Capital Heritage Limited
Archaeology and Heritage Consultancy

Lower Tyers Road, Ngauranga Gorge, Wellington (Part NZAA R27/537)

Archaeological Monitoring Report Under HNZPT Authority 2015/925

Prepared For Heritage New Zealand Pouhere Taonga (on Behalf Of Wellington City Council & Water Wellington)

Prepared by

Victoria Grouden (M.A.)

March 2016

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1 Introduction

1.1 Background to Project

This report had been prepared on behalf of Wellington Water Limited and the Wellington City Council for Heritage New Zealand Pouhere Taonga in fulfilment of Archaeological Authority 2015/925 for excavation work carried out at Lower Tyers Road Ngauranga Gorge. Water Wellington carried out water main renewal work on behalf of Wellington City Council along Lower Tyers Road in September 2015. A preliminary archaeological check (see Grouden 2015a) identified that an historic tannery in the area had been present on the road from the 1860s until the 20th century. A full archaeological assessment was carried out to support application to HNZPT for an archaeological authority prior to the start of work (see Grouden 2015b).

The regional location of Ngauranga can be seen in Illustration 1 and the street location of Lower Tyers Road is shown in Illustration 2. The route of the new water main is shown in Illustration 3.

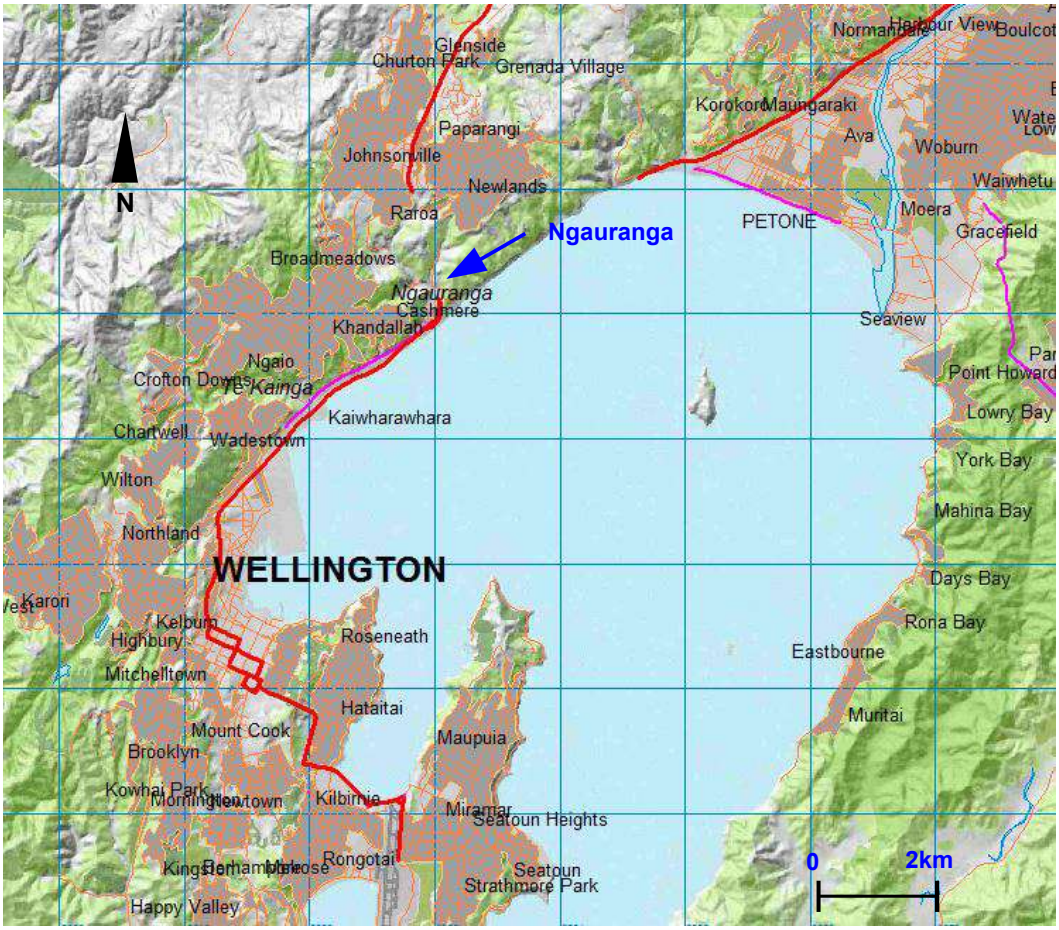


Illustration 1: Regional location of Ngauranga Gorge, Wellington (from Quickmap)

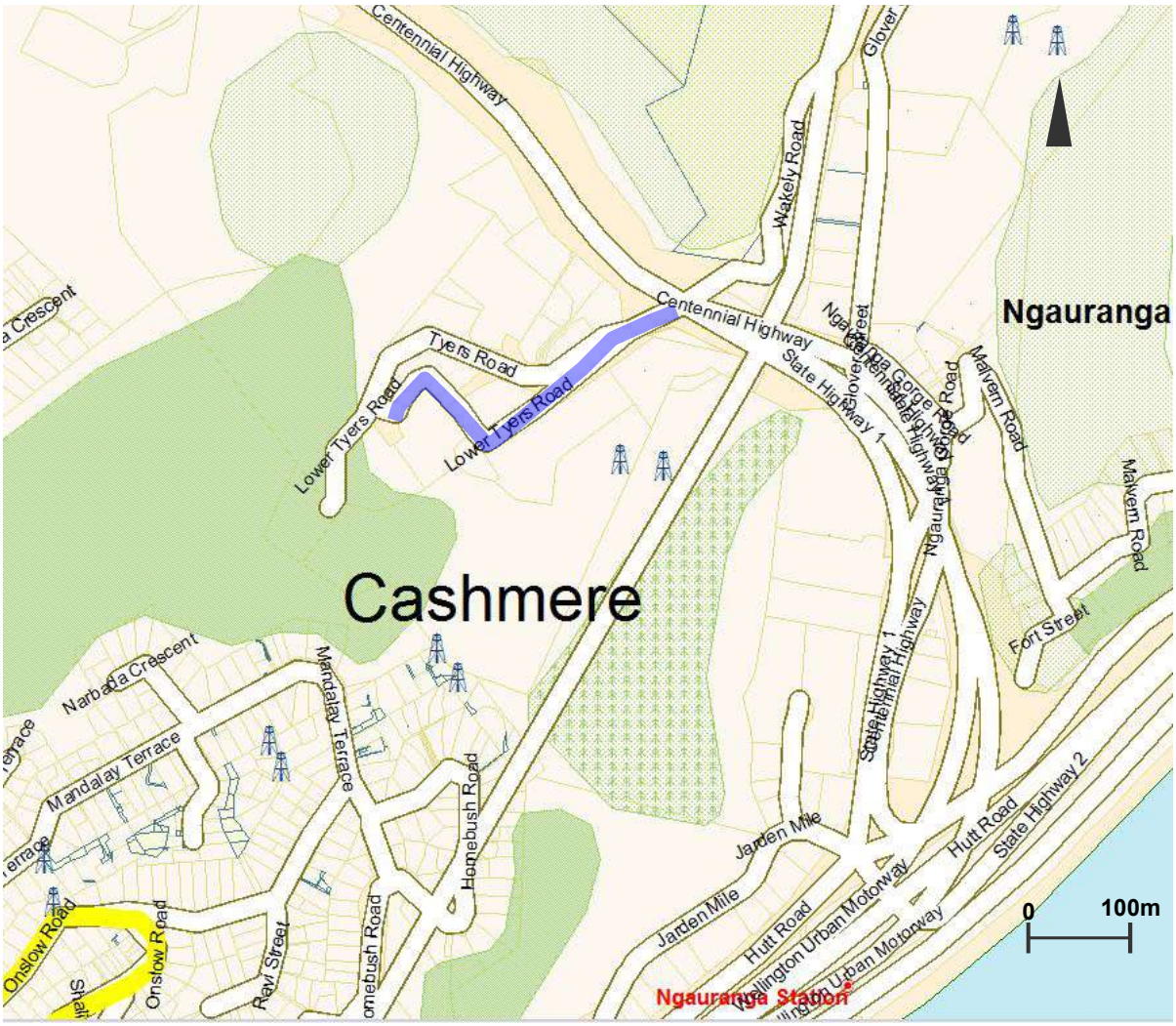


Illustration 2: Lower Tyers Road, Ngauranga Gorge, Wellington-in blue (image from Quickmap)

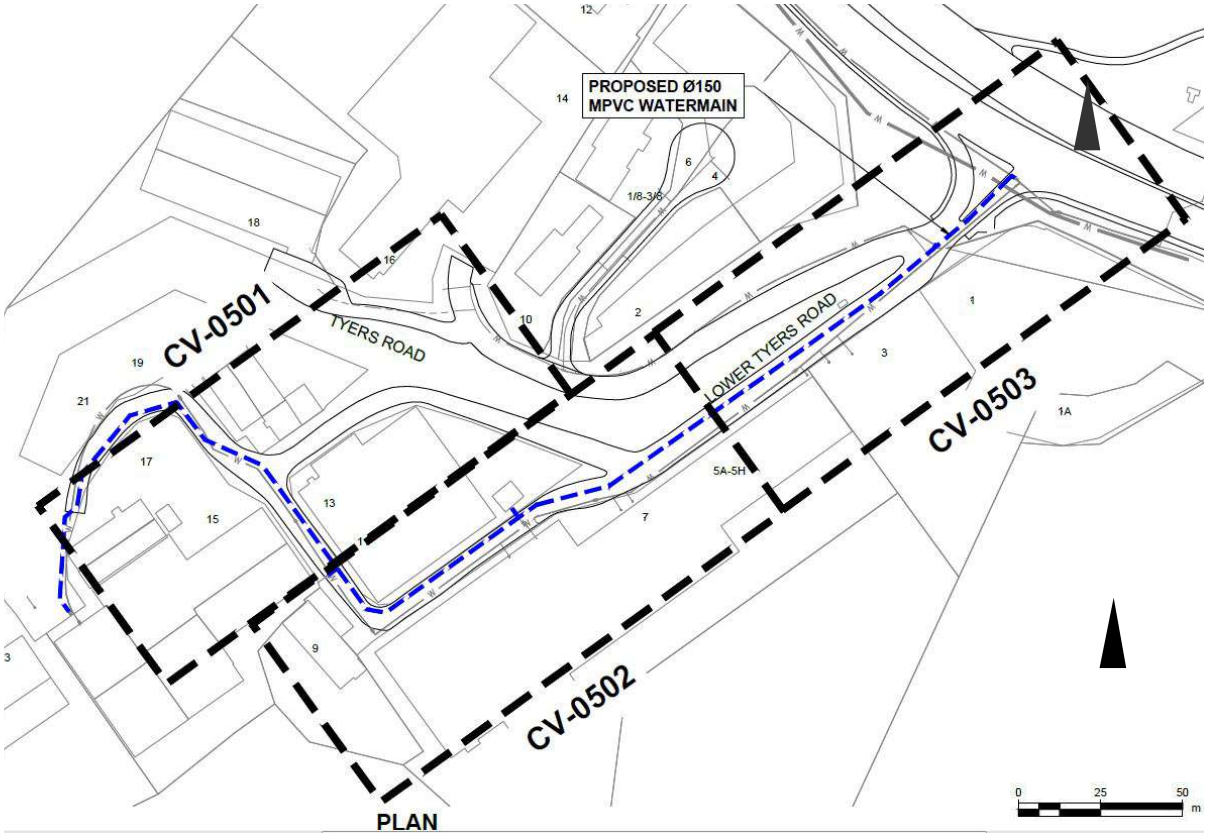


Illustration 3: Lower Tyers Road, Ngauranga Gorge, Wellington-water main route in blue (image supplied by Aecom)

2 History of the Site and Surrounding Area

The Ngauranga Gorge is situated in a wider area that has been occupied for several centuries, first by Maori, including Ngai-Tara and later Te Ati Awa and then by European immigrants from c.1840 onwards. The Ngauranga area was surveyed and subdivided up by William Mein Smith into a number of country sections at the instigation of the New Zealand Company (Mein Smith, 22nd June 2007) and the land on which Lower Tyers Road is situated on was originally part of Harbour District Section 8, Belmont Survey District Block XI (refer to Illustration 4, Illustration 5 and Illustration 6

2.1 Maori Occupation of the Wider Wellington Area

Adkin and Best (Adkin, 1959:5) identify Kupe as traditionally the earliest voyager to reach this country. Kupe's visit was followed some time later by the arrival of Ngai-Tara, who occupied the area on a more permanent basis (Adkin, 1959:6). Best also identifies Ngati-Mamoe and Ngati Ira as early inhabitants of the area, with Ngati Mutunga and Te Ati Awa coming to the region from Taranaki during the early part of the 19th century (Adkin, 1959:8-9).

There are a number traditionally recognised sites around central Wellington, particularly on coastal hill tops and inland ridges, but the sites that were still occupied by Maori at the time that the area was subdivided up by the New Zealand Company in 1940, included Te Aro Pa/Kainga, Pipitea Pa and Kumutoto Pa/Kainga, all close to the original shoreline. There were also cultivations grounds such as the Hauwai cultivation near the Basin Reserve. Moera cultivation area and kainga and the Nga Kumi Kumi cultivation area were located slightly further inland on the north-eastern slopes of the the Brooklyn Hill.

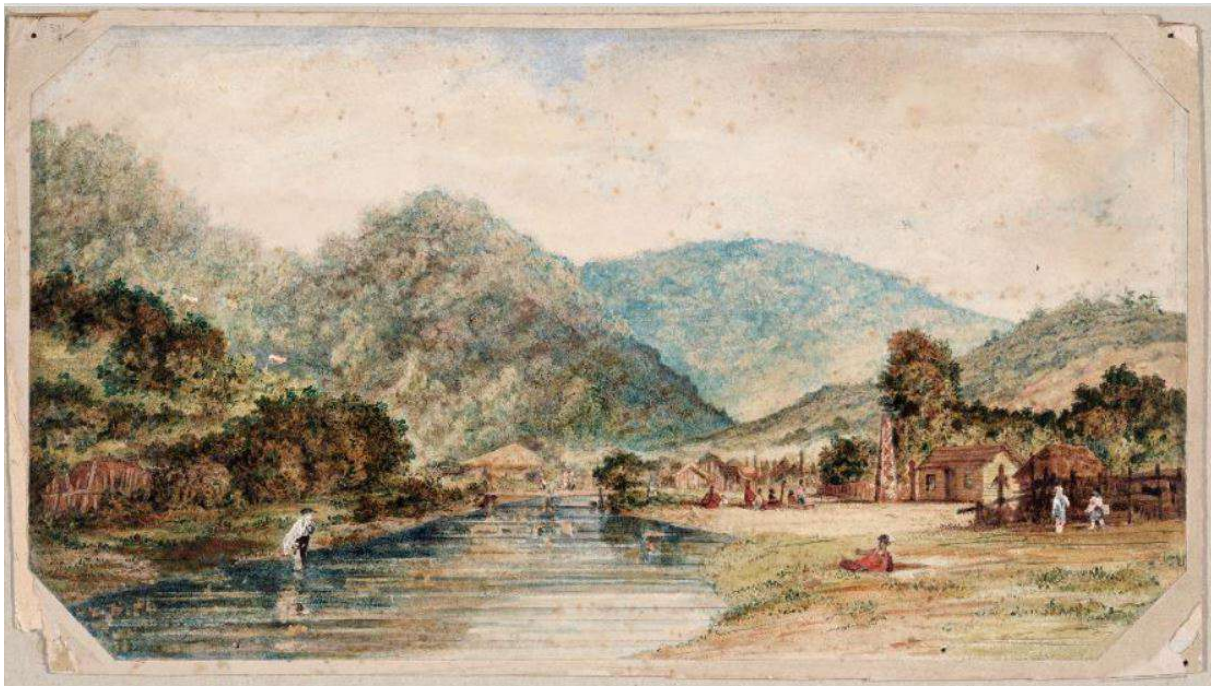


Illustration 4: Ngauranga Gorge and Stream. S. Brees ca.1843 (ATL B-031-008).

There were additional settlements and cultivations at Kaiwharawhara, at Ngauranga and at Porororangi, all on the route to Petone. Ngauranga (also written (Nga-uranga and Ngauhuranga) was a canoe landing place and was the site of a small Ngati Awa village (see Illustration 4). Te Wharepouri (of Nga-Motu hapu of Ati-Awa) is known to have lived there at one time (Ward, 1928:277).

2.2 Settlement and Ownership of the General Site Area after 1840

As with most of Wellington, the Ngauranga Gorge area was subdivided up during the 1840s into country sections by the New Zealand Company and later the New Zealand colonial government. Sections were granted to various individuals at that time.

Lower Tyers Road was originally part of Section 8, Harbour District, Belmont Survey District Block XI as seen in Illustration 5. This section was one of a number granted to 21 Ngauranga chiefs in October 1847 in exchange for cultivations located in Karori and Kaiwharawhara (Deeds Register volume 1, folio 300). This document made it clear that the 21 chiefs (represented by Te Manihera and Watene) retained rights to cultivations at Ngauranga, as parts of sections 7, 8 & 9 Harbour District with the remainder of the sections leased out to the New Zealand Government. The cultivated lands are shown

coloured yellow in Illustration 6 and included part of the Ngauranga Stream and surrounding area.

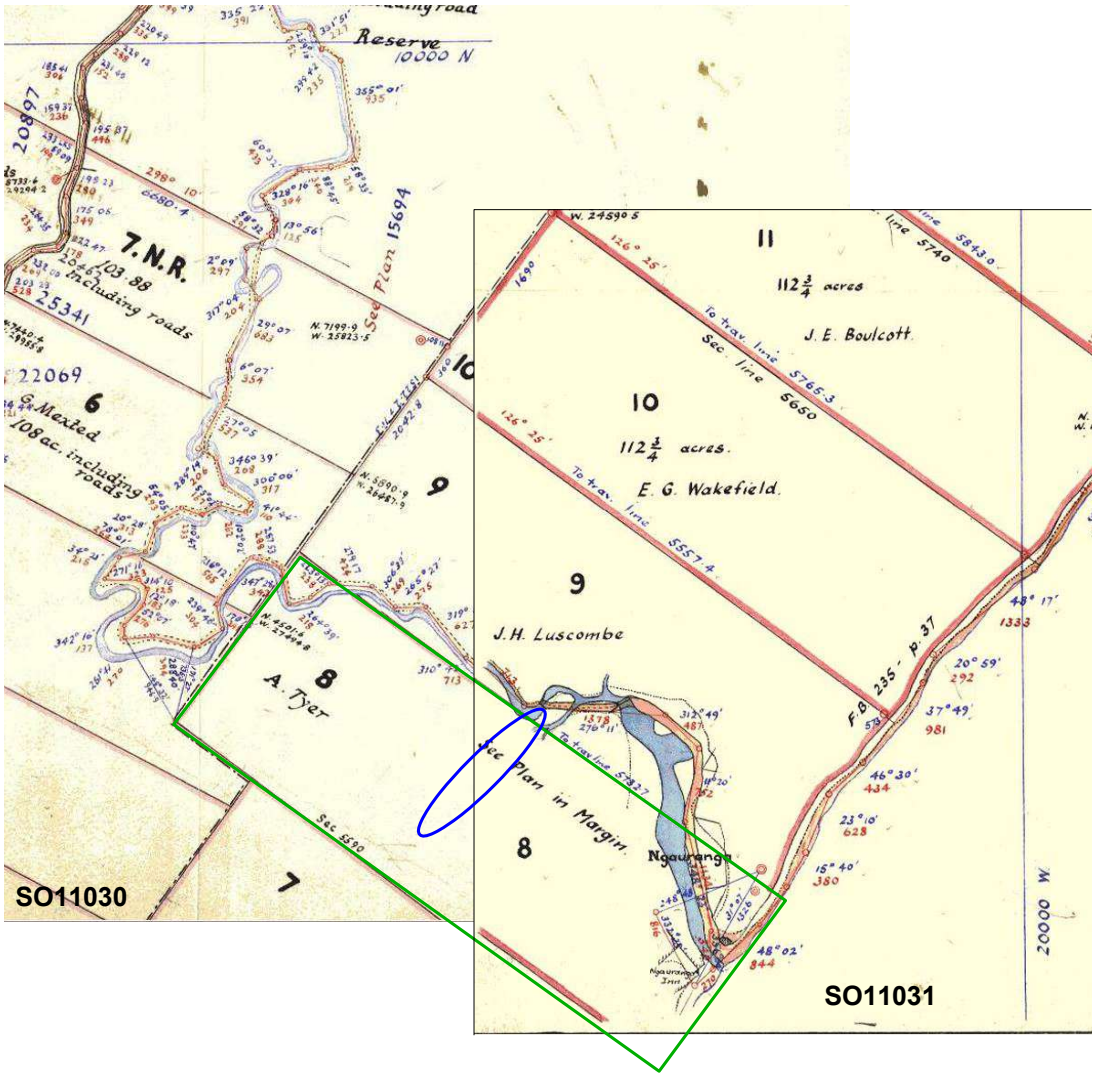


Illustration 5: Annotated details of SO 11030 and SO 11031 (c.1872- from Quickmap). Section 8 Harbour District, Block XI Belmont Registration District outlined in green, approximate location of Lower Tyers Road circled in blue.

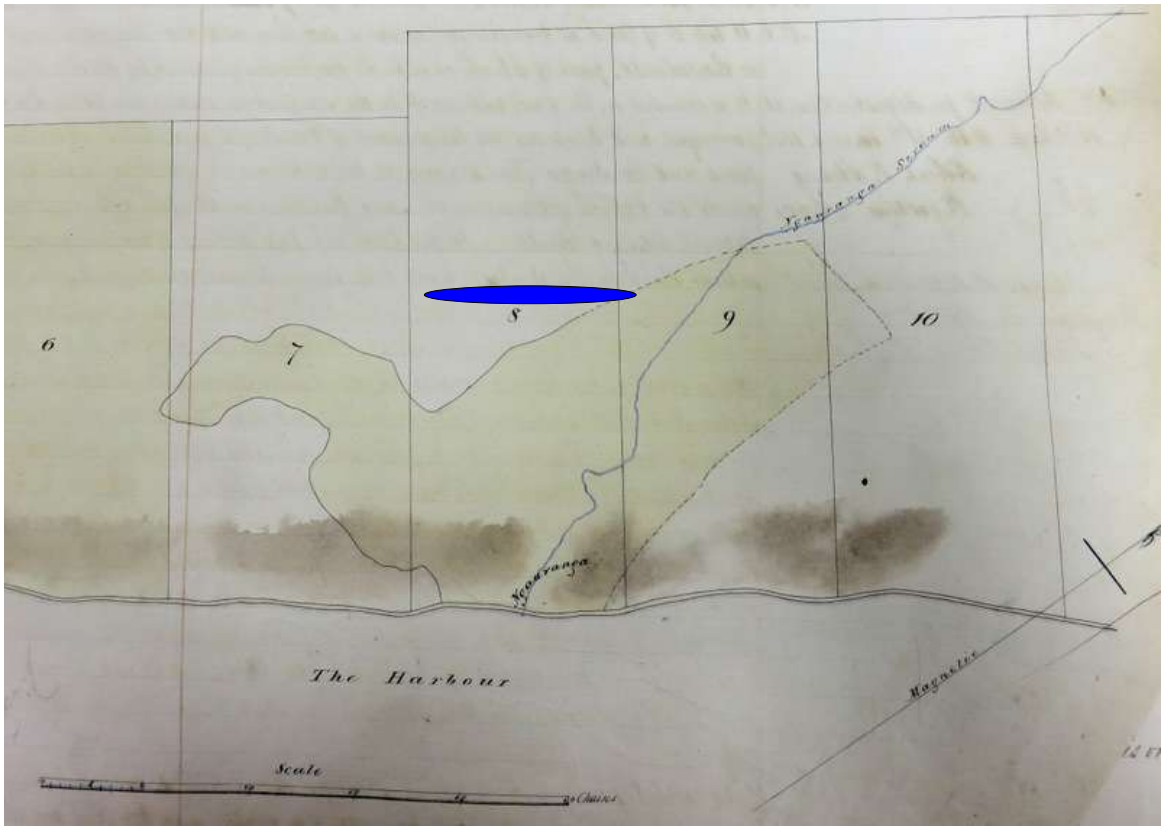


Illustration 6: Annotated detail of Wellington Deeds Register Volume 1, Folio 301 (National Archives. Approximate location of Lower Tyers Road shown in blue (Note: the Ngauranga Stream appears to be in incorrect location)

2.3 Ownership and Occupation History of Lower Tyers Road Area

It is possible to gain a good picture of land use in the Lower Tyers Road area, from a combination of Deeds Indexes and Deeds Registers (National Archives) and historic land titles (LINZ). The Deeds Books indicate that a 21 year lease was granted by Te Manihera and others to William Ellerslie Wallace (settler) in April 1853, for part of Section 8 Harbour District (Deeds Register Volume 3, Folio 60). It is not entirely clear whether or not the land leased to Wallace was part of the cultivation area, but a second plan dating to c.1872 (see Illustration 7) indicates that Tyers Road was just off the northern edge of the cultivation area. This shows the Ngauranga Stream in a slightly different location than the Deeds Register plan shown in Illustration 6, with Tyers Road located immediately to the north-west of the cultivations.

William Wallace ws married to Arapera Rongouaroa, daughter of Hemi Parai (of Ngati Haumia, Taranaki). Parai settled in Port Nicholson at Ngauranga, and was instrumental in securing lands at Te Aro Pa. For a time, Arapera and William Wallace lived at Ngauranga in a house owned by Manihera Te Toru, and Wallace ran a coaching hotel there (Wellington City Libraries, Biography: Hemi Parai).

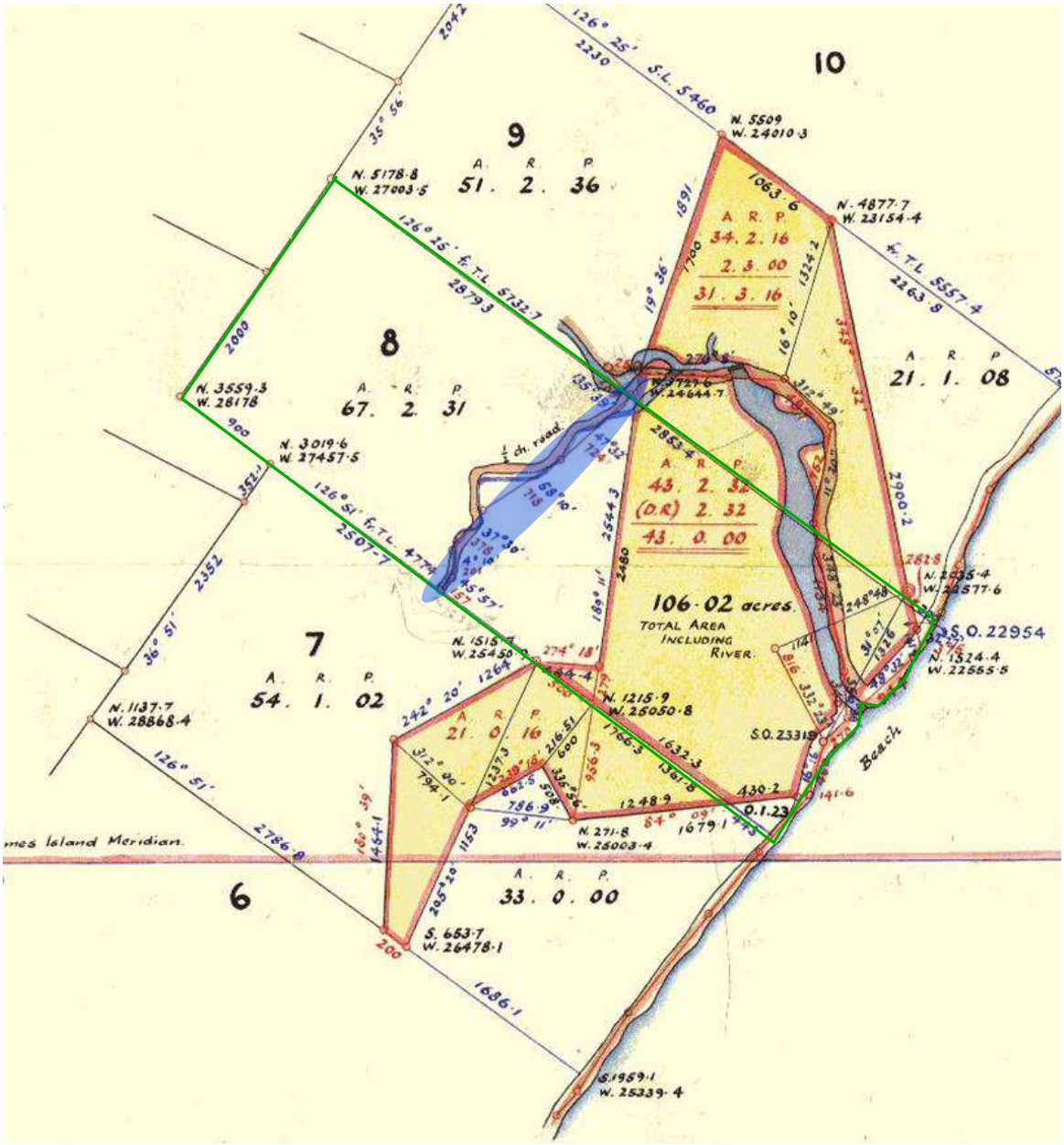


Illustration 7: Annotated detail of SO 11031 (c.1872- from Quickmap). Section 8 Harbour District, Block XI Belmont Registration District outlined in green, approximate location of Lower Tyers Road highlighted in blue. Ngauranga cultivation area coloured yellow.

It seems that after the land now containing Tyers Road was first leased out to William Wallace in 1853, it was never occupied by Watene, Te Manihera or any of the other 21 Ngauranga Chiefs, but cultivations may have continued nearby.

William Wallace re-assigned his 21 year lease to William Smart Loxley (merchant) in 1858. It seems that Loxley in turn transferred the lease to William Hickson (merchant) in the following year as a consideration for money owed to him (Deeds Register Volume 4, Folio 164). In 1862 the remainder of the 21 year lease was transferred by Hickson to Henry Death (settler) (Deeds Register Volume 8, Folio 186). In 1863 Death transferred his lease to William Clapham (publican) (Deeds Register Volume 8, Folio 188).

Ward (1928:278-279) describes Wallace's (later Futter's) Rainbow and Waterloo Inn at Ngauranga, with Clapham's Ngahuranga Hotel located on the opposite side of the stream. The location of Clapham's Hotel can be seen in Illustration 8 dating to 1882. Ward (1928:279) also notes that Mr. A. [Alfred] Tyer and Mr. F. [Frederick] Taylor were respectively operating a tannery and tallow works at Ngauranga by 1866.

It is not clear exactly what occurred when the original 21 year lease that held this part of Section 8, Harbour District ran out, but a renewal was logged in 1882 (Deeds Register Volume 82, Folios 1-3). This lease was between Te Manihera Matangi and Taari Waitara (lessors) and James Barber and Henry Barber (butchers) (lessees). An area encompassing 38 Acres at Ngauranga was leased by the Barbers for a period of 21 years from 25th April 1882. The Barbers set up what was to became the Wellington Meat Export Company, adjacent to Tyer's Tannery and Clapham's Ngahauranga Hotel.

A plan drawn up at the time that the Barbers took out their 21 year lease defines the land that they were leasing, and includes reference to several sub-lesees, including Alfred Tyer (also spelt Tire) and William Clapham (see Illustration 8).

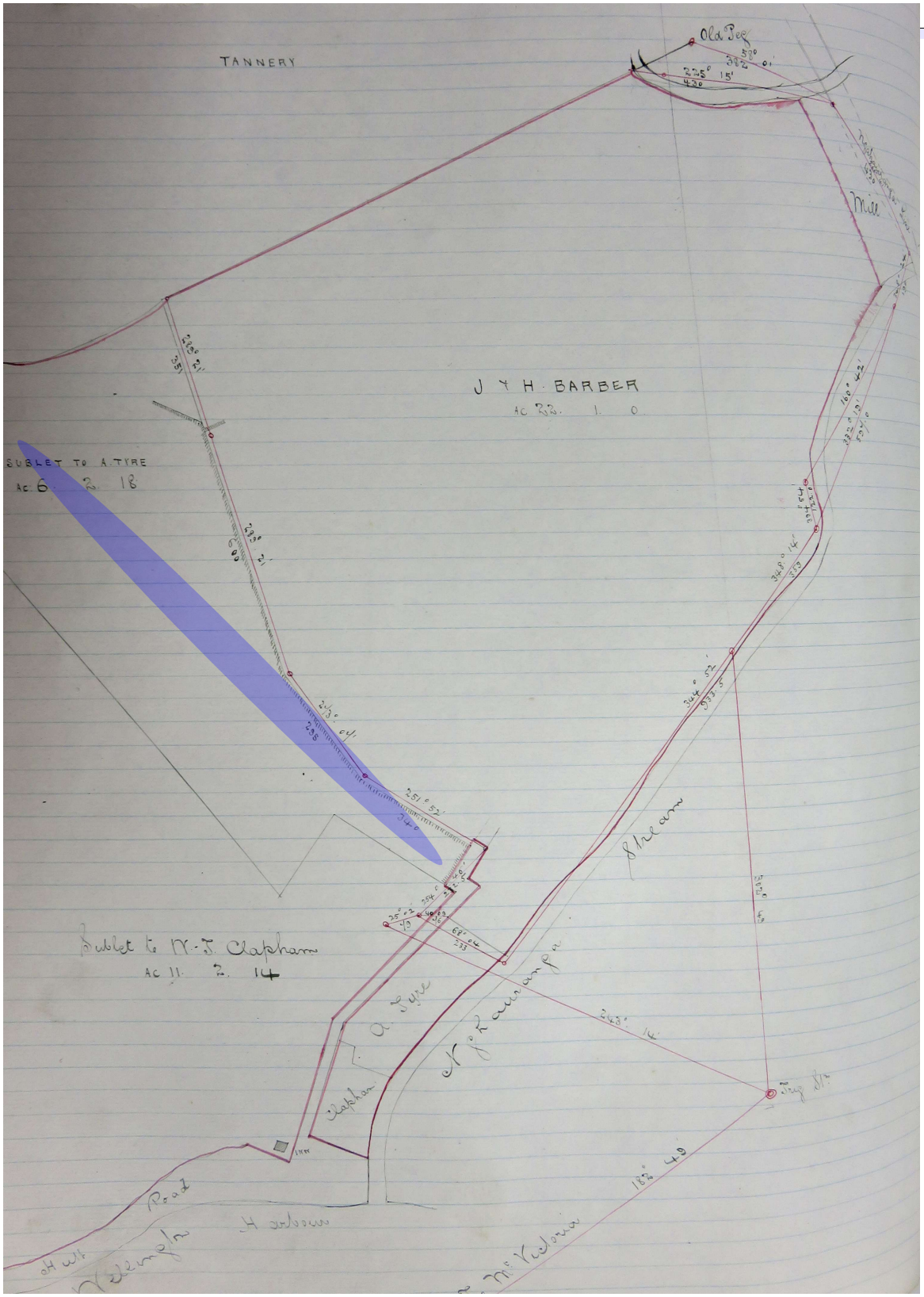


Illustration 8: Annotated detail of Wellington Deeds Register Volume 82, Folio 3 showing Barber lease with sub-lessees also indicated. Approximate location of Lower Tyers Road highlighted in blue.

2.4 Development of Tyers Tannery

It seems that there may have been a number of subleases on the area where Lower Tyers Road is located, including that taken on by Alfred Tyer himself. It is not known exactly when Tyer began to lease land in the area but sources indicate that he was operating a tannery at that location from c.1865 (Cyclopedia Company, 1897:816). Tyer is listed as a fellmonger and tanner at Ngauranga and it seems that his business was conducted on the land shown in Illustration 8 as being adjacent to the "Hutt Road" and the Ngauranga Stream, where Lower Tyers Road is now situated. Details of Tyer's business as noted in 1897 are as follows (Cyclopedia Company, 1897:816):

> *"More than thirty years ago Mr. Tyer founded the large business which is now conducted by him as above. From the commencement he determined that he would produce a good article in every line. He therefore established relations with Britain and Australia for the supply of bark and other materials required in tanning, of the very best quality procurable. The quality of the goods manufactured at the Ngahauranga tannery and fellmongery is such that there is no trouble about the sale of the leather, which "sells itself," and it is only on rare occasions during severe depressions that it is needful to export a small quantity to London.*
>
> *Mr. Tyer's fellmongery is situated on nine acres of leasehold land adjoining the large works of the Wellington Meat Export Company at Ngahauranga. The works are admirably arranged for the conduct of an extensive business. On arrival the skins are soaked for twelve hours in large pits, from which they are removed to the lime or paint house, where they are allowed to remain over night. By means of a trolley and tramway the skins are conveyed to the pulling room, where the wool is taken off rapidly and easily, the skins being sent to this tannery and the wool to the scouring room.*
>
> *The machinery is driven by a powerful steam engine of forty-horse-power, made by Messrs. Luke and Son, the steam being generated by one of Messrs. Robertson and Co.'s boilers. The scouring machine, which is a marvel of simplicity, is used to thoroughly-cleanse the wool, which passes automatically, first through hot, and afterwards through cold water, leaving the machine after going between rullers which are said to give a pressure equal to twenty tons. The wool is then subjected to treatment in the hydroextractors, of which there are two.*
>
> *The drying process is accomplished as far as practicable in the open air, but when the weather is unsuitable the drying is rapidly accomplished by an ingenious arrangement whereby the heat from steampipes is forced by means of fans, making 900 revolutions per minute through the raw material. When ready for baling, a powerful screw press is used to complete the process.*
>
> *The tannery is situated about a quarter of a mile up the Ngahauranga stream on a block of freehold land of fifty-two acres in extent. The buildings are well adapted for the purposes of the trade, and one hundred and seventy-six pits—comprising soaks, limes, bates, hangers, handlers, pits, and spenders—are constantly used in the various processes*

required to produce leather—which includes all classes of shoe and harness leather.

The machinery, which includes the most modern plant for carrying on a large trade economically and effectively, is driven by a large horizontal steam engine and two smaller engines.

Over 100 hands find regular employment at Mr. Tyer's tannery and fellmongery, and the whole production of these works is disposed of wholesale to the trade."

A plan of the tannery works as at 1907 is shown in Illustration 9 and Illustration 10. This plan was drawn up to show the closure of a former (un-surveyed) road and the survey of a new road (now Tyers Road-not to be confused with Lower Tyers Road) and a right-of-way (now part of Lower Tyers Road). An enlarged detail of this plan with buildings marked in red can be seen in Illustration 10. This shows the relationship of the various tannery structures to the route of the new water main.

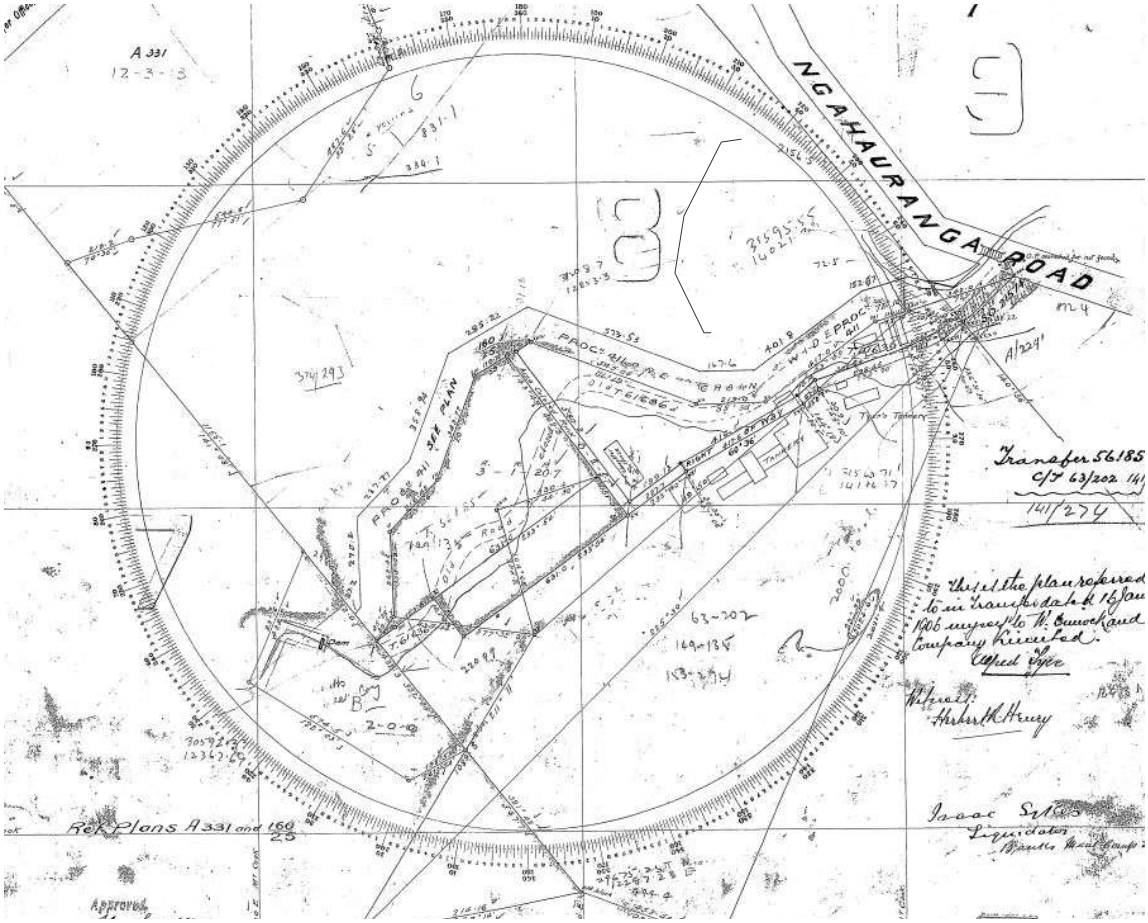


Illustration 9: A 2029, Plan of part Section 8 Harbour District [1906] (From Quickmap).

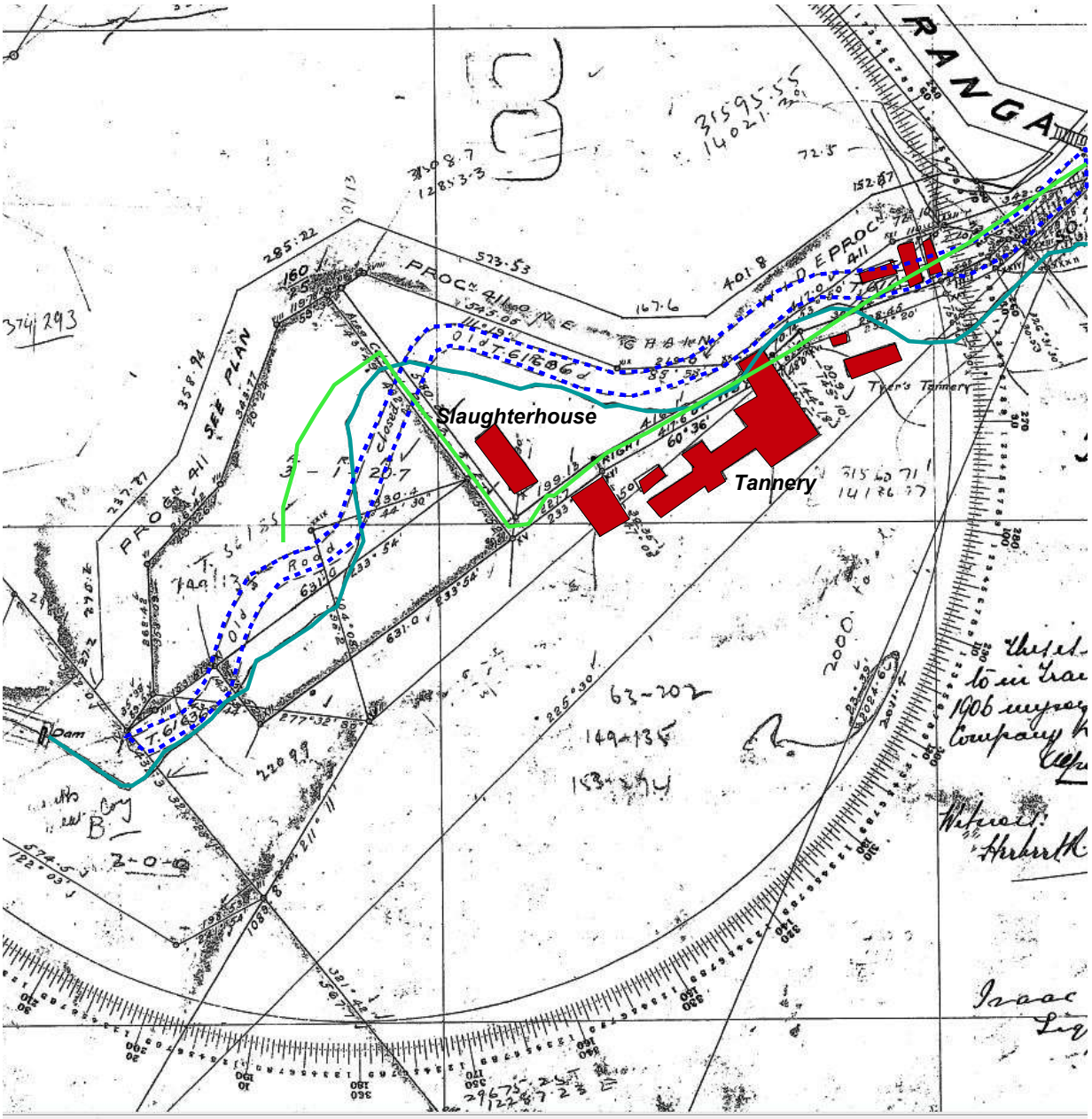


Illustration 10: Detail of A 2029, Plan of part Section 8 Harbour District [1906] (From Quickmap). Location of Tyer's Tannery buildings marked in red. Location of original, closed tannery road marked in blue. Approximate route of new water main pipe (on Lower Tyers Rd-right-of-way) indicated in green, old stream in turquoise.

Two additional illustrations may also give further detail on the layout of the tannery works. These can be seen in Illustration 11 and Illustration 12. The first is from an unverified source and is not dated, with the orientation of the buildings appearing to be different from that shown in 1906 (see Illustration 10). The other is dated to c.1920s and shows the entrance to Tyers Road, with precipitous rocky outcrop on the northern side. Both images indicate the steepness of the surrounding area, while the tannery buildings themselves are located on relatively level ground.

The tannery works was in operation at this site until well into the 20th century, eventually being taken over by Hutton's bacon factory.

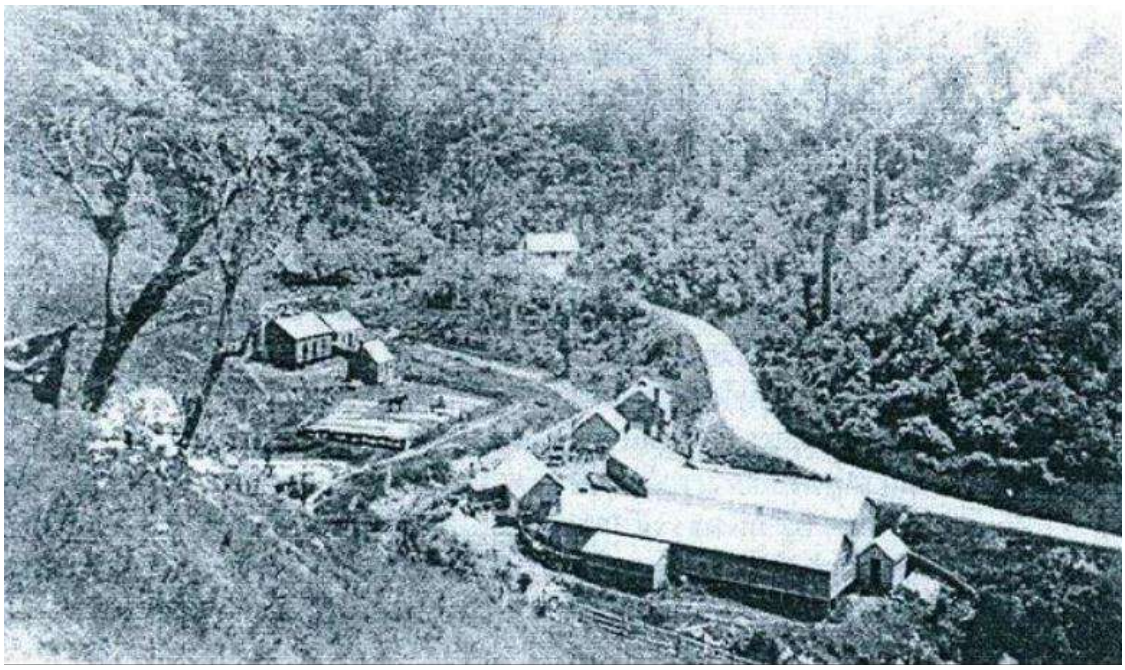


Illustration 11: Unverified image of Tyers Tannery (nd) (source: http://www.geni.com/people/Alfred-Tyer/6000000002984589456)

Illustration 12: Ngauranga Gorge-Tannery (now Huttons) (WC Archives 00138:0:13157)

3 Archaeological Monitoring

Archaeological monitoring was carried out 18th September to the first week of October 2015. The new water main pipe was laid down in sections, with each section filled in once connected to the previous section. Work began at the west end of Lower Tyers Road and proceeded along the route of Lower Tyers Road to where it connects to Ngauranga Gorge, finally connecting in to the central water main.

Section drawings were made periodically along the route and any items of potential cultural or archaeological interest were sampled and/or recorded. In general the water main trench reached a depth of up to 1m and was 700mm wide.

Because the new water main covered a distance of over 400mm, the excavation work is discussed in relation to three sections: 1, 2 & 3 as shown in Illustration 13, Illustration 14, Illustration 23 and Illustration 39.

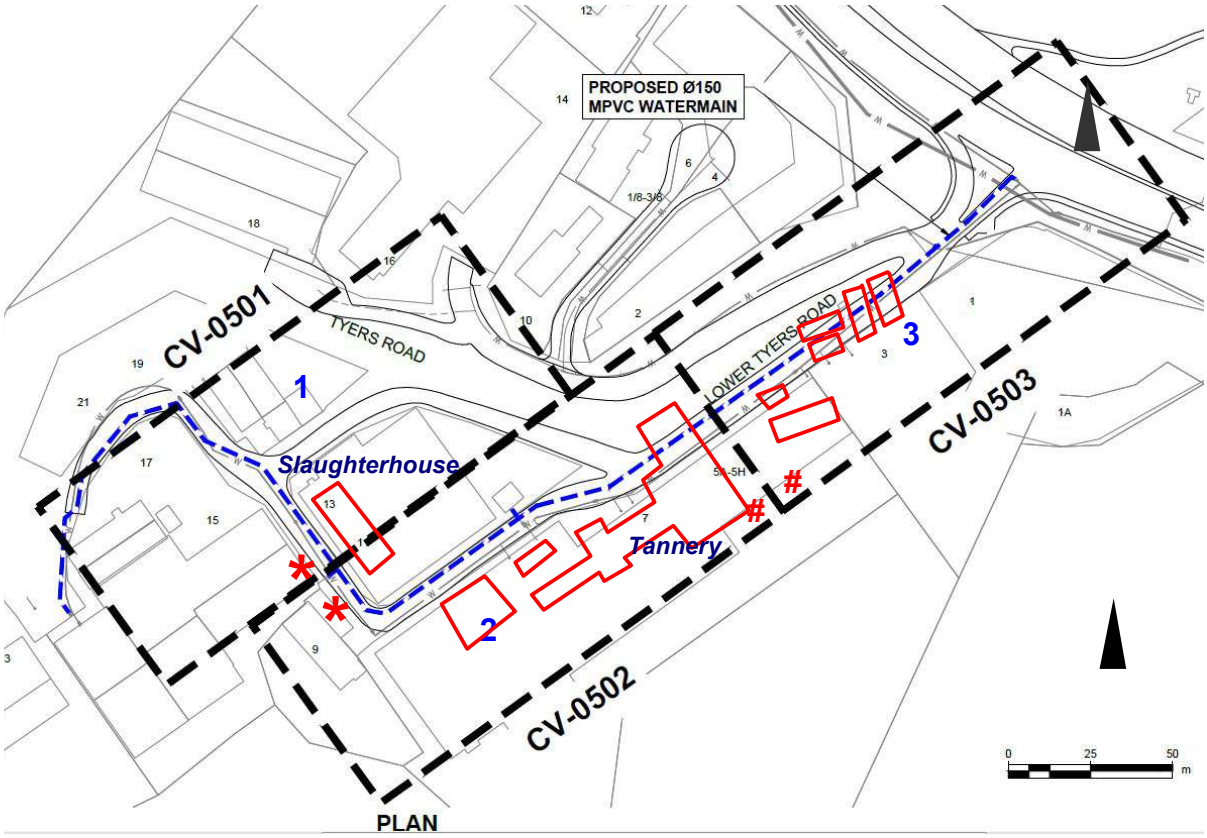


Illustration 13: Lower Tyers Road, Ngauranga Gorge, Wellington-proposed water main route in blue, approximate locations of tannery buildings in red (base image supplied by Aecom)

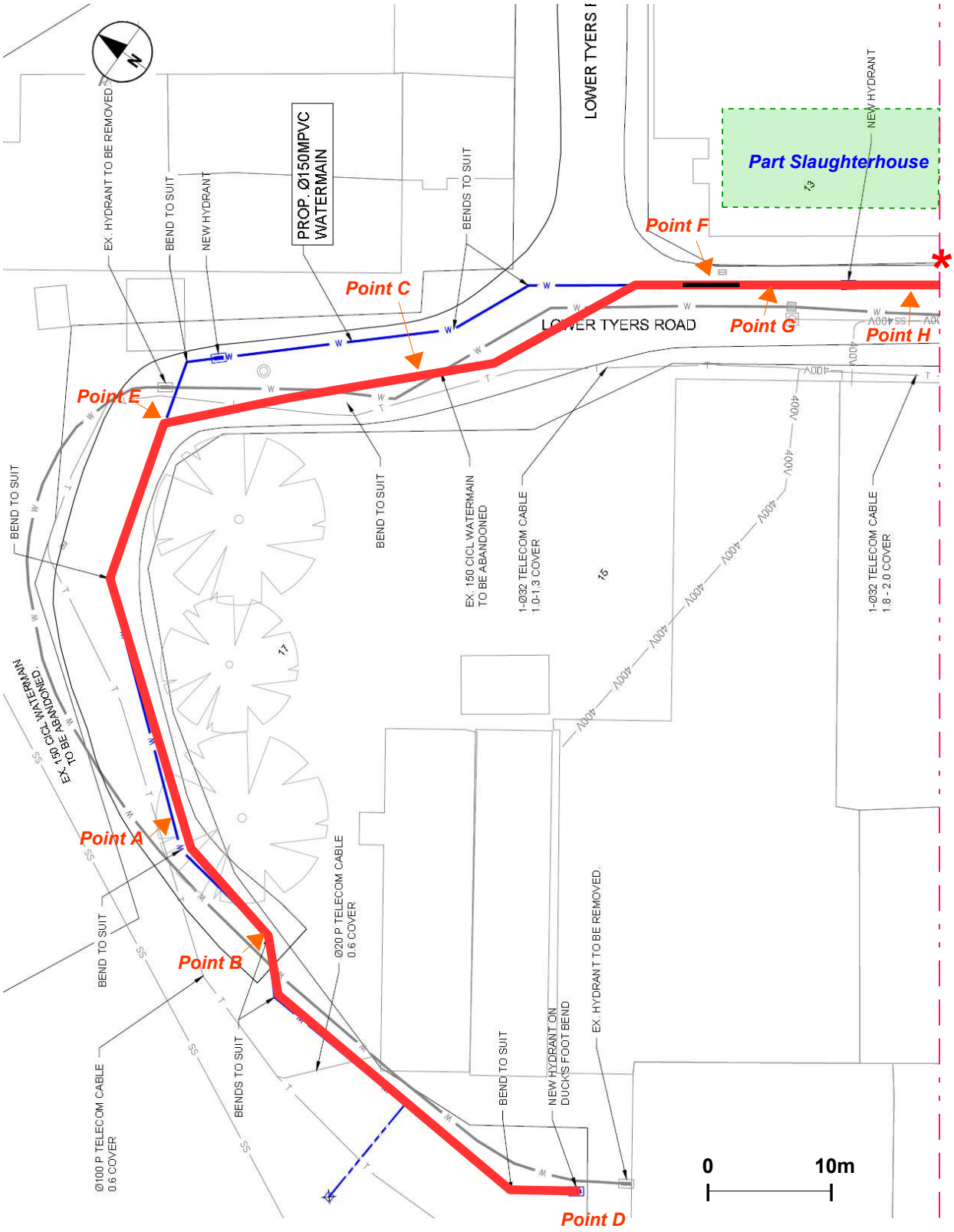


Illustration 14: Section 1: Lower Tyers Road Water Main Renewal: Actual route of water main trench in red (base plan supplied by Aecom). 1906 buildings shown in green.

3.1 Section 1: Archaeological Monitoring

Excavation work began in the area from Point A northwards as shown on Illustration 14. This area was excavated down by 1m and showed mixed soils over an existing iron water pipe (see Illustration 15). Soil layers consisted of a layer of asphalt [L1] (120mm) over hard fill [L2] (300-300mm thick) over dark, mixed fill layers of ashy, burnt soils [L3] and pumice-filled soils [L3a] (up to 300mm deep).

Small quantities of crushed brick inclusions were present in L3 which constituted a modified cultural layer. This material in turn sat over another hard fill layer of mixed clay and base course material [L4] to final depth of 1000mm. The metal pipe was set into the soil at 800mm below road level.

It appeared at this point that fill material had been put in place to bring the road up to the present level. This may have occurred at the time that a new road was surveyed out there in 1906 (refer to Illustration 10).

Illustration 15: Point A Cross-Section facing west: Lower Tyers Road 18th September 2015 (scale 1m)

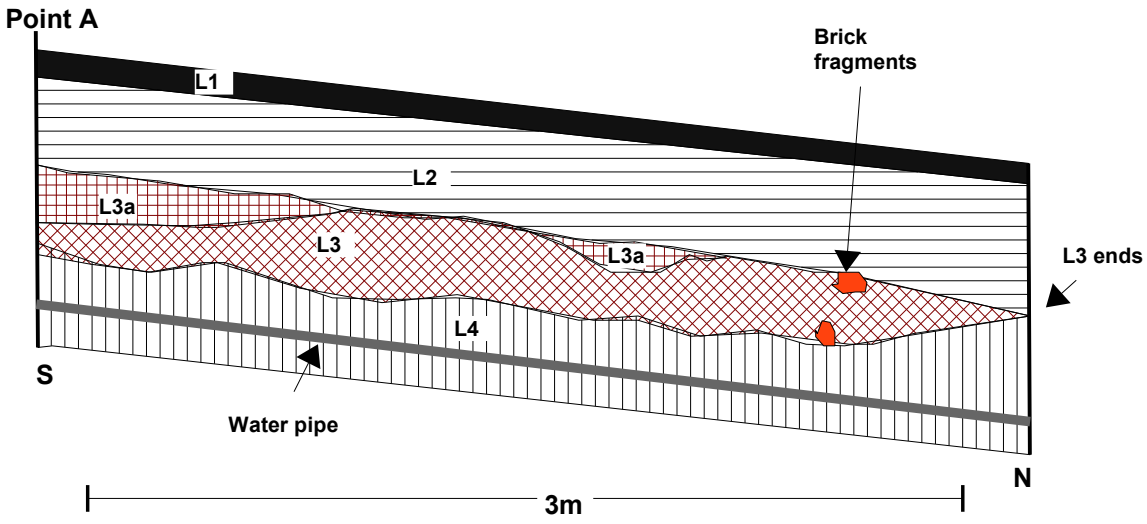


Illustration 16: West baulk X-Section Point A (18th September 2015)

Illustration 17: Looking north from Point A (18th September 2015)

Excavation continued south of Point A, to the end of Lower Tyers Road where it joined a new hydrant (see Point D, Illustration 14). The ashy soil layer continued to a point approximately 10m south of Point A (see Point B on Illustration 14) but there were no further cultural inclusions within the remainder of the trench contained hard fill to the base (around 1m deep).

It appeared that the southern end of Lower Tyers Road had been previously infilled by up to 1m deep for the majority of its extent. The hard fill observed in two layers within the Point A cross-section [L2 & L4] separated by a dark, ashy layer ([L3], had amalgamated into a single layer some 3.3m north of Point A and this trend continued throughout the remainder of Section 1 (see Illustration 14).

The new alignment crossed over an historic stormwater drain at Point E, Section 1 (see Illustration 14).

At Point C (approximately 45m further on from Point A-see Illustration 14) a brick fragment was observed at the base of the trench at depth of 1m. It

Illustration 18: Red earthenware drain pipe at end of concrete slab: Point 21st September 2015)

had been manufactured through extrusion and wire cutting. No makers marks or other distinguishing features were noted on the fragment.

Further along the trench in Section 1 a piece of red earthenware drain pipe was exposed at Point F, Section 1, at the end of a concrete slab set some 800mm below road level (see Illustration 14, Illustration 18 and Illustration 19). The slab appeared to have been cast in place and measured 4400mm long and was 120-180mm deep. It is likely to be a building footing of some kind, although no buildings were shown in this location on the 1906 plan of the tannery (see Illustration 13). This footing may pre-date that image as it seems unlikely that a new building would have been constructed in the roadway after that time.

The red earthenware pipe present at this point was a junction of several pipes. This is likely to relate to the concrete slab present nearby. The pipes and concrete slab were covered by multiple layers of clean, hard fill.

At Point G a mixed fill was present in the trench to a depth of up to 1700mm (see Illustration 21). Layers included asphalt [L1] to a depth of 120mm overlying a thin layer of compacted rocky, yellow clay [L2] to a depth of 220mm. This overlaid a darker soil containing traces of fragmented brick [L3] to a depth of 420mm.

Below this darker soil was a layer of yellow, clay-rich hard fill [L4] to a depth of 700mm below road level. A mixed hard fill [L5] was present underneath this to a depth of at least 1700mm.

The additional excavation in this section of the trench was carried out to try to determine the depth of a natural, underling base layer but this was not reached even at 1700mm below road level.

Illustration 19: Concrete slab at Point F (21st September 2015-scale 500mm)

Illustration 20: "Stein A" fire brick: Point G (21st September 2015)

Layer 5 at Point G contained sparse brick fragments, and several complete bricks present from a depth of around 700-900mm. One fire (refractory) brick was stamped STEIN A (see Illustration 20). This brick is most likely to have been manufactured by John G. Stein & Co. a firm operating from Falkirk, Scotland from 1887 until the later 20th century (Falkirk Community Trust).

Stein produced a large variety of types of bricks primarily fire bricks such as that found at here. These were designed to withstand high temperatures and were generally used for fires, kilns and furnaces and often in industrial settings. It is not clear when this brick would have been manufactured but it looks to be later 19th-early 20th century by the quality of the manufacture and marking. It is likely that the "STEIN" would have been stamped separately to the "A" on the brick as these were added on an ad hoc basis depending on the type of brick being manufactured. The "A'" may have been an indication of the brick containing alumina, a main constituent in fire bricks (Cranston, pers. com. 12, 03.2016).

Other cultural material found at Point G included wire cut red bricks with one press moulded, red brick stamped "SSB...". No further details have been ascertained about this brick so far. A mid green bottle base found in association was embossed L.T. underside the base and was most likely part of a beer bottle. A small amount of thin window glass, sheep bone fragments, copper wire, coal and charcoal was also found at this point. The material appeared to be general fill, rather than a specific rubbish pit, probably used to boost up the level of the road.

At Point H (see Illustration 14), a second brick deposit was encountered. This material was present at a depth of 900mm and included whole bricks in loose association (see Illustration 23 and Illustration 22). These did not seem to have been formed into a path or foundation and were not mortared. Again they are

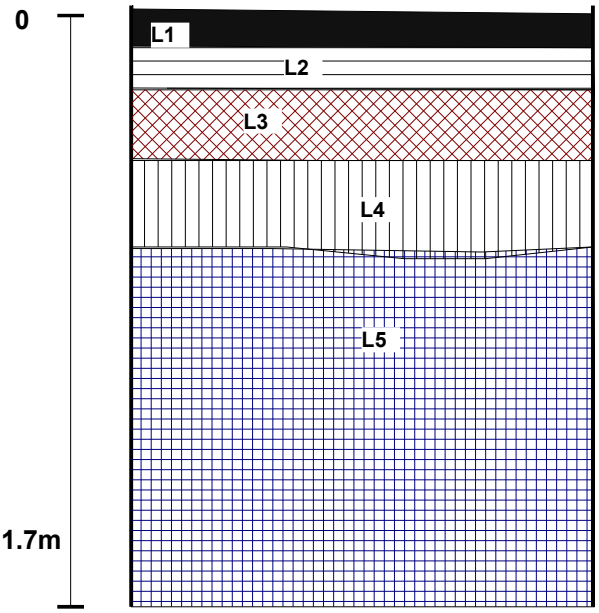


Illustration 21: Point G: X-Section North-East Baulk: 21st September 2015

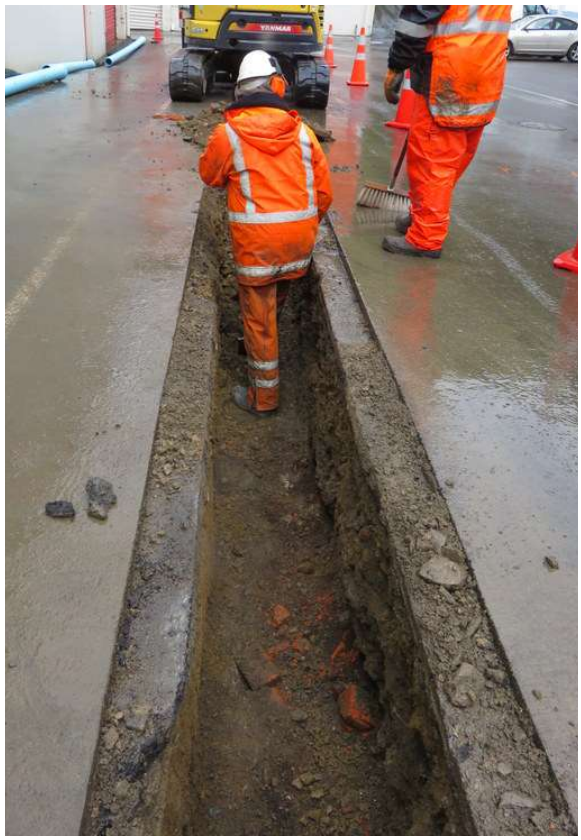


Illustration 22: Brick concentration: Point H (18th September 2015-scale 500mm)

most likely to represent fill material. They were present for a distance of 1.7.-2m from Point H to the south-east.

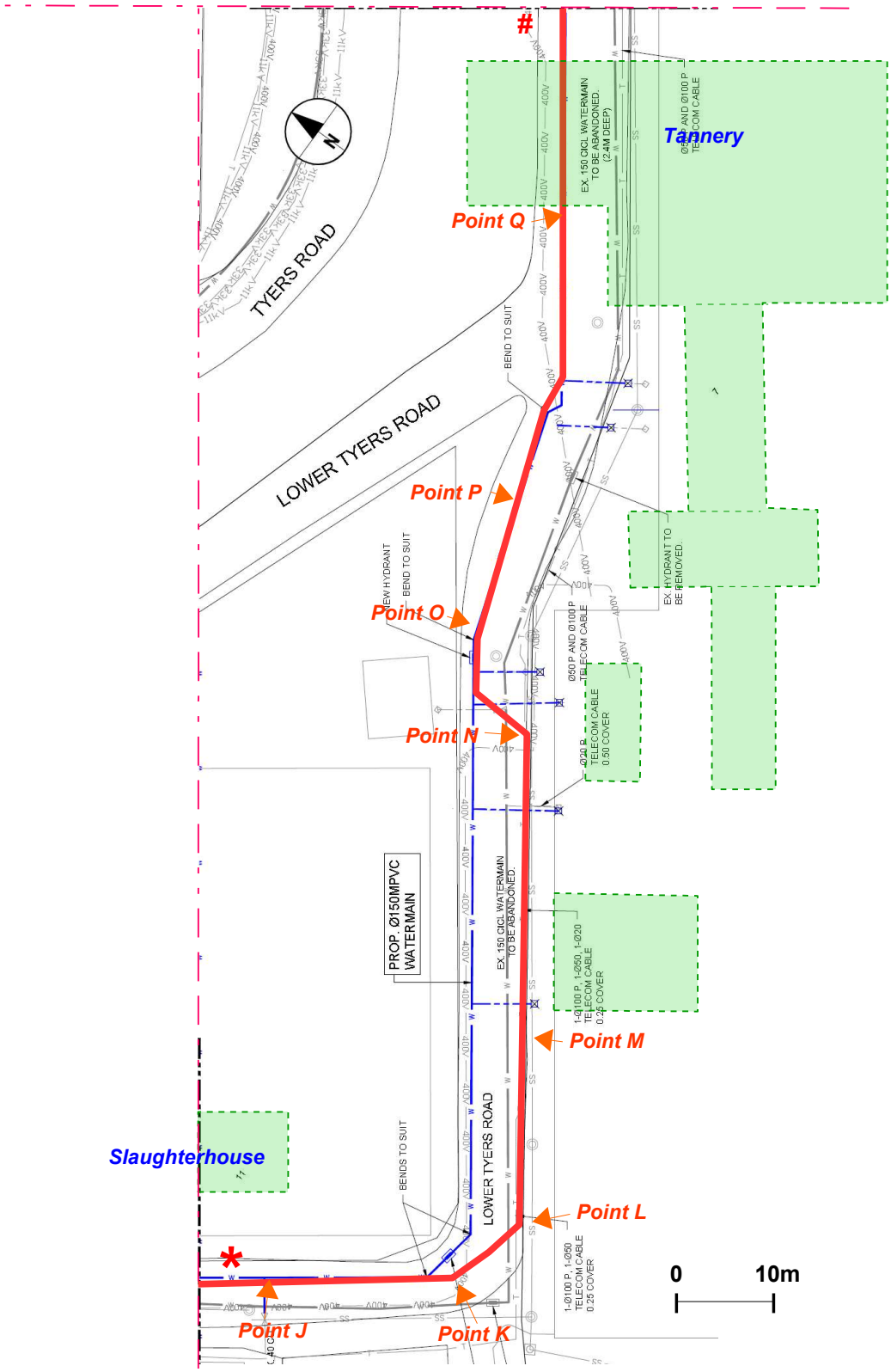


Illustration 23: Section 2: Lower Tyers Road Water Main Renewal: Actual route of water main in red (base plan supplied by Aecom). 1906 Buildings indicated in green.

3.2 Section 2: Archaeological Monitoring

Several glass aerated water bottles were found at a depth of 700mm below road surface at Point J (see Illustration 23). This included an A.G. (Alfred George) Saunders 10oz bottle with Codd type marble closure with two left tears and applied lip (see Illustration 24. The bottle was embossed "A.G. Saunders Trade [crossed key motif] Mark Wellington" on the face; "Cannington Shaw & Co Ld Makers St Helens England" on the lower back and "3264 A.G.S. 05" underside the base. Fisher dates an identical bottle to a 1907 manufacture (Fisher, 2003:167).

Illustration 25: A.G. Saunders aerated water bottle: Point J. Base and back marks

Illustration 24: A.G. Saunders aerated water bottle: Point J (scale in cm)

A.G. Saunders took over the large, Thorndon Quay business of C. W. G. Brodie in 1906 but was only in operation until 1909 when he sold to the Phoenix Aerated Water Company (Fisher, 2003:223). This certainly makes a narrow timeframe for the production of this bottle, and tends to suggest that material was deposited in the Tyers Road carriageway area to assist with forming the new road following the 1906 survey.

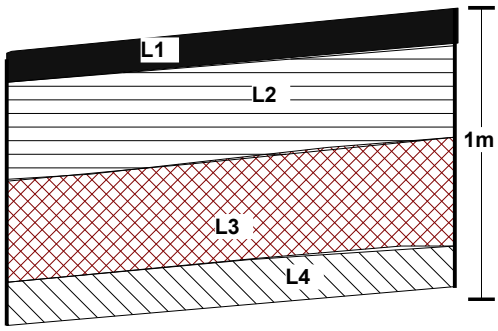


Illustration 26: X-Section Point K: West baulk

Fill material was observed down to the base of the trench throughout this area, a depth of 900mm and it is not known at what depth the natural subsoil is present.

A soil cross-section recorded at Point K (see Illustration 23) shows that at that point the trench may have reached the natural substratum at a depth of 900mm (see Illustration 26). At Point K, asphalt [L1] covered a layer of clean, yellow hard fill [L2] which was present to a depth of 400mm. This overlaid a layer of darker hard fill with fragmented brick inclusions [L3]. This fill overlaid a clean, yellow clay material that may have been a natural soil layer, but may also have been another layer of clean fill [L4].

Illustration 28: Possible natural, clay substrate at base of trench [L4]: Point K facing north-east (22nd September 2015)

Illustration 27: Wide-bore red earthenware stormwater pipe Point L-Point M facing south-west (22nd September 2015)

At Point L (see Illustration 23) a wide-bore, red earthenware stormwater pipe was noted running parallel with the new trench at 800mm below road level. The pipe was 250mm diameter and it continued within the side of the trench before turning and leaving it 20m further on at Point M (see Illustration 23).

Beyond Point M, the new trench continued uninterrupted until reaching Point O, having crossed back over to the north-western side of the carriageway at Point N (see Illustration 23). At Point O at the base of the trench (950mm) there was a lens of mixed, brown-red sand (iron sand?) mixed with pieces of slag and broken, wire-cut red brick [L6] (see Illustration 29 and Illustration 30). A red earthenware drain pipe was present at the base of the trench (1m deep). Soil layers in this area were a little more complex that in other parts of the trench. The asphalt topper [L1] covered a layer of clean, hard fill [L2]. This overlaid a greyer coloured fill with small brick and stone inclusions [L3]. Beneath this was a layer of yellow-grey fill

Illustration 29: red earthenware drain pipe: Point O facing north-east

containing larger stones [L4]. Fragments of fire brick were also found in this layer. A thin layer of gray clay was present beneath this [L5], overlying the lens of ashy sand with slag and brick fragments [L6]. The red earthenware drain pipe was present at this depth. Backfill above the drain pipe came from [L3] so it may be fairly modern.

At Point P (see Illustration 23) several layers of concrete slab were observed at a depth of 700mm-1m (see Illustration 31). A this point the asphalt [L1] overlaid a clay hard fill containing brick and stone fragments [L2].

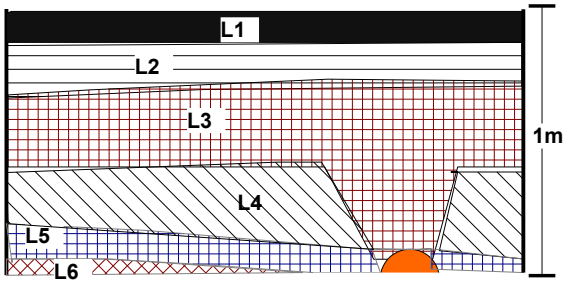


Illustration 30: X-Section Point O: North-western baulk

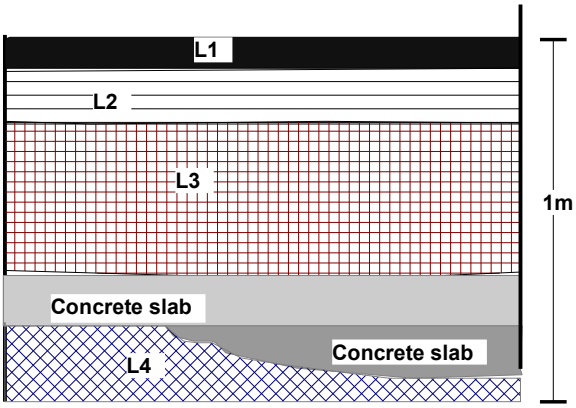


Illustration 31: X-Section Point P: South-eastern baulk

Beneath this fill was a mixed layer of apparent demolition rubble including broken concrete and brick fragments within a sandy, clay-loan [L3]. Two layers of concrete slab were present beneath this probable demolition material, overlying a layer of brown, loamy clay that may have contained organic material [L4]. This section of the trench showed a great deal of disturbance in general, and although no buildings are indicated directly in this position in the 1906 survey plan (see Illustration 23), it seems likely that there was some sort of structure here at one time, possibly predating 1906.

Illustration 32: Point P: concrete slabs (23rd September 2015) (scale 500mm)

At Point Q a 2.5m length of dressed timber with evidence of charring was found at a depth of 900mm (see Illustration 33). This may relate to the demolition of the tannery buildings shown on Illustration 23, because part of the main structure was located close to Point Q.

Illustration 33: Point Q: Charred, dressed timber (23rd September 2015) (scale 1m)

3.3 Section 3: Archaeological Monitoring

Between Point Q (see Illustration 23) and Point R (see Illustration 39), there was a fairly uniform stratigraphy within the trench (see Illustration 34 and Illustration 35). This consisted of the asphalt topper [L1] overlying a 25mm deep dark, compacted clay fill with sparse crushed brick, slag and metal fragments [L2]. Beneath this layer was a fairly uniform fill of larger base coarse pieces with no cultural inclusions [L3]. At the base of this layer, some 800-900mm below road surface, there was an additional layer of dark fill containing wire-cut bricks (some mortared but likely not in original position) [L4].

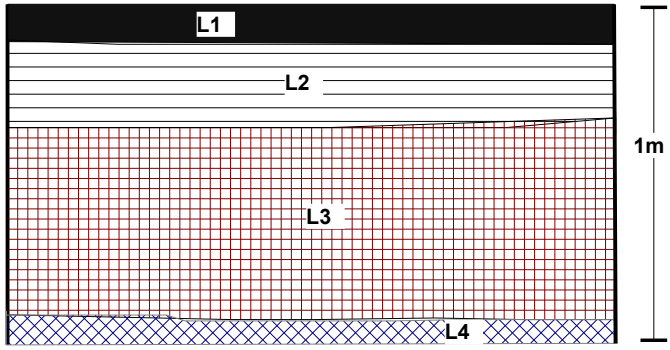


Illustration 34: Generalised X-Section Point Q-Point R: North-western baulk

It is not known how deep this additional layer [L4] of fill material is or at what level the natural substrate is located. However, there was certainly additional cultural material present there. Part of the slaughterhouse building was located across the route of the water main trench from approximately at the location of Point Q to 15m closer to Point R which was 60m north-west of Point Q. The bricks observed at the base of the trench were certainly more concentrated closer to Point Q, but there was no distinctive change in the trench stratigraphy to indicate the end of the building. There were also several cultural items found in the trench just north-east of Point Q, where the building would have been situated. This included a ferrous spring, and bolt and a ferrous barrel lid (see Illustration 36).

It is likely that the material observed at the base of the trench (at 900mm-1m below road level) is demolition material associated with the removal of this part of the slaughterhouse

and the formation of the new right-of-way (Lower Tyers Road) after 1906. Older deposits may well still be *in situ* below the level of the trench (greater than 1m below road level).

Illustration 35: North-east of Point Q showing darker fill material with bricks [L4] at base of trench (800-900mm) (23rd September 2015) (scale 500mm)

Illustration 36: Items found north-east of Point Q: L) barrel lid, R) spring & bolt.

From Point R (see Illustration 39), the layer of base course [L3] was found to the bottom of the trench (900mm-1m) right up to the intersection of Upper and Lower Tyers Road (Point S on Illustration 39). This area crossed the location of at least three tannery buildings as shown in 1906 (see Illustration 39) but it seems that their remains may be present at a greater depth than 900mm with the roadway having been substantially built up.

From Point S, the trench dropped down to a depth of 1.6m as it reached the intersection with the Ngauranga Gorge Road (see Illustration 37 and Illustration 38.) All material in that section of the trench consisted of layers of base coarse, concrete and hard fill relating to the formation of the Motorway, the entrance to Tyers Road and the services underneath the road surface (such as the trunk water main). NO cultural material was seen there.

Illustration 37: Facing south-west toward Point S (28th September 2015)

Illustration 38: Facing north-east to Point T: Ngauranga Gorge Road (28th September 2015)

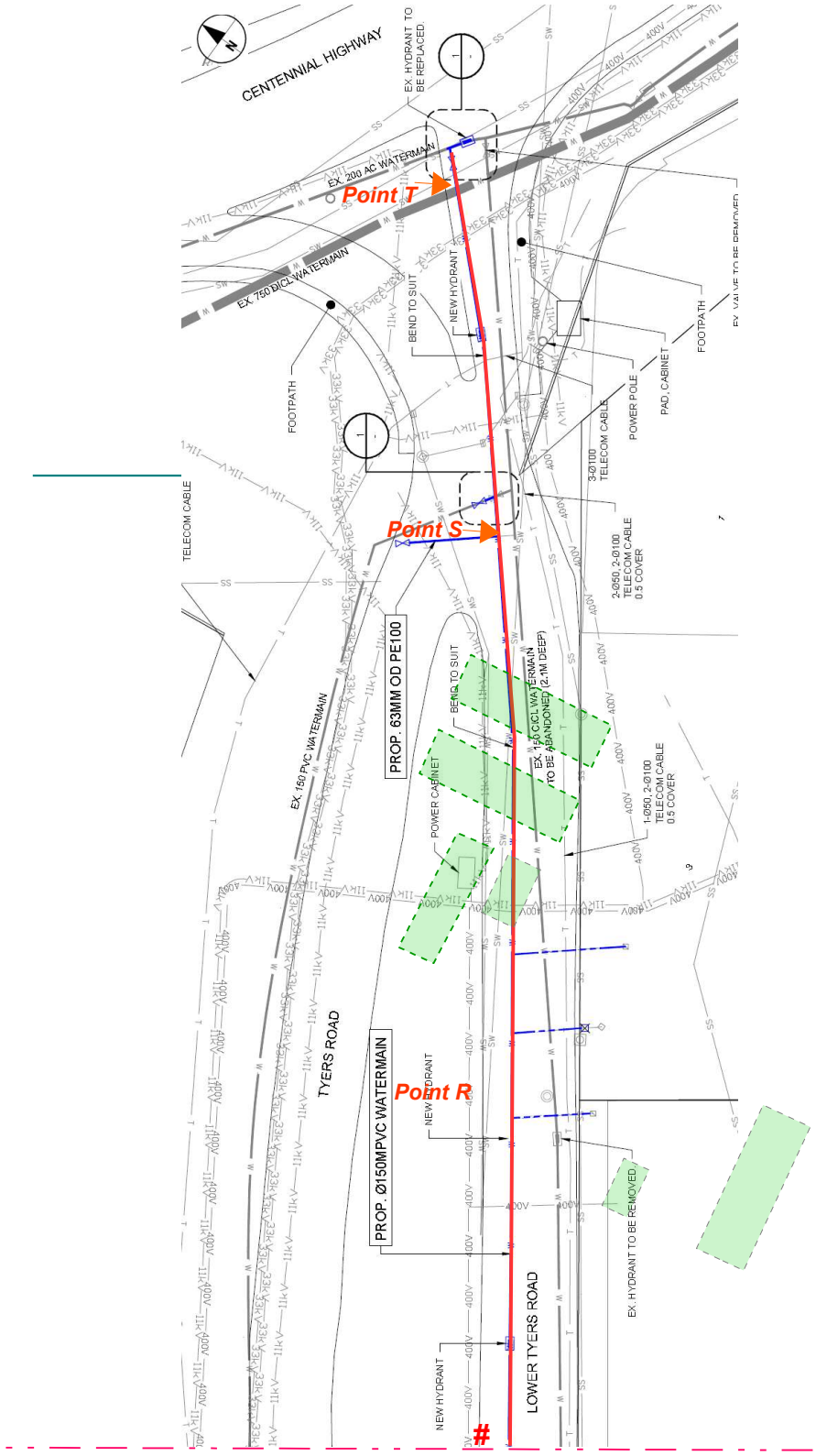


Illustration 39: Section 3: Lower Tyers Road Water Main Renewal: Actual route of water main trench in red (base plan supplied by Aecom). 1906 buildings shown in green.

4 Summary

Research into the use history of Lower Tyers Road, Ngauranga, indicated that following possible pre-1850 use of the area for food cultivation, industrial settlement occurred there c.1865 with the establishment of Tyers Tannery. The tannery was in operation well into the 20th century, and a new access road was surveyed in through the site in 1906. Part of this road was subsequently developed to form Lower Tyers Road which is present there today.

4.1 General Interpretation and Conclusions

The installation of a new water main pipe was carried out September-October 2015. This included excavation of a 700mm wide trench along a length of approximately 400m with the majority of the route excavated to a depth of 1m. It seemed that over the vast majority of the trench, excavations at a depth of 1m were still within cultural fill material either relating to 20th century road development or demolition of 19th century structures or other formations. Only one area appears to have reached a possible natural soil at that depth (see point K in Illustration 28) and it seems likely that considerable additional older material would be found at a greater depth than the 1m deep excavations required for this project.

Cultural activity was observed at different points along the route of the trench. This included modification of soils, formation of road surfaces, possible building foundation slabs, discard of probable demolition material from buildings, and a small amount of artifact material. None of the buildings shown in 1906 were positively identified in situ (see Illustration 22) but there was certainly evidence of building material, most likely in a demolished state, used as fill material. This consisted mainly of bricks, concrete slabs and some timber fragments. It is possible that some of the material observed, for instance the concrete slab found at Point F (see Illustration 14) may relate to a building that predates the 1906 plan, having already been remove by that time or it may have been part of a low structure not included on the plan.

Dateable material found included a 1907 A.G. Saunders aerated water bottle (with Codd type marble closure) at a depth of around 700mm below surface. A late 19th-early 20th century Stein fire brick was also found in conjunction with other hand-made bricks at a depth of 700-900m below surface in a different section of the trench. This corresponds with the fact that the road itself would have largely been formed after 1906, when it was first surveyed in to replace the informal track shown in Illustration 10. Cultural material was observed at the base of the 900mm-1m deep trench at many points along it length and one test excavation carried out at Point G indicated that fill material may be present in some areas to a depth of at least 1700mm. Itit seems that there will be significant remains at 1m and deeper within Lower Tyers Road, up to around 20m west of the Ngauranga Gorge Road intersection.

4.2 Future Archaeological Work

The current works affected only a small fraction of the total Tyers tannery site (280m² of a total of approximately 6,000m² including the built areas), and this was only to a depth of 1m. It is very likely that considerable further cultural and archaeological material will be present there, including within the part of the roadway that has already been excavated, at a depth greater than 1m. Application to Heritage New Zealand Pouhere Taonga for a subsequent archaeological authority should be undertaken for any planned work that requires excavation to a depth greater than 700m. *This is a statutory requirement.*

5 References

5.1 Published Material

Adkin, G.L. 1959 *The Great Harbour of Tara: Traditional Maori place-names and sites of Wellington Harbour and environs*. Whitcombe and Tombes Limited, Wellington.

Cyclopedia Co. 1897 *Cyclopedia Wellington Provincial District.* Cyclopedia Company, Christchurch.

Ward, L.E. 1928 *Early Wellington*. Whitcombe and Tombs, Wellington.

5.2 Unpublished Material

Cranston, M. 12th March 2016, Person Communication re Stein Brick. (contacted through http://www.scottishbrickhistory.co.uk).

Grouden, V.J. 2015a "Western Watermain Renewals Western Water main Renewal work: Imlay Crescent, Ngaio; Tyers Road, Ngauranga; Flers Street Karori; Rosehaugh Avenue Karori; John Witton Drive Wilton, Wellington-Preliminary Archaeological Checks". Unpublished report prepared fot Wellington Water Limited.

Grouden, V.J. 2015b "Lower Tyers Road, Ngauranga Gorge, Wellington (Part NZAA R27/537)". Archaeological assessment report prepared for Water Wellington Limited on behalf of the Wellington City Council.

5.3 Archival Sources

Deeds Register Volume 1, Folio 300; Volume 3, Folio 60; Volume 4, Folio 164; Volume 5, Folio 155; Volume 7, Folio 222; Volume 8, Folio 186; Volume 8, Folio 188; Volume 14, Folio 184; Volume 82, Folios 1-3 (National Archives).

5.4 Electronic Sources

Falkirk Community Trust "Working in the Brickmaking Industries" http://www.falkirkcommunitytrust.org/heritage/learning/resources-for-schools/docs/schools/industry/Working%20in%20the%20brickmaking%20industry.pdf

Mein Smith, Philippa. 'Smith, William Mein 1799 – 1869'. *Dictionary of New Zealand Biography*, updated 22 June 2007 (www.dnzb.govt.nz).

Scotland's Brick Industry
http://www.scottishbrickhistory.co.uk/tag/stein/

Wellington City Libraries, Hemi Parai
http://www.wcl.govt.nz/maori/wellington/bio-parai-hemi.html

Wellington District Plan Volume 1 Chapter 21, Appendix
http://wellington.govt.nz/your-council/plans-policies-and-bylaws/district-plan/volume-1-objectives-policies-and-rules

5.5 Historic Survey Plans

SO 11030 (c.1872) (Quickmap)
SO 11031 (c.1872) (Quickmap)
A 2029 (1907) (Quickmap)

6 Appendices

6.1 Appendix : NZAA Archaeological Site R27/537 Tyers Tannery Update

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

ARCHSITE archaeological site recording scheme

Site Record Form

NZAA SITE NUMBER: R27/537

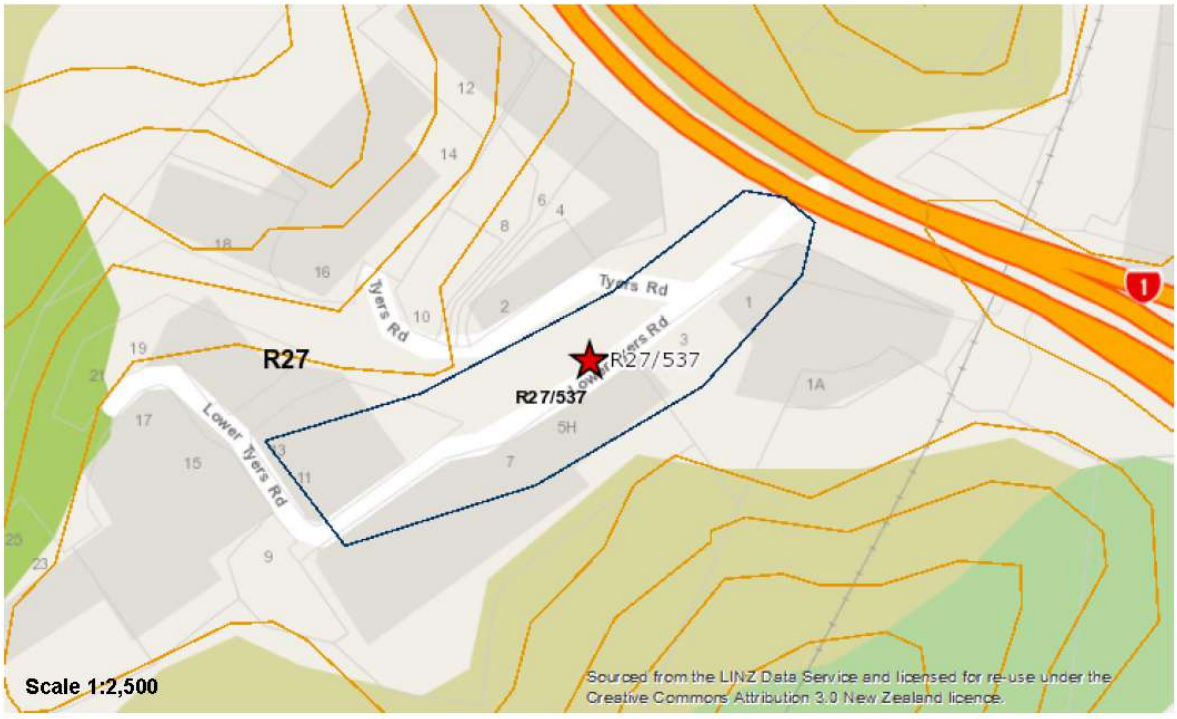
SITE TYPE: Industrial

SITE NAME(s): Tyers Tannery

DATE RECORDED:

SITE COORDINATES (NZTM) Easting: 1751646 **Northing:** 5432720 **Source:** On Screen

IMPERIAL SITE NUMBER: **METRIC SITE NUMBER:** R27/537



Finding aids to the location of the site

On both sides of the eastern end of Lower Tyers Road, Ngauranga Gorge, Wellington

Brief description

Site of Tyers Tannery, operating at this location from c.1865.

Recorded features

Tannery

Other sites associated with this site

SITE RECORD HISTORY	NZAA SITE NUMBER: R27/537

Site description

Updated 11/04/2016 (Field visit), submitted by victoriagrouden , visited 27/09/2015 by Grouden, Victoria
Grid reference (E1751646 / N5432720)

The site polygon indicates the extent of the tannery property as shown in 1906 (refer to survey plan WN A2029). Excavation work was carried out on this site by Wellington Water on behalf of Wellington City Council under Archaeological Authority 2015/925 in September 2015 for the installation of a new water main pipe. This included the excavation of a 400m long 700mm wide 900mm-1m deep trench within the Lower Tyers Road carriageway.

This work was monitored and a report is in progress. Preliminary findings indicate that archaeological material is likely to be present there at a variable depth, but generally deeper than 800mm and greater than 900mm-1m. Detailed section drawings of the trench at different points can be seen in attached site notes submitted April 2016.

Cultural material found during the trench excavation included clearly 20th century aerated water bottles as well as an impressed Scottish fire brick (STEIN) likely to be of late 19th or early 20th c manufacture. The road area appeared to have been built up to the current level using a mixture of imported fill and demolition material. Crushed and whole red bricks were found within the trench at regular intervals along its length. Concrete foundations of several structures were also found at a depth of 800mm-1m within the trench alignment, but these did not seem to relate to buildings as shown on a 1906 survey plan (see WN A2029).

For full excavation details see attached site notes submitted April 2016.

Updated 04/03/2015 (Field visit), submitted by victoriagrouden , visited 27/02/2015 by Grouden, Victoria
Grid reference (E1751646 / N5432720)

This is the site of Tyers Tannery, located in part of Section 8 Harbour District, Block XI Belmont Registration District. This site is now bisected by Lower Tyers Road. It seems that there may have been a number of subleases on the area where Lower Tyers Road is located, including that taken on by Alfred Tyer (see plan in Deeds Register Volume 82, Folio 1-3). It is not known exactly when Tyer began to lease land in the area but sources indicate that he was operating a tannery at that location from c.1865 (Cyclopedia Company, Wellington Provincial District, 1897:816). Tyer is listed as a fellmonger and tanner at Ngauranga. Details of Tyer's business are as follows (Cyclopedia Company, 1897:8216):

"More than thirty years ago [written in 1897] Mr. Tyer founded the large business which is now conducted by him as above. From the commencement he determined that he would produce a good article in every line. He therefore established relations with Britain and Australia for the supply of bark and other materials required in tauning, of the very best quality procurable. The quality of the goods manufactured at the Ngahauranga tannery and fellmongery is such that there is no trouble about the sale of the leather, which "sells itself," and it is only on rare occasions during severe depressions that it is needful to export a small quantity to London.

Mr. Tyer's fellmongery is situated on nine acres of leasehold land adjoining the large works of the Wellington Meat Export Company at Ngahauranga. The works are admirably arranged for the conduct of an extensive business. On arrival the skins are soaked for twelve hours in large pits, from which they are removed to the lime or paint house, where they are allowed to remain over night. By means of a trolly and tramway the skins are conveyed to the pulling room, where the wool is taken off rapidly and easily, the skins being sent to this tannery and the wool to the scouring room.

The machinery is driven by a powerful steam engine of forty-horse-power, made by Messrs. Luke and Son, the steam being generated by one of Messrs. Robertson and Co.'s boilers. The scouring machine, which is a marvel of simplicity, is used to thoroughly-cleanse the wool, which passes automatically, first through hot, and afterwards through cold water, leaving the machine after going between rullers which are said to give a pressure equal to twenty tons. The wool is then subjected to treatment in the hydroextractors, of which there are two.

The drying process is accomplished as far as practicable in the open air, but when the weather is unsuitable the drying is rapidly accomplished by an ingenious arrangement whereby the heat from steam pipes is forced by means of fans, making 900 revolutions per minute through the raw material. When ready for baling, a powerful screw press is used to complete the process.

The tannery is situated about a quarter of a mile up the Ngahauranga stream on a block of freehold land of fifty-two acres in extent. The buildings are well adapted for the purposes of the trade, and one hundred and seventy-six pits—comprising soaks, limes, bates, hangers, handlers, pits, and spenders—are constantly used in the various processes required to produce leather—which includes all classes of shoe and harness leather.

The machinery, which includes the most modern plant for carrying on a large trade economically and effectively, is driven by

a large horizontal steam engine and two smaller engines.

Over 100 hands find regular employment at Mr. Tyer's tannery and fellmongery, and the whole production of these works is disposed of wholesale to the trade."

A plan of the site drawn up in 1907 (A2029) shows a number of tannery buildings as well as a dam (see attached PDF file). It appears that the site was taken on by Huttons (bacon processors) in the early 20th century.

Condition of the site

Updated 11/04/2016 (Field visit), submitted by victoriagrouden , visited 27/09/2015 by Grouden, Victoria

Excavation carried out during September 2015 indicated that there is likely to be a great deal of further archaeological material within the Tyers Road alignment at a depth of 800-900mm or greater. It is not clear what might have survived there outside the road itself, due to the construction of a number of commercial and industrious buildings there in the 20th century.

Updated 04/03/2015 (Field visit), submitted by victoriagrouden , visited 27/02/2015 by Grouden, Victoria

The site is currently covered by an asphalted road (Lower Tyers Road) and by industrial and commercial buildings. Condition is unknown, but tanneries generally employed large soak and lime pits so it is possible that large and deep features may be present underneath the road and modern buildings.

Statement of condition

Updated: 29/03/2016, Visited: 27/02/2015 - Not visible - Site obscured by vegetation or other material, condition not observable

Current land use:

Updated: 29/03/2016, Visited: 27/02/2015 - Road reserve, Industrial/ commercial

Threats:

Updated: 29/03/2016, Visited: 27/02/2015 - Services/ utilities