

Appendix 12

Archaeological Assessment

Archaeological Assessment

The James Subdivision

115, 131 and 189 Three Mile Bush Road, Kamo

8 April 2021

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Glossary

| | |
|-------------|---|
| Classic | The later period of New Zealand settlement |
| Fire scoop | Fireplace used for various reasons (cooking, warming, etc.) |
| Hangi | An earth oven for cooking food |
| 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 |
| Radiocarbon | Method of absolute dating using known rates of decay of a carbon isotope |
| Terrace | A platform cut into the hill slope used for habitation |
| Wahi tapu | Sites of spiritual significance to Maori |

1.0 Introduction

Geometria Ltd was commissioned by Blue Wallace Ltd on behalf of their client TMB Ltd to undertake an archaeological assessment of The James subdivision. This assessment includes a damage assessment of shell midden and stone walls affected by the subdivision of 115 Three Mile Bush Road, and an archaeological assessment for the future development of the neighbouring properties at 131 and 189 Three Mile Bush Road, west of Kamo in Whangarei.

Under the Heritage New Zealand Pouhere Taonga Act 2014 all archaeological sites are protected from any modification, damage or destruction except by the authority of the Heritage New Zealand Pouhere Taonga. Dry stacked stone walls are scheduled in the Whangarei District Plan with rules covering their modification.

This assessment 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 Pouhere² 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 which are often not visible or obvious and 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 James subdivision is located at 115, 131 and 189 Three Mile Bush Road, on the north side of the road, two kilometres west of central Kamo and south of the Hurupaki volcanic cone (Figure 1).

Lot 1 DP 99045 at Three Mile Bush road is a flat to rolling property of 5.8ha, falling from approximately 188m above sea level near the south west boundary, to the north east. The property is currently being re-contoured and have in services established for the consented subdivision. There is an existing house remaining near the road frontage.

Lot 2 DP 99045 at 131 Three Mile Bush Road is a flat to rolling property of 4.9ha, currently in pasture with an existing dwelling and outbuildings, and an older house near the road frontage. The property drops to the north and north east.

Lot 3 DP 99045 at 189 Three Mile Bush Road is a flat to steep property of 9.0ha accessed via a narrow driveway extending north of Three Mile Bush Road, with the bulk of the property on the north side of the stream and rising to the upper slopes of the south side of Hurupaki. Most of the property is in pasture, with a fringe of remnant and regenerating native forest on the southern boundary/steep stream gully.

3.0 Proposed Development

3.1 115 Three Mile Bush Road

The consented subdivision of 115 Three Mile Bush Road is for 60 residential lots with a road lot and a reserve lot for drainage. The residential lots are 450-919m, with one larger lot of 4522m for future development. The subdivision is served by a single road crossing and loop road from Three Mile Bush Road, and a number of internal road crossings. Earthworks for the project comprise 106,000m³ of cut, fill and topsoil stripping.

The subdivision scheme plan called for the closing of two existing gateways/crossings to Three Mile Bush Road through the dry stacked stone wall fronting Three Mile Bush Road, on the southern boundary of the property. A new 25m wide crossing would be formed through the wall to provide access to the subdivision, with the boundary wall and old crossings repaired/filled using the surplus rock from the new crossing.

The former owners, the James family, along with Catherine Ballard's (2010) book on the stone walls of the Whangarei District suggested that stone walls on the property dated to the 1930s. This was accepted by Whangarei District Council when processing the original consent, an archaeological Authority was not deemed necessary, and the effects on the walls were taken as not more than minor or less than minor.

Ngati Kahu O Torongare provided a cultural impact assessment (Olsen 2019) of the subdivision as part of the consent application. The assessment noted the project was in an area of high cultural and traditional significance for Ngati Kahu O Torongare, with the vicinity of the project area near a significant wahi tapu, traversed by an ancient pathway, used as a mahinga kai and that a significant knoll used as a gathering place or Tau Rangatira is located near Three Mile Bush Road. Ngati Kahu O Torongare opposed the application in its entirety.

Subsequent to the granting of the original subdivision consent, problems with the original design became apparent and a further landuse consent was sought and granted from the Whangarei District Council, including the removal and relocation of 40m of dry stacked stone wall on the Three Mile Bush Road frontage, and the removal and relocation of 3.5m of stone wall on the north eastern boundary with Hurupaki School.

3.2 131 Three Mile Bush Road and 189 Three Mile Bush Road

The subdivision scheme plan for 131 and 189 Three Mile bush Road proposes amalgamating the existing lots 2 and Lot 3 DP 99045, and undertaking a staged subdivision of the new property.

Stage 1 will comprise 57 residential lots 560-1040m² in size largely on what is currently Lot 2 DP 99045 (seven lots will be partly located on what is currently the access to Lot 3 DP 99045). In addition there will be one road reserve lot, one access lot, one pedestrian access lot to the neighbouring The James subdivision, and a local purposes reserve lot for drainage purposes on the low lying ground adjacent to the stream in the north east corner of the property. There will be a single road crossing to Three Mile Bush Road, providing access to a loop road through the subdivision, and to the second stage to the north contained within a balance lot of 8.78ha.

Stage 2 will comprise 20 residential lots of 640-1290m² in the south east corner of the property, one road reserve lot connecting with Stage 1, one access lot, one local purposes drainage reserve lot containing the stream on the southern boundary, and a balance lot of 4.88ha on the steep slope on the south side of Hurupaki.



Figure 1: Location of 115 Three Mile Bush Road (in blue; WDC GIS).

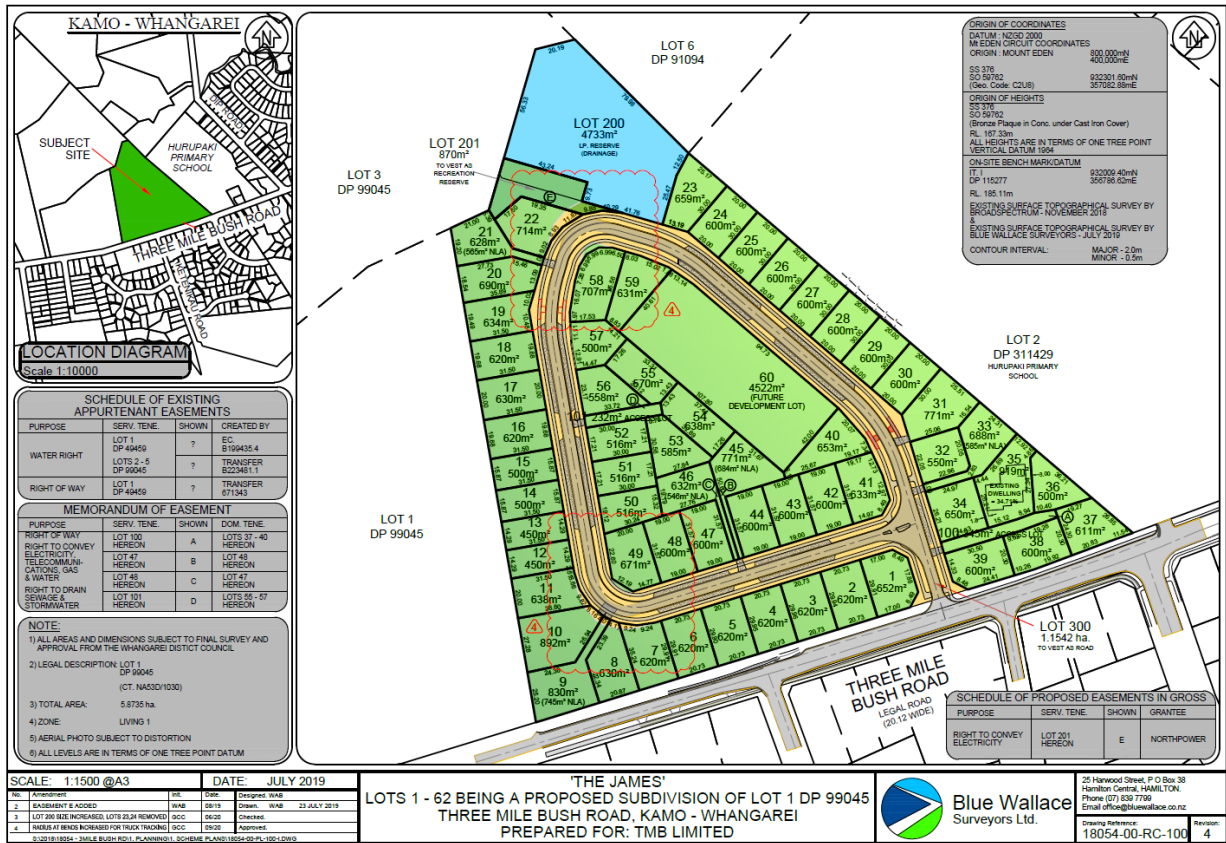


Figure 2: Subdivision of 115 Three Mile Bush Road.

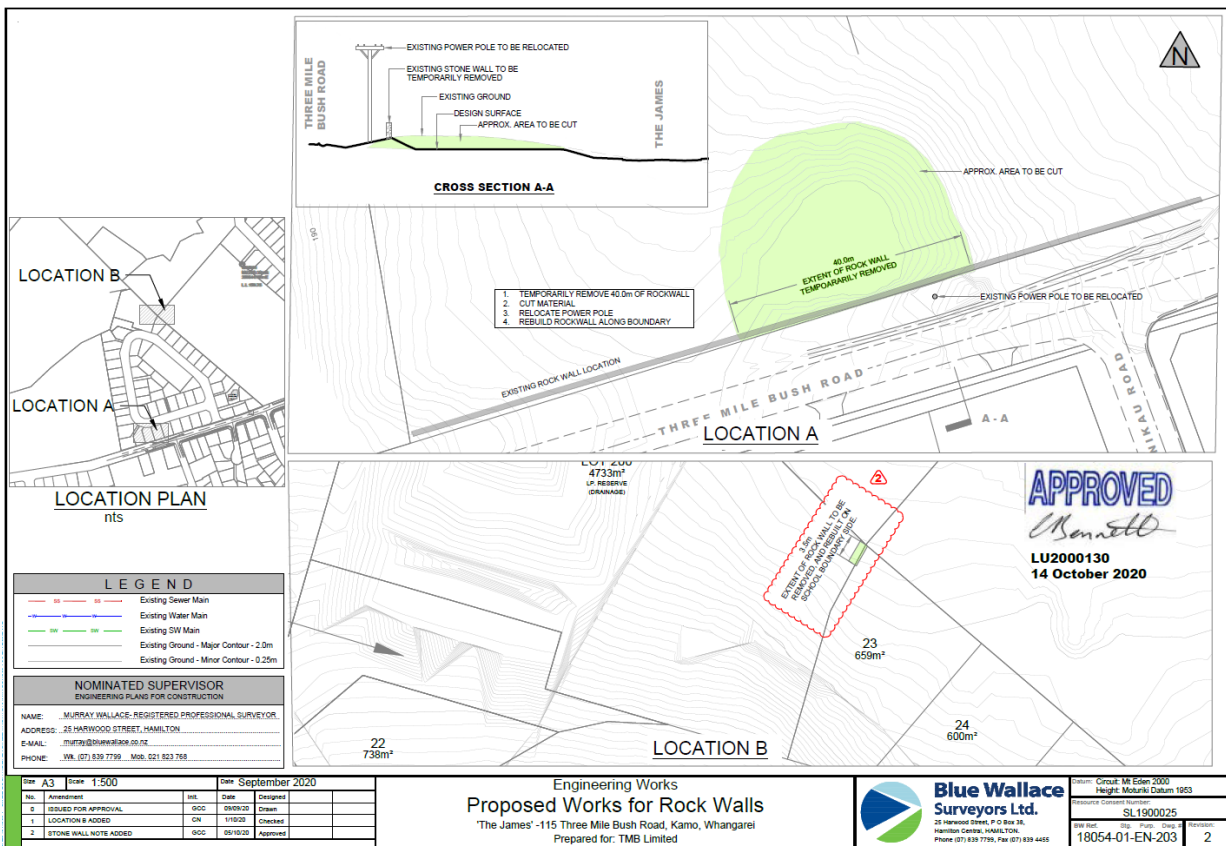


Figure 3: Changes to stone walls, 115 Three Mile Bush Road.

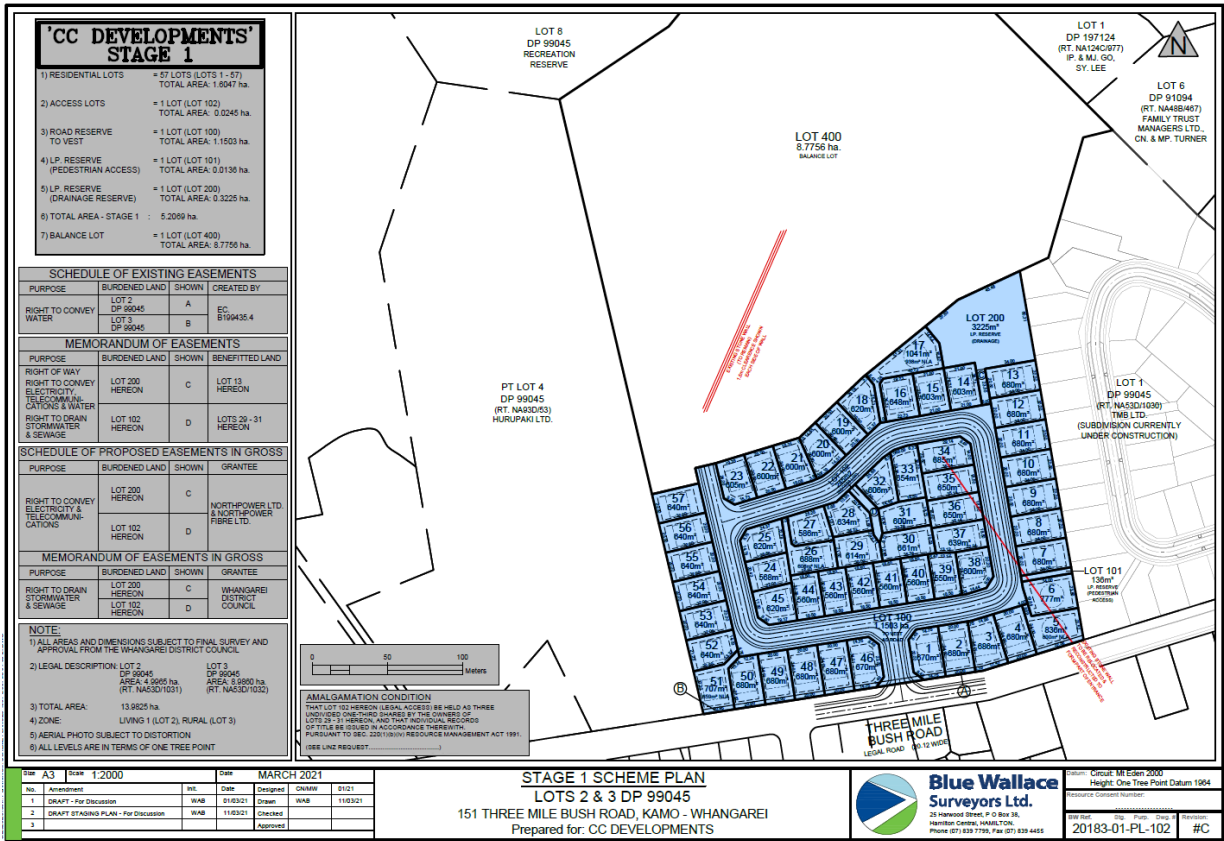


Figure 4: Subdivision of 131 Three Mile Bush Road.

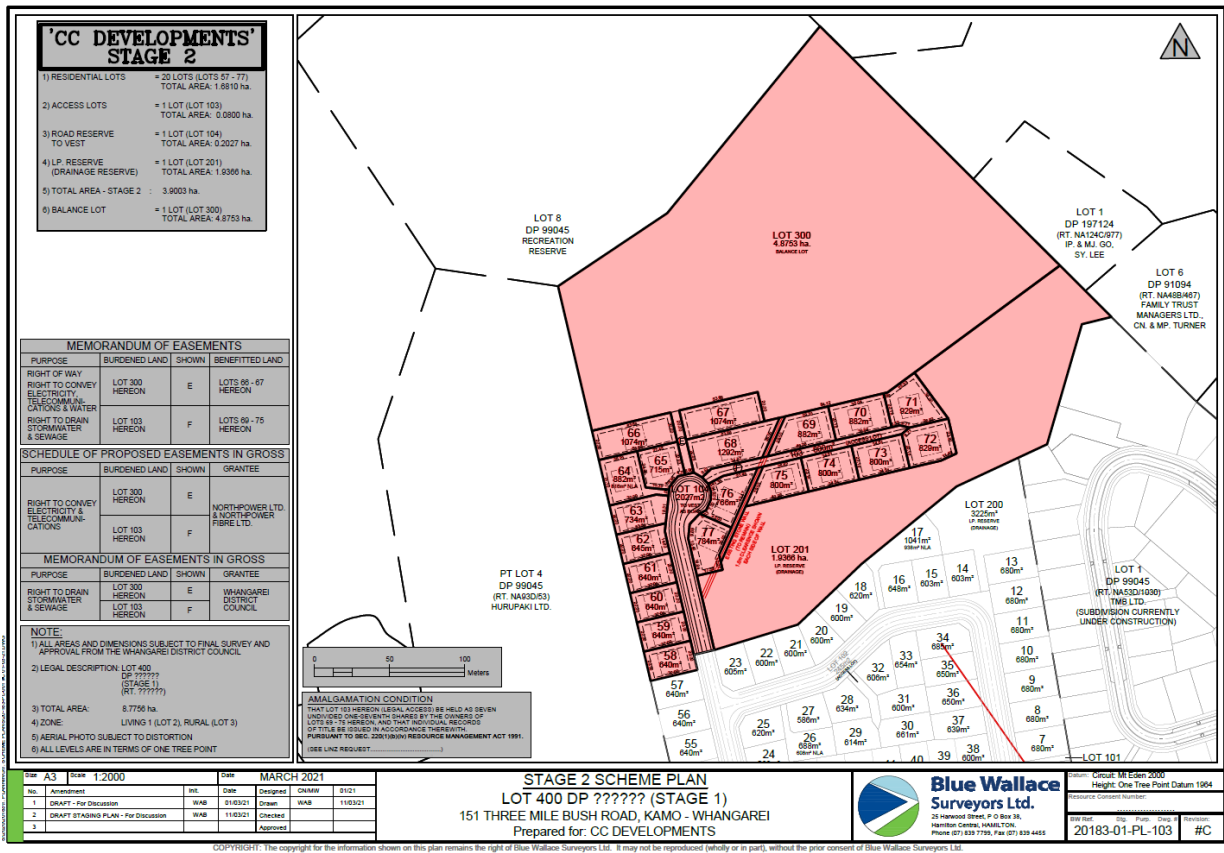


Figure 5: Subdivision of 189 Three Mile Bush Road.

4.0 Methodology

The methods used to assess the presence and state of archaeological remains on the property 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) downloaded via the ArchSite website, and land plans held at Land Information New Zealand. The Whangarei District Plan and NZ Historic Places Trust Register were also consulted.

Site visits involved examination of the existing ground surface. No probing or spade test pitting was undertaken.

5.0 Background

5.1 Archaeological sites on the subject property

There are no recorded archaeological sites on the subject property, although no archaeological survey has been previously undertaken in the immediate vicinity. The nearest known prior archaeological assessment was at the corner of Lake Ora and Three Mile Bush Road, undertaken by the author of this report in 2008 (Carpenter 2008).

The nearest recorded site is Pa Q06/208 which is 500m to the north west on the summit and north eastern slope of Hurupaki maunga. This pa was first recorded by D. Willoughby in 1963. In 1970 a plan of the whole site was drawn tape and compass survey, by J. McKinley of the then Historic Places Trust and in the late 1970s of early 1980s, the archaeological site recorders prepared another sketch of the site.

In 1990 S. Hakaraia and M. Jellick, facilitated by D. Nevin, undertook a plane-table and alidade survey on the site on behalf of the Whangarei District Council. That survey carried out between April and May 1990, produced a contoured site plan of all the visible features. The survey began at the trig which is 349m above sea level. The pa site spreads over the top of the breached crater, down the ridge to 30m below the trig on the north eastern side of the cone.

The pa is well defended by five ditches, and contains 82 storage pits over approximately 50 terraces with the largest pit measuring 8.8 x 7.4 x 1.5m deep and the smallest 2 x 1 x 0.20m. The native bush on the eastern side is dense and varied, half of it being intertwined with supplejack. From the trig west to the quarry, there is a fine pole stand of totara trees. The pa itself, a half hour walk uphill from Dip Road is well preserved and has a commanding view to the west along Three Mile Bush Road to Ruatangata. There is no indication of other features on the mid and lower slopes of the pa.

The pa is an archaeological sites of the highest significance, based on the size of the site and the state of the internal features. Along with the equally impressive Pa of Parihaka, Kauika/Pukenui and Maungatapere in particular, it points to the great value and carrying capacity of the soils of the Whangarei volcanic field in the prehistoric period.

The next nearest recorded archaeological sites are the pa on Onoke Reserve to the north east. This site, Q06/379 was recorded by G. Nevin in 1988. It consisted of the remnants of a pa site which had been heavily modified by bulldozing, located between the reservoir and Tuatara Drive. The remnants features were in excellent condition at

the time they were recorded, being under grass with the property owned by Warren Smith. They consisted of four terraces and six pits with seven other vague depressions on the upper terrace. These features are just visible in aerial photographs taken in 1947 and 1954. Recorded nearby is the railway ballast pit, two inclined tramways and other structures and features associated with the establishment of the Kamo-Hikurangi railway in the 1880s and 1890s, Q06/632.

In 1998, D. Nevin undertook a survey and assessment of a proposed 30-hectare redevelopment on the north eastern slope of Hurupaki and north slope of Onoke, between Dip, Pipiwai and Waipanga Road. At that time the area was in a mix of small house lots, former kiwifruit orchard, and unploughed steep pasture. A single site was recorded, a storage pit Q06/469 near Waipanga Road.

Pa Q06/525, terraces Q06/526 and pits Q06/528 and Q06/538 are recorded 1500m to the north on the northern slopes of Ngararatunua and Rawhiti Roa maunga. Pa site Q06/249 and coal mining site Q06/392, between the cemetery and Whau Valley, are located to the south east..

A large number of sites are recorded between Te Puia Street and Fairway Drive in Kamo, including substantial pa on the ridge that Fairway Drive ascends, multiple terrace and storage pit complexes, a chiefly meeting place at the point known as Ketenikau, the original burial ground of mid-19th century Chief Te Puia, and wooden artefact finds from the swamp below (now the vicinity of Braintree Street and Fairway Drive). Pa site Q06/377 consisted of a ridgeline with terraces, storage pits and possible defensive ditches, running for approximately 90m, and bulldozed into the swamp below as fill during the development of Fairway Drive in the late 1970s.

5.2 Other Heritage Sites and Features

There are no scheduled historic heritage sites or features or Maori Sites of Significance on the subject properties in the Whangarei District Plan. Neither are there any registered Historic Places, Historic Areas or Wahi Tapu or Wahi Tapu Areas on the Heritage New Zealand Pouhere Taonga List. The Hurupaki cone and Lake Ora are scheduled Outstanding Natural Feature and Outstanding Landscape Feature in the District Plan.

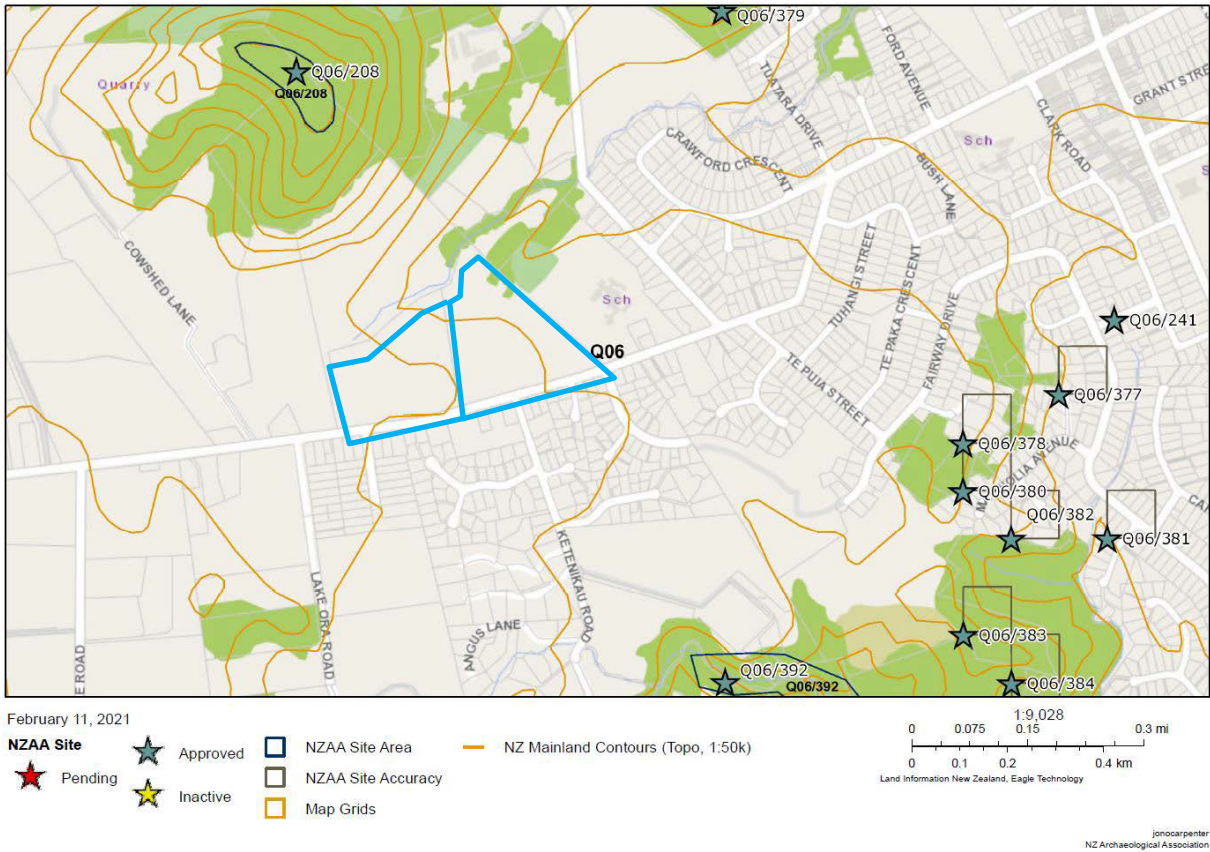


Figure 6: Archaeological sites in the vicinity of 115 Three Mile Bush Road (in blue).

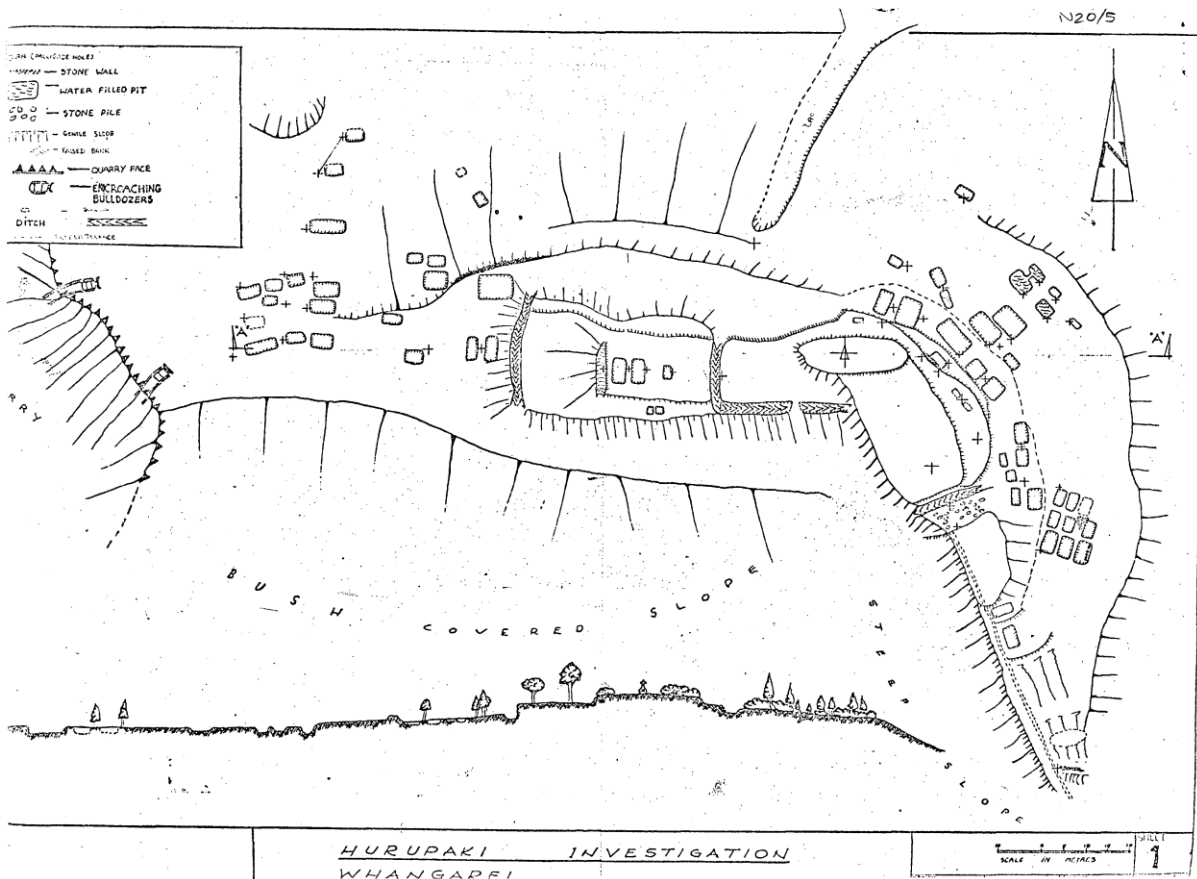


Figure 7: Pace and compass sketch plan of Hurupaki Pa, Archaeological Site Recorders (ArchSite).

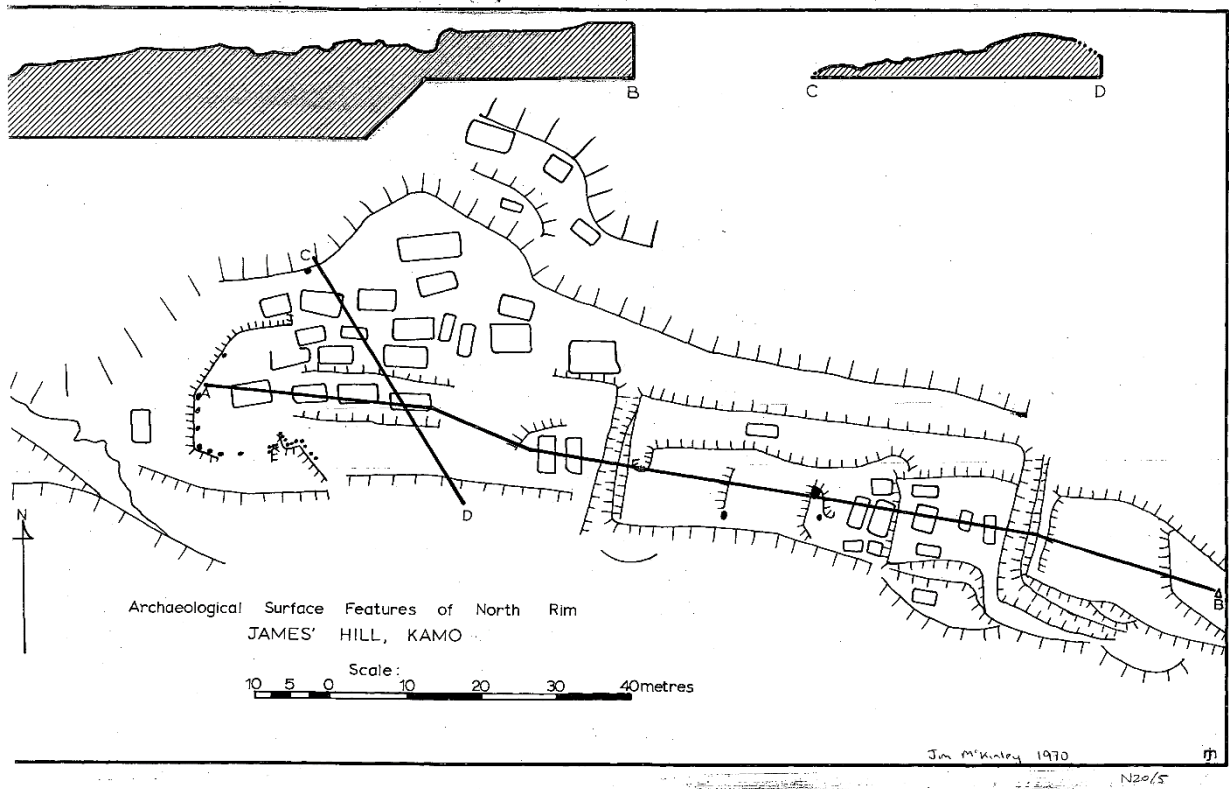


Figure 8: Tape and compass plan of Hurupaki Pa, J. McKinley (ArchSite).

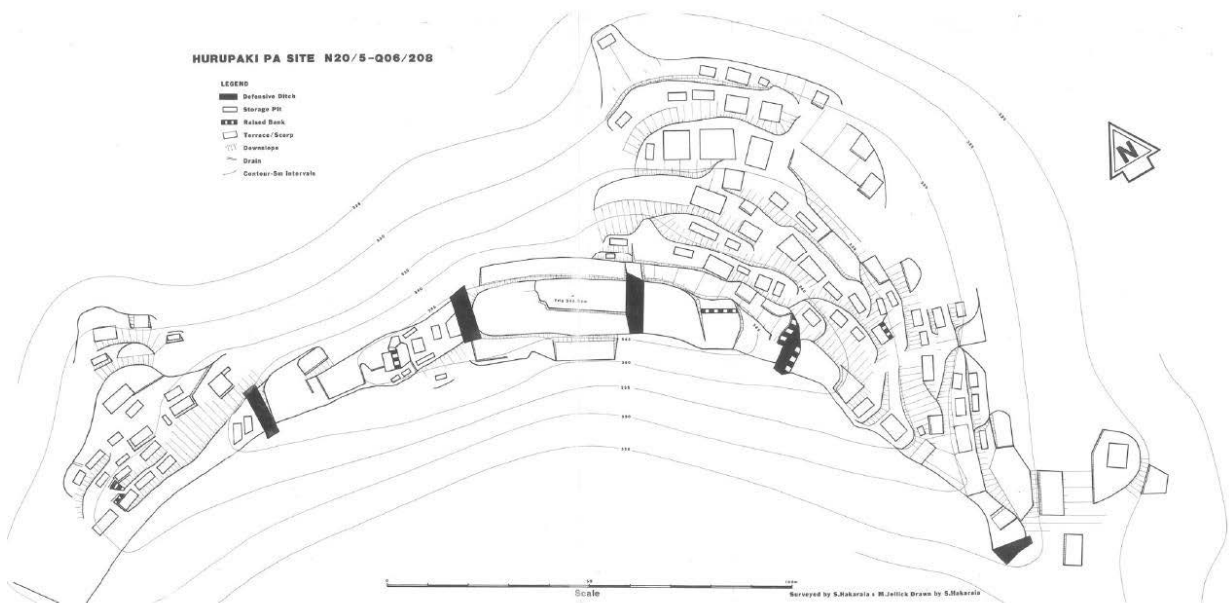


Figure 9: Plan table and alidade plan of Hurupaki Pa, S. Hakaraia and M. Jellick (Whangarei Library).

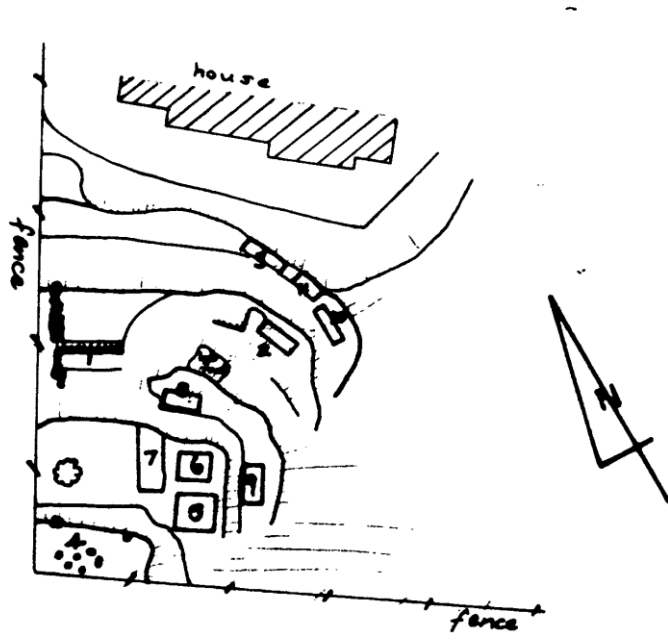


Figure 10: Sketch plan of Onoke Pa Q06/379 from archaeological site record (G. Nevin 1988).

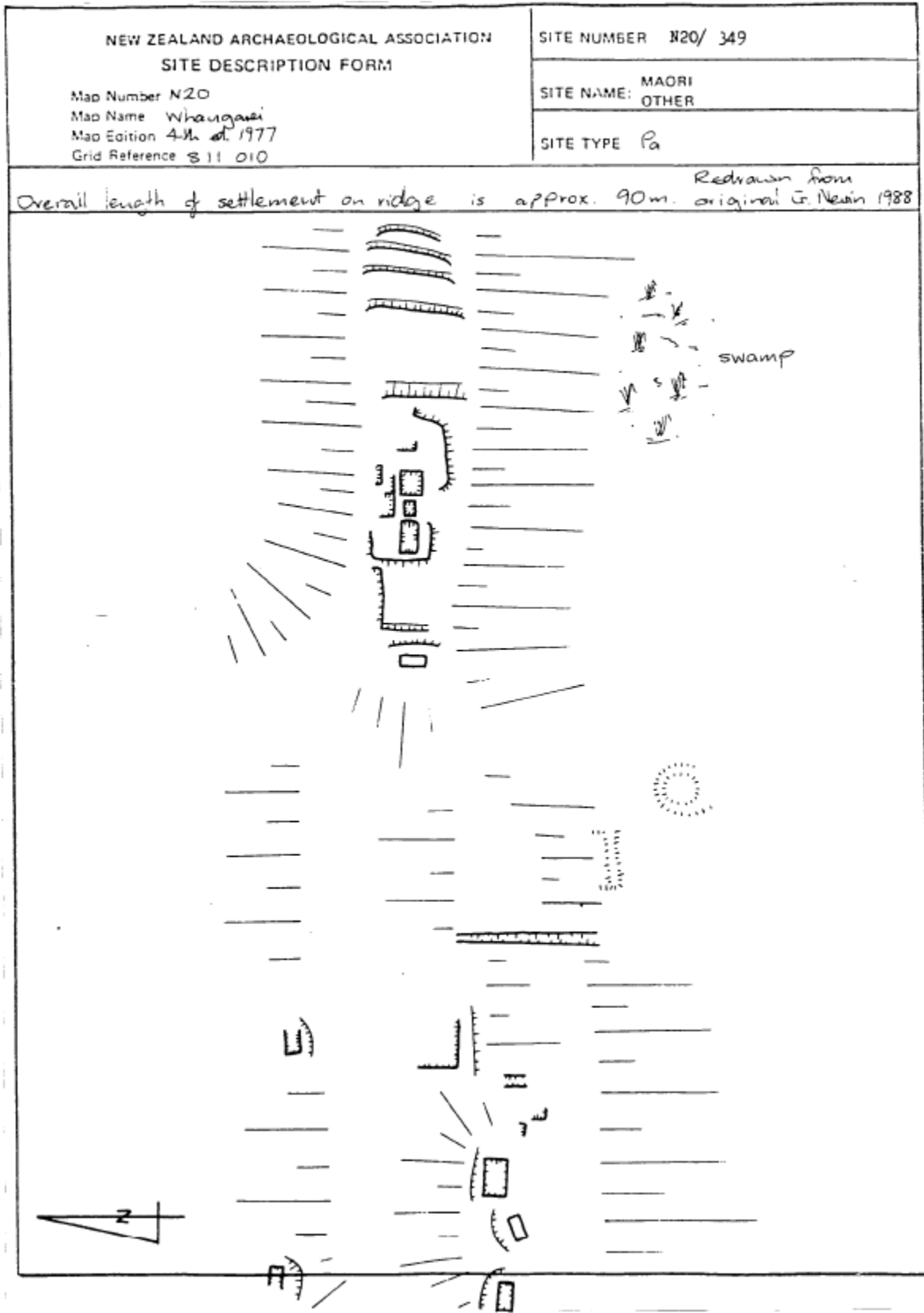


Figure 11: Q06/377 Fairway Drive Pa.

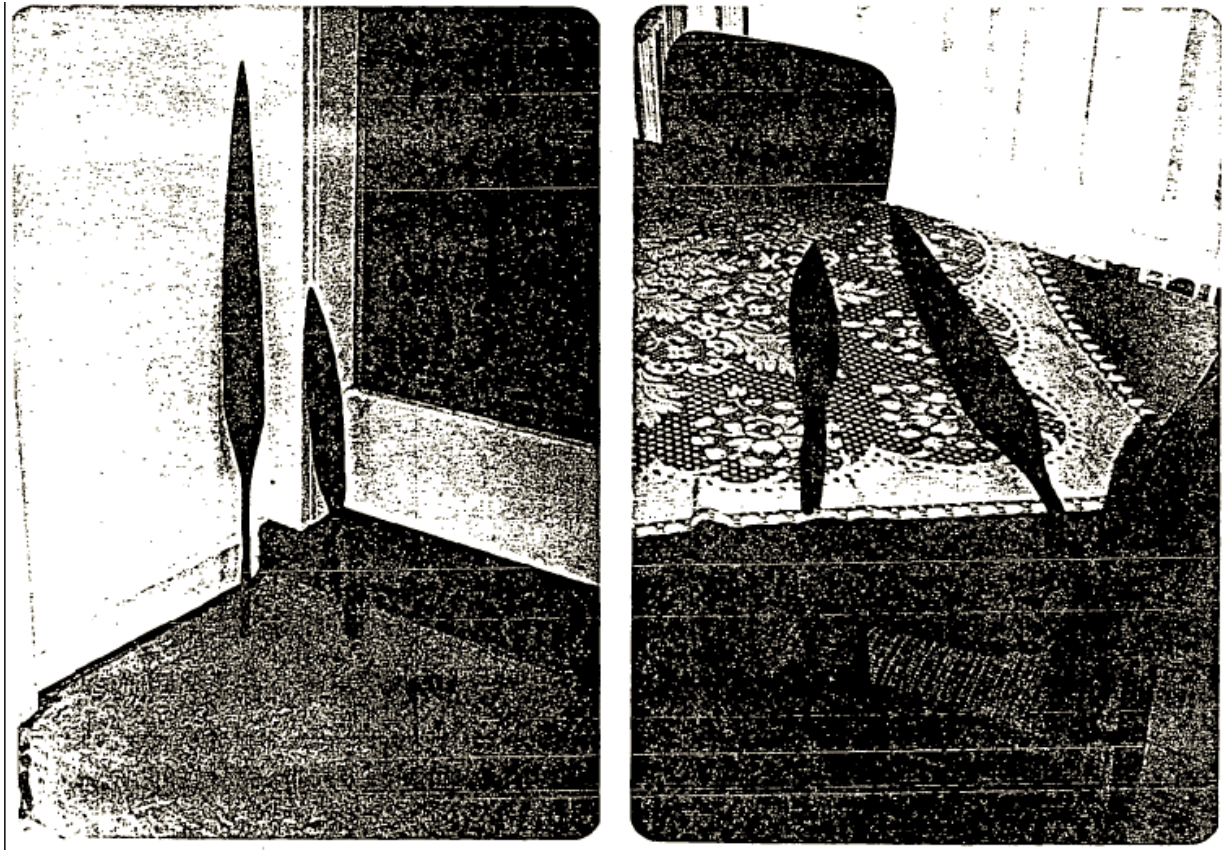


Figure 12: Q06/241 kumara weeders found by Mr. Granich during extension of Braintree to Clark Road, near the site of the Fairway Drive/Braintree swamp.

5.3 Historic Background

The Maori archaeological sites recorded in the vicinity of Three Mile Bush Road are a remnant of prehistoric and protohistoric Maori habitation and horticultural activities on the rich volcanic soils of the Kamo area. Along with Maungatapere, Maunu, and Whatatiri to the south east and Glenbervie to the west, Kamo was a centre of intensive Maori gardening in the prehistoric and protohistoric period.

A Maori village called Ketinikau was located on the western side of modern Kamo and was associated with extensive cultivations in the early historic period. Potato, maize, kumara and gourds were being cultivated near Ketinikau with wooden gardening implements in 1839, when this activity was observed by William Carruth when he journeyed through the area.

In 1839 Gilbert Mair Senior, one of Whangarei's earliest settlers, made a speculative purchase of 1800 acres from Corks Road in Kamo to the upper Whangarei Harbour. Sometime after 1844, when the Old Land Claims Commission reduced Mair's claim SO996a. The northern 400 acres of Mair's Grant was sold to George Burnett in 1853 and became his farm 'Cairnfield, while the 119ha Te Kamo Block which was the balance of Mair's claim not awarded to him, was purchased by the Crown in 1858 for £50. It was then purchased by William Carruth.

The part of Te Kamo immediately west of Burnett's property was purchased in 1871 by Thomas Wakelin and became his farm, 'Koraokaihau'. Wakelin arrived in New Zealand

from Braintree, Essex in 1860 and undertook several jobs including collector for the Whangarei Highways Board, before settling in Kamo on Koraokaihau. Wakelin soon expanded his holdings by purchasing adjoining land, including parts of the Ketenikau Block.

Other settlers soon followed and purchased land from the Maori owners, often shortly after title was granted. As the historic village of Kamo developed and spread, eventually becoming a suburb of Whangarei, most of the archaeological remains associated with the earlier Maori occupation have been destroyed, except in reserves or other pockets of land not economic to develop.

The construction of stacked drystone walls by European settlers from the mid-19th century has served to obscure and destroy the earlier Maori horticultural landscape which, on the basis of such landscapes preserved elsewhere, would have consisted of an elaborate network of low stone alignments marking out garden plots, paths providing access through the gardens, garden mounds of stone and soil, and clearance mounds of bare stone, along with undefended settlements or kainga and pa.

Remnants of the pattern of land tenure associated with the early Wakelin and Burnett's farms are still visible in the form of stacked dry stone boundary walls adjacent to the Kamo State Highway 1 Bypass and around Wakelin's homestead at Elsie's Way near Fairway Drive. Later stone walls from the expansion of European settlement are visible along Three Mile Bush Road.

5.3.1 Review of Historic Maps, Plans and Aerials.

A review of land plans and transactions is provided below. The subject property was originally encompassed within the Hurupaki Block but by the early 1890s was part of an extensive estate owned by settler James Whitelaw.

ML 2630 shows the original survey of the 362 acre Hurupaki Block in 1872. The entire block is shown in forest, apart from a small area adjacent to the 20 acre Otapapa Block on the south east boundary, the Whangarei-Ruatangata/Three Mile Bush Road alignment, and a clearing on the north west boundary with the Rawhitiria Block. The Otapapa Block appears to be cleared, does most of the Kopenui Block to the north of the Hurupaki maunga. Subsequent annotations show the subdivision of a 200 acre western block (later divided into Hurupaki No. 1 and No. 2), and an eastern block (Hurupaki No. 3) in 1887.

ML 5227 shows the survey of the Otapapa Block in 1881. Annotations describe the block as approximately 19 acres of rich pasture land, indicating it has been cleared and broken in for farming prior to this time. Stone walls are present on the Ruatangata/Three Mile Bush Road frontage to the south, and the Dip Road frontage to the east. The northern boundary is fenced.

ML 2630-A shows the subdivision of the Hurupaki Block into No. 1, 2 and 3, Blocks, in 1886. The No. 1 and No. 2 Blocks are in forest, apart from the Three Mile Bush Road frontage to the south, the area adjacent to the Rotomate Block at the south west boundary of Hurupaki No.1, and a clearing at the north western corner of that block and extending into the Rauwhitiroa (or Rawhitiroa) Block.

The adjacent Hurupaki No. 3 Block is cleared and shown as being owned/occupied by J. Whitelaw, but the southern half of the cone up to the fenced boundary with the Kopenui Block on the north side is still forested. The subject properties are in the south east corner of the Hurupaki No. 3 Block. The road boundary is annotated with "Fence and Wall".

According to subsequent annotations on the ML 2630-A plan, the Blocks came before the Native Land Court in 1891 and were partitioned at that time. The Hurupaki No. 1 Block of approximately 161 acres was partitioned into four smaller blocks of 30-60 acres each (Hurupaki No.1 A, B C, and D) along with the No.2 Block of approximately 40 acres shown as being owned or occupied by Wiki Pirihi.

ML 2630-B shows the survey of the Hurupaki No. 3 Block of 163 acres, in 1887. The Otapapa Block is shown immediately to the east, and the Hurupaki No. 2 Block to the east. Three Mile Bush Road is the southern boundary, with the Rawhiti Roa and Kopenui Blocks to the north west and north respectively; the Hurupaki maunga itself straddles Hurupaki No. 3 and Kopenui.

ML 9581 from 1914 shows the stone walls either side of Three Mile Bush Road at the Pukemiro Road intersection, including those along the Hurupaki No. 2 frontage.

DP 49459 from 1961 shows the subdivision and access to the Hurupaki quarry on Hurupaki No. 2. The plan shows the stone wall along the boundary with Three Mile Bush Road, along with an annotation stating "Stone wall at least 70 years old". The boundary between Hurupaki No. 2 and No. 3 is shown as a post and wire fence at least 60 years old at the southern end of the boundary; at the northern end is a stone wall at least 25 years old, and a post and wire fence at least 60 years old. The boundary with the Otapapa Block is shown as a stone wall but with no indication as to age, although the fence extending north along the boundary with the Ngatapapa block is shown with a post and wire fence at least 60 years old.

The Pahunuhunu and Ketenikau Blocks lie to the south of Three Mile Bush Road. The granting of title for Ketenikau to Te Puia and the Pa, chiefly meeting place and other historic features have already been noted above.

Maori land plan ML 29 shows the Ketenikau Block survey from 1865. The Block comprised 272 acres when originally granted to Te Puia, Manihere Teiwitahi, Hirawani, Tapene Hare, Pakia Hirini, Tipene, Hepi Monariki, Makere, Hemi Kohitaro, and Tamati Pehi. The land plan puts the location of Ketenikau itself immediately east of the top of Fairway Drive, at the point where the hill drops away and offers views east and south towards central Whangarei and the upper harbour. This is in the vicinity of the chiefly gathering place, Te Puia's burial ground and the Pa destroyed by Fairway Drive in the 1970s as noted above, and was obviously an important settlement in the mid-19th century and earlier, based on the presence and form of the destroyed Pa.

The plan also shows the name Otapapa in the vicinity of the southern boundary of what would later be surveyed out at the Otapapa Block, and an area of cultivations to the south of Otapapa and west of Ketenikau. The western side of the block beyond the cultivations are shown in forest. The purchase of approximately 55 of this block by Thomas Wakelin have already been noted, and over the next 15 years approximately another 130 acres was alienated to settlers and the Crown.

5.3.2 Review of Land Records

A review of the Hurupaki and adjacent Otapapa Native Land Court records was undertaken to identify what form of pre-1900 occupation may have occurred on those blocks in the vicinity of the subject property, who the traditional owners were, and how the blocks came to be alienated.

The Hurupaki title investigation came before the Native Land Court on 27 November 1873 (Maori Land Court Whangarei Minute Book No. 2: 115). Hira Taurau of Ngatikahu and resident at Ketinikau testified that he had seen the survey, knew the land, and the claimants named in the public notice were the right people, namely himself, Tipene Hari, Hone Rakete, Eruera Pohe and Hape Moanariki.

Eru Nehua also appeared and made a claim on Hurupaki, unless the neighbouring Otapapa was awarded to him, in which case he would withdraw.

Netana Ripa also appeared before the court and noted that he lived at Te Wairoa with the Hirorohi (Te Urioroi?) and had come to Ketinikau to stay with Ngati Kahu with Heke. Ripa, while sharing a whare with those involved, stated that Tauraurangi (?) a great man of Ngati Kahu gave the land to Heke and the whole second night of the visit was given over to discussing this transfer, although the boundaries were not marked by Heke at the time and none of his 50 followers asked for any land. He understood the land at issue to be at Ketinikau and didn't know anything about Otapapa, but Tauraurangi wished Heke would come back permanently, and Heke said he would.

The Court went on to find with regard to title to Hurupaki and Otapapa, that some gift of land was made to Heke by Ngati Kahu at Ketinikau but that the boundaries were not pointed out and that the gifting was left in an uncomplete state. The Court found that the northern and southern boundaries were not set, but those to the west and east might be approximated. The court could not say whether Hurupaki or Otapapa were in the gift, only that Ketinikau was the place the gifting occurred, and subsequently could not include the counter-claimants in any grant. The Court went on to state it would make no order in grant to either of the blocks until such time as Ngati Kahu surveyed out a piece of land in execution of the gift. The Court then adjourned until the next morning, and if no agreement could be reached, would adjourn again and make no order.

When the court re-convened the next day, Hira Taurau reported that they had come to an arrangement with Eruera and Kereama, giving them 20 acres for their claim on the west boundary of Hurupaki, bounded on the east by Hurupaki, on the south by the Ruatangata Road, and the western and northern boundaries by agreement. Eruera agreed to the new block of land in exchange for the extinguishment of the original gift, stating he had been out to the land in question that morning.

Wiremu Pomare Kingi stated that Tipene Hari had given his agreement the day before. The Court made grants to Hurupaki and Otapapa Blocks to Hira Taurua, Rikihana Takurua, Tipene Hari, Hirawanu Te Puia, Hone Rakete, Hepi Moanariki, Mere Wharenikau, Wiki Pirihi, Te Reweti Hori Kingi and Eruera Pohe. The Court also ruled that 200 acres on the western side of the block should be inalienable except by lease for a period of not more than 20 years, and that the rest should be unrestricted.

The 20 acres block granted to Eru Nehua as a result of the original gift to Heke was the Rotomate Block immediately west of Hurupaki, and that title was investigated and

granted in 1882 without challenge (Maori Land Court Whangarei Minute Book No. 2: 293, 295).

The claim to the 20 acre Otapapa Block was heard on 26 November 1873, just prior to the Hurupaki investigation. Hira Tauru of Ketenikau claimed the land. The claim was contested, on behalf of the descendants of Hone Heke on account of the gifting noted above, represented by Eru Nehua and Keremenita Peia, the son of Heke's brother. Peia indicated the land given was near to but not exactly on the Otapapa Block. However Hepi Moanariki testified the land was never occupied, and the gift was only a temporary offer of accommodation after the battle at Ruapekapeka and Hira Tauru would not budge.

As noted above, the investigation was ultimately adjourned until the counter claims over Otapapa were satisfied by the agreement over Hurupaki and Rotomate. The Otapapa Block was ultimately granted to Hira Taurua, Rikihana Takurua, Tipene Hari, Hirawanu Te Puia, Hone Rakete, Hepi Moanariki, Mere Wharenikau, Wiki Pirihi, Te Reweti Hori Kingi and Eruera Pahi.

Another claim by descendants of Hone Heke was made to land one kilometre further to the west two years earlier. The Pahunuhunu Block was claimed by Wi Taungahuru and Hika Tauku. It notes the area of the subject property as being in open taraire forest. Two surveyed road alignments are shown but little other relevant historical detail. The claim was heard on 15 September 1871 but the claimants were not present and the claim was adjourned and reheard on 18 September.

Te Hira Tauru of Ngatikahu claimed the land for himself and Rikihana te Hua, Wi Taungahuru, Rikihana Te Rua, and Hepi Moanariki. The claim was derived from their ancestors Ngarohe Te Uru, Te Tongotongo, Taionga, Tauru and Te Hera. Te Hira stated the land was held since the days of Ngarohe te Uru and had never been disputed, and that their fathers grew kumara on the land. They wished to sell the land and had plenty of land elsewhere for cultivation and occupation.

The claim was disputed by Heremenita Peia who stated that the people of Te Hira had given a portion of the land to his uncle Hone Heke after the war of 1845-46, who in turn had left it in the charge of Puriri. This was in return for land given up at Pouerua near Pakaraka. Heremenita had lived on the land and had been dispute with the claimants previously over ownership. The counter claim was supported by Eru Nehua of Ngati Hau at Whakapara but no other evidence was produced.

In answer, the original claimants stated that Heke was allowed to live on the land for a short time after the war as he was afraid of the Pakeha, but that he was then to return to his land when the danger was past. They went on to state that in-fact Heke had only visited the area for three days after the war, staying at Keitinikau near Kamo. The land exchanged at Pouerua was utilised under a similar agreement and these were not supposed to be a permanent arrangement. The title was subsequently issued to the original claimants without restriction. It is not clear if the visit by Heke referred to in the Pahunuhunu investigation was separate to that described for Hurupaki and Otapapa, but regardless indicates the connection to the area held by Heke.

The first partition of the Hurupaki Block is recorded on 24 November 1885, although the transaction happened ten years previously, shortly after the original title investigation (Maori Land Court Minute Book No. 3: 135, 137, 139). Wiki Pirihi appeared for the subdivision, stating that there were then 10 owners of the Block, five who had already

sold their share and five who still owned the block but wanted to partition. Pirihi stated they had agreed amongst themselves that those who had already sold had a share of 162 acres, and those who retained their interest had the 200 acre balance. Those who had not already sold were Hira Taurua, Rikihana Takurua, Tipene Hari, Hone Rakete and Wiki Pirihi himself, retaining 200 acres on the western side of the block, with Pirihi wishing to divide his 40 acre share from the eastern part of that portion.

Pomare Kingi appeared for himself and the other four original owners, Hirawanu Te Puia, Hepi Moanariki, Mere Wharenikau, Te Reweti, and Eruera Pohe. While originally objecting, subsequently the owners made further arrangements amongst themselves. Kingi would go on to state that he and the other four named had sold their 162 acre share on the eastern side of the Hurapaki Block ten years earlier to James Whitelaw, had received full payment for it, and requested that title to Hurapaki No. 3 be made over to him. Subsequently Hurupaki No. 2 was partitioned for Wiki Pirihi, and No. 3 made over to Whitelaw.

James Whitelaw went on to purchase an additional 60 acres of the Hurapaki No. 1 block in 1885, according to a Notification of Purchase in 1887 under the Native Land Administration Act 1886 (Archives New Zealand ref.: R25694183. James Whitelaw, Kamo Received: 4 April 1887 Subject: Notification of purchase of Hurapaki No.1 Block). He did this by purchasing the share of Hira Taurau, and a quarter share of Hone Rakete. This would go on to be partitioned or subdivided as the Hurapaki No. 1D block. The notification certificate states that the Native Land Court adjudicated the title in November 1885 after which Whitelaw purchased the land, began making payments on it for which he had receipts, and began clearing and fencing it.

Partition of the Hurapaki No. 1 Block was undertaken by Hone Rakete and the other owners in 1887 (Maori Land Court Minute Book No. 3: 145). Pomare Kingi appeared on the claimants behalf, noting that he himself no longer had a claim but was appearing at their behest with a written order for partition signed by the others and witnessed by Mr Mair.

Hurupaki No. 1 A was awarded to Tipene Hare, No. 1B to Hone Rakete, No. 1C to Rikihana Takurua and No. 1D to James Whitelaw, which had belonged to the child Hira Taurau.

5.3.3 James Whitelaw

James Whitelaw was a prominent Kamo settler and shopkeeper who ended up with substantial holdings, including the Onoke Block between Hurupaki and the railway, and the Otapapa and Hurupaki Blocks. He also owned other land further west along Three Mile Bush Road on the Pahunuhunu Block, and in Kamo itself.

Whitelaw was also involved in the purchase of part of the Ketenikau Block adjacent to the urupa for use as a European cemetery, following the death of his granddaughter Ada Holman. Her farther, married to Whitelaw's daughter, was unable to be buried in the Christ Church cemetery in Whangarei as she wasn't christened and Henry Holman sought land from chief Te Puia for this purpose.

James Whitelaw was hit hard by the economic depression of the early 1890s. His holdings at Kamo went up for sale in 1894 after he went bankrupt. At the time the auctioned estate included 162 acres at Hurupaki No.3 which had previously been the residence of J. H. Davis and described as being subdivided in good wall and post and

wire fences, and 101 acres of Hurupaki 1D and No.2 described as fenced, half in grass and half in bush and also previously the residence of J. H Davis, along with the 20 acre Otapapa Block, described as fenced all around with stone walls (Northern Advocate, 27 October 1894). No further information has been forthcoming about Davis, but he appears to have sold his Kamo properties in 1891 and left the area at the time Whitelaw was expanding, just before his bankruptcy.

Also included in the Whitelaw estate auction was land at Onoke, Pahuhuhunu, Ngamokotuiatara, Ketenika, Te Tiawhenua, Pukemirau and village sections in Kamo itself including Whitelaw's store, stable and other buildings, and a butchers and tailors, and three cottages all leased to others.

On 2 November 1894 the Auckland Star reported on the results of the sale, noting that the Bank of New Zealand purchased the 162 acre Hurupaki block for £931, while the Colonial Bank purchased the remaining parts of Whitelaw's Hurupaki holdings and Otapapa for £656 and £412 respectively.

The 1902 Cyclopaedia of New Zealand describes Whitelaw at the turn of the century as very much a man trying to get back on his feet:

"General Storekeeper, Gum and Produce Merchant, Kamo. Bankers, Bank of New Zealand, Whangarel. Mr. Whitelaw established his business in 1880. His shop has a frontage of fourteen feet to the main road and does a very steady trade. Formerly he had a very extensive business, but through the Bank of New Zealand crisis, he had the misfortune to lose the larger portion of his property and connections. Mr. Whitelaw is now gradually re-building his fortunes"

5.4 Summary

The subject properties were part of the Hurupaki Block, to which titles were granted to various owners affiliated with Ngati Kahu and surveys undertaken, from 1873 onwards. At that time all but the eastern boundary with the neighbouring Otapapa Block appears to have still been forested. No particular historical or cultural features of note are identified within the blocks based on the land court testimony and survey plans, but the Otapapa Block was contested by descendants of Hone Heke who may have occupied an area near that block briefly after the Northern War of 1845-1846.

The land was progressively partitioned and sold or leased (and later sold) to European settlers by the Maori owners over the next 20 years, as were many of the neighbouring Maori blocks. By 1894 large areas of land either side of Three Mile Bush Road, including most of the Hurupaki Block, were owned by settler James Whitelaw. The land had been broken in for farming and stone walls had been built along the Three Mile Bush Road frontage by the early 1890s.

Whitelaw appears to have expanded his holdings too fast and was hit hard by the economic depression of the early 1890s. His approximately 800 acre estate, which included a ribbon of properties from central Kamo west along Three Mile Bush Road to Church Road, broken up and auctioned off to a number of different buyers in late 1894, while he ultimately retained his domestic and commercial premises in Kamo itself.

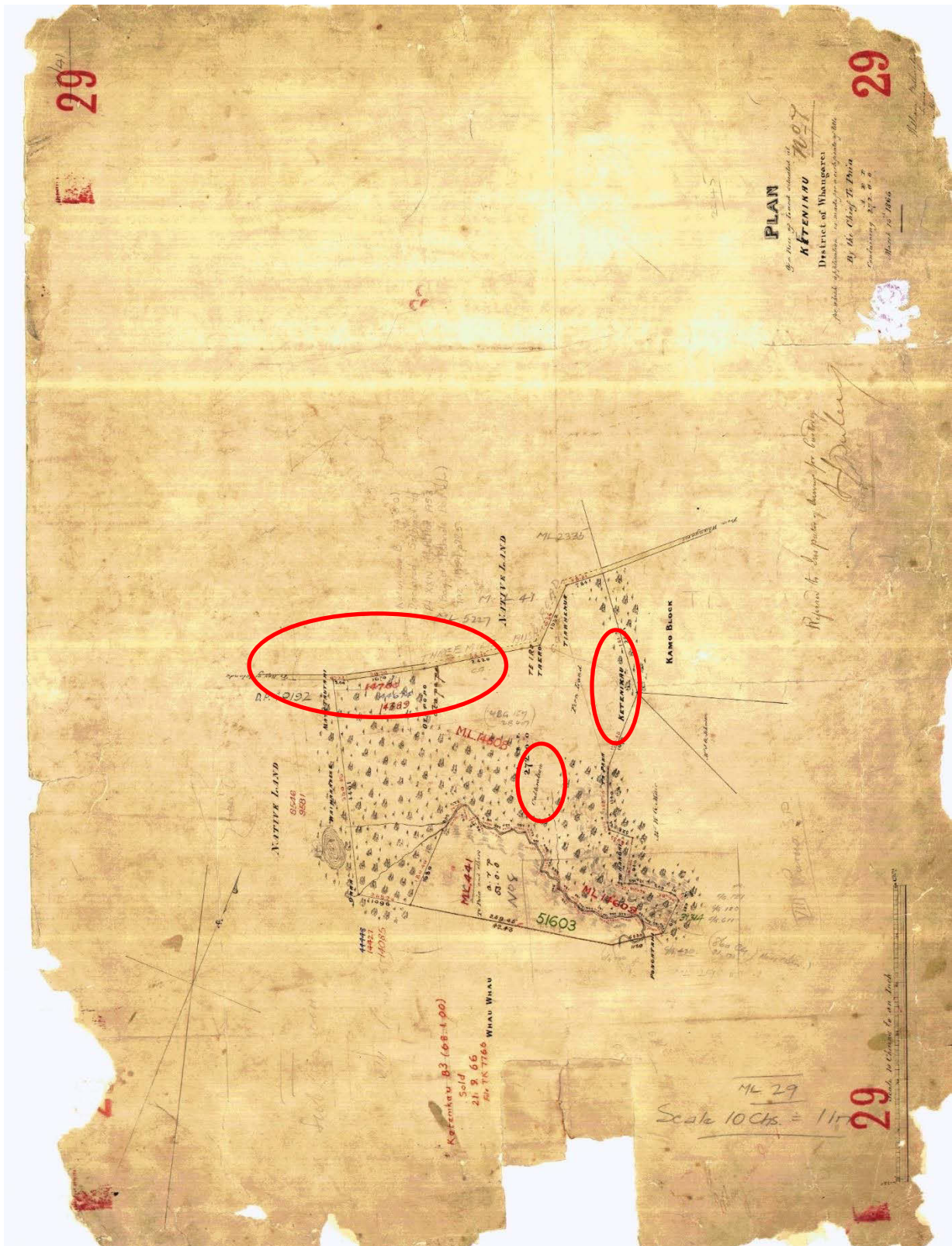


Figure 13: ML 29 Ketenikau Block with 1865 bush lines, and Otapapa, cultivations and Ketenikau (circled, left to right).



Figure 14: ML 2630 Hurupaki with 1873 bush line near the Hurupaki/Otapapa boundary.

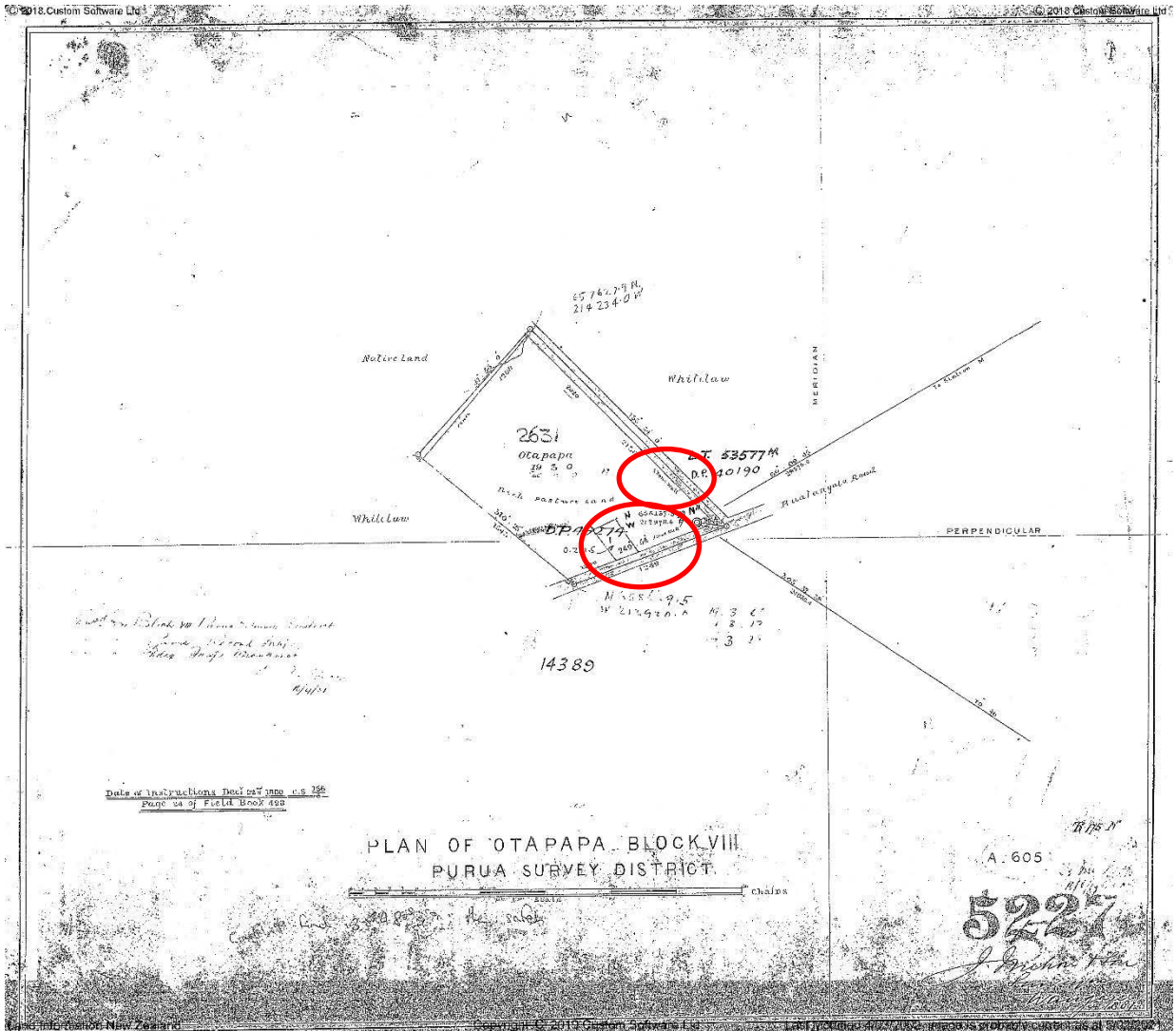


Figure 15: ML 5227 Otapapa Block 1881, with stone walls circled.

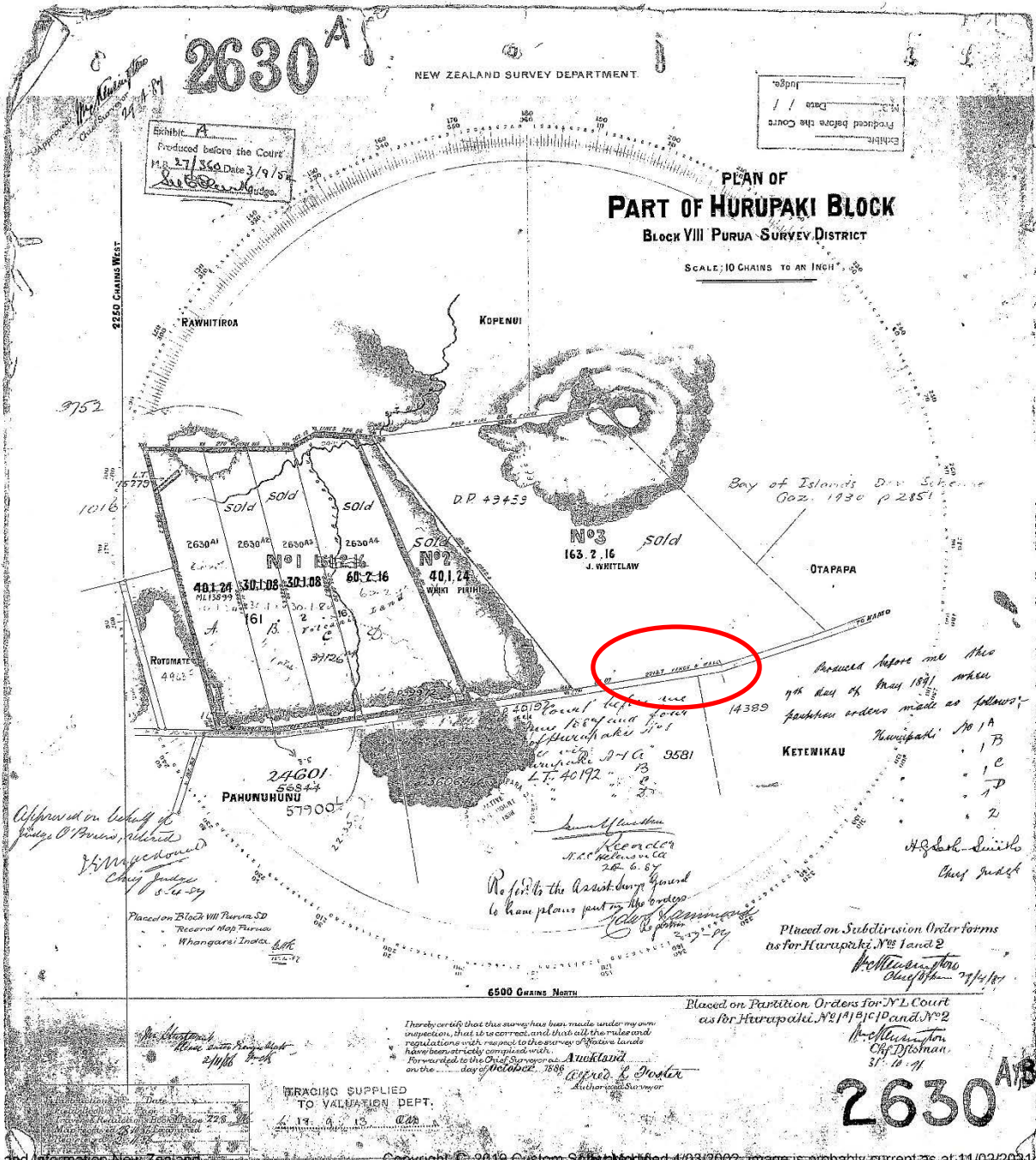


Figure 16: ML 2630A Hurupaki with 1886 bush lines and Thre Mile Bush road boundary at the subject property with wall and fence.

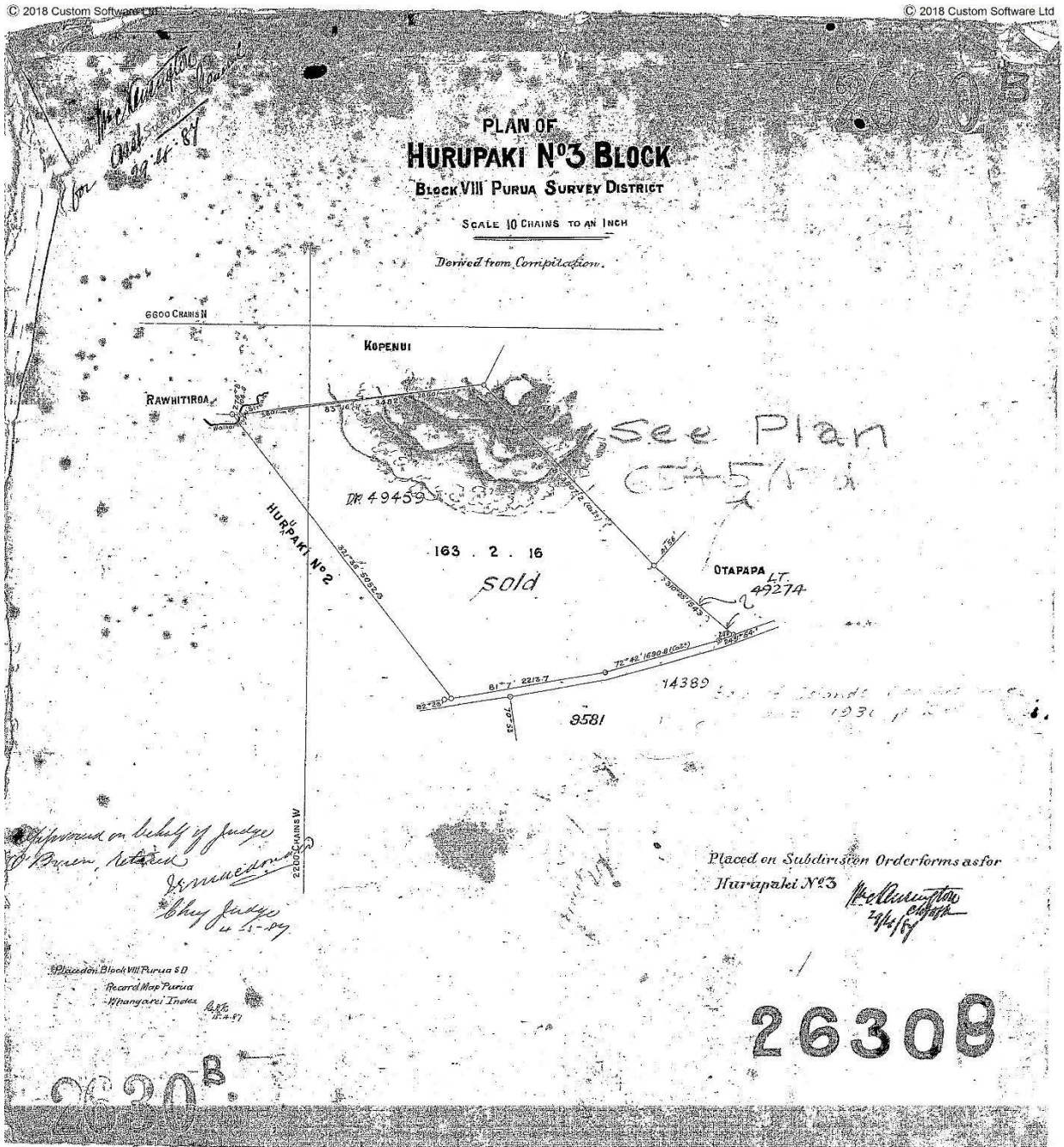


Figure 17: ML 2630B Hurupaki No. 3 in 1887.

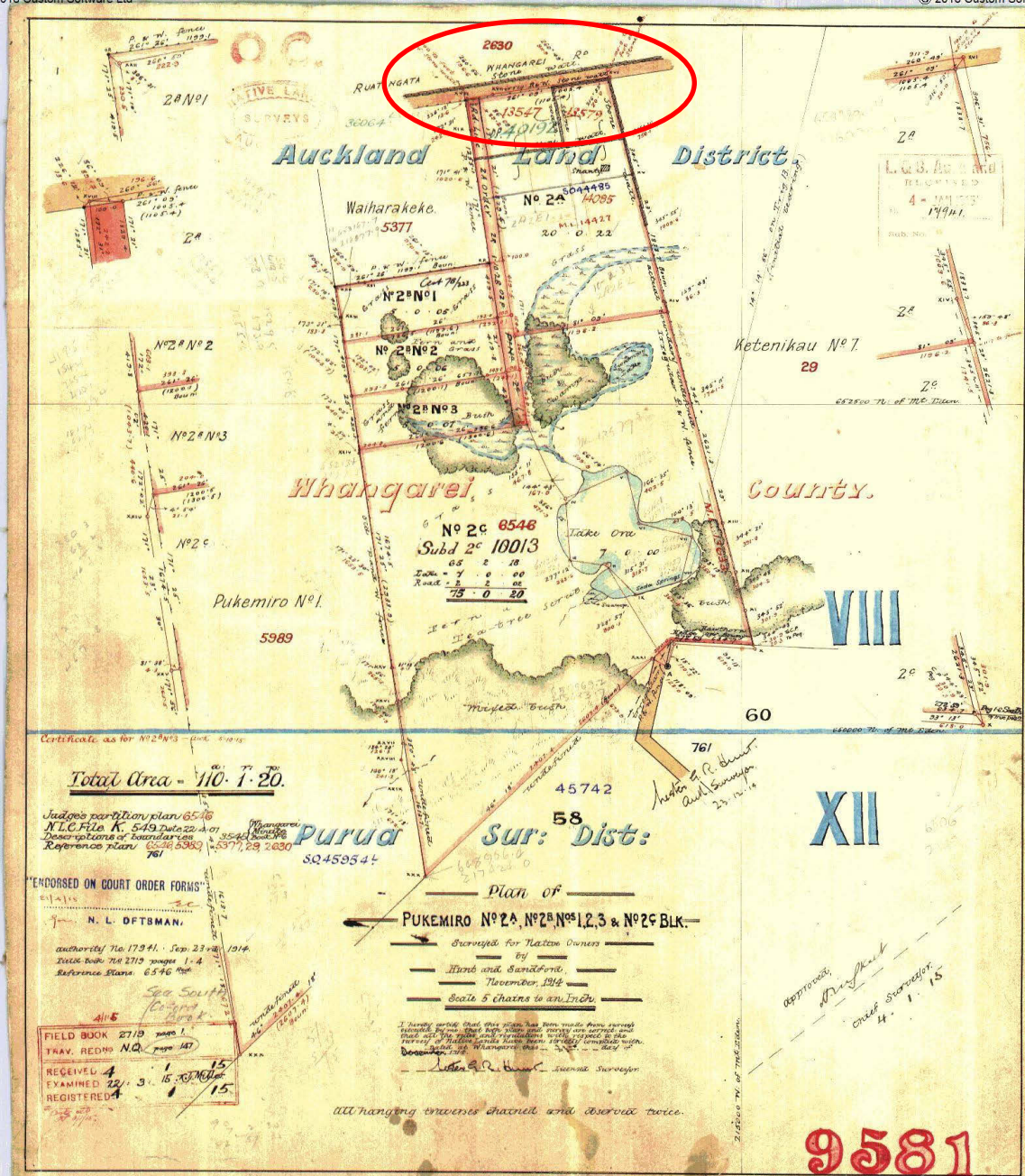


Figure 18: ML 9581 from 1914 with stone walls either side of Three Mile Bush Road on the south western boundary of the subject property.

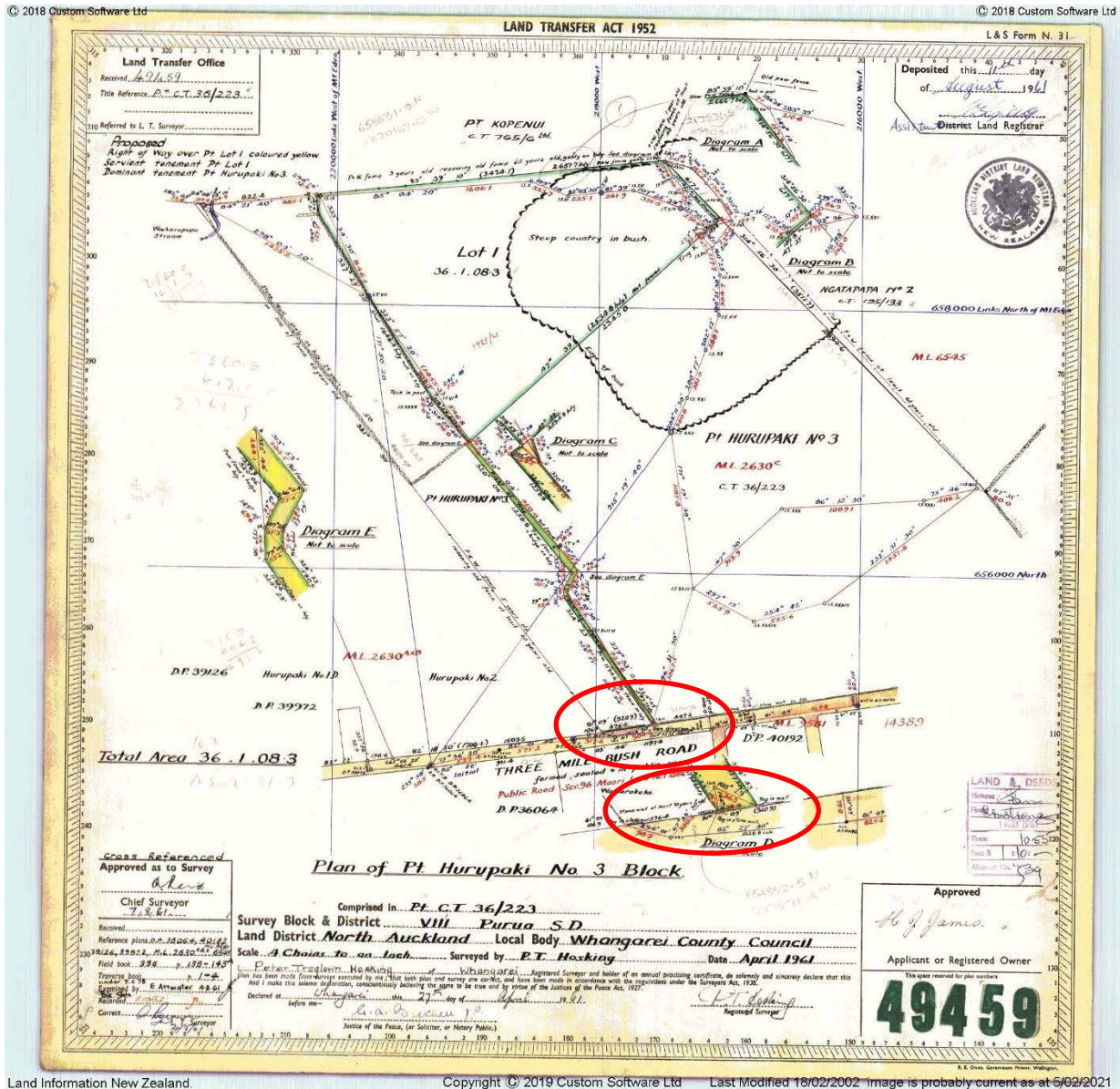


Figure 19: DP 49459 from 1961 showing stone walls on the Three Mile Bush Road boundary at least 70 years old, immediately west of the subject property.

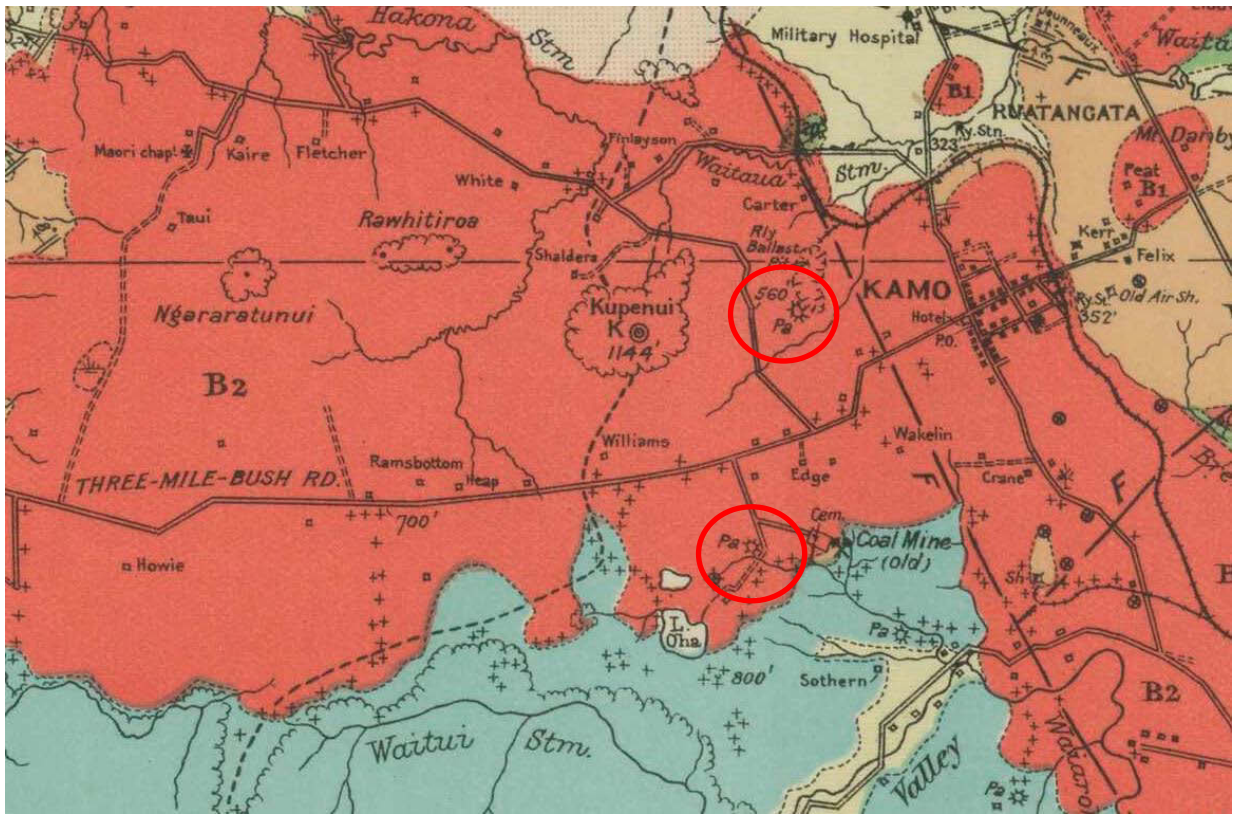


Figure 20: Detail from Ferrar's 1922 Geological Survey of the Purua District, with Onoke and Ketenikau Road Pa circled.



Figure 21: Detail from aerial SN 209 Run 402/24, 1942, with Onoke and Fairway Drive Pa circled.

6.0 Results

6.1 115 Three Mile Bush Road

115 Three Mile Bush Road was visited on two occasions, the first in response to a reported accidental discovery of midden on 2 February 2021, and the second as a result of further investigation of the history of the area suggesting the dry stacked stone walls were pre-1900 and thus subject to the archaeological provisions of the Heritage New Zealand Act 2014, on 12 February 2021.

The midden inspected on 2 February comprised a 1 x 1m scatter of medium-sized tuatua in orange-red silty stony volcanic soil. There was no depth to the deposit, no sign of charcoal, fire-cracked rock or an associated occupation layer around the scatter on the surface or the adjacent trench and other exposed areas in the vicinity.

Three spade test units were excavated either side of the exposed shell did not suggest any additional intact subsurface midden extending towards the adjacent stone wall. A small grab sample of shell was taken for potential radiocarbon dating but the feature was assessed as being essentially destroyed with no further information or context available.

A broken, green bottle base fragment was noted lying in the base of the trench directly below the shell. Additional glass from two other bottles was noted on the upper edge of the trench cut, at the same level of shell, three metres to the west. The green glass base was from a thick-walled champagne style bottle with a pronounced kick-up, other fragments were from a thin-walled olive green bottle with a rounded shoulder, and a clear glass bottle. No other diagnostic information was available.

Subsequent radiocarbon dating undertaken by the Waikato Radiocarbon Dating Laboratory indicated the sample contained atom bomb carbon and returned a modern date for the shell (A. Hogg to J. Carpenter pers. comm., 8 April 2021):

| Sample No. | Lab No. | dC13 | F14C% | Result |
|------------|---------|-------------|---------------|--------------------------------|
| Q06/652-1 | Wk52582 | 0.0 +/- 2.0 | 101.6 +/- 0.5 | 101.6 +/- 0.6 % (PMC) - no 13C |

A second visit was made to 115 Three Mile Bush Road to examine the stone walls once information suggesting they were a pre-1900 archaeological feature came to light. Approximately 310m of stone wall were noted on the southern boundary with Three Mile Bush Road, and 35m on the northern boundary. Examination of the 1942 aerial imagery of the area indicates there was once an internal stone wall at least 225m long on the eastern side of the property, approximately parallel to the internal wall on 131 Three Mile Bush Road as discussed in the next section.

Current modifications to the stone walls comprise the 40m section removed and reconstructed along Three Mile Bush Road, the in-filled gate on Three Mile Bush Road, minor changes to the existing gate/road crossing, and the re-orientation and relocation of a 3.5m section of stone wall from the subject property to a neighbouring property (Hurupaki School). As yet, the new road crossing into the subdivision requiring the removal of 25m of wall has yet to occur.

Upon inspection, the existing stone walls on the property were found to be in varied condition. The wall on the Three Mile Bush road frontage is generally in good condition,

and excellent condition where it has been recently reconstructed. However the wall is typically 1-1.2m high, somewhat shorter than usual and suggestive of prior modification.

The rest of the property has been comprehensively recontoured, with a small area of unmodified stone wall and mature native trees remaining along the stream on the northern boundary.

There was no indication of any other archaeological sites and features were present on the property by the time of the inspection.



Figure 22: Shell exposed in trench, immediately north of existing 115 Three Mile Bush Road crossing.



Figure 23; Detail of shell



Figure 24: Test units around shell to determine extent of any subsurface component.



Figure 25: Scatter of green and clear bottle glass at same level as shell.



Figure 26: Detail of bottle glass.



Figure 27: 115 Three Mile Bush Road crossing, prior to works commencing (Google Streetview).



Figure 28: Current 115 Three Mile Bush Road crossing, to be closed.



Figure 29: Current 115 Three Mile Bush Road crossing, to be closed with new crossing opening to the west.



Figure 30: East site of current Three Mile Bush Road crossing, to be closed.



Figure 31: 115 Three Mile Bush Road northern road crossing, prior to work commencing.



Figure 32: Northern road crossing gate, after infilling.



Figure 33: Northern road crossing gate after infilling.



Figure 34: Northern hillock, prior to re-contouring and relocation of power pole.



Figure 35: Northern hillock, after re-contouring and relocation of power pole.



Figure 36: Reconstruction of stone wall.



Figure 37: Northern hillock, prior to re-contouring and relocation of power pole.



Figure 38: Northern hillock, after re-contouring and relocation of power pole.



Figure 39: Northern hillock, after re-contouring and relocation of power pole.



Figure 40: Otapapa boundary wall relocation.



Figure 41: Otapapa boundary wall relocation.



Figure 42: Section of wall in fair condition along northern boundary.



Figure 43: Section of stone wall in poor condition on northern boundary.

6.2 131 Three Mile Bush Road

The property was visited over the course of two hours on 19 February. The weather was sunny and hot. The property was in grazed pasture, with landscaped gardens around the existing and original dwelling, and along the road frontage to Three Mile Bush Road.

Approximately 175m of stone wall is present along the southern boundary/road frontage, with two crossings. The stone wall along the road frontage is in fair condition. The southern side is largely obscured by vegetation but the north side is clear of vegetation in parts. The coping rocks are mostly absent from along the wall, and the wall has been affected by general wear, stock rubbing, and tree growth. Some sections of wall have been repaired but in the absence of the coping stones to hold the wall together, will continue to fail over time.

At both the driveway crossings, the walls have been lowered and capped with cement, presumably to aid visibility entering and exiting the property. Both these crossings are absent in the 1942 aerial suggesting they are relatively recent. The wall is 1.0-1.4m over most of its length, but sections with copping still present are 1.4-1.6m high.

A 50m long internal stone wall is present on the eastern side of the property, offset 5-70m (south to north) from the surveyed boundary. The 1942 aerial imagery suggests that the wall extended an additional 60m north to the stream but this section has since been removed.

The internal stone wall is also only in fair condition. It is built up against the road boundary wall and does not appear to be keyed into the wall as might be expected if they were built at the same time. Most of the copping stones are absent, leading to the poor state of the wall. The wall is 1.0-1.4m over most of its length, but sections with copping still present are 1.4-1.6m high.

No other archaeological sites or features were observed on the surface, or in otherwise eroded or exposed areas. There was no sign of the typical features associated with Maori horticultural activity in stony volcanic landscapes, such as stone gardening or clearance mounds, alignments, sunken paths or drains.

Likewise there was no suggestion of habitation, as might be indicated by terraces cut into steeper slopes, or storage pits for crops. The grass was very light with occasional bare patches and small eroded areas across the pasture and there was no suggestion of shell midden or other occupation deposits in the observed areas.

A number of in-filled geotechnical test pits were noted across the property. There was no sign of any archaeological material in the visible spoil at the top of these pits.



Figure 44: Looking north from south east corner of property.



Figure 45: Looking south to south west from north east corner of property.



Figure 46: Looking east from north east corner of property, towards 115 Three Mile Bush Road.



Figure 47; Looking south towards Three Mile Bush Road from north east corner of property.



Figure 48: Three Mile Bush Road boundary wall, landscaping and services.



Figure 49: Wall at driveway crossing modified by lowering and chip seal coping.



Figure 50: Three Mile Bush Road boundary wall.



Figure 51; Poorly repaired section of Three Mile Bush Road boundary wall.



Figure 52; Internal wall built against Three Mile Bush Road boundary wall.



Figure 53: Section of wall in poor condition.



Figure 54; Gate.



Figure 55: Northern termination of wall, looking north.



Figure 56: Northern termination of stone wall, looking south.



Figure 57: Concrete slabs and blocks pushed into small swale.

6.3 189 Three Mile Bush Road

The property was visited over the course of three hours on 9 March 2021. The property was in a mix of mown or recently grazed or rank pasture, recent native plantings above the stream, and landscaped gardens around the existing dwelling. Surface visibility was good around the plantings, areas of rank grass, and within the forested margin of the stream, to excellent in recently mown or grazed areas.

Approximately 150 of internal stone wall is present on the central western part of the property, running north east from the existing dwelling. The wall is in good condition, with one gate, and as for the other walls observed on neighbouring properties is typically 1.2-1.4m high and 1.2m wide.

The stone wall is present in the 1942 aerial image, in which it is shown as extending eastwards from its current eastern terminus, towards the stream and the stub of wall adjacent to the stream recorded at 115 Three Mile Bush Road. The wall is not shown on any of the historic survey plans and does not align with any existing or historic property boundaries or other land tenure features. However the eastern extension which has been removed, parallels the line of Three Mile Bush Road and its boundary wall.

Approximately 10m of stone wall is present at the road crossing to Three Mile Bush Road, bisected by the road crossing/driveway. This wall is also in good condition and 1.2-1.4m high by 1.2m wide.

No other archaeological sites or features were observed on the surface of the property, or in otherwise eroded or exposed areas. There was no sign of the typical features associated with Maori horticultural activity in stony volcanic landscapes, such as stone gardening or clearance mounds, alignments, sunken paths or drains on the more level or rolling ground.

Likewise there was no suggestion of habitation, as might be indicated by terraces cut into steeper slope on the south side of Hurupaki, or storage pits for crops. There were a number of small slips or terracettes from stock tracking or trees on the slope, which might appear to be archaeological from a distance, but are not. The grass was very light with occasional bare patches and small eroded areas across the pasture and there was no suggestion of shell midden or other occupation deposits in the observed areas.



Figure 58: Looking north along access across Lot 3 DP 99045 from Three Mile Bush Road crossing.



Figure 59: Lot 3 DP 99045 road crossing, looking south.



Figure 60: Detail of stone road boundary wall adjacent to road crossing.



Figure 61: South west end of internal stone wall.



Figure 62: Looking south west along internal wall.



Figure 63: Terminus at north eastern end of stone wall.



Figure 64: Looking south over stream to stone wall stubb at 115 Three Mile Bush Road.



Figure 65: Looking south over southern slope of Hurupakiand across stream to 131 Three Mile Bush Road.



Figure 66: Looking south across Hurupaki slope and stream, towards 115 and 131 Three Mile Bush Road.

6.3 Summary

On the balance of probabilities, the road boundary walls and a number of internal walls on the subject properties are pre-1900, and they have been recorded as archaeological site Q06/652 Stone walls. The James family recollection of walls being built in the 1930s may reflect the expansion of the internal wall system and/or repairs to existing walls at that time.

With regard to the stone walls at 115 and 131 Three Mile Bush Road, DP 49459 (1961) shows the boundary wall on the north side of Three Mile Bush Road on the property immediately to the west of 115 Bush Road being present for at least 70 years. ML 9581 (1914) shows the road boundary wall 131 Three Mile Bush Road already present by 1914, along with the walls on the south side of the road opposite.

ML 5227 (1881) shows the stone walls on the boundary of the Otapapa Block (at Three Mile Bush Road and Dip Road present in 1881. The Block was described as having boundaries completely in stone walls when sold in 1894. ML 2630A (1886) shows wall sand fence on the Three Mile Bush Road boundaries of the Hurupaku No. 3 Block including the subject properties.

James Whitelaw began purchasing parts of the Hurupaki Block in the 1870s, and owned substantial estate on both sides of Three Mile Bush Road by the early 1890s including the Otapapa Block and Onoke Block to the east and parts of the Pahuhuhun Block to the west. He was a prominent settler in Kamo with numerous other business interests including the original tramway to the Hikurangi mines. He went bankrupt in 1894 and sold his Three Mile Bush Road and other holdings at that time. His Hurupaki land is

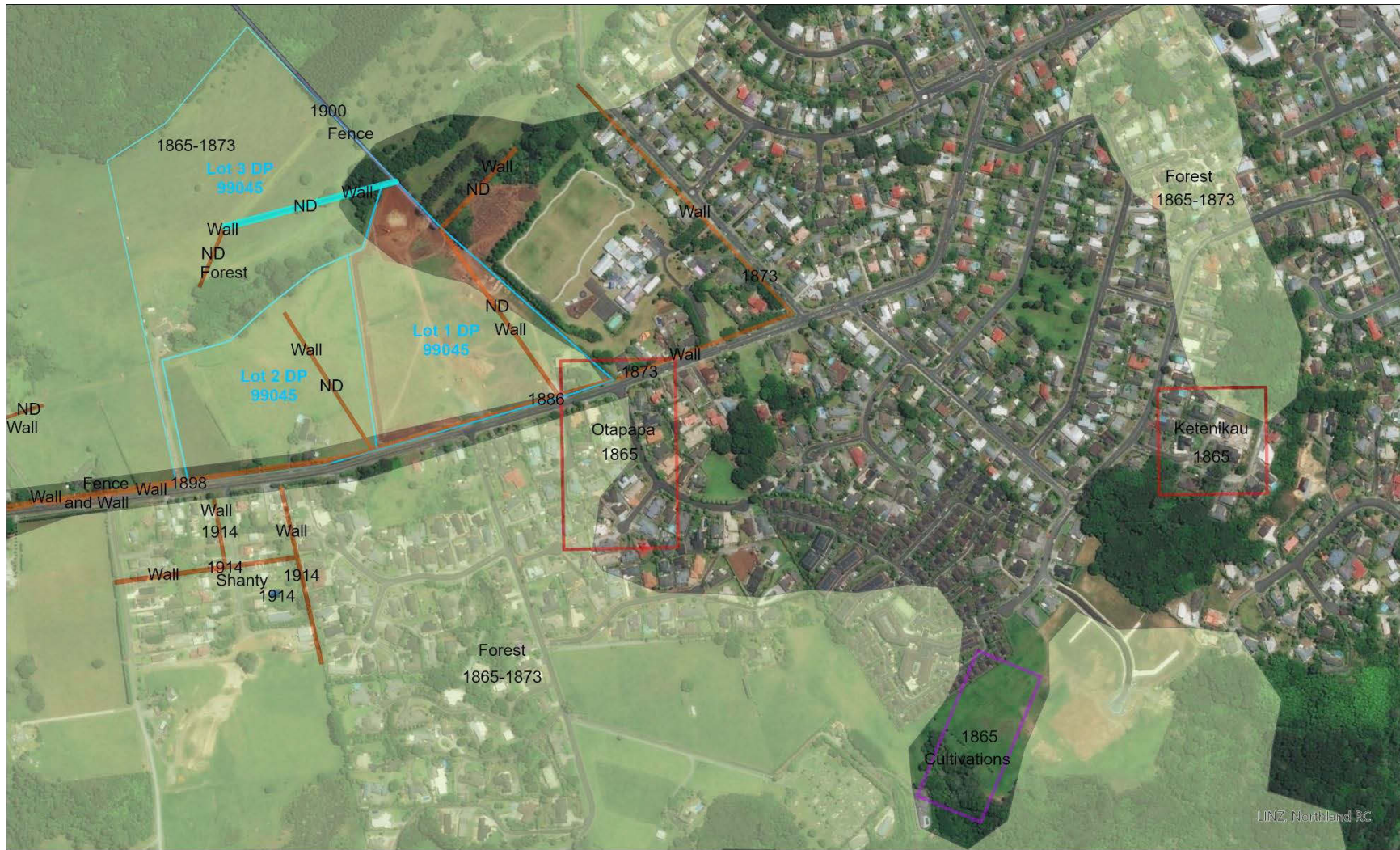
described as being subdivided with stone walls and wire fences, and Otapapa as fully fenced in stone walls, in the real estate advertisements for the bankruptcy sale in 1894.

The internal walls are more difficult to date but given their parallel alignment with each other and the original Otapapa/Hurupaku/Dip Road boundaries, in comparison to current property boundaries, they appear to pre-date the mid-20th and subsequent subdivisions and are consistent with the management of the Hurupaki No. 1 and Otapapa Block as a single unit prior to 1894.

Prior research undertaken further west at Karanui and Amalin Road also indicates that the Three Mile Bush Road boundary walls were generally present prior to 1900 along most of the road from central Kamo westwards, with non-road boundary walls being built next, and then internal walls, with most of the latter being built from the early 20th century onwards until the 1950s, with a great number built as work schemes to use up surplus labour from the gumfields and latter, the Depression..

With regard to prior use of the subject property by Maori, there is no indication from the site visits, radiocarbon dating of possible archaeological shell midden, or historic research that there was any permanent occupation of the area. Undoubtedly the forest resources available were utilised by local communities, and the line of Three Mile Bush Road is of some antiquity, but there is no indication of Maori archaeological sites and features.

Isolated subsurface archaeological features may be present, such as small midden deposits, or fire scoops and ovens, or artefact findspots and associated with short term use of the area. These are unlikely to be identifiable/avoidable prior to large scale topsoil stripping and a similar level of probability exists for most of Whangarei



0 100 200 Meters



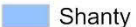

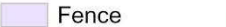


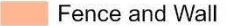


- | | | | |
|---|---|--|--|
|  Cultivations |  Forest |  Shanty |  Subject property |
|  Fence |  Ketenikau |  Wall | |
|  Fence and Wall |  Otapapa |  Subject property | |

Figure 67: Archaeological and historic features.

7.0 Significance Assessment

7.1 Assessment Criteria

The archaeological significance archaeological sites recorded on the subject property will be assessed using the following criteria.

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 if 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.

7.2 Significance Assessment of Stone Walls and Associated Features

Table 1 below assess the archaeological significance of Q06/631, the stone walls at 115 and 131 Three Mile Bush Road. They are assessed as being of low archaeological significance.

They walls are only in fair or good condition and have little information potential, only a single feature type is present (the walls themselves), they are common in the area, and have little contextual value in the absence of other features typical associated with such sites (such as clearance and consumption piles, standing historic farm structures etc). The stone wall network on the property has been previously modified by the removal of the internal wall on 115 Three Mile Bush Road and part of the internal wall on 131 Three Mile Bush Road, and the opening of new gates for the three residences.

On the other hand the walls have moderate to high amenity value and elicit strong community feeling and are highly valued for their visual and heritage appeal.

The Whangarei District Council undertook a study on the significance and condition of the stone walls in Whangarei District in 1997 and another study, the Dry Stone Wall Project, in 2005. The purpose of those projects was to manage and mitigate the effects of future development on stone walls by identifying them, reviewing and enhancing rules in the District Plan.

There is no survey methodology statement and the survey of stone walls in the 2005 Heritage Study appears to be based on observations from roads and other publicly accessible areas. This undercounts stone walls that can't be observed from public places. The assessment of stone walls is also limited by being focussed largely on the visual or landscape amenity of the walls, and specifically their visibility though vegetation or otherwise from public roads, with no concern for other heritage values.

The condition of the stone walls was classified into four categories in the course of the District Council study. "Excellent" refers to walls that are in good condition with no detracting features. "Collapsed - no vegetation" describes walls that are partially falling down but are not located near or covered by vegetation that obscures them from view. "Collapsed - vegetation" means walls that are partially falling down and their visibility is limited because of vegetation growth on or around them. The final category, "Good - by vegetation" outlines those walls that are in good condition but are located near vegetation, such as shelter belts or are covered by weeds and so on, which minimises their visibility from the road. When last assessed in 1997, 79% of the observed stone walls were in excellent condition with an additional 9% in good condition but obscured by vegetation.

In the context of the values identified by the Whangarei District Council, the stone walls on the subject property are in good condition.

In terms of their wider heritage significance, they are a small component of a significant stone wall pastoral landscape in the Three Mile Bush Road area. They are not rare at a local or regional level and are only a fair example of the type and form of this historic heritage established in the second stage of stone wall building in Whangarei which followed the established of the earliest farm walls by the first European settlers in the mid-19th century, with the expansion of farm settlements in the 1870s-1880s.

Table 1: Significance assessment of stone walls

| Significance Category | Value | Comment |
|--|---------------|--|
| Integrity, condition and Information potential | Low | <p>The walls and associated features are in a good to fair state of preservation.</p> <p>The walls have been subject to on-going damage from stock rubbing and general wear, exacerbated by the lack of cap stones along some of the walls.</p> <p>There is little informational potential within the walls themselves and individual sections are generally of a standard form and construction. Any informational potential is likely to be at a landscape level of analysis, examining the development of the walls and their spread across the landscape and how this changed over time, and how those changes are associated with changing land tenure.</p> |
| Diversity | Low | <p>The dry stacked stone wall features are the only features present. There are no field clearance piles, consumption platforms, or other stone work features as known from other, more comprehensive stone wall landscapes.</p> |
| Rarity and Uniqueness | Low | <p>The walls and associated features are not rare at a local or regional level; such stone walls are a common feature of volcanic landscapes in Northland and other regions of geologically recent volcanic activity.</p> <p>They are present on neighbouring properties at Three Mile Bush and the wider Kamo area, as well as at Maunu, Glenbervie, Maungatapere and Whatatiri. Remnant sections of wall are present within urban Whangarei and Kamo.</p> |
| Archaeological Context | Moderate | <p>The features lie within a wider landscape of European pastoral farming characterised by fields bound by stone walls and the use of the local rock in everything from road beds to culverts, bridges and railway embankments.</p> <p>Parts of this landscape overly and largely obscure an older Maori horticultural landscape which made use of the same geological and pedological resources albeit in different form and scale. Other areas were formed by European settlers clearing primary forest</p> |
| Landscape Context and Amenity Value | Moderate-High | <p>The landscape values of the stone walls and associated features are moderate to high. The walls on the subject properties are visible from the road, obvious at ground level from across the properties, and are equally visible from elevated positions on and off the property.</p> <p>Along with their landscape and visual amenity, the walls have educational value and there are opportunities to interpret the development of the walls and associated features, along with the history of the farm.</p> |

| | | |
|--|-------------|---|
| <p>Historical and Community Associations</p> | <p>High</p> | <p>The stone walls and other features are associated with prominent local settler James Whitelaw, who established a large number of local business interests in the 1870s and 1880s before being ruined financially in the economic depression of the 1890s.</p> <p>The local and wider Whangarei community values the stones walls, and this is reflected in their status in the Whangarei District Plan and the care with which the walls Three Mile Bush Road, and many other walls in the wider area, have been maintained. They appeal both in a visual sense and as a tangible link to a farming past that stretches back through the 19th century settlement of the Whangarei District and beyond to the European homelands of those who built the walls.</p> |
|--|-------------|---|

Figure 19. Stone Walls in Three Mile Bush

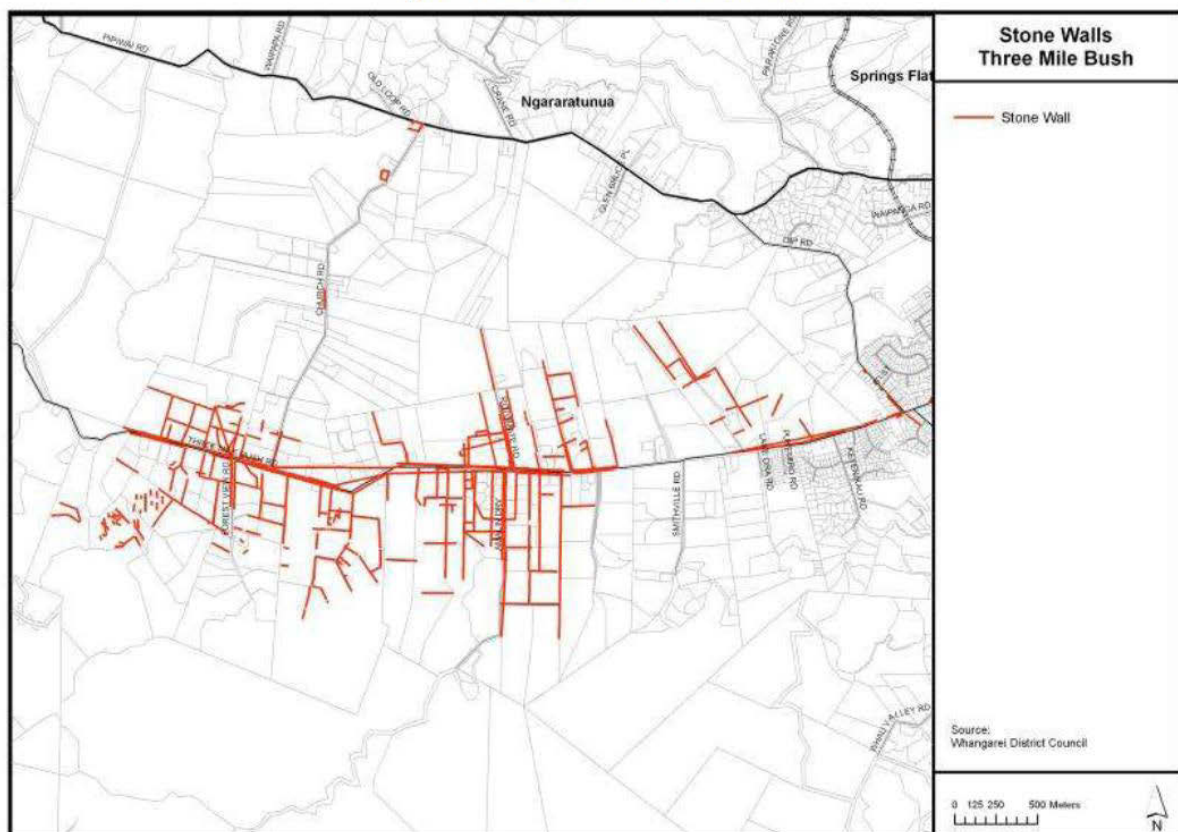


Figure 68: recorded stone walls at Three Mile Bush Road (Liang 2009: 35).

8.0 Assessment of Effects

On the balance of probabilities, pre-1900 stone walls have been modified without an archaeological Authority at 115 Three Mile Bush Road. These modifications include:

- 1) Infilling an existing gateway.
- 2) Deconstructing and then reconstructing a 40m section of wall on the same alignment to allow for recontouring and re-locating power poles.
- 3) Deconstructing and then relocation a 3.5m section of wall 90° to the original alignment on the neighbouring property in order to allow construction of a retaining wall.

4) Possible destruction of a small shell midden of unknown date/origin.

Of the approximately 350m of stone wall on the property, 50m have been modified by the current work, with an additional 25m to finish the new road crossing. The modifications to the stone walls have all been undertaken in a professional manner and little of their archaeological value has been lost.

On a similar basis, any subdivision proposal for 131 Three Mile Bush Road is likely to have similar effects on the dry stacked stone walls on that property. While the amenity values of the walls are recognised, the existing road crossings are unlikely to be of a form, size, and potential location to adequately service the subdivision and may require modification similar to those on the neighbouring property.

The internal stone wall is also not located in a practical location in terms of future development will be deconstructed, with the stone to be reused elsewhere.

As noted in prior reports involving stone walls in Whangarei District, it is the overall extent, pattern and condition of the stone walls across a landscape which provides most of their heritage value; as working elements of historic farms the walls were continuously opened and closed throughout their history, according to the needs of the farmer and the changing organisation of the farm and fields.

The Whangarei District Historic Heritage Study (Liang 2007: 25) states

"The Three Mile Bush area has approximately 31 kilometres of stone wall, which accounts for 20% of the stone walls located in the district. There are two walls running parallel to Three Mile Bush Road on either side for approximately 3 kilometres heading west from Smithville Road (Figure 19). This area has the greatest number of walls located in gardens and driveways. This may be as a result of smaller lot sizes in subdivision that have fragmented the walls."

The changes to the walls have affected approximately 75m of wall at 115 Three Mile Bush Road, excluding more minor repairs to the walls which have or may be undertaken as part of the project. At 131 Three Mile Bush Road, a similar closing of three existing crossings and the opening of a new crossing to meet the required engineer standards is likely to effect approximately 50m of wall, with 120m of internal wall to be deconstructed.

Now part of the rural-urban landscape, so long as the changes to the boundary walls are undertaken by an appropriate specialist, and recorded appropriately, the opening of new gateways, closing of others, and repairing and maintaining the walls as necessary as they become the boundaries of a subdivision rather than a paddock has low adverse effects on heritage value. However In terms of the wider heritage landscape these effects are less than minor.

Removal of the internal wall at 131 Three Mile Bush Road is a more significant effect as this wall is a remnant of the historic pattern of land tenure on the north side of Three Mile Bush Road, although part of the wall has been removed previously.

While the overall archaeological and heritage effects of the redevelopment of 115 Three Mile Bush Road and the proposed redevelopment of 131 Three Mile Bush Road are minor these effects still result in the ongoing, slow decline of the stone wall resource,

as larger properties in the stone wall country of Whangarei are progressively subdivided and developed. There is currently no adequate baseline from which we can track that decline as the WDC study referenced above was not comprehensive and was largely restricted to publicly visible walls, and there is no formal system of recording changes to the stone walls in the District.

There are unlikely to be other, subsurface archaeological features on the property as most of the area appears to have been still under primary forest when it was surveyed and first surveyed in the 1870s, with early historic Maori period occupation concentrated around Ketenikau to the east and pre to protohistoric occupation on Hurupaki and its northern slopes, Ngararatunua and Onoke to the north, north west and north east, and the land between Ketenikau and modern Kamo.

The land was sold to James Whitelaw progressively from shortly after title was issued to Maori owners, with the subject property part of Hurupaki No. 3 sold to and cleared by Whitelaw in 1875 and while the area was farmed, there was no homestead or other farm related infrastructure on the subject property.

There are unlikely to be effects on archaeological sites under features protected by the Heritage New Zealand Pouhere Taonga Act 2014 although as with most of this area such finds are always possible. Any accidental archaeological discoveries should be managed through an accidental discovery protocol.

9.0 Findings and Recommendations

9.1 115 Three Mile Bush Road

- 1) The stone walls probably date to before 1900 and have been modified without an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014.
- 2) The walls are of low archaeological significance, but moderate overall heritage significance.
- 3) The modifications to-date are of a minor nature, consisting of relocating a short section of internal wall, closing an existing gate/crossing and widening an existing gate/crossing on a road boundary wall, relocating a longer section of road boundary wall.
- 4) The modification of the walls to-date, and other repairs/restoration have been undertaken to a high standard and will serve to stabilise the walls and conserve them into the future.
- 5) A small, potentially pre-1900 shell midden deposit has been destroyed without an archaeological authority, but was later found to be a modern feature on the basis of radiocarbon dating.

9.2 131 Three Mile Bush Road

- 1) The stone wall on the road boundary and the internal wall probably date to before 1900 and an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required to modify or destroy them.

- 2) The walls are of low archaeological significance, but moderate heritage significance.
- 3) The modification to the road boundary wall is likely to be of a minor nature, such as infilling existing crossings, opening a new crossing, and repairing the wall.
- 4) The internal wall will be deconstructed and used for the stone walls at the subdivision entrance, and this wall may be archaeological.
- 5) An archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 will be required to modify or destroy the stone walls.
- 6) Modification of the stone walls should be undertaken by an experienced local dry stone wall mason.
- 7) A photographic record should be made of the deconstruction and modification of the stone walls as it occurs, along with a record of where the changes were made in the wall system. This information should be archived with Heritage New Zealand and within the Whangarei Library system/Northland Room.
- 8) There are unlikely to be other archaeological effects but an accidental discovery protocol should be in place to manage any unanticipated finds.

9.3 139 Three Mile Bush Road

- 1) The stone wall on the road boundary probably dates to before 1900 and an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required to modify or destroy them.
- 2) There is no indication of age of the internal wall, but this will remain in-situ and be repaired.
- 3) The walls are of low archaeological significance, but moderate heritage significance.
- 4) The modification to the road boundary wall is likely to be of a minor nature, such as infilling the existing crossing and repairing the wall.
- 5) An archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 will be required to modify or destroy the stone walls.
- 6) Modification of the stone walls should be undertaken by an experienced local dry stone wall mason.
- 7) A photographic record should be made of the deconstruction and modification of the stone walls as it occurs, along with a record of where the changes were made in the wall system. This information should be archived with Heritage New Zealand and within the Whangarei Library system/Northland Room.
- 8) There are unlikely to be other archaeological effects but an accidental discovery protocol should be in place to manage any unanticipated finds.

10.0 Summary

Geometria Ltd was commissioned by Blue Wallace Ltd on behalf of TMB Ltd to undertake an archaeological survey and assessment of 115, 131 and 139 Three Mile Bush Road.

The subject properties are part of a historic European pastoral landscape characterised by stacked dry stone field and boundary walls, which pre-date 1900. An archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required for any further modification or destruction of the stone walls.

There is no evidence based on historic research or archaeological survey of a permanent Maori occupation of the area, which appears to have been in primary forest until the 1870s. However the route of Three Mile Bush Road appears to have been used for some time as a foot track to Ruatangata and important Maori settlements from the prehistoric and historic period are located short distances away. Title to the land was issued in 1873 after which it was progressively partitioned and sold to European settlers, cleared and broken in for farming. Accidental discoveries of subsurface archaeological features are unlikely.

11.0 References

- Ballard, C., 2010, Stone Wall Country. C. Ballard, Whangarei.
- Butcher, M., 2011 Heritage Assessment. Onoke Ballast Pit. Unpublished report for the Department of Conservation, Whangarei.
- Carpenter, J., 2008. Archaeological Survey and Assessment of the Proposed Subdivision of Lot 3 and Lot 4 DP 379319, Three Mile Bush Road, Kamo. Unpublished report for Reyburn and Bryant Ltd. Geometria Ltd, Whangarei.
- Carpenter, J., 2009. Archaeological Survey and Assessment of the Proposed Subdivision of Lot 5 and 7 SO 317851, Kamo. Unpublished report for Tribro Kamo Ltd. Geometria Ltd, Whangarei.
- Carpenter, J., 2010. Carpenter, J., 2010a. Archaeological Survey and Assessment of the Proposed Spedding Road Extension, Whangarei. Geometria, Whangarei.
- Carpenter, J., 2011. Archaeological Monitoring of the Spedding Road Extension. Whangarei. Geometria, Whangarei.
- Carpenter, J., 2013. Archaeological Assessment of the Proposed Subdivision of 390 Three Mile Bush Road. Kamo. Unpublished report for Cato Bolam Consultants Ltd. Geometria, Whangarei.
- Carpenter, J., 2018. Personal communication to K. Nathan, Cato Bolam Consultants Ltd. Re: Subdivision of 28 Amalin Drive, Kamo - Archaeological Advice. Unpublished letter report, 3 June 2018. Geometria Ltd, Whangarei.
- Carpenter, J., 2020. Personal communication to B. Reiher, Evo Holdings Ltd. Re: 28 Amalin Drive - Archaeological Authority 2019/711 - Compliance Report. Unpublished letter report, 24 March 2020. Geometria Ltd, Whangarei.
- Phear, S., and R. Clough, 2010. Kamo Bypass Stage 2, Northland. Archaeological Assessment. Unpublished report for the NZ Transport Authority. Clough and Associates Ltd, Auckland.
- Johnson, L., 2002. Archaeological monitoring of the Kamo Bypass and investigation of site Q06/486. Unpublished report for Opus International Consultants. Northern Archaeological Research, Devonport.
- Liang, A., 2009. Whangarei District Heritage Report. Unpublished report for the Whangarei District Council.
- Maingay, J., 1990. Archaeological report on the proposed bypass at Kamo. Unpublished report for the Historic Places Trust. Department of Conservation, Whangarei Region.
- Menefy, D., 1994. Kamo. The Story of a Village. Kamo Book Committee, Whangarei.
- Nevin., D., 1998. Archaeological Survey. Hurupaki Slopes Development. Pipiwai Road. Kamo. Unpublished report for Northland Planning Services.

- Nevin, D., 1999. Kamo Bypass. Archaeological Report Two. Unpublished report for Opus International Consultants.
- Nevin, G. E., 1988. Whangarei City Archaeological Survey. Unpublished report for the Whangarei City Council.
- Olsen, G., 2019. Cultural Impact Assessment. 'The James' 62 Lot Residential Subdivision of Lot 1 DP 99045 at 115 Three Mile Bush Road, Kamo, Whangarei. Unpublished report for Ngati Kahu O Torongare.
- Phear, S. July 2010. Kamo Bypass Stage 2: Site Damage Assessment. Unpublished report for NZ Historic Places Trust. Clough and Associates, Auckland.
- Shackles, R., and S. Phear, 2011. Archaeological Monitoring of the Kamo Bypass Stage 2 Works, Kamo, Northland: Recording and Investigation of Sites Q06/581, Q06/607 and Q06/616. Preliminary Report Prepared in Fulfilment of NZHPT Authority No. 2011/52. Unpublished report for AECOM and the NZ Historic Places Trust.
- Spörli K.B. & Hayward B.W. (2002): Geological overview of Northland. Field trip guides, GSNZ Annual Conference "Northland 2002", Geological Society of NZ Miscellaneous Publication 112B, p.3-10.
- Turton, H. H., 1878. Maori Deeds of Old Private Land Purchases in New Zealand, From the Year 1815 to 1840, with Pre-Emptive and Other Claims. George Didsbury, Government Printer, Wellington.

Appendix A – Site Record Form