

Nil

10 BUSINESS

10.1 Operational Report

Staff

s 6 - Maintenance of law

s 6 - Maintenance provided a brief overview of his report.

In response to questions

- The 5% rat abundance rate was calculated using six monitoring lines, each with 10 stations. The interaction with each station provided a percentage over that line and then an average could be calculated for over the whole maunga. Rats had an approximate 50 metre home range so stations were placed 50 metres apart.
- 5% rat abundance was already a good rate. If the rate fell below this, then the focus would shift to other mustelids.
- There was still an issue with cats that had increased over the last three months. Two cats in particular had been identified and they were deemed stray/feral, rather than domestic. It was undeniable that the cats did a lot of damage. New multi-target traps had been put out recently.
- Muehlenbeckia had been identified as an appropriate species and the best option for planting in the area above the slip site on Te Paeopara. Poplars had also been considered as stabilisers, but they were only useful for around seven years.
- Everything that could be done to ensure people were made aware of the dangers on Mauao was being done. There was signage all around the mountain especially in high rock fall areas. Sites were monitored every six months for movement and every rock fall was investigated. Mauao was an eroding volcano so there would always be a degree of risk. There appeared to be more complacency by daily users. The risk profile for those using Mauao multiple times per day increased.
- It was great to see the Maungatapu and Omanu school communities engaged with the Planting Day programme.
- It was expected that the track records would flatline for the recent COVID lockdown as they had in the previous lockdown.

COMMITTEE RESOLUTION NG3/21/4

Moved:

s 7(2)(f)(ii)

Seconded:

That the Ngā Poutiriao ō Mauao receives the operational report for September.

CARRIED

10.2 Summary of Mauao Trust Wananga 28 July 2021

Staff

s 7(2)(f)(ii)

s 7(2)(f)(ii) provided a brief overview of her report.

In response to questions

- It was requested that the correct name for the Papamoa hills, the Papamoa Regional Park, be used.
- Further discussion on resting Mauao needed to happen. The Mauao Trust was driving this,

and it was suggested that they be approached regarding placing this on the agenda for discussion at their next meeting. An update of that discussion could then be presented to the December meeting of Ngā Poutiriao ō Mauao.

- Communications and media coverage for resting Mauao needed to clearly explain what giving the maunga a rest meant from a historical cultural prospective and why it was important. It also needed to clearly outline what activities could happen while it was resting.

COMMITTEE RESOLUTION NG3/21/5

Moved: s 7(2)(a) - Privacy

Seconded: s 7(2)(f)(ii)

That the Ngā Poutiriao ō Mauao receives the Summary of Mauao Trust Wananga 28 July 2021 report.

CARRIED

10.3 Ngā Poutiriao ō Mauao Annual Information Report 2020/21

Staff s 6 - Maintenance of law

s 7(2)(f)(ii)

s 7(2)(f)(ii) and s 6 - Maintenance provided a brief overview of the Annual Information Report 2020/21.

In response to questions

- The signage in place to explain the restoration of Waipatukakahu was commended.
- It was suggested that the table on page 55 of the agenda, Funding decisions through the 2021-31 Long Term Plan, included information regarding some of the key implementation milestones for things happening on the ground. This would provide a clearer picture of what was going to happen next and set the scene for what was going to happen in the future.
- It was suggested that following the Annual Report being presented to Council and adopted, a branded public version of the report be made available for public distribution.

COMMITTEE RESOLUTION NG3/21/6

Moved: s 7(2)(a) - Privacy

Seconded: s 7(2)(f)(ii)

That Ngā Poutiriao ō Mauao:

- (a) Approves that the information included in this report will become the content of the Ngā Poutiriao ō Mauao Annual Information Report 2020/21 2020/2021 for presentation to Council.
- (b) Authorises staff to make any amendments to the annual report as agreed at this meeting, prior to presentation to Council.
- (c) Requests staff to develop a branded public version of the Ngā Poutiriao ō Mauao Annual Information Report.

CARRIED

11 DISCUSSION OF LATE ITEMS

11.1 People Straying from the Tracks on Mauao

Key Points

- It had been noted that cross-fit training groups were moving off the tracks on Mauao and climbing up through the bush to the summit. This was happening mostly in the early morning, at lunchtime and after work.
- The route most commonly used was the steep goat track that historically was the original track to the summit. Usage of the track had been stopped because of the erosion that was happening on it.
- Concern was raised about the habitat being destroyed.
- There was a risk that this would occur more and more if not stopped.
- Placing a barrier at the popular route would only move the training groups to another spot.
- A multi-faceted approach was needed to mitigate the issue. Options included:
 - Directly approach the cross-fit training providers and running clubs
 - Use partnerships to get the message across to stay on the tracks e.g. the Sevens Rugby team frequently trained on Mauao
 - More signage
 - Use of fencing
 - Use of natural planting that was thicker and unable to get through
 - Use volunteers, friends of the maunga and members of the public as Mauao ambassadors to assist with the education.
- An identification type card for Mauao ambassadors was suggested, that could be shown when people were approached.

12 CLOSING KARAKIA

s 7(2)(a) - Privacy closed the meeting with a Karakia.

The meeting closed at 12.03pm.

The minutes of this meeting were confirmed as a true and correct record at the Ngā Poutiriao ō Mauao meeting held on 3 December 2021.

.....
CHAIRPERSON

9 DECLARATION OF CONFLICTS OF INTEREST

10 BUSINESS

10.1 Mauao Trust Verbal Update

10.2 Operational Report.

File Number: A13091319

Author: s 6 - Maintenance of law

Authoriser: s 7(2)(f)(ii)

PURPOSE OF THE REPORT

1. This report identifies the key operational issues and achievements over the reporting period, September – December 2021. It identifies up and coming work of interest to Ngā Poutiriao ō Mauao, including ongoing visitor records and an up-to-date events calendar for Mauao.

RECOMMENDATIONS

That Ngā Poutiriao ō Mauao:

- (a) Receives the Operational Report for December 2021.
- (b) Agrees on either Option 1 or Option 2 for the decision required under bullet point #22.

DISCUSSION

Visitor numbers

2. Total visitor numbers:

Year	Summit Visits (Calibrated)	Te Ara Tutanga (Base track)	Total visits
2016	876,297	419,588	1,295,885
2017	903,604	339,031	1,242,635
2018	702,665	489,667	1,192,332
2019	796,671	544,912	1,341,583
2020	589,650.5	506,097	1,095,747.5
2021 YTD	510,065	446,976	957,041

Table 1: Total year-to-date visitor numbers

Mauao Summit Visits (Calibrated)

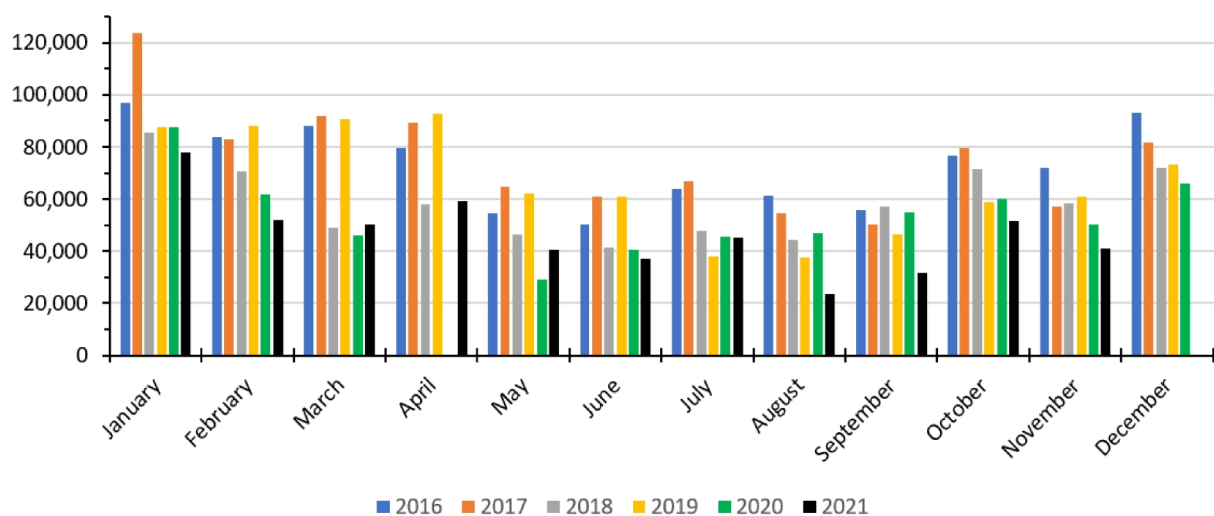


Figure 1: Base track numbers over this year, compared to previous years.

Te Ara Tūtanga (Base Track) Visits

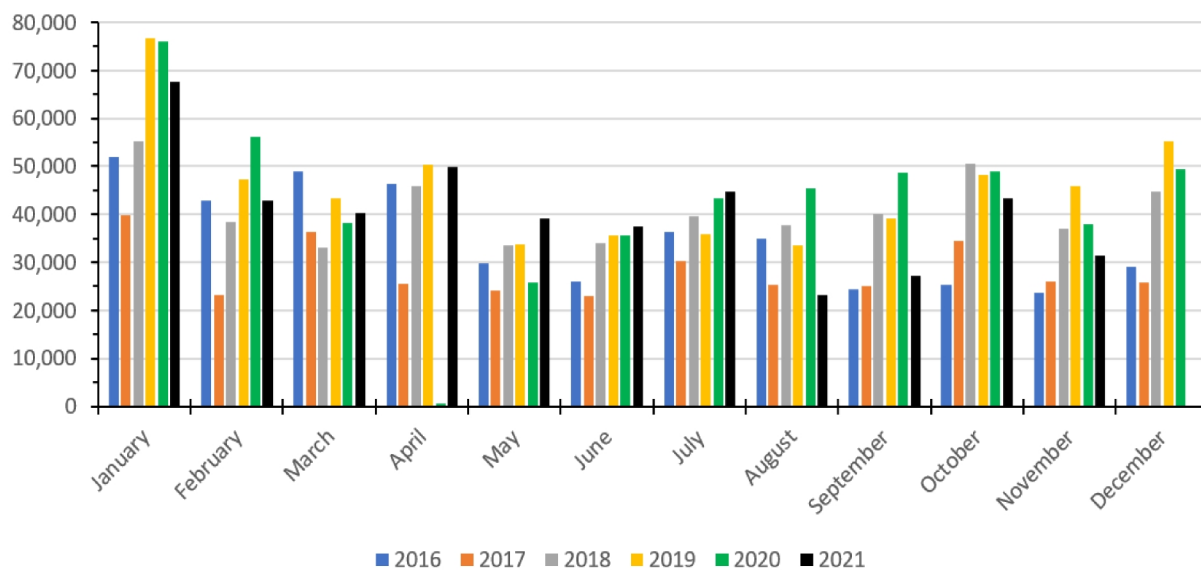


Figure 2: Calibrated summit numbers over this year, compared to previous years.

3. Please refer to the appendix for the full walkways report.

Volunteer support

4. Volunteer support on Mauao consisted largely of two care groups who service a portion of the bait lines on Mauao. This includes volunteers from Forest and Bird as well as the new volunteers through 'Western Bay Wildlife Trust' (WBWT). This extra support from WBWT is allowing the pest control activities on Mauao to move from monthly to fortnightly. A thank you to s 7(2)(a) - Privacy from 'Bay Conservation Alliance' for her time to facilitate this change in volunteer support.

Events

5. Planned events at and around Mauao for the period from December 2021 to June 2022.

Description	Start Date	Start Time	End Date	End Time	Anchor Venue	Notes
King and Queen of the Mount 2021	26/12/21	10:30 AM	26/12/21	12:30 PM	Mt Maunganui Main Beach - East	Summit
s 7(2)(a) - Privacy Sunrise wedding ceremony	29/12/21	05:30 AM	29/12/21	06:30 AM	Mauao - Top of the Stone Steps	Up the stone steps, through the gate and just to the right hand side off the main walking track
Mount Festival of Multisport	22/01/22	06:00 AM	22/01/22	05:00 PM	Pilot Bay Reserve	Base track
Marra Sprint Triathlon 2022	12/03/22	06:00 AM	13/03/22	01:00 PM	Pilot Bay Reserve	Base track
Superhero Walk for Waipuna Hospice 2022	19/03/22	09:00 AM	19/03/22	12:30 PM	Coronation Park	Base track
Foundation Clinic Mauao Half Marathon 2022	20/03/22	07:30 AM	20/03/22	12:00 PM	Mauao	Summit and base track
The Mount Swim - 2022	02/04/22	08:00 AM	02/04/22	05:00 PM	Mt Maunganui Main Beach - Moturiki	Base track PP date 7 May 2022
Triathlon Tauranga - PP	03/04/22	06:00 AM	03/04/22	02:00 PM	Pilot Bay Reserve	Tentative COVID postponement date
Mount Maunganui Half Marathon 2021 (postponed to this date due to COVID)	30/04/22	08:00 AM	30/04/22	01:30 PM	Mt Maunganui Main Beach	Original date 21/08/21, then postponed to 27/11/21 before being postponed to this date Base track
Ultimate Athlete NZ	20/05/22	09:00 AM	21/05/22	06:00 PM	Mt Maunganui Main Beach	Base track Moved from April to May 2022
Mount Runners and Walkers Half Marathon 2022	05/06/22	08:00 AM	05/06/22	12:00 PM	Mt Maunganui Main Beach	Base track

Recent success

6. Due to the effects of COVID-19, contractors were engaged to finish this year's plantings at both Waipatukakahu and the new planting area. This brought the total number of plants for the 2021 planting year to approximately 13,000 native tree's and grasses.
7. The native grasses at Waipatukakahu have had mulch spread around them to help survive the hot summer. Furthermore, the stumps from the previous oak trees have now been removed.
8. Rabbit burrow fumigation has been set to a 4-6-week schedule to achieve more consistently.

9. The annual archaeological monitoring has been completed and passed onto Heritage NZ for their record – please see appendix for the full report.
10. Two night-shooting operations, consisting of two nights each, have been completed since September. The first operation saw 14/34 rabbits controlled. The second operation saw 11/24 rabbits controlled.
11. Rabbit shooting has not been as successful over the past two months due to the contractor not having thermal equipment available. This is being resolved via engaging another shooter who has this equipment currently available.
12. Rabbit browse was continuing to take place in the new planting area. Although the Plantskydd (rabbit deterrent) reduced this, the damage taking place on the young plants called for another approach. To protect these plants and help the damaged ones recover, biodegradable plant guards have been placed around the plants.
13. Please see the appendix for the Avalon Ltd rock stability report, which did not arrive in time for the previous hui.
14. The Oruahine track has been successfully renewed. This has extended the life of this track and improved the quality. This involved adding edging to the outer part of the track, which will improve safety by defining the track edge but also help to stop aggregate from the track entering the ngahere (forest). The larger set of stairs was also widened and a handrail added for safety – please see appendix for before and after photos.
15. Two days of abseiling the Oruahine and Waikorire bluffs resulted in the control of approximately 80 'Boneseed' plants. Boneseed is a highly invasive species, which can produce up to 50,000 seeds every year and each seed can remain dormant for up to 10 years.
16. Two small retaining walls at the summit have been installed and the eroded cavities that formed from people going off track to the 'selfie' spot has been backfilled. A temporary fence has been erected to keep the public off this area and a permanent handrail/barrier will be installed mid-December.
17. A new pest control line has been cut on the southern face of Mauao. Once operational, this will create closer spacings between devices, which will result in better control.
18. The temporary rescue number system that was approved at the last Nga Poutiriao o Mauao has successfully been installed.
19. s 7(2)(a) - Privacy and S 6(c)-Maintenance visited the schools that are involved in the People Plants and Schools (PIPS) programme. The students had successfully germinated the seeds they collected from Mauao and grown them to a size large enough to repot. It was great to see the passion and caring nature the children showed towards their tree's. They seemed very excited at the thought of creating a forest on Mauao that will become a taonga for years to come.

Planned work for the upcoming period

20. A follow up arial Pampas operation is planned for December. Six months ago, the initial operation took place and was very successful. Now that Pampas is in 'active growth', a follow up operation is recommended to ensure the target plants are completely dead.
21. s 7(2)(a) - Privacy from Ngai Tukairangi has been engaged to undertake weekly monitoring for Myrtle Rust over the summer period. This work is important as last year the Bay of Plenty region saw higher numbers of sightings and tree's which in previous years showed resistance, became infected.

22. There are currently two usable power poles on the Mauao Historic Reserve, these two poles take power to the light pole at the 'active jetty' (next to the start of the track at Pilot Bay).

This light pole at the jetty has recently been replaced with a new solar powered light pole. When this old light pole was replaced, the powerlines which connected it to the power pole (1) on the Mauao Historic Reserve was also removed. This power pole (1) is now disconnected and free-standing, without purpose.

Moving forward, there are two possible options with regards to the remaining electrical infrastructure on Mauao.

Option One

The free-standing power pole (1) would be removed (cut at ground level to avoid disturbance) but the power connection at the base would be left as is. This would leave one existing power pole (2) at the start of the reserve but would allow easy reconnection of power if there is a desire to do so in the future.

Option Two

If power is not desired in this location, the free-standing power pole (1) would be removed. Furthermore, the other power pole (2), which is fed by the road, could also be removed. With power pole (2) removed, the powerlines that arch from the road can also be removed.

With either option, the below ground cable that connects both power poles will be left in-situ to avoid ground disturbance.

The powerlines that arch from the road and span across the area that the new Pou, will be in at Pilot Bay. Therefore, it is important to consider the new interpretation designs in this decision – please see the appendix for a visual representation.

23. Waipatukakahu is progressing well and the next operational step is to remove the small sections of fencing either side of the entrance (these will be cut at ground level to avoid soil disturbance). Once this is removed, it will be time to create the rock/boulder edge at the front of the site. Originally it was thought rocks could be sourced from around Mauao, but this may be more invasive on the environment/landscape than is wanted. Therefore, it would be preferred to bring in this material from offsite. This is likely to come from the Polar Lane quarry at Papamoa hills, which is where the aggregate for tracks is sourced.

Ongoing maintenance

24. Ongoing maintenance continues on the following aspects of the reserve:
- pest plant and animal control;
 - stock and pasture management;
 - walkway maintenance;
 - sign and structure maintenance;
 - Motu Kauri track maintenance; and
 - geotechnical rock stability monitoring and scaling to maintain visitor safety.

ATTACHMENTS

1. **Mauao Track Counter Data August 2021 to November 2021 - A13091312** [↓](#)
2. **Mauao annual Archaeological Monitoring Report 2021 - A13091313** [↓](#)
3. **August 2021 Mauao Rockfall + Monitoring Report - A13091315** [↓](#)
4. **Oruahine track renewal photos - A13091316** [↓](#)
5. **Mauao power-pole Visualisation - A13091317** [↓](#)



Tauranga City Council



s 6 - Maintenance o

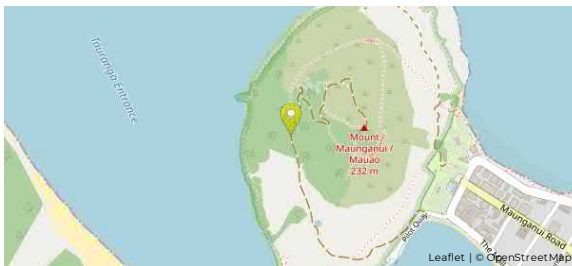
26.11.2021

Mauao - Motu Kauri Track

Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Location



Daily Average

1,144

+0.0%

Compared to 01.09.2020 → 24.11.2020

Peak Day

Monday
8th Nov 2021

685

Daily Avg. - Week

01.01.2021 → 25.11.2021

Daily Average

387

-3.0%

Compared to 03.01.2020 → 26.11.2020

Daily Avg. - Weekend

01.01.2021 → 25.11.2021

Daily Average

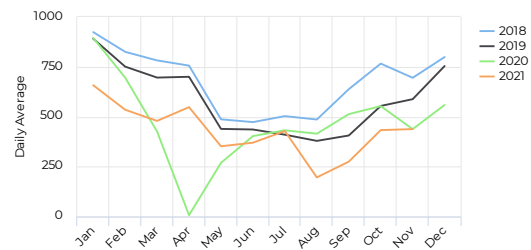
528

-11.2%

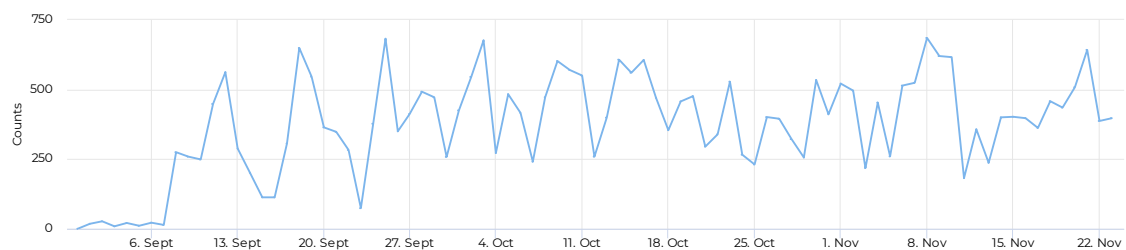
Compared to 03.01.2020 → 26.11.2020

Annual Comparison by Month

01.01.2018 → 25.11.2021

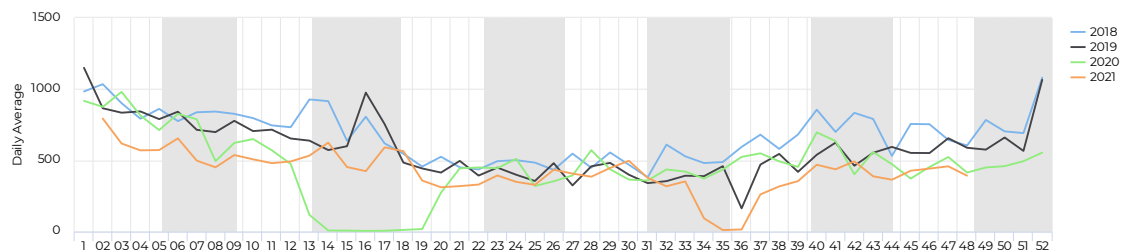


Daily traffic



Annual Comparison by Week

01.01.2018 → 25.11.2021



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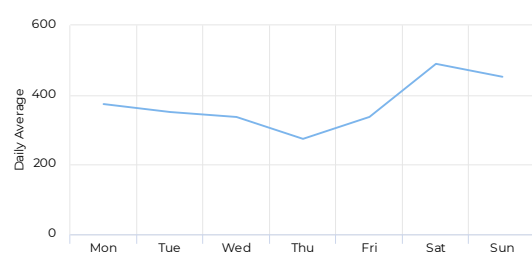
1

Mauao - Motu Kauri Track

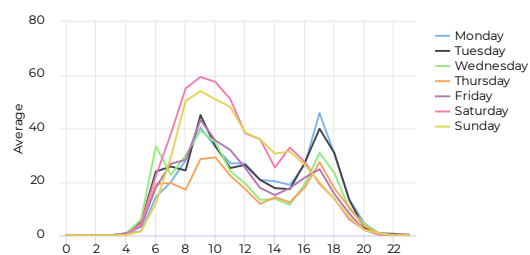
Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Daily Profile

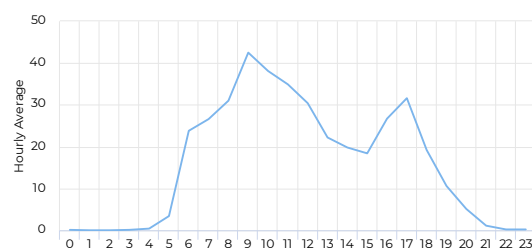


Hourly Profiles by Day



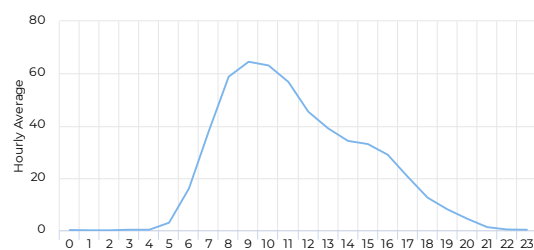
Hourly Profile - Weekdays

01.01.2021 → 25.11.2021



Hourly Profile - Weekend

01.01.2021 → 25.11.2021



Mauao - Te ara tūtanga Track

Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Location



Daily Average

1,144

+0.0%

Compared to 01.09.2020 → 24.11.2020

Peak Day

Sunday
10th Oct 2021

2,981

Daily Avg. - Week
01.01.2021 → 25.11.2021

Daily Average

1,157

Compared to 03.01.2020 → 26.11.2020

+1.6%

Daily Avg. - Weekend
01.01.2021 → 25.11.2021

Daily Average

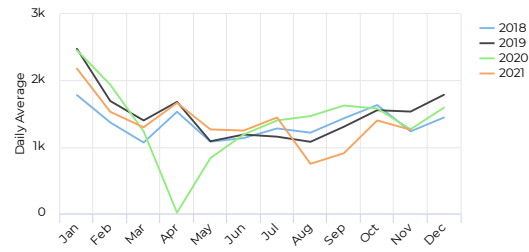
1,861

Compared to 03.01.2020 → 26.11.2020

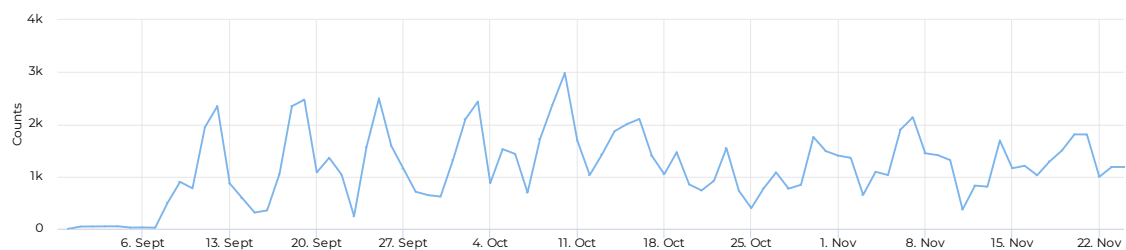
-1.3%

Annual Comparison by Month

01.01.2018 → 25.11.2021

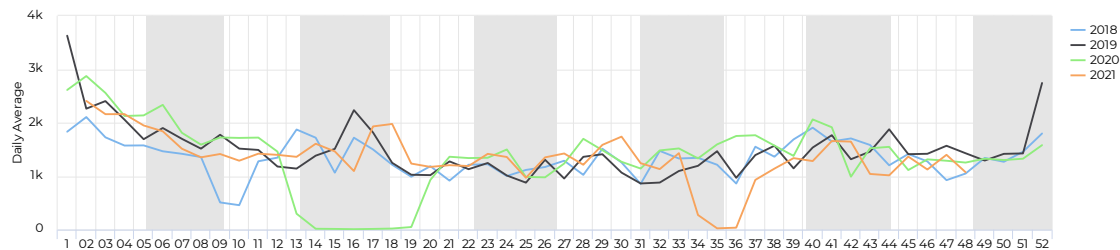


Daily traffic



Annual Comparison by Week

01.01.2018 → 25.11.2021



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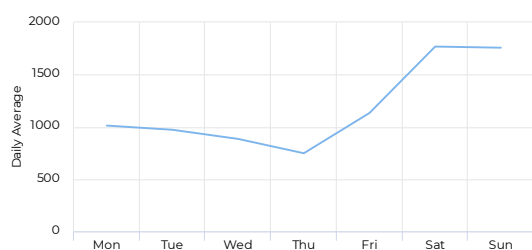
3

Mauao - Te ara tūtanga Track

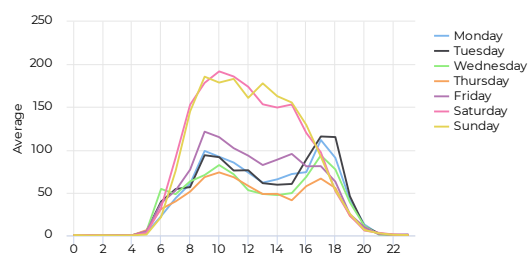
Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Daily Profile

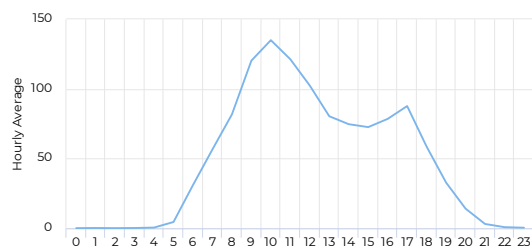


Hourly Profiles by Day



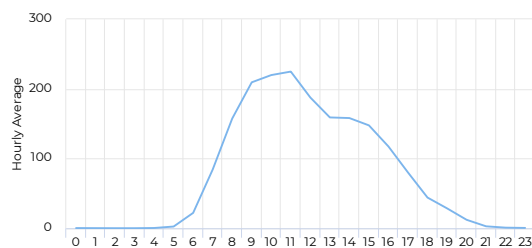
Hourly Profile - Weekdays

01.01.2021 → 25.11.2021



Hourly Profile - Weekend

01.01.2021 → 25.11.2021



Oruahine Track

Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Location



Daily Average

1,144

+0.0%

Compared to 01.09.2020 → 24.11.2020

Peak Day

Saturday
16th Oct 2021

1,155

Daily Avg. - Week

01.01.2021 → 25.11.2021

Daily Average

577

+0.3%

Compared to 03.01.2020 → 26.11.2020

Daily Avg. - Weekend

01.01.2021 → 25.11.2021

Daily Average

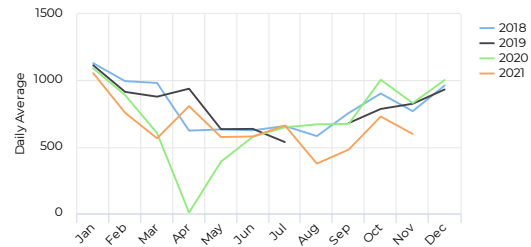
843

-4.4%

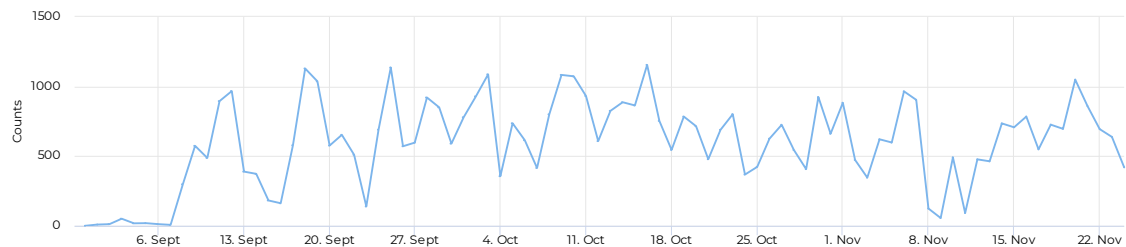
Compared to 03.01.2020 → 26.11.2020

Annual Comparison by Month

01.01.2018 → 25.11.2021

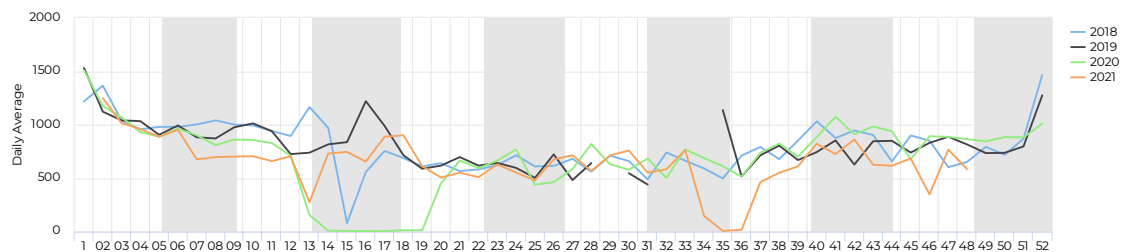


Daily traffic



Annual Comparison by Week

01.01.2018 → 25.11.2021



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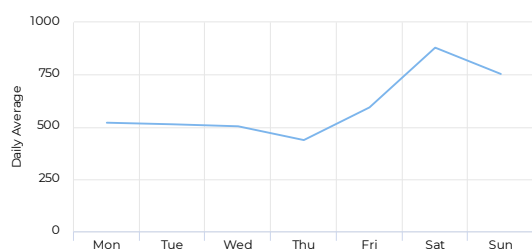
5

Oruahine Track

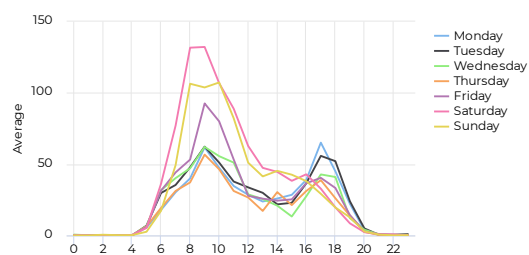
Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Daily Profile

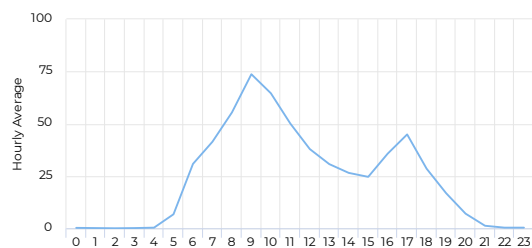


Hourly Profiles by Day



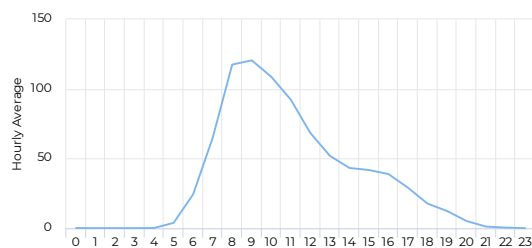
Hourly Profile - Weekdays

01.01.2021 → 25.11.2021



Hourly Profile - Weekend

01.01.2021 → 25.11.2021



Waikorire Track

Tauranga City Council

31st August 2021 8:18 PM → 24th November 2021 8:18 PM

Location



Daily Average

1,144

+0.0%

Compared to 01.09.2020 → 24.11.2020

Peak Day

Saturday
25th Sep 2021

3,415

Daily Avg. - Week
01.01.2021 → 25.11.2021

Daily Average

1,883

+5.0%

Compared to 03.01.2020 → 26.11.2020

Daily Avg. - Weekend
01.01.2021 → 25.11.2021

Daily Average

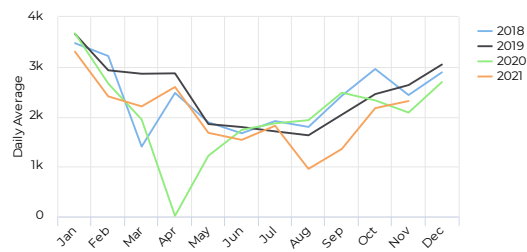
2,378

-2.3%

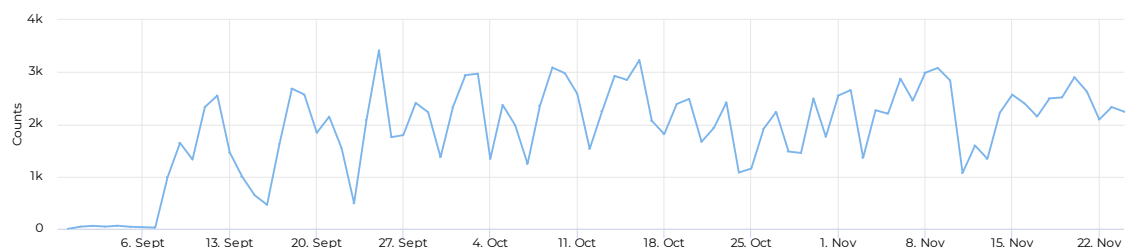
Compared to 03.01.2020 → 26.11.2020

Annual Comparison by Month

01.01.2018 → 25.11.2021

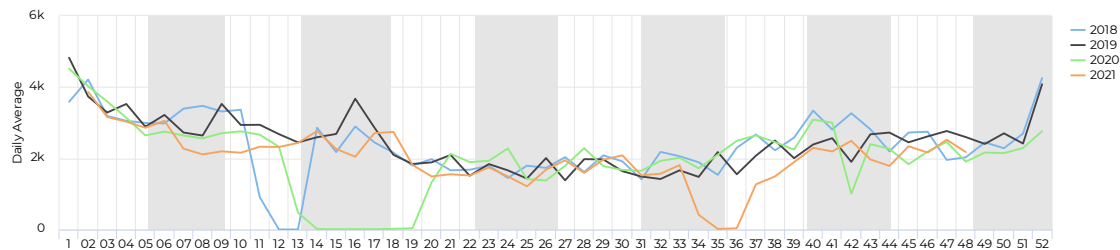


Daily traffic



Annual Comparison by Week

01.01.2018 → 25.11.2021



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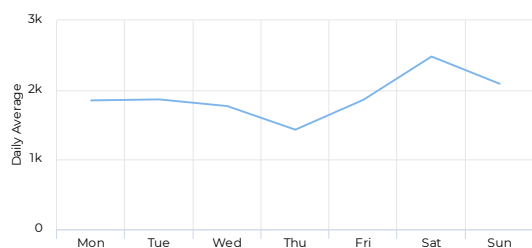
7

Waikorire Track

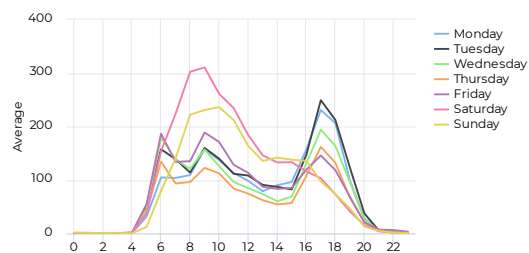
Tauranga City Council

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Daily Profile

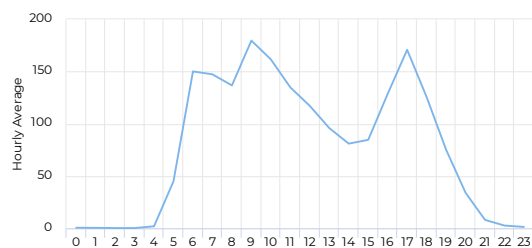


Hourly Profiles by Day



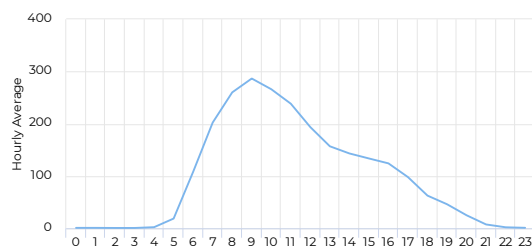
Hourly Profile - Weekdays

01.01.2021 → 25.11.2021



Hourly Profile - Weekend

01.01.2021 → 25.11.2021





REPORT

ARCHAEOLOGICAL SITE CONDITION MONITORING
REPORT - MAUAO HISTORIC RESERVE, TAURANGA

InSitu Heritage Ltd



InSitu Heritage Ltd

ARCHAEOLOGICAL SITE CONDITION
MONITORING REPORT
MAUAO HISTORIC RESERVE, TAURANGA

29 October 2021

Prepared for:

Tauranga City Council
Private Bag 12022
TAURANGA

Prepared by:

s 7(2)(a) - Privacy

In Situ Heritage Limited
P O Box 710
WHAKATANE 3158

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Purpose

Mauao Historic Reserve is an extensive cultural heritage landscape that covers approximately 40 hectares. It is located on the eastern side of the entrance to Tauranga Harbour (Figure 1). The Reserve contains components of three pā, plus associated pits, terraces, platforms, house floors and middens. The shell mounds in the reserve are the only known surviving examples of this type of archaeological feature within the Bay of Plenty. Mauao is gazetted as a Historic Reserve and is managed by Tauranga City Council (TCC). Mauao is protected under the provisions set out in the Mauao Vesting Act 2008. The Trustees of the Mauao Trust administer the Reserve on behalf of Ngāi Te Rangi, Ngāti Ranginui and Ngāti Pūkenga. The Reserve must be managed in a manner consistent with the requirements of the Reserves Act 1977. Mauao is also identified as a wāhi tapu on the Heritage New Zealand List (item no. 9423).



Figure 1 – Location of the Mauao Historic Reserve.

One of the key principles of historic heritage management is that the values of heritage places are clearly understood before decisions are taken that may result in change. Once the heritage values are identified and understood, the aspects of the places that possess heritage value can be conserved and protected accordingly. The visible archaeological features of the Reserve were mapped in 2003 and an archaeological report was prepared by Ken Phillips at that time. In 2004 a Conservation Plan was prepared for the Reserve by Wildland Consultants Ltd, which incorporated specialist archaeological advice to guide management and conservation of the archaeological sites within the Reserve. Phillips updated the archaeological report in 2014, and there have also been other archaeological reports prepared between 2003 and 2014 relating to particular work carried out under archaeological authority conditions within the Reserve.

TCC were granted an archaeological authority (no. 2017/944) by Heritage New Zealand in August 2017, to undertake various activities associated with ongoing maintenance of the

reserve. Heritage Management Specifications were prepared in May 2016 to guide the work permitted under the conditions of the archaeological authority. The specifications include the establishment and maintenance of an archaeological site condition monitoring programme. The conditions of the archaeological authority include a requirement that the authority holder (TCC) submit to Heritage New Zealand an annual report containing a summary of the maintenance works undertaken during the preceding year and outlining any archaeological work completed.

In 2018 the first annual monitoring report was prepared and provided a summary of the annual work programme and baseline data for on-going archaeological site condition monitoring. Monitoring was also carried out in July 2019 and September 2020 and reported.

This latest (2021) monitoring report provides a summary of the annual work programme undertaken during the period from July 2020 to June 2021; and updated data for on-going archaeological site condition monitoring, gathered during a site visit on 14th October 2021. This report also includes recommendations for work actions that are required to address site management issues identified during the monitoring inspection.

Summary of reserve archaeological work 2020/21

During October 2020 a draft Archaeological Research Strategy for Mauao was prepared and this was discussed at a meeting with Mauao Trust representatives in May 2021. The draft strategy is currently under consideration.

A draft archaeological report was prepared in April 2021 to inform Te Korowai o Mauao (Restoration and Planting Plan) and presented to staff. In December 2021 advice was provided relating to planned large tree removal and the planting plan.

The temporary step alignment established to bypass the landslip on the base track was removed in early 2021 and the area has been resown in grass. There have been no adverse effects to archaeological features in the area where the steps were, and grass is recovering well. A site visit and archaeological input to the Mauao Interpretation Plan was also provided during the year. The site visit took place in April 2021.

Archaeological inspections specific to on-going reserve maintenance were carried out during the year as follows:

8 June 2021 – archaeological monitoring of machine access track formation to enable extraction of large trees removed near the base track. There was minor impact on archaeological features (midden) which was appropriately recorded and reported to Heritage New Zealand at the time. Removal of the summit trig was monitored. No intact archaeological features were disturbed.

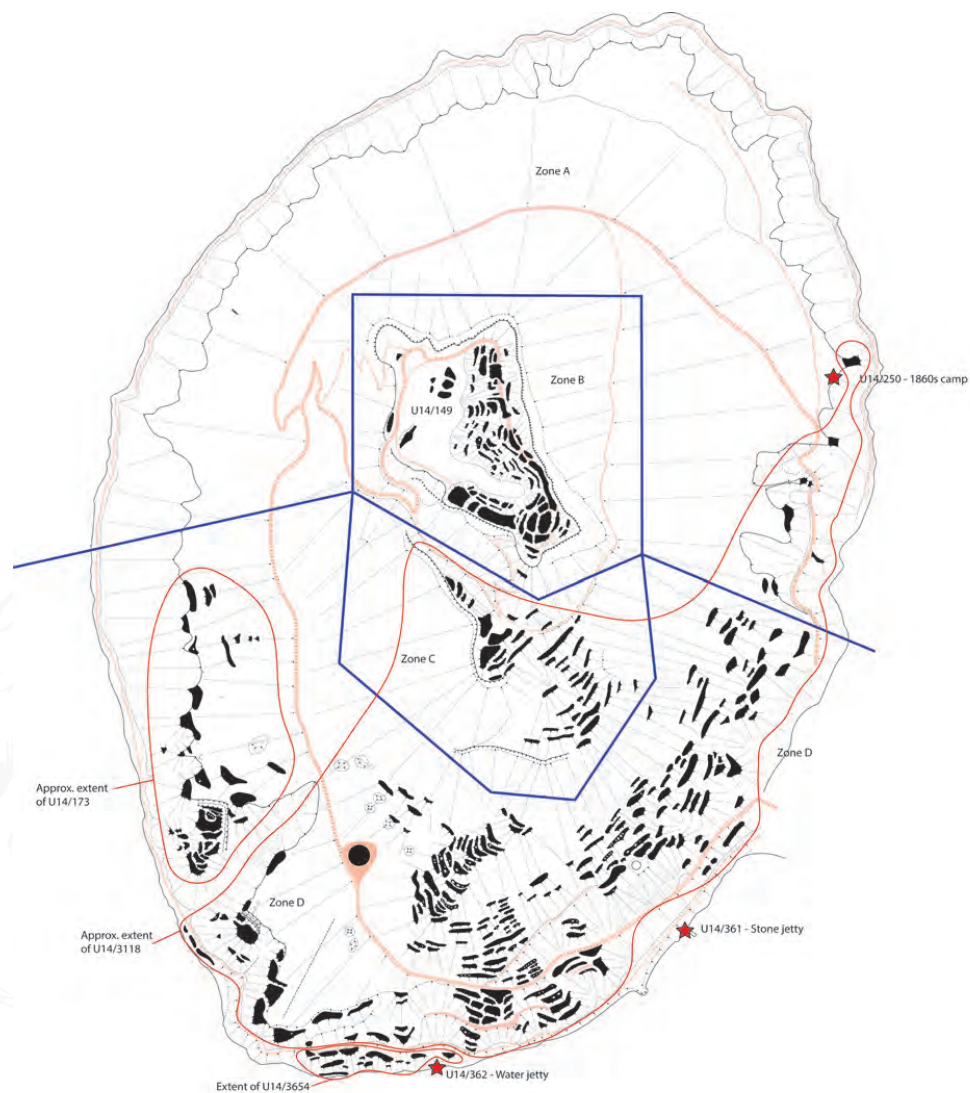


Figure 2 – 2019 plan showing recorded archaeological features on Mauao (InSitu Heritage Ltd 2019).



Figure 3 – Location of monitoring points within the Mauao Historic Reserve.



Monitoring Site 1

Stone Jetty surrounds - stone walls

Notes: Erosion is unchanged from 2020, grass cover advancing, but this could be primarily due to seasonal variability. Plants on terraces now well established, but some minor infill planting is required. Introduction of soil and planting along the track margin would assist to restrict visitor access to the formed track.















Monitoring Site 2

Iron jetty and surrounds

Notes: Vegetation clearance to reduce pōhutukawa and sycamore growing on the stonework face of the jetty that was done in 2020 needs to be maintained. There is on-going invasion by sycamore and other tree species. Interpretation should be developed at the jetty as part of the current project and the site should continue to be maintained in low vegetation/ferns/rank grass, with periodic weed















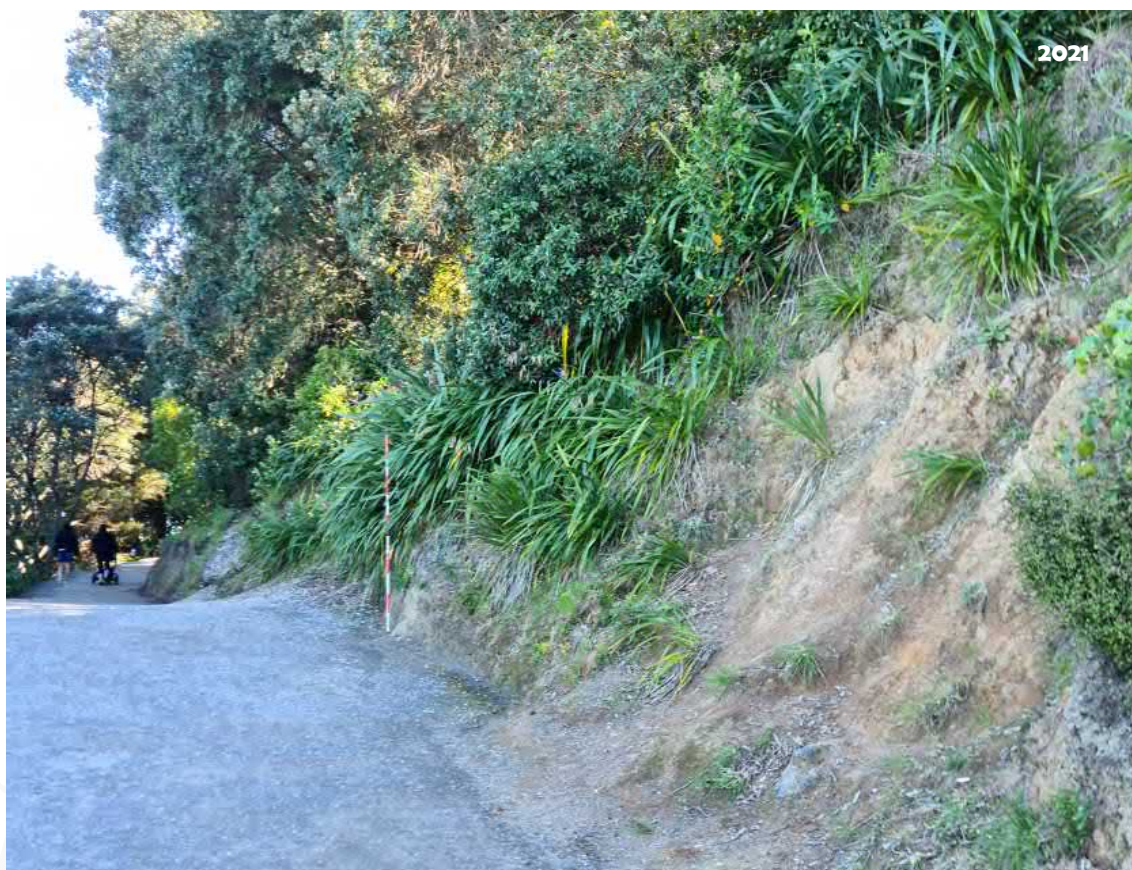
Monitoring Site 3

Base track midden erosion

Notes: There has been no significant advance or improvement in vegetation cover over the monitoring period and the eroded face is still highly visible. Shell is still accumulating at the base of the slope. Introduction of fill material may be required to get plant cover better established.











Monitoring Site 4

Fence placement, rabbit browse and slope stability

Notes: Vegetation cover on eroding archaeological features is now well established. There is no significant evidence of rabbit browse in the areas where grazing has ceased. There has been considerable improvement in vegetation cover and slope stability over the monitoring period.











Monitoring Site 5

Rabbit damage (inactive)

Notes: Old rabbit damage, visibility decreasing. Note danger that such features start to look like archaeological depressions over time. Area around burrow entrance has deflated over time



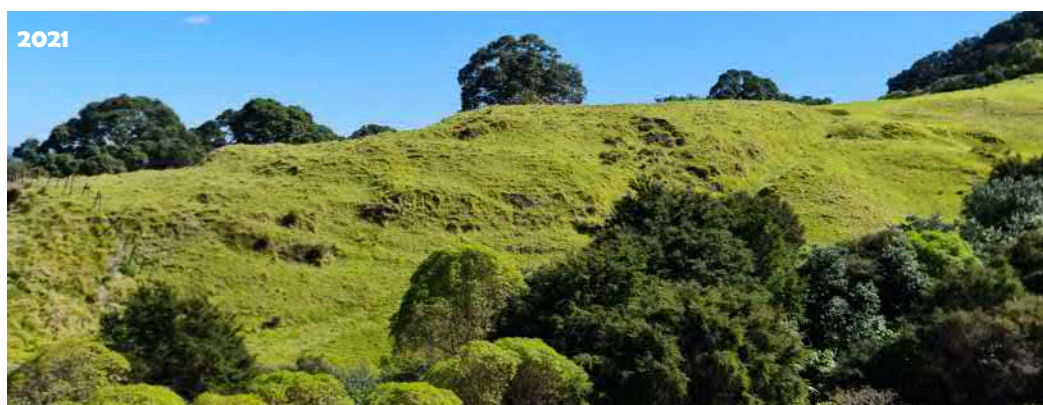
Archaeological Site Condition Monitoring Report: Mauao Historic Reserve | 26



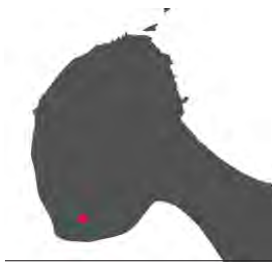
Monitoring Site 6

Pa U14/173 condition/grass cover

Notes: General views across pa to demonstrate grass cover. Site is stable with good ground cover being maintained. Very little evidence of recent rabbit browse but rabbits are present in low numbers and should be closely monitored.







Monitoring Site 7

4WD track maintenance issues - tailings management

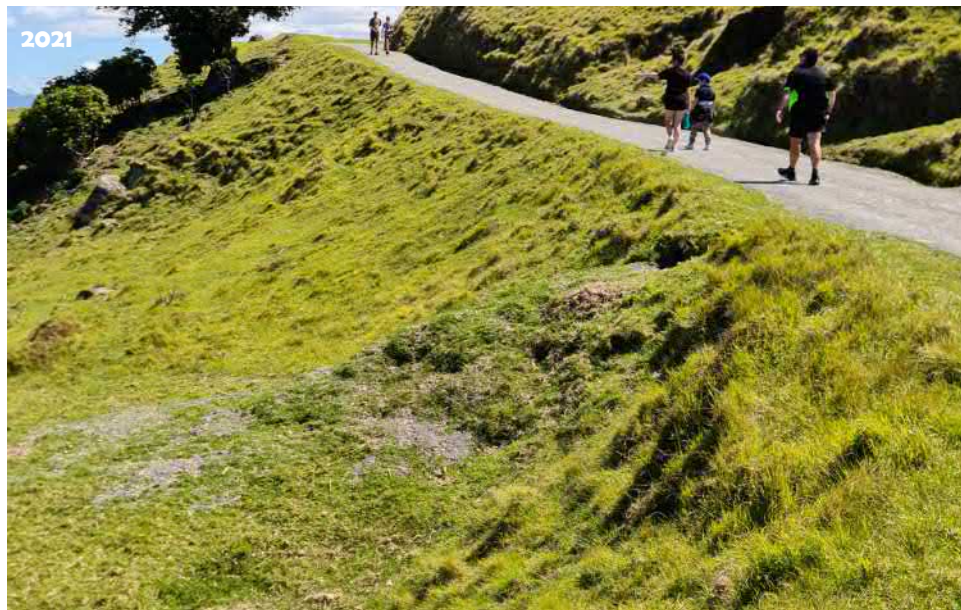
Notes: There is no recent evidence of tailings being dumped on archaeological features above the track, as was the issue in the past. However, the artificial build-up of material continues to 'create' features adjacent to the track. There is still a significant issue with metal being distributed onto terraces below the track. The distance between culverts, their function and the treatment of tailings needs further management attention. Consideration should be given to removal of artificial build-up with archaeological supervision.













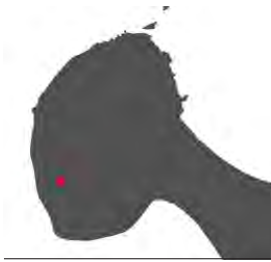
Monitoring Site 8

Midden and vegetation management - pōhuehue growth

Notes: Grass sward is kikuyu; stock have had access to the mound since December 2019. Stock numbers in Spring 2021 are higher than the previous year and this has impacted on the grass cover on the southern side of the mound. Stock numbers should be closely monitored and reduced if necessary to







Monitoring Site 9

Erosion on shell mound - stock and vegetation management

Notes: Grass sward is kikuyu; stock have had access to the mound since December 2019. Stock numbers in Spring 2021 are higher than the previous year and this has impacted on the grass cover on the southern side of the mound. Stock numbers should be closely monitored and reduced if necessary to maintain sward height.









Monitoring Site 10

Rabbit damage (active)

Notes: Vegetation cover has significantly improved as greater rabbit control measures are in place, but this should be closely monitored. No recent rabbit browse at this location, but rabbits were seen in the area during the monitoring visit.







Monitoring Site 11

Land slip on southern slope

Notes: 2018 planting of slip scar is well established. Still a lot of visible shell midden at the top of the slip scar and some limited new exposure since 2020 inspection. Stock exclusion on shell mound not successful so far due to location, it may need a temporary netting fence instead. Recommend archaeological investigation followed by planting and livestock exclusion.







Monitoring Site 12

Fence around middens on southern slope

Notes: Fence around middens that was installed in 2003 was removed in 2018. Some browse of young karaka initially, but grove now well established and no new erosion of midden in evidence. Continue to monitor condition.



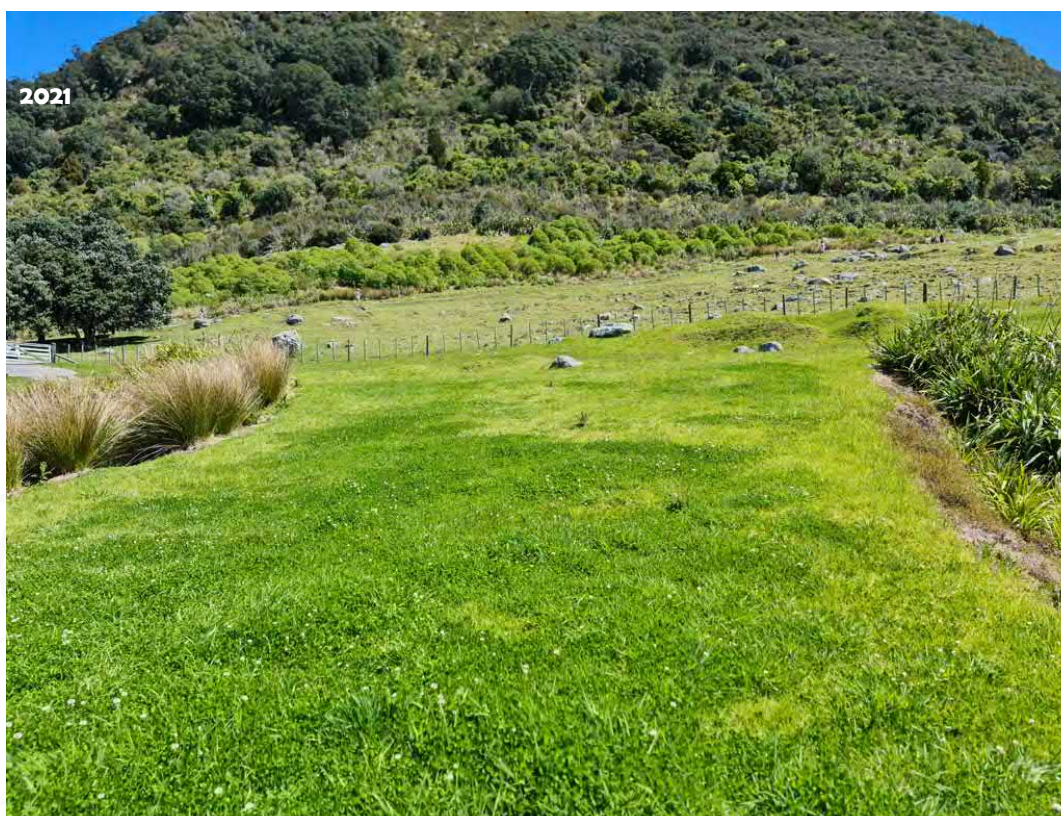




Monitoring Site 13

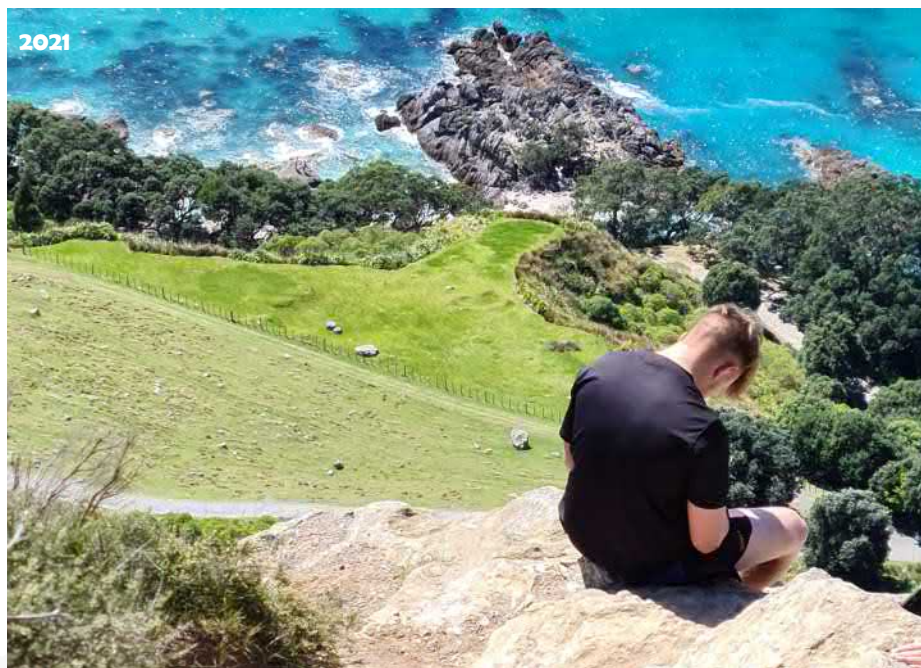
Area of military camp, helicopter pad, pits and terraces retired from grazing in 2018

Notes: Management of vegetation and site visibility has significantly improved following cessation of grazing. Features stable.



Archaeological Site Condition Monitoring Report: Mauao Historic Reserve | 45







Monitoring Site 14

Repairs to summit terrace

Notes: Repair to terraces completed in 2013. The aggregate at the base of the slope was not moved as recommended as in 2019, but now less visible. Encroaching vegetation has been managed to keep terraces visible.







Monitoring Site 15

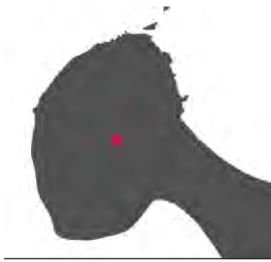
Repair to bank on summit and steps intallation

Notes: Width of steps has been increased to cover desire line. Continue to monitor use.



Archaeological Site Condition Monitoring Report: Mauao Historic Reserve | 50





Monitoring Site 16

General monitoring of summit wear

Notes: There is on-going wear of imported armouring material on summit; on-going recapping is required by bringing in additional material from stockpile. Trig removed June 2021.







Monitoring Site 17

Desire line track on summit

Notes: Desire line is continuing to cause wear to intact archaeological deposit, and soil loss is readily apparent. Action to block access to prevent further wear was recommended in 2018 and needs to be implemented. Continue monitoring. Additional fill material may be required around the tree.



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Monitoring Site 18

Stone steps condition and erosion

Notes: Stonework stable at present, but erosion from desire line more visible than in 2020. Weed spraying corridor needs to be reduced as this is encouraging desire lines. **Action needed at the top of the stairs to reduce water flow and erosion.**





Summary of actions - Heritage Management Specification

No.	Action	Timeframe	Comment on progress
1	Condition monitoring of capping and informal desire lines	On-going	Further recapping with fill material required.
2	Remedial action as required: addition of approved/suitable fill or aggregate to address desire lines.	On-going as required in response to monitoring	On-going.
3	Large tree removal	2016-18	On-going.
4	Remove smaller trees by felling at ground level, followed by herbicide application to stumps if necessary.	2016-17	On-going.
5	Land-slip assessment and response	2016 and on-going as required	On-going. Shell mound above large slip needs monitoring for stability.
6	Retire large land slips above the 4WD track from grazing	2016/17	Actioned in 2018 and progressing well.
7	Pest control in areas retired from grazing in 2005.	On-going as required following planting	On-going. Rabbit numbers increasing in 2021, control action required.
8	Weed control in areas retired from grazing in 2005.	Ongoing	On-going.
9	Establishment of pōhūehue on shell mounds	2017	Trial commenced 2018, on-going.
10	Ensure archaeological authority is in place prior to any fencing or planting work above the base track on the north-eastern side of Mauao	2016	Archaeological authority no. 2017944 in place. Expires August 2022.
11	Maintain walking and vehicle tracks	On-going	On-going. Further work to improve 4WD track maintenance required including removal of built-up tailings material below the track at culvert exits.
12	Implement rabbit control programme	2016 and on-going	On-going. Good progress being made toward eradication, but this needs to be maintained.
13	Stone Jetty and associated stone walls heritage assessment	2017	Assessment of stonewalls completed in 2020.
14	Repair of stone walls associated with jetty	2017/18	Not required.
15	Monitoring and vegetation management of Iron Jetty platform	2016 and on-going	On-going vegetation management is required.
16	Monitoring	2016 and on-going	Programme established 2018 and is on-going.

References

Phillips, K.J.S. 2003. Preliminary Archaeological Survey and Identification of threats to archaeological resources, Mauao Historic Reserve. Unpublished report to Tauranga District Council

Phillips, K. J.S. 2014. Archaeological Inspection and Conditions Assessment Mauao Historic Reserve. Unpublished report prepared for Tauranga City Council

Wildland Consultants Ltd. 2004. Conservation Plan for Mauao Historic Reserve. Unpublished report prepared for Tauranga District Council





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GEOTECHNICAL

Tauranga District Council
Private bag 12022
Tauranga

30 August 2021
Avalon Project #22102

For the attention of s 6 - Maintenance of law

Dear s 6 - Maint

Mauao Slopes; Rockfall incident response and Routine monitoring report August 2021

On the 2 August a member of the public reported a rockfall event to the Ranger's office.

At your request Avalon's team comprising our Engineering Geologist and two Rope Access Technicians, visited the site on 16 August. The aim was to carry out an inspection of the rockfall source location, checking stability, looking for impact evidence down the fall line and attempt to locate it's resting place below the Waikorere track.

The inspection of the rockfall site took until late morning, after which we carried out the routine EDM survey of the Bluff movement monitoring locations.

Avalon's Engineering Geologist carried out a full track walkaround and monitoring locations inspection plus further investigated the "sinkhole" reported as Item 9 in our March 2021 Monitoring Report.

1. Rockfall Reported on 2 August

The rock in question was reported as "boogie board sized" so presumably relatively thin and around 0.5 to 0.8m along the sides.

It impacted the Waikorere track a few metres in front of the person in question. The person reportedly had heard the rockfall whilst it was rolling/bouncing down from above, then saw it exiting the bush just above the track and thus were able to safely move away from the fall line.

The location on the Waikorere track is indicated on the following aerial photo, Photo 1.

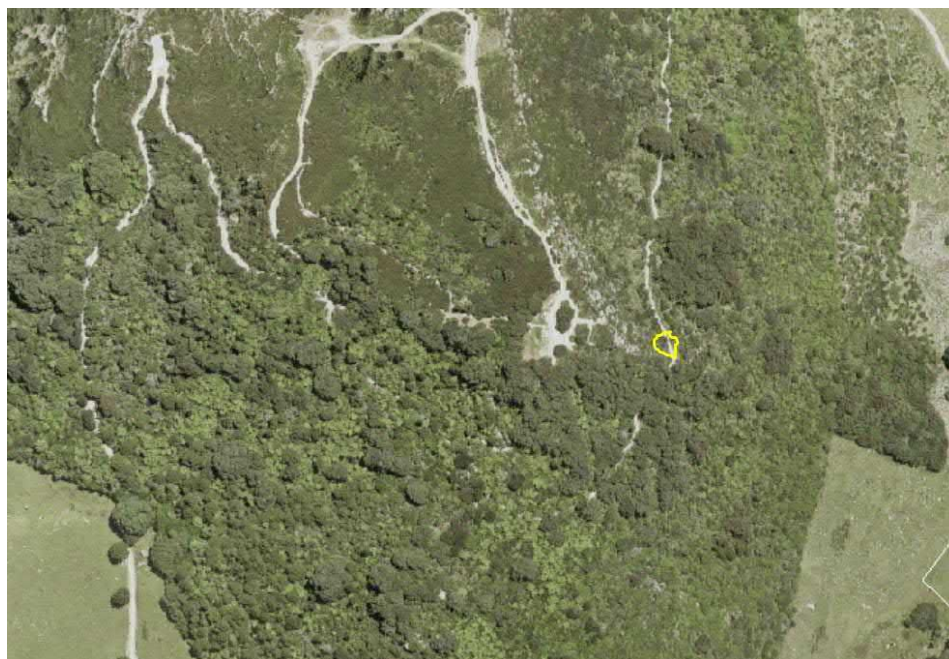


Photo 1; The rockfall crossed the Waikorere track at this location.

2. Waikorere track Rockfall Risk Evaluation

From the description the rock's weight could have been around 100kg, clearly large enough to present a risk of fatality to a person in its path.

"Disk" shaped rocks such as this tend to spin when falling, allowing them to travel further than spherical or cube shapes.

Our most recent numerical rockfall risk evaluation (2020) was based on an estimate that 2 to 3 rocks of this size cross the Waikorere track per year, which outputs the risk level to an individual on one crossing as 1.2×10^{-7} , well within the tolerable individual level. With present visitor numbers this risk level equates to a fatality incident return period of around 26 years.

In the previous 18 years, since our monitoring commenced in 2003, as far as we are aware members of the public have only reported one other incidence of rockfall crossing the Waikorere track. In July 2018 a Waikorere rockfall involved multiple pieces up to 300mm in diameter.

3. Rope Access Inspection of the 2 August Rockfall Site

Two technicians spent around an hour on the rock bluff and slope down to the Waikorere track. They did not find any evidence of the rockfall source location nor of its fall line through the bush. They also inspected the bushed slope below the track but did not find the rock in question.

Our inspection team did not locate any specific remaining hazards or any particular marginally stable larger sized rocks. There are however numerous small, loose surface rocks of up to around 150mm diameter, trapped in vegetation.

4. Other reported rockfall since previous monitoring

We understand that there has been no other rockfall reported to the ranger's office or campground since our previous monitoring.

5. Sinkhole on the lower slope, above the campground

This was found on our previous monitoring walkover and reported as Item 9 in our March 2021 Monitoring Report.

The springs that issue around the lower colluvial slopes around Mauao indicate widespread underground water flow. Underground drainage routes will tend to form at levels where sandy, relatively permeable colluvium, overlies impermeable clay (weathered volcanic ash) layers. The 'piping' effect, scouring out sand, can create open 'pipes', 'small tunnels'.

This feature looks likely to be a 1m³ or so void collapse above a small underground watercourse in a natural "pipe", scoured out by flowing water.

On this inspection we probed the 'tunnel' with a borehole camera and light source on extendable fibreglass poles.



Photo 2; The sinkhole at the surface (2m scale).



Photo 3; The sinkhole entrance.



Photo 4; Looking further in the 'tunnel' appears to continue to the right. A small pool of water can be seen on the floor.



Photo 5; The tunnel continues to the right. Furthest view in photo is around 5m from the entrance. The diameter of the tunnel here is around 0.5m.

6. Rockfall onto Base Track



Photo 6 & 7; A recent rockfall from the actively eroding slope above the Western Base track.

As has been the case for many years, this slope continues to actively erode and generate occasional falling rock.

We recommend that this particular slope should continue to be scaled regularly as required, as new surface rocks are exposed.

7. Loose surface rock above the Oruahine track



Photo 8; Rock resulting from a small soil slip above the Oruahine track.

In this case the rock is only 2m above the track so does not present a hazard but it illustrates how small soil slips and erosion continue to bring new rock to the surface.

8. Exposed Projecting Boulder above the Goat track

See photographs on following page. This boulder has now eroded out to such a degree that it may be marginally stable.

The location is at the crest of an exposed slip face around 10m above the mid Goat track. The boulder does pose a hazard to persons using the track below.

This boulder appears likely be able to be scaled relatively easily. Although it is unlikely to pick up enough speed to reach the Base track, there is a small possibility that it may therefore a temporary Base track closure would be required.



Photo 9, 10, 11; Overhanging boulder above Goat track.

9. Persons off track on the bluff edge above the Waikorere track.

Just a quick note that we regularly observe persons leaving the designated tracks and accessing the bluff edges.



Photo 12; Off track persons on bluff crest above Waikorere track.

We have no reason to believe such persons triggered the 2 August rockfall, although it is possible.

Of course these persons are at risk of falling, however, we are not aware of any accidental falls and the vast majority of visitors do not leave the designated tracks as these persons have actively chosen to.

10. Slip scar above southern 4WD track

This slip scar does not present any hazard to persons but has been actively eroding and enlarging for 16 years. The location is 37° 38' 1.8494" S, 176° 10' 17.0897" E

Tauranga DC, Mauao Flood Damage 2005

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8.	Slip 120m (up slope distance) above 4WD track. 3m wide x 3m up slope x 1m deep. Debris including rock swept to 4WD track. Some rock & boulders at rest on old farm track mid slope. Boulders in unstable positions on slip scarp.	Scale rock debris from slip and debris slope & locally re-profile slip crest. Seed.
7.	Slip 100m (up slope distance) above 4WD track. 2m wide x 2m up slope x 1m deep. Moderate seepage. Debris including rock swept onto 4WD track. One 0.6m ³ boulder at rest on slope 6m below slip scar. Other debris spread below.	Scale rock debris from slip and debris slope & locally re-profile slip crest. Seed.

This slip was triggered by a large storm event in May 2005. 350mm of rain fell in 24 hours. It was initially two smaller slips, designated #7 and #8 out of a total of 52 slips generated by that rainfall event. *Extract from Avalon Report 0534B*

These separate slips eventually joined together and continued to expand, resulting in the picture today. Planting efforts have helped slow the erosion rate.



Photo 13; Slip from above. Note midden on right.



Photo 14; Slip from below. Very rocky, difficult for vegetation to establish.

11. Bluff survey

The benchmark survey found no significant recent movement on the high bluffs which are monitored.

11. Photographic Survey

At each monitoring visit since 2003 we have been taking photographs at 13 locations/viewpoints to document changes in erosion and vegetation on Mauao.

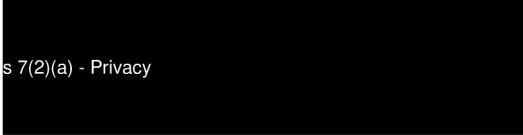
When this project started large areas of the upper slopes were devegetated following widespread fires in 2003.

The slopes are now recovered to the point where the original monitoring locations no longer offer ideal views of ongoing changes. For this reason from now onwards we will be using a different set of locations.

For the record Appendix A includes relevant photographs from the post 2003 fires investigation; Avalon Report #0314

If you have any queries please don't hesitate to contact me.

Regards



s 7(2)(a) - Privacy

Appendix A: Photographs after the extensive fires in 2003

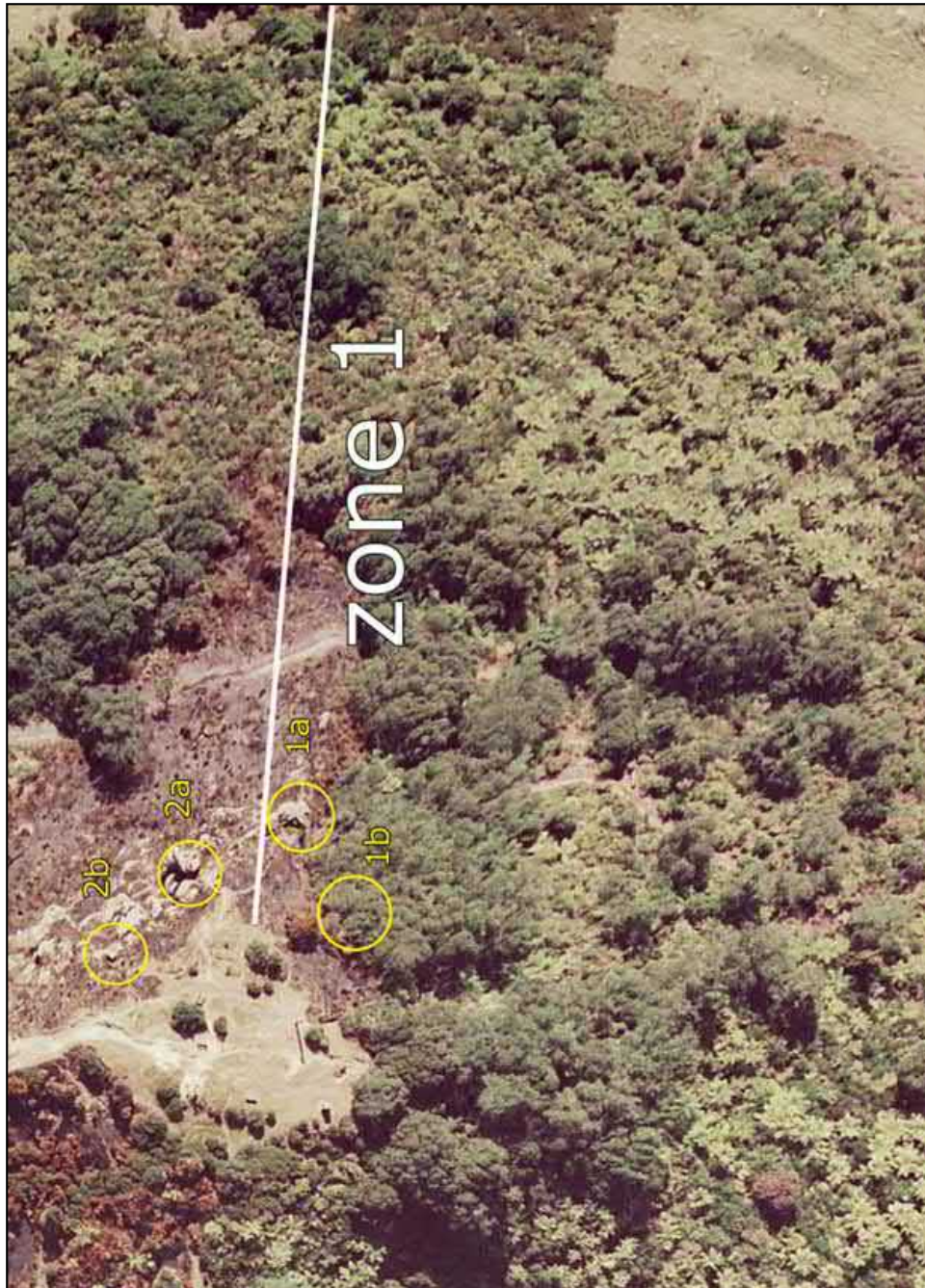
Photograph No 1; Aerial view of Mauao.



Photograph No 2; Aerial view of the rock slope zones.



Photograph No 3; Aerial view of zone 1.



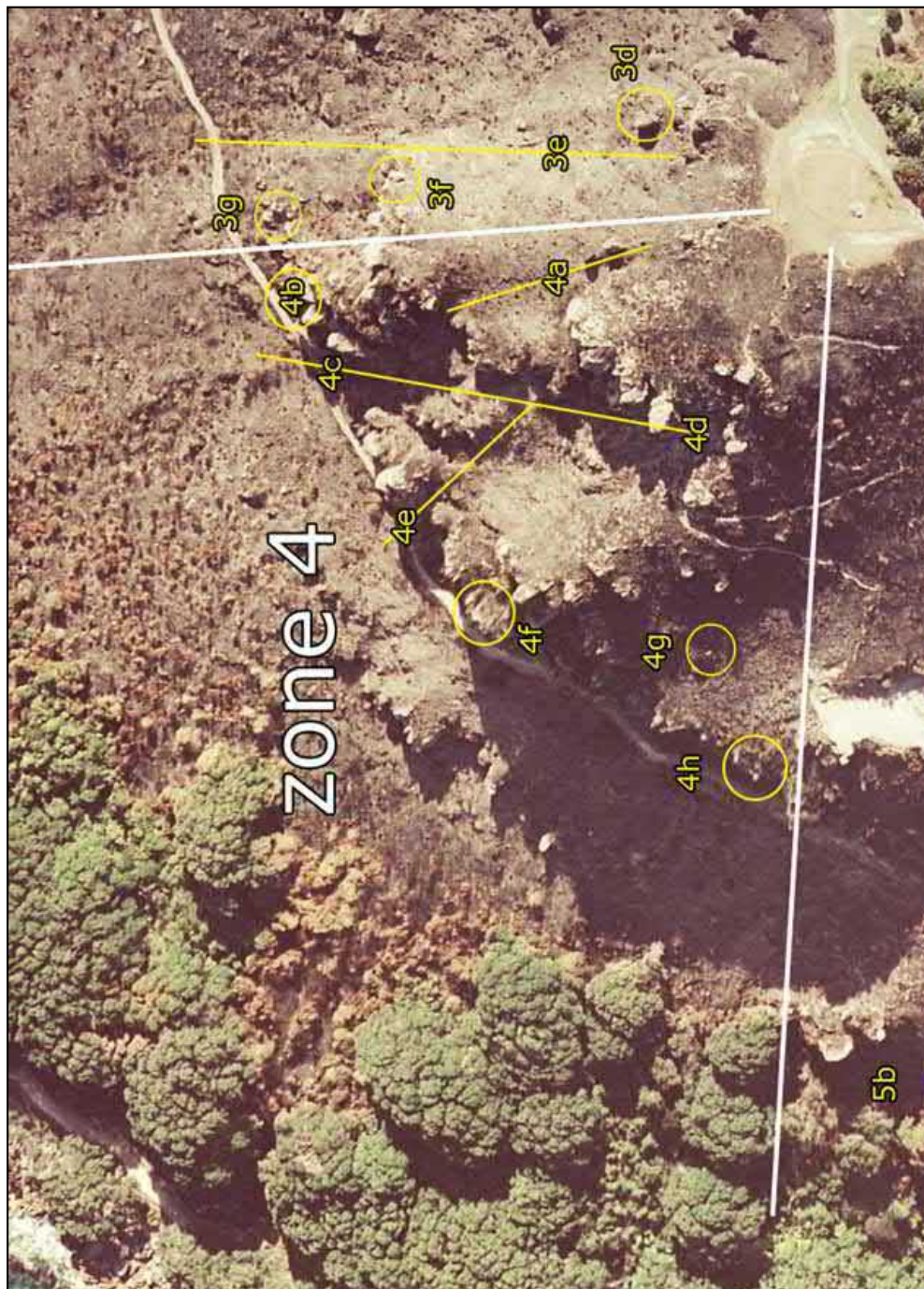
Photograph No 4; Aerial view of zone 2.



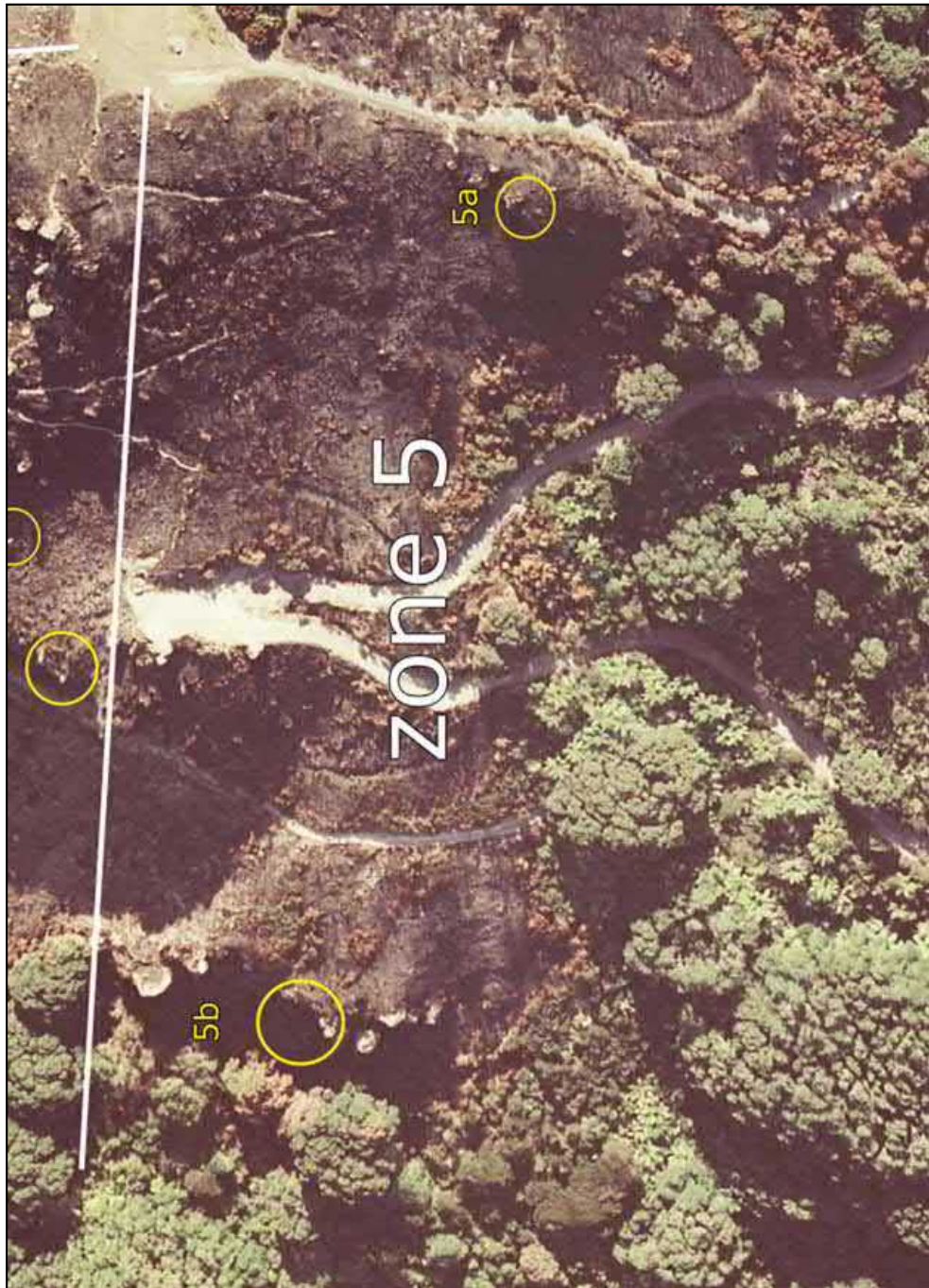
Photograph No 5; Aerial view of zone 3.



Photograph No 6; Aerial view of zone 4.



Photograph No 7; Aerial view of zone 5.



Photograph No 8; View to zone 1 & 2 from Base track.



Photograph No 12; 2a view from rock face to south.



Photograph No 18; View up into zone 3 from the Oruahine track.



Photograph No 19; Top of bluff at 3a.



Photograph No 20; View down to 3b.



Photograph No 21; View down to 3c.



Photograph No 22; Unstable column at 3d.



Photograph No 23; View into gully at 4a.



Photograph No 24; Rock climbing crag at 4b.



Oruahine - Before



Oruahine - During



Oruahine - After



Mauao power poles.

Key: Yellow dots represent current power poles.

Red line represents the removed powerline.

Blue line represents the current powerline which provides the power.

Brown line represent underground cable connecting the power poles.







10.3 Mauao Implementation Plan Project Updates

File Number: A13091968

Author:

Authoriser:

s 7(2)(f)(ii)

PURPOSE OF THE REPORT

1. The purpose of this report is to provide an update to Ngā Poutiriao ō Mauao on actions towards the projects underway within Te Mahere Whakamahinga ō Mauao, also known as the Mauao Implementation Plan.

RECOMMENDATIONS

That Ngā Poutiriao ō Mauao:

- Receives this summary report that highlights updates on Mauao Implementation Plan projects.

DISCUSSION

Placemaking and interpretation – delivery

2. The Placemaking and Interpretation Project is identified as Project F2 in the Mauao Implementation Plan, and is now in the delivery phase.
3. s 7(2)(f)(ii) in the Spaces & Places Division at Tauranga City Council is leading the project delivery.
4. Law Creative have been contracted to provide design work throughout the project. They have completed the designs for placemaking and interpretation, with approval from Mauao Trust and Ngā Poutiriao ō Mauao. Law Creative continue to work within the project delivery phase.
5. Beca have been engaged and have commenced work on the consenting requirements for the project, including resource consent and relevant archaeological authorities. Beca are also providing engineering input and building consent advice for the various structures.
6. Sourcing has begun on some of the bespoke materials that will be required for the cultural interpretation elements, such as the granite rocks for carving.
7. The project programme has been reviewed and it is currently anticipated that the first stage of the project, the wayfinding signage, will commence installation onsite in March 2022.
8. Temporary signs for emergency wayfinding have been installed following a presentation by Surf Lifesaving NZ representatives to Ngā Poutiriao ō Mauao at the 22 September 2021 hui. These are to be replaced through inclusion in the design and installation of placemaking, and interpretation signage.

Pest Control Plan

9. The Pest Control Plan is identified as Project S2 in the Mauao Implementation Plan.
10. s 7(2)(a) - Privacy has been engaged as a conservation specialist to assist in the preparation of a Pest Control Plan. The plan will outline the current rigorous strategies and document the overall schedule. There will be consideration of the established pest control method and the plan will include opportunities for innovation, and inclusion of new techniques.

Korowai restoration and planting

11. The Korowai: Restoration and Planting Plan project is identified as Project F3 in the Mauao Implementation Plan and was initiated in 2020.
12. Trial planting of native species has been updated in subsequent operational reports.
13. Plants which were seed-sourced off Mauao through PIPS, have been monitored and will supply Trees For Survival (TFS) with 1700 plants to grow for next year's plantings.

Kaitiaki programme

14. The Kaitiaki Programme Development is identified as Project F11 in the Mauao Implementation Plan. This project is to investigate a kaitiaki programme, to be co-designed between the Mauao Trust and Ngā Poutiriao ō Mauao.
15. No update has been received at the time of writing. Progression of this project should be discussed at Ngā Poutiriao ō Mauao.

Resting of Mauao

16. The Mauao Resting Period Establishment is identified as Project F8 in the Mauao Implementation Plan.
17. Prior discussions have given background and context. A wānanga for furthering the establishment is required, which was discussed at the 22 September 2021 Ngā Poutiriao ō Mauao hui. A date is yet to be scheduled for a wānanga, led by Mauao Trust. This is to be prior to the next Ngā Poutiriao ō Mauao hui.

ATTACHMENTS

Nil

11 DISCUSSION OF LATE ITEMS

12 CLOSING KARAKIA