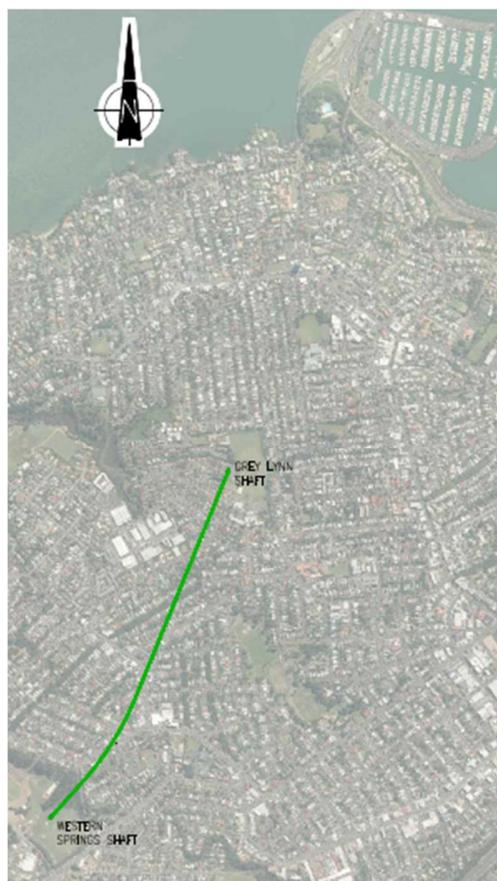


GREY LYNN TUNNEL: ARCHAEOLOGICAL AND HISTORIC HERITAGE ASSESSMENT

Prepared for Watercare Services Ltd



February 2019

By

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TABLE OF CONTENTS

1. Executive Summary	1
Recommendations	1
2. Introduction.....	3
Project Overview	3
Assessment Methodology	5
3. Historical Background.....	8
Maori Settlement.....	8
European Settlement	10
4. Archaeological Background.....	24
Information from Early Aerials.....	33
5. Field Assessment.....	36
Western Springs.....	36
Tawariki Street.....	36
6. Discussion and Conclusions.....	43
Summary of Results	43
Maori Cultural Values	43
Survey Limitations	43
Archaeological Value and Significance.....	43
Effects of the Proposal	44
Resource Management Act 1991 Requirements	44
Heritage New Zealand Pouhere Taonga Act 2014 Requirements	45
Conclusions	46
7. Recommendations	47
Bibliography.....	48

1. EXECUTIVE SUMMARY

Watercare Services Ltd is proposing to construct a wastewater interceptor from Tawariki Street in Grey Lynn to Western Springs, Auckland. Known as the Grey Lynn Tunnel (GLT) Project this wastewater interceptor will connect to the Central Interceptor (CI) at Western Springs and increase the capacity of the metropolitan wastewater network. The proposed tunnel is approximately 1.6km in length with 4.5m internal diameter, at an approximate depth ranging between 20 and 60m below ground level. It will involve a mixture of both deep and shallow underground construction, utilising the Central Interceptor shaft at May Road and a two new shafts and associated works at Tawariki Street (which will require the removal of three dwellings between 44 and 48 Tawariki Street). Tunnelling will be undertaken by Tunnel Boring Machine (TBM).

No archaeological or other historic heritage sites were identified within the Western Springs Reserve during the archaeological assessment for the Central Interceptor or during this field survey. It was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the playing fields and the swampy nature of the landscape in this area.

Similarly, no known archaeological or other historic heritage sites are located near the proposed works on Tawariki Street. No historically recorded activities were identified in the area from the background research and field survey. It was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the residential subdivision and college playing fields.

This assessment has established that the proposed activity will have no effect on any known archaeological remains, and has little potential to affect unrecorded subsurface remains.

If suspected archaeological remains are exposed during development works, the Accidental Discovery Rule (E12.6.1) set out in the (Auckland Unitary Plan – Operative in Part (AUP OP) 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.

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.

Recommendations

- There should be no constraints on the proposed Grey Lynn Tunnel on archaeological and other historic heritage grounds, since no archaeological or other historic heritage sites are known to be present and it is considered unlikely that any will be exposed during development.
- If subsurface archaeological evidence should be unearthed during construction (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 Maori, such as wahi tapu, the tangata whenua should be consulted regarding the possible existence of such sites in the project area.

2. INTRODUCTION

Watercare Services Ltd (Watercare) is the water and wastewater service provider for Auckland. Watercare is proposing to construct a wastewater interceptor from Tawariki Street, Grey Lynn to Western Springs Reserve in Auckland ('Grey Lynn Tunnel') (Figure 1 and Figure 2). The GLT will connect to the Central Interceptor at Western Springs and increase the capacity of the metropolitan wastewater network.

This report and assessment is submitted to accompany an application for resource consents and a notice of requirement by Watercare for the construction, operation and maintenance of the GLT. It also identifies any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). The specialist area of this report is to assess the potential effects of the proposed activity on historic heritage and archaeological values, and the significance of those effects.

This report does not include an assessment of Maori cultural values. Such assessments should be made by the mana whenua. Maori cultural concerns encompass a wider range of values than those associated with archaeological sites. Consultation with mana whenua is ongoing throughout this Project.

Project Overview

The GLT involves the following elements (described in more fully in the Assessment of Environmental Effects) and as shown in the following drawing and outlined in the reports which form part of the application:

Grey Lynn Tunnel

- a) The GLT involves construction, operation and maintenance of a 1.6km gravity tunnel from Western Springs to Tawariki Street, Grey Lynn with a 4.5m internal diameter, at an approximate depth of between 15 to 62m below ground surface, depending on local topography. The tunnel will be constructed northwards from Western Springs using a Tunnel Boring Machine ("TBM"). The Grey Lynn Tunnel will connect to the Central Interceptor at Western Springs via the Western Springs shaft site.

Tawariki Street Shaft Site

- a) The GLT also involves construction, operation and maintenance of two shafts and associated structures at Tawariki Street, Grey Lynn ("Tawariki Street Shaft Site").

The Tawariki Street Shaft Site will be located at 44-48 Tawariki Street where the majority of the construction works will take place. Construction works will also take place within the road reserve at the eastern end of Tawariki Street and a small area of school land (St Paul's College) bordering the end of Tawariki Street (approximately 150m²).

The Tawariki Street Shaft Site will involve the following components:

Main Shaft

- A 25m deep shaft, with an internal diameter of approximately 10.8m, to drop flow from the existing sewers into the Grey Lynn Tunnel;

- Diversion of the Tawariki Local Sewer to a chamber to the north of the shaft. This chamber will be approximately 12m long, 5m wide and 5m deep below ground, and will connect to the shaft via a trenched sewer;
- Diversion of the Orakei Main Sewer to a chamber to the south of the shaft. This chamber will be approximately 10m long, 5m wide and 11m deep below ground;
- Construction of a stub pipe on the western edge of the shaft to enable future connections (that are not part of this proposal) from the CSO network;
- Construction of a grit trap within the property at 48 Tawariki St to replace the existing grit trap located within the Tawariki Street road reserve. The replacement grit trap will be approximately 16m long, 5m wide and 13m deep below ground;
- Permanent retaining of the bank at the end of Tawariki Street to enable the construction of the chamber for the Orakei Main Sewer. The area of the bank requiring retaining will be approximately 44m long, 3m wide and 2m high; and
- An above ground plant and ventilation building that is approximately 14m long, 6m wide and 4m high. An air vent in a form of a stack will be incorporated into the plant and ventilation building and discharge air vertically via a roof vent. The vent stack will be designed with a flange to allow future extension of up to 8m in total height and approximately 1m in diameter in the unexpected event of odour issues.

Tawariki Connection Sewer Shaft – Secondary Shaft

A secondary shaft will be constructed at the Tawariki Street Shaft Site to enable the connection of future sewers (that are not part of this proposal) from the Combined Sewers Overflows ("CSO") network. This will involve the following components:

- A 25m deep drop shaft with an internal diameter of approximately 10.2m; and
- A sewer pipe constructed by pipe-jacking to connect the secondary shaft to the main shaft.

The Grey Lynn Tunnel represents a key component for the upgrading and reorganisation of Auckland's metropolitan wastewater network, as it will:

- a) increase the capacity of the metropolitan wastewater network, thereby supporting the intensification of the Auckland urban area;
- b) assist in reducing the frequency of storm-related overflow events from the combined wastewater / stormwater network;
- c) improve network reliability and enable future upgrades and improvements to the network.

Assessment Methodology

The New Zealand Archaeological Association's (NZAA) site record database (ArchSite), Auckland Council's Cultural Heritage Inventory (CHI), AUP OP and the Heritage New Zealand Pouhere Taonga (Heritage NZ) New Zealand Heritage List/Rārangī Kōrero were searched to determine whether any archaeological or other historic heritage sites had been recorded on or in the immediate vicinity of the Project area. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early survey plans and aerial photographs were checked for information relating to past use of the property. Archival research was carried out to establish the history of the Project area.

A visual inspection of the Project area was conducted on 3 July and 1 August 2018. 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 remains). Exposed and disturbed soils were examined where encountered for evidence of earlier modification, and an understanding of the local stratigraphy. Subsurface testing with a probe and spade was carried out within Western Springs Reserve to determine whether buried archaeological deposits could be identified or establish the nature of possible archaeological features. Photographs were taken to record the topography and features of interest/the area and its immediate surrounds.

Archaeological sites beneath modern buildings and sealed surfaces in urban environments can rarely be identified prior to being exposed during site works. Therefore, the approach to archaeological assessment is to identify historically recorded activities on the site and assess the potential for archaeological evidence to have survived on the basis of later modifications to the site.

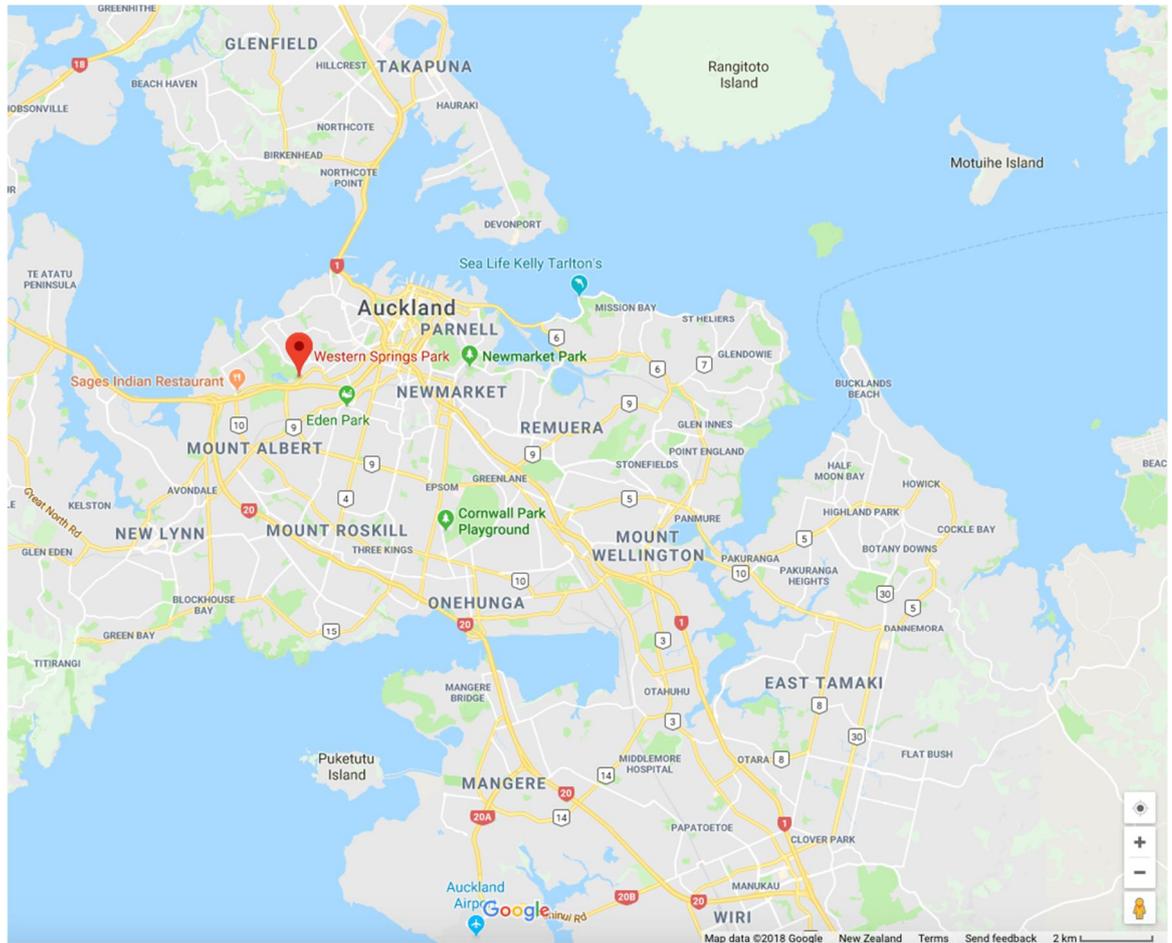


Figure 1. The location of suburbs Western Springs and Grey Lynn indicated by the red marker (Google Maps 2018)

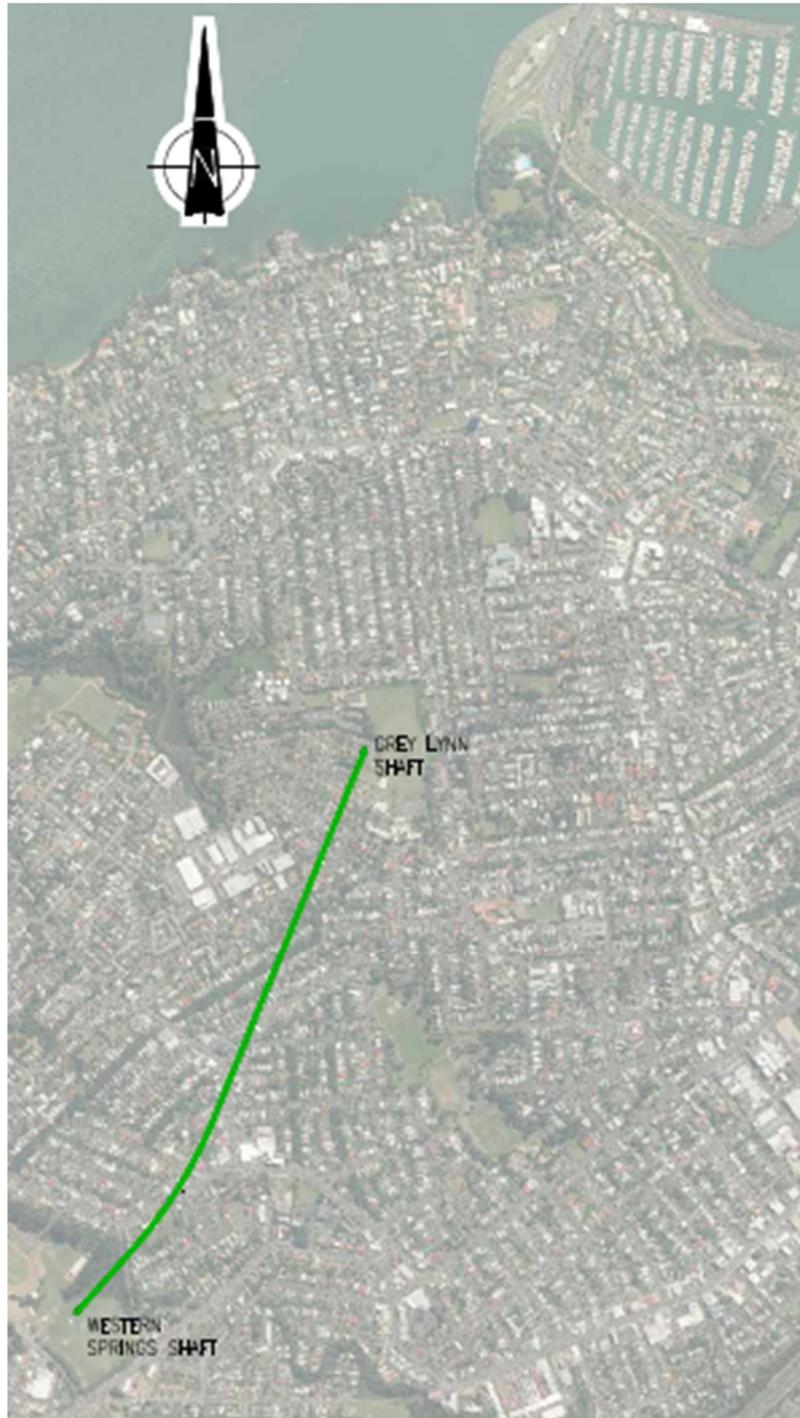


Figure 2. Grey Lynn Tunnel (source: Watercare)

3. HISTORICAL BACKGROUND

Maori Settlement

While 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 mana whenua.

Auckland and the upper Waitemata Harbour has a long history of traditional associations with Maori, depicted in the complex traditional record relating to the region that reflects the migrations, conquests and occupations that have taken place in this area over centuries.

The Maori name for the Auckland Isthmus (the ‘Isthmus’) was Tamaki-makau-rau, ‘The bride sought by a hundred suitors’. It was also often described as ‘Tamaki Herenga Waka’ or the resting place of many waka – a reference to the layers of tribal associations with the Auckland area. Many tribes descended from ancestral waka, including Te Arawa, Mataatua, Aotea, Tainui and Mahuhu, have flourished in Tāmaki as the volcanic soils provided rich material for gardening across the Isthmus.

The land within Tamaki-makau-rau was highly valued and many battles were fought for supremacy. The isthmus had many settlement sites, including fortified Pa, supporting one of the most concentrated Maori populations in New Zealand. The short distance between the east and west coast was also attractive as resources could be obtained easily from both. There are no fewer than eight waka portages between Waitemata and the Manukau.

The Waitemata and Manukau Harbours contained extensive shellfish beds, fisheries and birds, while the fertile soils of the volcanic fields were excellent for growing crops. The harbours, with their various portages, were the centre of an extensive water-based transport network and were rich in marine resources. Maori had their food production organised into gardening and fishing circuits and there were many fishing stations supported by gardens throughout the Isthmus.

Through the leadership of Hua Kaiwaka in the 16th century, the various tribes of the Isthmus were united under the confederation known as Te Waiohua. The Hauraki confederation of tribes also had periodic incursions into the isthmus as well as fishing camps in the Waitemata. The Te Taou hapu of Ngati Whatua, domiciled in the north-west, attacked Te Waiohua and killed their chief Kiwi Tamaki in the mid-17th century, eventually settling in the central isthmus (Blair Jun 2013: 4). From this battle came a new people through the Ngaoho line. Remnants of Waiohua returned gradually from hiding to join Ngaoho.

Ngati Whatua was not to have an easy time following the collapse of Waiohua ascendancy in Tamaki. There were conflicts with Ngati Paoa who had fortified villages on the Tamaki River and an increasing presence of Europeans. By 1820 Te Tou were back at Kaipara and only the Ngaoho, with Apihai Te Kawau as chief and based at Mangere, remained on the isthmus with Ngati Paoa and possibly others.

From the 1820s, when the acquisition of muskets sparked tribal warfare, Maori settlements in Tamaki-makau-rau were deserted, and Maori did not return to the area until the 1830s. Close to the bush and western ranges Apihai and a number of his people stayed along with Ruka Taurua of Te Taou, and some Ngati Tahinga from the Waikato,

at Te Rehu beside the mangrove estuary of Waioteao (Motions Creek). During nearly two years according to evidence given in 1868 at the Native Land Court hearing, Te Rehu was their main settlement in the 1820s (Hiyama 1991:3-4).

In March 1840 Ngati Whatua chief Apihai Te Kawau signed the Treaty of Waitangi and invited Governor Hobson to found a settlement in Auckland. With the loss of land in 1840 and the outbreak of war in the 1860s Maori no longer traditionally occupied the Grey Lynn – Western Springs area.

Cox's Bay (Ōpoutūkeha) -

Opoutukeha or Opou (Cox's Bay) is named after the ancestor Poutukeha. The creek (Cox's Creek) is an ancient boundary line between Ngati Huarere and Ngati Pou (AUPOP schedule). Ngati Huarere (Huarere being Tamatekapua's grandson) are the source of the Arawa descent lines for the Maori of Tamaki (Hiyama 1991:2). The soil and north-facing slopes above Opou were cultivated for kumara (Simmons 1987). The traditional name Tuki-tuki-muka is also associated with Cox's Bay, which relates to the customary harvest and preparation of flax for the making of garments and lashings (Figure 3).

Western Springs (Te Waiorea) -

Western Springs and the creek that drains it are known to Maori as Te Waiorea for the long-finned eels (orea) that lived in the clear waters of the springs. Next to Waiorea is Te Rehu, the historic settlement of Te Taou, Ngaoho and Te Uringutu, along with their Tainui relations, Ngati Tahinga. In the 1820s these tribes stayed here under the chiefs Apihai Te Kawau and Ruku Taurua (Hiyama 1991). Te Rehu is usually cited as being beside the estuary where the creek from Waiorea meets the waters of the Waitemata (which according to Stone (2001) carried the name of Te Rehu), but gardens, waka routes, fishing and shellfish-gathering sites, mahinga kai, food preparation sites and the like would have extended out beyond this. Waioteao or Motion's Creek drains to Waiorea and thence to the sea beside Titokaroa (Meola Reef) (Figure 3).

David Simmons records that Kawharu, a warrior raised on the Manukau, led an attack from the north on the people of Tamaki in 1680. Kawharu came close to Waiorea at some point on the campaign and Nga Kauaewhati, 'the broken jaw bones', places a battle of this time overlooking Waiorea. Back along the ridge where Surrey Crescent runs today is Te Raeokawharu, 'Kawharu's brow', marking a spot where the invading chief rested, and hence tapu for nearly 200 years (Hiyama 1991:2).

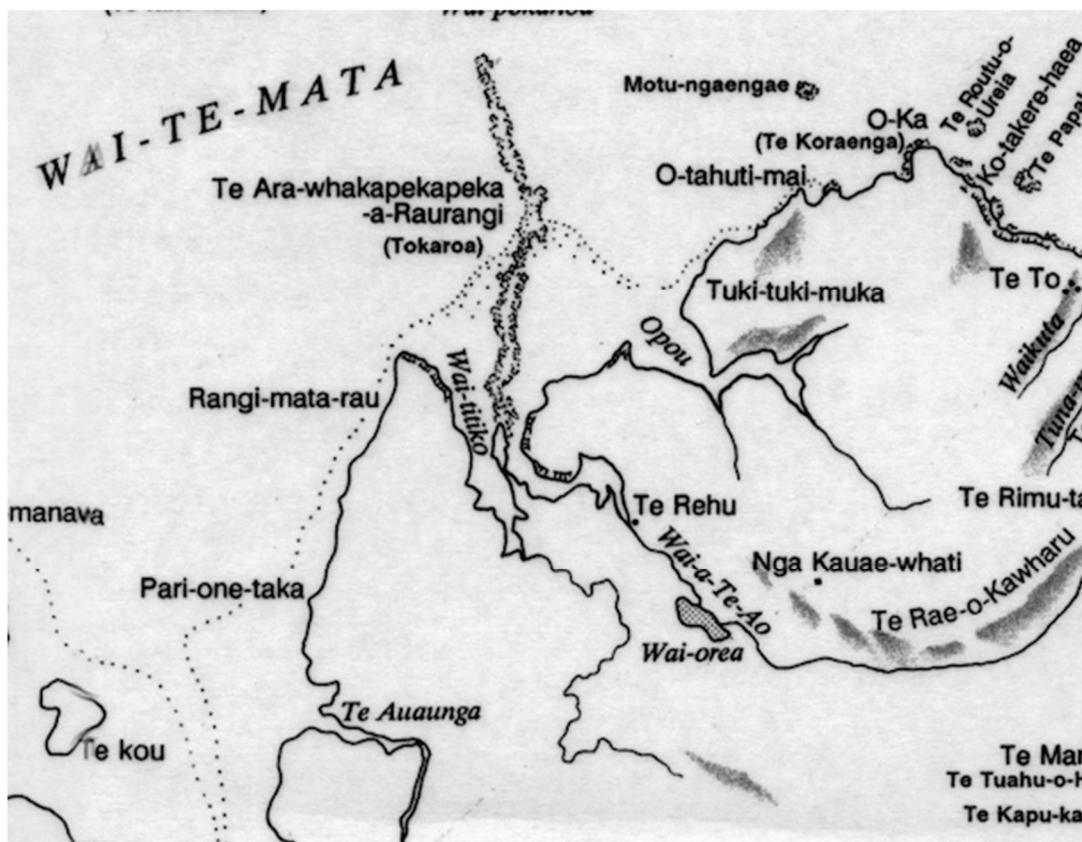


Figure 3. Detail of ‘Map of the Tamaki Isthmus with Maori place names’ showing the Grey Lynn – Westmere – Western Springs area (from Kelly and SurrIDGE 1990, Map of Tamaki-Makau-Rau)

European Settlement

Western Springs and Grey Lynn were part of the Mataherehare, Opou and Whau Block (1840) and the large Waitemata to Manuka Block (1841) acquired by Governor Hobson from Apihai Te Kawau and Ngati Whatua, being the first Crown ‘purchases’ in Auckland. The new town of Auckland was established in 1841 and the Crown was offering Crown Grants for sale in the mid-1840s. From June of 1844, the ‘suburban lands’ in Sections 8 and 9 of the County of Eden, which included Grey Lynn, Westmere and Western Springs began to be publicly auctioned. The lots were often in lieu of land ‘bought’ before 1840 and since reclaimed by the Crown, or ‘allowed for credit transferred’ (Hiyama 1991:7-8). Potential purchasers were advised to use water transport to arrive at Cox’s Creek for viewing, due to the difficulty of land access (McEvoy 2015:12).

Allotments in Grey Lynn and Westmere areas were largely purchased by speculators, hoping for a quick profit and properties were quickly on-sold, sometime repeatedly. The Project area within the Western Springs sports fields was originally part of Allotment 14 of Section 9 - Suburbs of Auckland (Figure 4), and Tawariki Road was part of Allotment 28 Section 8 - Suburbs of Auckland.

Western Springs

A notable exception of early land speculation and on-selling was at Western Springs where William Motion, in business with Joseph Low, purchased several allotments on which he grew wheat that was processed by his mill (which was built in 1845-46 in what is now Old Mill Road (Figure 4). The mill used Waiatea (Motions Creek) to transport wheat and flour to and from the mill.¹ Previously the firm of Low and Motion had operated a flour mill where Carlaw Park was located on Stanley Street above Mechanics Bay, but restricted water supply necessitated a move outside the city boundaries.

Prior to 1874 the Auckland settlement was largely supplied with water from a spring in Auckland Domain (Duck Ponds) to standpipes in the town. By the 1850s shortage of supply and contamination of wells by sewage and other waste seeping into the water table led to water-borne diseases and occasional epidemics. Pressure for a new reticulated water supply in 1874 led eventually to Council voting to proceed with a steam pumping scheme based at Western Springs, which at that time was located well outside the city, where there was a series of uncontaminated natural springs fed by an underground water supply. These springs seem to have been known as the Western Springs from the earliest days of European settlement (Pearson Apr 2000:25).

Auckland City Council purchased 152 acres of the Motion's property to establish the Western Springs pumping station. The area purchased is shown in Figure 5 – Allotments 12, 13, 14 and 17 as well as 18A on the northwestern side of Old Mill Road. Design and construction began immediately and in July 1877 the Western Springs Waterworks were commissioned (Figure 6). Auckland now had a permanent reticulated supply of good quality water that was designed to meet the needs of the city until the turn of the 20th century (Murdoch n.d.). Part of this system is illustrated on an early plan entitled 'Auckland west showing pipe lines from Western Springs to reservoir in Ponsonby Road' dating to the 1880s (Figure 7).

As well as the pumping station a 6-acre reservoir or impound pond (the main Western Springs lake) was created in the swampy ground to the west of the pumping station. The lake was 6ft deep and was designed to hold some 22 million gallons (100 million litres). This required the construction of an embankment around the lake some 12m wide at the base and 3m wide at its top (Foster 2012:3).

After the collapse of the Otago Goldfields in the mid-1860s many Chinese workers moved to the warmer Auckland area. Some of the largest expanses of early European gardens were located in the Grey Lynn, Arch Hill and Western Springs area. The soils were fertile and natural spring waters presented an ideal location for vegetable gardens. Industrious Chinese created extensive market gardens either side of Great North Road below the Surrey Crescent ridge and over the Western Springs plateau. Over time the Great North Road hill became known as 'Chinaman's Hill' (McEvoy 2015:21).

By the end of the 19th century Auckland had outgrown the Western Springs water supply and reservoirs were constructed in the Waitakere Ranges that provided gravity supply to Auckland. Without the need for the water supply from Western Springs the land became redundant. It was unsuitable for housing development and, apart from some commercial gardening along the Great North Road, the land became overgrown and was used as an illegal rubbish tip. In 1922 Council decided to allocate 40 acres to be a zoo for the city and allocated £10,000 for its development (Bush 1971:279). The remainder of the area

¹ Hiyama (1991) places the mill "near where the Zoo's (old) elephant house is now located

remained in its derelict condition, apart from a camping ground on the corner of Great North Road and Motions Road.²

From 1927 the unemployed were put to work on public relief schemes around New Zealand at pay rates sufficiently low as to not attract men from other work they could find. The City Council saw the potential for Western Springs for facilities besides the zoo, and the use of unemployed labour was ideal for the plans it had in mind. In 1929 40 to 50 men were employed to drain and level 12 acres for the Western Springs Stadium, with a running and cycling track, and another 10 acres of outer playing fields (Figure 8) (Hiyama 1991:84). It was reported that,

‘It will be necessary to move 30,000 cubic yards of topsoil, rock and clay, and the job, together with what is needed at the stadium, will provide six months’ labouring work for 40 men. The cost is put down at £8800 ...’.³

In the early 1960s the City Council cleared and landscaped the lake and started to develop the modern Western Springs Reserve around it.



Figure 4. Detail from survey plan SO 677 (May 1845) showing the location of ‘Low & Motion Mill’ and ‘Landing Place’ (red arrow) immediately to the north of Old Mill Road and Allot 14 (blue arrow)

² The camp was used as a transit camp for the American military during WWII

³ *New Zealand Herald* Vol LXVI, Issue 20358, 12 Sep 1929.

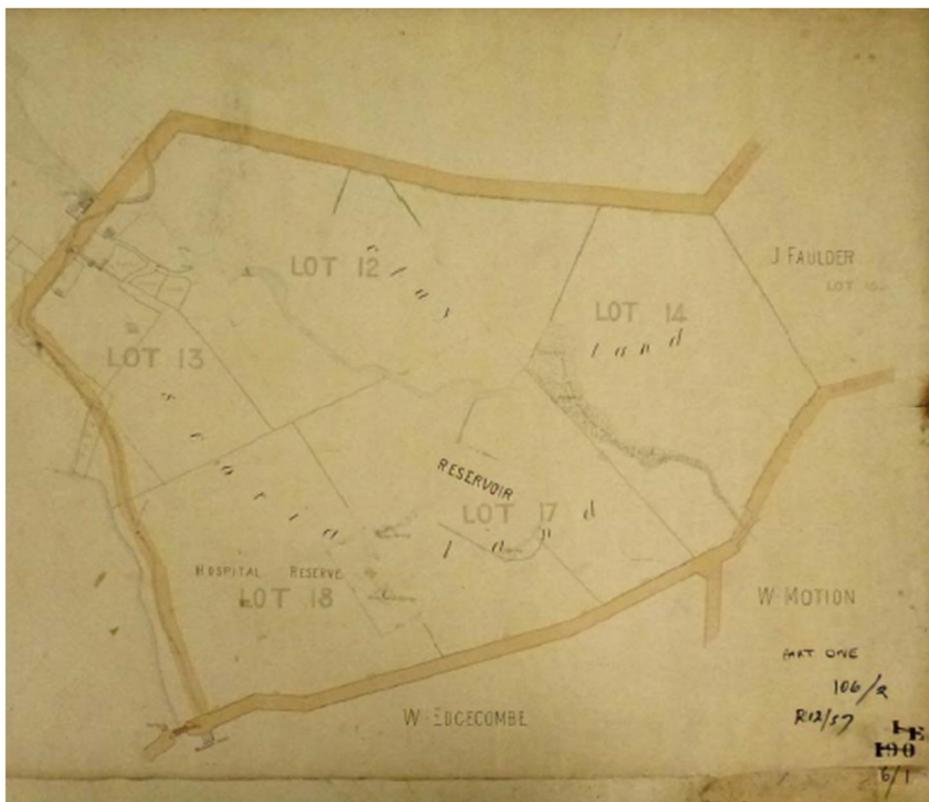


Figure 5. Detail from survey plan of Lots 12, 13, 14 and 18, Western Springs (by H. N. Warner, April 1876, Auckland Council Archives)



Figure 6. Looking south in the vicinity of the top of the Bullock Track showing the Western Springs pumping station and the surrounding farmland in 1898. The Western Springs Stadium of today would be to the right of the photograph, and the playing fields in the foreground (Sir George Grey Special Collections, Auckland Libraries, 7-A11122)

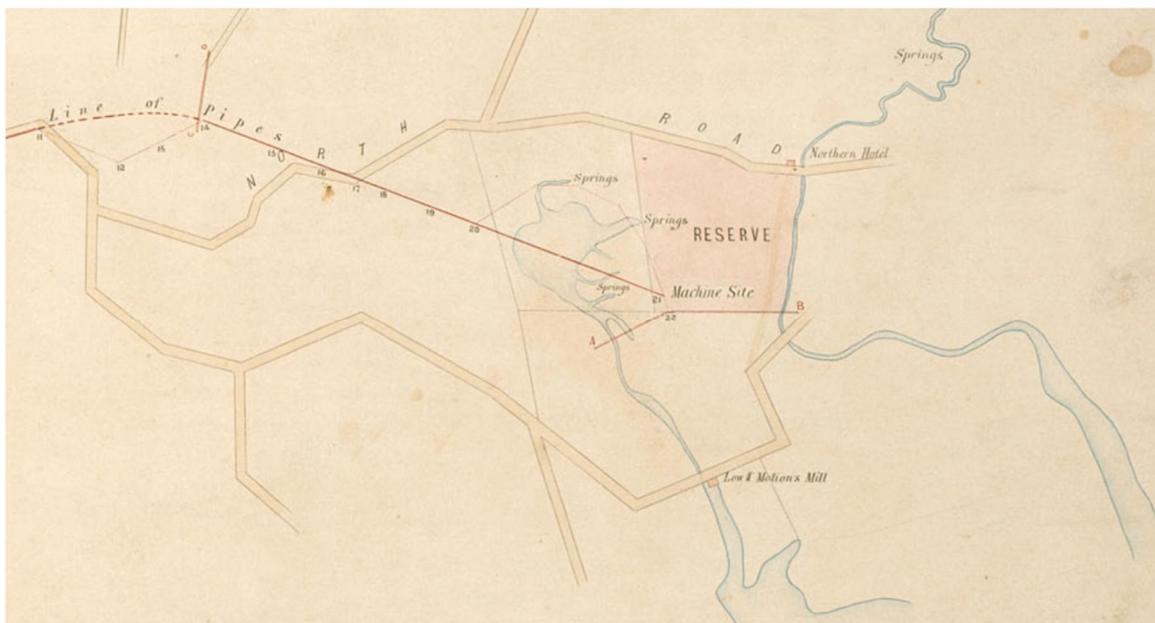


Figure 7. Detail from an 1880s map - 'Auckland west showing pipelines from Western Springs to reservoir in Ponsonby Road,' showing the Western Springs reserve, 'Machine Site' (Pump Station) and Low & Motion's Mill on Motions Creek (Sir George Grey Special Collections, Auckland Libraries NZ Map 4679)



Figure 8. Western Springs playing fields. This photograph is undated but appears to be around the time the fields were formed (Auckland Museum Library PH-NEG-C26286)

Tawariki Street

The earliest European settlement in the Cox's Creek area dates from the 1840s, when John Cox started a market garden in the area (Hiyama 1991:10). In 1859 an area on the southern side of the bay was subdivided as the 'Village of Richmond' within Sections 8 and 9 of the County of Eden, which includes the modern Regina, Kingsley, Livingstone, Webber and Edgars Streets (Figure 9 and Figure 10). Logs to build at least one of the houses here were floated to Cox's Bay and up the tidal estuary and pit sawn on site (Hiyama 1991:11).

In 1896 a tannery was started on Regina Street in an area now covered by housing, and in 1899 the Cashmore Brothers started a steam-powered sawmill just below West End Road on the northern side of the bay (Figure 11). This operated until 1920 when the mill burnt down.

St Paul's College, located on Richmond Road near the south-eastern shoreline of Cox's Creek, was originally Sacred Heart College which moved to this Grey Lynn site in 1903 from the corner of Pitt and Wellington Streets in the city (Waters 2003). A new three-storey building was built on spacious grounds, part of a 47-acre (19 hectare) block that had been gifted to the Catholic diocese in 1852 for religious and educational purposes by Hugh Coolahan, an Auckland Catholic businessman. The Marist Brothers owned and ran the College, leasing approximately 13.5 acres (5.5 hectares) of land from the Bishop (Waters 2003:22).

The Sacred Heart College land included Allotments 27 & 28 Section 8 - Suburbs of Auckland (Figure 10), which commanded a wide view to the northwest down the gentle sloping gully to Cox's Creek where Cashmore's Sawmill was located. There were no dwellings in this direction at that time, and the rolling land was treeless and covered in weeds and the odd patch of gorse (Figure 12). While Jervois Road and Ponsonby Roads to the northeast were almost fully lined with buildings, most of the land from Jervois Road, John Street and Richmond Road up to Ponsonby Road was undeveloped, with only a scattering of buildings on the western flank of Ponsonby Road (Waters 2003:25-26).

During the early years much work was necessary to improve the college grounds as a gully ran through the middle of the property and it had a rolling, uneven contour. It was not long before several cricket pitches were formed on the lower slopes of what was to become the 'near field' (Figure 13). In 1909 this area was levelled for a sports field and a drainage system installed. The gully and 'far field' were fenced off and farming activities were confined to the gully area (Waters 2003:26). As many of the boys were from rural districts and had farming backgrounds, the college provided practical agriculture as a subject and ran its own farm on the lower part of the property, which ran down to Cox's Creek. By 1915 ploughing was done around the gully, the nearby fields and what was known as the 'Casey Estate' (the stretch of land to the north-western side of the grounds where the gully widens out towards Cox's Creek (Waters 2003)). Cows, horses, sheep and chickens were farmed and crops of oats and barley were harvested (Carlyon and Morrow 2008:83-84) (Figure 14 and Figure 15).

In 1919-23 the Catholic diocese subdivided off part of the Sacred Heart College property and by 1928 the northern portion of this area was occupied by a Marist Convent and the Trinity Street Catholic School and Church, now all part of the Kelmana Avenue complex, and the eastern half of Allotment 28 became a sports field for the Sacred Heart School (Figure 16). In 1927 the 'far field' was developed into the college's main sports ground. In 1931 a bowling green, an additional tennis court and a shooting range were developed

in the near side of the gully (Waters 2003). Around this period the rest of the property was sold by the Catholic diocese and subdivided as the Casey (residential) Estate in 1937. The land is described as in ‘Heavy Gorse’ and ‘Scattered Blackberry’ immediately prior to development (Figure 17 and Figure 18).

Plans were started as early as 1909 to fill the mudflats of Cox’s Bay to create a recreation reserve. However, official filling only began in the 1950s and continued for a number of years. In 1976, after the fill had settled the Cox’s Bay Reserve was developed as a park and sporting recreation grounds (Foster Oct 2012:5).

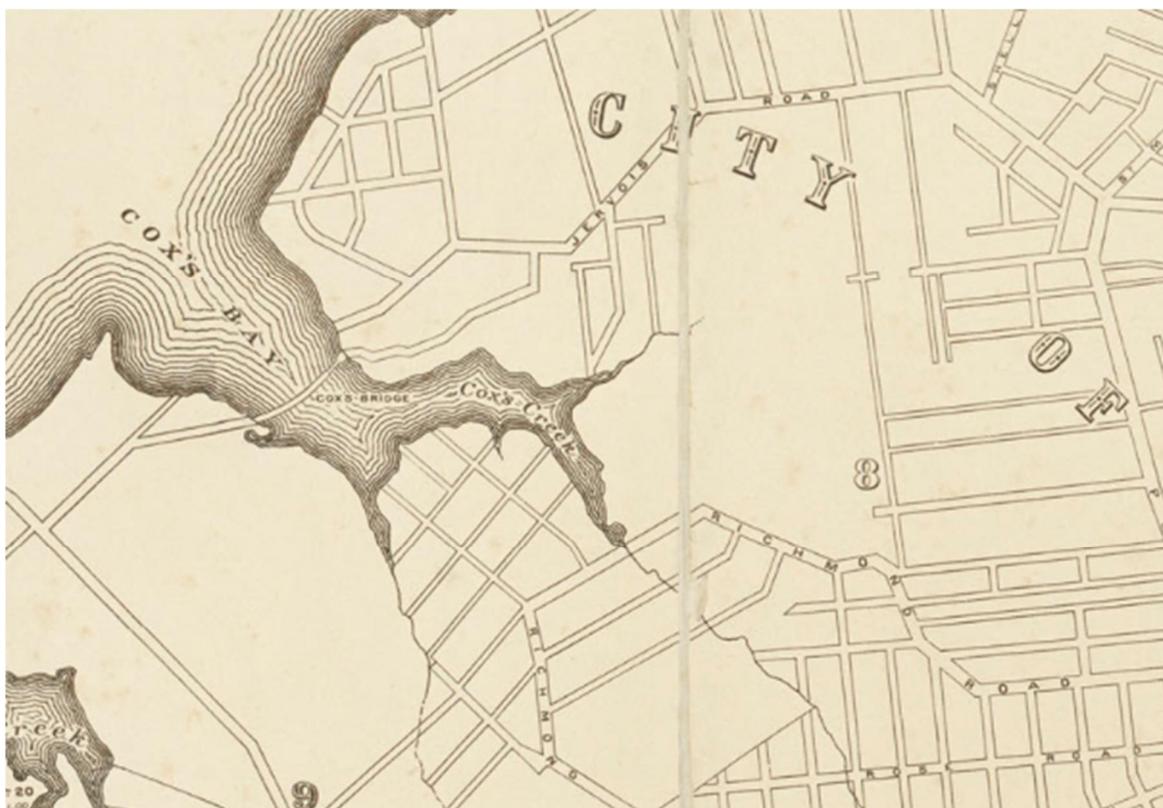


Figure 9. Detail from NZ 4785 (1892) Sheet 1 of a cadastral map of Eden County (Auckland City) ('Sir George Grey Special Collections, Auckland Libraries)



Figure 10. Detail from Upton & Co.'s New Map of City and Suburbs of Auckland 1886 (Sir George Grey Special Collections, Auckland Libraries, NZ Map 198) showing the location of the eastern end of Tawariki Street (red arrow) and the Western Springs sports field (blue arrow)



Figure 12. Looking towards Ponsonby across the farm land from Cox's Creek ca. 1900 (Unknown photographer, Auckland Museum Library PH-RES-4511)



Figure 13. The cricket pitch on the 'near field' looking northeast towards Jervois Road across the rolling farmland of the Sacred Heart College grounds (in Waters 2003)

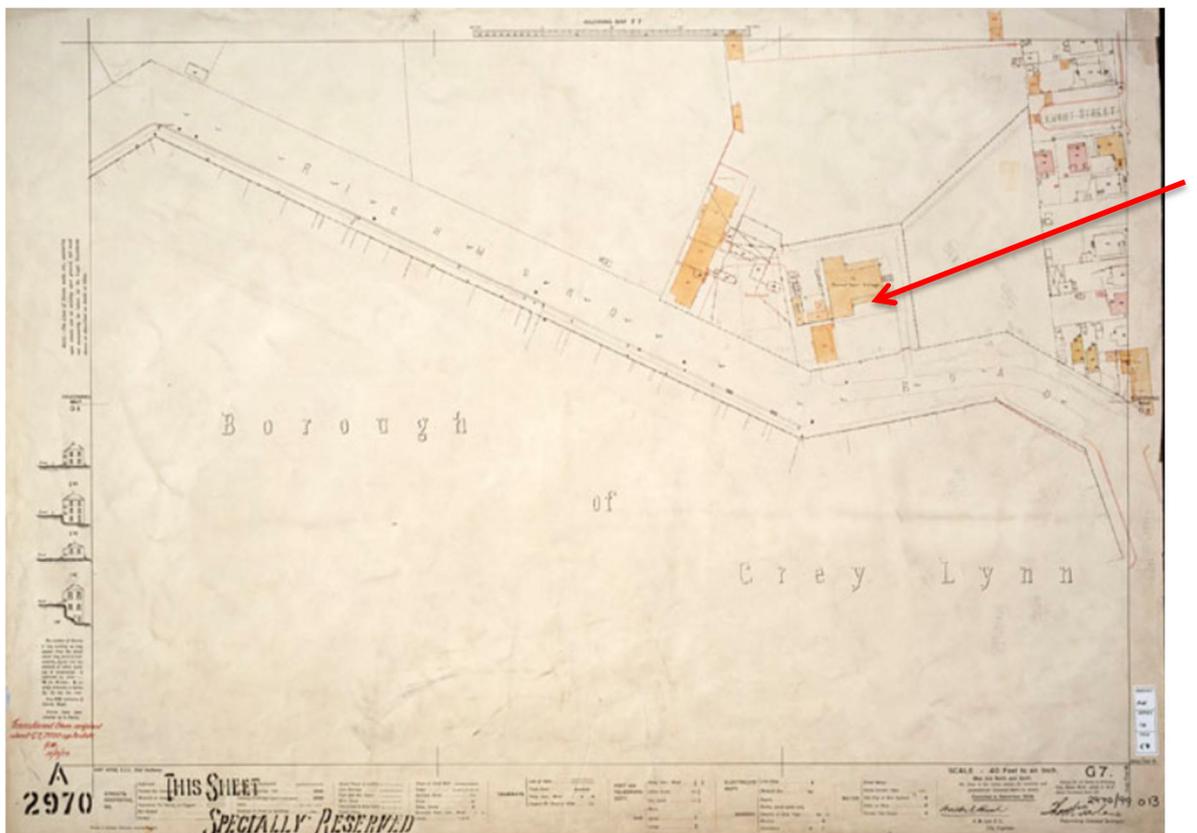


Figure 14. 1908 Wrigg City Plan of Auckland Maps F7 & G7 (annotated to July 1919) showing the Sacred Heart Boys School buildings (arrowed) adjacent to Richmond Road and the undeveloped school farm across Allotments 27 & 28



Figure 15. 1908 Wrigg City Plan of Auckland Maps F6 (annotated to July 1919) showing the upper reaches of Cox's Creek. Note a 'Bridge' located within Allotment 27 in the approximate position of the intersection of Parawai and Tawariki Streets today (arrowed)

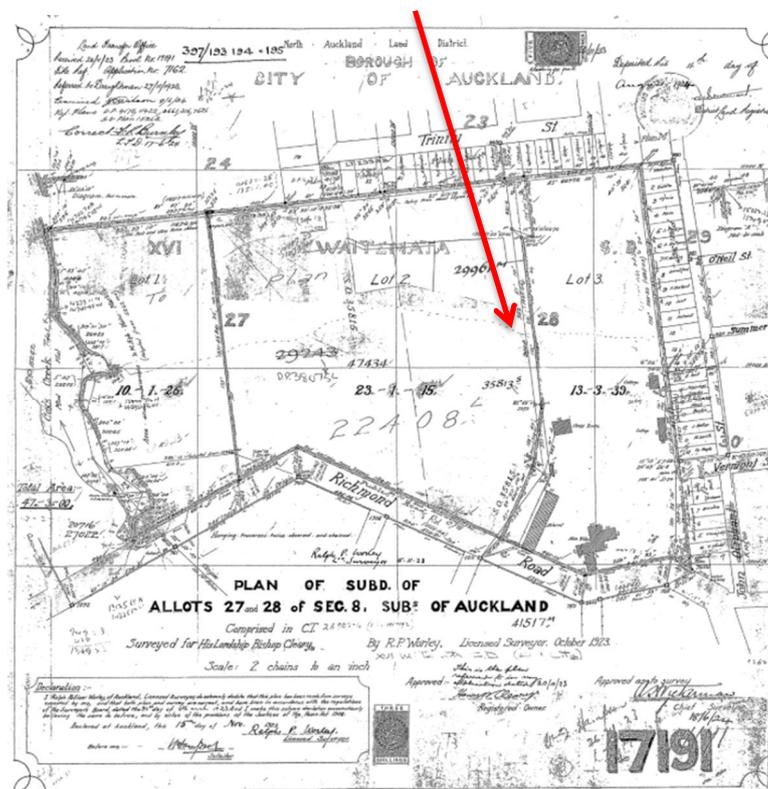


Figure 16. Survey plan DP 17191 (October 1923) Plan of Subd [subdivision] of Allots 27 and 28 Sec 8 Subs [suburbs] of Auckland, Surveyed for His Lordship Bishop Cleary. The approximate location of the eastern end of Tawariki Street is arrowed

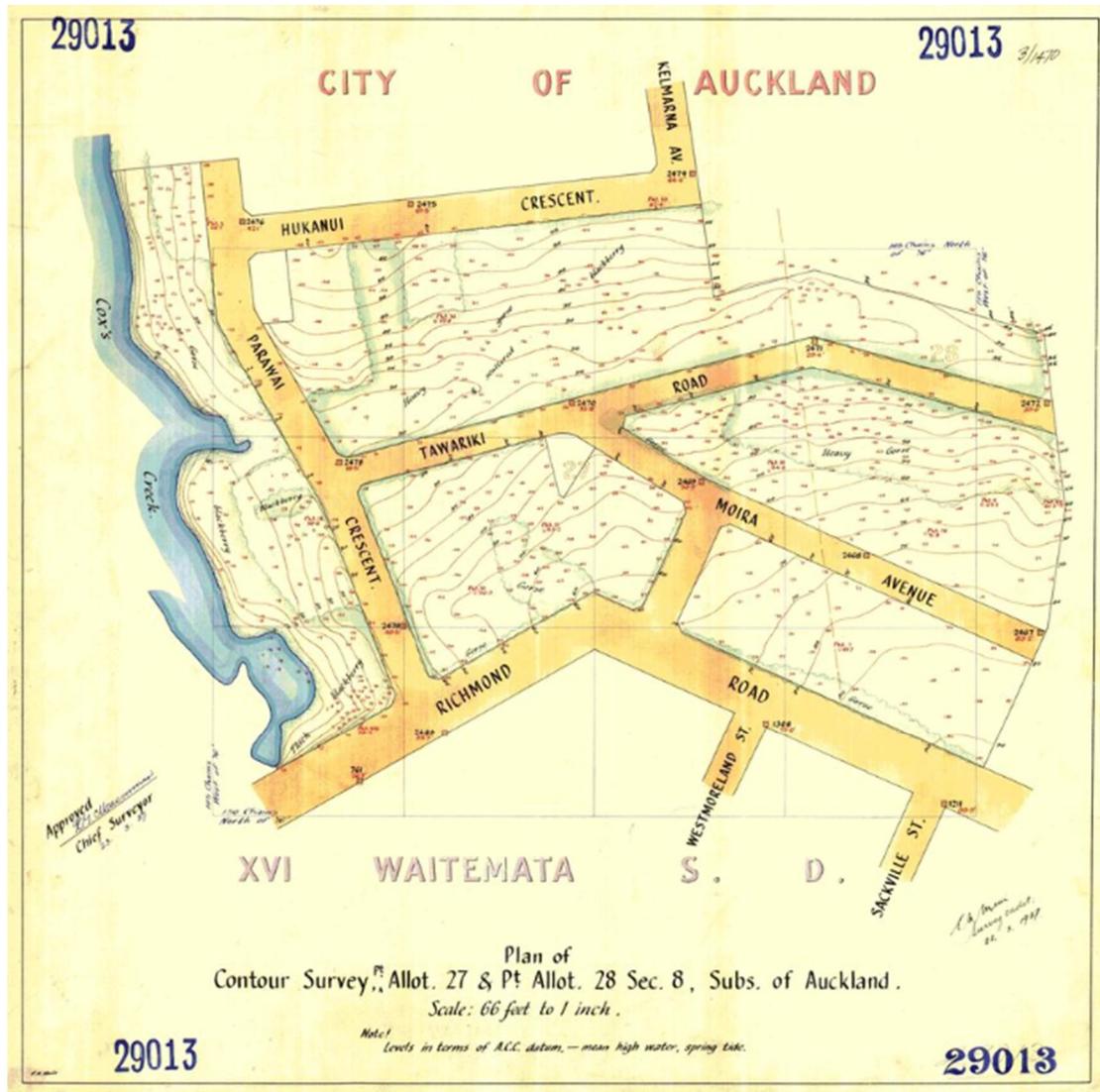


Figure 17. Survey plan SO 29013 (Mar 1937) Plan of Contour Survey Allot 27 & 28 Sec 8, Subs of Auckland describing the land with 'Heavy Gorse' and 'Scattered Blackberry' prior to development

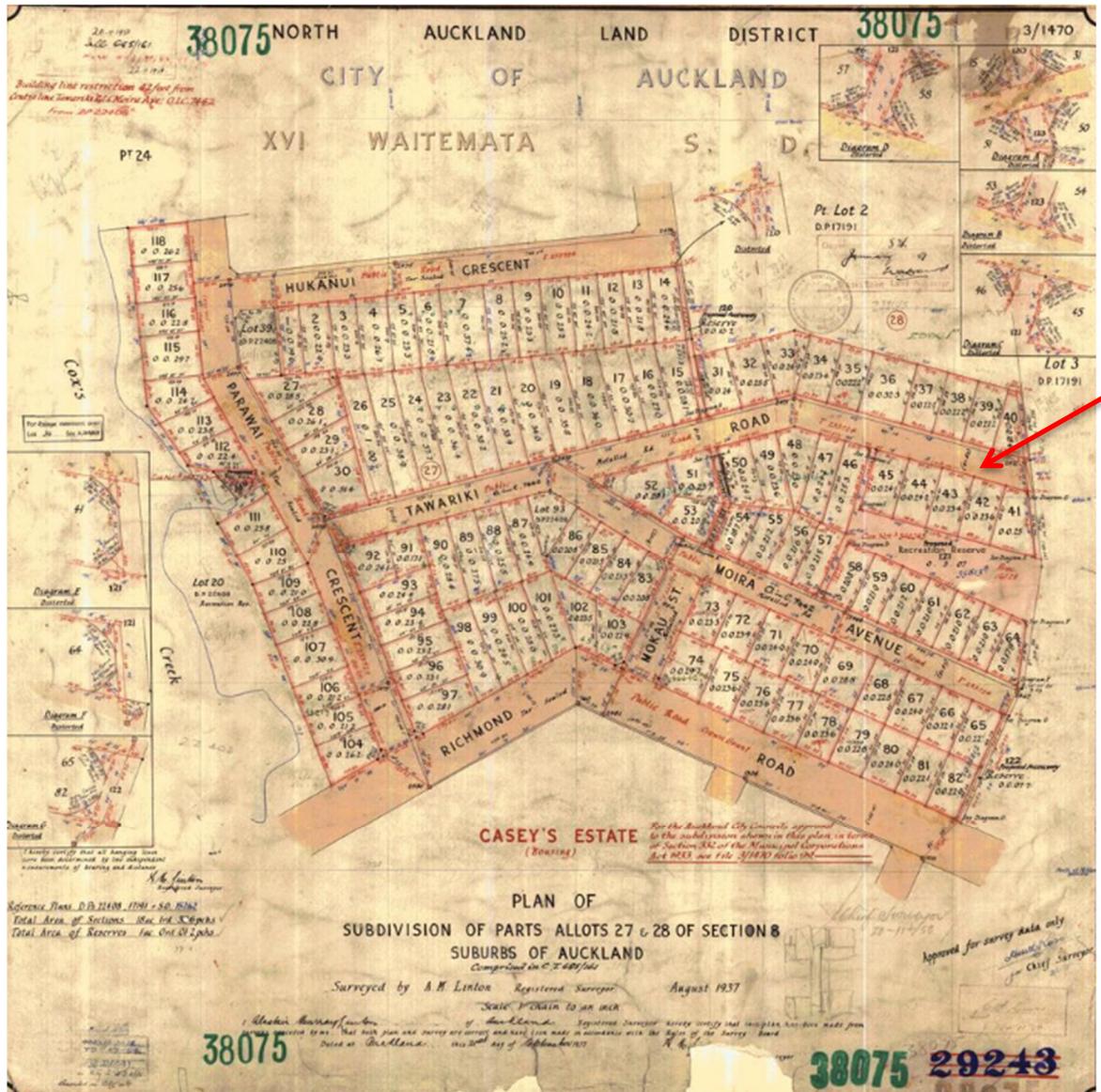


Figure 18. Survey plan DP 38075 (Aug 1937) Casey Estate (Housing) Plan of Subdivision of Parts Allots 27 & 28 of Section 8 Suburbs of Auckland

4. ARCHAEOLOGICAL BACKGROUND

Western Springs

Five archaeological sites, three historic structures, and three Maori Heritage Sites (Wai Orea, Nga Kauaewhata and Te Rehu – the first two of which are scheduled in the AUPOP) are located at Western Springs, with other sites located in the wider area (Figure 19 - Figure 21; Table 1).

Of the archaeological sites related to Maori settlement, two are related to a former pa. On the hillside off Old Mill Road and Surrey Crescent overlooking Western Springs Park is the reported location of a pa called Nga Kauaewhata (R11/537). Nga Kauaewhata was associated with a battle that took place in Kawharu's time. Simmons (1987) notes it was in the Arch Hill area, but provides an approximate grid reference in the location of Western Springs Stadium, well to the west of Arch Hill. More recently Simmons (2013) records that the battle took place at Te Rae o Kawharu (Great North Road ridge, roughly between Ponsonby Road and the eastern end of Surrey Crescent, and also well east of the given grid reference (CHI record)). Nga Kauaewhata is also recorded on the Auckland Council CHI as a Maori Heritage Area and a scheduled Site and Places of Significance to Mana Whenua (SPSMW) in the AUPOP (UPID004) (Figure 21).

Little of Nga Kauaewhata remains except for two small terraces (23m x 14m and 18m x 10m) located in the north-western corner of Western Springs Stadium and recorded as site R11/1149. Shell midden site R11/1148, southeast of the pa location, was located within tree roots in Western Springs Park. The NZAA site record describes it as consisting of a small number of oyster shells and in generally poor condition. Located slightly further afield to the north-west is another midden site R11/104, now destroyed, but previously thought to relate to a Maori settlement named Te Rehu. Site R11/349, located further to the west is a destroyed burial site.

The springs within the Western Springs Reserve are also recorded on the Auckland Council CHI as a Maori Heritage Area, and the Western Springs main lake is a scheduled SPSMW in the AUP OP (UPID008) (Figure 21). This water source would have played an important role in settlement selection by Maori, and the springs were also important to later industrial development in 19th century Auckland.

There is a significant collection of historic buildings at MOTAT (Museum of Transport and Technology) adjacent to the Western Springs Reserve, three of which are recorded on the CHI and scheduled in the AUP OP. These are related to the history of the Western Springs Waterworks. The first two are the former Pumping Station/Pumphouse (CHI #2690, UPID01678 Category A) and the former Engineer's House built in 1879 (CHI #19083, UPID01679 Category B). The Pumping Station is also a Category 1 Listed Historic Place (#114) on the Heritage New Zealand List. A historic tram shelter (CHI #18449; UPID01672 Category B) located within this area is also part of this group of historic structures related to early industry in Auckland (Figure 21).

The engineer's house, the pumphouse and their associated landscape setting have been internationally recognised for their exceptional contribution to the establishment of Auckland, receiving a UNESCO award in 2009 (Auckland Council Assessment 2010).

On the northern side of the Western Springs Park between Old Mill Road and Motions Road is the location of the former Low & Motions Flour Mill (CHI #756, R11/2794). The

mill was constructed in 1848 after Joseph Low and Henry Motions moved their mill to Western Springs, establishing the 'New Mills' (Murdoch n.d.).

A United States Military Camp has also been recorded on the CHI (#16977), and this is located to the south of the former Mill site. The Western Springs camp was one of a scattering of camps in Auckland, from Pukekohe and Papakura in the south to Mechanics Bay and Western Springs, as well as various parks on the Isthmus, where 29,500 US soldiers found accommodation from 1942 to 1944.⁴

In 2011-2012 archaeological assessments were undertaken as part of the AEE for the CI, a new wastewater tunnel to collect wastewater flows from the Isthmus and transfer them across the Manukau Harbour to the Mangere Wastewater Treatment Plant (WWTP) (Shackles et al. Dec 2011; Shakles et al. Mar 2012). The project extends across the Isthmus from Western Springs to the WWTP in the south. The main tunnel, link sewers, local connections and many of the associated structures will be underground and constructed by tunnelling methods, with access provided from a number of surface construction sites. One of three main construction sites is on the northern extent of the Western Springs playing fields. This is also the location of the proposed Western Springs Drop Shaft for the GLT, which will link here to the CI. As part of the archaeological work for the CI field survey and subsurface testing was carried out within the northern corner of the Western Springs playing fields for the northern extent of the CI and combined sewer overflow (CSO) collector sewer pipeline (CC2 Western Springs to Ivanhoe Rd, Western Springs). No archaeological remains were identified and it was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the playing fields and the swampy nature of the landscape in this area (Shakles et al. Mar 2012:18).

Tawariki Street

A number of archaeological and other historic heritage sites relating to Maori occupation and early European industry are recorded around the original foreshore of Cox's Bay and creek (Figure 19, Figure 20, Figure 22; Table 2). There include three shell midden sites – R11/1153, R11/1154 and R11/1161 – along the eastern shoreline of Cox's Bay. Two SPSMW are also recorded attributing to the significance of Cox's Bay to Maori. Tukituki Muka Maori Heritage Area (UPID001) relates to the customary harvest and preparation of flax for the making of garments and lashings. This Maori Heritage Area was originally identified for the Auckland City District Plan (Isthmus Section) by the late Hariata Gordon as an area of mudflats at the end of Webber Street. In conversation with Mrs Gordon in 2006 she commented that the site was identified largely to put on record the significance of Cox's Bay to Maori, and not as a specific location where physical evidence might be found (Foster Apr 2012). The area shown on the AUP OP maps would originally have been tidal mudflats, with the original shoreline in this location marked by the boundaries of the properties at the end of Webber Street with the reserve. The other SPSMW is Opoutukeha (Waahi whakahahirahira), marking Cox's Creek as an ancient boundary line between Ngati Huarere and Ngati Pou (UPID054) (Figure 22).

In 2012 an archaeological assessment was carried out for the proposed upgrade to the existing footpath through the Cox's Bay reserve along Cox's Creek from West End Road

⁴ <http://www.nzhistory.net.nz/war/us-forces-in-new-zealand/the-camps>

to Richmond Road (Foster Apr 2012, Oct 2012). This assessment confirmed the location of many of the recorded sites in Cox's Bay.

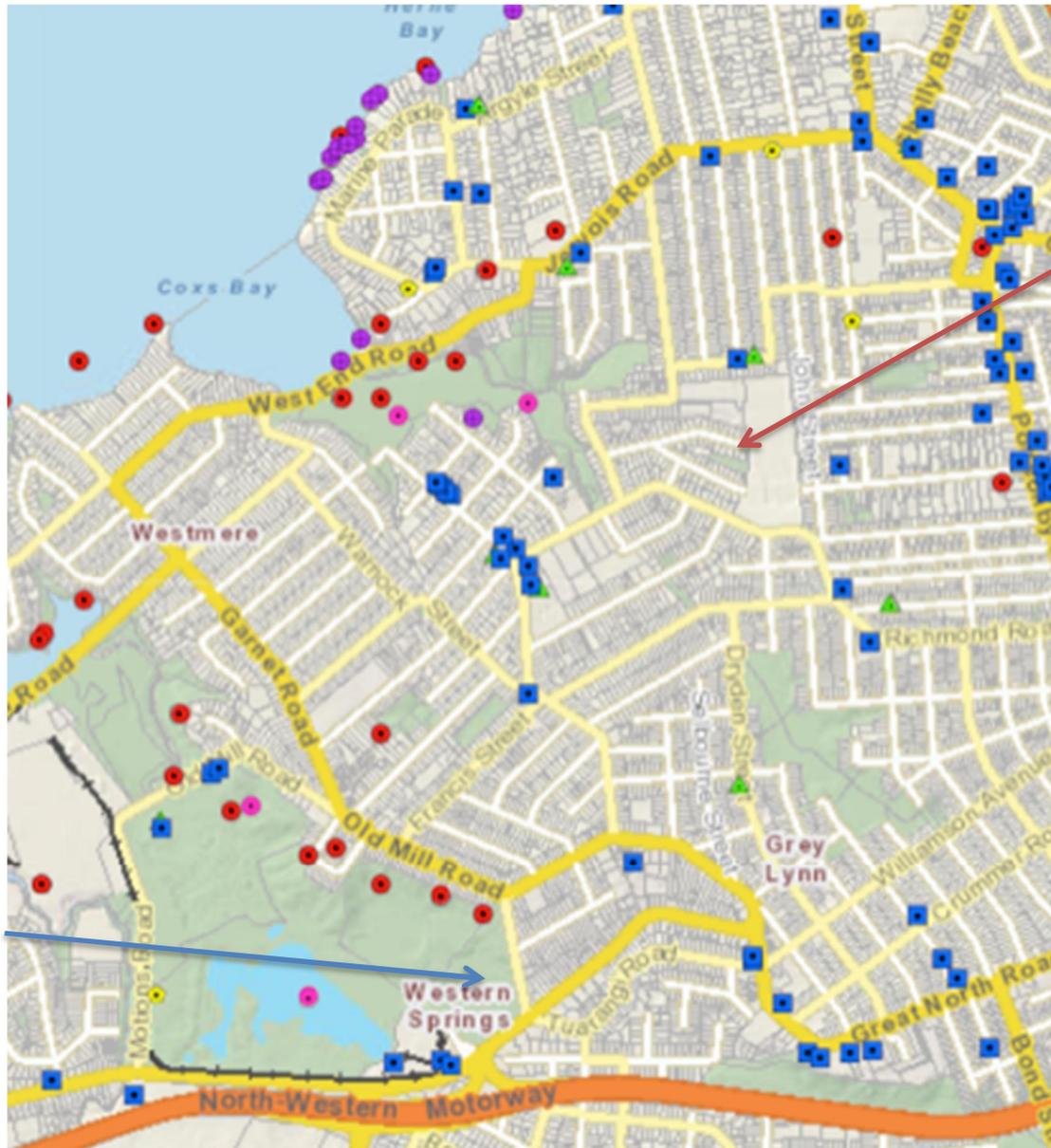


Figure 19. Recorded archaeological and historic heritage sites in the Western Springs and Grey Lynn area. Western Springs Drop Shaft (blue arrow) and Grey Lynn – Tawariki Street Drop Shaft (red arrow) (source: Auckland Council GeoMaps)

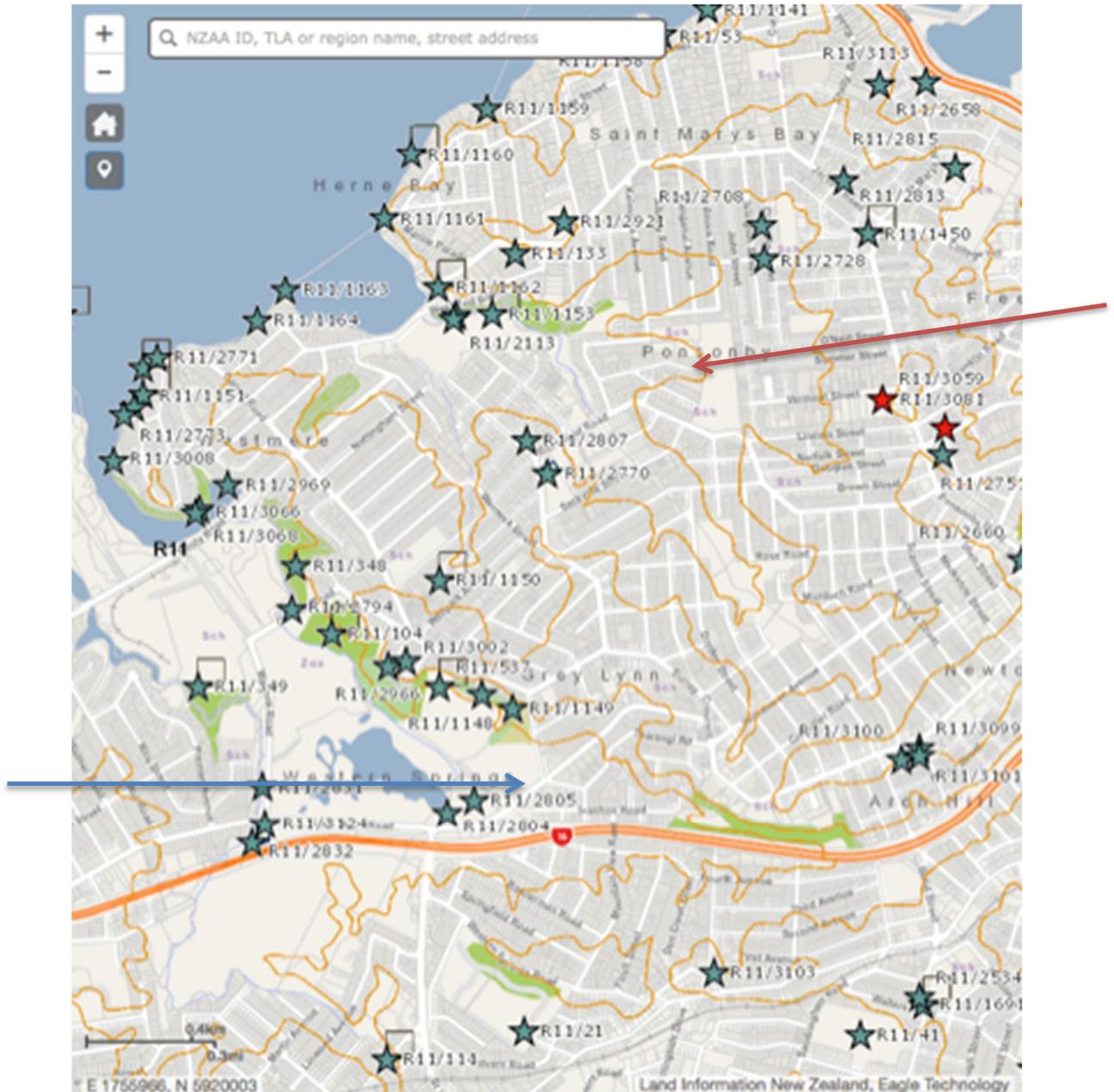


Figure 20. Recorded archaeological sites in the Western Springs and Grey Lynn area. Western Springs Drop Shaft (blue arrow) and Grey Lynn – Tawariki Street Drop Shaft (red arrow) (source: NZAA ArchSite)

Table 1. List of archaeological and other heritage sites in the vicinity of the GLT drop shaft at Western Springs (listed in numerical order based on their CHI record number)

CHI No.	NZAA ID	Site Type	Name	Location	NZTM Easting	NZTM Northing	AUPOP	Heritage NZ List
756	R11/2794	Flour Mill Site Jetty Site	Low & Motions Flour Mill	Western Springs Motions Creek Old Mill Road	1753317	5919186		
2690	R11/2804	Industrial Building	Western Springs Pumphouse	Western Springs 805 Great North Road	1753902	5918419	UPID01678 Category A Historic Heritage (Schedule 14.1)	List Number 114 Historic Place Category 1
5776	R11/104	Midden/ Settlement	Te Rehu	Western Springs Auckland Zoo	1753468	5919095		
5835	R11/348	Midden (shell) Historic Midden	Te Rehu?	Western Springs Motions Creek	1753335	5919348		
6061	R11/1148	Shell Midden		Western Springs	1754024	5918864		
6847	R11/537	Reported Ridge Pa?	Nga Kauae Whati	Western Springs Old Mill Road	1753868	5918896		
8554	R11/1149	Terraces		Western Springs	1754139	5918613		
11500	R11/349	Burials/Findspot	Te Rehu?	Western Springs	1752968	5918894		

CHI No.	NZAA ID	Site Type	Name	Location	NZTM Easting	NZTM Northing	AUPOP	Heritage NZ List
				Meola Creek				
12771		Maori Heritage Area	Wai Orea	Western Springs Main Lake	1753673	5918593	UPID008 Sites and Places of Significance to Mana Whenua (Schedule 12)	
16977		U.S. Military Camp	Western Springs Camp	Western Springs	1753270	5918600		
18449		Historic Structure	Bus/Tram Shelter (former)	Western Springs 805 Great North Road	1754052	5918412	UPID01672 Category B Historic Heritage (Schedule 14.1)	
19083	R11/2805	Building /Dwelling - Engineers House	Historic Structure	Western Springs 805 Great North Road	1754028	5918423	UPID01679 Category B Historic Heritage (Schedule 14.1)	
19759		Maori Heritage Area	Nga Kauaewhatai	Western Springs Old Mill Road	1753527	5919105	UPID004 Sites and Places of Significance to Mana Whenua (Schedule 12)	
20123	R11/2966	Midden		Western Springs West View Road	1753677	5918973		
21878	R11/3002	Industrial Site	Public Abattoir	Western Springs West View Road	1753746	5918991		

Table 2. List of archaeological and other heritage sites in the vicinity of the GLT drop shaft and associated works at Tawariki Street (listed in numerical order based on their CHI record number)

CHI No.	NZAA ID	Site Type	Name	Location	NZTM Easting	NZTM Northing	AUPOP	Heritage NZ List
759	R11/2113	Industrial Timber Mill	Cashmore's Mill	West End Road Cox's Creek Herne Bay	1753865	5920195		
760		Bridge Site Wharf Site	Cox's Bridge Road	West End Road Cox's Bay	1753765	5920295		
6065	R11/1153	Midden (Shell)		West End Road Cox's Creek	1754065	5920296		
6066	R11/1154	Midden (Shell)		West End Road Cox's Creek	1753965	5920296		
6073	R11/1161	Midden (Shell)		Cox's Creek Herne Bay	1753765	5920195		
12764		Maori Heritage Area	TukiTuki Muka	Cox's Creek Walkway adjoins boundaries of 47 and 49 Webber Street, Grey Lynn	1754255	5920186	UPID001 Sites and Places of Significance to Mana Whenua (Schedule 12)	
17862		Chimney Stack	Former Tattersfield Textiles Industry Chimney	57 Livingstone Street 271 Richmond Road Grey Lynn	1754327	5919987	UPID02555 Category B Historic Heritage	

CHI No.	NZAA ID	Site Type	Name	Location	NZTM Easting	NZTM Northing	AUPOP	Heritage NZ List
							(Schedule 14.1)	
18890		Historic Heritage Area - Edwardian villas	Ardmore Road, Wanganui Avenue, Albany Road and Trinity Street	Ardmore Road, Wanganui Avenue, Albany Road and Trinity Street	1754816	5920302	UPID02516 Historic Heritage Area (Schedule 14.2)	
19882		Buildings - Residential	State Housing Complex	97 Vermont Street Ponsonby	1755086	5920019	UPID02484 Category B Historic Heritage (Schedule 14.1)	
20065		Maori Heritage Area	Opoutukeha (Waahi whakahirahira. Named after the ancestor Poutukeha. The creek is an ancient boundary line between Ngati Huarere and Ngati Pou.	Cox's Bay, Westmere	1753914	5920148	UPID054 Sites and Places of Significance to Mana Whenua (Schedule 12)	

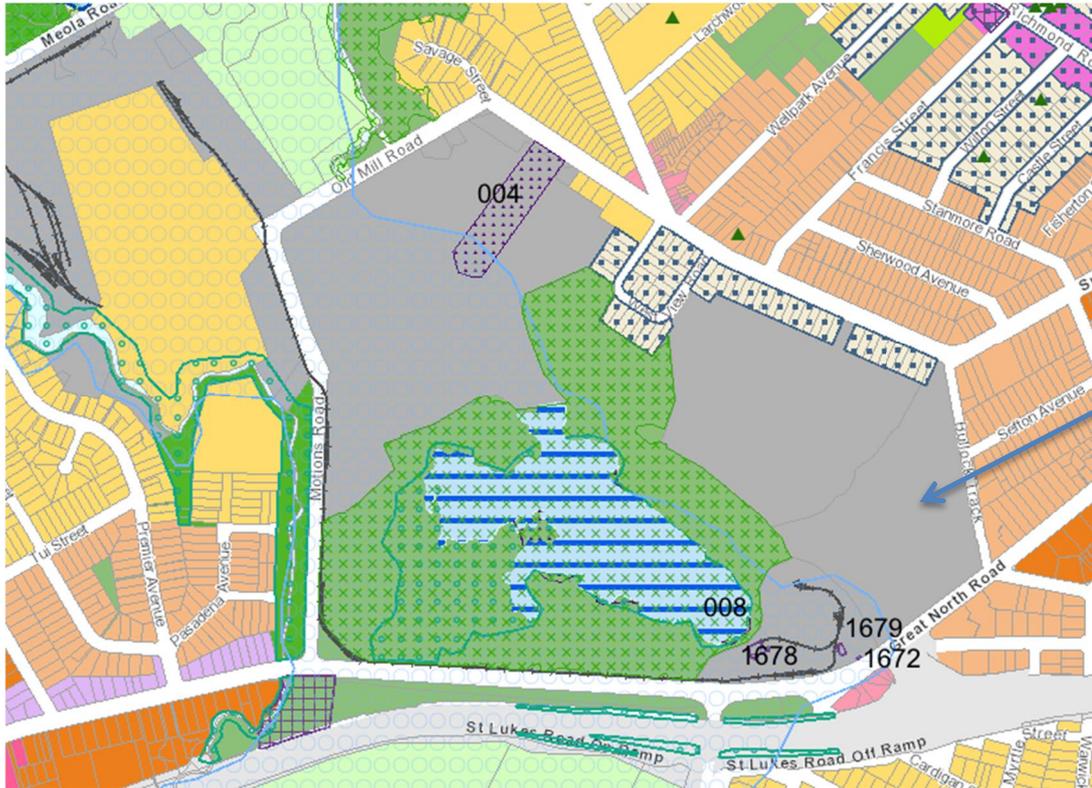


Figure 21. AUP OP map of Western Springs showing scheduled Historic Heritage Sites and Areas, and Sites and Places of Significance to Mana Whenua. The location of the Western Springs Drop Shaft arrowed

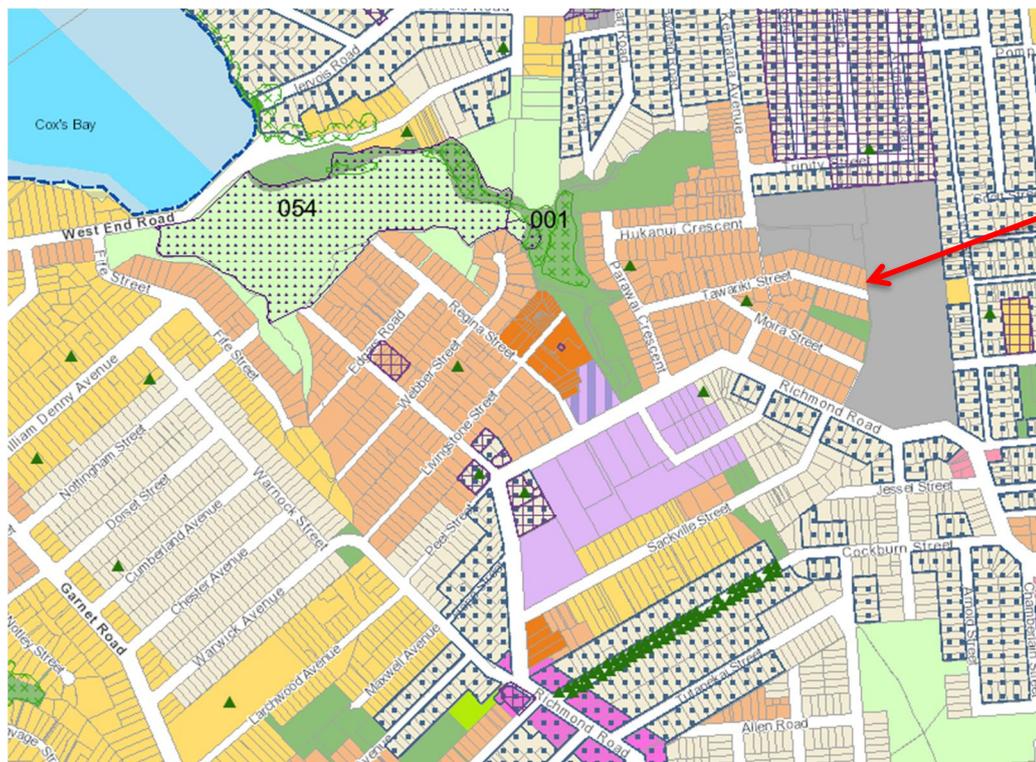


Figure 22. AUP OP map of Grey Lynn showing scheduled Historic Heritage Sites and Areas, and Sites and Places of Significance to Mana Whenua. The location of the proposed Tawariki Street drop shaft arrowed

Information from Early Aerials

An examination of early aerial photographs shows the two main construction areas at the Western Springs Reserve playing fields and Tawariki Street in Grey Lynn from the 1930s and 1940s.

At Western Springs, Figure 23 is a 1940 aerial showing the recently levelled and drained land for the Western Springs Stadium, with a running and cycling track and the adjacent outer playing fields. This is now clearly a significantly modified landscape in comparison to the rolling farmland across this area shown in Figure 6. A 1959 aerial (Figure 24) shows additional earthworks above and in the north-eastern corner of the playing fields and below the Bullock Track, and on the steep hillside above the Western Springs Stadium.

An aerial photograph from 1930 (Figure 25) of the Sacred Heart College grounds and playing fields in Grey Lynn shows the remaining part of the property to the west sold by the Catholic diocese still undeveloped prior to being subdivided as the Casey residential estate. However, the alignment of Tawariki Street and Moira Street appears to have been formed running up to the edge of the college grounds. The 1940 aerial (Figure 26) shows the newly developed Casey residential subdivision on this land. In the 1960s, further extensive filling and levelling occurred across the St Paul's College (formerly Sacred Heart) sports fields above and to the east of Tawariki Street (Figure 27).



Figure 23. 1940 aerial photograph of the recently formed Western Springs sports fields (source: Auckland Council Geomaps)



Figure 24. 1959 aerial photograph of the Western Springs sports fields. Note the recent earthworks above and in the north-eastern corner of the fields and the access road along the eastern side of the fields (arrowed) (source: Auckland Council Geomaps)



Figure 25. Sacred Heart College, Grey Lynn, Auckland. 1930. The arrow shows the eastern end of Tawariki Street. Ref: WA-62745-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/22566571](https://records/22566571)

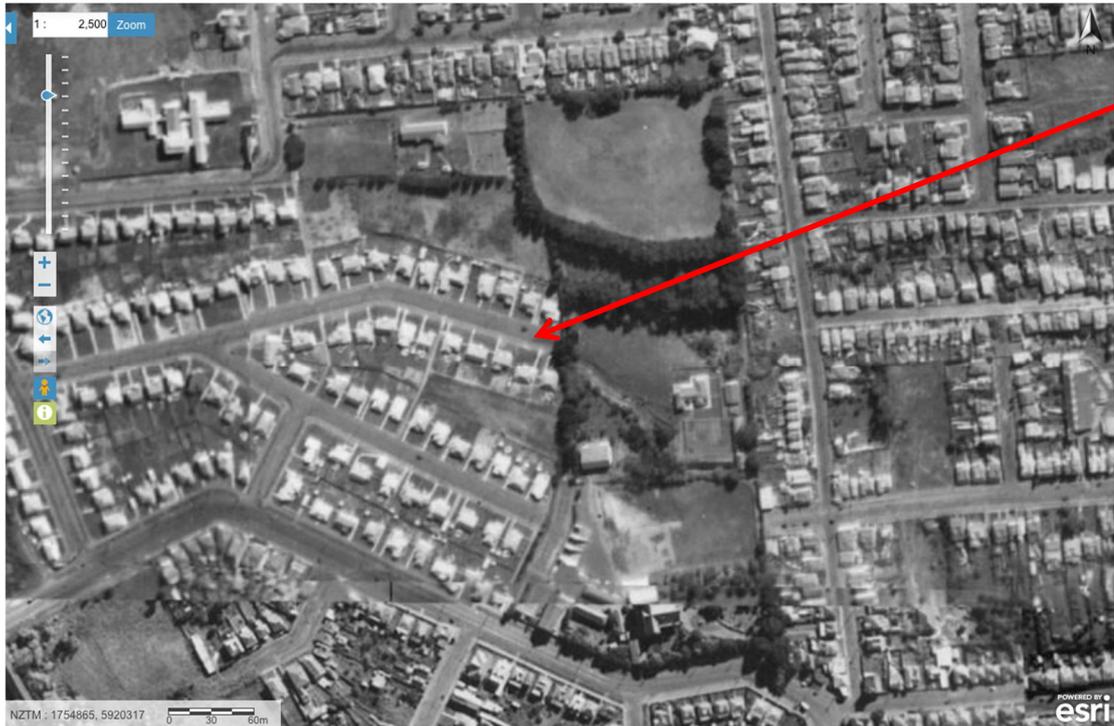


Figure 26. 1940 aerial photograph of the recently constructed Casey Subdivision including Tawariki Street source: Auckland Council Geomaps)



Figure 27. Detail from NZ Map 7331 1960-1969 showing extensive filling and levelling for the development of the St Paul's sports fields. Aerial photograph from Auckland City Council, Department of Works and Services. Town Planning Division 24-25 (APL)

5. FIELD ASSESSMENT

Western Springs

The southern end of the Grey Lynn Tunnel and proposed construction works are situated at the Western Springs playing fields to the north and northeast of the three rugby pitches. Works will involve a mixture of both deep and shallow underground construction, utilising the CI shaft for the TBM. This Western Springs site is also a primary construction site for the CI covering an area of 7000m² (Figure 28 - Figure 31).

The Western Springs playing fields are located below and south of the recorded archaeological sites R11/537, Nga Kauaewhata ridge pa, and its surviving terraces (R11/1149) and midden site R11/1148, which are located on the hillside off Old Mill Road and Surrey Crescent overlooking the park. Nga Kauaewhata is a scheduled SPSMW in the AUP OP. The proposed tunnel alignment will extend from the CI and Western Springs Drop Shaft in the playing fields at a depth under this hillside and the Bullock Track / Surrey Crescent and therefore, will not impact on these recorded sites.

The Western Springs playing fields are also located near the springs and Western Springs lake (Wai Orea, CHI #12771), which is also a scheduled SPSMW. The MOTAT heritage area opposite the playing fields contains three historic structures – the Engineers House (CHI #19083), the Western Springs Pumphouse (CHI #2690) and tram shelter (CHI #18449), all of which are scheduled in the AUPOP. These sites are located well clear of the proposed works.

The extent of landscaping used to form the playing fields is not accurately known, therefore, it is difficult to assess the potential survival of any archaeological remains within this area, although the construction of playing fields generally involves significant levelling and drainage works. An archaeological field survey including subsurface testing with a probe and the excavation of test pits was undertaken to assess the area for unidentified archaeological remains. No archaeological sites were identified in this specific area during the archaeological assessment for the CI (Shakles et al. Mar 2012) or during this field survey and it was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the playing fields and the swampy nature of the landscape in this area.

Tawariki Street

The northern end of the Grey Lynn Tunnel and proposed construction works are located within the road reserve at the end (east) of Tawariki Street in Grey Lynn. However, a new shaft sunk and associated works at this location will require the removal of three dwellings at 44 - 48 Tawariki Street (Figure 32). These houses are located on the northern side of the road.

Tawariki Street and the houses along it were constructed from the late 1930s as part of the Casey residential subdivision. The street runs along the bottom of a gully and prior watercourse in the upper reaches of Cox's Creek (Figure 33). The topography and house sites rise up on either side of the gully from the street level. The end of the street finishes at a steep, retained bank, which forms the western side of the St Paul's College playing fields (Figure 34 and Figure 35).

The houses at 44 - 48 Tawariki Street, like most along this street and elsewhere within the Casey residential estate, are of a similar New Zealand Housing single storey design with timber weatherboards and tile roofs (Figure 36). There are no recognised heritage values associated with these dwellings.

There are no known archaeological or other historic heritage sites located near the proposed works on Tawariki Street. Archaeological sites beneath modern buildings and sealed surfaces in urban environments can rarely be identified prior to being exposed in the course of redevelopment work. However, no historically recorded activities were identified in the area from the background research and field survey. It is also unlikely that any previous archaeological evidence would have survived on the basis of later modifications to the area. Therefore, it was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the residential subdivision and college playing fields.

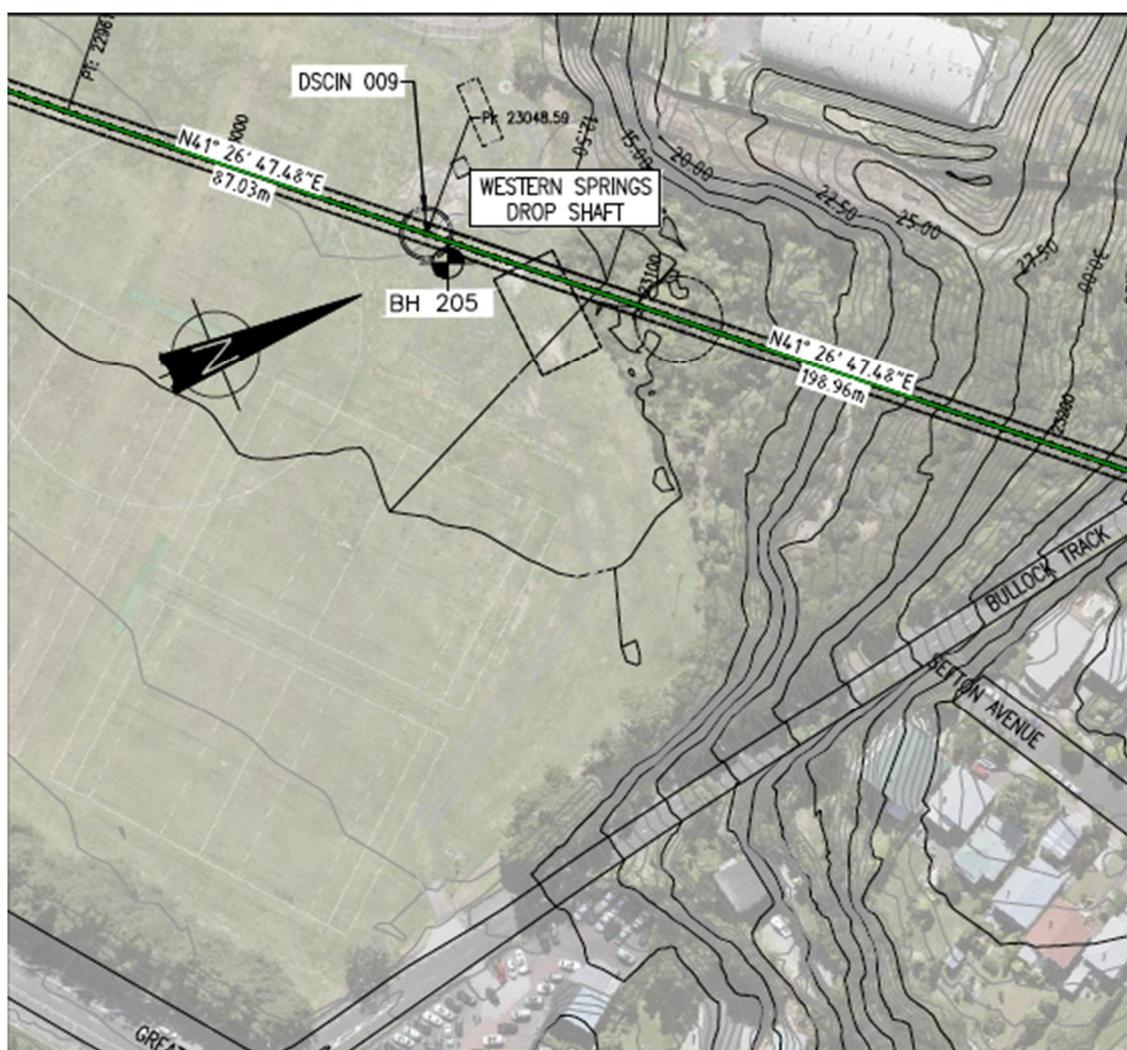


Figure 28. The location of the Western Springs Drop Shaft within the north-eastern corner of the Western Springs sports fields



Figure 29. Looking northwest from the bottom of the Bullock track across the Western Springs playing fields



Figure 30. Looking east across the Western Springs playing fields from the stadium fence line. The proposed drop shaft is located in the foreground centre of the photo



Figure 31. Looking north towards the Western Springs Stadium at the proposed drop shaft location between the goal posts and the bush line

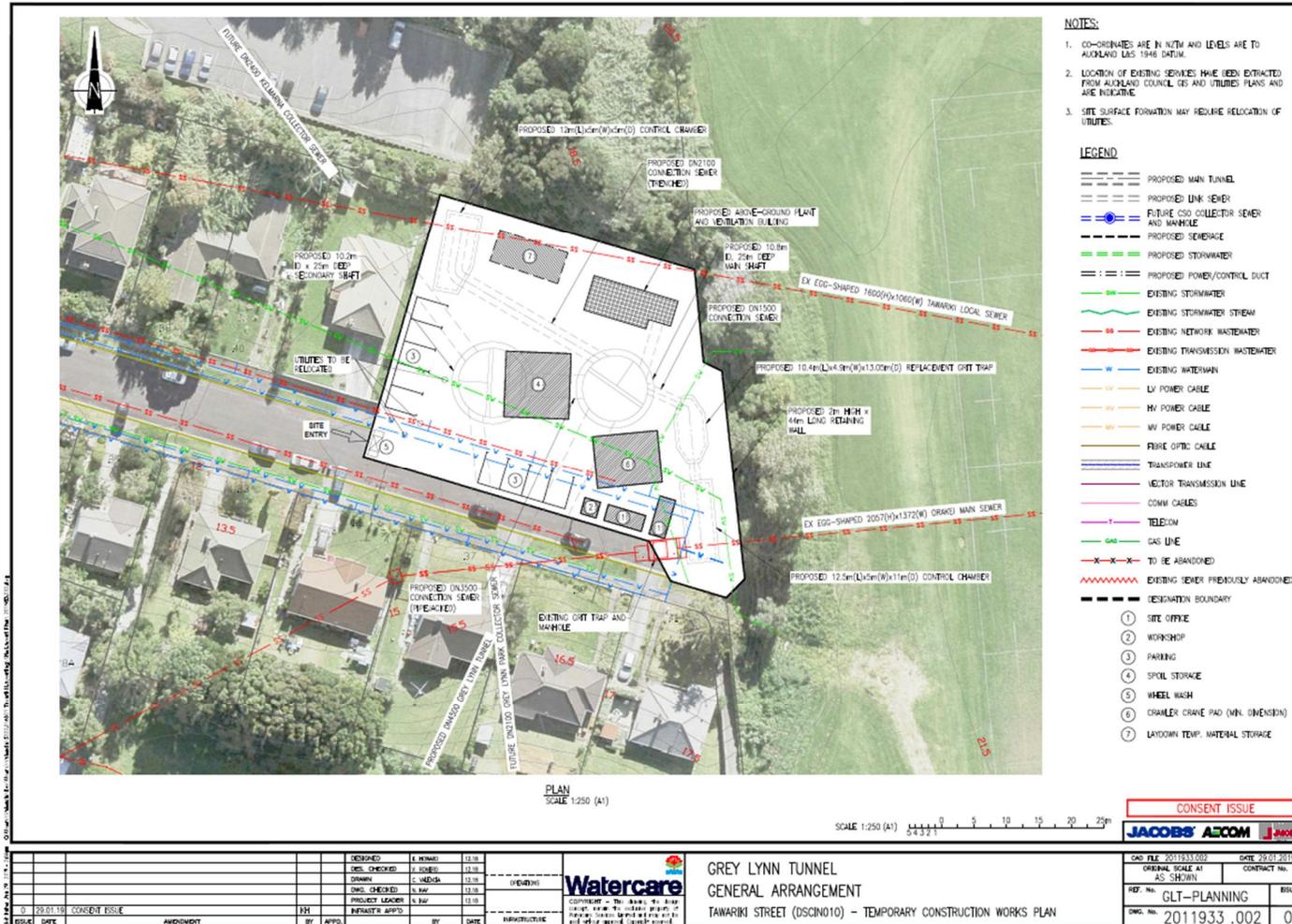


Figure 32. Tawariki Street layout plan of proposed works (source: Watercare)



Figure 33. Looking east along the end of Tawariki Street towards the elevated sports fields of St Paul's College



Figure 34. Looking west along Tawariki Street from the raised sports fields of St Paul's College



Figure 35. Looking east from the end of Tawariki Street in the vicinity of the proposed location of the Grey Lynn Shaft up to the St Paul's College sports fields



Figure 36. No.s 44, 46 & 48 Tawariki Street

6. DISCUSSION AND CONCLUSIONS

Summary of Results

No archaeological or other historic heritage sites have been identified within the Western Springs Reserve during the archaeological assessment for the CI or during the field survey for this report. It was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the playing fields and the swampy nature of the landscape in this area.

Similarly, no known archaeological or other historic heritage sites are located near the proposed works on Tawariki Street. No historically recorded activities were identified in the area from the background research and field survey. It was determined that the likelihood of unidentified remains being uncovered was considered low based on the early 20th century modification to the area during the construction of the residential subdivision and college playing fields.

Maori Cultural Values

This is an assessment of effects on archaeological values and does not include an assessment of 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.

The historical association of the general area with the tangata whenua is evident from the recorded sites, traditional histories and known Maori place names. A number of Sites and Places of Significance to Mana Whenua (SPSMW) are scheduled on the AUP OP in the general vicinity.

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 sites beneath modern buildings and sealed surfaces in urban environments such as Tawariki Street can rarely be identified prior to being exposed in the course of redevelopment work. Therefore, the approach to archaeological assessment is to identify historically recorded activities on the site, and assess the potential for archaeological evidence to have survived on the basis of later modifications to the site.

Archaeological Value and Significance

The AUP OP Regional Policy Statement (RPS) identifies several criteria for evaluating the significance of historic heritage places. In addition, Heritage NZ has provided guidelines setting out criteria that are specific to archaeological sites (condition, rarity, contextual value, information potential, amenity value and cultural associations) (Heritage NZ 2006: 9-10).

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.

Western Springs has buildings related to the development of Auckland's water supply in the late 19th and early 20th centuries. The presence of a former ridge pa overlooking the springs, two terraces of which have been identified archaeologically, also attest to it being an important settlement locale for Maori prior to European settlement. In addition, the scheduling of the pa and the Western Springs main lake as SPSMW stresses the traditional significance of the area. As the field survey did not identify any archaeological remains in the sports field and the former nature of the area was swampy, the potential for any subsurface remains is considered low.

A number of archaeological and other historic heritage sites relating to Maori occupation and early European industry recorded around the original foreshore of Cox's Bay and creek. Two SPSMW are also scheduled due to the significance of Cox's Bay to Maori. Field survey and background research did not identify any archaeological remains or historically recorded activities in the upper reaches of Cox's Creek at Tawariki Street. Similarly, the potential for any subsurface remains is considered low given the 20th century development of this area.

Effects of the Proposal

No known archaeological or other historic heritage sites will be affected by the proposed construction of the GLT. 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. While it is considered unlikely in this situation based on the early 20th century modification to these areas, the 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.

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 2016 (AUP OP) is relevant to the proposed activity.

There are no scheduled historic heritage sites located within the Project area. This assessment has established that the proposed activity 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 not be required.

However, if suspected archaeological remains are exposed during earthworks, the Accidental Discovery Rule (E12.6.1) set out in the AUP OP 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. This rule would no longer apply in respect to archaeological sites if an Authority from Heritage NZ was in place.

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)’⁵

⁵ 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

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 the proposed activity as no known sites will be affected, and it is unlikely that any undetected sites are present. However, should any sites be exposed during development the provisions of the HNZPTA must be complied with.

Conclusions

This assessment has established that the proposed activity will have no effect on any known archaeological remains, and has little potential to affect unrecorded subsurface remains.

If suspected archaeological remains are exposed during development works, the Accidental Discovery Rule (E12.6.1) set out in the AUP OP 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.

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.

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.

7. RECOMMENDATIONS

- There should be no constraints on the proposed Grey Lynn Tunnel on archaeological and other historic heritage grounds, since no archaeological or other historic heritage sites are known to be present and it is considered unlikely that any will be exposed during development.
- If subsurface archaeological evidence should be unearthed during construction (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 Maori, such as wahi tapu, the tangata whenua should be consulted regarding the possible existence of such sites in the project area.

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