

Campana Road Plan Change: archaeological assessment

**report to
Capstone Projects**

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1 Introduction

Five landowners propose a Private Plan Change at 485 Puhinui Road, 467 Puhinui Road, 5 Campana Road, 10 Campana Road and 11 Campana Road (Lot 2 DP 402013, Allotment 190 Parish of Manurewa, Lot 1 DP 482013, Lot 3 DP 71211 and Lot 2 DP 71211). These properties are currently zoned Future Urban Zone in the Auckland Unitary Plan and are currently used for market gardening. The proposal is to rezone the properties to Light Industrial, which is consistent with surrounding properties. An archaeological assessment is required in support of the Private Plan Change application to Auckland Council. Tom Anderson of Capstone Projects, on behalf of the landowners, commissioned this assessment from CFG Heritage Ltd.

1.1 Statutory requirements

All archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 and may not be destroyed, damaged or modified without an authority issued by Heritage New Zealand Pouhere Taonga (HNZPT).

An archaeological site is defined in the Heritage New Zealand Pouhere Taonga Act as:

- (a) 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).

The Resource Management Act 1991 (RMA) requires City, District and Regional Councils to manage the use, development, and protection of natural and physical resources in a way that provides for the wellbeing of today's communities while safeguarding the options of future generations. The protection of historic heritage from inappropriate subdivision, use, and development is identified as a matter of national importance (Section 6f).

Historic heritage is defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas
- archaeological sites;
- sites of significance to Māori, including wāhi tapu;
- surroundings associated with the natural and physical resources (RMA Section 2).

These categories are not mutually exclusive and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

Where resource consent is required for any activity the assessment of effects is required to address cultural and historic heritage matters.

2 Methodology

The following digital data sources were consulted:

- Site records from the New Zealand Archaeological Association (NZAA) Site Recording Scheme (SRS) were obtained from ArchSite (<https://nzarchaeology.org/archsite>)

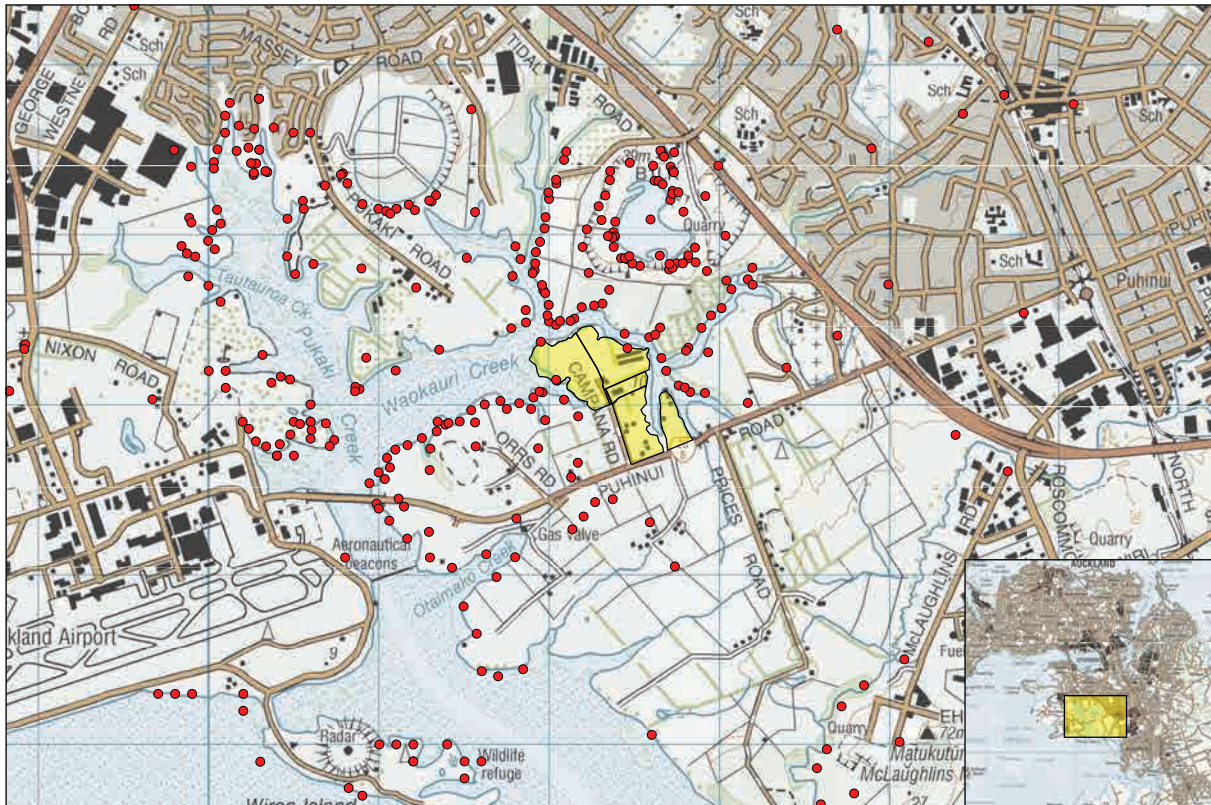


Figure 1. Location of the Campana Road Plan Change area and archaeological sites recorded in the area.

- Records of previous archaeological investigations in Manukau were obtained from the HNZPT digital library (<https://dl.heritage.org.nz/greenstone3/library/collection/pdf-reports/>)
- Historic images including photographs, drawings, and paintings searched for primarily through the online catalogues of the Alexander Turnbull Library
- Historic maps and plans held by Land Information New Zealand (LINZ) were accessed using QuickMap
- The Auckland Council Cultural Heritage Inventory (CHI) and the Auckland Council GeoMaps GIS viewer were searched for any areas of cultural significance in the vicinity (<https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html>).
- Soil types in the area were identified from S-Maps online viewer maintained by Landcare Research (<https://smap.landcareresearch.co.nz/app/>)
- OurEnvironment was searched for vegetation and soil information (scinfo.org.nz)
- Aerial photography was accessed from RetroLens (Retrolens - Historical Imagery Resource)
- LINZ for surveys, imagery, property details.

An archaeological survey was undertaken on 26 October 2023 by Lucy Arrell of CFG Heritage Ltd. This was a visual inspection undertaken on foot, supplemented by test pitting and a 1.1 m gum spear. The primary focus of the survey was to identify any possible archaeological features or material which may be impacted by works.

3 Background

The Manukau Harbour is located on the southwest of the Tāmaki Isthmus and flows into the Tasman Sea through a narrow (2.2 km) channel. The plan change sits between the multiple volcanic fields that comprise Auckland. To the southeast is Matukutūruru / Mount Wiri and Matukutūreia / Mount McLaughlin, and multiple tuff rings known as the Puhinui Craters. Five hundred metres

north of the plan change is Ngā Kapua Kohuora / Crater Hill, to the west of which is Te Pūkaki Tapu o Poutukeka / Pūkaki Lagoon, a 600 m wide explosion crater. These latter volcanoes, along with Māngere Lagoon, Waitomokia, Kohuora, and Robertson Hill, are collectively known as Nga Tapuwae a Mataoho, 'The Sacred Footprints of Mataoho.' Crater Hill comprises of a scoria tuff cone that has been largely quarried away, while most of the encircling tuff ring remains (Taylor 1982: 2). Crater Hill is bounded on three sides by the Waokauri Creek, which flows north of the plan change and feeds into Pūkaki Creek (Taylor, 1982: 3). Pūkaki Creek is a broad tidal inlet that flows into the Manukau Harbour to the west. Much like the Puhinui Creek Estuary, the Waokauri Creek estuary features thick silt deposits with expanding mangrove forests along its banks and flats (Bickler et al. 2008: 4).

The plan change area is constituted of mostly imperfectly drained soils, with the thick mangrove swamps to the northeast. Most of the project area is described as clay, with some parts recording loam and silt deposits over a clay base. Prehuman vegetation across the project area is projected to have been dense, old growth kauri forest. These forests were part of a wider landscape of native conifers, such as kahikatea, rimu, and mataī. A surviving reference to these old kauri forests is the name Waokauri creek, meaning 'kauri forest' (Tonson 1966: 27). An ancient sub-fossil kauri forest in the tidal mud flats to the west of the plan change is partially buried by prehuman eruptions at Maungataketake (Marra et al. 2006: 2160).

Today the Manukau region is divided between residential sprawl in all directions from the plan change area but the west, which is mostly divided into grassed paddocks and industrial development, mostly associated with Auckland Airport. The project area is bounded to the north by the Waokauri Creek, which is a tributary to the Pūkaki Creek to the west. These waterways are bounded by extensive mudflats that are classed as a significant ecological area in the Auckland Unitary Plan, though they are increasingly infiltrated by mangroves.

3.1 *Pre-European Māori*

Settlement across the broader Manukau area was focussed on the construction and occupation of pā on the hills and volcanic cones that characterise the landscape. These include Ngā Kapua Kohuora / Crater Hill, Matukutūruru / Mount Wiri, Matukutūreia / Mount McLaughlin, and Te Pane o Mataoho / Māngere Mountain. Prior to their currently quarried states, views between Crater Hill pā and Matukutūreia would have been evident, linking the landscape across great distances (Campbell et al. 2013: 46). Manukau is connected around its harbour and to other areas of Tāmaki Makaurau by waterways, portages at New Lynn connect to the Whau River and the Waitemata harbour, and Ōtāhuhu to the Tāmaki River and the Hauraki Gulf (Campbell et al. 2013: 27). Importantly, the Waokauri also acted as a portage route northeast to the Tāmaki River, between Ngā Kapua Kohuora / Crater Hill and Te Pūkaki Tapu o Poutukeka / Pūkaki Lagoon (Puhinui Structure Plan 2016). The Waokauri portage eliminated the need for travellers to pass around the Māngere Peninsula (Hooker 1997: 29). These portages connect the Manukau Harbour to the broader Tāmaki isthmus, and as such the project area is part of a continuous archaeological landscape.

The Te Waiohūa confederation occupied the Māngere and Puhinui area. Ngā Kapua Kohu Ora / Crater Hill would have been the central focus of the archaeological landscape across the Puhinui area (Campbell et al. 2013: 46). Also important was the Pūkaki Lagoon (District Plan – Manukau Section). The soils that surround the volcanic cones tend to be fertile and good for gardening, making the broader Manukau area attractive for pre-European Māori settlement. Archaeological evidence of gardening and subsistence across the landscape includes food preparation and cooking areas, and pits for storing surplus food (Taylor 1982: 13, Foster et al. 1985, Sullivan 1973). A range of food gathering was undertaken by Māori throughout the region, as indicated by the number of shell middens across the landscape, including within the plan change area. These middens are evidence of widespread marine exploitation and intensive occupation of the area, along with stone tools and flakes, aligned postholes, and evidence of woodworking, gardening, and food storage (Campbell et al. 2013: 13, 55; Taylor 1982: 13).

3.2 Historic

The first European contact in Manukau was made in 1820 by Rev. Samuel Marsden and Mr J. L. Nicholas, who travelled from the Bay of Islands aboard the brig *Active* (Tonson 1966: 31). One of the first European settlers documented in the Manukau area was Thomas Mitchell, an Australian timber merchant who was drawn to settle in 1835 after noticing kauri trunks from the Manukau Harbour. Mitchell's residence is shown on one of the earliest charts of the region, by Thomas Wing of the *Fanny* (Tonson, 1966: 43). The Church Missionary Society first established outposts in Manukau in 1836, and it is around these stations that the first European settlements were formed.

A vast block of land known as Clendon's grant was allocated to Captain James Reddy Clendon in 1842, extending from the Manukau Harbour into the fertile farmlands of Papatoetoe (Tonson 1966: 56). The grant was offered to Clendon by the 1840 Government as payment for the purchase of his Bay of Islands Estate (Campbell et al. 2013: 9). The Wiri grant was not settled by Clendon, nor developed, and over time was split and sold into smaller farms. Wesleyan Mission stations began to be established in the late 1840s, and in 1849 an area in Ihumātao came under their charge (Tonson 1966: 47). The Ihumātao Mission station and a school were built adjacent to the nearby Māori settlement and using Māori labour, under the supervision of Rev. H.H. Lawry.

Manukau was a part of the Great Survey of New Zealand in 1853 which included a chart of the Manukau Harbour by Commander Byron Drury of the *Pandora* (Figure 2). The arms of the Waokauri Creek are mapped accurately, though it is unnamed. On a north bank of the Pūkaki Creek is a point labelled 'Nga-nui Pt' and three buildings are visible (Figure 2). These are Marmaduke Nixon's farmstead, as pointed out in his own map where the Nga-nui point is labelled as 'My Hut' (Campbell et al. 2013:7). Nixon's map labels the span between the Waokauri and Pūkaki Creeks as 'Native Land', and indicates approximate structures thought to represent a Māori settlement, or individual raupō whare. Nixon occupied the land here from 1852 to 1854, before becoming a prominent figure in the Land Wars.

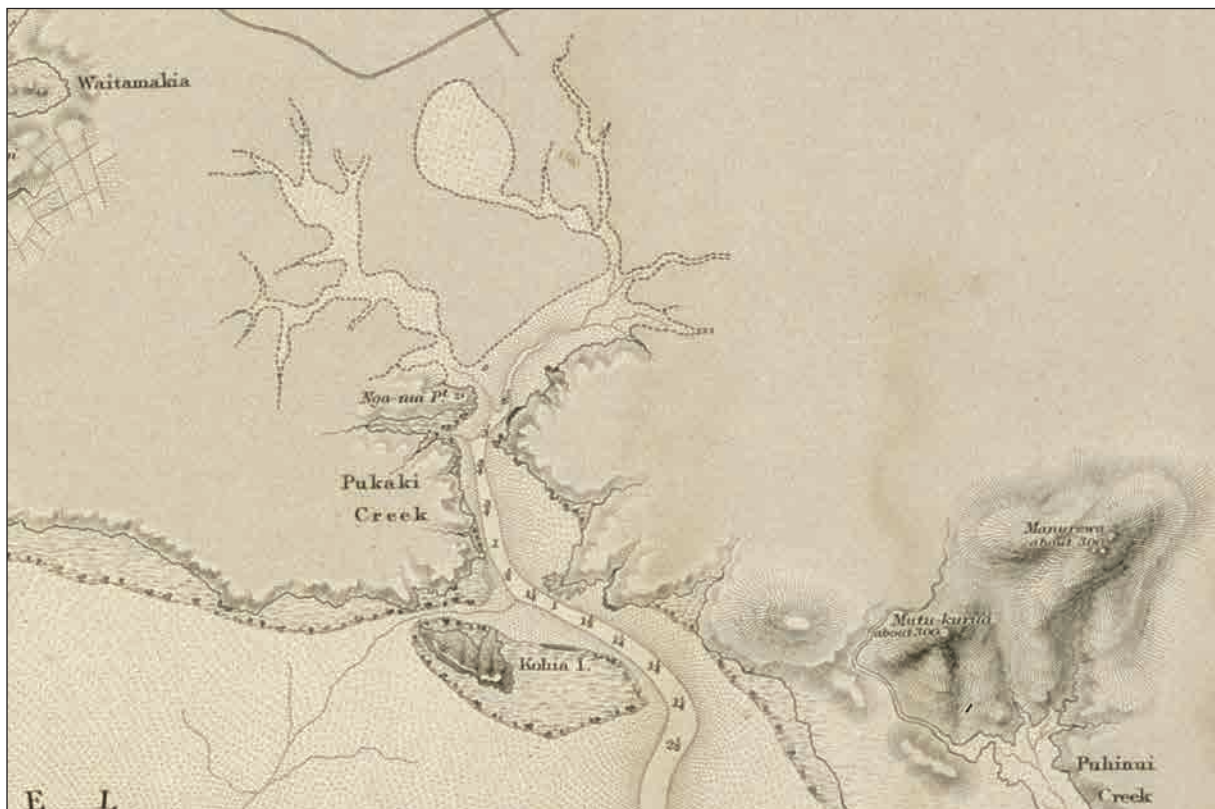


Figure 2. Detail of Commander Drury's 1853 chart of the Manukau Harbour (Alexander Turnbull Library).

Plan SO 238 from 1866 (Figure 3) shows the plan change area sitting below Waokauri Creek. The two properties along Puhinui Road are marked as being owned by Francis William Claude, though his land south of Puhinui Road had since been purchased by Thomas McLaughlin in 1845, and is marked in the name of his son William McLaughlin. Above these two properties, to the north, is a block owned by William Thorne Buckland, yet to be divided into the two separate properties present today. Land marked north of the Waokauri Creek is listed for 'Native purposes' and is consequently open for sale (Campbell et al. 2013). There are no visible annotations or markings indicating structures, other than the Papahinau Chapel erected in 1863 (R11/230). This area, known as Papahinau, just west of the plan change area, was occupied by Te Ākitai from the early 19th century through until 1823. The land was reoccupied in 1835 through until 1863, at which point Te Ākitai refused the oath of allegiance to the Crown and moved into the Waikato (Foster and Sewell 1995). The historic pattern of Te Waiohūa settlement around the Manukau area was disturbed by 1860s land confiscations following the New Zealand Land Settlements Act 1863, including the seizure of 1300 acres at Mangere and Pūkaki respectively, and 110 acres at Ihumātao (District Plan – Manukau Section).

Lot 190, a part of the plan change area sitting between two arms of the Waokauri Creek, is depicted in Plan SO 23261 as having multiple buildings and an 'old orchard' owned by Mrs Bickers (Campbell et al. 2013: 16). This survey was made in 1925, and the description 'old' could mean the buildings date far earlier. The landscape surrounding the plan change was historically used as farmland, with farming likely beginning following 1845 when Clendon's Grant was subdivided (Clough and Prince, 2000). The primary land use remained farming throughout the 19th and early 20th century, until the 1960s onwards, when quarrying and then industrial development began. The earliest aerial photo showing the plan change area dates to 1939, and shows it to be grassed paddocks with buildings limited to the edges of Puhinui Road (Figure 4). Vegetation is shown to be far more limited than it is presently, with the banks of the Waokauri Creek predominantly clear.

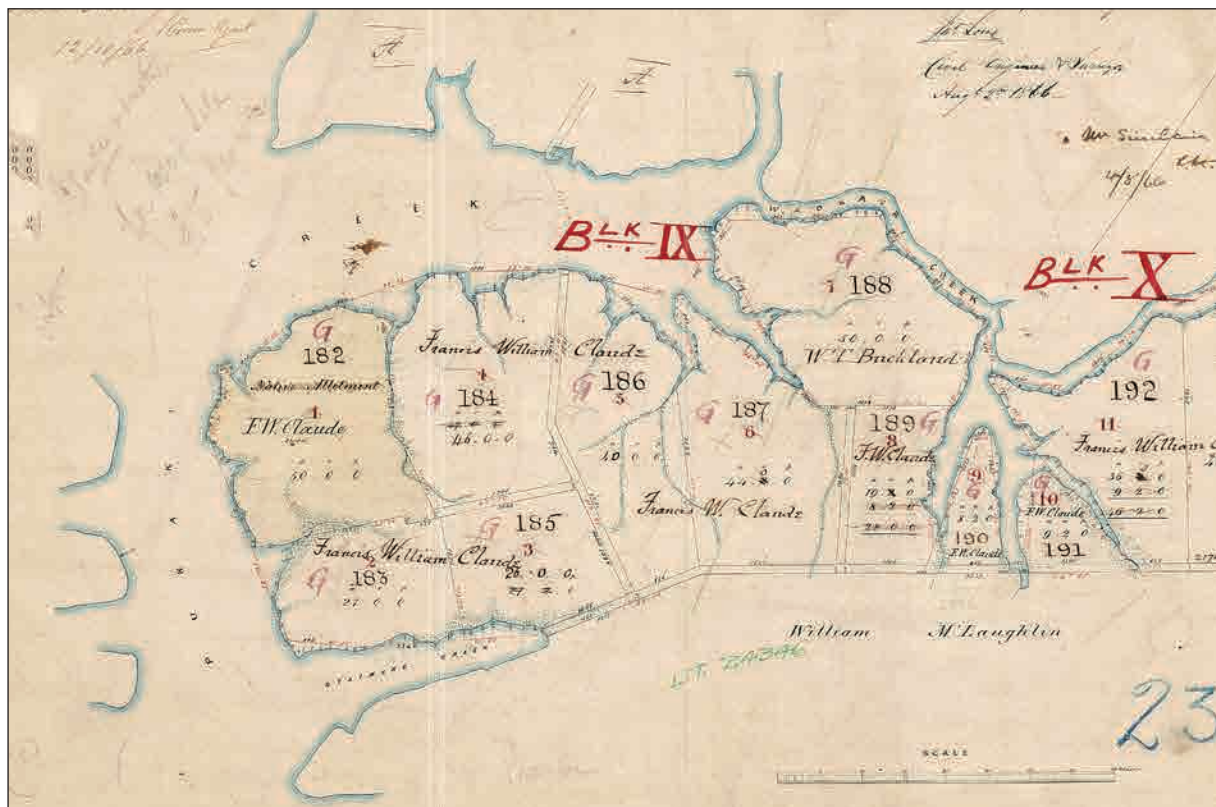


Figure 3. Detail of plan SO 238, dated to 1866, showing the properties of W. T. Buckland and F. W. Claude.

3.3 Archaeological background

Early archaeological surveys in the Manukau region were undertaken by Agnes Sullivan (1973, 1975) recorded most of the known sites around the Pūkaki Creek and Ngā Kapua Kohu Ora / Crater Hill. Sullivan's (1973) investigations at the Lower Pūkaki Creek recorded 62 new sites, including the relocation of the Papahināu kāinga (R11/229), a 19th century Māori settlement area south of the Waokauri Creek and just west of the plan change. The area has been subsequently resurveyed since with new sites including houses, gardens, terraces, and Māori and European artefacts (Foster and Johns 1983; Foster and Sewell 1995). On revisiting Papahināu, Campbell (et al. 2013) reported it as partially destroyed and heavily obscured. The site remains an important example of historic period Māori occupation. Sites recorded by Sullivan (1975) at Ngā Kapua Kohu Ora / Crater Hill consist of pits, gardens, burial caves and middens, altogether forming an extensive archaeological landscape, which Campbell et al. (2013) describes as including not just the hill itself but the southern slopes down to the Waokauri Creek. Further investigations at Ngā Kapua Kohu Ora / Crater Hill found houses, cobbled platforms, pits, and the extensive shell middens that are characteristic of the Manukau inlet banks (Foster et al. 1985).

Excavations at Puhinui (R11/25) found the largest evidence for stonefields in the area at Matukutūreia / Mount McLaughlin, identifying cultivation areas up to 1500 m² (Lawlor 1981). The Puhinui Peninsula appeared to be largely used for gardening and shellfish exploitation, with little evidence of intensive occupation (Bulmer 1992; Clough and Turner 1998; Bickler et al. 2008). Bickler et al. (2008) observed that visible midden sites appear to be far larger and more complex than surface evidence might suggest, and that midden erosion is a critical issue for the future. The same conclusion was reached during the investigation of a creekside midden exposure (R11/602) along a northern arm of the Waokauri, which was found in a flat paddock alongside pits, hāngi, postholes and terraces



Figure 4. Detail of aerial photo SN139/33/8, dated to 1939 showing land use of the plan change area.

(Taylor 1982: 7). Taylor (1982: 14) proposed that there is a high probability that other streambank sites in the area recorded primarily as middens also conceal a similar complexity of occupation.

Directly to the east of the plan change area several dense middens were uncovered during the extension of the Manukau Memorial Gardens, comprised of primarily tuangi (*Austrovenus stutchburyi*) and pipi (*Paphies australis*) in a charcoal stained soil (Clough and Prince 1999). Large scale excavations took place to the west of the plan change when the Auckland Airport developed its northern runway by the harbour shore (Campbell 2011; Hudson and Campbell 2011). This area (R11/859) contained burials interpreted as demonstrating the reinforcement of memory and group identity, as well as occupation evidence including finely made artefacts, kumara storage pits, and houses, dated between the 16th and 18th centuries. Investigations during further airport extensions identified fire scoops, postholes, and midden (Campbell and Moses 2023). Though most was disturbed, ground penetrating radar located dense subsurface midden deposits subsurface.

Campbell et al. (2013) conducted a broad survey of the Pūkaki area, including the Waokauri Creek and the plan change, as well as Ngā Kapua Ora / Crater Hill, Pūkaki Lagoon, Pūkaki Peninsula, Puhinui Reserve, Papahināu, Pūkaki Chapel and Waituarua Pā. Metimeti (R11/541), a historic kainga approximately 400 m from the plan change area, was unable to be located. The midden sites located inside the plan change area (R11/2855, R11/1111, R11/1112) were revisited. All were observed to be visible from the creek banks, and shell and stone flakes were scattered across the market gardens and ploughed fields, as well as in the mudflats along the creek banks. The stone flakes include Manukau cherts, Tūhua / Mayor Island obsidian, Motutapu greywacke and Tahanga basalt from the Coromandel, fashioned into adze flakes, grinders and drill points. Investigations by Bader (2023) in the northeast corner of 485 Puhinui Road found sparse shell scattering and a charcoal rich topsoil that may indicate archaeological subsurface features across the Waokauri Creek edge.

3.4 NZAA Sites

Archaeological sites within 100 m of the Campana Road plan change area are predominantly midden sites (R11/1114, R11/1116, R11/619, R11/616, R11/618, R11/615, R11/610, R11/609, R11/591, R11/578, R11/577, R11/46). These midden sites contain various indicative of substantial occupation, notably obsidian and adze flakes. Some garden sites are also recorded within 100 m of the plan change area (R11/618, R11/46), as is a cluster of three historic late 19th century rubbish dumps (R11/2853).

3 archaeological sites, all middens, are located in the plan change area.

3.4.1 R11/2855

A shell midden covering an approximately 30 x 15 m area first recorded by Campbell et al (2013). The shell is predominantly tuangi and is exposed in recently cultivated soil. Three green and grey obsidian flakes, and one chert flake, were found in the midden. A further 2 m x 100 mm thick shell lens was found heading down to the mudflats in the west. The rest of the scarp was thickly vegetated and was thought to cover more midden. Three obsidian flakes were found in vehicles tracks 100–300 m to the southwest, and are thought to have been transferred from the midden by vehicles.

3.4.2 R11/1111

An extensive midden scatter across a cultivated field and along the Waokauri creek bank first recorded by B. Cramond and M. Taylor (1981). In the creek bank thin lenses of shell were visible, as were red and yellow chert flakes and 19th century black beer bottle glass sherds. Midden and flakes are scattered across the promontory market garden and in poor condition in this area. The main midden concentration is found in the northwest quadrant of the property along the Waokauri Creek, and further stone flakes are found spread through the mudflats. A separate small midden exposure is found in the southeast corner of the market garden measuring 10 x 10 m.

3.4.3 R11/1112

A tuangi midden on the south bank of the Waokauri Creek opposite Ngā Kapua Kohu Ora / Crater Hill, found 4 m from the mangrove choked creek inlet. This site was originally recorded by B. Cramond and M. Taylor (1981). The bank in which the shell midden sits is eroding.

4 Section 56 investigations

Minimally invasive exploratory investigations were on 18 July 2023 at 10 Campana Road in areas where shell midden associated with sites R11/1111 and R11/2855 was visible on the surface. 6 trenches were opened with a 3.5 tonne hydraulic excavator using a 1400 mm flat edged bucket to just below the base of the plough zone, exposing any in-situ features to determine their condition and the extent of site disturbance. Any features identified were left intact, recorded, and photographed. No samples were taken. These are reported in full in Campbell and Arrell (2024).

The area had been ploughed in the past with plough lines evident beneath the topsoil. It is currently cultivated for market gardening, but this cultivation does not reach the level of the plough lines. Cultivation had dispersed midden shell across the surface.

At Trench 1 at the eastern surface scatter of R11/1111, two areas of intact midden were found beneath the plough zone, mostly tuangi (*Austrovenus stutchburyi*).

Trenches 2–5 were four interconnected trenches dug through the western surface scatter of T11/1111. Two patches of midden, again dominated by tuangi with occasional tipa (scallop, *Pecten novaezelandiae*) and fire-cracked rocks were found. Ten postholes, including a cluster of eight, were recorded along with eight pits including one small bin pit, and a fire feature. Other than the bin pit, all the pits extended into the baulks of the trenches so their full extents could not be recorded, but Pit 15 was 6500 mm long.

Trench 6 was excavated across R11/2855. It contained one posthole and five pits, one of which was overlain by a fire feature and a cache of fire cracked rock. No midden was associated with these two features so they may have been used for cooking kūmara or drying fish.

It is evident that features are fairly well preserved beneath the plough zone and, while the full extent of the sites is unknown, it seems probable that further archaeological evidence will be present across the plan change area along the creek banks or on high ground, even where surface shell is not present.

5 Field survey

At all properties, there was a focus on exposed soils and the perimeter edges which featured eroded edges sloping down toward creek mudflats. Dense vegetation and steep, muddy slopes meant that not all creek banks were able to be examined well for any traces of archaeology.

5.1 485 Puhinui Road

This property is comprised of flat and gently rolling land, almost entirely used as active and abandoned market gardens. The edges of all market gardens and paths were grassed with a deep, soft topsoil. The eastern edge of the property is densely forested and dropped sharply down to mangrove swamp with little visibility through the forested edges (Figure 5).

The sparse shell scatters and charcoal stained soils identified by Bader (2023) were visited and the area probed but were not relocated. The surface along the perimeter edges and non-active market gardens along the eastern side of the property were probed for any material such as midden. No midden was found, and two test pits showed that the soils along the forested edge were soft and deep, while the topsoil around the abandoned market gardens was shallow atop very hard clay (Table 1). Though visibility was extremely limited and traversing down the embankment was not viable, it is possible that midden remains are located down the bank and along the swamp edges.



Figure 5. Impeded view east from the eastern edge of the perimeter at 485 Puhinui Road.

At the southeast corner of the property under thick forest and bush cover there is a scatter of worn bricks and small concrete blocks, as well as a shard of blue and white ceramic (Figure 6). Probing around this surface material found there to be further subsurface material. This material could relate to late 19th or early 20th century activity, though there was no diagnostic material visible across the surface materials to provide any firm date.

5.2 467 Puhinui Road

This property is separated from the other plan change allotments by the creek bed and mangrove swamp, and the high steep forested banks on either side. It is accessible from Puhinui Road. The property is comprised of gently rolling fields that are divided into paddocks, a circular driveway, and a series of buildings at the northern end of the property.

No sites are recorded within the boundaries of this property, and none were detected by probing. As with the other properties, the soil along the creek bank was soft and no surface or subsurface material was detected. Dense vegetation around streams meant they were often inaccessible but were viewed where possible.

5.3 5 Campana Road

This property was divided into flat grassed areas and inactive market gardens to the east end of the property, and a large gravelled and concreted carpark and warehouse buildings to the west (Figure 7).

The forested edges of the creek bank were walked and found to be largely inaccessible due to dense vegetation. Probing found the soil along the bank to be very soft and highly churned, no material was found across the property.



Figure 6. Scatter of bricks and concrete blocks at the southeast corner of 485 Puhinui Road.



Figure 7. Pack house building and largely gravelled carpark found at the west end of 5 Campana Road.

5.4 10 Campana Road

This property is comprised of mostly unused market gardens and a densely vegetated strip that continues down to the Waokauri creek banks. The mudflats of the creek are heavily silted and choked by mangroves. The north end of the property was accessible through to the banks of the Waokauri creek and was walked over and probed.

Site R11/1111 is recorded on the property in the muddy banks of the Waokauri Creek and scattered throughout the market gardens at the north end of the property. The abandoned fields were covered with sparse scattered cockle shell, though probing and testing pitting revealed no intact subsurface midden, though it did find sparse fragmented shell intermixed with the topsoil (Table 1). This is aside from the previously reported midden exposure in the northeast corner of the property. This exposure was visible from the surface, though significantly smaller than its original estimation of 10 x 10 m, measuring presently at approximately 3 x 3 m (Figure 8, Figure 9). Probing found the depth to be 300 mm at its centre then progressively shallower as it radiated outwards. A further two test pits were excavated toward the west of the promontory, and sparse fragmented shell intermixed with the topsoil, though no signs of any intact midden deposits. .

The mudflats of the south bank of the Waokauri Creek were choked by mangroves and heavily silted (Figure 10). A small surface oyster scatter was found spilling out of the edge of the vegetation and measured approximately 1.5 m wide, and probing indicated it extends further down (Figure 11). Further oyster lenses were found closer to the low tide water line, and the area was thick with mud snail shells (*Amphibola crenata*) (Figure 12). No artefactual material was found, and probing revealed no subsurface midden along the mudflats. Movement further west around the promontory was not possible due to heavy silt and thick vegetation.

The ploughed fields of the property have visible shell scatters extending across most of their length, identifiable as tuangi, pipi and scallop (Figure 13). These areas were probed, and test pitted for subsurface midden, however no intact middens were found below the surface. One small obsidian



Figure 8. Midden exposure (R11/1111), looking northward toward the Waokauri Creek, 10 Campana Road.



Figure 9. Midden exposure (R11/1111) showing fragmented tuangi shell, 10 Campana Road.



Figure 10. View northwards from the Waokauri Creek mudflats, 10 Campana Road.



Figure 11. Thick layer of oyster shell in Waokauri Creek bank, 10 Campana Road.



Figure 12. Thin lenses of oyster shell extending west around the promontory, 10 Campana Road.



Figure 13. View eastward of ploughed fields with surface scatters of fragmented shell, 10 Campana Road.



Figure 14. View westward toward Pūkaki Creek, where site R11/2855 was recorded, 10 Campana Road.



Figure 15. View northeast from the banks of 11 Campana Road toward Ngā Kopua Kohu Ora / Crater Hill.



Figure 16. Location where site R11/1112 is recorded to be, 11 Campana Road.

flake was found toward the centre of the property. The site (R11/1111) generally appears to be in poor condition, having been considerably ploughed. Site R11/2855 was unable to be relocated and is presumed to be obscured by the heavy vegetation of the western perimeter or eroded down the steep bank slopes (Figure 14). Any views toward the Pūkaki Creek from this location are obscured.

5.5 11 Campana Road

This property is divided into market gardens that are presently in use. The ploughed fields were walked, probed, and test-pitted with the intention of detecting any visible or subsurface midden, but none was found. The entire perimeter was walked, and it is notable that the property has high steep banks down to the Waokauri Creek that are almost entirely inaccessible, however they do provide mostly clear views out north and eastwards toward Ngā Kapua Kohu Ora / Crater Hill and the arms of the Waokauri Creek (Figure 15).

The mudflats before the creek were accessible in limited cases, and where possible were surveyed. No archaeology was detected, including the midden site of R11/1112 which was unable to be relocated (Figure 16). Probing detected no subsurface remains buried by silt and no shell or stone fragments were visible on the surface. The area is heavily overrun with mangroves and silt deposition, which are the likely cause behind difficulties in site relocation.

During a subsequent site visit on 23 April 2024a previously unrecorded midden was seen at the top of the steep bank down to the Waokauri Creek, and was recorded as site R11/3513. This midden was about 4 m long, 100 mm deep and was comprised mostly of small tuangi (*Austrovenus stutchburyi*). It did not seem to be a very extensive site although it was not probed to see how far it extended (Figure 17).



Figure 17. Newly recorded midden R11/3513.



Figure 18. Location of the recorded sites on the properties.

Table 1. Test pit locations and descriptions.

Test Pit	Description	Property
1	300 mm of friable dark topsoil with roots and gravel; natural subsoil visible at 300 mm below surface.	Lot 2 DP 402013
2	100 mm of friable dark topsoil with roots and gravel; hard natural clay at 100 mm below surface.	Lot 2 DP 402013
3	150 mm of topsoil; 150 mm of mixed silty clay subsoil, no natural subsoil found.	Lot 2 DP 71211
4	150 mm mixed dark brown topsoil with sparse fragmented shell inclusions; natural yellow clay silty subsoil at 150 mm below surface.	Lot 3 DP 71211
5	200 mm mixed dark brown topsoil with relatively dense fragmented shell inclusions; natural yellow clay silty subsoil at 200 mm below surface.	Lot 3 DP 71211
6	250 mm mixed dark brown topsoil; natural clay silty subsoil at 250 mm below surface.	Lot 3 DP 71211
7	200 mm dark brown friable topsoil with sparse shell fragments; natural yellow clay subsoil at 200 mm below surface.	Lot 3 DP 71211
8	200 mm dark brown friable topsoil; natural yellow clay subsoil at 200 mm below surface.	Lot 3 DP 71211
9	200 mm compacted brown topsoil; natural yellow clay subsoil 200 mm below surface.	Lot 3 DP 71211

6 Assessment

The following assessment of values and significance relate only to archaeological values. Other interested parties, in particular mana whenua, may hold different values regarding the sites and proposed Plan Change. This assessment uses the criteria in Chapter D17 of the AUP and follows the Auckland Council Methodology for Evaluating Historic Heritage Significance (2019).

6.1 R11/2855

Historical	This is a pre-European Māori site related to settlement and land use in the area. This site has moderate historical value.
Social	This site is on private property and has no known social value.
Mana whenua	Only mana whenua can comment on the value of the site to them.
Knowledge	This site can provide additional information about past occupation in the area. Middens and storage features can provide information about the subsistence and occupation patterns of pre-European Māori populations. If charcoal or other datable material is found within a secure context, they could provide temporal information about the use of the features dated. This site has moderate knowledge value.
Technology	There are no signs of special innovation, construction, components, or use of materials. The site has little technological value.
Physical	The physical condition of the site is moderate and representative of land use in the region. Midden and food storage sites are common across the area, therefore the physical attributes of this site are not rare. The site has moderate physical values.
Aesthetic	The above-ground condition of this site remains partially intact and would have some aesthetic values.
Context	The features at this site pertain to the wider archaeological context in the area and can be used as indicators of where larger scale archaeological landscapes may exist. This site has moderate contextual value.

This site is protected under the HNZPTA 2014. It has moderate values based on its highest values, which are its historical, knowledge, physical, and contextual values. This site type is not uncommon around the Manukau Harbour and is one of many similar areas of occupation across the landscape. This site has limited heritage values and does not meet the criteria for scheduling. Though retention of these values through scheduling is desirable, loss of heritage values can be partially mitigated.

6.2 R11/1111

Historical	This is a pre-European Māori site related to settlement and land use in the area. This site has moderate historical value.
Social	This site is on private property and has no known social value.
Mana whenua	Only mana whenua can comment on the value of the site to them.
Knowledge	This site can provide additional information about past occupation in the area. Middens and storage features can provide information about the subsistence and occupation patterns of pre-European Māori populations. If charcoal or other datable material is found within a secure context, they could provide temporal information about the use of the features dated. This site has high knowledge value.
Technology	There are no signs of special innovation, construction, components, or use of materials. The site has little technological value.
Physical	The physical condition of the site is moderate and representative of land use in the region. Midden and food storage sites are common across the area, therefore the physical attributes of this site are not rare. The site has moderate physical values.
Aesthetic	The above-ground condition of this site is fair in some places and retains moderate aesthetic values.
Context	The features at this site pertain to the wider archaeological context in the area and can be used as indicators of where larger scale archaeological landscapes may exist. This site has moderate contextual value.

This site is protected under the HNZPTA 2014. It has moderate values based on its highest values, which are its historical, knowledge, physical, and contextual values. This site type is not uncommon around the Manukau Harbour and is one of many similar areas of occupation across the landscape. This site has limited heritage values and does not meet the criteria for scheduling. Though retention of these values through scheduling is desirable, loss of heritage values can be partially mitigated.

6.3 R11/1112

Historical	This is a pre-European Māori site related to settlement and land use in the area. This site has moderate historical value.
Social	This site is on private property and has no known social value.
Mana whenua	Only mana whenua can comment on the value of the site to them.
Knowledge	Middens can provide information about the subsistence and occupation patterns of pre-European Māori populations. If charcoal or other datable material is found within a secure context, they could provide temporal information about the use of the features dated. This site has moderate knowledge value.
Technology	There is unlikely to be any unique technological attributes at this site. This site has no technology value.
Physical	The physical condition of the site is unknown, but if it is intact as described by Campbell et al (2013) it would have moderate physical values.
Aesthetic	The above-ground condition of this site is unknown, but if it is intact as described in Campbell et al (2013) it would have some aesthetic values.
Context	Middens pertain to the wider archaeological context in the area and can be used as indicators of where larger scale archaeological landscapes may exist. This site has moderate contextual value.

This site is protected under the HNZPTA 2014. It has moderate values based on its highest values, which are its historical, knowledge, physical, and contextual values. This site type is not uncommon around the Manukau Harbour and is one of many similar areas of occupation across the landscape. This site has limited heritage values and does not meet the criteria for scheduling. Though retention of these values through scheduling is desirable, loss of heritage values can be partially mitigated.

6.4 R11/3513

Historical	This is a pre-European Māori site related to settlement and land use in the area. This site has moderate historical value.
Social	This site is on private property and has no known social value.
Mana whenua	Only mana whenua can comment on the value of the site to them.
Knowledge	Middens can provide information about the subsistence and occupation patterns of pre-European Māori populations. If charcoal or other datable material is found within a secure context, they could provide temporal information about the use of the features dated. This site has moderate knowledge value.
Technology	There is unlikely to be any unique technological attributes at this site. This site has no technology value.
Physical	The physical condition of the site is fair and has moderate physical values.
Aesthetic	The above-ground condition of this site remains intact and would have some aesthetic values.
Context	Middens pertain to the wider archaeological context in the area and can be used as indicators of where larger scale archaeological landscapes may exist. This site has moderate contextual value.

This site is protected under the HNZPTA 2014. It has moderate values based on its highest values, which are its historical, knowledge, physical, and contextual values. This site type is not uncommon around the Manukau Harbour and is one of many similar areas of occupation across the landscape. This site has limited heritage values and does not meet the criteria for scheduling. Though retention of these values through scheduling is desirable, loss of heritage values can be partially mitigated.

6.5 Summary

The sites recorded at Campana Road are all similar middens and have similar values. Their historical, knowledge, physical, and contextual values are moderate and none of them meet the criteria for scheduling as Historic Heritage places in the AUP. This assessment is restricted to archaeological values and not examined mana whenua values. Mana whenua may hold different values regarding the sites and the proposed Plan Change.

7 Conclusions

The previously recorded midden sites have been identified as potential constraints on the proposed plan change. Four pre-European Māori middens are recorded in the project area (R11/2855, R11/1111, R11/1112 and R11/3513). These sites are connected to the wider Waokauri Creek landscape and could provide important information regarding pre-European and historic Māori occupation of South Auckland. Some historic material is located at 485 Puhinui Road and would require further investigation to determine its timeframes and values. Extensive ploughing across the plan change area is likely to have damaged archaeological remnants, however the possibility remains that archaeology remains below the immediate surface. Since the initial assessment an exploratory investigation of R11/1111 and R11/2855 was undertaken which showed that, despite the level of ploughing, middens and pits remain intact below the plough zone (Campbell and Arrell 2024). Various burning features were found alongside the middens and pits, indicating that cooking was occurring alongside food consumption and storage at the sites. The investigation found that features were concentrated in areas of slightly higher ground, likely taking advantage of the better drainage. It is probable that

further middens, fire features, postholes, and storage pits are located beneath the plough zone in areas that were not trenched on high ground and along the creek banks.

The proposed Plan Change includes three Sub-precincts: Sub-precinct C, a Light Industry Zone on most of the Campana Road Plan Change area; Sub-precinct C1, an Open Space – Informal Recreation Zone set back 20 m from the Waokauri Creek margin; and Sub-precinct E, a Business – Light Industry Zone on Puhinui Road to provide retail and amenities for the surrounding Light Industry Zones.

Sub-precinct C1 provides for open space and recreation activities, including a future coastal walkway, appropriate to the coastal environment and the cultural significance of the zone. Sub-precinct C1 incorporates the identified extents of R11/1111, R11/1112 and R11/2855 protecting these sites from future development (Figure 19). This is an important mitigation and the protection of these sites will offset the effects of any future development. Any future coastal walkway can be designed to minimise effects on the sites and will enhance the social / amenity values of the sites.

It is highly probable that further archaeological sites and features will be present in Sub-precinct C. While this assessment is for the Plan Change and not for any future development proposals, any modification or destruction of these sites must be managed through the provisions of the Heritage New Zealand Pouhere Taonga Act 2014.

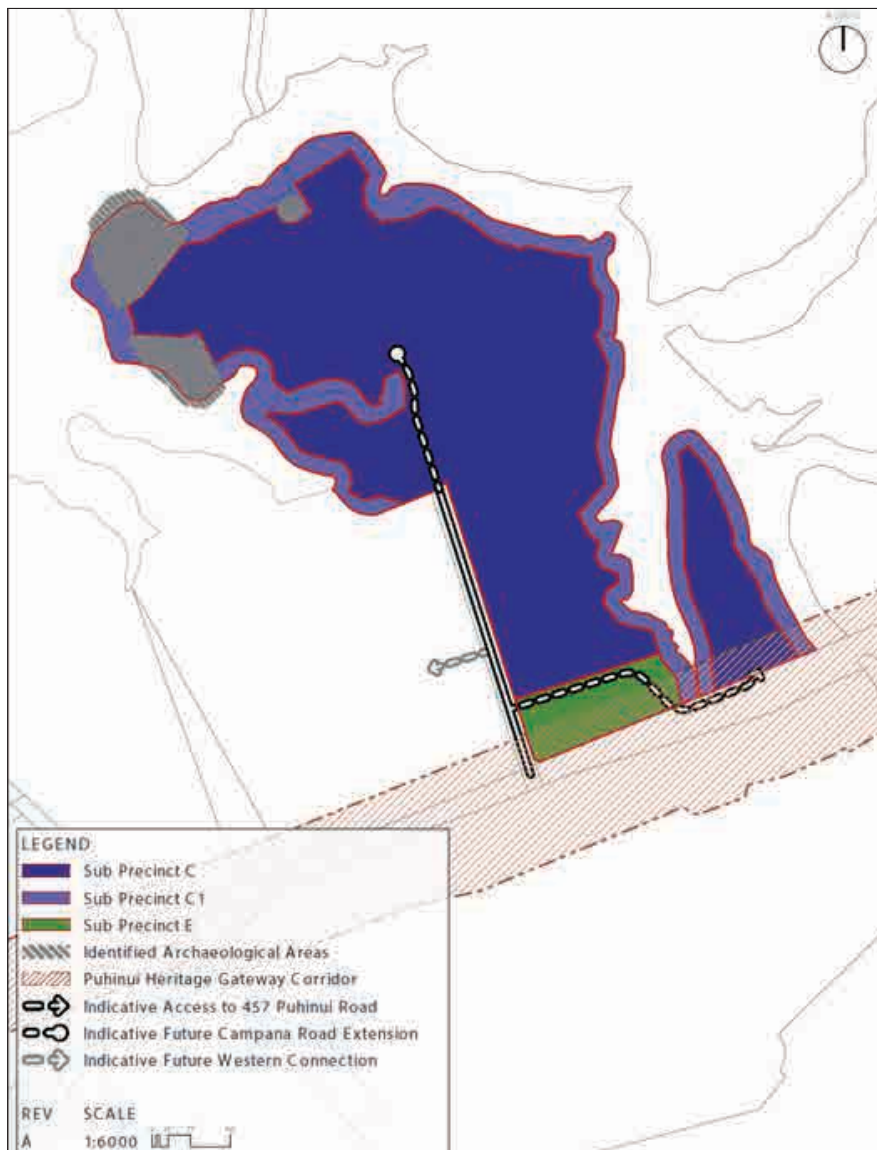


Figure 19. Proposed Sub-precincts at Campana Road, with Sub-precinct C1 incorporating the identified extents of R11/1111, R11/1112 and R11/2855.

8 Recommendations

These recommendations are only made based on the archaeological potential that has been outlined above. Any other values associated with special interest groups, including tangata whenua, can only be determined by them. It is recommended that:

- the proposed Sub-precinct C1, protecting the identified extents of R11/1111, R11/1112 and R11/2855, be adopted;
- when development commences and earthworks plans become available, full archaeological assessments are undertaken to determine if an authority to destroy, damage or modify archaeological sites or features must be applied for from Heritage New Zealand Pouhere Taonga (HNZPT) under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014;
- since archaeological survey cannot always detect sites of traditional significance to Māori, or wāhi tapu, the appropriate tangata whenua authorities should be consulted regarding the possible existence of such sites, and the recommendations in this report.

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