

# **Tūpuna Maunga Authority**

## **Heritage Impact Assessment of Proposed Tree Removals and Re-vegetation Planting Plan for Ōwairaka/Te Ahi-Ka-a-Rakataura/Mount Albert**

**September 2018**

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## 1. INTRODUCTION

The Tūpuna Maunga Authority are proposing to remove approximately 340 exotic trees from Ōwairaka/Te Ahi-Ka-a-Rakataura/Mount Albert (Ōwairaka). There are a number of reasons for this, including;

- Removal of trees and therefore over time their living root systems from damaging archaeological sites and evidence.
- A number of the trees are near the end of their life expectancy and constitute a danger to the public from falling limbs, branches or uprooting of the trees themselves. They also for the same reasons have potential to damage the archaeological evidence through impact damage when they fall or by altering the terraces or other adjacent features should they be uprooted when they fail.
- To re-establish the shape of the Mountain so that the historic sightlines and archaeological evidence can be viewed within the landscape.
- There are a number of trees present that are considered pest plants for which surveillance is required.

This planting plan for Ōwairaka focuses on the restoration of highly modified areas on the maunga through revegetation to a historically accurate ngahere ecosystem, and the development of suitable habitat to protect and preserve archaeologically significant terraces present at the site (Te Ngahere 2018:3).

The majority of Ōwairaka is scheduled on the Auckland Council Unitary Plan as ID 1576 (Figure 1) as a Significant Historic Heritage Place. Ōwairaka is recorded on the Auckland Council Cultural Heritage Inventory (CHI) with the record number 11639 and recorded with the New Zealand Archaeological Association (NZAA) as site R11/20.

Ōwairaka Mountain is described in the CHI as “*Hochstetter notes this site as having a “very wide crater opening towards the north northwest 80 to 100 feet deep – a remarkable lava hill lying right in front of the opening of the crate.” The most important areas have been destroyed by quarrying, playing fields, reservoirs, and “tidying up” by the Domain Board. Notes by HJR (Bob) Brown record that Owairaka was occupied by the Waiohua, under Kiwi of Maungakeikie from 1720 to 1750. From Fenton “Important Judgement”, P 62 – 63, that Marsden visited Owairaka, 11 November 1820, and viewed the surroundings from the summit. From Letters and journals of*

*Samuel Marsden p 316 in Elder. According to George Graham, Mt Albert was originally known as Oruarangi, after Ruarangi, the chief of a tribe who had a pa there. Also, O Wairaka is named after a Polynesian Princess, the daughter of Toroa the commander of the Matatua canoe, who settled there. Wairaka married, and her descendants became Ngati Awa.”*



**Figure 1. Area of Ōwairaka that is scheduled in the Auckland Council Unitary Plan as a Category A\* historic heritage place.**

## **2. STATUTORY BACKGROUND**

There are two main pieces of legislation that control work affecting archaeological sites in New Zealand. These are the *Heritage New Zealand Pouhere Taonga Act 2014* (HNZPTA) and the *Resource Management Act 1991* (RMA). The HNZPTA is administered by Heritage New Zealand Pouhere Taonga (HNZPT) and requires a consent (Authority) for any works that affect archaeological sites. In terms of the area under discussion the definition of an archaeological site in the Act is: any place in New Zealand that was associated with human activity that occurs before 1900 and which may be able, through investigation by archaeological methods to provide evidence

relating to the history of New Zealand. Any person who intends to carry out work that may damage, modify or destroy an archaeological site must first obtain an authority from the HNZPT.

The authority process applies to all sites that fit the criteria of the HNZPTA, regardless of whether the site is recorded in the New Zealand Archaeological Association (NZAA) site recording scheme or if the site only becomes known of as a result of ground disturbance or if the activity undertaken is permitted under a district or regional plan or if a building consent has been granted. The RMA requires City, District or Regional Councils to manage the use, development and protection of natural and historic resources in a way that provides for the wellbeing of today's communities whilst safeguarding the options for future generations. The protection of historic heritage from inappropriate development is identified as a matter of national importance (section 6f).

Historic heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific or technological qualities. Historic heritage includes: historic sites, structures, places and areas; archaeological sites; sites of significance to Maori, including wahi tapu, and surroundings associated with natural and physical resources. These criteria are not mutually exclusive.

The historic heritage value of Ōwairaka Mountain is recognised and the place is scheduled on the Auckland Council Unitary Plan as item 1576.

### **3. SITE HISTORY**

The following is a summary of the history only, and is largely a version of what has been written by Dick Scott (1961). It is recognised that individual Iwi will have their own histories and traditions that pertain to the maunga that may differ or add more detail than what is outlined here.

More than 30000 years ago Ōwairaka erupted and its lava flow divided in the direction of Oakley and Meola Creeks (Searle 1961:96). *“Later phases of eruption were more explosive and showers of ash were spread.....covering..... rocks and rough surface with a smooth layer of ash. This accounts for the thick rich soil on much of Mt Albert's lava field...”*

This build up of volcanic soils was fertile and ideal for gardening. Maori would have been attracted to this area because of these soils. Eventually Wairaka led a community from the Bay of Plenty to

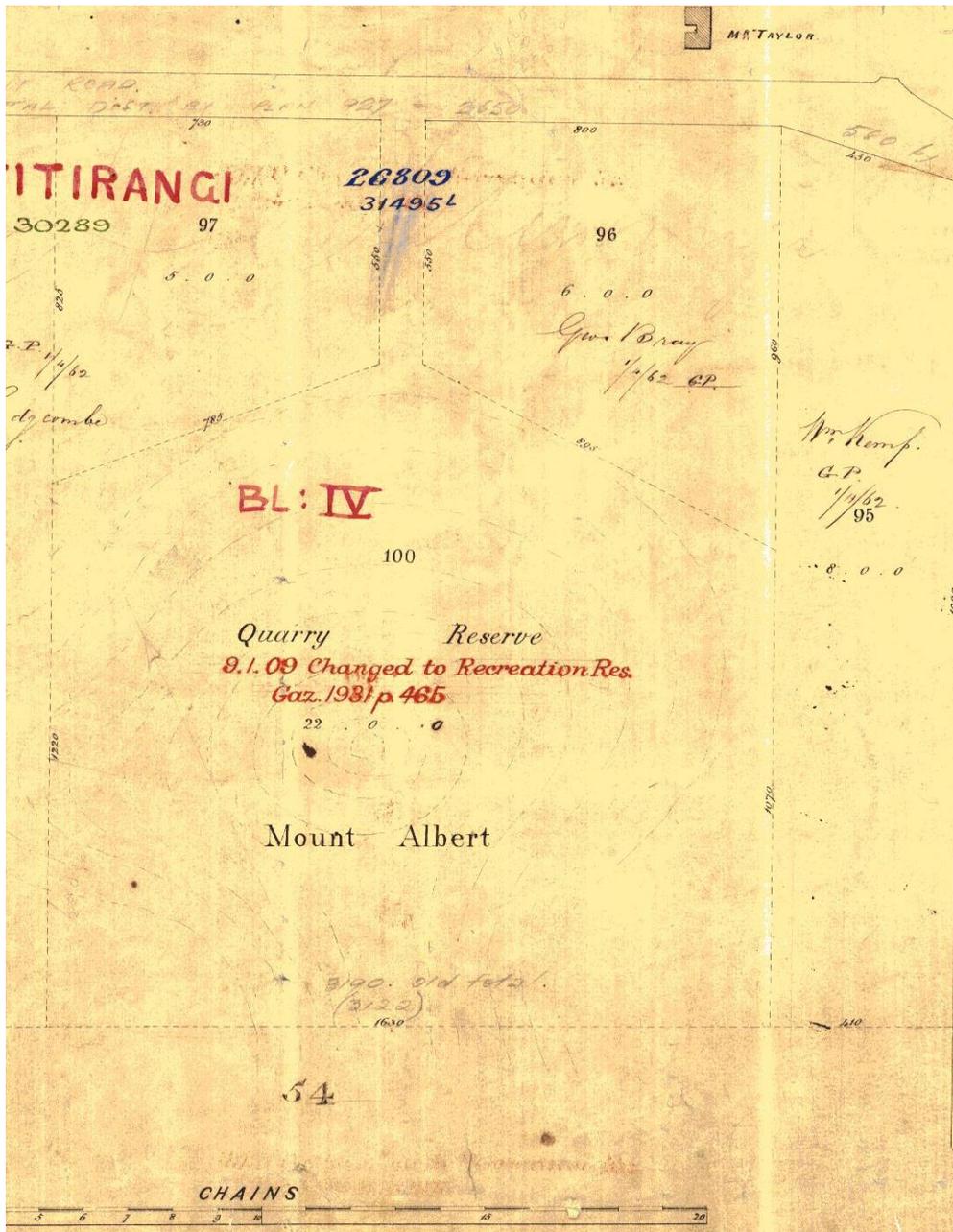
settle on Ōwairaka, “*the place of Wairaka*” (Scott 1961:14 – 15). Later in the 1700s Ōwairaka was one of many pa associated with Kiwi Tamaki, it is said that in his seasonal rotation through the Tamaki district that he occupied Ōwairaka in March and April and that it was a centre for the processing of kuaka (godwit), where they were bought back to the Pa to be cooked in their own fat as a winter preserve (Scott 1961:15). One estimate suggests that as many as 1575 people lived on Ōwairaka.

When Kiwi Tamaki went to war with Iwi from the Kaipara region he was defeated and people retreated to the Auckland region, only to be followed and attacked, including from others taking advantage of the situation from other parts as well. Scott (1961:16) records that the longest resistance to the invaders came from the people living at Ōwairaka.

In the 1790s new fighting occurred between the people of the Auckland region and those of the Waikato and Thames areas. Ōwairaka was abandoned and in 1820 when Samuel Marsden climbed the mountain it was not occupied.

Ōwairaka is first recorded as being sold into European ownership as part of a larger land package to Thomas Mitchell, a Sydney based trader, in 1835 (Scott 1961:16). Eventually this sale was repudiated, and Ōwairaka was again sold as part of a larger land package to the government of the day in 1841 (Scott 1961:17).

Ōwairaka remained in Government ownership and is depicted on SO1148 (circa 1862) as a quarry Reserve (Figure 2). The mountain would be quarried, mostly for railway purposes until 1928 (Searle 1961:96) with the final quarry on the mountain closing in 1959 (Wenley and Haden 2013: Chapter 9 – this publication is not page numbered). In all Wenley and Haden record that about 1.5 million cubic metres of scoria was removed for road and rail building between 1860 to 1959.



**Figure 2. Part SO1148 (circa 1862) illustrating Mount Albert set aside as Lot 100, a Quarry Reserve.**

The values to the community was recognised early on, with the Mt Albert Highway District Board petitioning the government to stop the quarrying and hand over the mountain to local government. This did not happen by any means immediately with part of the mountain ending up as quarry whilst the rest had a domain board formed (Figure 3). Eventually after the closing of the quarries, the majority of the mountain has been transferred to be a recreation reserve, though some has been retained for water reservoir purposes.



#### 4. ARCHAEOLOGY

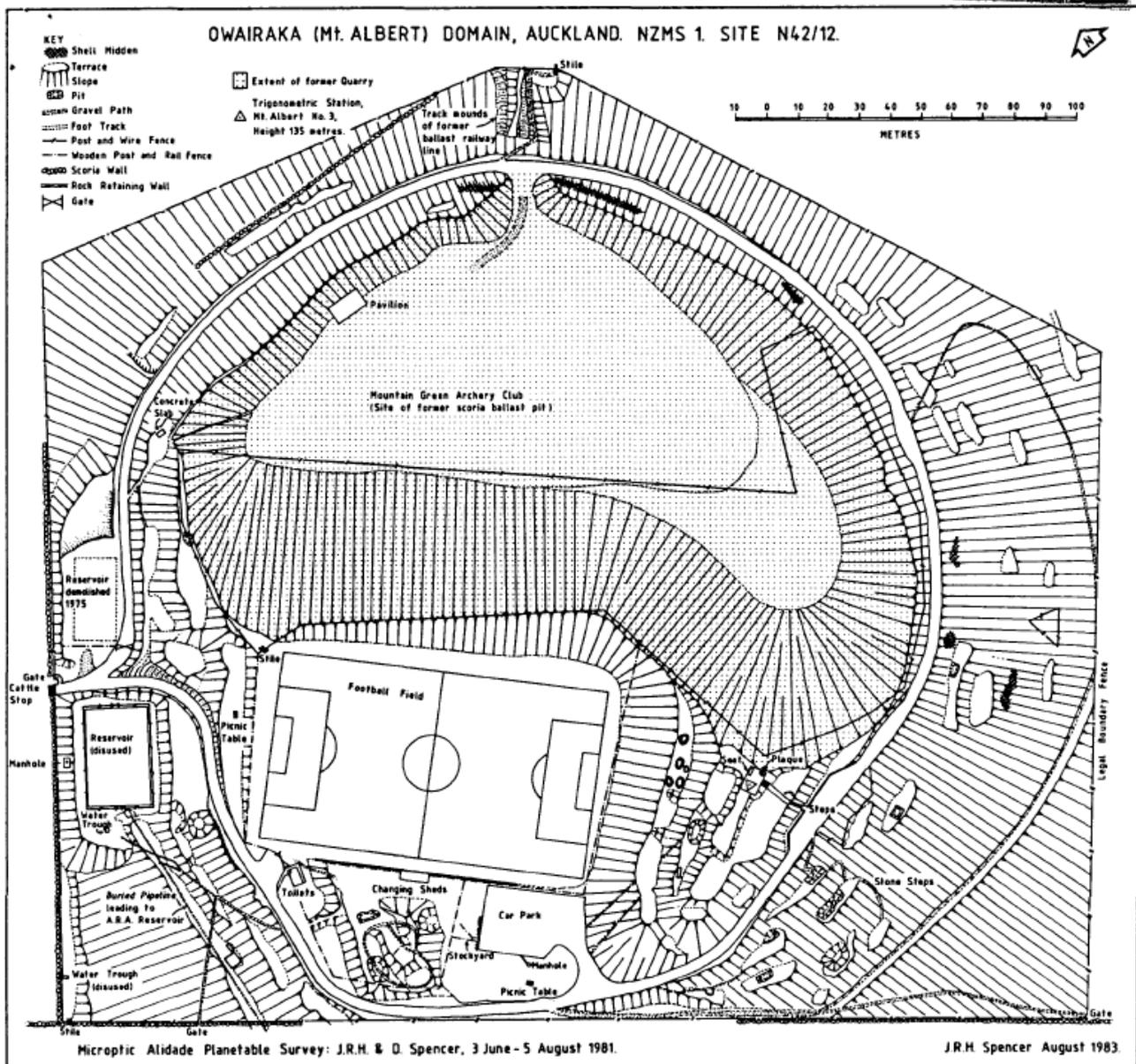
The previous section has given an historical narrative; this section is the history and comments of archaeological recordings only.

Ōwairaka is recorded as R11/20 with the NZAA and as CHI record 11733 with Auckland Council. It was originally reported by Bob Brown in August 1961 who recorded that there is a very wide crater and that it is a hill pa, on this original record it is written “most important area destroyed by quarrying, playing field, reservoirs and “tidying up” by Domain Board. This appears to be in the hand writing of Les Groube who was Filekeeper and accepted the record into the NZAA Files in September 1961.

Further typed information lists some of the information described in the CHI listing that is the description used in the introduction of this report (refer page 1). This additional information is undated and it is not clear who supplied it.

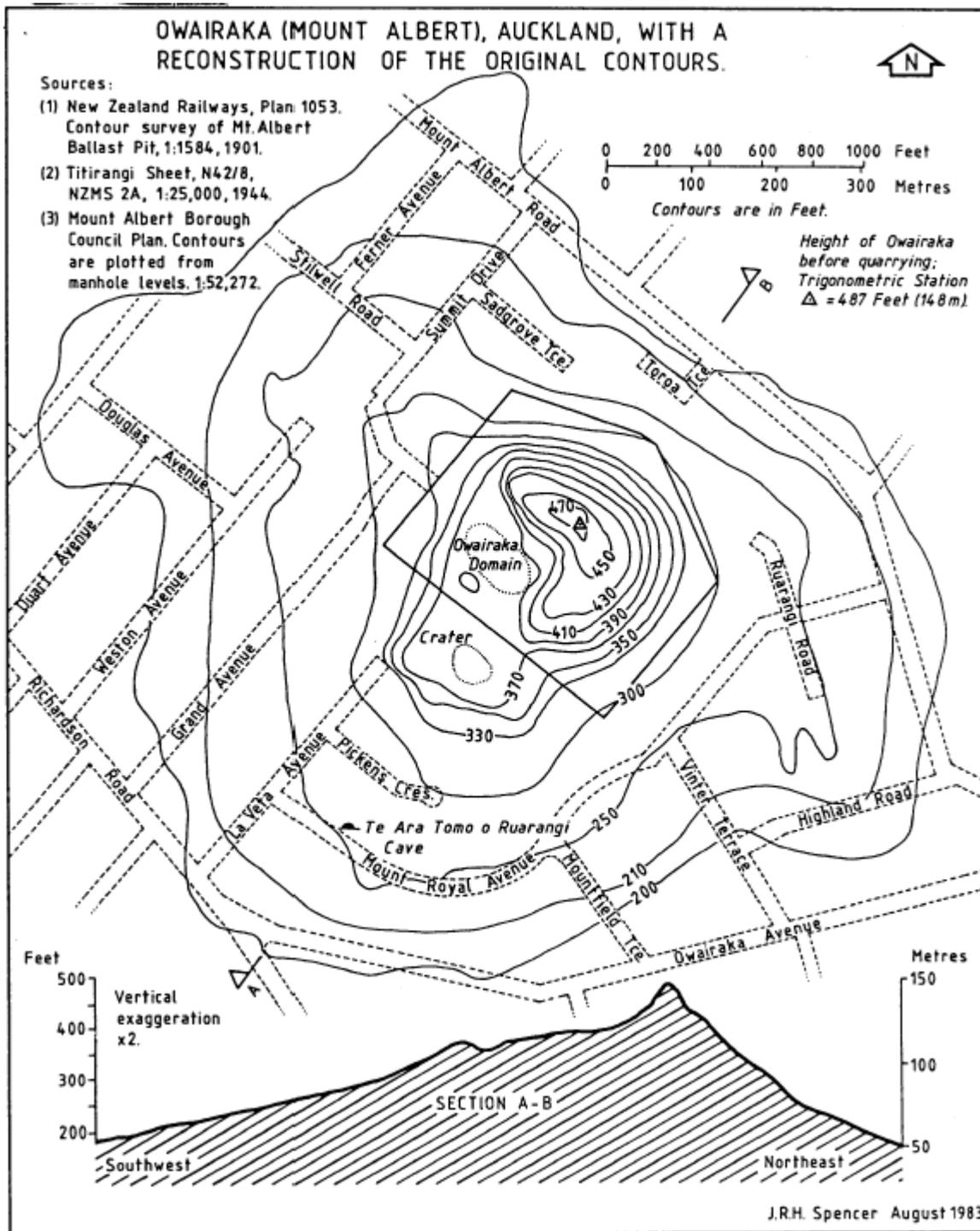
Elissa Jackson visited the site in 1974 and recorded part of the mountain, she made the comment that *“Of the surviving major volcanic cones, the features of Mt. Albert have probably been the most damaged. It is no longer possible to perceive any overall pattern in the Maori occupation of this hill. However, in several places, small areas of earthworks remain. These exhibit individual terraces and rectangular pits which can be expected wherever the gradients of the slopes permit, and wherever European earthworking hasn't yet obliterated them.”* Jackson also noted that there are midden present dominated by pipi and cockle.

Jeremy Spencer mapped the mountain in 1983 (Figure 4), this illustrates the areas of modification and where archaeological evidence is present. This plan has been recognized as having a few errors and omissions in it (Campbell 2012. Foster 2013) it is nevertheless the best archaeological plan of the mountain, and is recognized as generally correct, in particular in illustrating areas of past modifications.



**Figure 4. Archaeological plan by Jeremy Spencer, August 1983.**

Spencer also recreated the a plan of the mountain prior to the quarrying activities using historic plans (Figure 5), this illustrates the changes and losses that have been undertaken at Ōwairaka. This illustrates that the cone high points have been quarried away, the area now obvious as the tihi is an approximate 33m below what would have once been the highest point.



**Figure 5. Reconstruction of historic shape of Ōwairaka based on historic survey plans, by Jeremy Spencer, August 1983.**

Peter Adds visited the site in 1988 and added that there is “heavy damage” to the site, he noted that terraces, pits and stone walls are found on northern, eastern and southern slopes. The most recent update was from monitoring undertaken by Eleanor Sturrock in from May to June 2013, she monitored works designed to minimise any impacts to the archaeology, these works achieved what they were designed for as no archaeology was observed during monitoring of those works.

Additional information available on the Auckland Council CHI includes that of Peter Matthews Stage 3 university archaeology paper where he noted that as well as the midden being mostly cockle with pipi; rock oyster, flat oyster, scallop, mud snail, cat's eye, whelk and volute were also found in the midden components.

Recent archaeological work on the mountain has been to monitor minor works related to the removal of redundant farming infrastructure or to observe works related to the water storage facilities on the mountain – none of these works have found any archaeological evidence to be present in areas where works have previously occurred (Campbell 2012, Foster 2013, Phillips 2015).

## **5. SITE INSPECTIONS**

Various site inspections were undertaken by myself, both in the company of staff of the Tūpuna Maunga Authority, other specialists and by myself over August to September 2018. The briefing given was for Treescape to be able to remove trees without damaging the archaeology of the mountain. Other areas were inspected to assess whether there was archaeological evidence present and if they were suitable for conservation plantings as well as in places providing habitat for endangered lizard species.

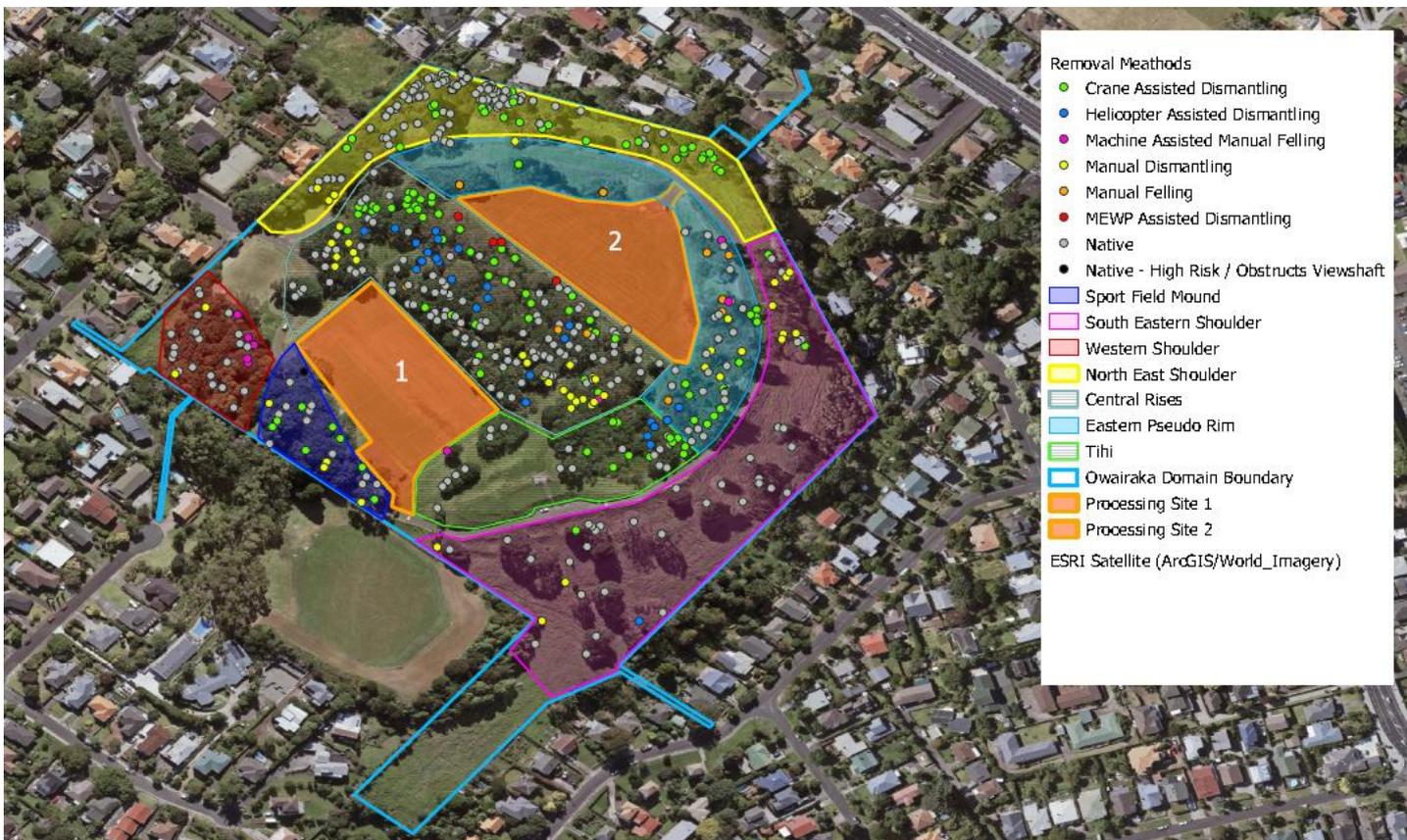
During these inspections areas were identified where substantial past earthworks and or quarrying will have destroyed any archaeological evidence and where archaeological evidence was present. This information was discussed with Treescape staff and others, some by subsequent phone calls and brief meetings, but mostly during onsite inspections.

These site inspections and meetings have resulted in the methodologies discussed in the following sections.

## **6. TREE REMOVALS**

The following sections are based on the report by Treescape Ltd (2018) and their proposed tree removal methodologies, their proposed worksites on Ōwairaka. Conditions vary across the

mountain as a consequence this section is divided into the areas as proposed by Treescape (Figure 6).



**Figure 6. Tree Removal locations and areas as per Treescape Report**

### **6.1 - A1 South Eastern Shoulder**

This area is one of the least modified areas and has a good deal of the archaeological evidence present. It consists of slopes of the volcanic cone that have been terraced, some with storage pits built on them, although I did not observe any it is almost certain that midden will also be found beneath the thick rampant grass, usually in the vicinity of the terracing. None of the trees to be removed from this area are near the already existing roading or modified areas of the mountain, it is proposed to remove them all by either manual dismantling or with helicopter assisted dismantling. These methods are appropriate to the area, but only if the manual dismantling is to be used with crash pads beneath them to avoid accidental damage to archaeological features and deposits.



**Plate 1. Some of the slopes in area A1 – South Eastern Shoulder, illustrating a tree to be removed by manual dismantling located on a terrace.**

### **6.2 - A2. North Eastern Shoulder.**

The North Eastern Shoulder area is largely but not entirely unmodified. Where trees are to be removed they are present on areas that have archaeological evidence, either terracing or slopes where evidence may exist subsurface. A drystone wall appears on Figure 6 of this location as does the earthworks associated with the former tram line associated with the Pre-1900 quarrying. This is protected under the Heritage New Zealand Act, just as is the evidence relating to the pre-1900 occupation by Maori. The majority of trees are proposed to be removed with the assistance of a crane, others are to be manually dismantled. Again most trees in this area should be dismantled with the use of crash mats beneath them to protect archaeological surface and subsurface evidence.



**Plate 2. The pictured hump with gum trees growing on it is the base of the former quarry tram lines. As it pre-dates 1900 it too must be considered an archaeological site and be protected from damage.**

### ***6.3 – B. Western Shoulder.***

This area is largely unmodified by 20<sup>th</sup> century earthworks, terracing is evident within the trees. Some trees can be dismantled with the assistance of machinery from the roading, others are to be manually dismantled. Crash mats should be used as appropriate to protect surface and subsurface archaeology.

### ***6.4 – C. Sports Field Mound***

This mound has clear signs of both modification and intact archaeology, including some very well formed pit features. There are also areas of it, particularly at the eastern end where it is not entirely

obvious whether modification has occurred, or if it has occurred to what extent, and therefore what the likelihood of intact subsurface archaeology is. Therefore this whole area should be treated with caution. There is the formed road and carpark immediately adjacent which means it is feasible to dismantle by crane, this readily prevents impacts on the surface and the adjacent sports field is a suitable processing centre, therefore minimizing handling of the materials. All trees that are proposed to be manually dismantled should be done so with the crash mats beneath.



**Plate 3. The eastern end of the sports mound area illustrating the hard surfaces that a crane could be set up on. The eastern end appears to be modified, however the extent could not be asserted without subsurface testing.**

### ***6.5 – D. Central Rises***

The majority of this area has been modified by quarry activities and the creation of the sports field. There are locations on the periphery of this area that have intact archaeological evidence, the majority has been destroyed. Treescape propose to remove many of the trees here by crane or

helicopter. In most cases it would not be necessary to do this for archaeological reasons, however it maybe necessary for arboricultural reasons due to the density or size of trees in this location.



**Plate 4. Although it appears to be a terrace, this flat form is in fact a broad former quarry bench typical of what is found in the Central Rises area.**

### **6.6 – E. Tihi**

Although referred to as the Tihi, as it is the highest point of Ōwairaka remaining today, in the times of this being an occupied Pa it was not the highest point and it is unlikely that this area would have held the significance of a tihi as we know it now. Nevertheless archaeological features are present, some of the periphery of the area has been modified by quarrying and the features that remain are in effect the modern day tihi of the site. The majority of the trees to be removed from this area are proposed to be removed by crane, this will prevent damage to the intact archaeological features. Examination of some of the trees in the periphery of this area may find that some of them could be

removed by less costly methods should it be found they are where the archaeology has been destroyed by past quarry activities.

### ***6.7 – F. Pseudo Rim***

The vast majority of this area has been significantly modified by the 19<sup>th</sup> and 20<sup>th</sup> century quarry activities, the inside of the rim can be considered to be non-archaeological, the outside in contrast appears to be totally natural. The top of this rim is largely non-archaeological, however in places it appears that it is part of a remnant terrace and midden is found upon it. Care needs to be taken when removing any trees on the outside, these should be done by crane as the summit road is immediately adjacent, those on top of the rim maybe removed by crane or other appropriate methods. If to be removed by manual means it is recommended that crash mats are employed for many of the trees.

### ***6.8 – Processing Site 1***

Processing site 1 is a fully earthworked playing field, there are no archaeological concerns with it being used for that purpose.



**Plate 5. The view across the playing field of Processing Site 1. The Tihi area is visible on the left and the Sports Field Mound to the rear right.**

### ***6.9 – Processing Site 2***

This area is the former quarry that in more recent years has been used for archery and other activities. This area is fully modified and has no archaeological remains, it can be used as a processing site without any archaeological conditions.



**Plate 6. The view across the field of Processing Site 2. Part of the Pseudo Rim is visible to the right, whilst the Cental Rises is to the left.**

## **7. CONSERVATION PLANTINGS**

The following sections are based on the report by Te Ngahere (2018) and their proposed methods and locations for conservation plantings, including the desire to provide habitat for native skinks. Conditions vary across the locations, as a consequence this section is divided into the areas as proposed by Te Ngahere (Figure 7).



**Figure 7. Proposed planting locations from Te Ngahere (2018)**

### **7.1 WF7**

This is in the area depicted in Figure 7, this has been totally quarried and no archaeological evidence has survived the quarry. Any species of plant is acceptable to plant within this area, though it is recommended that only those species recommended by the Department of Conservation (Jones 2007) be planted within 5m of any areas not considered to be quarried slopes (such as archaeological features or natural slopes). A recommendation that is made within the Te Ngahere report (2018:8). The preparation and identification of the limits to establish the 5m buffer should be undertaken by the project archaeologist.

### **7.2 Mound Plantings**

It is proposed that mound planting be trialled on the slopes between terraces on the south eastern side of the maunga as a no dig method to establish pōhuehue (*Muelhenbeckia complexa* var.

complexa). This would require the importation of small quantities of soil for the plant to be established in, it is a non-evasive method of establishing pōhuehue. The effects of importing soil to create the mound planting are difficult to quantify as it has not been attempted before, however at most it can be presumed that some of the features or slope will have a minor change in their angle and will change visually in a similar minor fashion. These proposed experimental works may require an Authority to modify and archaeological site from Heritage NZ, they have given approval for trialing on Ōhūiarangi without Authority, it is unknown whether they would have the same conclusions on extending the trial to other Maunga. I recommend that direction is sought from them to clarify their thoughts. Final placement of any moundings should not occur without supervision of the project archaeologist.

## 8. **ASSESSMENT OF HISTORIC HERITAGE**

### *8.1 Auckland Unitary Plan*

Ōwairaka Mountain is scheduled as an Historic Heritage Place in the Auckland Unitary Plan (AUP), item #1576: Mount Albert/Owairaka R11\_20 – Category A\*). The site is listed as having Additional Rules for Archaeological Sites or Features and as being a Place of Maori interest or Significance.

The Council uses a range of heritage to identify and evaluate historic heritage for scheduling:

- A. Historical
- B. Social
- C. Mana Whenua
- D. Knowledge
- E. Technology
- F. Physical attributes
- G. Aesthetic
- H. Context

Ōwairaka is scheduled in the AUP for the following Heritage Values;

- A. Historical: the place reflects important or representative aspects of national, regional or local history, or is associated with an important event, person, group of people, or with an idea or early period of settlement within New Zealand, the region or locality;

- D. Knowledge: the place has potential to provide knowledge through archaeological or other scientific or scholarly study, or to contribute to an understanding of the cultural or natural history of New Zealand, the region, or locality;
- G. Aesthetic: the place is notable or distinctive for its aesthetic, visual, or landmark qualities.

The historical values will not be affected by this process. The aesthetic values are contained within Sally Peakes report.

While archaeological study would be able to establish greater knowledge about the place, its location and the wider settlement of the Ōwairaka area, current technology would require largely invasive methods to do this. These are not proposed for this project.

Ōwairaka is prominent in the landscape in which it sits. Within the environs of the immediate Ōwairaka areas the Tūpuna Maunga dominates the skyline and is visible from many viewpoints across Auckland and between other Tūpuna Maunga. Historically the many terraces, pits and archaeological earthworks of the mountain would have been a visually dominant feature.

The additional Rules for Archaeological Sites or Features under the AUP have additional controls and require assessment of the activity under the rules listed in Table D17.4.1. and Table D17.4.2. As noted earlier this site has considerable archaeological value and the focus of the assessment is how the works impact on these values. As it relates to the proposal, Conservation Planting (A23) and Tree Removal (A26) are discretionary activities. Non-invasive archaeological investigations are a permitted activity, where as other investigations are Restricted Discretionary activities.

### **Historic Heritage Objectives and Policies**

Part D17 of the Unitary Plan sets the Objectives and rules of the Historic Heritage Overlay.

Objectives are contained at D17.2, and include:

- (1) The protection, maintenance, restoration and conservation of scheduled historic heritage places is supported and enabled.*
- (2) Scheduled historic heritage places are protected from inappropriate subdivision, use and development, including inappropriate modification, relocation, demolition or destruction.*
- (3) Appropriate subdivision, use and development, including adaptation of scheduled historic heritage places, is enabled.*

The proposed works are considered to be in accordance with the above objectives for historic heritage as they have been designed to enhance the values of Ōwairaka Mountain by removing trees that are damaging the maunga without causing any physical impact, except where earlier earthworks have already modified the form and archaeological features. Visual aspects of the archaeological features and the proposed plantings have been designed to remedy erosion issues currently evident on the Mountain assisting with the protection and conservation.

## ***8.2 Assessment of Effects on Archaeological Features***

### **Tree Removal Works**

The methodology for removal of trees from this Tūpuna Maunga has been the avoidance of impacts to surface features as well as sub-surface material therefore minimising the potential for any archaeological material, whether identified or unrecorded to be impacted, therefore protecting the fabric of archaeological features from damage.

Removal of exotic trees will also benefit the visual aspects of the maunga allowing for the visible archaeological features to be more readily identifiable and viewed. This is particularly the case where older failing trees are present as their removal will enhance the shape of earthworked features that are hidden from the public viewshed.

Further, aside from the actual removal operations, the removal of exotic trees from an archaeological perspective is considered to have positive effects for the long-term preservation of Ōwairaka. As the rootplate of trees has the potential to disturb and destroy archaeology as they mature, removing trees can be beneficial to preserving *in situ* archaeological features. Secondly, as trees age, limbs can become weak and fail during periods of high winds or as a result of storm damage. Such events can also tear the rootplate from the ground damaging and exposing archaeology. Controlled removal is therefore favourable to uncontrollable and natural events. As some of the trees to be removed are getting towards the end of their natural life, they are even more susceptible to damage from natural events and the potential to impact on archaeology is higher.

## Revegetation Works

An outline of the proposed revegetation works is contained at 7.1 – 7.2 above with proposed planting developed to avoid known areas of archaeology and to minimise ground disturbance therefore reducing the potential for any *in situ* archaeology to be impacted. There would appear to be no effects from this proposal to the archaeology of Ōwairaka.

## 9. CONCLUSIONS

Methods have been developed to remove trees from Ōwairaka (Treescape 2018) while avoiding and minimising impact on the archaeological features or unknown subsurface evidence.

Positive effects will arise from the visual enhancement of archaeological features as large exotic trees tend to conceal and confuse opportunities for visual appreciation of the landscape. This is particularly so for the pa and following the removals this element will be visible as the prominent feature of the maunga. Also from the pa the contextual landscape that make up its positioning will be better visible providing opportunities for its relationship to the landscape to be appreciated.

The conservation plantings have been designed to be placed where the mountain has already been modified and archaeological evidence will not exist, or in the case of mound planting on the slopes between terraces where it is unlikely to affect any archaeology.

This Heritage Assessment has focused on the archaeological values of this place. Ōwairaka Mountain has also has significant Mana Whenua values, for which I am not qualified to comment upon, there may be traditional or cultural concerns that may affect the proposal or the conclusions of this report that I am unaware of.

## 10. RECOMMENDATIONS

Noting that much modification has occurred over Ōwairaka, and that it may not be easy for non-archaeological professionals to discern I endorse the Tree Removal Plans (Treescape 2018) and Planting Plans (Te Ngahere 2018) subject to the following additional recommendations;

### *10.1 Tree Removals*

- a) That as a pre-tree removal condition, a walk over between Treescape and the project archaeologist occurs to confirm / finalise the tree removal methodology for each area or in some cases individual trees.
- b) The finalised methodology will be submitted to Council prior to the works starting.
- c) That where there is any consideration that damage to underlying archaeological features or subsurface evidence may occur crash mats must be used to protect the ground surface.

### *10.2 Conservation Planting*

- a) For the WF7 planting only species that are defined as suitable for planting on archaeological sites, as per the Department of Conservation (Jones 2007) publication or any updated list that is subsequently released by the Department of Conservation, should be planted within 5m of archaeological features or unmodified parts of the mountain.
- b) The project archaeologist should be on site for the set out of the WF7 plantings to define the limits of the adjacent archaeological evidence to facilitate recommendation a) above.
- c) Final placement of any mounds for the mound plantings areas should not occur without supervision from the project archaeologist.

*Advice Note: Depending on the ongoing discussions with Heritage New Zealand it may be a requirement to obtain an Authority to modify an archaeological site from Heritage New Zealand for the mounding plantings.*

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