

WARKWORTH NORTH STRUCTURE PLAN AND PLAN CHANGE: ARCHAEOLOGICAL ASSESSMENT

Prepared for SF Estate Ltd
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INTRODUCTION

Project Background

This report has been prepared to inform the Warkworth North Structure Plan and Plan Change on behalf of Turnstone Capital Limited. The general location in the greater Auckland area is shown in Figure 1 and the boundary for the proposed Plan Change area is shown in Figure 2. The Warkworth North Structure Plan area covers 120 Ha and lies to the southeast of the proposed Puhoi to Warkworth motorway extension, with the Viv Davie-Martin Drive lifestyle development area to the west, the Mahurangi River to the south, and Hudson Road and State Highway 1 to the east and north-east.

The area proposed to be rezoned as part of the Plan Change covers 99 Ha and more or less applies to the Structure Plan area, with the exception of 141 Carran Road, the western extent of Lot 1 DP 508375, and the existing General Business and Light Industrial zoned land to the east. The legal descriptions of the properties within the Plan Change area are listed below and locations are shown in Figure 3;

To the north of Falls Road:

- **Part Allot 52 Parish of Mahurangi** (20.45 Ha), **Lot 2 DP 355193** (15.2 Ha), **Lot 18 DP 9212** (6.56 Ha), **Lot 16 DP 9212** (1.6 Ha), **Sec 15 SO 495251** (7.65 Ha), **Sec 16 SO 495251** (1.03 Ha), **Sec 17 SO 495251** (14.6 Ha), **Sec 24 SO 495251** (2.27 Ha), **Lot 1 DP 405448** (2.3 Ha), **PT Lot 1 DP 180823** (.75 Ha), **PT Lot 2 DP 180823** (1.17 Ha), **Lot 1 DP 375015** (.95 Ha), **Lot 2 DP 375015** (.82 Ha), part of **Sec 4 SO 476652** (9.26 Ha), **Allot 96F Parish of Mahurangi** (2006m²) and **Crown Land Block VI Psh of Mahurangi SO 26D** (1.22 Ha).

To the south of Falls Road:

- **Lot 1 DP 508375** (7.2 Ha), **Lot 1 DP 209013** (2.22 Ha), **Lot 3 DP 209013** (2.10 Ha), **Lot 1 DP 509795** (1.27 Ha), **Lot 2 DP 509795** (3.74 Ha), **Lot 2 DP 336399** (2.07 Ha), **Lot 1 DP 62696** (.41 Ha), **Lot 1 DP 204539** (.96 Ha) and part of **Lot 2 DP 431845** (.24 Ha).

An archaeological assessment was commissioned by Turnstone Capital Ltd to establish whether future development is likely to impact on archaeological values in the area proposed to be rezoned within the Warkworth North Structure Plan. This report has been prepared as part of the required assessment of effects accompanying a plan change application under the Resource Management Act 1991 (RMA) and to identify any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Recommendations are made in accordance with statutory requirements.

Methodology

The New Zealand Archaeological Association's (NZAA) site record database (ArchSite), Auckland Council's Cultural Heritage Inventory (CHI), former Rodney District Plan and Auckland Unitary Plan Operative in part (AUP OP) schedules and the Heritage New Zealand (Heritage NZ) New Zealand Heritage List were searched for information on archaeological and other historic heritage sites recorded in the vicinity. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early plans held at Land Information New Zealand (LINZ) were checked for information relating to past use of the Structure Plan and Plan Change area.

Visual inspections and limited probing of the Plan Change area were conducted on 17 January 2017 and 2 August 2017. The ground surface was examined for evidence of former occupation (in the form of shell midden, depressions, terracing or other unusual formations within the landscape, or indications of 19th century European settlement or activity remains). Exposed and disturbed soils were examined where encountered for evidence of earlier modification, and an understanding of the local stratigraphy. Particular attention was paid to topographical features where archaeological sites are often found to be located, such as spur and ridge lines (to the north of Falls Road) and land in the vicinity of the Mahurangi River (to the south of Falls Road).



Figure 1. Map showing the location of the Warkworth North Structure Plan and Plan Change area (marked by red circle) in the Greater Auckland Region (source: Auckland Council Geomaps)

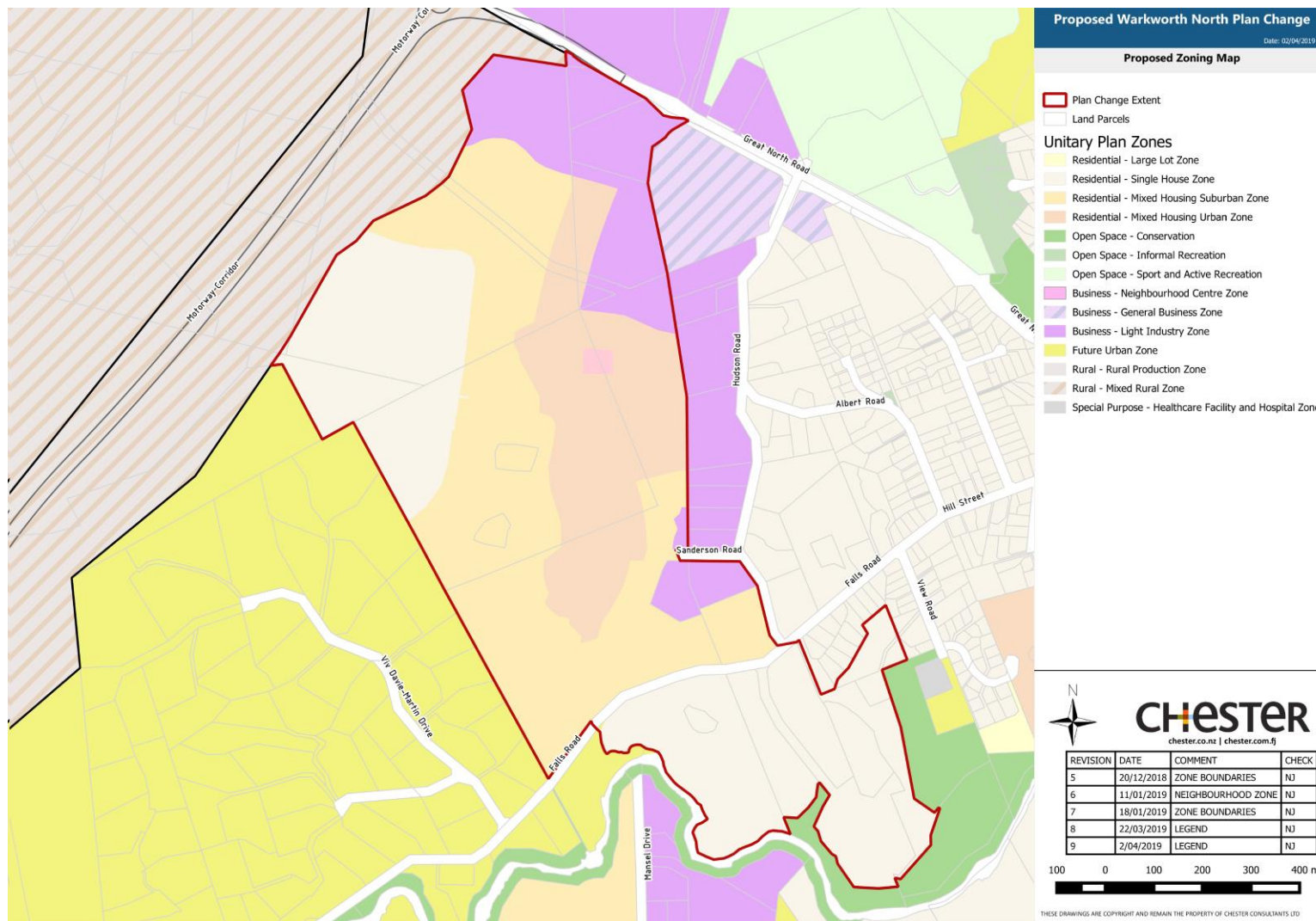


Figure 2. Map of the Warkworth North Plan Change area (source: Chester Ltd)

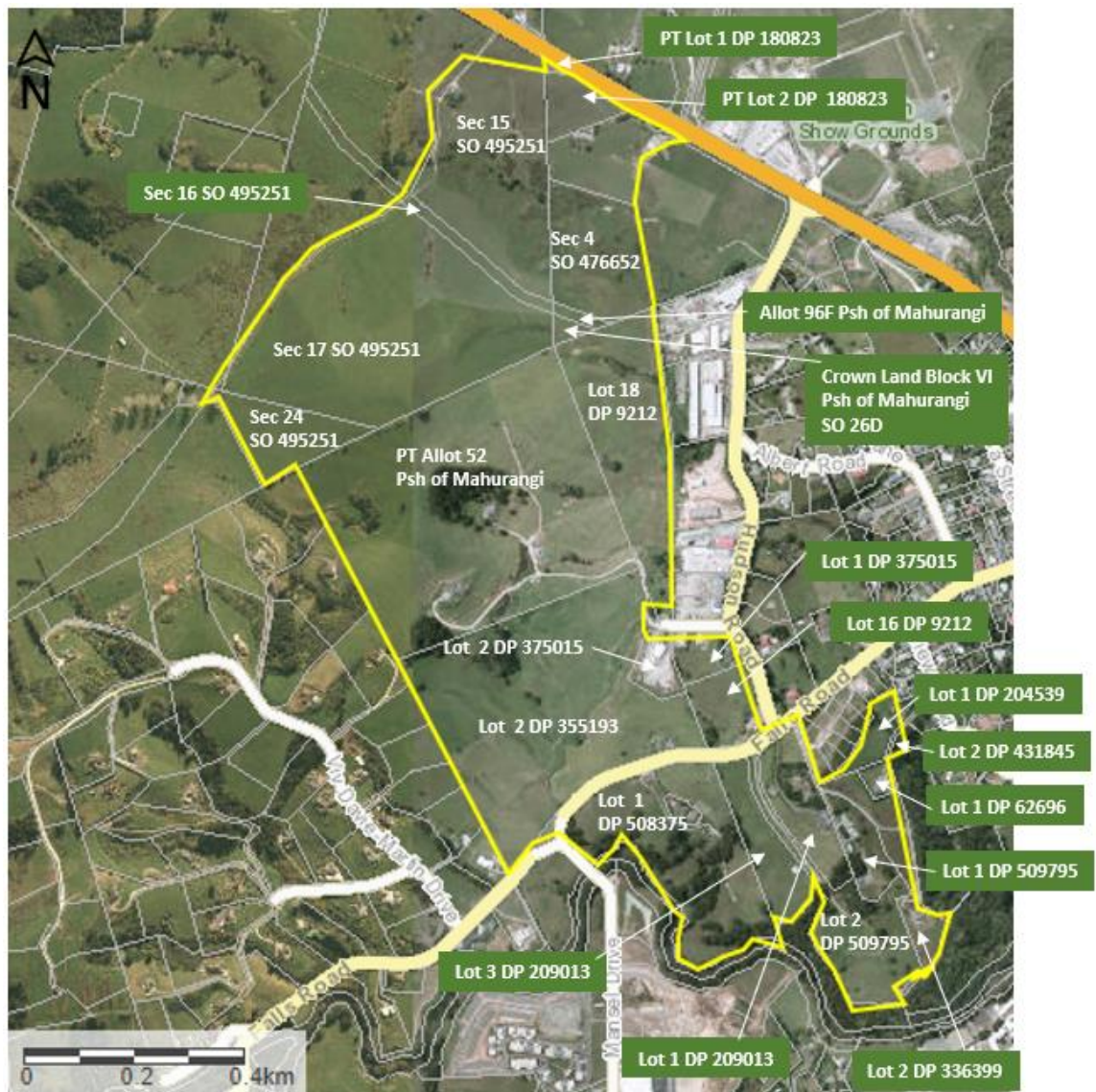


Figure 3. Aerial Photographs showing lots within the proposed Plan Change area (source: Auckland Council Geomaps)

HISTORICAL BACKGROUND

Maori Settlement¹

The Mahurangi region was occupied in pre-European times by Ngati Rongo, who maintained close relationships with Ngati Manuhiri to the north, and other tribes and subtribes in the surrounding area, including Ngati Whatua. However, from the 1720s pressure from Ngati Paoa, Ngati Maru and other tribes of the Marutuahu confederation who occupied the Hauraki Gulf began to build, with disputes arising over fishing rights, and warfare continued intermittently for many years. A later invasion by Ngapuhi left a void of power through much of the greater Auckland area, but Ngati Rongo subsequently re-established themselves in the district. (ARC 1992).

The name Mahurangi originally applied to a small island off Waiwera and to the wider bay. The harbour was named Kiaho and the Mahurangi River was Waihe. 'Mahurangi was an elderly woman in Hawaiki, the ancestral homeland of the Maori. Her special powers enabled the construction of the Tainui canoe to proceed, and this place was named Mahurangi during the exploration of the Hauraki Gulf by the Tainui canoe.' Later the name was applied to the whole area and the river. (ARC 2005).

Māori in the Kaipara and Mahurangi districts did not occupy permanent year-round settlement sites, but moved between their kainga (villages) in accordance with the seasons. The east and west coastal boundaries provided abundant marine resources, while the inland forest supplied Māori with hunting and resource gathering opportunities. Rivers such as Pūhoi and Mahurangi supplied plentiful fresh water, and sandy soils near coastal areas were highly suited to kumara cultivation (Murdoch 1992).

Competition for control of one of the most highly prized resources of the Mahurangi – the muru or small spotted shark led to protracted conflict between Te Kawerau and Hauraki tribes in the 1700s. Known as the Marutuahu confederation, these Hauraki tribes comprised Ngāti Paoa, Ngāti Whanaunga, Ngāti Maru and Ngāti Tamatera. Battles continued intermittently throughout the 18th century, with Marutuahu eventually gaining permanent control of the fishing grounds (Murdoch: 1992).

Further warfare occurred in the 1820s and 1830s when raiding Ngapuhi from the north, armed with muskets, launched a series of attacks throughout the tribal territories of Ngāti Whatua. Māori of the Kaipara and Mahurangi, armed only with traditional hand combat weapons such as mere and taiaha, were swiftly defeated. Most fled the invasion, leaving the region virtually deserted for several years (Murdoch: 1992). By the late 1830s small numbers of Ngāti Whatua began to return to their traditional occupation areas in the Kaipara and Mahurangi, eventually re-establishing themselves in the districts. Te Kawerau/Ngāti Rongo Māori of the Mahurangi were now under the leadership of Te Hēmara Tauhia. They settled north of Wenderholm, at Te Muri, where a kainga (village), large gardens and an orchard were established (Mackintosh 2005: 4-5).

¹ This section is adapted from Judge and Clough 2009 and Burnett 2016. While the section on Maori settlement is based on reliable documentary sources, this information should not be viewed as complete or without other context. There are a large number of iwi historically associated with the Auckland region and many other histories known to tangata whenua.

European Purchase and Settlement

Missionaries and sawyers began appearing in the Kaipara and Mahurangi districts by the early 1830s and, with the arrival of Europeans, Ngāti Whatua tribes came under increasing pressure to relinquish land (Mackintosh 2005: 5). Although several Ngāti Whatua chiefs signed the Treaty of Waitangi in 1840, including Te Roha from Te Uri-O-Hau, large tracts of land were lost through Crown purchases, pre-1840 claims and Native Land Court proceedings (NZMCH, 2006, p.199).

On 13 April 1841, the Crown acquired its first large tract of land in the area, known as the Mahurangi Purchase. This included the Mahurangi and Omaha Block (Deed No. 192) comprising an estimated 220,000 acres, with boundaries stretching from the North Shore of the Waitemata in the south to Te Arai Point in the north shown in Figure 4 (Turton 1877: 251). Initial payment for the land included: '400 blankets, 60 cloaks, £200 cash, 60 gowns, 2 horses, 2 head of cattle, 200 pairs of trousers, 30 coats, 100 caps, 4 casks of tobacco, 6 bags flour, 2 bags rice, and 1 bag sugar (ibid).' However, complications arising from the purchase were soon apparent. The land was not obtained from resident iwi such as Ngati Whatua, but from Hauraki tribes who claimed ancestral control of the area from the 18th century (Rigby 1998:20). The Mahurangi Purchase made Ngati Rongo theoretically landless, and the sale was therefore disputed by their chief Te Hemara Tauhia before it was finalised. Te Hemara appealed for the return of Mahurangi to Ngati Rongo, in particular Te Puhoi.²

Negotiations were also ongoing with European settlers, many of whom held pre-treaty or pre-emption waiver claims over various tracts of the land (Grover Robin 2013:35 and Rigby 1998:3). A 'second wave' of Mahurangi purchases was conducted by the Crown between 1853-1865, most notably the Parihoru Mahurangi Purchase (Deed No.197), dated 1 November 1853, which outlined the boundaries of the Mahurangi Block and was signed by Parihoru and four other Kawerau chiefs, see Figure 5 (Turton. 1877: 255-6 and Rigby 1998: 37). Following the final settlement of claims against the original purchase surveying in the Mahurangi district continued, with allotments marked out for sale by both speculators and settlers.

The thickly forested land around the Warkworth area provided a rich source of timber and prior to the government land purchase in 1841, a European presence in the Mahurangi had already been established during the 1820s with camps of up to 300 seamen dressing spars for the Royal Navy (Mabbett 1977; Key 1967: 23). This had become one of the main industries in the Mahurangi by the late 1820s, and resulted in a spar station being established at the Mahurangi Heads by Captain Ranulf Dacre in 1832. This developed into a wider ship building industry, with at least a dozen ship building yards established on the shores of the Mahurangi during the 19th century (Mabbett: 1977).

The land around the Warkworth area also provided suitable soils for agriculture and as the land was cleared, farms progressively replaced kauri forests and orcharding, dairying, and sheep farming became the predominant use of the land (Vine 1967: 19).

² In 1853 the Puhoi (or Te Hemara) Reserve was granted to Ngati Rongo, the boundaries of which ran 'from the south shore of the Pukapuka to Waiwera, and inland to the western boundary of the [Mahurangi] Purchase' (Locker 2001: 80). In 1866 the title to this reserve was granted to Ngati Rongo at a Native Land Court hearing. The Puhoi Reserve was eventually surveyed into ten blocks, with Te Hemara retaining the titles to Maungatauhoro (70 acres), Orokaraka (8 acres) and Puhoi (2537 acres) (Mackintosh 2005: 6).

Warkworth

In 1840 the Surveyor-General, Felton Mathew, sailed up the Mahurangi Harbour with the intent of investigating the suitability of the land for settlement and industry. Mathew's report noted:

'Brick earth is abundant, and the forest in every direction presents a profusion of timber for building, almost entirely Kowdie [sic] [Kauri]. The river is perfectly adapted for navigation by steamers or small vessels; and the harbour forming the depot for shipping being at so short a distance I consider the spot I have described as being most admirably adapted for the formation of a town' (Locker 2001:62).

Following the Mahurangi Purchase of 1841, it would be a decade before surveying was completed and land offered for sale to settlers along the Mahurangi River. In the interim, the Crown sought revenue from the land by issuing timber licenses (to cut wood or firewood) at £5 a year. One of the first licenses issued was to John Anderson Brown in 1844 (Locker 2001:66). Brown had lived in the Mahurangi as a squatter since 1843, and by the following year had constructed a dam, water-race and mill along the left bank of the Mahurangi River (Keys 1954:32). This was the first water-powered timber mill in the district, and for a time the area was known as 'Brown's Mill'. In 1853, he acquired 153 acres of land from the Crown and a small township was established. Brown named the area Warkworth after his hometown of Warkworth in Northumberland (ARC n.d.). By 1854 quarter acre lots were advertised at £6-15 each (Locker 2001:75). Settlement progressed at a slow rate, and by 1864 those town lots which had not been sold were put up for public auction.

The Mahurangi Library and the Mahurangi Post Office were opened in 1859, with Brown appointed as Postmaster. Brown was also elected chairman of the Mahurangi Highway Board in 1863, the same year in which the first Mahurangi School was established. Local industry expanded with the development of Henry Palmer's flour mill, which was in operation on the right side of the river by 1868, and the manufacture of lime for which Warkworth would become renowned (Keys 1954: 71-72).

John Sullivan was the first to begin lime production in Warkworth as early as 1849, with Combes and Daldy advertising lime for sale in the *Southern Cross* by 1850. The first lime-works were in operation by the 1850s, and were situated near Brown's Mill on the right bank of the Mahurangi River. A second lime production site, down river from Warkworth, was acquired by John Southgate in 1857 who built a hotel and several lime kilns on the land. Southgate sold to Nathaniel Wilson in 1864, who continued manufacturing lime on the site, eventually establishing the Wilsons Cement Works in 1884. The company was credited with being the first producer of Portland cement in New Zealand and the Southern Hemisphere, and was responsible for the material used to construct the Warkworth Bridge in 1899 (Dave Pearson Architects 2005:9-12).

It is also noted that a small Catholic Cemetery is located within the Structure Plan area in Pt Lot 1 DP 180823. This lot was formerly part of Section 96C which was set aside as a cemetery reserve in 1883 (Dawson & Burnett 2016: 16). Use of the cemetery, however, did not commence until 1928. It contains 35 graves with the last burial being c. 1990. The cemetery is no longer considered functioning due to serious flooding issues and the graves may be relocated to a new cemetery site in future (information provided by the Catholic Parish of Puhoi and Warkworth).

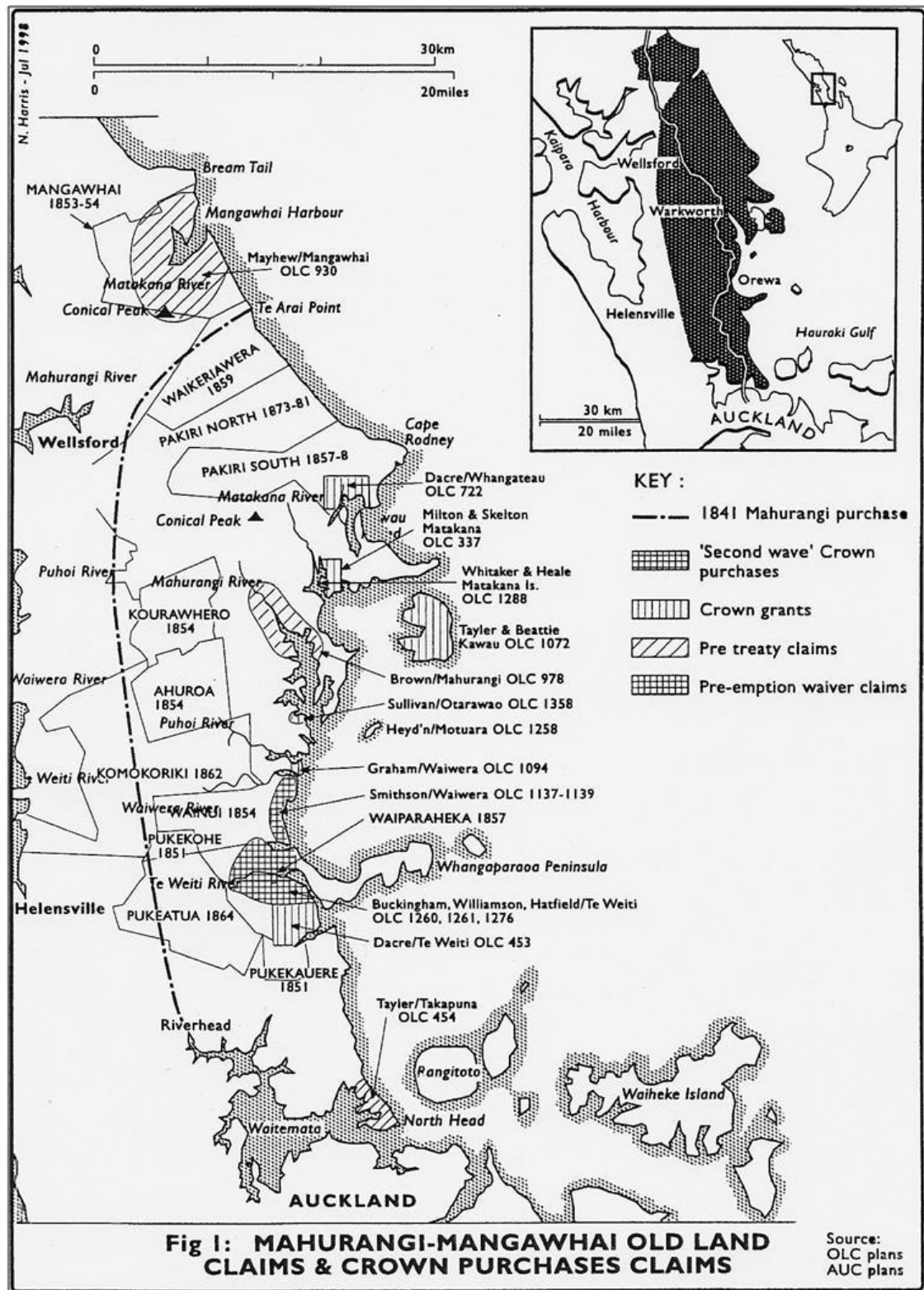


Figure 4. Plan showing land claims and Crown purchases in the Mahurangi (source: Rigby, B. 1998. The Crown, Maori, and Mahurangi 1840-1881: a historical report commissioned by the Waitangi Tribunal. New Zealand, p.3)

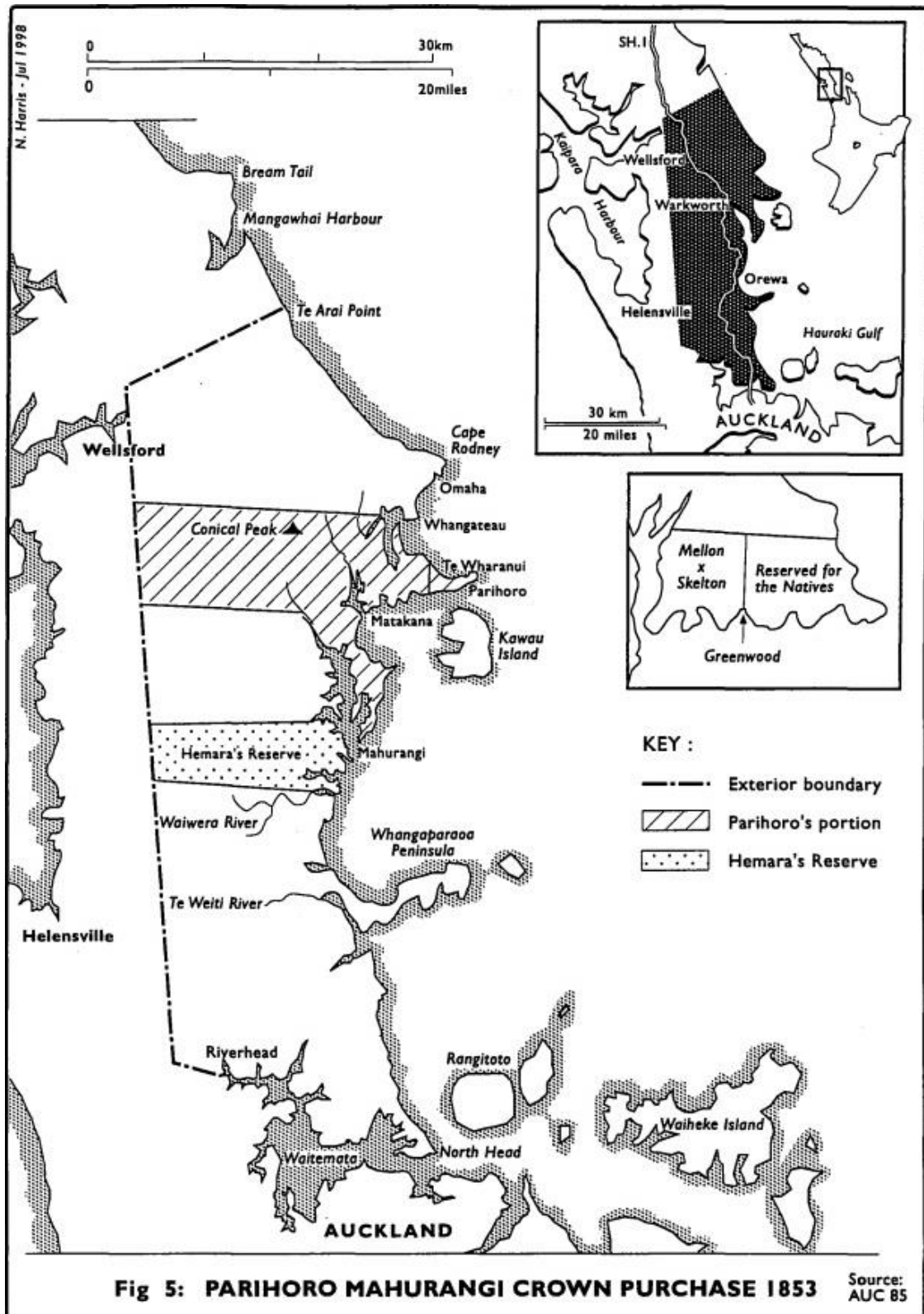


Figure 5. Plan showing Parihoro Mahurangi Crown Purchase, 1853 (source: Rigby, B. 1998. *The Crown, Maori, and Mahurangi 1840-1881: a historical report commissioned by the Waitangi Tribunal. New Zealand, p.3*)

World War II U.S. Army Camps

During WWII several United States military camps were located throughout the wider Warkworth area. American forces stationed at these camps comprised elements of the 3rd Marine Corps Division, the 25th Infantry Division, and the 43rd Infantry Division (Figure 6). The first division to establish camps in the area was the 43rd, which arrived in October 1942. The division remained for only a few weeks but later returned in March 1944. Elements of the 3rd Marine Corps Division, including the 21st Regiment, 12th Artillery Regiment and 3rd Tank Battalion, were stationed in Warkworth for several months from March 1943. Last to arrive in the area was the 25th Infantry Division, which occupied camps from December 1943 to February 1944 (Bioletti 1989: 27-29).

Most U.S. military camps in the area consisted of several native timber ‘two-and four-men huts.’ These were mostly constructed with louvre windows. Khaki pyramidal tents were also erected in some camps, and were fitted with wooden floors and pot-belly stoves (ibid pp. 111 and 113). Wells were dug by troops at certain farm camps to provide fresh water sources, some of which are still in use today. A photograph of a typical camp is provided in Figure 7.

The above-mentioned camps included camps J1, J2 and J3 at the Rodney Showgrounds and a military hospital camp near Hill Street, Warkworth. These camps accommodated elements of the 25th Infantry Division after their campaign in the Solomon Islands. The camps were occupied from December 1943 - February 1944 and detailed plans of J1, J2 and J3 (known collectively as ‘Rodney Camp’), dated 9 September 1943, record the positions of various personnel and ancillary buildings as well as services such as water supply, drains and power lines, and notable other buildings and roads in the immediate surrounds of the camps (Figure 8).

The Rodney Camp was noted to be a comparatively small site with the grounds comprising only a few huts, mess rooms, ablution blocks, cookhouses, latrines, Quarter Master Store and Ration Store. According to a camp data file, dated 1943-1944, most of these buildings were constructed with concrete floors, sarking roofs and with malthoid on Pinex (ACIO A1629 21011 12/g, Archives New Zealand).

Following the departure of the U.S. Forces from the Warkworth area some camp buildings were utilised by the New Zealand Army and by 4 August 1944 the *Evening Post* reported that a group of the Warkworth army camps had been handed over by the New Zealand Army to the War Assets Realisation Board. The article noted:

‘The camps are built to the usual New Zealand Army pattern, and consist largely of prefabricated huts and various auxiliary buildings, including stores, kitchens, mess-rooms, and drying rooms... The camps which have now been vacated by the New Zealand Army provided accommodation for many thousands of soldiers. The Warkworth group alone had room for about 5000’.

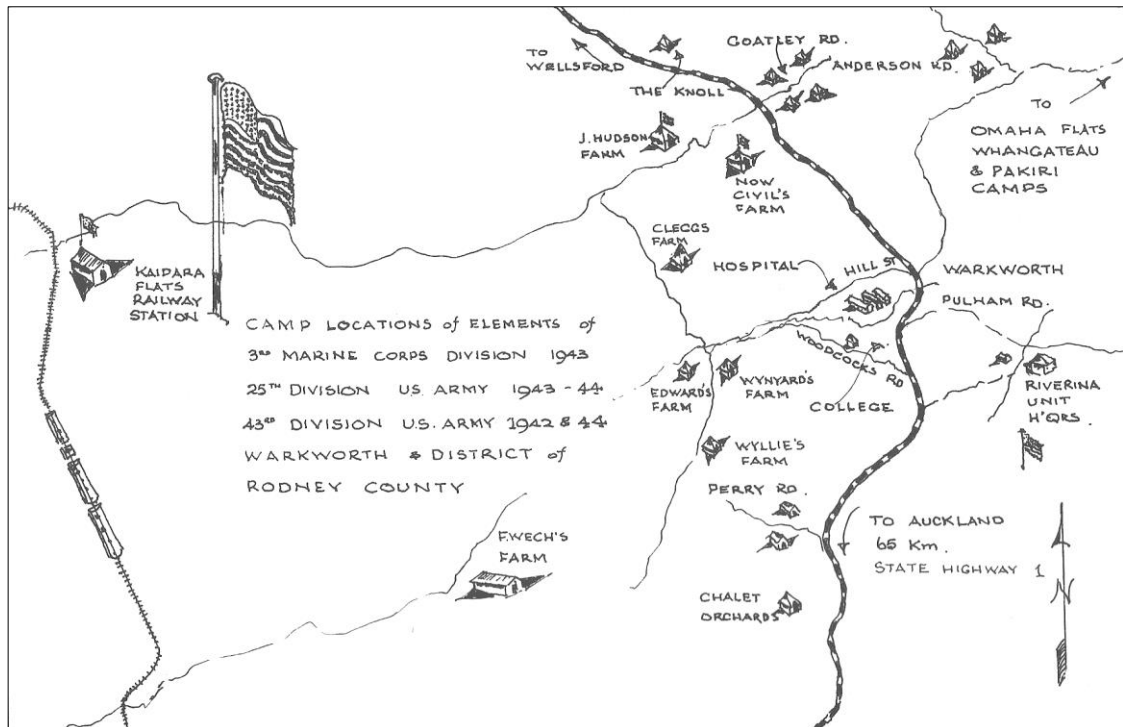


Figure 6. Sketch plan showing the location of World War II US military camps in the Warkworth area (source: Harry Bioletti, *The Yanks are Coming: The American Invasion of New Zealand, 1942-1944*, Auckland, 1989, p. xii)



Figure 7. Photograph, dated 1940s, by Tudor Collins, showing a typical US military camp with two- and four- men huts (source: Bioletti 1989, p.27)

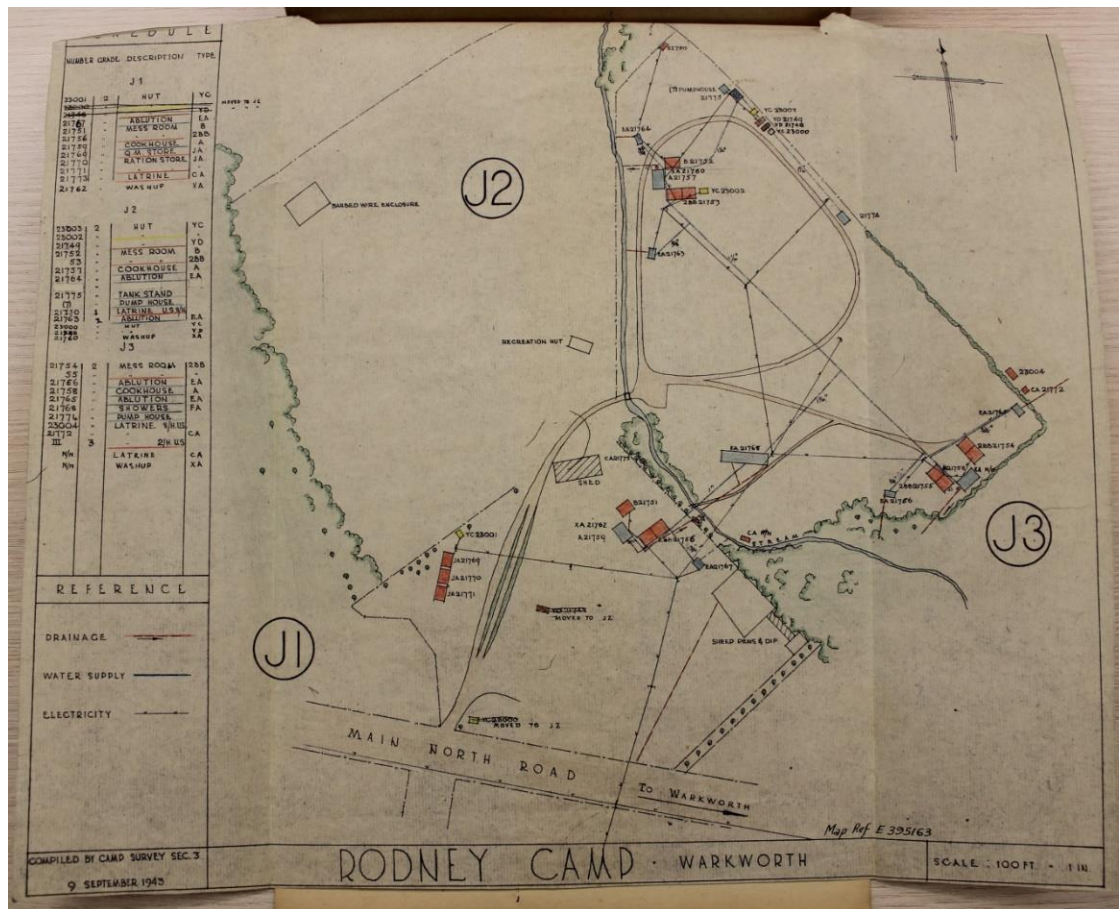


Figure 8. Plan, dated 9 September 1943, showing the layout of Rodney Camps J1, J2 and J3, situated within the Rodney Showgrounds along State Highway One, Warkworth (source: Camp data – Warkworth J1, J2 and J3 Camps, 1943-1944, ACIO A1629 21011 12/g, Archives New Zealand)

HISTORICAL SURVEY

Information from Early Maps and Plans

Only limited information was able to be gained from a review of LINZ plans of the Structure Plan area. An undated survey plan (Figure 9) shows early property allotments within the current Structure Plan area. These are (Allot 51) with the name W. Horne and (Allot 52) with the name “Fletcher.” The plan in Figure 10 from 1856 shows the allotments with an overlay of the Plan Change area. The north-east section has a written description of “The Great Swamp”.

A plan dating from 1858 (Figure 11) shows that the land containing the great swamp is now part of Lot 96A (owned by J. Russel) and the small access lot (96F) can be seen to link two of W. Horne’s properties (Allot 51 and Allot 95). A later 1883 plan shows the northern part of the proposed Structure Plan Area with the name M. George written on it and also shows Lot 96 C indicated as a “Cemetery Reserve” (Figure 12). The subdivision of Allot 51, including the lots along Hudson Road and the creation of Lot 16 DP 9212 & Lot 18 DP 9212 is shown in a plan from 1914 (Figure 13). No buildings/structures or other information relating to past land use was identified from the early plans.

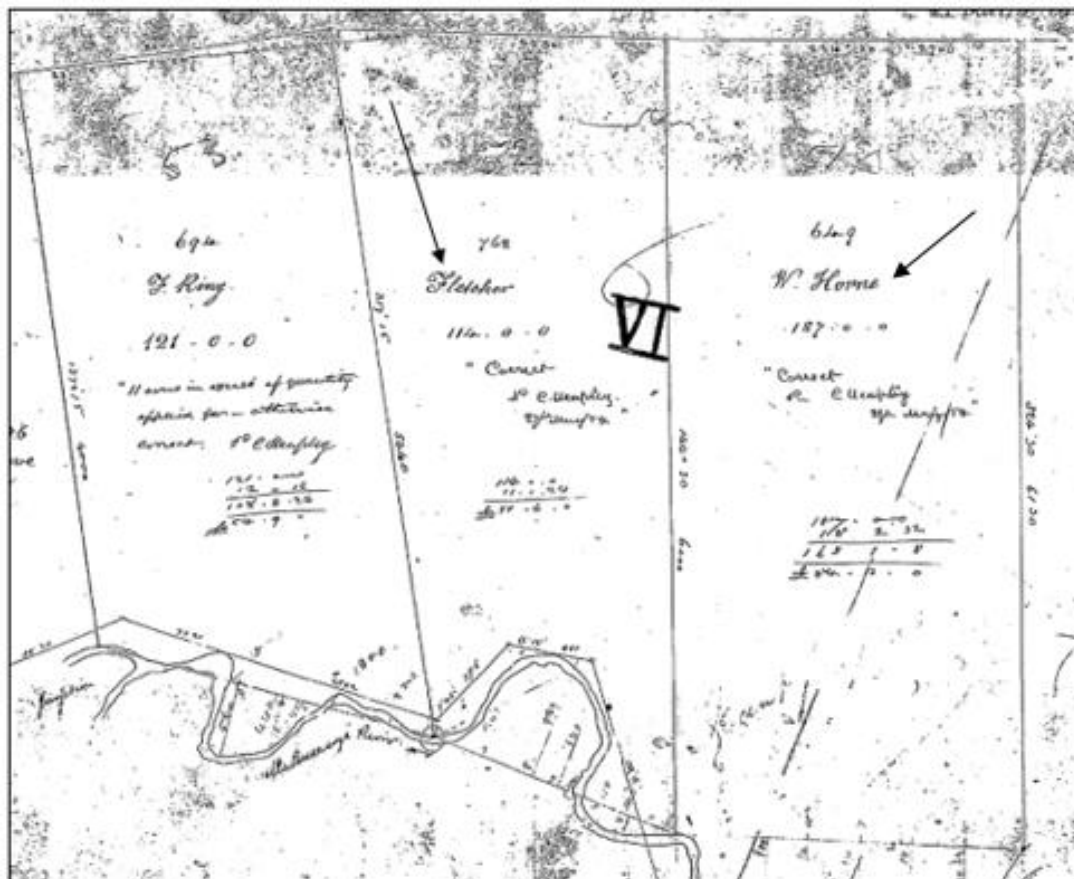


Figure 9. AK SO 1110 B I (undated) survey plan showing early allotments owned by Fletcher and Horne (marked by arrows) where much of the current Structure Plan area is located (source: Quickmap)

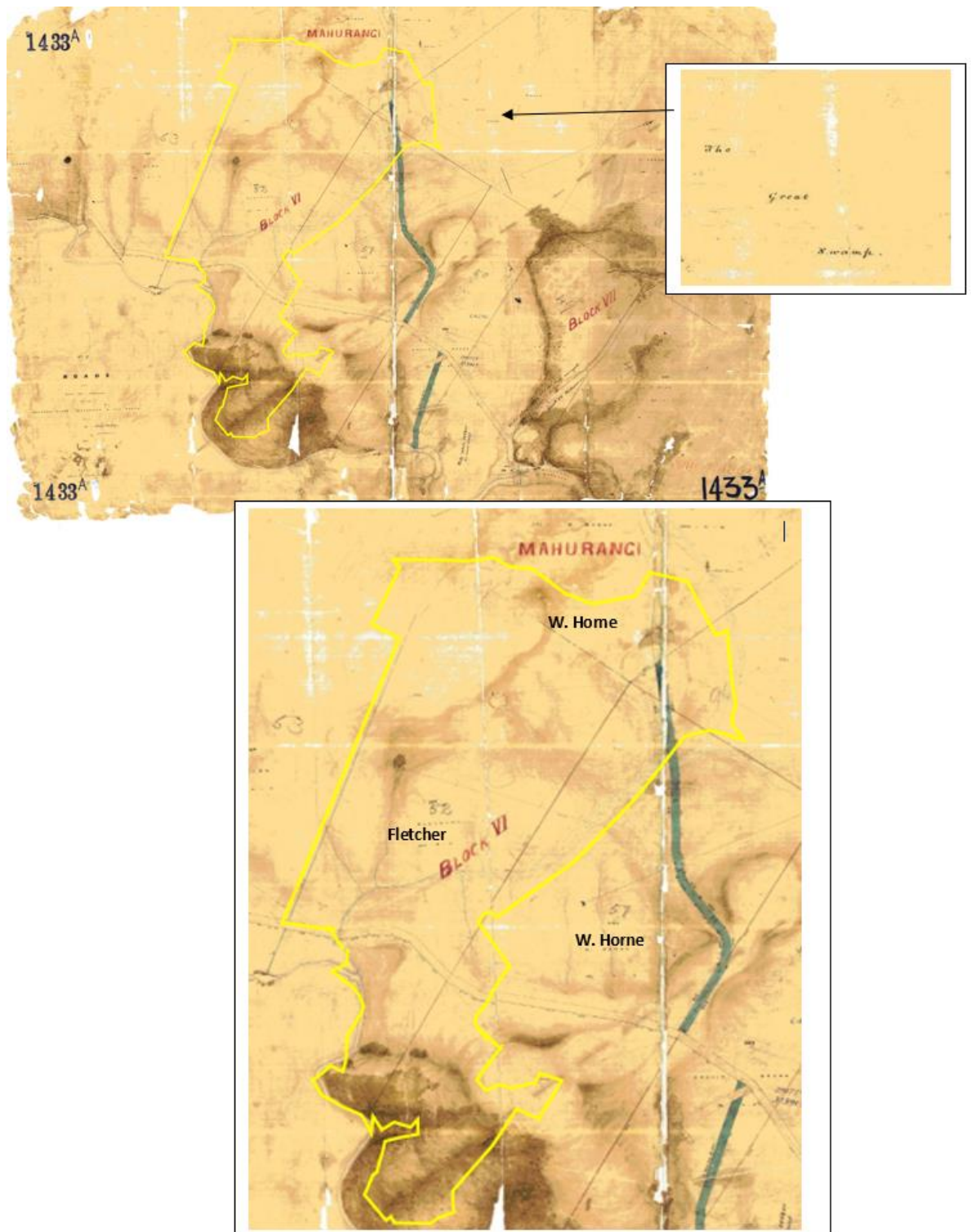


Figure 10. Section of AKC SO 1433 Plan from 1856 showing the Plan Change area overlain in yellow with upper inset showing area to the northeast with “The Great Swamp” written and lower inset showing the area in more detail (source: Quickmap)



Figure 11. AK SO 1435 E I Plan from 1858 showing early subdivision of Lot 96 (north-eastern part of the Structure Plan area) showing Allot 96 F linking two of Horne's properties (source: Quickmap)

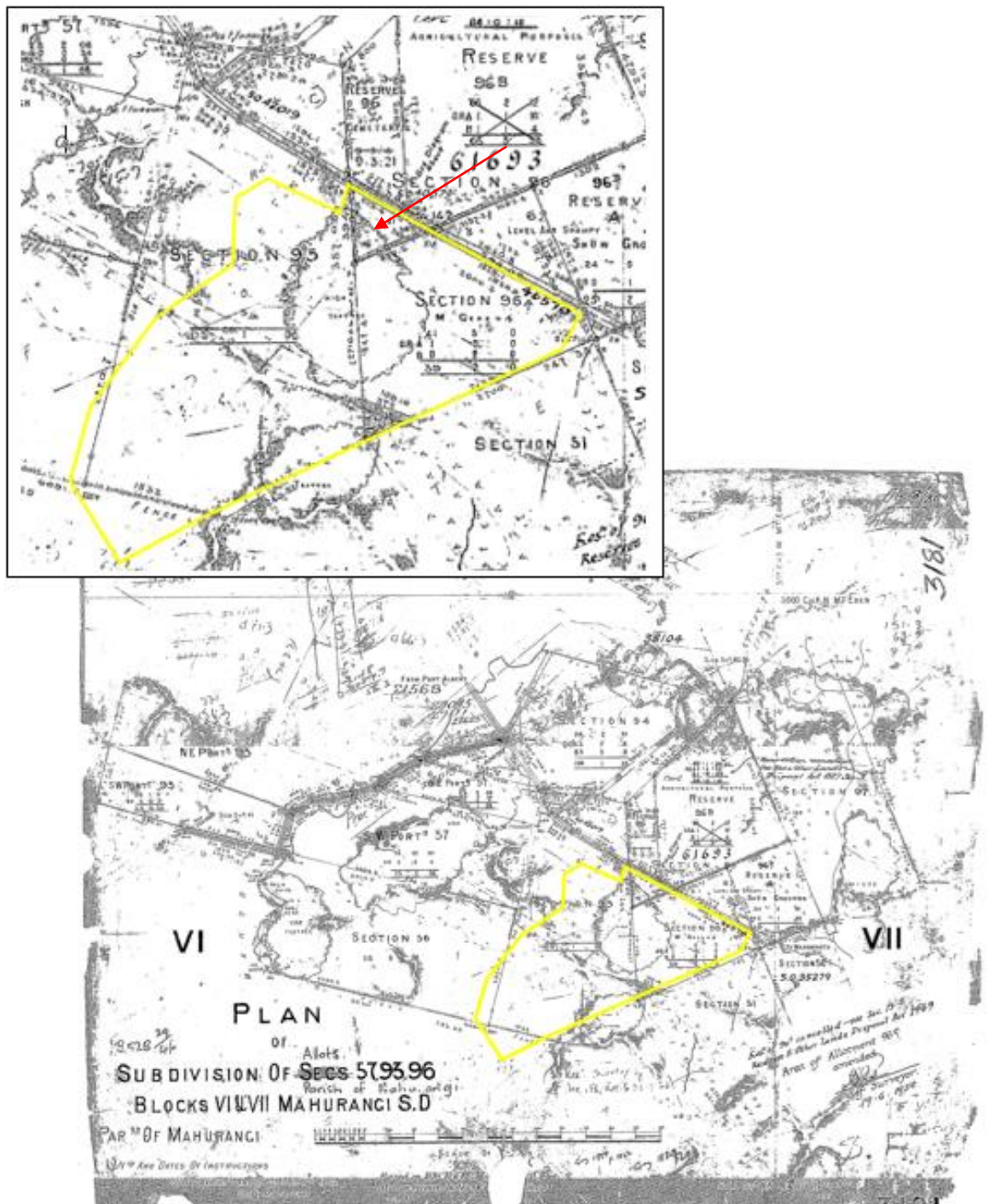


Figure 12. SO 3181, dated 1883, showing northern part of Structure Plan area (detail in upper inset) with owner marked as M. George and Section 96C which extends into the north-eastern corner of the Plan Change area marked as “Cemetery Reserve” indicated by red arrow (source: Quickmap)

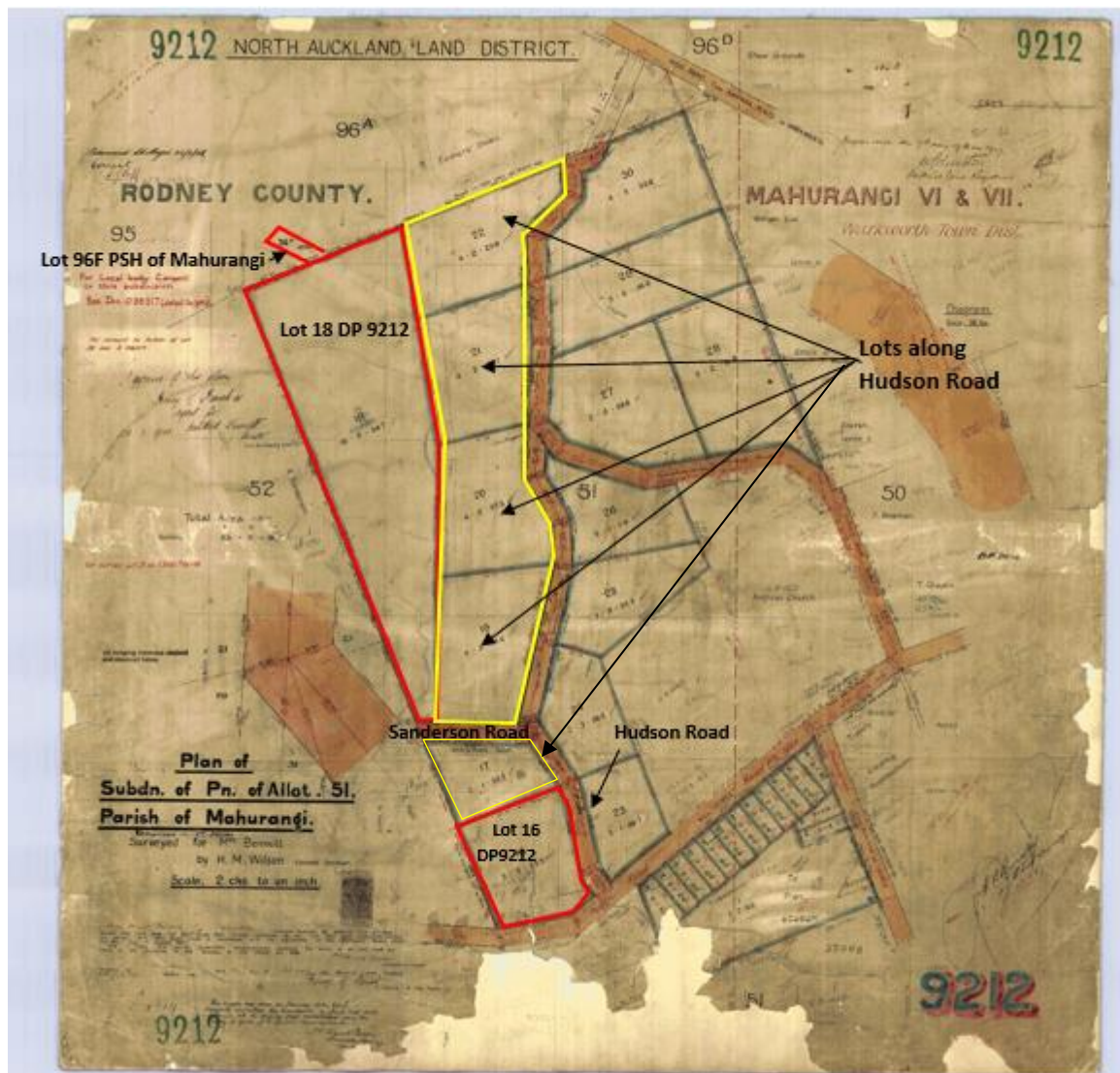


Figure 13. DP 9202 from 1914 showing subdivision of Allot 51 with lots in the Plan Change area outlined in red and light industrial lots along Hudson Road outlined in yellow. A notation along the western boundary of Lot 16 states “post and wire fence over 40 years old” (source: Quicmap)

ARCHAEOLOGICAL BACKGROUND

The archaeological background of the Warkworth area was reviewed as part of a recent study for North and Northwest Rural Urban Boundary (RUB) options commissioned by Auckland Council (Campbell et al 2013). The plan in Figure 14 reproduced from this report shows the distribution of pre-European Maori sites in the area as well as soils indicating suitability for gardening. As can be seen in the figure the Plan Change area is situated on what are considered unsuitable gardening soils (hill soils) and only a small area in the northwest corner of the Structure Plan Area is shown as suitable. It should also be noted that the plan (not shown) for European period sites taken from the same source shows a similar distribution (Campbell et al 2013: 26).

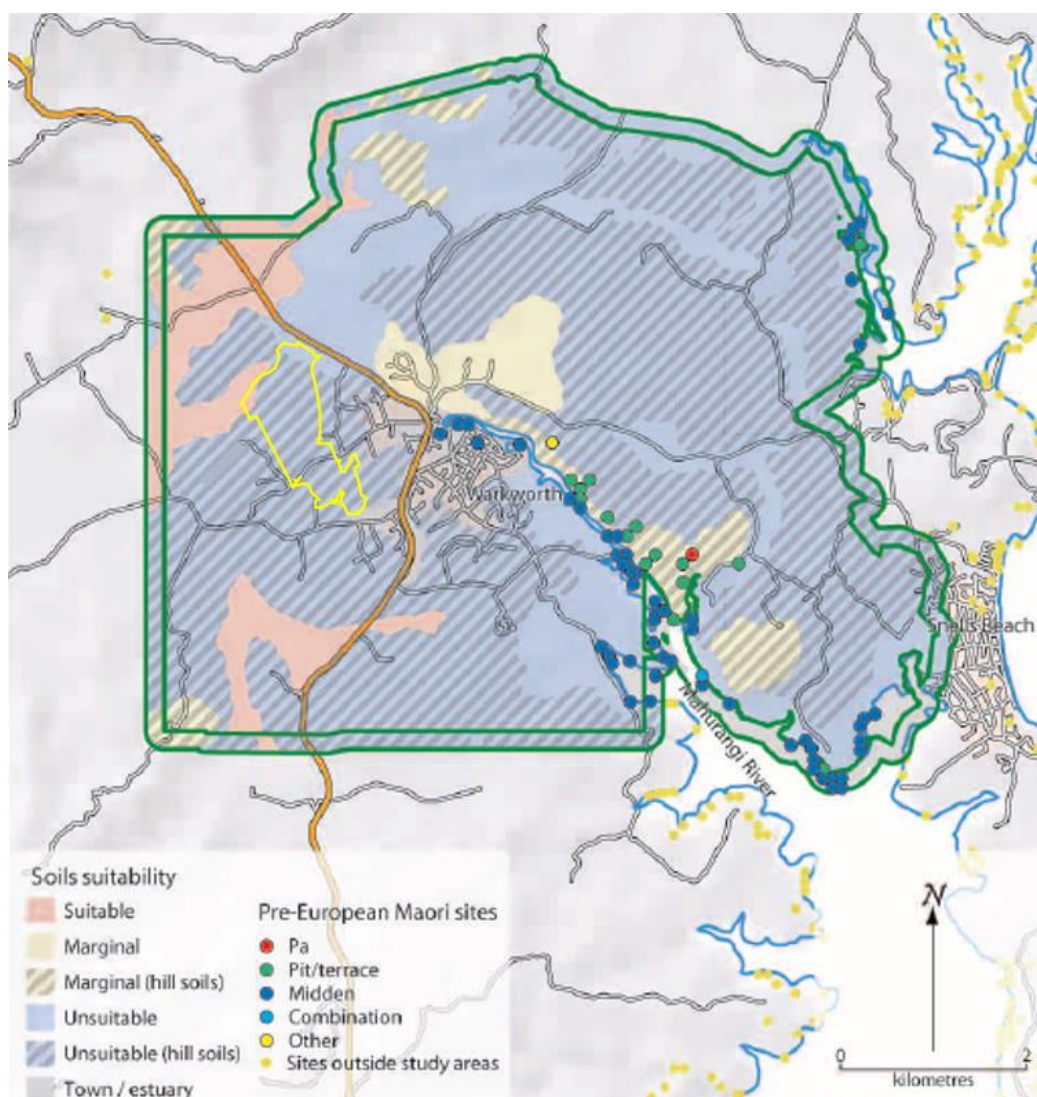


Figure 14. Plan showing pre- European Maori archaeological sites within the Warkworth RUB and horticultural soil suitability with Plan Change area outlined in yellow (source: Campbell et al 2013: 24)

Previous Archaeological Surveys

In general, the broader Warkworth area contains a number of archaeological sites relating to pre- and post-European occupation of the area. During the 1970's archaeological surveys conducted in the Warkworth region were focussed on coastal areas on the Mahurangi peninsula and around the harbour and these surveys resulted in a number of archaeological sites being recorded, including pa, terrace and midden sites. Further surveys along the Mahurangi River also identified additional Maori archaeological sites on both the northern and southern banks (Campbell et al 2013: 36; Dawson et al 2016: 35).

Over the last two decades, development driven assessments have been conducted further inland, including in the vicinity of the Structure Plan area. These include a 1998 survey for what is now the Viv Davie-Martin Drive lifestyle development area, just to the west. The area surveyed included farm paddocks on the hillside to the north of Falls Road and the area bordering the Mahurangi River to the south of the road. The survey did not identify any archaeological sites or evidence of historic or prehistoric occupation (Harlow 1998: 3).

In 2007, a survey conducted at 70 Woodcocks Road had similar results, with no archaeological sites identified (Farley & Clough 2007), as did a 2009 survey to the south of Woodcocks Road by the same survey team (Farley & Clough 2009). A survey conducted at the northern end of Hudson Road for a business park development did identify one natural "slump" terrace, which resembled an archaeological site, but it was ultimately determined to be most likely natural in origin (Judge and Clough 2009).

As part of an assessment for the Mansel Drive Bridge Crossing, which extends across the Mahurangi River at 223 Falls Road, an area within this property was also surveyed with no archaeological sites identified (Judge 2016). The areas covered by these surveys in relation to the Plan Change area are shown in Figure 15.

Recorded heritage sites

There are no recorded archaeological sites or historic heritage sites within the Plan Change boundary. In the general vicinity (i.e. within 500 m of the boundary), twelve sites have been included in the Auckland Council Cultural Heritage Inventory (CHI). Two of these are reported historic sites, a United States Military Hospital Camp dating to the 1940's (CHI ref: 16987) and the Rodney Camp J1, J2 and J3 also associated with the U.S. military during the Second World War (CHI ref: 17001). The other ten sites are all historic buildings. Eight of the structures are historic houses, most of which are villa style buildings. The other two sites consist of the Warkworth Cottage Hospital (CHI: 16193) and the Warkworth Primary School (CHI: 16216). Summary descriptions are provided in Table 1.

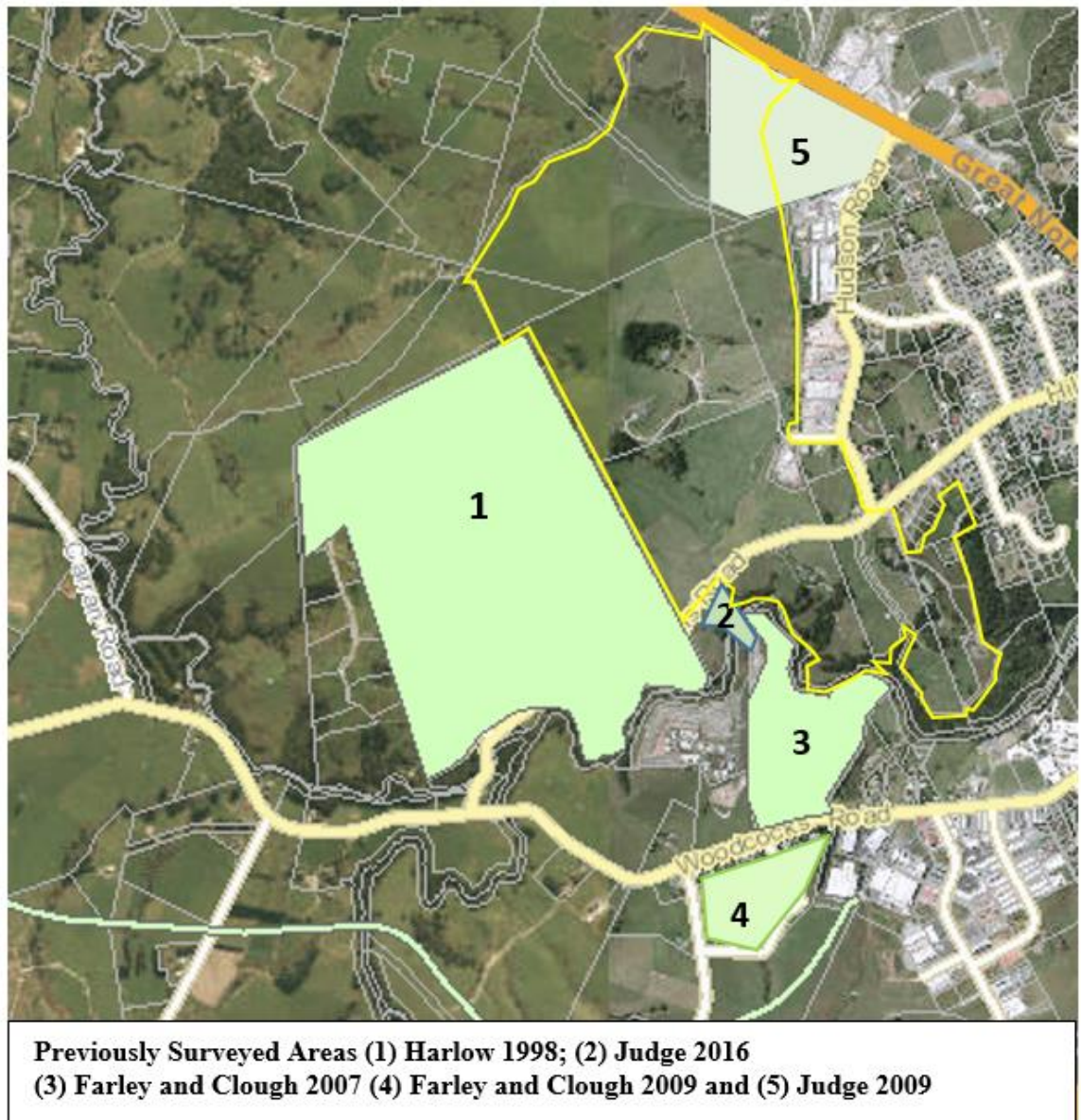


Figure 15. Aerial photograph showing previous survey coverage in the vicinity of the Plan Change area outlined in yellow (source: Auckland Council Geomaps)

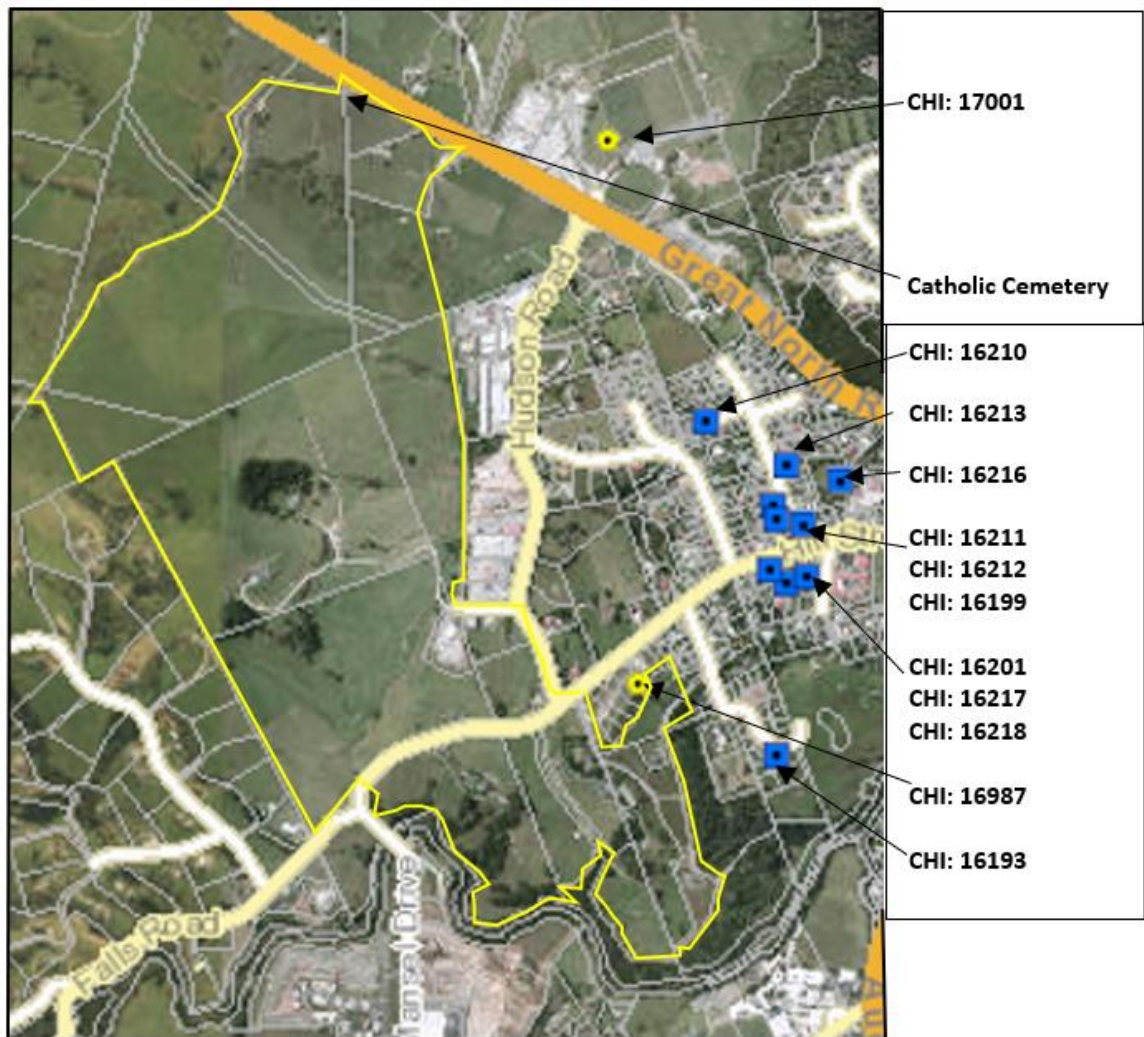


Figure 16. Locations of CHI sites within c. 500 m of the Plan Change area (outlined in yellow) with location of the Catholic Cemetery also indicated (source: Auckland Council Geomaps)

Table 1. Summary Details of the Historic Heritage Places within 500 m of the Plan Change Area

CHI ref:	Category	Type/ Description	Easting	Northing
16193	Historic Structure	Warkworth Cottage Hospital/ timber weatherboard building constructed in the 1920's.	1748457	5970267
16199	Historic Structure	Timber weatherboard house at 42 Hill Street Warkworth	1748508	5970717
16201	Historic Structure	Bay villa at 4 Kasper Street, Warkworth.	1748512	5970615
16210	Historic Structure	Former Holden House – villa at 8 Belmont Place (UPID: 00550 Cat B)	1748312	5970921
16211	Historic Structure	Square villa at 5 Victoria Street, Warkworth.	1748455	5970729
16212	Historic Structure	Square villa at 7 Victoria Street, Warkworth.	1748446	5970754
16213	Historic Structure	Square villa at 14 Victoria Street, Warkworth.	1748471	5970833
16216	Historic Structure	Warkworth Primary School at 34a Hill Street, Warkworth.	1748580	5970803
16217	Historic Structure	Historic house at 41 Hill Street, Warkworth.	1748472	5970599
16218	Historic Structure	Bay villa at 47 Hill Street, Warkworth.	1748440	5970628
16987	Reported Historic Site	U.S. Military Camp/ Military Hospital (1942 to 1945)	1748185	5970409
17001	Reported Historic Site	U.S. Military Camp (Rodney Camp J1, J2 and J3) (1942 to 1945)	1748125	5971472

PHYSICAL ENVIRONMENT

Geology and Geomorphology

The area to the north of Falls Road (Stubbs Farm) is underlain by mudstone and graded sandstone of the Pakiri Formation as shown on the 1:250 000 scale Geological Map 3 of the Auckland region. With respect to the larger Structure Plan area, located north of Stubbs Farm, this area is underlain by Mahurangi Limestone (Motatau Complex) which is characterised by muddy limestones and calcareous mudstones and sandstones of the Northland Allochthon. It has also been noted that the weathered soils of the Motatau Complex have poor drainage properties and that this northern area was generally observed to be swampy (KGA Geotechnical 2017: 10). The land to the south of falls Road is also underlain by the Pakiri Formation, with the areas along the Mahurangi River consisting of Holocene river deposits of sand, silt mud and clay with local gravel and peat beds (KGA Geotechnical 2017: 4).

Previous geotechnical investigations on the parts of the Structure Plan area to the north of Falls Road displayed a 20 to 40 cm thick layer of brown silt topsoil with moderate to high strength silts continuing down to approximately 4 m (Land Development & Exploration Ltd 2016). The soil description to the south of Falls Road on the hillslopes leading down towards the Mahurangi River, like that to the north of Falls Road consists of a thick layer of silt (KGA Geotechnical 2016: 5). The land bordering the Mahurangi River consists of steep banks (up to 15 m) which have been affected by both erosion (on the outside bends of the river) and depositional processes (on the inside bends). The areas of erosion have been described as active and a landslip was noted during a recent geotechnical survey (KGA Geotechnical 2016: 7).

Topography and Vegetation Cover

The area to the north of Falls Road is characterised by rolling hill country with pasture interspersed by isolated stands of native bush with the north-western part being the most highly elevated at c. 70 m asl. This high area is predominated by a roughly north-south trending ridge which continues onto the neighbouring property to the southwest. The land to east of the ridge, slopes downward reaching 30 m asl along the eastern boundary. The area to the south slopes more steeply down towards a stream which enters the property in the east near Sanderson Road and runs in a south-westerly direction across the property and crosses under Falls Road. The land to the south of the stream slopes upwards to form a ridgeline along Falls Road.

The land to the south of Falls Road is characterised by a knoll and ridgeline trending to the south and southwest towards the Mahurangi River containing wood lined gullies. At 223 Falls Road, five watercourses (described as both intermittent and permanent) have been recorded running from the higher ground and draining into the Mahurangi River. The largest of these is the stream which marks the western end of the Structure Plan area adjacent to the Mansel Drive extension (Bioresearches 2016: 18).

As well, five main areas of vegetation have also been identified. The first is the land bordering the Mahurangi River which is proposed to be vested as an Esplanade Reserve. The vegetation is characterised by stands of Totara and as the area has been fenced off for approximately 20 years and undergone restoration planting there is a relatively thick layer

of undergrowth in this area. Totara is described as the dominant species in the four other areas with tree ferns, Puriri, Kanuka and Pine also noted as being present. These areas have been identified as generally having moderate ecological value with the fenced off areas containing a more diverse range of undergrowth species (Bioresarches 2016: 6).

Modifications

The majority of the Project Area has been used as pasture for stock grazing and after initial clearance has remained relatively unmodified. There are some isolated impacts from the construction of farm sheds and ponds and from the construction of five modern residential buildings, four to the north of Falls Road and one to the south.

The only other modification identified was in the area bordering the stream which runs through Lot 2 DP 355193 (just to the north of Falls Road) which had been fenced off and planted with native species in 2013. The planting consisted 9 520 native plants (Ngati Manuhiri Settlement Trust Website) and was implemented as a condition of resource consent for a new water supply initiative undertaken by Watercare at a site on Sanderson Road.³ Photographs of the planting area taken in 2013 are shown in Figure 17.



Figure 17. Photographs showing the area for native planting around the un-named stream in Lot 2 DP 355193 (source: Ngati Manuhiri Settlement Trust Website)

³ The conditions are stated in the Auckland Council Decision Following the Hearing of an Application for Resource Consent Subject: Application for resource consent under section 88 of the Resource Management Act 1991 by Watercare Services Ltd for takes from groundwater and the Mahurangi River for a municipal water supply to the Warkworth township and surrounds at Sanderson Road and at 6 Brown Road, Warkworth. Hearing held on 26 June 2012 commencing at 9.30am, in the conference room, The Bridgehouse, 16 Elizabeth Road, Warkworth.

FIELD ASSESSMENT

Field Survey Results

The field survey was undertaken in two parts. The first visit was on 17 January 2017 and covered the properties shown in Figure 18 with results provided below. Two lots along Sanderson Road (Lot 1 & 2 DP 375015) which contain light industrial units and a house and landscaped grounds were not entered, but were observed from the property boundary. The ground surface on both lots were seen to be modified and covered by pavement/ gravel, apart from the house which was situated on a landscaped lot.

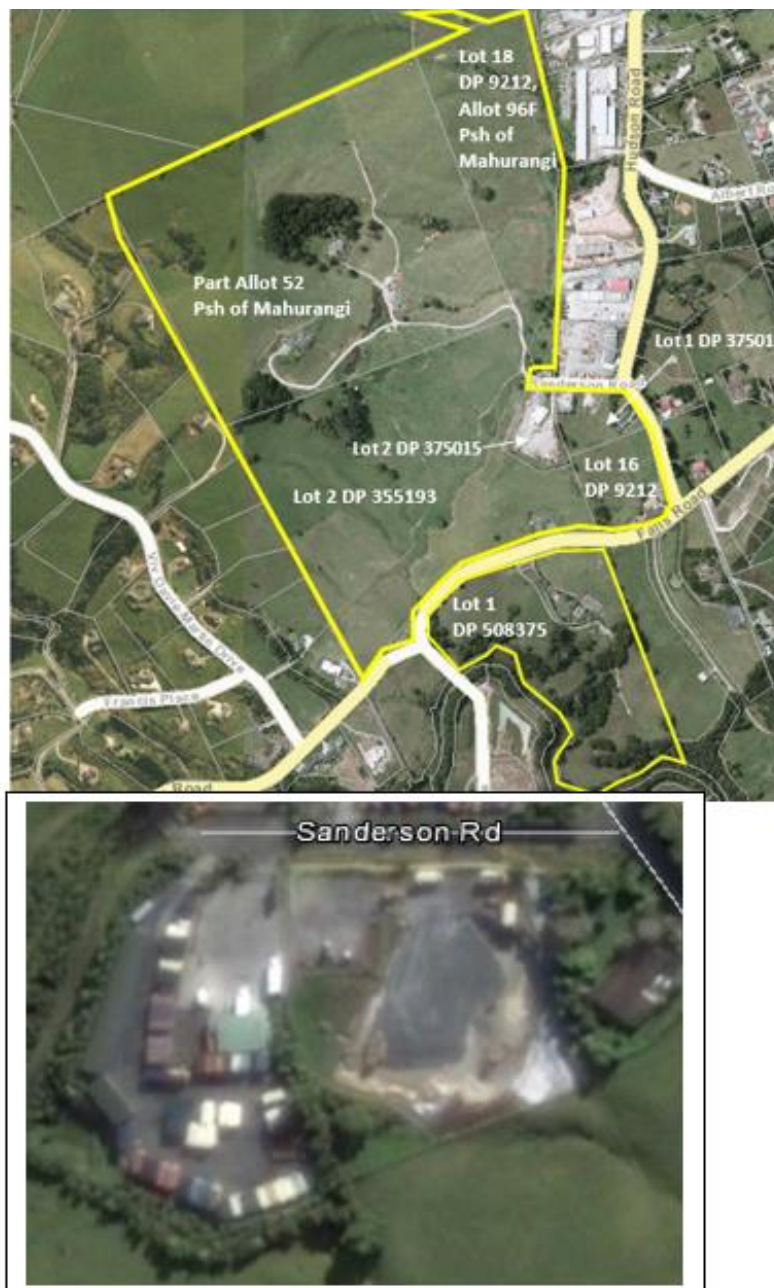


Figure 18. Aerial photograph showing the lots visited during the first survey in January 2017 with lower inset showing the modifications to Lot 1 and Lot 2 DP 375015 (source: Auckland Council Geomaps and Google earth, respectively)

Part Allot 52 PSH of Mahurangi, Lot 2 DP 355193, Lot 18 DP 9212 and Allot 96F PSH of Mahurangi

These lots are located on the northern side of Falls Road and consist of rolling hill country with grass covered paddocks and three sizable stands of native bush. There are also some large pine shelter belts and several watercourse runoff gullies in this area, all of which were mostly dry at the time of the survey. The northern part of this area contains two modern houses and a large farm shed which are accessed by metalled track/driveways from Sanderson Road. The land in this northern section is highly elevated and the southward leading slopes are relatively steep, with cattle tracks and slumping noticed during the survey (photographs in Figure 19 and Figure 20).

Lot 2 DP 355193 contains a stream which enters from the east just to the north of Sanderson Road and runs south-westerly until it meets the lot boundary at Falls Road. A fenced and recently planted out area bordering the stream was observed during the survey (photographs in Figure 21 and Figure 22). The rest of this area was in pasture apart from a modern house with fenced grounds along Falls Road. Again, cattle tracks were noted and parts of the area although dry at the time of the survey showed pugging from cattle movements in the wetter months. No archaeological features or deposits were identified in this area during the survey.



Figure 19. View of northern part of Lot 2 DP 355193 (facing north)



Figure 20. View of Pt Allot 52 Psh of Mahurangi with house visible in the background (facing north)



Figure 21. View of land bordering the northern side of Falls Road with planted out area along the stream indicated by arrow (facing west)



Figure 22. Close-up view of the area of native planting along the stream to the north of Falls Road (facing northeast)

Lot 16 DP 9212

This lot is bordered by Falls Road in the south, another residential lot to the north, Hudson Road in the east and grassed paddocks to the west. The south-eastern corner at 47.5 m asl is the highest point in this lot and has been levelled off and a modern house constructed. The remainder consists of relatively steep hillsides sloping down towards the northwest with a gully running down the western side. The ground cover was mostly grass, but areas of exposed soil were also observed which showed signs of erosion. Parts of the lot were being used for cattle grazing at the time of the survey. Apart from those within the landscaped garden of the house, the only other trees present were situated on the western side of the property near the gully described above. During the survey, it was noted that some trees had recently been felled and there were the remains of recent burning observed. No evidence of archaeological features or deposits were identified. Photographs are shown in Figure 23 and Figure 24.



Figure 23. Photograph showing the southern part of Lot 16 DP 9212 with sloping hill sides and house (102 Hudson Road) visible near the top of the photograph (facing southeast)



Figure 24. View of the western side of Lot 16 DP 9212 with gully and trees visible with stumps and piled wood indicated by arrows (facing northeast)

Lot 2 DP 508375

Most this property was in use for stock grazing at the time of the survey and a small number of cattle and sheep were observed in the paddocks. The north-eastern part of the property contains a ridge which slopes to the southwest, a levelled off area in the northeast corner with storage containers that did not appear to be in use was also observed. This lot also contains a modern house with pool, tennis court, sheds and landscaped grounds, all set back from Falls Road and there is a farm shed located adjacent to Falls Road beside the driveway leading to the house. The remainder of the property consists of hills and gullies containing a mixture of grassed paddocks and stands of native bush with some exotic species also present. As noted earlier the areas along the Mahurangi River contain steep banks and are covered by thick undergrowth. This area was visually inspected and probed where possible, although the presence of vegetation restricted the areas that could be probed successfully. In addition, the grassed paddock bordering the proposed reserve alongside the river was also probed (Figure 25). No evidence of archaeological deposits or features were identified in the probed areas or any other part of the property.



Figure 25. Photograph of paddocks in the southwestern part of Lot 2 DP 508375 (223 Falls Road) with wooded area bordering the Mahurangi River at the southern boundary indicated by black arrow (taken looking southwest)

A survey of the remaining properties in the Plan Change area shown in Figure 26 was conducted on 2 August 2017 with site walkover and limited probing. A previous archaeological survey (Judge 2009) included Sec 4 SO 476652, Lot 1 DP 405448 and Pt Lot 1 (which contains the Catholic Cemetery) and Pt Lot 2 DP 180823. These lots were not resurveyed, although a brief visual inspection was conducted to take note of their current status.



Figure 26. Aerial photographs showing the lots surveyed in August 2017 (outlined in yellow) with locations of previously surveyed lots are also indicated (source: Auckland Council Geomaps)

Sections 15, 16, 17 and 24 DP 495251

The first lots to be surveyed were those located along the northern boundary of the Structure Plan area. The land has been used for farming for many decades and is currently owned by the Civil family. Section 15 is the most northern of the lots and is bisected by a stream running in a generally east-west direction across its middle. The land to the north of the stream is relatively flat with gentle slopes leading down to the stream and there is a house along its northern boundary. The land to the south of the stream slopes dramatically upwards to the highest point in the area, at 70 m asl, which is located in the southwestern corner of the lot. The land on either side of the stream was found to be marshy and contained wetland plants. A photograph of this lot is shown in Figure 27.

Sections 17 and 24 were found to be characterised by steeply sloping hill sides running up to the high point in Lot 15. The land was in use for cattle grazing at the time of the survey and the ground cover was a mix of grass and muddy areas churned up by stock movement. No evidence of archaeological features or deposits were identified.

Part Lot 1 and Part Lot 2 DP 180823

These lots were not surveyed on foot as access was not permitted. However, as the land bordered accessible properties and State Highway 1 they were easily observed from their boundaries. The two lots make up a triangular shape with Part Lot 1 making up the northern tip and Part Lot 2 the remainder. Part Lot 1 contains a Catholic Cemetery and the graves observed showed interment dates ranging from the 1930's to the 1990's. Part Lot 2 borders State Highway 1 and was observed to be relatively flat and boggy. A photograph of the cemetery is shown in Figure 28.

Lot 1 DP 405448

This lot was previously surveyed (see Judge 2009) with no archaeological sites identified. A brief visual inspection was conducted to determine the current status of the property. The lot contains a house set along its northern boundary, which is also the highest point. The remainder of the land slopes downwards towards the stream. The northeastern corner of the property contains the entrance from State Highway 1 and a large modified area containing a disused shed/ workshop. No changes from the previous survey were identified. A photograph of the lot is shown in Figure 29.

Sec 4 SO 476652

This lot was previously surveyed (see Judge 2009) with no archaeological sites identified. A short visual inspection was conducted to determine the current status of the property. The northern and eastern parts of the property are located on low lying land and the western part slopes upward quite steeply towards the southwest from the sides of a stream which runs through the southern half of the property continuing into Sec 15 SO 495251. No changes from the previous survey were identified.

Lot 1 DP 204539, Lot 1 DP 62696 and part of Lot 2 DP 431845

These lots lie to the south of Falls Road. Lot 2 DP 204539 is a residential property with the northern part containing a house and landscaped garden and the southern part a grassed paddock. The property is accessed up a steep hillside from View Road and sits on a westerly trending ridge with steeply sloping sides. Lot 1 DP 62696 is a small rectangular lot. A large concrete water storage tank and small wind turbine are situated in this lot, which is also the highest point in the area at 85 m asl. The ground on both the lots was water saturated at the

time of the survey. As both of these lots were situated on a high ridge they were carefully inspected and probed, however, no evidence of archaeological remains or features were identified. The section of Lot 2 DP 431845 bordering the track leading up to the Lot 1 DP 62696 is also within the Structure Plan area. This section of the lot is a steep wooded hillside. Photographs are provided in Figure 30.

Lot 1 DP 209013 and Lot 3 209013

These two lots run from Falls Road in the north down towards the Mahurangi River. The properties are currently used for cattle grazing apart from a house and farm shed along the western border and a stand of bush in the southern part of Lot 1 DP 209013. The southernmost boundary of Lot 3 DP 209013 is approximately 50 m north of the Mahurangi River and the lots are separated from the river by a thick stand of bush. All of the lots had some degree of surface disturbance from cattle movements and No archaeological remains or features were identified in these lots during the survey. See photograph in Figure 31.

Lot 2 DP 336399, Lot 1 DP 509795 and Lot 2 DP 509795

Lot 2 DP 336399 is a narrow, steeply sloping lot mostly in pasture part from a house which has been constructed on a flattened area near its southern end, which leads down towards the Mahurangi River. Lot 1 DP 509795 is also situated on a hillside with slopes ranging from moderate to extremely steep, apart from a levelled off area on the western side which contains a house with landscaped gardens and a large farm shed. The remaining land is covered in pasture grass and stock were present at the time of the survey. Lot 2 DP 509795 also contained an area in its southeastern part that was modified from works observed in 2001 and 2006 aerial photographs (not shown) reviewed on the Auckland Council Geomaps Website. The southern boundary of this lot follows the line of the Mahurangi River, but is separated from the waterway by thick bush cover. Much of the land was water saturated at the time of the survey and muddy from stock movements. No archaeological remains or features were identified in these lots during the survey. A photograph is provided in Figure 31.



Figure 27. Photograph showing the hill running up from the stream in Sec 15 DP 495251 (looking southwest)



Figure 28. Photograph of the Catholic Cemetery in Pt Lot 1 DP 180823 taken from the edge of State Highway 1 looking northwest



Figure 29. Photograph showing a view of Lot 1 DP 405448 taken from the shed near SH1, looking northeast. The house is indicated by the arrow



Figure 30. Left: photograph showing Lot 1 DP 62696 with tank and wind turbine (looking south); Right: photograph showing the grassed paddock at Lot 1 DP 204539 (looking northeast)



Figure 31. Left: photograph showing steep hillside in Lot 1 DP 509795 (looking east); Right: photograph showing the modified area in Lot 2 DP 509795 (looking southwest)

DISCUSSION AND CONCLUSIONS

Summary of Results

No archaeological sites have previously been recorded in the Warkworth North Structure Plan area and none were identified during this assessment. Recorded archaeological sites are generally located around the Mahurangi River to the south of Warkworth and historic sites are also located near the river and the township itself. A large area to the west of the Structure Plan area was surveyed in 1998 with no archaeological sites identified. Other surveyed areas in the general vicinity (including within the Structure Plan area) have produced similar negative results. Based on the findings of the current survey, along with the results of past surveys and reviews of the archaeological potential, it is considered unlikely that any unrecorded subsurface remains are located within the Structure Plan boundaries.

There are no historic heritage sites identified within the Structure Plan boundary. Two reported historic sites (both former WWII U.S. Military camps) are located in the vicinity of the Structure Plan area. These are (CHI: 17001) Rodney Camp J1, J2 and J3 and (CHI: 16987) Military Camp and Hospital, both of which are included in the Auckland Council CHI.

Maori Cultural Values

This is an assessment of effects on archaeological values and does not include an assessment of effects on Maori cultural values. Such assessments should only be made by the tangata whenua. Maori cultural concerns may encompass a wider range of values than those associated with archaeological sites. Consultation has been undertaken between Te Kawerau o Maki and Ngati Manuhiri who have both completed Cultural Impact Assessments.

Survey Limitations

It should be noted that archaeological survey techniques (based on visual inspection and minor sub-surface testing) cannot necessarily identify all sub-surface archaeological features, or detect wahi tapu and other sites of traditional significance to Maori, especially where these have no physical remains.

Archaeological Value and Significance

The archaeological value of sites relates mainly to their information potential, that is, the extent to which they can provide evidence relating to local, regional and national history using archaeological investigation techniques, and the research questions to which the site could contribute. The surviving extent, complexity and condition of sites are the main factors in their ability to provide information through archaeological investigation. For example, generally pa are more complex sites and have higher information potential than small midden (unless of early date). Archaeological value also includes contextual (heritage landscape) value. Archaeological sites may also have other historic heritage values including historical, architectural, technological, cultural, aesthetic, scientific, social, spiritual, traditional and amenity values.

The Warkworth North Structure Plan area has no known archaeological value or significance as no archaeological sites have been identified within its boundaries. There are also no recorded archaeological sites in the vicinity and previous surveys in the area have not identified any evidence of archaeological deposits or features. The identification of archaeological sites to the east show that locations closer to the coast were preferred for settlement and occupation and it is considered unlikely that subsurface archaeological features or deposits are present in the Structure Plan area.

Effects of the Proposal

The proposed plan change and future residential and business developments will have no known effects on archaeological values as no archaeological sites have been identified within the boundaries of the Plan Change area. As well, there are no recorded archaeological sites in the vicinity and previous surveys that have been undertaken within the Structure Plan Area and on neighbouring properties have found no evidence of archaeological deposits or features. It is, thus, considered unlikely in this situation, that unrecorded subsurface remains will be exposed during future development. However, in the unlikely event that archaeological remains were to be encountered, this possibility can be provided for by putting procedures in place ensuring that the Council and Heritage NZ are contacted should this occur.

Archaeological features and remains can take the form of burnt and fire cracked stones, charcoal, rubbish heaps including shell, bone and/or 19th century glass and crockery, ditches, banks, pits, old building foundations, artefacts of Maori and early European origin or human burials.

A Catholic Cemetery is located within the Plan Change area. It is not a scheduled historic heritage or archaeological site and is likely to be relocated due to flooding issues and the rezoning of the land will not have any effect on heritage values.

Resource Management Act 1991 Requirements

Section 6 of the RMA recognises as matters of national importance: *‘the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga’* (S6(e)); and *‘the protection of historic heritage from inappropriate subdivision, use, and development’* (S6(f)).

All persons exercising functions and powers under the RMA are required under Section 6 to recognise and provide for these matters of national importance when *‘managing the use, development and protection of natural and physical resources’*. There is a duty to avoid, remedy, or mitigate any adverse effects on the environment arising from an activity (S17), including historic heritage.

Historic heritage is defined (S2) as *‘those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: (i) archaeological; (ii) architectural; (iii) cultural; (iv) historic; (v) scientific; (vi) technological’*. *Historic heritage includes: ‘(i) historic sites, structures, places, and areas; (ii) archaeological sites; (iii) sites of significance to Maori, including wahi tapu; (iv) surroundings associated with the natural and physical resources’*.

Regional, district and local plans contain sections that help to identify, protect and manage archaeological and other heritage sites. The plans are prepared under the rules of the RMA. The Auckland Unitary Plan (Operative in part) is relevant to the proposed activity.

There are no scheduled historic heritage sites located in the Structure Plan area. This assessment has established that the proposed plan change will have no effect on any known archaeological remains and has little potential to affect unrecorded subsurface remains. If resource consent is granted, consent conditions relating to archaeological monitoring or protection would therefore not be required.

However, if suspected archaeological remains are exposed during future development works, the Accidental Discovery Rule (E12.6.1) set out in the Auckland Unitary Plan (Operative in part) must be complied with. Under the Accidental Discovery Rule works must cease within 20m of the discovery and the Council, Heritage NZ, Mana Whenua and (in the case of human remains) NZ Police must be informed. The Rule would no longer apply if an Authority from Heritage NZ was in place, with the exception of significant post-1900 remains not covered by the Authority.

Heritage New Zealand Pouhere Taonga Act 2014 Requirements

In addition to any requirements under the RMA, the HNZPTA protects all archaeological sites whether recorded or not, and they may not be damaged or destroyed unless an Authority to modify an archaeological site has been issued by Heritage NZ (Section 42).

An archaeological site is defined by the HNZPTA Section 6 as follows:

‘**archaeological site** means, subject to section 42(3), –

(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)’

Authorities to modify archaeological sites can be applied for either in respect to archaeological sites within a specified area of land (Section 44(a)), or to modify a specific archaeological site where the effects will be no more than minor (Section 44(b)), or for the purpose of conducting a scientific investigation (Section 44(c)). Applications that relate to sites of Maori interest require consultation with (and in the case of scientific investigations the consent of) the appropriate iwi or hapu and are subject to the recommendations of the Maori Heritage Council of Heritage NZ. In addition, an application may be made to carry out an exploratory investigation of any site or locality under Section 56, to confirm the presence, extent and nature of a site or suspected site.

An archaeological authority will not be required for future development as no known sites will be affected, and it is unlikely that any undetected sites are present. However, should any sites be exposed during future development the provisions of the HNZPTA must be complied with.

Conclusions

Based on the inland location and lack of any archaeological evidence within the Structure Plan area it is considered unlikely that any archaeological deposits or features will be affected by future development. If any unrecorded archaeological sites are exposed during future development activities, the effects are considered likely to be minor and can be appropriately mitigated by recording and information recovery under the archaeological provisions of the HNZPTA. No heritage constraints to future development have been identified in the Structure Plan area.

RECOMMENDATIONS

- There should be no constraints on the proposed structure plan and plan change on archaeological grounds, since no archaeological sites are known to be present and it is considered unlikely that any will be exposed during future development.
- If subsurface archaeological evidence should be unearthed during future development (e.g. intact shell midden, hangi, storage pits relating to Maori occupation, or cobbled floors, brick or stone foundation, and rubbish pits relating to 19th century European occupation), or if human remains should be discovered, the Accidental Discovery Rule (section E.12.6.1 of the AUP OP) must be followed. This requires that work ceases within 20m of the discovery and that the Auckland Council, Heritage NZ, Mana Whenua and (in the case of human remains) the NZ Police are notified. The relevant authorities will then determine the actions required.
- If modification of an archaeological site does become necessary, an Authority must be applied for under Section 44(a) of the HNZPTA and granted prior to any further work being carried out that will affect the site. (*Note that this is a legal requirement*).
- In the event of koiwi tangata (human remains) being uncovered, work should cease immediately in the vicinity of the remains and the tangata whenua, Heritage NZ, NZ Police and Council should be contacted so that appropriate arrangements can be made.
- Since archaeological survey cannot always detect sites of traditional significance to Maori, such as wahi tapu, the tangata whenua should be consulted regarding the possible existence of such sites on the property.

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