9 MCKEAN ROAD, 101 TOTARA ROAD AND 105-107 TOTARA ROAD, WHENUAPAI: ARCHAEOLOGICAL ASSESSMENT



Prepared for Neil Construction Ltd

October 2022

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Contents

Introduction
Project Background1
Methodology1
Historical Background
Māori Settlement4
European Settlement
Whenuapai Airbase7
Land Ownership History7
Archaeological Background11
Historical Survey
Information from Early Maps and Plans15
Information from Early Aerials15
Physical Environment
Topography, Vegetation and Land use17
Geology and Geomorphology17
Historical Modification17
Field Assessment
Field Survey Results
Discussion and Conclusions
Summary of Results
Māori Cultural Values
Survey Limitations
Archaeological Value and Significance
Effects of the Proposal
Covid-19 Recovery (Fast-track Consenting) Act 2020
Heritage New Zealand Pouhere Taonga Act 2014 Requirements
Conclusions
Recommendations
Bibliography



INTRODUCTION

Project Background

Neil Construction is proposing a 244 lot residential subdivision together with jointly owned access lots, public roads, pedestrian accessways, esplanade reserves, and a recreation reserve to vest (to be referred to as the Project Area in this report). The proposal primarily provides vacant residential lots which can accommodate a range of housing types. A selection of houses on the south-eastern area of the site will be designed at the consenting stage and are smaller in nature to provide greater housing diversity. The total land area to be developed is 14.6027 hectares and is made up of the following portions of land: 9 McKean Road (Lot 3 DP77541) covering 5.0600ha, 101 Totara Road (Lot 1 DP170291) covering 5.0043ha and 105-107 Totara Road (Lot 1 DP52677) and (Lot 1 DP72379) covering 4.5384ha.

This report has been prepared in support of the application for a referred project under the COVID-19 Recovery (Fast-track Consenting) Act 2022 ('the Act") for the proposed development.

An archaeological assessment was commissioned by Neil Construction Limited to establish whether the proposed residential development is likely to impact on archaeological values. This report has been prepared as part of the required assessment of effects accompanying a resource consent application for a fast-track approval under the Act 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), Auckland Unitary Plan Operative in Part (AUP OP) schedules, and the Heritage New Zealand Pouhere Taonga (Heritage NZ) New Zealand Heritage List/Rārangi Kōrero were searched for information on archaeological or other historic heritage sites recorded on or in the immediate vicinity of the property. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early survey plans and aerial photography were checked for information relating to past use of the property. Limited archival research was also carried out to establish the history of the property. A field survey was undertaken on 8 September 2022 by Kirstin Roth and Jennifer Low. 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 industrial remains). Subsurface testing with a probe was conducted on a regular basis in approximately 10m intervals in conjunction with test pitting, in order to understand the local stratigraphy. Test pits approximately 25cm by 25cm were placed in areas thought to hold the highest potential for archaeological remains, or in areas where an undisturbed soil profile was thought to be attainable. Photographs were taken to record the landscape and any features of interest, in conjunction with field notes.





Figure 1. General location of the Project Area on Totara and McKean Roads, Whenuapai (bounded in blue) (source: Auckland Council Geomaps)



Figure 2. Aerial image showing the property details of the Project Area (source: Auckland Council Geomaps)



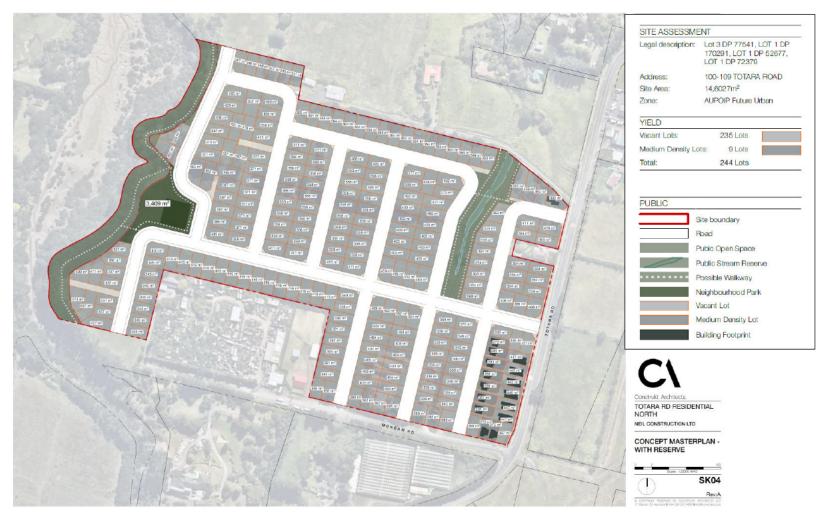


Figure 3. Concept Masterplan of the proposed subdivision at Totara and McKean Roads, Whenuapai (source: Neil Construction Limited)



HISTORICAL BACKGROUND

Māori Settlement

The Whenuapai area and other locations along the creeks and inlets of the inner reaches of the Upper Waitemata Harbour were occupied by Māori for generations before the arrival of Europeans, evidence of which survives in the form of recorded place names, oral traditions and archaeological sites (although many sites have been destroyed by 19th and 20th century development and natural processes). The name Whenuapai itself translates as 'fertile land' (Stewart 1997) or perhaps 'good land', although the original Māori name of the area was Waimarie which means 'calm waters' (Morris 1995; Simmons 1987). The harbour provided not only abundant marine resources but also access to some significant communication and portage routes, such as the Rangitopuni River and Kaipatiki Creek (Lucas Creek). The Waitematā harbour was part of an inland water route stretching from north of Dargaville through to the centre of the North Island (via the Kaipara, Waitematā and Manukau Harbours and the Waikato River).

Through time a number of iwi have had influence over the Upper Waitematā Harbour region. Of particular significance were Te Kawerau, Waiohua and Ngāti Whatua and the many hapu related to these groups (Clough & Tanner 2004). However, other hapu from outside the region also maintained rights to fish in the waters of the Waitemata through the summer months, and archaeological sites in the area may relate to any of these groups.

The rohe of Te Kawerau a Maki once extended from the Waitakere Ranges north to Cape Rodney and Leigh. The ancestors of the people that would become Te Kawerau a Maki were on the coastline between northern Taranaki and Kawhia during the 13th and 14th centuries (Te Kawerau a Maki 2006). They trace their lineage from the leading raNgātira of the Aotea, Kahutara, Kurahaupo, Tainui and Tokomaru canoes (Te Kawerau a Maki 2006). The immediate ancestor of the Kawerau tribe was Maki (also referred to as Makinui), a famous chief of Ngāti Awa of Taranaki. Before arriving at Tamaki he was settled at Kawhia, establishing links with the Tainui tribes of Waikato (Murdoch 1990:13; Te Kawerau a Maki 2006). 'Te Kawerau a Maki' means 'the carrying strap of Maki' – a name derived from an event involving Maki during a conquest of Kaipara (Murdoch 1990:13). Around 1600 AD Maki and his followers migrated northwards settling initially near Waiuku, then at Rarotonga (Mt Smart), and set about conquering and intermarrying with the people of South Kaipara and Ngaoho of the Waitakere Ranges (Murdoch 1990: By the late 1600s Maki's descendants occupied land from South Kaipara to 13). Mahurangi and the Hauraki Gulf (Murdoch 1990:14).

By 1680 AD, however, Ngāti Whatua of North Kaipara had advanced on the Waitakere area, initially intermarrying with Kawerau people and later, by conquest, taking all of the pa on the west coast (Murdoch 1990:14). By 1700 AD, many Kawerau had been killed while others sought refuge in the forests and caves of the Waitakere Ranges. Due to earlier intermarriages and relationships, Ngāti Whatua left Te Kawerau in peace in the western (coastal) half of the Waitakere area (Murdoch 1990:14). There followed a period of relative peace until the arrival of the Europeans.

A number of Māori place names associated with the wider area have been recorded, some but not all of which are in use today (Figure 4). Onekiritea refers to the Hobsonville peninsula generally, and refers to the whitish clays soils found in the area, used in earlier times as a pigment and as a form of soap (Te Kawerau a Maki 2008; NZHPT 2008). Te



Okoriki refers to an important area (a small eroding headland) beside the Harbour Bridge approaches (ibid.). Te Waiarohia o Ngariki (the Waiarohia Inlet) was an important fish and shellfish gathering place, and the name refers to an earlier tribe searching for water (ibid.). The headland opposite Herald Island was named Te Turerenga, or 'the slipping away', referring to the night time escape of prisoners taken by Nga Puhi in this area (Simmons, 1987). Onetaipu, applied to the headland to the north of Te Turerenga, means 'sandy foreshore', while Te Tauhokaiapi refers to 'the fishing net pole of Pi', a mud flat. Like the Waiarohia inlet, the Rarawaru and Kotukutuku inlets are known today by their Māori names, but Brighams Creek was previously known as Pitoitoi ('name of a bird' – Simmons, 1987). Kopupaka, at the head of Pitoitoi, where it separates into Totara and Waiteputa ('the water flowing forth') Creeks, translates as 'the scorched stomach' (Simmons, 1987) applied to a stream flowing into Limeburners Bay, but at the time of the first land sales became the name of the large block of land which included the Hobsonville Peninsula and Whenuapai.

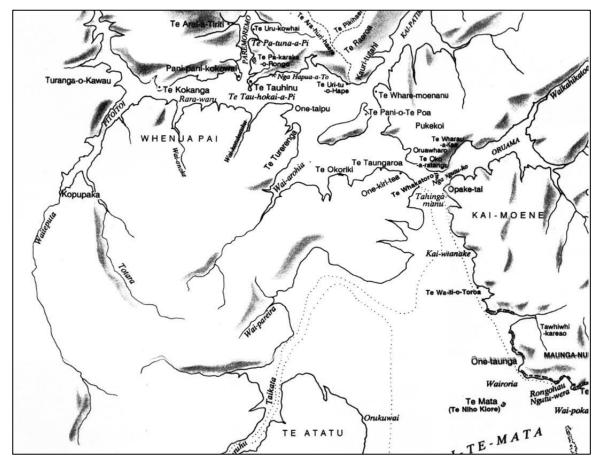


Figure 4. Detail of map of Māori place names showing the place names in the Whenuapai area (source: Kelly, J. and J. Surridge 1990, Map of the Tamaki Isthmus with Māori Place Names Redrawn from Tamaki-Makaurau by Leslie Kelly. Department of Geography, Auckland University)



European Settlement

When Europeans first began to settle the Upper Waitematā they would have encountered a landscape covered in kauri forest (North 2000). By 1840, after the arrival of numerous settlers, several timber mills were founded in the upper harbour at Lucas Creek, Paremoremo and Rangitopuni (North 2000; Morris 1995). The site known as Mill Flat in Riverhead was a site of one of the early saw mills (Morris 1995). In a little less than 20 years, practically all of the kauri was logged and gum diggers replaced the timber workers (North 2000; Morris 1995).

On 2 June 1853, 600 acres of land named the 'Waipareira Block' (which included the Project Area) were sold by two chiefs of the Ngāti Whatua, for £50. However, this sale proved to be controversial and later formed part of the 3000 acres of reserve land in West Auckland that was given back to Kawerau a Maki (Hahn 2007). In 1857, however, two European settlers named as Joseph Newman and Thomas Summerville managed to acquire the 600 acre Waipareira Block, reportedly for the sum of £250 (Hahn 2007).

The Sinton family is credited with the building of one of Whenuapai's first houses (Ingersoll n.d.). On 19 January 1860, William Sinton and his wife Janet had embarked at Southampton for New Zealand aboard the vessel *Red Jacket* and four months later disembarked in Auckland (Ingersoll n.d.). After declining the opportunity to purchase 40 acres of land in Kaukapakapa due to Māori unrest in that area, Sinton worked for a while before he was finally granted 70 acres of land in Hobsonville in 1864 (Ingersoll n.d.). There was much manuka and scrub on Sinton's new land, perhaps due to natural regeneration following the clearing of the kauri forests. Much of the land at Whenuapai at the end of the 19th century appeared barren and devoid of large trees after the loggers and gum diggers had passed through (Hahn 2007).

Around Whenuapai, early gum diggers lived in shanty style dwellings, and would take the gum that they had excavated to one of the two stores owned by the Sinton family at either Brigham Creek or Hobsonville (Morris 1995; Ingersoll n.d.). Here, they would be either paid in cash for their gum or they could trade it for goods and supplies (Ingersoll n.d.).

Despite the presence of a few European settlers farming the land in the Whenuapai area, most chose to settle at nearby Hobsonville (Hahn 2007). It would appear that for the most part Whenuapai followed a classic pattern of rural land use in the greater West Auckland area. This being, that kauri forest was first logged and cleared, the ground was then excavated and worked by gum diggers, and then the ground improved by farmers to enable the development of good pasture for livestock or crop cultivation.

One crop that was cultivated successfully at Whenuapai was tobacco (Hahn 2007). The tobacco plant is known for its ability to grow in even the poorest soils and in a wide variety of climates, so the soil and conditions at Whenuapai posed no problems (Hahn 2007). So successful was tobacco cultivation at Whenuapai and Riverhead that by 1929, 120,000 pounds of tobacco was being produced annually (Hahn 2007). However, due to increased government taxation and pressure exerted from trade unions for improved working conditions and wages, tobacco production in Whenuapai steadily decreased. By 1940 tobacco cultivation had ceased and Motueka in the South Island had become the main centre of cultivation in New Zealand (Hahn 2007).



Whenuapai Airbase

New Zealand's air force had its origins in June 1923, when the New Zealand Permanent Air Force (NZPAF) was officially established, and a small number of surplus British aircraft were acquired. The first training base was established in Canterbury at the Wigram Aerodrome, and in 1924 the Hobsonville Peninsula was chosen as a suitable location for an aircraft station for both seaplanes and land planes to defend the port of Auckland. Work began at Hobsonville in 1927 and it was operational soon after (Macready & Clough 2008).

In 1937 the Royal New Zealand Air Force (RZNAF) was created as a separate defence service, replacing the NZPAF (under the Air Force Act 1937). The first Chief of Air Staff, Wing Commander (RAF) Ralph Cochrane, had written a comprehensive report assessing the needs of the new Air Force in 1936 and recommended sweeping changes (Macready & Clough 2008). These included the separation of land and seaplane operations and other functions, and identified the need for airbases in New Zealand that could accommodate the new Wellington bomber (Macready & Clough 2008; Ingersoll n.d.). By August 1938, some suitable and inexpensive land had been identified at Whenuapai, and a 600 acre purchase was made on 29 August (Ingersoll n.d.; Ministry of Defence Report 2004). After the land had been levelled, drained and topsoiled, four grass runways were constructed at Whenuapai (Ingersoll n.d.). However, to better cope with the increased numbers of heavy aircraft using the airbase for the Pacific arena of war by 1942, they were replaced with thick concrete (Ministry of Defence 2004; Ingersoll n.d.).

In 1945, Whenuapai also opened to civilian aircraft and by 1947 the then National Airways Corporation was operating a passenger and freight service (Ministry of Defence 2004). Regular services commenced between Whenuapai, Paraparaumu, and Harewood and international services began in the late 1940s, and continued until 1965 when Auckland International Airport opened at Mangere (Ministry of Defence 2004). Since the war, Whenuapai has also retained military operations and today forms RNZAF Base Auckland (Ministry of Defence 2004). The Hobsonville Airbase was closed in 2002, surplus to defence requirements.

Land Ownership History

The property at 101, 105-107 Totara Road and 9 McKean Road is a 14.6027ha portion of the much larger Lot 3, Parish of Waipareira, granted by the Crown to John Waters Bain and James Burtt on 15 December 1854 for the sum of £337 (1G/2240, Archives NZ, Figure 4). John Waters Bain and James Burtt entered into partnership as Merchants, and Ship and Commission Agents on 1 November 1850, being situated on the Wharf at Lower Queen Street (*New Zealander*, 2 November 1850:2). In 1855 Burtt retired from the business and settled in Paerata (*Auckland Star*, 30 January 1908:5). On 16 November 1855 Bain conveyed his share in the property to Burtt (DR 5D/572, Archives New Zealand) as part of the business asset split.

By 1860 Burtt had begun to subdivide the property, selling portions of the Lot, with the Project Area contained within Lot 10 sold on 9 December 1862 to Thomas Russell of Auckland, solicitor for the sum of £94.18.0 (DR 13D/545, Archives NZ). The written Deed notes a property boundary on the south and western sides as being near a Landing Place which today would be located at the end of McKean Road (Figure 5) and formerly known as Punga Road.



Russell did not settle on the land and later sold the property to Henry Chamberlin of Auckland, esquire on 9 May 1877 (DR 22M/573, Archives NZ). Chamberlin was a member of the Legislative Council and had large landholdings in Drury, Raglan and Hobsonville along with other smaller landholdings and a residence in Parnell (New Zealand Herald, 17 April 1888). Chamberlin appears to have been prospecting for coal at the time of his death in Drury. The property was transferred to Elizabeth Catherine Chamberlin, widow, and Edmund Augustus Mackechnie, solicitor on 3 July 1888 (NA14/247, LINZ). A series of Supreme Court rulings were made allowing Elizabeth Chamberlain and Eva Ellen Laing authorisation to sell the property, and a vesting of the interest held by Mackechnie to Charles Chamberlin (brother of Henry). The property was later transferred to Frederick Mikat of Hobsonville, farmer on 14 May 1907 (NA14/247, LINZ). Little is known of Mikat's occupation of the land, however it appears a house was constructed on the Punga Road frontage, and was occupied by Ellen Mikat, until her death in 1937 (Auckland Star, 4 June1937) and Frederick Mikat who died the following month (Auckland Star, 2 August 1937). This is likely the house situated on Punga Road as seen in the 1940 aerial (Figure 9) and may have been occupied by the retired Mikat's for many years after they sold the property. The house is situated in Lot 3 of a later subdivision (and excluded from the subject property). A subsequent Licence to occupy issued to George McKean indicated the presence of a house and outbuildings including a cowshed, and although some years passed between Mikat's occupation and McKean's occupation, it is likely the buildings were originally associated with Mikat.

Mikat appears to have constructed or utilised a wharf or jetty on the Rarawaru Creek, advertising for a missing flat-bottomed 14-ft dinghy that had "drifted from Waimarie", the original name of Whenuapai (*New Zealand Herald*, 5 October 1920:1). Mikat transferred the property to John Alexander Headly and Henry Farndell Lush of Auckland, farmers on 2 September 1920 (N14/247, LINZ). The property was subdivided in 1922 into three individual lots with John Alexander Lush taking Lots 1 and 3, and Henry Lush taking Lot 2. A Right of Way ran along the eastern boundary and it was not until 1941 that the Crown took the land for the purposes of a road, officially forming this portion of Totara Road (NA347/170, LINZ). The subject property is contained within Lots 2 and 3. Lot 3, located in the southwest did not include the property currently identified as 107 Totara Road, which was included in Lot 2.

Lot 2

Lush retained ownership of Lot 2 until 15 August 1957 when the property was transferred to William Thomas Sumner of Whenuapai, farmer, and Mary Coghill Sumner, his wife (NA1504/58, LINZ). On 11 June 1965 Lot 1 DP52677 was transferred to Thomas Roy Johnson and Peter Kevin Hood of Auckland, nurserymen, with Title 6A/456 issued. Johnson's share in the property was transferred to Peter Hood on 7 October 1971. The property was subsequently amalgamated in Title NA28C/160 along with land at 105 Totara Road. The properties at 105-107 Totara Road were purchased by Neil Construction Limited on 2 May 2017 (NA28C/160, LINZ).

Lot 3

Headly transferred Lot 3 to Dorothy Abigail Nixon of Hobsonville, spinster, on 5 December 1922 (NA347/169 and NA363/50, LINZ). Dorothy married John Wetheral Simpson of Hobsonville, pottery worker in October 1923 and it has not been established that the couple resided on the property. In 1941 a portion was taken by the Crown for defence purposes, with the land ultimately becoming Totara Road. In 1955 the remaining



23 acres 1 rood and 32 perches was taken by the Crown (NA363/50, LINZ). A notation made on the Title on 7 November 1956 stated "Gazette Notice under Section 4 Public Works Amendment Act 1935 imposing varying height limits of trees, buildings and other structures on the within land.

Prior to that notation a Deferred Payment Licence of Farm Land under the Land Act 1948 was issued to George Howard McKean on 10 August 1955 (NA1372/8, LINZ). McKean acquired the Licence at a purchase price of £3,050, paying a deposit of £250, allowing him to occupy 22 acres and 8 perches for the term of 30 years. McKean was subject to a number of conditions, for the most part relating to the upkeep and maintenance of the property. The Licence contained a schedule of buildings and improvements located on the property to which McKean was purchasing:- Cowshed, Dwelling, Washhouse, Sheds (2), Fencing, Shelter Pines, Grassing and Water Supply (excluding pump and motor) with a value of £2,161. The buildings are likely to be those shown in the 1940 aerial (Figure 9). In 1974 McKean obtained the land in fee simple, issued Title NA28A/273 (LINZ). Shortly thereafter McKean subdivided the land.

The land at 9 McKean Road, designated Lot 3 DP77541 was issued Title NA33D/951 on 20 September 1976 (LINZ). Following George McKean's death the property was transferred to Thomas Arthur McKean, Grace Janette McKean and John Charles Francis as executors on 11 July 1990. On 24 April 1998 Grace Janette McKean received a ³/₄ share and Mervyn James McKean received a ¹/₄ share in the property. Mervyn McKean's share was later transferred to himself and Linda Sarah McKean.

The land at 105 Totara Road, designated Lot 1 DP72379 was transferred to Peter Kevin Hood on 21 January 1975 (NA28A/273, LINZ) and issued a new Title NA28C/160, amalgamating with land at 107 Totara Road.



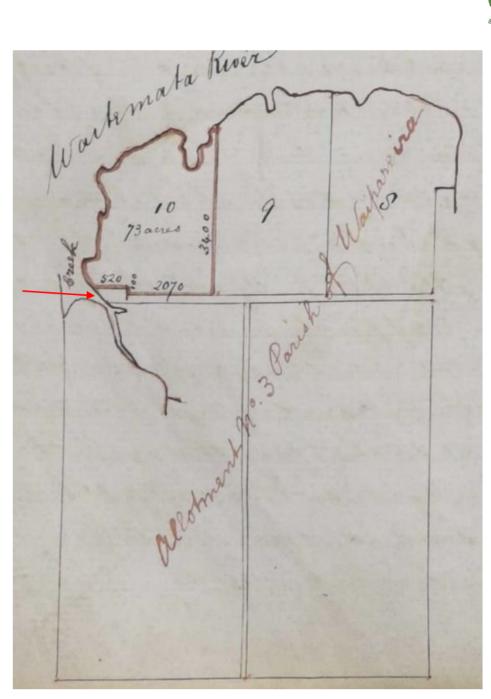


Figure 5 Showing Lot 10 as drawn on Deeds Register 13D/545 (Archives NZ) with Landing Place indicated.



ARCHAEOLOGICAL BACKGROUND

There has been relatively little in the way of archaeological field survey or investigation in the Whenuapai area in the past. However, in 1999 Clough & Associates carried out a survey for a Structure Plan Area (SPA) at Waiarohia Creek, recording several shell middens, including some within the SPA (Clough & Prince 1999). In 2010 the route of a proposed wastewater pipeline that crossed Brigham Creek on its path to Trig Road near the Whenuapai Airbase was assessed, with field survey identifying three new shell midden sites (Phear & Clough 2010). Site surveys by Druskovich have recorded remnant midden in the Brigham's Creek area, and a number of coastal structures have been recorded by Auckland Council, often on the basis of reported information rather than field survey (CHI records).

Other surveys carried out recently have failed to identify any archaeological sites. In 2010, an archaeological assessment was undertaken of some 1400ha of land in the area of Whenuapai and Hobsonville for Waitakere City Council (Shakles et al. 2010). Field survey, including in the area to the south of Brigham Creek Road, did not identify any archaeological sites. Judge (2011) completed an assessment for a new pumping station on Brigham Creek Road, but no new archaeological or other heritage sites were identified.

Investigations of historic buildings and surrounds have been carried out in connection with the SH16 and SH18 extensions. Sinton House at 2-4 Sinton Road was investigated by Foster (2006), who established that it was an early 20th century building. Investigation of the site of the Sinton store (R11/2000) found evidence for a brick paved floor but little else (Foster 2007). Ockleston House at 130 Hobsonville Road, dating back to 1885, was also investigated (Foster & Felgate 2008).

In 2016 a heritage assessment for the Whenuapai Structure Plan area was undertaken. While a number of early European houses and industrial areas were identified, the report stated that the sites relating to Māori occupation consisted of midden and were in most cases in poor condition, although it went on to say that extensive midden deposits have been reported in some areas in the past. As well it was noted that the coastal areas should be seen as archaeologically sensitive, with the potential for further midden to be present (Clough & Associates and Matthews and Matthews Architects: 2016).

More recently, land at 150-152 Brigham Creek Road and 2-18 Kauri Road was assessed (Low and Clough, 2018), with no archaeological sites noted. The properties at 69 Trig Road and 149-151 Trig Road were subjected to a preliminary archaeological assessment (Low and Clough, 2019a; Low and Clough, 2019b) with no archaeological constraints identified. Similarly 71 Trig Road (Low, Grant and Clough, 2020), 73 Trig Road (Low and Clough, 2022), 94 Trig Road (Low and Apfel, 2021) and 98-100 and 102-102A Totara Road (Low, Apfel and Clough, 2021), were assessed with no archaeological features located. In general, evidence for Māori occupation within the area is focused around the coast and waterways, while evidence of early European occupation is relatively sparse and associated with a few key settler families.

A search of the NZAA ArchSite database (Figure 6) showed no archaeological sites present within or in close proximity to the Project Area. Four archaeological sites were identified between c. 350 and 800m from the Project Area. The closest site is R10/228 (CHI:5560) located c. 350m to the northwest. It was recorded in 1977 and described as a c. 1m long exposure of shell with *Chione sp.* And oyster. identified. It was located down the side of a flat topped point at the east end of Riverlea Road. There are two additional sites further to



the west, R10/229 (CHI:5561) located c.630m to the northwest of the Project Area and R10/230 (CHI:5562) located c. 800m to the northwest of the Project Area). R10/229 is described in the NZAA site record as being located on gently sloping ground on low sea cliffs near a small stream and consisting of a c. 30cm layer of shell with *Chione sp.*, *Amphibola sp* and oyster identified. R10/230 was described in 1977 as being located on banks around a flat top of a point of land with an existing house and swimming pool present the construction of which were likely to have disturbed the site. It was described as a c. 20cm thick layer of shell with oyster and pipi identified. Midden site R10/227 (CHI:5559) is located on the coastal margin, c. 515m to the east of the Project Area. It is described in the NZAA site record as being c. 4m in length and 40cm thick with cockle and other species. Located on a gently sloping bank below a flat topped point. There have been few radiocarbon dates returned in the wider area as is shown in Figure 8.

Four historic heritage sites have also been recorded in the general vicinity of the Project Area. These consist of one historic building (CHI:3270) the Whenuapai Dropzone located c. 450m to the southeast of the Project Area, one historic botanical site (CHI:2204) an English Oak tree at 51 Riverlea Road located c. 530m to the south of the Project Area and two maritime sites. The latter two are CHI:194, the former Riverlea Wharf and breastwork located c. 365m to the northwest and CHI:761, hulk of the Hawera, located c. 380m to the north northeast.

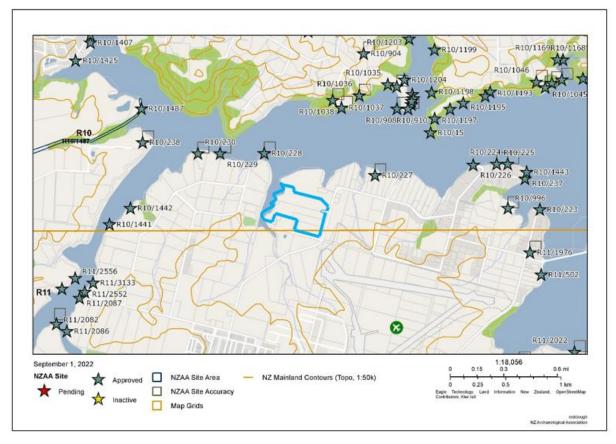


Figure 6 Recorded archaeological sites within the wider are with the Project Area bounded in blue (source: NZAA ArchSite)





Figure 7 Showing sites of heritage significance within the wider area with the Project Area bounded in blue (source: Auckland Council Geomaps)

 Table 1. Brief description of the archaeological and other historic heritage sites in the general vicinity (between c. 350m-800m) of the Project Area

NZAA Ref	CHI Ref	UPID ID	Site Type	Description	NZTM Easting	NZTM Northing
R10/227	5559		Archaeological Site	Shell midden c. 4m in length with cockle and other species.	1745349	5928777
R10/228	5560		Archaeological Site	Shell midden c.1m long exposure of shell down side of flat topped point of land.	1744349	5928975
R10/229	5561		Archaeological Site	Scatter of shell over a 10x4m area on low sea cliffs.	1743949	5928974
R10/230	5562		Archaeological Site	Shell midden with cockle, mudsnail, oyster and pipi identified.	1743749	5928974
n/a	194		Maritime Site	Former Riverlea Wharf and breastwork.	1744299	5928976
n/a	761		Maritime Site	Hulk of the <i>Hawera</i> . 174505		5928890
n/a	2204		Historic Botanical Site	English Oak located at 51 Riverlea Road.	1743836	3928339
n/a	3270		Historic Building	Whenuapai Dropzone Building.	1745291	3928108





Figure 8. Aerial photograph showing radiocarbon dating undertaken on archaeological sites in the vicinity of the Project Area (arrowed) (source: University of Waikato https://radiocarbondating.com/Research/nz -radiocarbon-database



HISTORICAL SURVEY

Information from Early Maps and Plans

Survey Ordinance plans 904A, 12107, 29567, 29631, 30571 and 39921 were reviewed, however no information relating to structures or land use was recorded on the plans. Similarly, Deposited plans 8348, 9146, 11504, 15221, 24416, 52677, 56216, 72379, 77541, and 170291 showed no information pertaining to potential archaeological or heritage sites.

Information from Early Aerials

A number of aerial images were reviewed dating from 1940 to 1980 (Figure 9, Figure 10) showing changes on the property to varying degrees. The western part of the land remained largely in pasture with some changes to the boggy wetland area via drainage. The southeast corner of the property, originally in pasture, following the acquisition by Peter Hood was cultivated possibly as part of his nursery career.

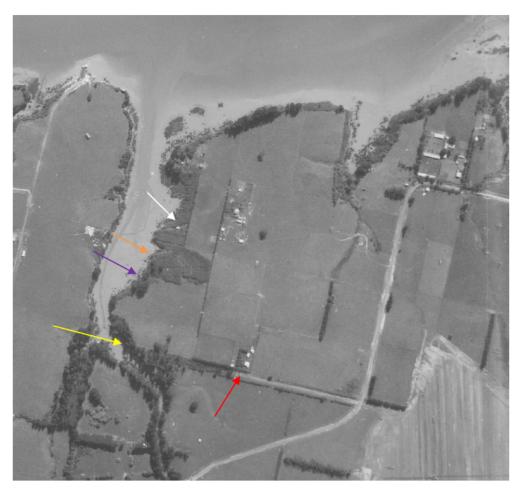


Figure 9. Detail of 1940 aerial photograph(Crown 143 91 21) showing the Project Area largely in pasture with vegetation along the coastal margin. A house and outbuildings can be seen on the McKean Road (then Punga Road) frontage (red arrow), landing place at the end of McKean Road (yellow arrow), remains of historic jetties (purple arrow), area of boggy ground with visible drainage trenches (orange arrow) and small shed (white arrow) Note Totara Road appears to have been formed prior to official acquisition (sourced from: http://retrolens.nz and licensed by LINZ CC-BY 3.0)

October 2022 McKean Totara Road - Archaeological Assessment



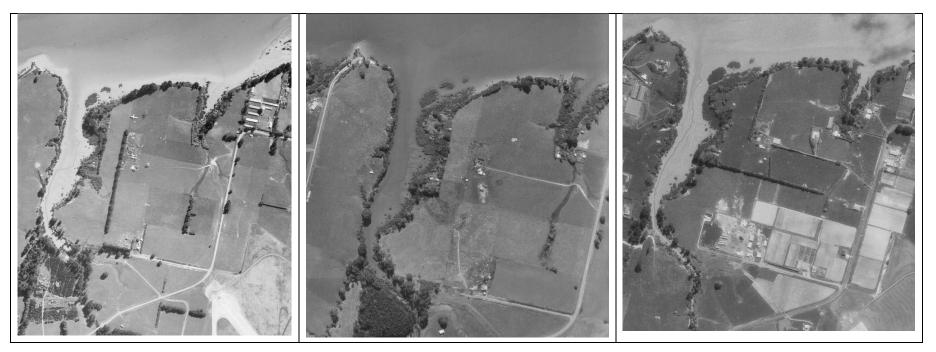


Figure 10 Aerial images showing the changes in land use over time. From left: 19/9/1950 SN583-1914-22, 27/4/1963 SN1392-3230-39 and 24/10/1980 SN5783A-L-10. The shelter pines present in 1950 as noted in the Licence to McKean had been removed by the early 1960s and significant changes can be seen to the drained boggy area near the coastline. By 1980 the southeast portion was heavily cultivated and the land round the original homestead has also been modified (sourced from: http://retrolens nz and licensed by LINZ CC-BY 3.0)



PHYSICAL ENVIRONMENT

Topography, Vegetation and Land use

The Project Area is bounded on the west by the Raruwaru Creek, to the north by private property, to the east by Totara Road, and to the south by McKean Road. At the time of inspection domestic occupation was in effect at two locations fronting Totara Road. No stock was present although stock trampling was evident across the majority of the Project Area. In addition, the property was fairly overgrown, indicating a lack of recent use. As can be seen in the aerial plan in Figure 11 much of the property is flat land and is typically so on the eastern half of the property. The western half is more variable with land sloping down towards the Raruwaru Creek.

The Project Area is currently divided into a number of fields/paddocks by post and wire fencing. These fields exist on the eastern, central and western portions of the property with fences generally running east-west. The southern area has largely been utilised as a civil works area and a Treescape yard, although the easternmost portion is in flat grass. An overgrown channel is noted running northwards from 105 Totara Road. This appears to have been a natural channel that has been partially modified by culverts to allow access across fields (see Figure 11).

There is not a significant amount or variety of vegetation on the property. A row of tall pine trees marks the far western boundary of the property and the boundary between 9 McKean Road and 101 Totara Road. A stand of Kauri is located running northwards behind 5 McKean Road. A line of bamboo is present on 101 Totara Road. The grass is typically slightly overgrown across the majority of the field with the occasional overgrown weed.

Geology and Geomorphology

Probing around the property indicated a soft clay beneath the topsoil of which its depth could not be obtained through probing alone. The ground across the entirety of the property was soft and contained a significant amount of ground water, likely as result of the extremely heavy rains two days prior. It is important to note that the wet soil influenced the impaction recorded in the stratigraphic profiles discussed below. The general soil profile indicates a 10-40cm topsoil layer overlying Waitemata clays.

Historical Modification

The property is likely to have been subjected to tree felling, gum digging and significant ploughing to turn the land to pasture. These actions will likely have obscured any potential terrace edging, spread any underlying midden within the topsoil and potentially removed much of any underlying trace of pre-European occupation. The southeast corner of the property has been heavily ploughed with horticultural pursuits noted in Figure 10. Historic residential housing was restricted, the house and some outbuildings possibly still present, however these are within land excluded from the proposed development.

A particularly boggy vegetated area on 9 McKean Road adjacent to Raruwaru Creek had drainage channels installed by 1940 (Figure 9) and over the decades the vegetation was cleared resulting in the area being solely in pasture today. There is however still a small channel draining water from the elevated part of 9 McKean Road to the estuary running southwest to northwest. The land in this area is still boggy.

Located just to the south of this drained area is a slope constructed in the manner of a ramp leading down into the Raruwaru Creek. There were two areas of interest indicating at least



two jetties were constructed in this area over time. Remains of wooden piles and beams were noted immediately to the north of the ramp, with concrete piles noted running from the shoreline out towards the channel of the creek. The ramp had been overlain with gravel, likely to aid footing on the muddy slope.



Figure 11. Aerial plan with contours showing the topography and modified waterway (channel)- blue line and the properties in the Project Area which are outlined in yellow (source: Auckland Council Geomaps)



FIELD ASSESSMENT

Field Survey Results

The field survey was undertaken on 8 September 2022 and was primarily focused on the western side of the property adjacent to Rarawaru Creek. The proposed development consists of three properties comprising 14.6027 hectares.

105-107 Totara Road

The survey started at the southern portion of the proposed area along McKean Road which included Lot 1 DP 52677, followed by Lot 1 DP 72379 situated on the south eastern side of the Project Area. As noted previously this portion of land had been heavily ploughed and utilised for horticultural purposes in the past.

Lot 1 DP 52677 fronts both McKean Road and Totara Road. The western side of the property has recently been occupied by Hick Bros Civil, east of the property at 3 McKean Road (Figure 12). The property had earth bunds along the eastern, northern and western sides of the metal yard, with a portacom on the southeast corner next to the entrance (Figure 13).

The central portion of Lot 1 DP 52677 is in use as base for Treescape, a company specialising in landscaping, tree clearance and related activities. The property was gravelled over with a modern dwelling and a small shed and surrounded by a timber fence (Figure 14 and Figure 15). The shed was observed to have over-lapping horizontally placed weatherboards and a gabled roof. The concrete block structure to the north of the property likely enclosed mulch or other landscaping material. The area is a hazardous yard and those concerns along with land modifications having occurred, no physical surveying was undertaken. The eastern portion of Lot 1 DP52677 was a relatively flat densely grassed area, surrounded by an electric fence as its primary use for keeping livestock (Figure 16). A residential dwelling is situated in the northeast corner of the Lot and the house and curtilage was not inspected. The land immediately west of the house and Lot 1 DP72379 immediately to the north of the house was flat grassed land which was still heavily water laden following an intense storm event (Figure 17). Lot 1 DP 72379 contained a small waterway orientated north-south which continued into Lot 3 DP 77541 and also further to the north (Figure 18). No archaeological features were noted in this area.

9 McKean Road

The property comprised within 9 McKean Road, Lot 3 DP77541 is roughly an L shape with access from both Totara Road and McKean Road. Access to the land was via Totara Road through a neighbouring a residence at 3 Totara Road. At this time the resident of 3 Totara Road, Mark McKean, spoke with us regarding the history of the property. His grandfather (George McKean) owned the property for a number of years, with his father also having knowledge of the land. McKean informed us that hangi pits had been noted on the property, primarily in the western portion at various place along the coastline. McKean also noted that harrowing had also produced a quantity of kauri gum over the years. He noted that his grandfather grew vegetables in the portion of land immediately south of the house at 103 Totara Road. The land is now in grass with a small trough no longer in use (Figure 19). The eastern side of Lot 3 DP 77541 was relatively flat and was boggy following the heavy rain (Figure 19). The central portion of Lot 3 DP77541 was relatively flat in grass. Access to this portion was via a land bridge across the creek running from 105



Totara Road. To the north this Lot was bounded by a fence line with large pines separating 9 McKean from 101 Totara Road (Figure 19). The western portion however was hilly and sloped downwards towards the coast (Figure 20). The coastal marine area outside the southern end of 9 McKean Road was approximately 3 metres above the creek with steep to almost vertical faces on the bank. Further to the north an area formerly utilised as a jetty was located. Although now located within the coastal marine area, the features identified were the only ones encountered during the survey. A slope constructed in the manner of a ramp leading down into the Raruwaru Creek led to two areas of interest indicating that at least two jetties were constructed in this area over time. Remains of wooden piles and beams were noted immediately to the north of the ramp (Figure 21), with concrete piles running from the shoreline out towards the channel of the creek (Figure 22). The ramp had been overlain with gravel, likely to aid footing on a muddy slope. Portions of brickwork from a demolished structure were noted but are likely to have been dumped in the estuary from an unknown source.

A particularly boggy vegetated area on 9 McKean Road adjacent to Raruwaru Creek had drainage channels installed by 1940 (Figure 9) and over the decades the vegetation was reduced resulting in the area being solely in pasture today. There is however, still a small channel draining water from the elevated part of 9 McKean Road to the estuary running southwest to northwest. The land in this area is still particularly boggy (Figure 23).

101 Totara Road

October 2022

Situated at the northern end of the proposed development Lot 1 DP 170291 contained a residential house at the eastern side fronting Totara Road. The house and curtilage were not inspected. The central portion of the property, from the rear of the house to an area adjacent to the neighbouring horticulture structures was undulating grassland that was extremely wet from recent rainfall. A line of bamboo partly separated the central portion from the western portion and there were dilapidated sheds nearby (Figure 24). The western side sloped towards the creek to varying degrees (Figure 25), however the CMA was set steeply above the Creek. An old shed filled with plastic planter pots and other sundry items associated with horticultural pursuits was also noted in this area.



Figure 12. View from McKean Road looking north into Hick Bros civil yard showing flat metal yard, and timber fence





Figure 13. Looking north into the Hicks Bros yard showing the earth bunds to the west and north, and gravel base (left) and showing the placement of the portacom, eastern bund and machinery to the northeast (right)



Figure 14. Views north into the gravelled Treescape yard showing building to the west and large concrete blocks stacked at the north end



Figure 15. Small shed and storage area on the eastern side of the Treescape yard



Figure 16. View north of the easternmost portion of Lot 1 DP52677 bounded by McKean and Totara Roads





Figure 17. View west showing northern curtilage of Lot 1 DP52677 to the left and the flat grassed land within Lot 1 DP72379





Figure 18. View south along channelled waterway located on Lot 1 DP72379 (left) and view north along waterway passing over eastern side of Lot 3 DP77541 (right)



Figure 19. Looking west across Lot 3 DP77541 from Totara Road (left) and looking west across the middle portion of Lot 3 DP77541 towards Raruwaru Creek showing large pines on the boundary between 9 McKean Road and 101 Totara Road (right)





Figure 20. Looking south from higher elevation of 9 McKean Road towards the Raruwaru Creek showing pines bordering the creek edge (left) and looking northwards upslope from the southern portion of 9 McKean Road (right)



Figure 21. Photographs showing possible canoe/dinghy pull in area with some timber structural remains on the north side on the boat ramp area (top) and looking eastwards upslope from the gravelled boat ramp area towards 9 McKean Road (bottom)





Figure 22. Photographs showing concrete piles on the northern side (top) and concrete structures on the south side of the boat ramp (bottom)





Figure 23. Photograph showing drainage channel running SE-NW towards Raruwaru Creek



Figure 24. Photographs showing the bamboo fencing and dilapidated sheds separating the central and western portions of 101 Totara Road (left) and the collapsing corrugated iron shed containing various horticultural items (right)



Figure 25. Photographs taken standing along western fence line looking north showing the slope (left) and facing west from the higher elevation showing slope down towards the creek (right)



Test Pits

The information provided by Mark McKean focused our examinations on the western side of the property. Test pits were located within this half of the property in areas that had potential for occupation. Test pits were approximately 25cm by 25cm. The location of these test pits is shown in Figure 26. Images of individual test pits are seen in Figure 27- Figure 31. In order to locate culturally modified areas (and therefore of archaeological significance), several test pits were dug. Due to the focus on the coastline, test pits were systematically dug along the far western portion. In addition to this, the terraces and their slopes were comprehensively probed in order to determine whether subsurface archaeological remains existed. The locations of the test pits are displayed in Figure 26 with their coordinates presented in Table 2. It is important to note that there had been a significant amount of rain around the time of survey. Thus, there was a significant amount of surface and subsurface water on the property. This made finding suitable areas for test pitting difficult.

Probing and test pitting did not detect any subsurface archaeological remains, however with such a large area of land it is not unreasonable to be unable to locate such features through limited testing, especially where ploughing and other ground disturbance activities have occurred in the past.



Figure 26. Aerial plan showing the locations of test pits on western side of property





Figure 27. Location of Test Pit 1 (left) and stratigraphic profile of test pit 1, facing east (right)



Figure 28. Location of Test Pit 2 (left) and stratigraphic profile, facing west (right)





Figure 29. Location of Test Pit 3 (left) and stratigraphic profile facing northwest (right)



Figure 30. Profile of Test Pit 4





Figure 31. Profile of Test Pit 5

Table 2 Location of test pits and description of soil profiles

Test Pit No.	NZTM Coordin ates ±4m	Layer 1	Layer 2	Notes
1	1744401- 5928400	16cm of medium brown moderately loose loam	2cm of Orange compacted clay	This test pit was placed on a flat portion on top of a hill, in an area where probing indicated relatively dense
2	1744582- 5928484. 37	22cm of a medium brown moderately loose loam	3cm of light orange compacted clay	This test pit was situated on a hill however appeared to be in a heavier ploughed area
3	1744496- 5928585	20cm of a medium brown moderately loose loam, heavily rooted	4cm of a light orange compacted clay	This test pit was situated at top of a steep downward slope towards coast. Frequent modern rubbish TP area.
4	1744452- 5928571	11cm of medium brown moderately compacted loam, recently impacted by heavy waterflow	4cm of a light orange compacted clay	This test pit was located close to coastline on the far east of the property.
5	1744532- 5928626	40cm of dark brown, heavily compacted clay, waterlogged	2cm of an orange compacted clay	This test pit was situated at the flat base of hill.



DISCUSSION AND CONCLUSIONS

Summary of Results

Historic research has indicated that there may have been some utilisation of the land by Europeans for tree felling, gum digging, and farming prior to 1900 although it could not be concluded that permanent settlement occurred on the land prior to 1907.

Discussions with a family member of a former owner suggest there is evidence of Māori occupation on the western portion of the property in the form of hangi pits that were uncovered during farming practices over a period of many years. Although, past activities would have damaged archaeological remains, it is considered likely that subsurface evidence may still be present on the western side of the property.

Māori Cultural Values

This is an assessment of archaeological values and does not include an assessment of effects on Māori cultural values. Such assessments should only be made by the tangata whenua. Māori cultural concerns may encompass a wider range of values than those associated with archaeological sites.

The historical association of the general area with the tangata whenua is evident from the recorded sites, traditional histories and known Māori place names.

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 Māori, 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 and traditional values.



Effects of the Proposal

Based on the findings of this assessment the proposed activity will have no known effects on archaeological values as no archaeological sites have been previously recorded within the Project Area. However, in any area where archaeological sites have been recorded in the general vicinity it is possible that unrecorded subsurface remains may be exposed during development. In this case it is considered likely that unrecorded subsurface archaeological sites relating to Māori settlement will be exposed during development in the western part of the Project Area, which borders Raruwaru Creek. This is based on background research and information provided by a local resident, whose family formerly owned the land in the Project Area. It should be noted that detailed earthworks plans have not been prepared, however as can be seen in the preliminary plan in Figure 32 earthworks are planned in the western part of the Project Area (apart from the Esplanade Reserve along Raruwaru Creek) and would impact on any archaeological remains located there.

If unidentified archaeological remains are exposed during development, they are unlikely to be extensive due to damage from previous activities. The potential adverse effects are therefore considered to be minor and could be appropriately mitigated through archaeological monitoring and the recovery of archaeological information relating to the history of the area. As detailed earthworks plans are yet to be prepared, this report will require updating once they do become available and the specific area to be monitored by an archaeologist will also be provided based on the earthworks plans.

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 Māori and early European origin or human burials.

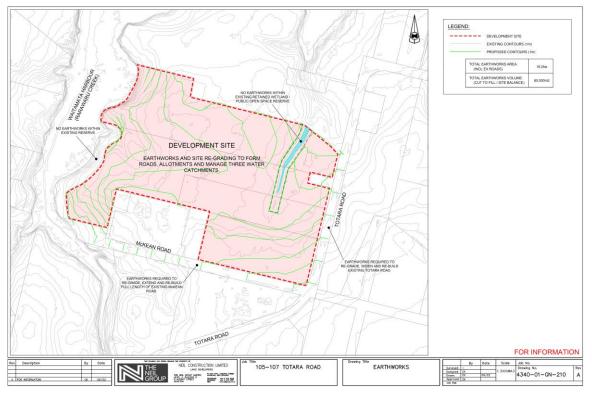


Figure 32. Preliminary earthworks plan for the proposed residential subdivision with area (source: The Neil Group)



Covid-19 Recovery (Fast-track Consenting) Act 2020

The purpose of this Act is to urgently promote employment to support New Zealand's recovery from the economic and social impacts of COVID-19 and to support the certainty of ongoing investment across New Zealand, while continuing to promote the sustainable management of natural and physical resources. The Act requires engagement with parties who have an interest in an area where works are to be undertaken. Section 5(3) (b) states that the purpose of the engagement includes identification of any wāhi tapu sites that would exclude an activity in that place from being a permitted activity and 5(3)(c) to identify any site that requires a management plan.

Section 5(4) states that a wāhi tapu or other site of cultural significance need not be identified as such in the relevant plan or proposed plan and may for example, be recorded in the New Zealand Archaeological Association's site recording scheme; or recorded in a list maintained under section 65 or 81 of the Heritage New Zealand Pouhere Taonga Act 2014.

A resource consent granted under this Act has the same force and effect for its duration, and according to its terms and conditions, as if it were granted under the Resource Management Act 1991. The Act does not remove the requirement to obtain an Authority under the HNZPTA to modify an archaeological site.

This assessment has established that the proposed activity will not affect any known archaeological remains but has the potential to affect unidentified subsurface archaeological remains that may be exposed during development. If resource consent is granted, conditions would be recommended requiring archaeological monitoring of surface stripping in selected areas (with locations to be confirmed once detailed earthworks plans are available) in the western part of the Project Area. It is also recommended that an advice note regarding the provisions of the HNZPTA is included, as an Authority under that Act will be required for any modification and investigation of archaeological remains.

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)'

Under Section 42(3) an Authority is not required to permit work on a pre-1900 building unless the building is to be demolished.

Under Section 43(1) a place post-dating 1900 (including the site of a wreck that occurred after 1900) that could provide 'significant evidence relating to the historical and cultural heritage of New Zealand' can be declared by Heritage NZ to be an archaeological site.

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 Māori 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 Māori 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.

While no known archaeological sites will be affected by the proposed works, it is considered likely that unidentified subsurface archaeological remains may be exposed during development, especially in the western part of the Project Area. To avoid any delays should unidentified subsurface features be exposed by the proposed works, consideration could be given to applying for an Authority under Section 44(a) of the HNZPTA to cover all works undertaken for this project, as a precaution. This should be obtained before any earthworks are carried out. The conditions of the Authority are likely to include archaeological evidence before it is modified or destroyed. This approach would have the advantage of allowing any archaeology uncovered during the development of the property to be dealt with immediately, avoiding delays while an Authority is applied for and processed.

Conclusions

Historical research indicates some occupation of the property by Europeans prior to 1900 but it cannot be confirmed if permanent European settlement of the land occurred before 1907. Personal communications with a family member of a former owner indicates there are likely to be archaeological remains relating to pre-European Māori occupation present, especially in the western part of the Project Area in the vicinity of Raruwaru Creek and also possibly some distance inland. While the archaeological survey for this assessment did not locate any archaeological features, there are areas of the property which would have been suitable for some level of occupation by Māori.

The proposed development will have no known effects on archaeological values, as no archaeological sites have been identified within the Project Area, however there is some potential for unidentified subsurface remains to be exposed during development. Based on the previous impacts to the Project Area from land clearance, gum digging and many decades of farming, if unidentified archaeological remains are exposed during development, they are unlikely to be extensive due to damage from these previous activities. The potential adverse effects are therefore considered to be minor and could be appropriately mitigated through archaeological monitoring and the recovery of archaeological information relating to the history of the area. As detailed plans have not been prepared this report will need to be updated once these are available.



RECOMMENDATIONS

- There should be no major constraints on development on archaeological grounds, as no known sites will be affected, and the possibility that archaeological remains may be present can be mitigated through the provisions of the HNZPTA.
- As unrecorded subsurface archaeological features and deposits associated with Māori occupation and settlement are likely to be present, mitigation in the form of archaeological monitoring is likely to be recommended under authority from Heritage NZ.
- If no authority has been obtained and 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).
- Since archaeological survey cannot always detect sites of traditional significance to Māori, such as wahi tapu, the tangata whenua should be consulted regarding the possible existence of such sites on the property.



BIBLIOGRAPHY

- Auckland Council Cultural Heritage Inventory, accessed at <u>http://maps.aucklandcouncil.govt.nz</u> and <u>https://chi.org.nz</u>.
- Clough, R. E, and Prince, D. 1999. Waiarohia Structure Plan Area: Archaeological Assessment. Clough & Associates report prepared for Waitakere City Council.
- Clough, R. and V. Tanner. 2004. Northern Region Strategic Development: Heritage Assessment. Clough & Associates report prepared for Waitakere City Council.
- Clough & Associates Ltd and Matthews & Matthews Architects Ltd. 2016. Whenuapai Structure Plan Area: Preliminary Historic Heritage Assessment. Report prepared for Auckland Council.
- Foster, R. 2006. 2-4 Sinton Road: preliminary archaeological report on demolition. Russell Foster and Associates report to Transit New Zealand.
- Foster, R. 2007. Archaeological investigations, at the purported site of Sinton's house and store (R11//2000): preliminary report. Russell Foster & Associates report to Transit New Zealand.
- Foster, R. and M. Felgate. 2011. Archaeological Investigation of the Field Cottage and Ockleston House, Hobsonville. Historic Places Act 1993 Authority 2005/22. Prepared for New Zealand Transport Authority and New Zealand Historic Places Trust.
- Hahn, M. 2007 "God Willing and Weather Permitting" The Upper Waitemata Harbour. Waitakere.
- Hayward, B.W. and J.T. Diamond 1978. Historic Archaeological Sites of the Waitakere Ranges, West Auckland, New Zealand. Auckland Regional Authority.
- Hayward, B.W. and J.T. Diamond 1978. Prehistoric Archaeological Sites of the Waitakere Ranges and West Auckland, New Zealand. Auckland Regional Authority.
- Heritage NZ. 2019. Writing Archaeological Assessments. Archaeological Guidelines Series No. 2.
- Heritage NZ. 2018. Investigation and Recording of Buildings and Standing Structures. Archaeological Guidelines Series No. 1.
- Ingersoll, G. n.d. Whenuapai Past and Present.
- Judge, C. 2011. Proposed Pumping Station, Brighams Creek Road, Whenuapai: Archaeological Assessment. Clough & Associates report prepared for Watercare Services Ltd.
- Kelly, J. and J. Surridge. 1990. Map of the Tamaki Isthmus with Māori Place Names Redrawn from Tamaki Makau-Rau by Leslie Kelly. Department of Geography, Auckland University.
- Low, J. and A. Apfel. 2021. 94 Trig Road, Whenuapai: Preliminary Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- Low, J, A. Apfel and R. Clough. 2021. 98-100 and 102-102A Totara Road, Whenuapai: Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- Low, J. and R. Clough. September 2018. 150-152 Brigham Creek Road and 2-18 Kauri Road, Whenuapai, Auckland: Archaeological Assessment.
- Low, J. and R. Clough. March 2019a. 69 Trig Road, Whenuapai, Auckland: Preliminary Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- Low, J. and R. Clough. 2019b. 149-151 Trig Road, Whenuapai, Auckland: Preliminary Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- Low, J. and R. Clough. 2022. 73 Trig Road, Whenuapai: Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- Low. J, J. Grant and R. Clough. 2020. 71 Trig Road, Whenuapai, Auckland: Preliminary Archaeological Assessment. Clough & Associates report prepared for Neil Construction Ltd.
- McKean, Mark. Personal Communication. 8 September 2022.
- Macready, S. and R. Clough. December 2008. Draft Hobsonville Airbase: Heritage Landscape Assessment. Clough & Associates report prepared for the Hobsonville Land Company



- Ministry of Defence (2004). WHENUAPAI AIRBASE Consultation, Future Use Options & Disposal Processes Report to The Minister of Defence May 2004. Accessed at: http://www.nzdf.mil.nz/downloads/pdf/whenuapai/report-on-whenuapai-airbase-consultation.pdf
- Morris, M. 1995. Horses and Flying Fortresses. Auckland.
- Murdoch, G. 1990. Nga Tohu o Waitakere. The Māori Place Names of the Waitakere River Valley and its Environs: The Background History and an Explanation of their Meaning. In Northcote-Bade 1990: 9-32.
- New Zealand Archaeological Association ArchSite Database, accessed at http://www.archsite.org nz.
- New Zealand Heritage List, accessed at http://www.historic.org.nz.
- North, L.V. 2000. Up the River: Stories of the Settlers of Hobsonville.
- Phear, S. and R. Clough. 2010. Proposed Kumeu-Huapai-Riverhead Wastewater Pipeline, Pumping Station and Rising Main: Archaeological Assessment. Clough & Associates report prepared for Rodney District Council.
- Shakles, R., S. Phear and R. Clough. 2010. Whenuapai Development Area Stage 2: Heritage & Archaeological Assessment. Clough & Associates report prepared for Waitakere City Council.
- Shakles, R., J. Low and R. Clough. 2014. Proposed Residential Subdivision on land off 34-42 Brigham Creek Road and 2-8 Dale Road, Whenuapai, Auckland: Archaeological Assessment. Clough & Associates report prepared for Harrison Grierson Consultants on behalf of Oyster Capital Ltd.
- Simmons, D. 1987. Māori Auckland including the Māori Place Names of Auckland collected by George Graham. Auckland: The Bush Press.
- Sullivan, J., R. Ewing and S. Ell. 2009. Whites Aviation Classic New Zealand aerial photography. Auckland: Random House.
- Stewart, D. 1997. Background report on the Cultural Heritage Significance of Items Proposed for Scheduling on the District Scheme: The Proposed Waitakere City District Plan Heritage Appendix.
- Te Kawerau a Maki, 2006. Integrated Catchment Management Plans Waiarohia Stream, Totara Creek, Hobsonville Peninsula, New Lynn East.
- Turton, H.H. 1877. Māori Deeds of Land Purchases in the North Island of New Zealand: Volume 1. Accessed at www nzetc.org/tm/scholarly/tei-Tur01Nort-t1-g1-g1-g1-g6.html

Auckland Star, 30 January 1908, 4 June 1937; 2 August 1937 New Zealand Herald, 17 April 1888; 5 October 1920 New Zealander, 2 November 1850