Appendix H. Archaeological Assessment Report

Archaeological Assessment of the Proposed

Aratapu Water Storage Reservoir

Aratapu

1 September 2020

Prepared for:

Te Tai Tokerau Water Trust

c/o Williamson Water & Land Advisory
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Glossary

Classic	The later period of New Zealand settlement
Midden	The remains of food refuse usually consisting of shells, and bone, but can also contain artefacts
Pa	A site fortified with earthworks and palisade defences
Pit	Rectangular excavated pit used to store crops by Maori
Terrace	A platform cut into the hill slope used for habitation
Wahi tapu	Sites of spiritual significance to Maori

1.0 Introduction

Williamson Water & Land Advisory commissioned Geometria Ltd to undertake an archaeological assessment on behalf of the Te Tai Tokerau Water Trust, of the proposed new Aratapu Water Storage Reservoir at Aratapu, south west of Dargaville. A number of archaeological sites are recorded in the immediate vicinity of the proposed works, an even larger number are recorded in the area, and coastal Northland has a high archaeological site density in general.

Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA, previously the Historic Places Act 1993), all archaeological sites are protected from any modification, damage or destruction except by the authority of Heritage New Zealand Pouhere Taonga.

This report uses archaeological techniques to assess archaeological values and does not seek to locate or identify wahi tapu or other places of cultural or spiritual significance to Maori. Such assessments may only be made by Tangata Whenua, who may be approached independently of this report for advice.

Likewise, such an assessment by Tangata Whenua does not constitute an archaeological assessment and permission to undertake ground disturbing activity on and around archaeological sites and features may only be provided by Heritage New Zealand Pouhere Taonga, and may only be monitored or investigated by a qualified archaeologist approved through the archaeological authority process.

1.1 The Heritage New Zealand Pouhere Taonga Act 2014

Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA; previously the Historic Places Act 1993) all archaeological sites are protected from any modification, damage or destruction except by the authority of the Historic Places Trust. Section 6 of the HNZPTA defines an archaeological site as:

> *" any place in New Zealand, including any building or structure (or part of a building or structure), that—*
>
> > *(i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and*
> >
> > *(ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*
>
> *(b) includes a site for which a declaration is made under section 43(1)"*

To be protected under the HNZPTA an archaeological site must have physical remains that pre-date 1900 and that can be investigated by scientific archaeological techniques. Sites from 1900 or post-1900 can be declared archaeological under section 43(1) of the Act.

If a development is likely to impact on an archaeological site, an authority to modify or destroy this site can be sought from the local Heritage New Zealand Pouhere Taonga office under section 44 of the Act. Where damage or destruction of archaeological sites is to occur Heritage New Zealand usually requires mitigation.

Penalties for modifying a site without an authority include fines of up to $300,000 for destruction of a site.

Most archaeological evidence consists of sub-surface remains and is often not visible on the ground. Indications of an archaeological site are often very subtle and hard to distinguish on the ground surface. Sub-surface excavations on a suspected archaeological site can only take place with an authority issued under Section 56 of the HNZPTA issued by the Heritage New Zealand.

1.2 The Resource Management Act 1991.

Archaeological sites and other historic heritage may also be considered under the Resource Management Act 1991 (RMA). The RMA establishes (under Part 2) in the Act's purpose (Section 5) the matters of national importance (Section 6), and other matters (Section 7) and all decisions by a Council are subject to these provisions. Sections 6e and 6f identify historic heritage (which includes archaeological sites) and Maori heritage as matters of national importance.

Councils have a responsibility to recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga (Section 6e). Councils also have the statutory responsibility to recognise and provide for the protection of historic heritage from inappropriate subdivision, use and development within the context of sustainable management (Section 6f). Responsibilities for managing adverse effects on heritage arise as part of policy and plan preparation and the resource consent processes.

2.0 Location

The site of the proposed reservoir is located on the Pouto Peninsula, approximately 12 km south of Dargaville and four kilometres east of Te Kopuru, between Te Koporu and Glinks Gully. The proposed reservoir will be located in the headwaters of the Aratapu Creek catchment.

The dam structure will be located on Allotment 127 Parish of Te Kopuru and the impounded water were extend across Allotments 128, 129, 131A-E and 132A Parish of Te Kopuru.

3.0 Proposed Development

The proposed reservoir will have a maximum working storage volume of approximately 4 million cubic metres (WWLA 2020). While the exact land the reservoir will service is not currently known (that depended on future uptake), it is expected that it will be able to provide sufficient water to irrigate approximately 1,070 hectares of horticultural land use.

The proposed dam will span a valley that is approximately 70 m wide at its base and approximately 170 m wide at the dam crest, which is 22 m high (from the base of the valley). The main earthwork associated with the reservoir construction will include:

- Clearing and stripping of topsoil from the dam, spillway, and borrow areas.
- Sub-excavation of unsuitable foundation materials and placement in a designated area.

- Excavation of the spillway and borrow area and placement of fill within the dam or designated area

Construction will largely be conducted using site derived materials.

A new track and turn-off area from West Coast Road is likely to be required to enable construction traffic and workers to safely access the site.

The location of the diversion culvert in the right abutment is arranged so that work required to install the culvert can be undertaken in the dry, without accessing in the soft central portion of the valley. Construction of the coffer dam located upstream from the main site works will be required prior to dewatering and excavation activities commencing in the valley floor.

A significant initial task will be the excavation of unsuitable peat-dominated soil from within the dam footprint. It is anticipated that this material can be disposed of on-site, for example by re-spreading it on land for agricultural benefit or infilling and re-contouring a gully-head outside of the immediate area of the dam. Care is required to ensure peat and organic earth fills do not generate a risk either from instability or erosion.

This phase will also involve the establishment for the site offices and storage areas.

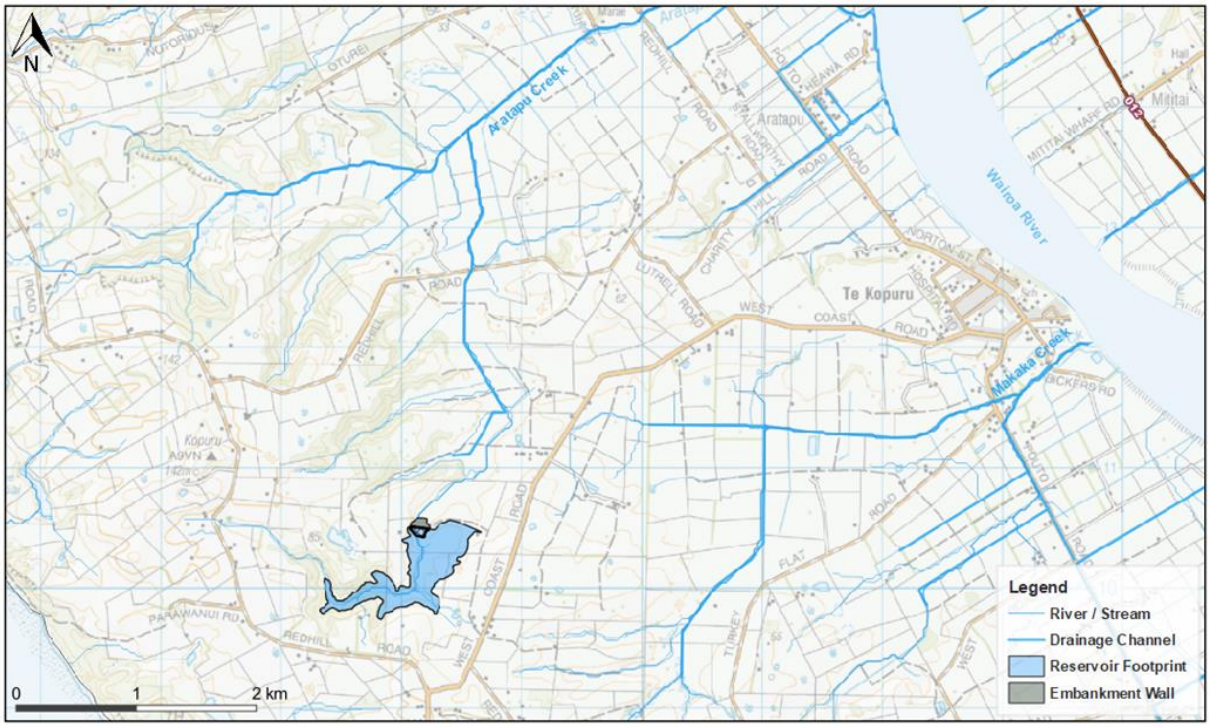


Figure 1: Aratapu Water Storage Reservoir location (WWLA 2020).

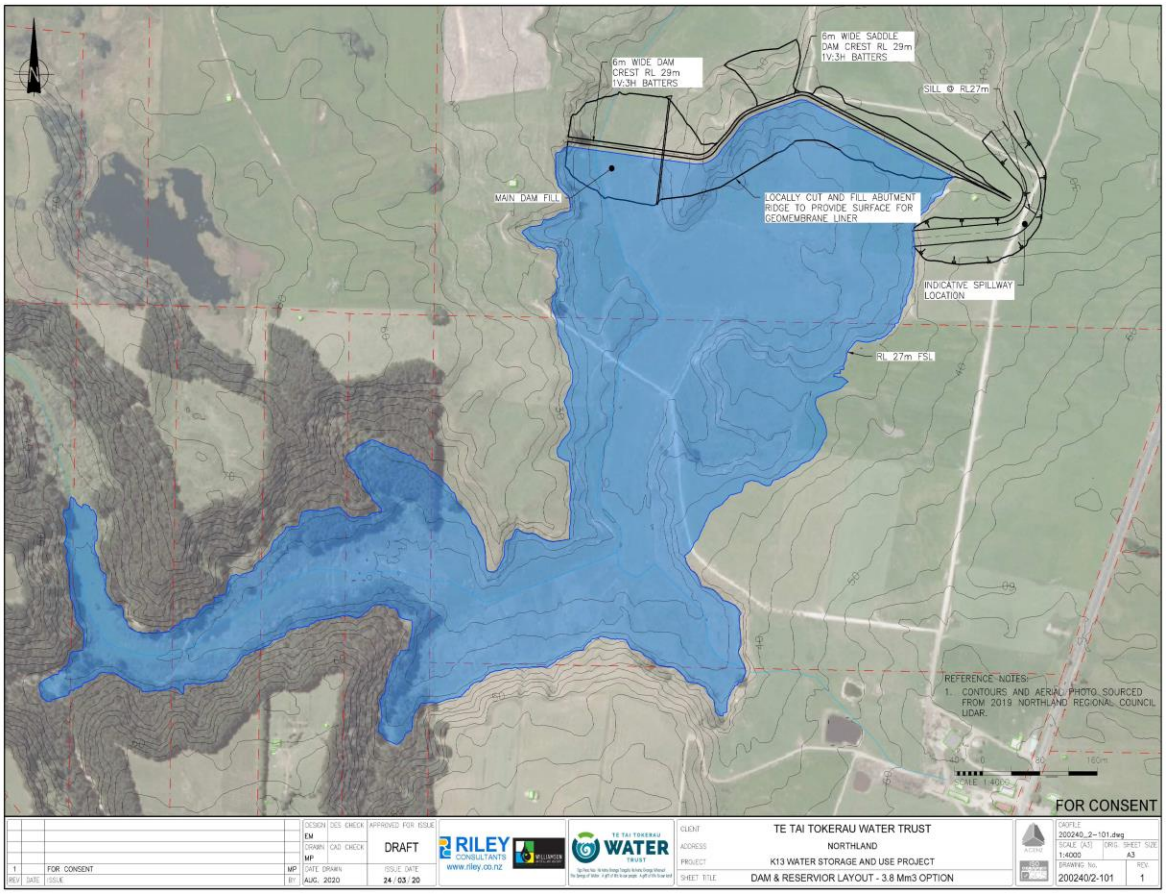


Figure 2: Dam and reservoir footprtin (Riley 2020).

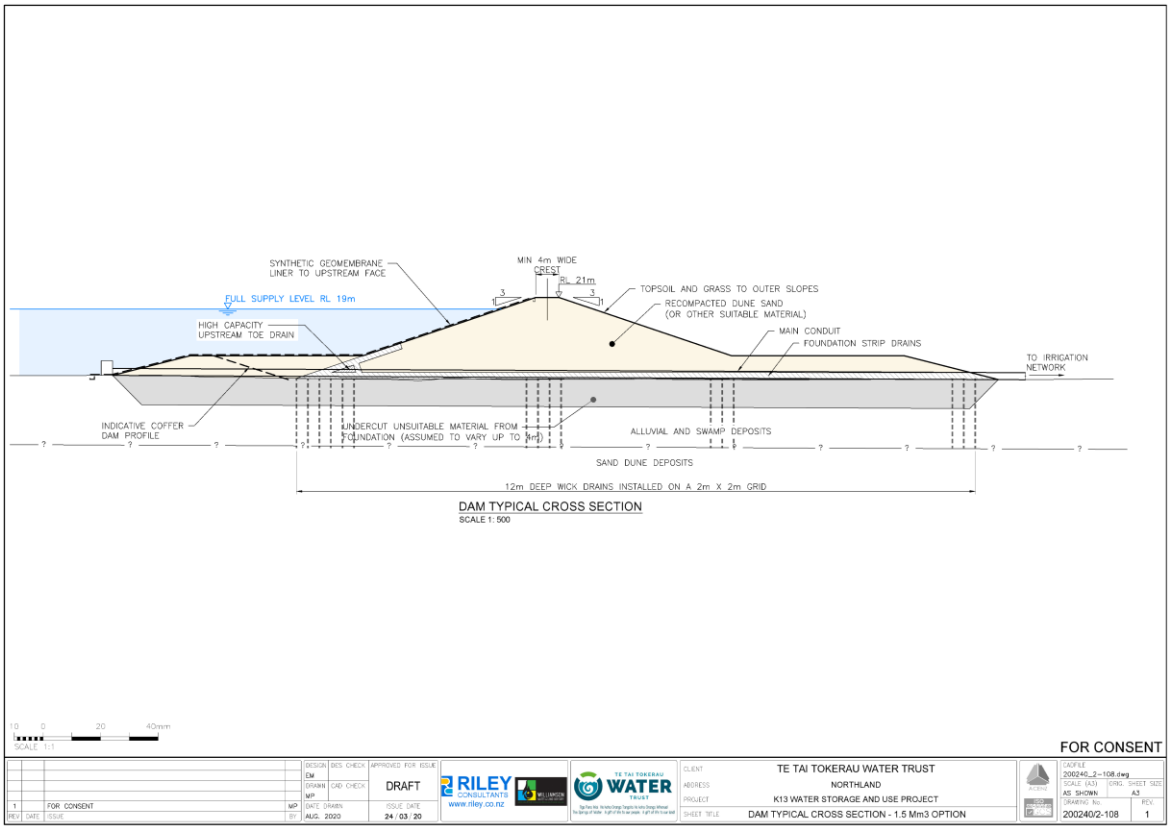


Figure 3: Dam cross section (Riley 2020).

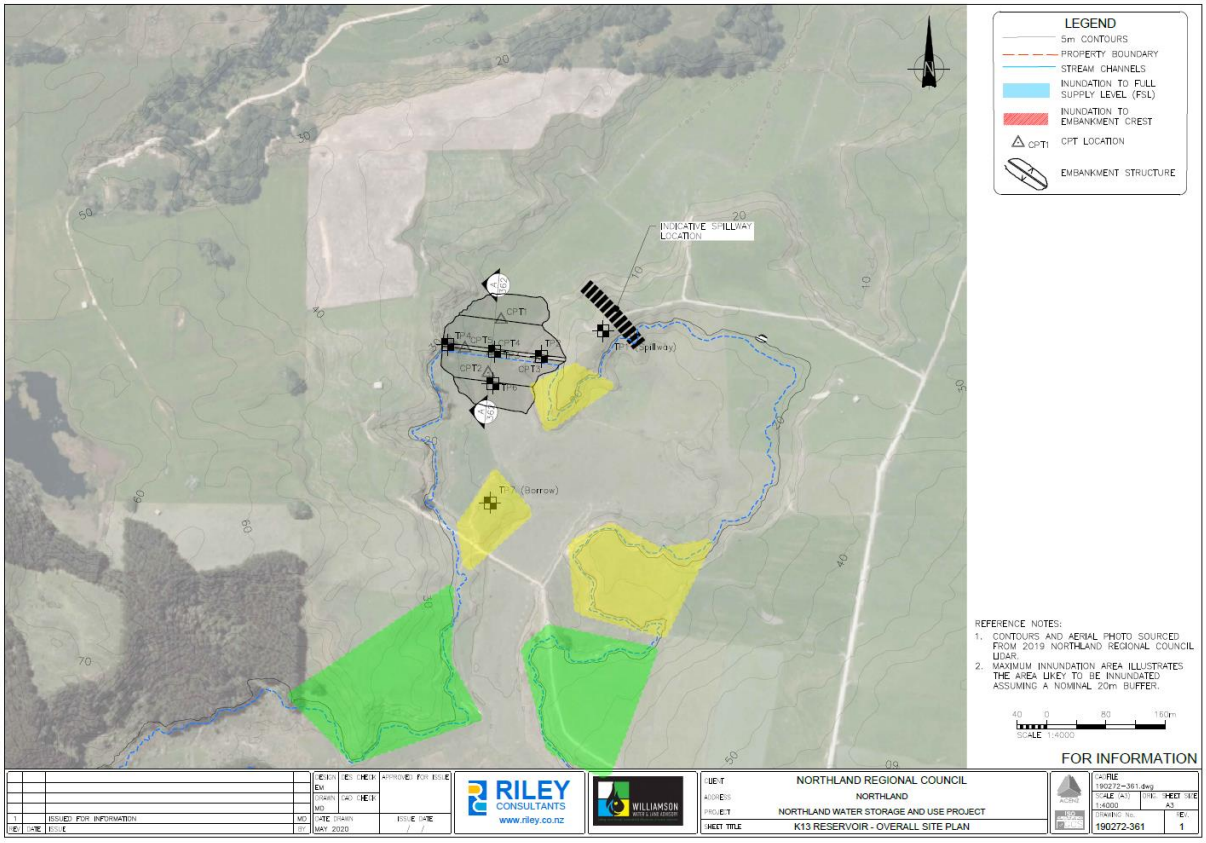


Figure 4: Potential primary (yellow) and secondary (green) borrow areas.

4.0 Methodology

4.1 Desktop and Field Assessment

The methods used to assess the presence and state of archaeological remains in the project area included both a desktop review and field survey. The desktop survey involved an investigation of written records relating to the history of the property. These included regional archaeological publications and unpublished reports, New Zealand Archaeological Association Site Record Files (NZAA SRF - ArchSite - www.archsite.org.nz - is the online repository of the NZAA SRF), land plans held at Land Information New Zealand, and maps and plans held by other public institutions.

The field assessment involved walking over the project area with a concentration on ridges, spurs and stream banks, and examining eroded or exposed ground surfaces. Probing but no test pitting was undertaken, as there were many opportunities to view soil profiles in track cuttings and eroded areas.

4.2 Significance Assessment

Where archaeological sites, features and/or values are present in the vicinity of the proposed track improvements, two sets of criteria are used to assess their significance:

The first set of criteria assess the potential of the site to provide a better understanding of New Zealand's past using scientific archaeological methods. These categories are focussed on the intra-site level.

How complete is the site? Are parts of it already damaged or destroyed? A complete, undisturbed site has a high value in this section, a partly destroyed or damaged site has moderate value and a site of which all parts are damaged is of low value.

How diverse are the features to be expected during an archaeological excavation on the site? A site with only one or two known or expected feature types is of low value. A site with some variety in the known or expected features is of moderate value and a site like a defended kainga which can be expected to contain a complete feature set for a given historic/prehistoric period is of high value in this category.

How rare is the site? Rarity can be described in a local, regional and national context. If the site is not rare at all, it has no significance in this category. If the site is rare in a local context only it is of low significance, if the site is rare in a regional context, it has moderate significance and it is of high significance it the site is rare nationwide.

The second set of criteria puts the site into its broader context: inter-site, archaeological landscape and historic/oral traditions.

What is the context of the site within the surrounding archaeological sites? The question here is the part the site plays within the surrounding known archaeological sites. A site which sits amongst similar surrounding sites without any specific features is of low value. A site which occupies a central position within the surrounding sites is of high value.

What is the context of the site within the landscape? This question is linked to the one above, but focuses onto the position of the site in the landscape. If it is a dominant site with many features still visible it has high value, but if the position in the landscape is ephemeral with little or no features visible it has a low value. This question is also concerned with the amenity value of a site and its potential for on-site education.

What is the context of the site within known historic events or people? This is the question of known cultural association either by tangata whenua or other descendant groups. The closer the site is linked with important historic events or people the higher the significance of the site. This question is also concerned with possible commemorative values of the site.

An overall significance value derives from weighing up the different significance values of each of the six categories. In most cases the significance values across the different categories are similar.

5.0 Environment, Archaeology and History

5.1 Natural Environment

The Pouto Peninsula which forms the north barrier of the Kaipara Harbour runs in the north west to southeast direction and is approximately 55 km long. The width varies from about 5.4 km to about 14 km, with the widest part of the peninsula near its southern end.

The landform is comprised of Quaternary dune sands with consolidated and leached early Pleistocene sands outcropping along the western sides of the peninsular, which are dissected by steep-sided eastwards-draining valleys floored by Holocene alluvial, swamp and estuarine deposits. Younger Pleistocene consolidated sands with partly

eroded dune morphology outcrop west of the older sands at up to 214 m elevation. These sands extend to the west coast forming a coastline characterised by eroding cliffs along the northern part of the north Kaipara barrier. Northwards, there are extensive flats of Holocene alluvial swamp and estuarine deposits in the Dargaville and Ruawai areas. Interspersed between the dunes are numerous dune lakes and ancient swamp formations (Smale et al., 2009).

Soils of the Pouto Peninsula and its northern extension to Maunganui Buff fall into two broad categories: sands on the rolling hills and organic soils in the intervening shallow basins. Sandy soils are recent (Holocene) sands at three stages of development; Pinaki Sand, a well-drained and nearly neutral soil; Te Kopuru Sand, a poorly drained, acidic soil with a peaty subsoil; and Red Hill Sand, a well-drained and mildly acidic. Organic soils (poorly drained acidic peats) occur locally in low-lying basins. Recent alluvial soils occupy the floor of the Kaihu River valley, while lower flats of the Pouto Peninsula and the Ruawai Plains are characterised by Kaipara Soils, gley soils with heavy clay textures derived from estuarine alluvium (Smale et al., 2009).

Before human settlement of New Zealand 800 years BP most of Kaipara would have supported dense rain forest (McGlone and Wilmshurst, 1999). Pollen and charcoal analyses from Northland show that fire and fire-tolerant heathland was abundant during the last Ice Age (14 000–10 000 years BP), decreased during most of the Holocene (began 10 000 years BP), and then increased dramatically after the arrival of humans (Dodson, Enright and McLean, 1988). During the Polynesian period (800–200 years BP), about half of New Zealand was cleared by fire, mostly in the lowlands (McGlone, 1983).

The proposed reservoir site is contained within a gully on the eastern edge of the Early Pleistocene parabolic dunes, where this geological type adjoins the Awhitu Group dunes.

5.2 Archaeological Sites and Context

There are no recorded archaeological sites within 100m of the proposal. However no archaeological surveys or assessments have been undertaken in the area. The nearest recorded sites are more than five kilometres away. The closest of these is pa site P08/2, which is located between West Coast Road and the west coast, and is visible from the road. The site is a large terraced-hill pa, and contains up to 30 storage pits, and multiple terraces suggesting a large degree of kumara cultivation in the area prehistorically.

However subsequent inspection of modern and historic aerial imagery has resulted in the identification of at least seven previously unrecorded archaeological sites between the project area and the coast, and north to pa P08/2. These sites include several large storage complexes with more than 10 pits and/or terraces.

The nearest new site (NS1) is 500m east south east of the project area, between the reservoir and the northern end of Lake Parawanui. It consists of at least six storage pits on a low ridge running east to west.

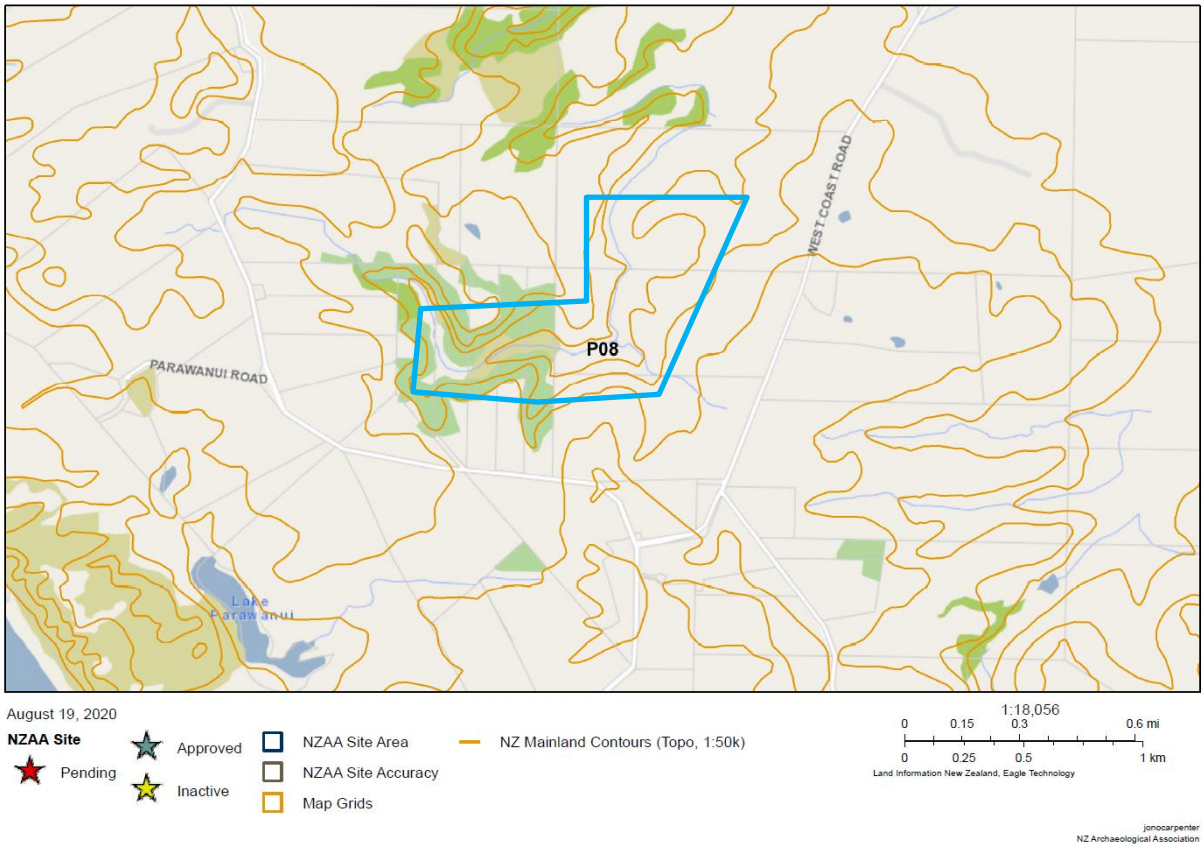


Figure 5: No archaeological sites are recorded in the vicinity of the project area (ArchSite).

Figure 6: Aratapu Reservoir and previously unrecorded sites.

Figure 7: NS1.

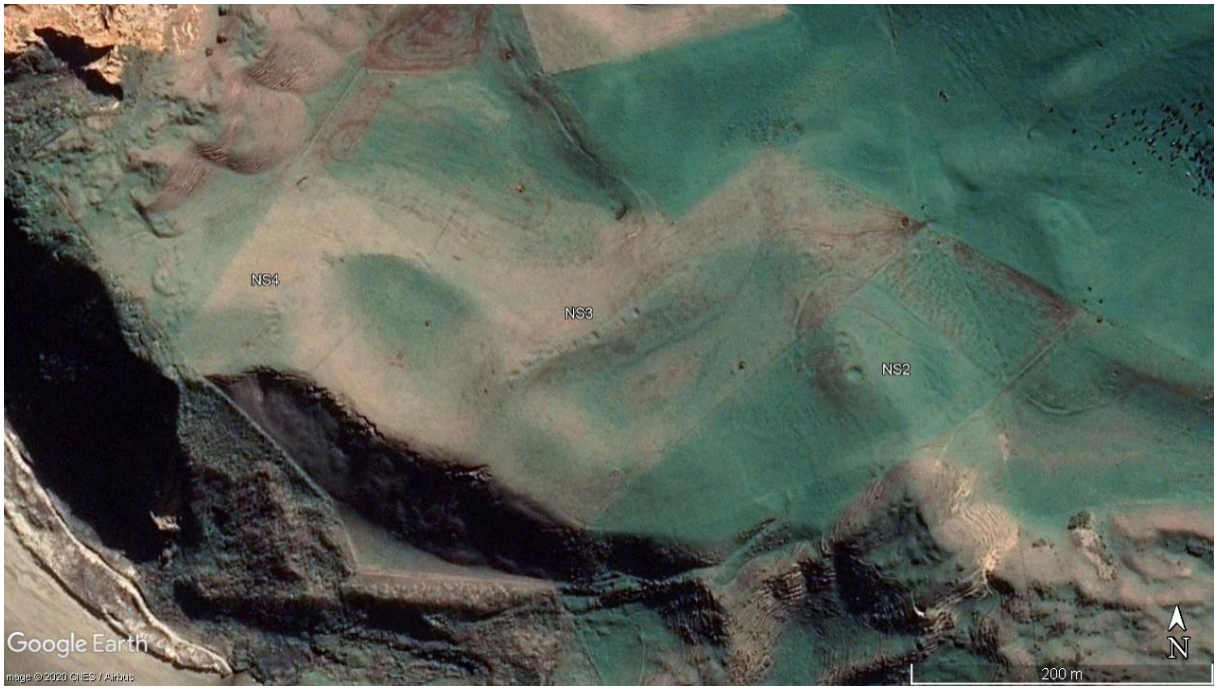


Figure 8: NS 2, 3 and 4.

Figure 9: NS 5, 6 and 7.

Three sites are located immediately north of the unnamed stream immediately north of the western end of Parawanui Road, 200-500m east of the coastal escarpment and two kilometres west of the project area (NS 3, 4 and 5). The three sites lie on different parts of the same winding ridge and appear to consist of up to 20 or more pits and terraces, with NS 4 having more than a dozen visible features. Further north is another pit complex on a north west to south east trending ridgeline immediately west of Lake Kapowai (NS 5). To the north of Lake Kapowai are two more pit complexes, one of which contains at least 10 pits and or terraces (NS 6 and 7). In general the sites are from 200-1000m from the coastal escarpment, and are located near the watercourses and dune lakes.

The presence of these substantial but previously unrecorded sites in the vicinity of the project area suggest an intensive pre- and proto-historic occupation of the area, along with the possibility that archaeological sites or features might be present but as-yet unrecorded in the project area.

5.2 Other Heritage Listings

There are no sites of significance to Maori, or historic places, sites or objects scheduled in the Kaipara District Plan within or near the project area. There are no historic places or wahi tapu on the Heritage New Zealand List.

5.3 Historic Background

The Pouto Peninsula is within the rohe of Te Uri o Hau, a hapu of Ngāti Whātua who in ancient times arrived in the canoe Mahuhu-o-Te-Rangi along with Ngāpuhi, both inhabiting the Kaipara area and settling around Pouto and the South Head of Kaipara Harbour. Te Uri o Hau descend from Haumoewaarangi through Hakiputatomuri, who is Te Uri o Hau's founding ancestor. Te Uri o Hau has approximately 6000 members and ancestral marae at Otamatea, Waikaretu, Oruawharo, and Arapaoa (New Zealand Government, 2000).

Te Uri o Hau came to control the northern part of Kaipara Harbour when Ngāti Whātua expanded south among the resident tribes of Ngāti Awa, Ngāti Ririki and Ngāti Mārua (Taonui, 2017). In 1807 a major battle occurred between Ngāti Whātua and Ngāpuhi tribes at Moremonui, south of Maunganui Bluff where Ngāti Whātua defeated Ngāpuhi. In 1825, at the battle of Te Ika-a-Ranganui near Kaiwaka, Ngāpuhi had their ultimate revenge against Ngāti Whātua, defeating the southerners and leading to the depopulation of the Kaipara area for a decade.

Although largely depopulated following the internecine warfare of the 1820s, much of the area remained in Te Uri o Hau ownership until at least the 1860s. The Te Uri o Hau landholding was first reduced in 1842 when the chiefs of Te Uri o Hau and Ngāpuhi (Chiefs Paikea and Tirarau respectively) ceded to the Crown between 2,200 and 3000 hectares as punishment for Maori action against a storekeeper named Forsaith, believed to have desecrated an urupa and removed human remains. No payment was made for the land. Further loss of land occurred following a series of Crown purchases between 1854 and 1865 which saw 110,000 hectares alienated from Te Uri o Hau, around 60% of their total land holdings in the Otamatea and Pouto areas (Taonui, 2017).

Europeans first arrived in the area in the 1770s when Captain Cook sighted fires burning on the coast of the Northern Peninsula (KKI, 2014)and by the early 1800s sailing ships began to appear in the Kaipara looking for Kauri spars. Soon after, Missionaries began to arrive in the area. Samuel Marsden's journals record that he first visited the area in 1817 and again in 1820. A mission station was built at Okara Point Pa in 1820 and the Reverend Buller operated mission schools in the 1830s and 1840s. The first European traders in sailing ships entered the harbour about 1838, to serve the mission stations and to trade for timber(KKI, 2014). In the later part of the 19th century the area became more popular with European settlers, partly due to an increase in coastal traders plying the waters between Kaipara, Helensville, and the Manukau.

In the later part of the 19th century the area became more popular with European settlers, partly due to an increase in coastal traders plying the waters between Kaipara, Helensville, and the Manukau, thus reducing the need for overland travel. A customs house and pilot station were built at Pouto in 1874 (the customs house was moved to Te Kōpuru in 1903). Later, in 1876, a signal mast was erected in the sand hills at North Head, several miles west of the pilot station. The following year, a telegraph system was set up between the two and in 1884 a lighthouse was built at North Head. This was manned until 1947 when it became automated(KKI, 2014).

An early influx of settlers to the area came with the arrival of the Albertlanders in the 1860.This group was led by William Rawson Brame who had a vision to establish a classless, nonconformist society in New Zealand, which was established at Port Albert on the eastern shores of the Kaipara Harbour. The first migrant ships, the Matilda Wattenbach and Hanover departed from the London Docks on May 29 1982, bound for the Albertland Settlement with the first of over 3000 settlers(KKI, 2014).Other settlers who arrived during this period were associated with the timber and gum digging industries.

Gum diggers operated on the peninsula from the 1870s and lasting into the 1930s. Many of these were "Yugoslavs" -Dalmatian people who had left a war-torn Europe endeavouring to forge a new life in New Zealand. Local Maori were also actively involved in gum digging industry. Dargaville became a major centre of the kauri gum industry, with vast quantities extracted from kanuka/manuka shrublands and wetlands

throughout the district, but particularly the eastern side of the Pouto Peninsula(Bradley, 1982, p. 127).

From the 1870s to the 1920s, the Northern Wairoa was a major centre of the kauri timber industry, with a large sawmill also built on the peninsula at Te Kopuru, although the timber that was supplied to it mostly came from outside the area. Once timber and gum were exhausted throughout the region the sawmills gradually closed and the area was settled for farming. In many cases, settlers from the timber and gum industry transitioned to farming, cutting, and breaking in land from the former forested dunes. Dairy farming became the main form of farming and was well established by the early 20th century.

Tons of kauri gum were being exported from the wharf at Aratapu from the mid-1860s. Crown land was subdivided into Kauri Gum Reserves following the passing of the Kauri Gum Industry Act of 1898.

Dune stabilisation was undertaken in the 1930s on the western coast between Dargaville and Pouto (Cutten, 1934; Harrison-Smith, 1939)and since WWI, further extensive land development for agriculture has taken place, much of it on poorer soils and sponsored by the Government development schemes. This led to most of the remaining shrub lands and secondary growth areas have been cleared and wetlands drained.

5.3.1 Te Kopuru Block and Red Hill

The project area lies within the Te Kopuru Block, ceded to the Crown as compensation for the muru or plundering of Forsaith's store at Mangawhare (near Dargaville), in 1842. The area more generally lies within the boundary zone between the rohe of Te Uri o Hau, Te Roroa and the south western extent of interests associated with Te Parawhau and the southern iwi/hapu of Whangarei and the upper Wairoa River. The project area is at the southern end of the Te Kopuru Block.

The eastern boundary of the Te Kopuru Block land is the Wairoa River; the northern boundary is Te Aratapu Stream and the southern boundary is Te Makaka Stream. On the western boundary is a line connecting these two streams. Subsequently the western boundary was incorrectly taken by the Crown to be the west coast.

Little is known about the occupation of the block between 1842 and 1857, when the Tatariki Block immediately south was surveyed after purchase by the Crown. Ultimately the Crown claimed 9-10,000 acres in 1919, substantially larger than what had been ceded in 1842.

The cession of the Te Kopuru Block was repudiated by Ngati Kawa and Ngati Whiu hapu of Te Rorora from the early 1860s. They had occupied the land prior to the battle of Ika-a- Ranganui, afterwhich they removed themselves to the Hokianga. In 1865 a sawmill was established at Aratapu and the best land in the block had been purchased by settlers. Ngati Kawa and Ngati Whiu again stated their claim with a specific interest in the Aratapu area and suggested that it should never have been included in the cession at Te Tirarau and Paikea had no right to give it up.

Near the southern boundary of the block, immediately south of the project area, the Red Hill settlement was established by European settlers. By the mid-1880s, a school was being run from the teacher's residence and Sandford's gum store had been

established at Red Hill. A Wesleyan church was established in the late 1880s and was soon in use for the local school. Exotic trees were being planted on the marginal land, and as shelter belts and orchards, supplied from the local Red Hill Nursery operated by the Dickson family, and the roads between Te Kopuru, Red Hill and Aratapu were being improved. A post office was opened at Red Hill in 1890 with Neil McLeod sworn in as the first postmaster and G. Dickson the mailman undertaking a weekly service.

In 1891 a gum diggers union was formed at Aratapu and had 40 members. In 1892 the Crown attempted to sell Section 132 on the west side of the project area but the Red Hill community asked that it be retained due to the gum available on the block. In 1892 J. H. Meredith and Sons of Aratapu were selling the rights to gumdigging on their land at Red Hill, noting it was a good winter field, accommodation at low rents was available, and indicating a preference for married men.

Following the Kauri Gum Act of 1908, Sections 127 and 131 became part of the Crown Te Kopuru Gum Reserve. Allotments 131A-E were removed from the No.2 extension of the Te Kopuru Kauri Gum Reserve in 1940 (New Zealand Gazette, 20 June 1940).

5.2.2 Review of Historic Maps, Plans and Aerials

A review of historic maps and plans for the area was undertaken, and the findings reported on above. Twenty two survey plans for the area were inspected, along with early 20th century geological plans, Gum Reserve plans, and mid-20th century aerials.

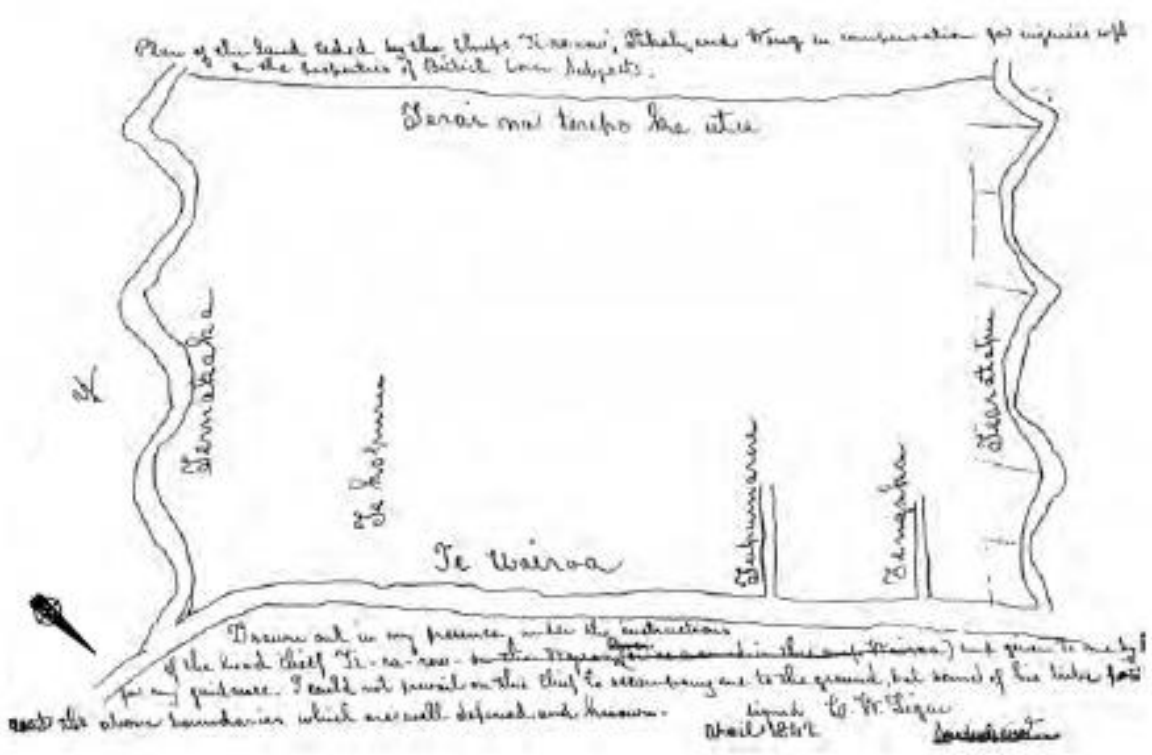
SO 2814 and 2904 (1882) shows the subdivision of sections at the southern end of the Te Kopuru Block including those which encompass the project area. and the survey of the Crown Grant Roads through the area. They show topographic features but no other historic information for the project area.

SO 8026 (1895) shows the western side of the project area, and surrounding areas to the north west. The only item of historic interest is a homestead annotated "C. (or G.) Clunes", on Section 132B.

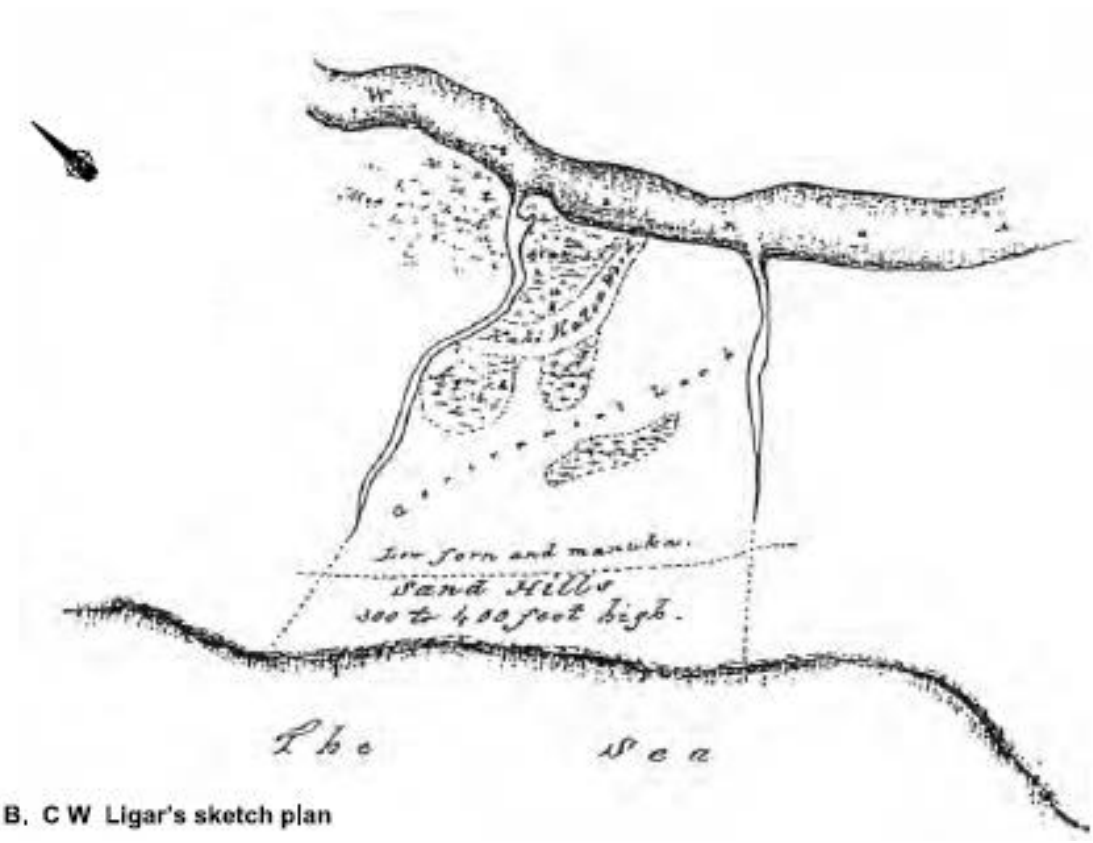
SO 24307 (1927) shows the survey of Section 1 Block V of the Tokatoka Survey District, on the eastern side of West Coast Road from Section 128. This land plan shows Section 1 with a post and wire fence boundary, and a shanty adjacent to the road annotated "Shek Solomon".

SO 27819 (1934) shows Section 125 as leased by W. A. Lochead and Section 126 as leased by Antonio Pitoni, with Section 127 to the south (the northern end of the project area) leased by K. B Hamlin. Section 134 and 135 to the west are leased by K. B. Hamlin and others. Section 124, 125 and 137 are primary and secondary education endowment lands.

Ferrar's 1928 geological survey map of the area shows the Red Hill gum store and post office south east of the project area. It also shows Te Roroa Pa, between Lake Parawanui and Parawanui Road. This pa has not been identified from aerial imagery or historic survey plan, but may be one of the previously unrecorded sites noted above. It also shows a gum digging camp and gum washer around the Red Hill and Mahuta Road intersection, north west of the project area.



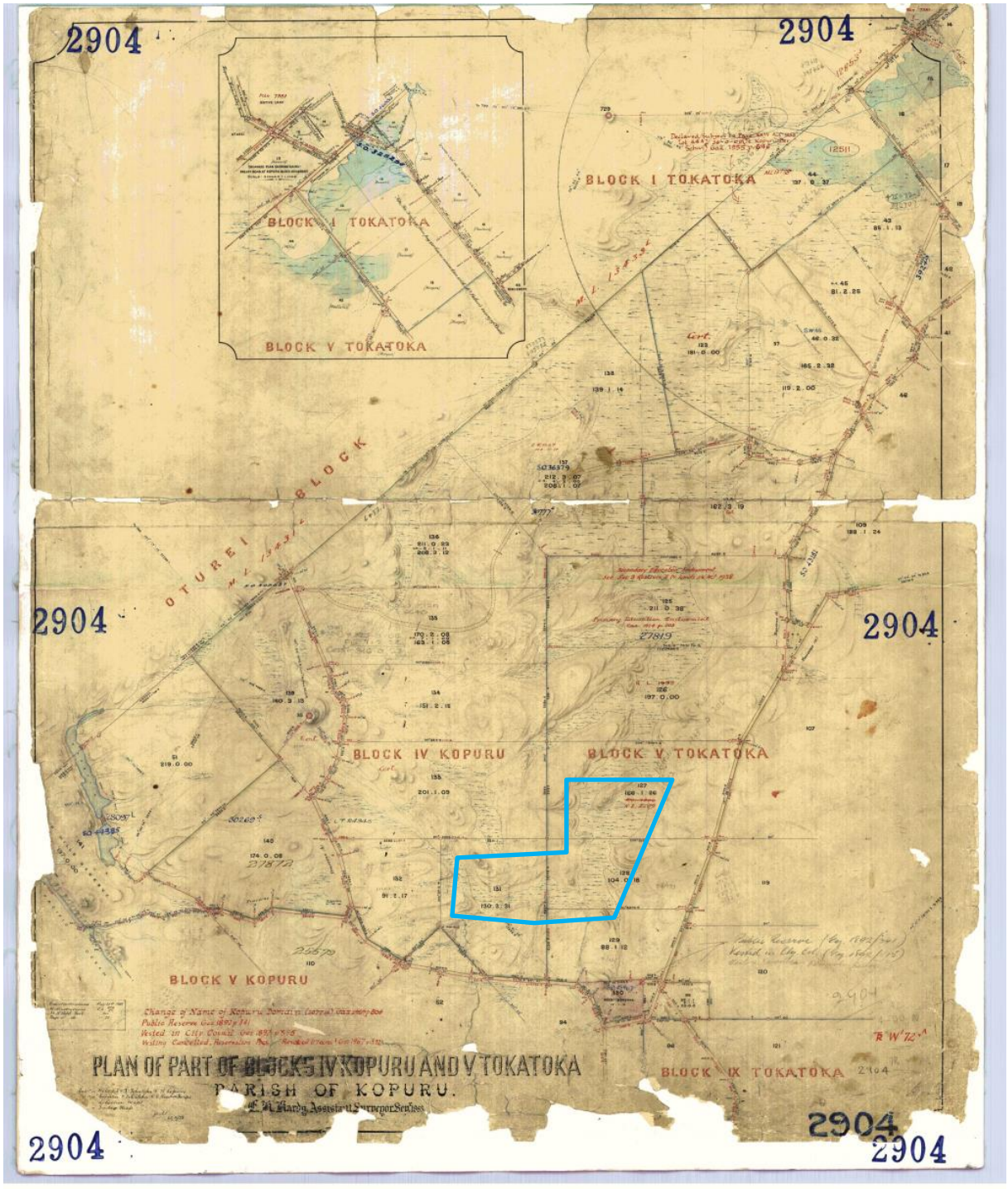
A. Sketch based on instructions of Te Tirarau



B. C W Ligar's sketch plan

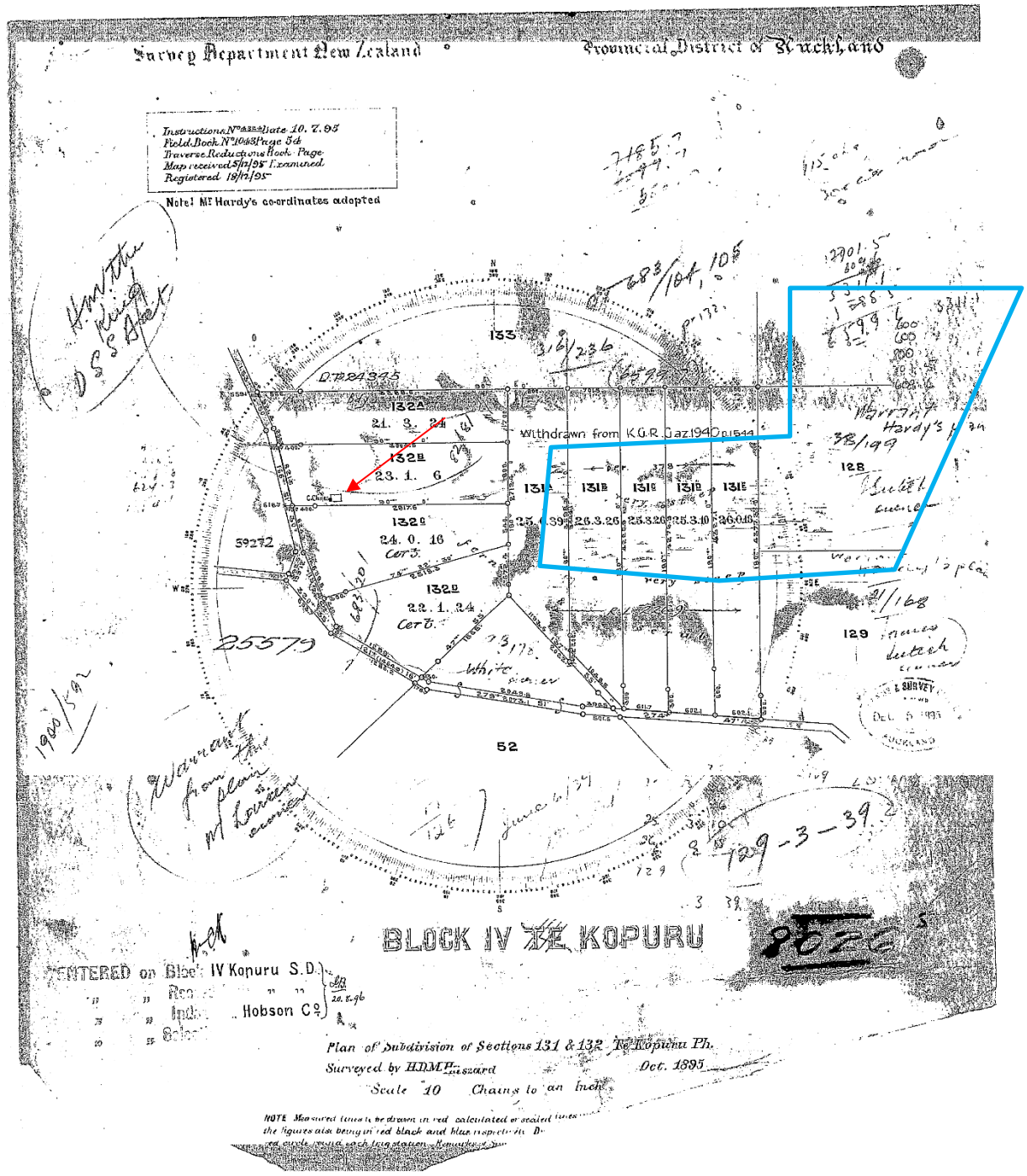
Figure 10: Te Kopuru Block (Waitangi Tribunal 2002: 90, Figure 19).

Figure 11:



Land Information New Zealand, Custom Software Limited, Date Scanned 2002, Last modified March 2002, Plan is probably current as at 29/05/2019

Figure 12: SO 2904 (1882).



Land Information New Zealand, Custom Software Limited, Date Scanned 2002, Last modified March 2002, Plan is probably current as at 29/05/2019

Figure 13: SO 8026 (1895) and Clunes residence (arrowed red).

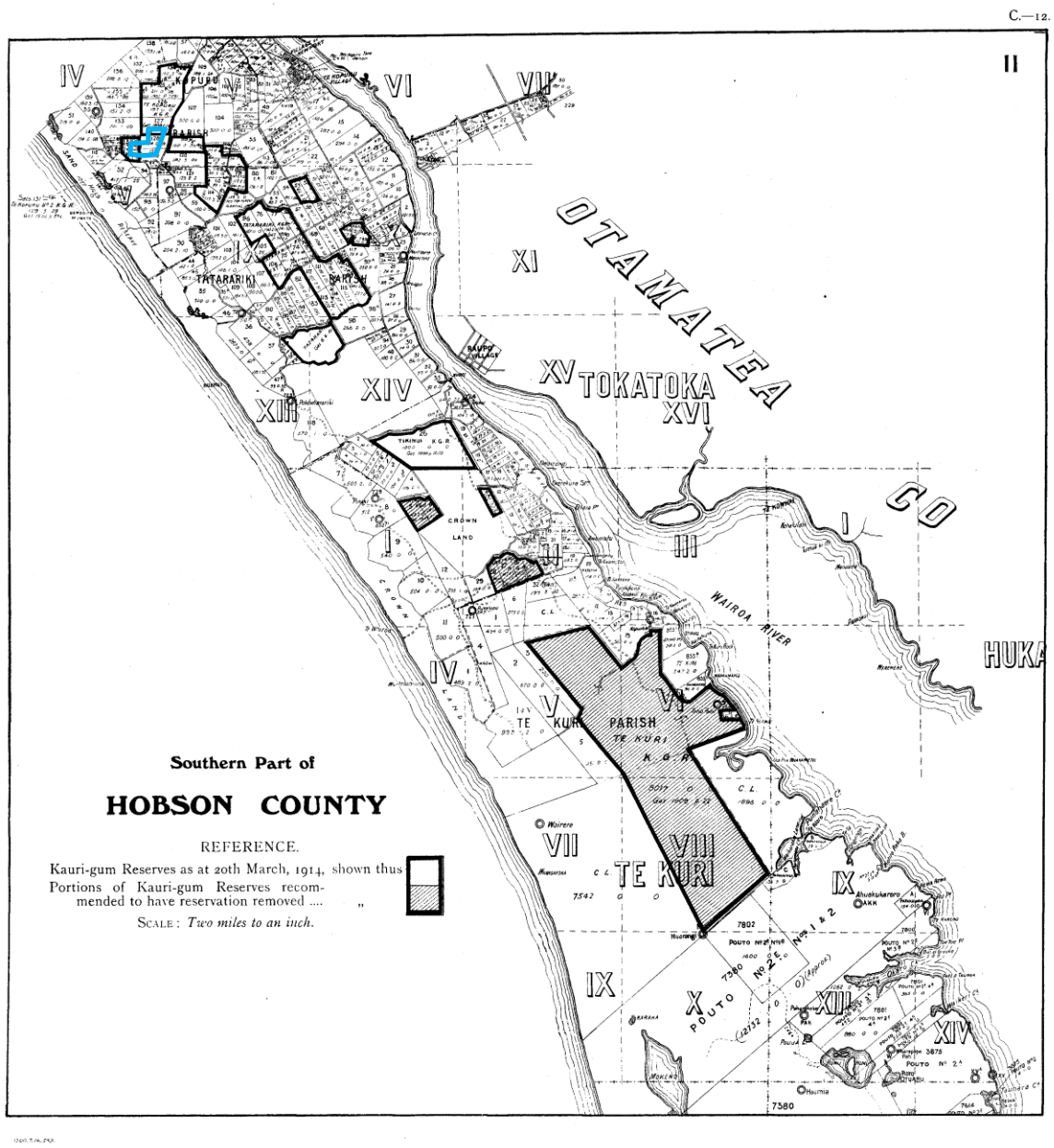


Figure 14: Te Kopuru Kauri Gum Reserve blocks (AJHRS 1914).

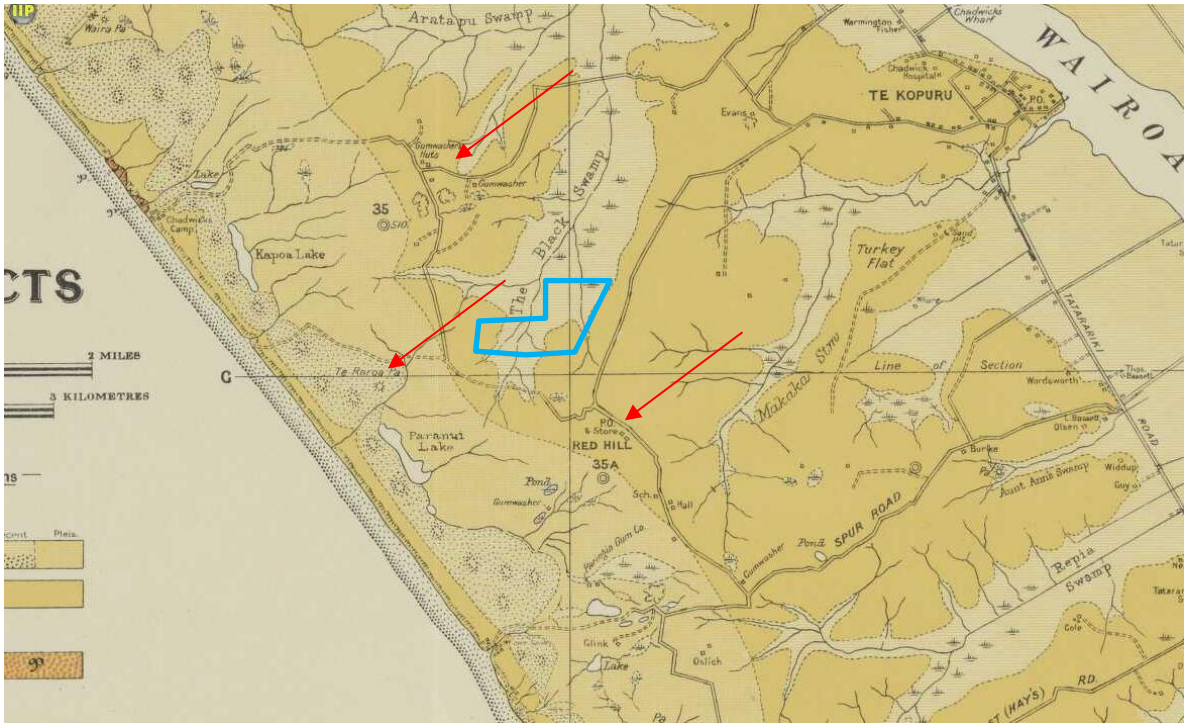


Figure 15: Detail from Ferrar (1928) geological survey; Note Te Roroa Pa immediately north of Lake Parawanui, gum camp at Mahuta and Red Hill Road intserction, and Red Hill post office and store (arrowed red).

Figure 16: SN 212-422-6.

6.0 Field Assessment

The project area was inspected by R. Gibb and D. McCurdy on the 24th July 2020. All the ridgelines were walked over and inspected and probed. Test pits were not required due to multiple soil exposures evident throughout the property, formed by both natural erosion and stock damage. The weather at the time was overcast with the occasional heavy shower. The property is characterised by low spurs running east-west towards the valley located along the eastern and western high ground that overlook the valley floor, and these were the most likely location where evidence of Maori occupation and modification of the land would be found. All of these areas were inspected.

Two features, a small terrace and quarry located on the slope at the bottom of a spur on the eastern side, were noted. The quarry appears to be from recent activity and the terrace was possible the location of an old trough. Neither appear on the 1957 aerial image. These features are farm related and not of Maori origin.

Near the southern end of the farm immediately below the property boundary and stand of pines on the neighbouring property, one new archaeological site has been recorded. The site consists of a series of terraces and pits, located above the inundation level on the western slopes overlooking the proposed dam area. This has been recorded as P08/388. The site consists at least 28 small terraces, 10 rua pits and several possible whare sites located on three low dune ridges and a small hillock, between the 30-60m contour. The features are quite ephemeral but appear largely intact and undamaged by contemporary land use. The site is spread over a slope at the end of the plateaus and over two lower spurs.

Given this location is bracketed by former Te Kopuru Kauri Gum Reserve Blocks (Section 127 to the north, and Sections 131A-E to the south west) and the presence of an early 19th century gum diggers camp further north, these may be gum workings.

The location of the site is above the proposed inundation level and there is no immediate threat to the site. It is recommended that no earthworks, either cut or fill, be undertaken in the immediate area around the site. If earthworks were deemed essential and required in the immediate area, an authority from Heritage New Zealand would be required.

A second feature of note is a series of natural tomos (caves) located on the eastern slopes. These are a natural feature that have been previously filled by the farmer and are not archaeological in nature but are noteworthy as tomos were often used by Maori to inter the dead. It should also be noted that although these tomos were the only ones located on the property, and are located on the other side of the valley from the new pit/terrace site, there is a possibility that there may be further hitherto undiscovered tomos may be on the property.

No evidence of Maori garden drains was found on the valley floor, or evidence of past horticulture, such as taro plots. This area has a large modern drainage network running through it, established post 1957 as shown in a 1957 aerial (SN 212-422-6). At this time, the farm has been established throughout the valley floor and up the eastern flank to West Coast Road but the western hills are still in scrub. Spoil piles from recent drain clearing are spread around the drains throughout this area.

No other archaeological sites were identified during the survey.

Figure 17: P08/388 Terraces and pits.

Figure 18: P08/388 Terraces and pits, and inundation levels.

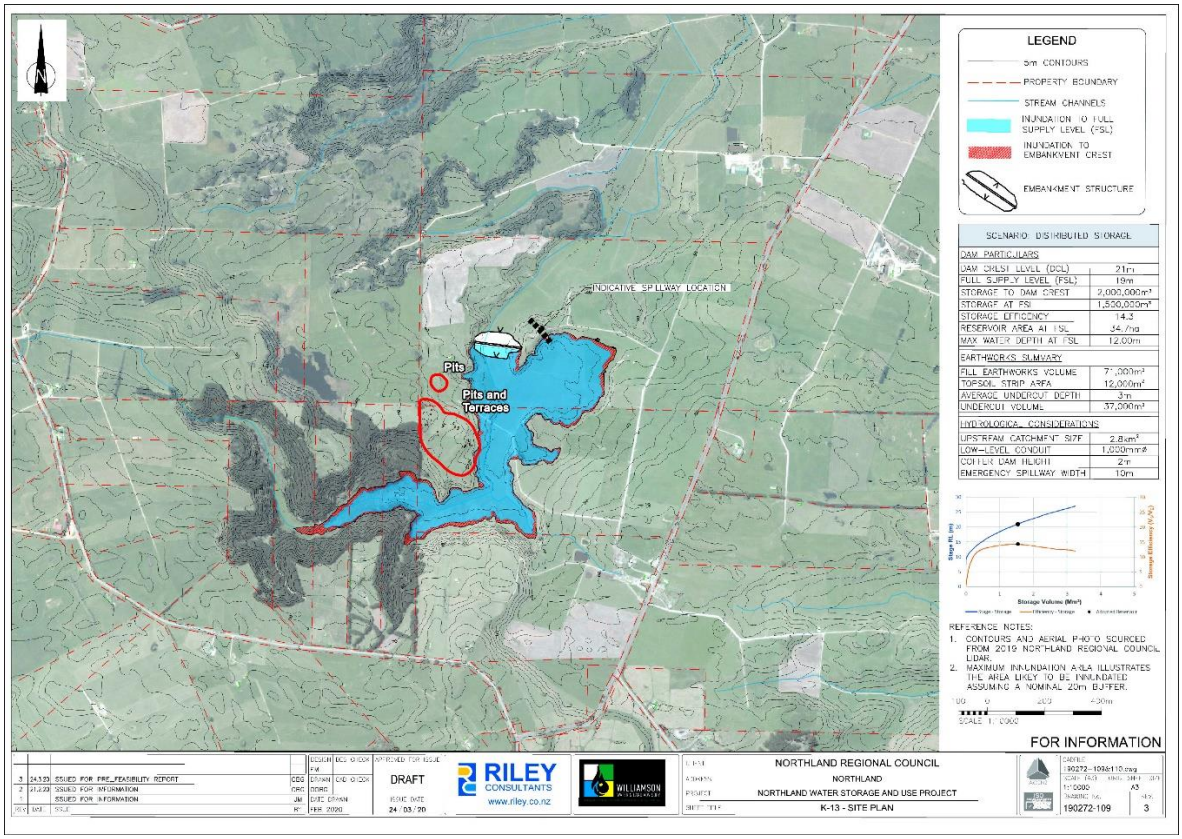


Figure 19: Aratapu Reservoir and P08/388 Terraces and pits location.

Figure 20: Typical soil profile in the project area.

Figure 21: Looking south over northern end of reservoir, over recent pine harvest area.

Figure 22: Lower slope of north facing land in centre of reservoir.

Figure 23: Mid and upper slope of north facing land in centre of reservoir.

Figure 24: Looking over northern valley in centre of reservoir.

7.0 Significance Assessment

Based on the criteria noted above, the site recorded as P08/388 is assessed as being of low to moderate significance.

P08/388 appears to be either a pre-or protohistoric Maori occupation, or potentially a gum digging site based on the form of the features visible on the ground surface, and the land use history of the area. There may be additional subsurface features between the pits and terraces. The observed features are in fair condition.

Table 1: Significance assessment of P08/388.

Significance Category	Value	Comment
Integrity, Condition and Information Potential	Moderate	The features around the edges of the property and close or on the ground surface have been modified stock , farm development and erosion. Subsurface features are likely to be present below the existing ground surface. They have the potential to provide information including dates of occupation, subsistence practices and environmental reconstruction.
Diversity	Moderate	The surface feature consists of a large number of in-filled pits and possible terraces or house floors, on the surface. Other associated subsurface features may be present within or adjacent to the surface features and may include postholes from structures, lithic artefacts from food preparation, shell midden and cooking/heating features.
Rarity and Uniqueness	Low	A large number of pit and terrace complexes are present on the Pouto Peninsula, although most of the recorded sites are to the south. Review of aerial imagery suggests there are a much larger number of such sites in the strip of land between Baileys Beach to the north and Glinks Gully to the south, than have been previously recorded.
Archaeological Context	Low	The site may be associated with similar occupation sites recorded to the west and north west and relate to the pre- or protohistoric Maori occupation of the area. They may also be associated with gum digging in the late 19th or early 20th century.
Landscape Context and Amenity Value	Low	The site is not visible in the wider landscape or obvious from the ground nearby. It is on private property and has no recreational or educational amenity.
Historical Associations and Community Connections	Low	The site is may be of significance to the local Maori community. There do not appear to be any particular associations with historic events or people, and the site may be from gum digging activity.

8.0 Assessment of Effects

There are no identified archaeological sites or features within the footprint of the dam wall or reservoir. However there is a newly recorded pit and terrace complex site P08/388 immediately west/above the north western inundation extent. The southern end of this site lies within an area designated as a possible source for borrowing fill for the dam wall, and borrowing from this area as indicated could modify or destroy up to eleven terraces.

It is also possible that accidental damage may occur to other parts of the recorded site P08/388 if care is not taken during construction, even if that area is not ultimately required to supply fill.

Given the large scale of the project and the requirement to strip topsoil across the footprint of the dam wall, and borrow fill for wall construction, along with associated haul roads, hard stands and yards, and sediment control, it is possible that other unrecorded subsurface features may be uncovered and will be modified destroyed in the course of the project.

Subsurface features are unlikely to be proactively identified/identifiable prior to the commencement of earthworks, such as by exploratory or test excavation across the area by hand or mechanical excavator. Such features are more likely to be identified during topsoil stripping through archaeological monitoring.

Such monitoring should be targeted at those areas most likely to contain archaeological sites and features, namely ridge tops and gentle north-facing slopes and descending ridges and spurs which will be affected by the dam wall, borrow areas and associated works.

It is possible that wooden artefacts may be found in wetland or waterlogged deposits on the valley floors, as such artefacts were often cached in wetlands for protection. These may be uncovered if existing wetlands and drains are stripped prior to dam construction and inundation.

9.0 Findings and Recommendations

1) There may be archaeological effects from the proposed Aratapu Water Storage Reservoir.

2) The Te Tai Tokerau Water Trust should apply for a general archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 to modify unrecorded subsurface archaeological sites and features which may be affected by the Aratapu Water Storage Reservoir and undertake this work in accordance with a suitable archaeological site instruction.

3) Given the lack of definite archaeological effects, an archaeological site instruction will suffice and no research strategy is recommended due to the lack of specific archaeological features to be investigated. The archaeological site instruction will include a standard approach to investigation and analysis of any accidental archaeological discoveries. This will be aimed at providing baseline information with regard to site use, chronology, and paleo environment in the project area.

4) P08/388 should be avoided in the first instance, and if the secondary borrow area is used, the site should be excluded as a first preference.

5) The applicant should undertake consultation with Tangata Whenua in light of the findings and recommendations from this report, as part of the archaeological authority process and should develop protocols around the appropriate tikanga for Maori archaeological sites and features and discuss opportunities for cultural monitoring of earthworks.

6) Earthworks for the project are likely to require monitoring by an archaeologist in areas of higher archaeological potential such as along the ridges and spurs to be stripped for the dam wall, borrow sites, and associated works. Spot-monitoring and on-call procedures should suffice in other areas.

10.0 Summary

Geometria Ltd was commissioned by Williamson Water & Land Advisory on behalf of the Te Tai Tokerau Water Trust to undertake an archaeological assessment of the proposed new Aratapu Water Storage Reservoir.

The proposed new reservoir itself will not affect any known archaeological or historic heritage sites or features. However one new pit and terrace complex site was recorded immediately adjacent to the western side of the project area. This area may be used to borrow fill for the dam will.

Given the scale of the project it is possible that subsurface archaeological sites or features may be affected in the course of earthworks. For that reason, a precautionary approach is recommended, including applying for an archaeological authority from Heritage New Zealand Pouhere Taonga under the Heritage New Zealand Pouhere Taonga Act 2014, and preparation of an appropriate archaeological site instruction to monitor higher risk areas and provide protocols for managing effects on other areas.

11.0 References

11.1 Books and Reports

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Dodson, J. R., Enright, N. J. and McLean, R. F. (1988) 'A late Quaternary vegetation history for far northern New Zealand', Journal of Biogeography, 15, pp. 647–656.

Harrison-Smith, J. (1939) 'Sand Dune Reclamation', New Zealand Journal of Forestry, 4, pp. 227–235.

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Waitangi Tribunal, 2002. The Kaipara Interim Report. Wai 674. Waitangi Tribunal, Wellington.

Waitangi Tribunal, 2006. The Kaipara Report. Wai. 674. Waitangi Tribunal, Wellington.

11.2 Maps, Plans, Photographs and Other Images

<u>11.2.1 Land plans</u>

Deed 1314 (1929).

DP 917 (1889).

DP 2808 (1903).

DP 11139 (1916).

DP 24345 (1932).

DP 25579 (1933).

DP 27872 (1938).

DP 33728 (1946).

DP 39978 (1952).

SO 2801 (1882).

SO 2810 (1881).

SO 2814A (1883).

SO 2904 (1892).

SO 8026 (1895).

SO 24307 (1927).

SO 30269 (1939).

SO 35969 (1950).

SO 36923 (1951).

SO 43181 (1961).

SO 44047 (1961).

SO 44158 (1963).

SO 45976 (1968).

Appendix A – Draft Archaeological Site Instruction and Methodology

A1.0 General On-Call Procedures for Potential Archaeological Finds

1) Stop work in the immediate area around the find.
2) Secure and mark the area, and any hazards.
3) Inform the site supervisor/foreman.
4) Supervisor will inform the Project Manager, Project Archaeologist, and Environs Kaitiaki (if the archaeologist and Kaitiaki are not present).
5) Project Archaeologist and cultural monitor/kaitiaki will inspect the find and the Project Archaeologist will advise the Site Supervisor and Project Manager as to whether the find is or is not archaeological, and if archaeological, whether it is a significant find such as koiwi tangata/human remains or taonga tuturu/a protected object, and enact the appropriate protocol.

   For further detail, see Section A7.2 for general archaeological discoveries, A7.3 for human remains/koiwi tangata, and A7.4 for protected objects/taonga.

6) Work in the affected area may recommence following the all-clear by the Project Manager, after consultation with the Project Archaeologist and Tangata Whenua, and any necessary investigations.

A2.0 Key Contacts for Archaeological Finds

Find Type[1]	Role	Name	Primary Phone	Email
GA, K, T,	Project Manager	TBA		
GA, K, T,	Project Archaeologist	Jonathan Carpenter	021 893063	jono@geometria.co.nz
GA, K, T,	Contractor	TBA		
GA, K, T,	Kaitiaki/ Cultural Monitor	TBA		
K	NZ Police	Dargaville Police Station	09 4393400	
T	Ministry of Culture and Heritage	Nancy Watters	04 4994229	protected-objects@mch.govt.nz
K, T	Heritage New Zealand	James Robinson	027 4284990	jrobinson@heritage.org.nz

[1] GA=General archaeological discoveries, K=Koiwi Tangata, T=Taonga Tuturu

A3.0 Parties to the Plan

Client Representative	TBA
Project Manager/Principal Contractor	TBA
Iwi Liaison/Cultural Monitor:	TBA
Project Archaeologist	Jonathan Carpenter 021 893063 Geometria Ltd jono@geometria.co.nz
Heritage New Zealand	James Robinson 09 401 7947 027 4284990 archaeologistNA@heritage.org.nz Heritage NZ PO Box 836 Kerikeri 0245

All staff, contractors and sub-contractors involved in the project are to be made aware of the Site instruction. They must abide by the Site instruction as a condition of employment or contract while working on this project. Other parties may be involved in the case of accidental discoveries of human remains/koiwi tangata (e.g. NZ Police, Northland DHB/Coroner) or protected objects/taonga (Ministry of Culture and Heritage).

A4.0 Background to the Site Instruction

This Site Instruction is a to guide to managing archaeological issues that arise during the development of the new Aratapu Water Storage Reservoir at Aratapu.

Prior to any ground disturbing work an archaeological Authority under Section 48 of the Heritage New Zealand Pouhere Taonga Act 2014 will be required in order to modify previously recorded archaeological sites as described in the archaeological assessment, *Carpenter, J, 2020. Archaeological Assessment of the Proposed New Water Supply Aratapu Water Storage Reservoir.*

Archaeological authorities typically require the preparation of an archaeological Site instruction to provide a process for managing archaeological issues encountered during day to day operations for projects with archaeological effects.

No work can commence on this authority until this site instruction is received and approved by Heritage New Zealand Pouhere Taonga. Any changes to the site instruction will require the prior written agreement of Heritage New Zealand Pouhere Taonga.

Any changes to work affecting archaeological sites in this site instruction require the prior written agreement of Heritage New Zealand

A4.1 Site Instruction Objective
To specify and co-ordinate the operational guidelines and procedures for the day to day activities that may affect archaeological sites during the building relocation. These procedures are to ensure the protection of the archaeological features and sites on the subject property and/or manage their investigation, modification or destruction, to specify methodologies for managing earthworks in an archaeologically sensitive environment, to clarify roles, and to ensure there are mechanisms in place so that contractors comply with the site instruction.

A4.2 Site Instruction Context
This Site Instruction has been prepared to accompany an application for an Authority to modify an archaeological site and such a document is likely to be required as a condition of the granted Authority. Adhering to Authority conditions is a legal requirement, and under section 88 of the Heritage New Zealand Pouhere Taonga Act 2014:

Penalties for breach of archaeological authority conditions include fines of up to $120,000.

Penalties for modifying a site without an authority include fines of up to $300,000 for destruction of a site.

A4.3 Definitions
Archaeological issues are those which arise due to the effects or possible effects of the building relocation on recorded and unrecorded archaeological sites, and may also be taken to include effects on wahi tapu, protected objects or taonga tuturu, and human remains or koiwi tangata. These terms are defined below:

Archaeological Site – Under the HNZPTA, any place including a building or structure that was associated with human activity that pre-dates 1900 and that can be investigated by archaeological methods and provide evidence relating to the history of New Zealand.

Under the HNZPTA all archaeological sites are protected from any modification, damage or destruction.

If a development is likely to impact on an archaeological site or sites, an authority to modify or destroy the site/s can be sought from the local Heritage New Zealand Pouhere Taonga office under Section 44 of the Act. Where damage or destruction of archaeological sites is to occur Heritage New Zealand usually requires mitigation.

Wahi tapu – Any site of cultural, religious or spiritual significance to Tangata Whenua.

Taonga - artefacts such as implements, weapons or decorations traditionally and historically utilised by Tangata Whenua and include parts or the remains thereof.
Koiwi Tangata – Human skeletal remains. These may be archaeological, or of more recent origin.

A4.4 Context of the Archaeology

An initial review of the history and archaeology of new water supply project was undertaken in mid2020:

- There were no known archaeological sites or features in the project area.
- However there is a long history of human occupation of the wider area based on traditional histories, with a historic period Maori occupation noted from the early 1800s by European observers, followed by European settlement of the area in the mid-19th century.
- In the late 19th and early 20th century, gum digging occurred in the area, which was part of the Te Kopuru Kauri Gum Reserve.
- One archaeological site, P08/388 Terraces and pits as recorded immediately adjacent to the north west side of the project area.
- The site may be affected by borrowing fill for the dam wall.
- Archaeological monitoring recommended for sensitive areas/works where archaeological features are most likely to be encountered, and on-call procedures to manage any discoveries elsewhere and/or in the absence of the archaeologist.
- **Effects needs to be managed in accordance with the Heritage New Zealand Pouhere Taonga Act 2014 and the archaeological authority and associated conditions granted for the park project.**

A5.0 Site Management Procedures

A5.1 Pre-start

The archaeologist and cultural monitor/kaitiaki for the Tangata Whenua will attend the pre-start meeting/site induction with contractors prior to works commencing to provide an archaeological and cultural briefing and any other Tikanga as required.

A plan and timetable for archaeological monitoring will be developed, based on areas of higher archaeological potential, although accidental discoveries may occur anywhere and will require investigating.

On-call protocols will be discussed in the event that features are uncovered or modified, or artefacts, taonga or human remains/koiwi tangata are discovered in the absence of the archaeologist.

P08/388 will be marked out and avoided by contractors.

A5.2 Earthworks and other Ground Disturbing Activity

The archaeologist will monitor topsoil stripping on the eastern side of the dam and spillway location, and borrow areas as indicated **See Figure A1 and A2 (Red polygon)**

Any work undertaken in the absence of the archaeologist in areas which are not archaeologically sensitive or elsewhere in the absence of the archaeologist will be managed according to the on-call protocols described below.

Additional areas for monitoring may be identified in the course of the project

Archaeological features revealed and or modified by the project will be excavated, sampled, recorded, analysed and reported on using standard techniques for the feature types encountered as discussed in the Appendix below.

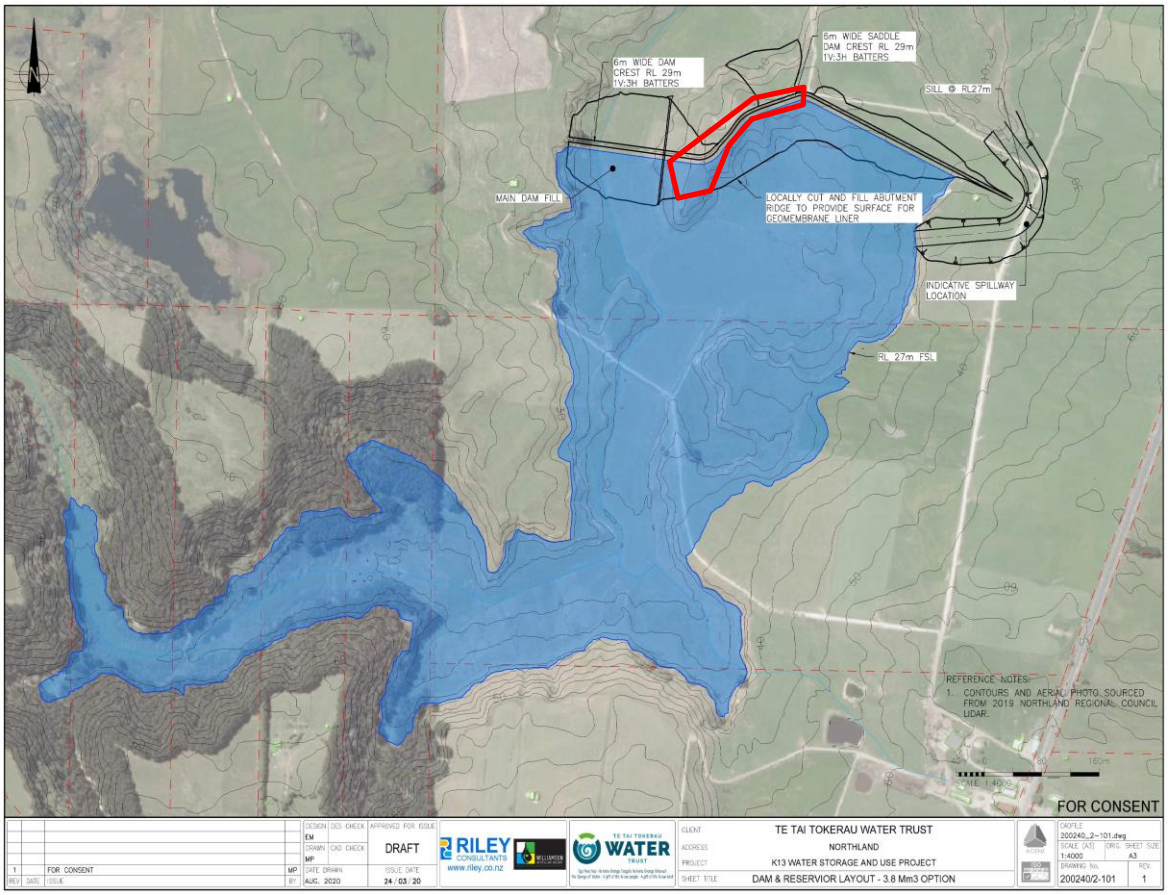


Figure A1: Areas for monitoring (Dam construction).

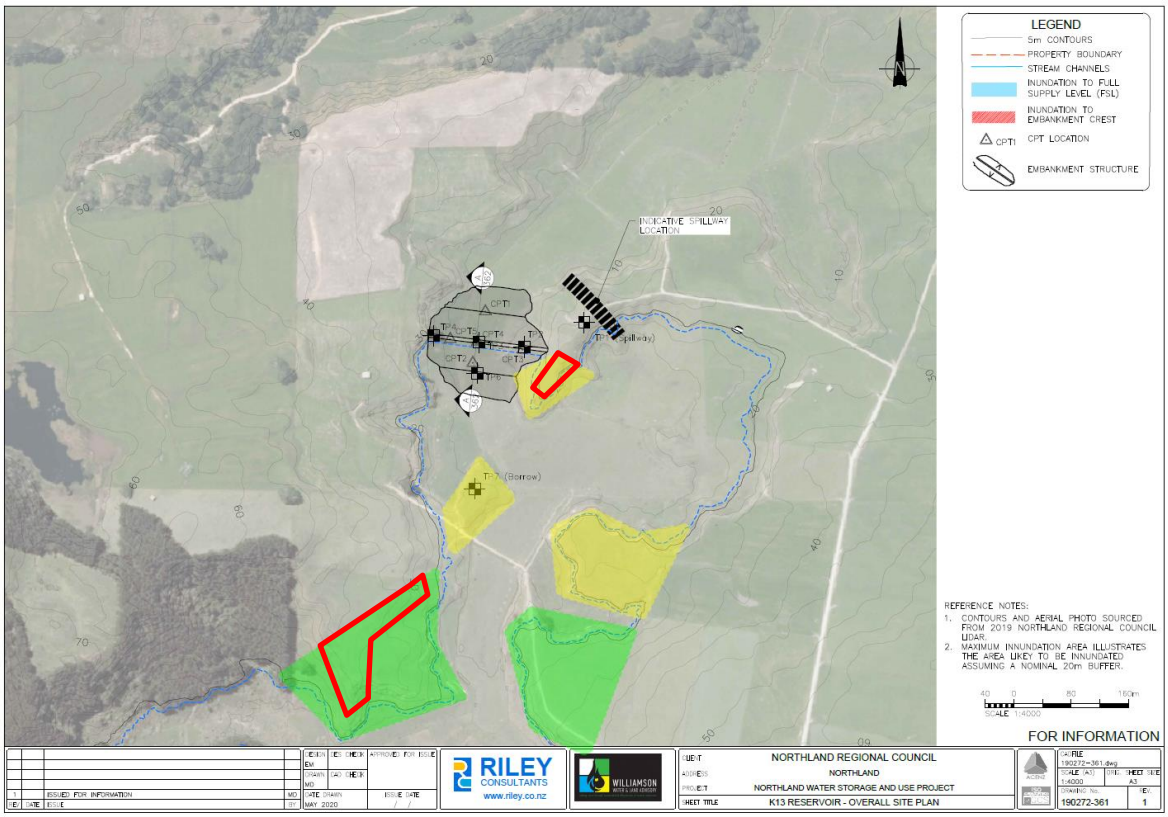


Figure A2: Areas identified for monitoring (borrow).

A5.3 On-Call Procedures

On-call procedures and spot monitoring are in place for all works occurring elsewhere in the project area.

A6.0 Responsibilities

A6.1 Client

- Ensure that the conditions of the archaeological authority are met.

A6.2 Contractor

- Ensure the Project Archaeologist is informed of the start and finish dates of any archaeological work required as a condition of this authority.

- In liaison with the Project Archaeologist and HNZPT Northland area Project Archaeologist, plan the sequence of work to allow for any required archaeological and conservation work, including arranging an on-site archaeological briefing prior to works commencing and preferably as part of the main site induction/briefing.

- Cooperate with all parties involved to allow any archaeological work including, but not limited to, accidental discoveries, site damage or monitoring to be completed as required in this site instruction.

- Make immediate contact with the Project Archaeologist in the event of accidental discovery or site damage to archaeological features (See protocols for accidental discovery and site damage below).

- Undertake consultation with Tangata Whenua and in association with the Project Archaeologist and implement any taonga Maori protocols or archaeological investigation or monitoring requirements if archaeological sites, taonga or human remains are discovered.

- Ensure that copies of the HNZPT approved Site instruction and HNZPT Authority are available on site and are provided/known to all relevant parties including contractors and Tangata Whenua.

- Manage risks surrounding the sites to ensure that methods used in do not damage or affect sites of archaeological significance. A dialogue with the Project Archaeologist is important in identifying and minimizing potential risks to the sites.

- In conjunction with the Project Archaeologist conduct a Hazard Assessment and identify all potential risks to the health or safety of any individual involved in the works. The hazard assessment will also identify all potential risks to the environment as a result of the works.

- In conjunction with the Project Archaeologist update their Health, Safety and Environmental Management Plan (HSEMP) in which all risks are identified and processes put in place to eliminate, isolate or mitigate these risks.

- Be responsible for on-site safety by ensuring that all processes and procedures identified in the HSEMP are implemented and actively followed. Access restrictions may be necessary at times for safety reasons.

• When required provide access to the site and allow for the activities of the project Archaeologist as detailed in this plan and the HNZPT authority.

• Ensure that any archaeological remains on site are secured from unauthorised interference or removal.

• Provide reasonable assistance with requests for investigatory earthworks for archaeological purposes.

• Be required to keep confidential all archaeological discoveries, including archaeological remains, *koiwi, taonga* or artefacts, unless agreed by all relevant parties, including the Department of Conservation, HNZPT, and Tangata Whenua.

A6.3 Project Archaeologist

• Liaise with the other parties and comply with all health, safety and environmental requirements on the subject property.

• Provide an archaeological briefing to contractors on-site before work commences.

• Investigate and/or monitor earthworks that may affect any archaeological sites.

• Determine whether or not any deposits that are uncovered are archaeological or not.

• Identify, record, investigate and sample archaeological stratigraphy, features, and remains in accordance with the authority requirements and accepted archaeological practice.

• Recover, analyse, record and preserve as appropriate any Maori material cultural remains, historic artefacts, bulk shell samples, samples for radiocarbon dating, and remains of diagnostic fauna and flora.

• Undertake any archaeological work in conformity with any taonga Maori protocols or monitoring requirements agreed to by Tangata Whenua and the authority holder that are identified to the Project Archaeologist.

• Allow for involvement of Tangata Whenua representatives in archaeological work where requested. Upon discovery of any archaeological remains the Project Archaeologist will immediately discuss and agree with the project manager about any pending stand down periods.

• Any wooden artefacts that are discovered are to be recovered in accordance with best archaeological practice and appropriate conservation science. Specialist assistance may be necessary.

• Notify the discovery of taonga and recognised Maori cultural material to the Ministry for Culture and Heritage or local public museum as required by the Antiquities Act 1975. Decisions on the custody of artefacts are made by the Ministry in consultation with tangata whenua.

• If any koiwi tangata (human remains) are encountered, no further site modification in the vicinity of the remains shall occur until Tangata Whenua and the HNZPT have

been advised and their responses received. Additionally, the NZ Police should be notified as appropriate.

A6.4 Tangata Whenua Contact/Iwi Monitor

The Tangata Whenua will undertake any Tikanga Maori protocols as necessary and according to the conditions of the archaeological authority.

- This may include but is not limited to identifying appropriate personnel e.g. kaumatua, cultural monitor, undertaking blessings/karakia and cultural monitoring, responding to accidental discoveries and consulting with the other parties about management and operational issues.

- Communicating issues to all the Tangata Whenua named in the authority, as they arise.

A6.5 Heritage New Zealand Pouhere Taonga

The HNZPT Northland Area Archaeologist shall be available to advise and mediate. This includes:

• Being a point of contact in the event of site damage or uncovering of further archaeological remains.

• The HNZPT Northland Area Archaeologist shall abide by the site safety system and direction in relation to matters of site practice.

In the event of any disputes the HNZPT may act as mediator and/or final arbiter of any matters pertaining to effects on archaeological sites.

A7.0 Operational Guidance

A7.1 Stand Down Periods

Time delays should only occur if archaeological features, koiwi/human remains, or taonga are discovered during track construction. The length of the delay will depend on the nature and the extent of any finds and weather. Generally the site Project Archaeologist will attempt to isolate the affected area and shall take reasonable steps to minimise any delays to construction. Most anticipated archaeological remains should require no more than 2-3 days to be cleared. Exceptional, complex or extensive remains may require additional time and periods of delay will be negotiated with the project manager and the contractors.

A7.2 On-Call Procedures

All staff and contractors should be alert for archaeological sites/features in the course of their duties. These may take the form of unusual surface or subsurface features (holes, pits, other cuts and fills or unusual soil formations), natural features out of context (shell in piles or layers, water rolled or fire-cracked rocks, charcoal smears or concentrations) and items of human manufacture (glass and ceramics, metals and plastics, concrete and brick, worked timber).

In the event of the discovery of sites/features by anyone on-site the following protocol and any additional measures required by the Tangata Whenua will be followed:

1) All work within 10m of the discovery will cease until the Project Archaeologist advises it is appropriate to proceed, except in the case of human remains/koiwi tangata where work will cease within 20m of the discovery.

2) The Project Archaeologist and Tangata Whenua representative will be informed immediately if not present.

3) The Project Archaeologist will carry out archaeological investigation as quickly as possible according to conditions of the authority and the contents of this Site instruction.

4) If human remains are discovered the Koiwi Discovery Protocol set out below in 5.3 will be followed.

5) If taonga are unearthed the protocol set out below in 5.4 will be followed.

In the event that significant archaeological features or artefacts are found in-situ, a stand down of up to three days in the immediate vicinity of the remains may be required to inform and receive a response from the HNZPT. HNZPT may require an archaeological investigation. Work may resume when the Project Archaeologist advises that the work is complete.

A7.3 Koiwi Tangata/Human Remains Discovery
In the event of the discovery of koiwi tangata (human remains) the following protocol and any additional measures required by the Tangata Whenua will be followed:

1) All work on site will cease within 20m and the remains are not to be further disturbed in any way of the authority.

2) If it is not clear whether the bone is human, work in the immediate vicinity will cease until a reference collection and/or a specialist can be consulted and identification made.

3) The Project Archaeologist or Tangata Whenua representative will be notified if not present, along with DOC, HNZPT and Police.

4) The area containing the koiwi will be secured in such a manner as to protect the remains from further damage.

5) A site inspection by Tangata Whenua and appropriate statutory agencies (Police, District Health Board) will be arranged and they will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.

6) Koiwi will be handled in accordance with wishes and protocols requested by the Tangata Whenua. If requested, this may include the removal of the remains for analysis prior to reburia.

7) If the remains cannot be removed by Tangata Whenua or their authorised agent within the stand down period, the Project Manager may request the Project Archaeologist to remove the remains and deposit them at the mortuary or appropriate repository until other arrangements are made.

8) The Project Archaeologist will give clearance for work to proceed in consultation with the Tangata Whenua representative, once the remains are removed.

In the event that koiwi tangata are found, a stand down of up to three days may be required to confirm the identification, consult with affected parties, observe protocols and remove remains. Work may resume once the remains are removed from the site and protocols have been observed.

A7.4 Taonga Tuturu Discovery Procedure

In the event of the discovery of taonga (treasures) such as carvings, stone adzes and greenstone objects, or other objects falling under the definition of "Taonga Tuturu" under the Protected Objects Act 1975, the following protocol and any additional measures required by the Tangata Whenua will be followed:

1) If necessary the area of the site containing the taonga will be secured in a way that protects the taonga as far as possible from further damage (or theft), consisted with the conditions of the Authority.

2) The Project Archaeologist will inform the NZ HNZ and nominated Tangata Whenua representative so that appropriate actions (both archaeological and cultural) can be determined.

3) If the Project Archaeologist is not present he will be contacted immediately and informed of the find.

4) If the object is determined to be Taonga Tuturu under the Protected Objects Act 1975, the Project Archaeologist will notify the Ministry of Culture and Heritage within 28 days as required under the Act.

5) The Ministry for Culture and Heritage, in consultation with Tangata Whenua, will decide on custody or ownership of the Taonga.

6) If the taonga requires conservation treatment (stabilisation), the Ministry will be informed and will arrange and pay for this to be undertaken by the Department of Anthropology, University of Auckland. It would then be returned to the custodian.

In the event that taonga are found, a stand down of up to three days may be required to consult with affected parties and undertake archaeological investigation as required. Work may resume when the Project Archaeologist or HNZ advises the Project Manager that work is complete.

A7.5 Dispute Resolution

Most disputes are a result of poor communication between the parties and can be avoided if sufficient details of the archaeological requirements and the various parties' responsibilities are included in tender and work management documentation, and understood. Disputes usually arise on-site as a result of conflicting expectations for when/how fast areas of archaeological interest can be cleared by the archaeologist and when development may continue.

In the event of a dispute relating to archaeological issues a meeting between the authority holder's representative, contractor(s) and Project Archaeologists should be convened as early as possible to resolve the dispute. If appropriate the Tangata Whenua representative should also participate. Stand down periods, which are the

most common cause of dispute, are to allow for archaeological investigations are provided for in the HNZPT authority.

If the dispute cannot be resolved representatives of the HNZPT should be consulted to resolve the dispute as the HNZPT is responsible for resolving disputes relating to matters arising from authority conditions.

A8.0 Features and Feature Recording

All features, profiles layers, sample locations and artefact find spots will be recorded using a Leica RTK GPS tied to the NZTM 2000 map grid. Particularly significant features or details may be 3D laser scanned. Obvious 20th century features will be recorded as disturbances.

Feature, layer, find acquisition, find discard and photographic information along with spatial data for those elements will be recorded in a Geographic Information System (GIS) or spatial database.

A comprehensive written, hand-drawn and photographic record of features, complex feature sets, profiles and other relevant information will be created. Plans and stratigraphic profiles will be described, drawn and photographed and registered to surveyed points. The stratigraphic relationships of the different elements and evidence of disturbance to the deposits will be recorded. A mix of field forms, registers and notebooks will be used to record the work.

Maori archaeological features have been recorded nearby. These may include:

- Midden/faunal material.
- Fire scoops and hangi.
- Postholes from whare, cooking shelters, drying racks, palisades or other structures.
- Pits/bin pits for storage
- Koiwi Tangata/burials.
- Artefacts including worked lithic, shell and bone material, and possibly taonga tuturu as defined under the Protected Objects Act 1975.

European artefacts and features are not expected, and are unlikely to pre-date 1900 or be identifiable as such, as they will likely consist only of old farm infrastructure.

A9.0 Analysis

Maori archaeological materials may require specialist analyses including lithics (e.g. stone artefacts), midden, radiocarbon dating and osteoarchaeology (human remains) may be necessary for any excavated materials, and these may take some time to complete.

Maori archaeological materials analysis would be expected to include:

- Minimum of two radiocarbon dates with samples selected from secure archaeological contexts or features as a first preference, to be undertaken by the University of Waikato Radiocarbon Dating Laboratory. The goal would be to date the earliest and most recent occupations of observable features, or other potentially significant features which might be encountered.
- 10l midden samples from different archaeological contexts..

- Charcoal wood species identification from midden, postholes, fire scoops and earth ovens as available.
- Microfossil analysis as necessary, depending on finds.
- Lithic or other artefactual analysis as necessary, depending on finds.

A10.0 Expected outputs

Expected outputs of any investigation include:

- Written descriptions of observed archaeological features.
- GIS-based maps and plans.
- Measured drawings including annotated plans, elevations, and details of archaeological features.
- Photographic record.
- Finds inventory and analysis.
- Features inventory and analysis.
- Photo inventory.
- Radiocarbon dates for key features.
- Analysis of midden and artefacts.
- Preliminary and Final Reports on the results of the investigation.
- Re-assessment of site significance of sites as necessary.
- Identification of intact archaeological sites and features remaining on the property at the conclusion of works.
- Preliminary report within 20 days of the conclusion of the investigation outlining initial findings including maps, photographs and descriptions of subsurface features and extents and their significance.
- Final report within one year of the conclusion of the investigation containing the results of analysis.

A11.0 Materials Handling

Following the conclusion of fieldwork which will include initial sorting and discard, excavated materials will be housed in the Geometria materials laboratory in Auckland, in the first instance during the analysis and reporting stage. Some material may be transferred to sub-contractors for specialist analysis at their respective premises. This may include but is not limited to the University of Auckland archaeological laboratories and the University of Waikato Radiocarbon Laboratory.

A12.0 Curation

Following the conclusions of fieldwork, excavated materials will be housed in the Geometria facilities in Auckland and Whangarei, in the first instance during the analysis and reporting stage. Some material may be transferred to sub-contractors for specialist analysis at their respective premises.

Any historic European artefacts are the property of the landowner and will be offered to the landowner in the first instance, following analysis. If the Council does not wish to retain the materials they may be offered to the Dargaville Museum or another suitable mid-North repository.

Maori artefacts which are identified as Taonga Tuturu will be managed according to Ministry of Culture and Heritage and Tangata Whenua protocols. Maori artefacts and

ecofacts (midden etc.) deemed not to be Taonga will be offered to Tangata Whenua in the first instance, and then to the Dargaville Museum following analysis.

Koiwi Tangata (human remains) will be dealt with according to the wishes of Tangata Whenua and options may include re-interment somewhere else on the subject property by negotiation with land owner, re-interment at an appropriate urupa or cemetery, or the remains may be left in place if development will not impact them.

A13.0 Archiving

Copies of the final report in hardcopy and electronic form will be submitted to Heritage New Zealand Pouhere Taonga, New Zealand Archaeological Association, Kaipara District Library, Tangata Whenua, and the client.

Appendix B – NZAA Archaeological Site Record Forms

ARCHSITE archaeological site recording scheme

Site Record Form

NZAA SITE NUMBER: P08/388

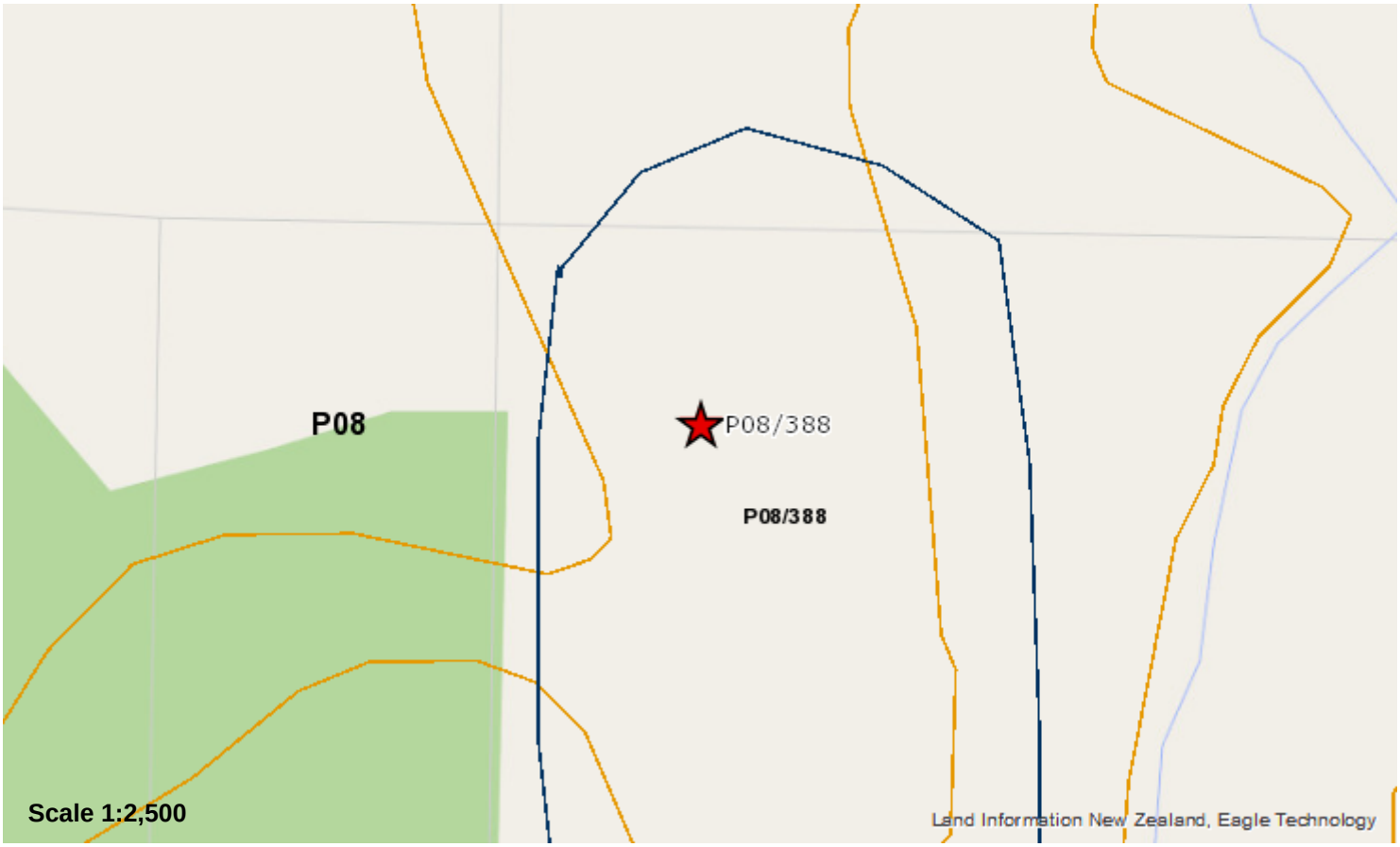
SITE TYPE: Pit/Terrace

SITE NAME(s):

DATE RECORDED:

SITE COORDINATES (NZTM) Easting: 1677947 **Northing:** 6010225 **Source:** On Screen

IMPERIAL SITE NUMBER: **METRIC SITE NUMBER:** P08/388



Finding aids to the location of the site

The site is immediately east of a stand of pine, located on the western side of the valley on the farm accessed via 555 West Coast Road.

Brief description

Recorded features

Other sites associated with this site

SITE RECORD HISTORY	NZAA SITE NUMBER: P08/388

Site description

Updated 19/08/2020 (Field visit), submitted by russellgibb , visited 24/07/2020 by Gibb, Russell
Grid reference (E1677947 / N6010225)

The site consists at least 28 small terraces, 10 rua pits and several possible whare sites located on three ridge lines between the 30-60m contour overlooking the valley to the east. The features are quite ephemeral but appear largely intact and undamaged by contemporary land use.

Condition of the site

Updated 19/08/2020 (Field visit), submitted by russellgibb , visited 24/07/2020 by Gibb, Russell

The features are quite ephemeral and the site is likely to have more features than were recorded at the time. The site is currently in pasture and has suffered little damage. The valley immediately below the site is proposed to be developed into a dam but the lake inundation level is well below the site.

Statement of condition

Current land use:

Threats:

SITE RECORD INVENTORY	NZAA SITE NUMBER: P08/388

Supporting documentation held in ArchSite