

PROPOSED PLAN CHANGE 18-140 WAIHOEHOE ROAD AND 15-50 KATH HENRY LANE, DRURY, AUCKLAND: ARCHAEOLOGICAL ASSESSMENT

Prepared for Oyster Capital Ltd

March 2019



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INTRODUCTION

Project Background

Oyster Capital (“Oyster”) is applying to Auckland Council for a Plan Change to the Auckland Unitary Plan (Operative in Part) (AUP) to rezone 48.9 hectares of Future Urban land in Drury East (Figure 1). Addresses and legal descriptions are provided in Table 1. It is proposed to rezone the land to a mix of residential zones (Terraced Housing and Apartment Buildings and Mixed Housing Urban) with provision for drainage reserves. The rezoning proposal provides capacity for up to 1054 dwellings. Oyster has an interest in 18.4 hectares of land on the northern side of Waihoehoe Road as outlined below in Figure 2.

An archaeological assessment was commissioned by Oyster Capital Ltd to establish whether the proposed Plan Change is likely to impact on archaeological or other historic heritage values. This report provides a broad assessment of the Plan Change area based on desktop research and a more detailed assessment of 116–140 Waihoehoe Road (Figure 3) based on desktop research and field survey. The report includes identification of existing archaeological and other historic heritage values, as well as any potential effects on those values. This report has been prepared as part of the required assessment of effects for a private plan change application under the Resource Management Act 1991 (RMA) and to identify any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Recommendations are made in accordance with statutory requirements.

Table 1. Addresses and legal description of the properties in the Plan Change area

Address	Legal Description	Area (HA)
18 Waihoehoe Road	Lot 10 DP 135804	0.3760
28 Waihoehoe Road	Lot 3 DP 60259	0.8468
44 Waihoehoe Road	Lot 1 DP 135804	1.0
76 Waihoehoe Road	Lot 2 DP 115991	4.1991
76A Waihoehoe Road	Lot 3 DP 115881	11.9877
112 Waihoehoe Road	PT ALLOT 1 DP 60259	4.0231
116 Waihoehoe Road	Pt Lot 1 DP 146189, Pt Lot 2 DP 146189, Lot 2 DP 173904, Lot 3 DP 173904	15.1465
136 Waihoehoe Road	Lot 1 DP 371528	1.7945
140 Waihoehoe Road	Lot 2 DP 371528	1.5220
15 Kath Henry Lane	Lot 9 DP 135804	1.0
18 Kath Henry Lane	Lot 2 DP 135804	1.0
27 Kath Henry Lane	Lot 8 DP 135804, 1/6 SH Lot 12 DP 135804	1.0
34 Kath Henry Lane	Lot 3 DP 135804, 1/6 SH Lot 12 DP 135804	1.0
44 Kath Henry Lane	Lot 4 DP 135804, 1/6 SH Lot 12 DP 135804	1.0
45 Kath Henry Lane	Lot 7 DP 135804, 1/6 SH Lot 12 DP 135804	1.0
49 Kath Henry Lane	Lot 6 DP 135804, 1/6 SH Lot 12 DP 135804, 1/2 SH Lot 13 DP 135804	1.0
50 Kath Henry Lane	Lot 5 DP 135804, 1/6 SH Lot 12 DP 135804, 1/2 SH Lot 13 DP 135804	1.0

Methodology

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

Visual inspections of the properties at 116, 136 and 140 Waihoehoe Road were conducted on 26 February 2019. The ground surface was examined for evidence of former occupation (in the form of shell midden, depressions, terracing or other unusual formations within the landscape, or indications of 19th century European settlement or activity remains). Photographs were taken to record the area and its immediate surrounds. These were the only properties accessible for survey at the time of assessment, but based on the desktop assessment (including a review of aerial photographs and available information relating to the recorded Drury tramway/mineral railway), it was considered that survey of further properties was unnecessary for the purpose of the Plan Change request.



Figure 1. Location of the Plan Change area in Greater Auckland

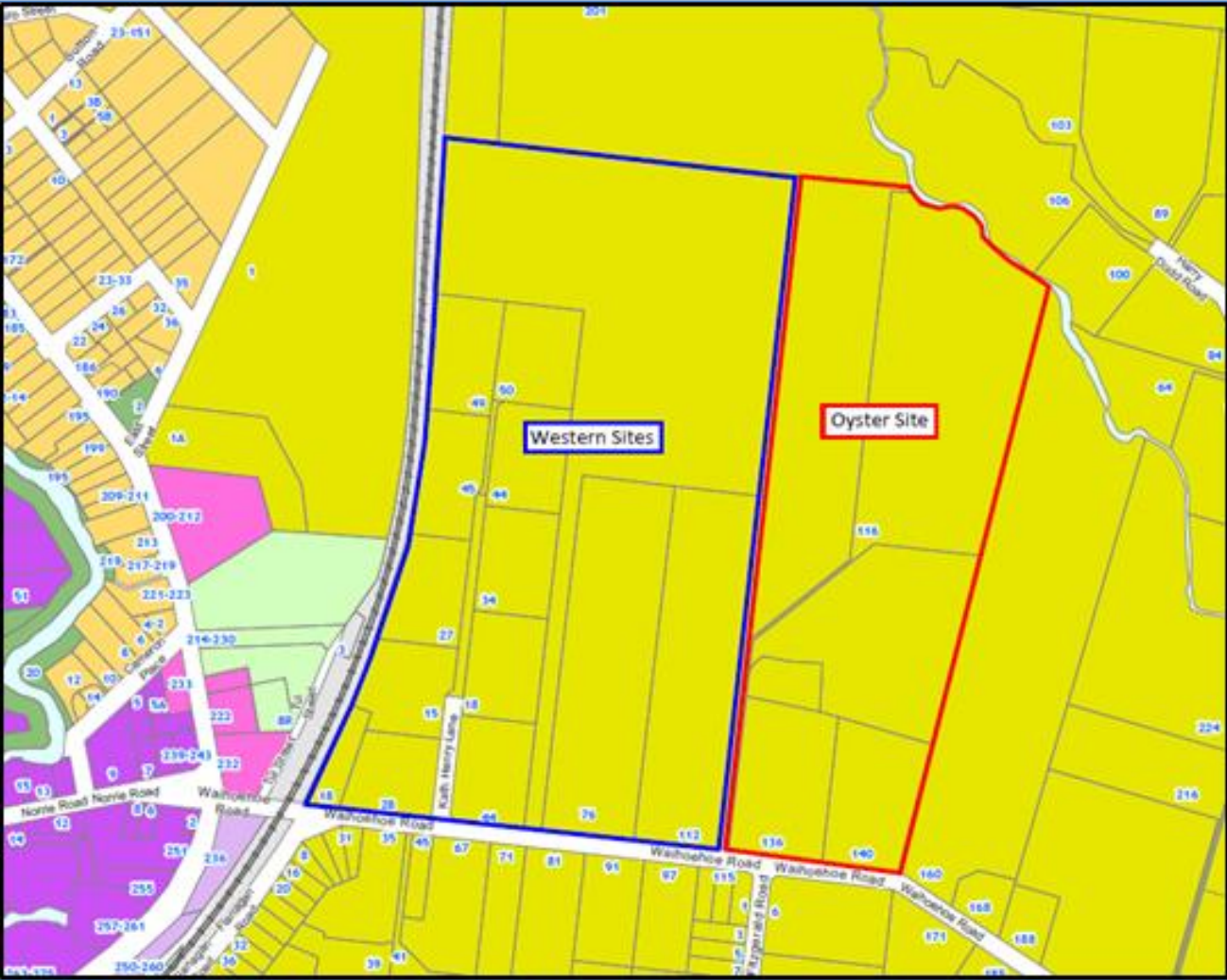


Figure 2. Proposed Plan Change area and the Oyster Capital Land Holdings (source: Barker & Associates)



Figure 3. Properties at 116, 136 and 140 Waihoehoe Road that were surveyed/inspected

HISTORICAL BACKGROUND

Maori Settlement

The Slippery Creek or Opaheke catchment area, whose waters flow into the Manukau Harbour at Opaheke, has long been a strategic location and occupied by a number of tribal groups who ‘could trace their ancestry back to the earliest occupants of the land, and in particular the crew of the Tainui’ (Murdoch 1990:1). The Tainui canoe initially landed on the East Cape near Cape Runaway and subsequently travelled northwards to the eastern shores of the Hauraki Gulf. Upon arrival in the Waitemata a number of these migrants decided to settle in the district. Among them were Te Keteanataua and his son Taihaua, who settled at Taurere near the mouth of the Tamaki River, and Rakataura and Taikehu, who settled on the shores of the Manukau Harbour. These descendants of Taihaua came to occupy the coastline between Tawhitokino and Kawau Island as well as numerous islands of the Hauraki Gulf (Murdoch 1996; La Roche 1991).

The Papakura/Drury area and surrounds also provided an important access link for travellers in pre-European times (and later in the early settler and military periods). With Manukau Harbour to the west and the Hunua Ranges to the southeast, it was an area highly utilised as a connection between Tamaki Makaurau (the Auckland Isthmus) and the Waikato. As well, the Manukau Harbour shores were the entrance to the inland route to Wairoa (Clevedon) and the Hauraki Gulf. Tracks such as the Ararimu Track and another that ran through Tuimata and Tuakau had been used for generations and some also connected up with canoe landing spots, such as the one at Chalky Point, which met with a track that led to Waipapa at the head of the Pahurehure Inlet (Craig 1982:70).

Where resources were plentiful or a location was strategic, the area was protected by a fortified pa. Wetland/swamp areas in the lowlands were unlikely to have attracted settlement, but resources abundant in these areas would have been utilised (Tatton and Clough, 2003). Wetland areas may also have been utilised to hide tools, weapons and other significant items in times of threat.

The main settlement sites that have been identified in the vicinity of the Plan Change area were at Maketu Pa (located approximately 4km to the southeast), the settlement of Opaheke at Slippery Creek just to the north and at Pukekiwiriki Pa (or Red Hill) which is situated further to the north and approximately 4km east of Papakura. There was also a settlement called Te Aparangi situated near Pukekiwiriki Pa, although the exact location is not known.

European Settlement

Some of the earliest European visitors to the area were missionaries who had been travelling through the land containing present day Papakura and Drury from 1834. It is also considered likely that explorers and traders would have visited the area in the first half of the 19th century, although they would not necessarily have been documented (Heritage Consultancy Services 2013:16). Land purchases in the area to the south of Auckland were conducted by the government from the early 1840s, although details are difficult to ascertain, as a large number of blocks were involved and many were sold prior to survey with vague boundary descriptions and plans that often consisted of nothing more than rough sketches (Husbands 1993: 23). The Papakura Block, the Ramarama Block and the Hunua Block were all acquired by the Crown during this period and the land was sold on

to numerous investors. Settlement at Drury is not documented prior to the early 1850s, although it is thought possible that some settlement may have occurred during the 1840s. This is not, however, supported for the first half of this decade, as a journal kept by a Dr John Johnson who travelled through the area and camped at Slippery Creek in 1846 made no note of any settlers being present in the area (Craig 1982: 57).

The earliest documented usage of land in the Drury area is from 1851, when a Depasturing license was granted to Mr George Cole of Papakura at Tuimata (Heritage Consultancy Services 2013: 43). It would appear that Cole, who resided and farmed in Papakura, did not use the land at Tuimata and allowed the lease to lapse, as in July 1852 it was granted to Thomas Runciman as a cattle run – as stated in a notice from the Commissioner of Lands’ Office July 14 1852 and published in the 8 August edition of *The New Zealander*. Thomas Runciman, his wife Isobel and their four children are considered the first permanent settlers at Drury (south of Slippery creek). The family had come to New Zealand from Scotland in 1840 and had resided in the Bay of Islands and Whangarei before settling near Drury. The Runciman family were well known and respected locally; the area just to the south of Drury was part of the Township of Runciman and a local road was also named after the family.

Prior to the construction of the Great South Road, which was commenced in 1843, traditional tracks and waterways had been used for generations to travel between the Auckland Isthmus and the Waikato. By 1855, the Great South Road had been metalled as far as Papakura, but the section between Papakura and Drury was described as being little more than a clay track (Lennard 1986: 3). The route south from Drury utilised existing traditional Maori tracks, as the Great South Road ended at Drury until 1853. It was in this year that a surveyor, Mr H. Hayr, who was returning to Auckland from the Waikato, was told he could not travel by the usual Track as it was ‘tapu’. To avoid the track, the party instead travelled through farmland around Pokeno Hill and then through bush all the way back to Drury (Lennard 1986:1). As it turned out the new track taken was found to be more direct, although parts were covered in dense bush at the time. Nevertheless, the government decided that the new track was worth pursuing after noting it was situated on government acquired land or land in negotiation. As a result, the government commissioned Hayr to open a bridle track, work for which was completed in two weeks and at the cost of around £25. This track, which became known as Hayr’s Line was to become the Great South Road more or less from Drury southwards into the Waikato (Lennard 1986: 2).

The location of Drury along the main road south from Auckland, along with the fact that it was also navigable by water, aided in the growth of the small settlement and by the late 1850s various businesses had been set up including a hotel (Lennard 1986:3). The hotel known variously as ‘The Drury Hotel’, ‘Young’s Hotel’ and ‘The Farmers’ Inn’ was owned and operated by Mr William Young, who was also one of the early land purchasers in the area.

In the early 1860s, during the build up to the Waikato Campaign of the New Zealand Wars, the growth of the settlement at Drury was further aided by its strategic location between Auckland and the Waikato. It was at this time that Drury was chosen by the government as the operations headquarters for improving the bridle track known as Hayr’s Line into a road capable of transporting troops and supplies south to the Waikato. The improvement works and extension of the Great South Road were conducted under the leadership of General Duncan Alexander Cameron, commander of the British army in New Zealand from 1861-1865.

Local Coal and Clay Industries

Coal seams were identified in the hills to the east of Drury in 1858, just before the arrival of the Austrian scientific expedition on the ship *Novara*. The expedition included geologist Ferdinand Von Hochstetter, who, at the request of the government, investigated the newly discovered Drury coal deposits. Hochstetter noted that the coal seam had been discovered by the Rev. A.G. Purchas and that it had been opened in several places by various settlers. He went on to describe the location of the coal seams as being in a section of hills to the east of Drury running nearly north–south, with the coal being present in gullies on the slopes. He examined coal deposits at several locations, including Mr Turnbull’s and Mr Farmer’s properties, the farms of Mr Hall, Mr Falwell, Mr Pollock and at Mr Symonds’ farm and Mr Campbell’s farm, both located at Symonds Creek.¹

The first coal mine at Drury, The Waihoihoi² Coal Mine’ opened in 1859, as reported by the Rev. A.G. Purchas in the 3 September 1859 edition of the *New Zealander*. However, due to disruptions caused by the New Zealand Wars and expenses in transporting the coal to Auckland, the mining operation closed in 1866 (Brown and Brown 2017:28). Mr Henry Chamberlain, who was one of the prominent landowners in the area, was keenly interested in reopening the coal mining operation, but unfortunately failed to achieve his goal, dying as a result of an accident while exploring for coal deposits on his estate in 1888 (as reported in various newspapers of the day including the 16 April Edition of the *Auckland Star*).

After Chamberlain’s death it was not until the early years of the 20th century that the mining venture reappeared, as described in a newspaper article in the 18 April 1904 edition of the *New Zealand Herald*, which described a visit to the mines by 16 gentlemen from Auckland with interests in a company that was being formed to reopen the mining operation at that time. The official opening of the mine, which included a new tramway, took place officially in July 1905 (as reported in the *New Zealand Herald* 31 July 1905). The tramway for the new mining operation ran to the Old Drury Railway Station and replaced the 19th century horse drawn tramway with coal trucks which were now pulled along the track by a locomotive.

It was also noted by Hochstetter in his 1859 report on the Drury Coal fields that along with coal the area contained deposits of both fire clay and potter’s clay in great abundance and he recommended that manufacturing facilities to take advantage of these resources should also be established. In fact, the clay deposits were first exploited during the original coal mining operation (the Waihoihoi Coal Company) in the late 1850s; however, operations had ceased by 1885 (Brown and Brown 2017: 28). They were started up again in 1905 under the Drury Coal Mining Company as a brickworks, although soon pottery and tiles were also being manufactured. The works were located on the flat at the foot of the hill where the mine was located. The works were sizable, with a large drying shed and two smoke stacks, one for the engine in the grinding mill and one for the first kiln, which was capable of holding up to 30,000 bricks (as stated in an article in the *Auckland Star* entitled

¹ As noted in a report by Dr. Hochstetter in ‘Of a Geological Exploration of the Coal-field in the Drury and Hunua District, in the Province of Auckland (N.Z.)’ published in the 14 January 1859 Edition of the *New Zealander*.

² It is noted that in historical sources a variant form of spelling for ‘Waihoehoe’ was often used, namely ‘Waihoihoi’ (this occurred in general in earlier sources, pre-1900). The spelling in this report will use that of the historical source from which it is taken.

‘The Drury Pottery Works’ in the 22 November 1906 edition). A photograph of the brickworks taken in 1906 is shown in Figure 4.

Unfortunately, both the brickworks and the second coal mining operation failed to thrive. Although the exact dates of closure have not been established, the company first went into liquidation around 1914 with the structures and equipment sold off in 1921. Pottery works at Drury did continue slightly longer and another company – Drury Potteries Limited – was formed in 1927, but it went into liquidation in 1928 (Brassey 2017:120).



Figure 4. Photograph of the Drury Pottery and Fireclay works taken in 1906 (source: Auckland Libraries Heritage Collections JTD-22G-00997-1)

HISTORICAL SURVEY

Information from Early Maps and Plans

Historical plans were searched to provide additional information on past ownership and land use of the Plan Change area. An early plan showing the land ownership in the 1860s is shown in Figure 5. The Plan shows much of the land in the area as owned by 'Farmer'. James Farmer arrived in New Zealand around 1847 and bought land at Drury in 1853 and had constructed a house there by 1858. The land was most likely used to run cattle and the house was used by two notable inhabitants, namely, the reverend Thomas Norrie and his family when they first arrived in Drury in the late 1850s and also by General Duncan Cameron as his military headquarters during the construction of the Great South Road in 1861/62 (Mathews and Mathews 2019:6). This plan also shows properties with some of the names mentioned by Ferdinand Hochstetter as visited during his expedition to the Drury Coalfields in 1859. Property owned by Henry Chamberlain at that time is also shown on the plan in an area to the east of the current Drury Hills Road.

As can be seen in Figure 6, land formerly owned by James Farmer was included in a subdivision plan from 1880 that was prepared for Henry Chamberlain. Chamberlain had purchased the land in 1870 from Thomas Mackelvie, a business associate of James Farmer and to whom Farmer had conveyed his Drury property in that same year (ibid). The Plan Change area lies just to the north and east of the land purchased by Chamberlain in 1870 and has the name Godkin written on it. It is thought that this may refer to George Godkin, who was a local Drury resident and manager of the Farmer's Hotel during the New Zealand War period from 1862 to 1865. His obituary also notes that he was a contractor for the supply of troops with stores and managed the local stores for Mr W.J. Young (who owned the Farmers' Hotel). It also noted that just prior to his death in 1891, at only 46 years of age he had a large brick hostelry constructed near the old railway station (*New Zealand Herald* 4 December 1891).

Godkin's land extended up to the North Island Main Trunk Railway line (Figure 6) and included the whole Plan Change area. The original railway reserve extended into the southwest corner of the Plan Change area, where 18 Waihoehoe Road and part of 15 Kath Henry Lane are now located (Figure 7). Land to the south of Waihoehoe Road was taken under the Public Works Act for railway purposes in 1916 (Figure 8), and the railway station moved to the new location in 1918 (Bickler et al. 2013). Subdivision along Waihoehoe Road within the Plan Change area mainly occurred after 1968, when the property at 28 Waihoehoe Road was created (Figure 9). In the 1980s land that had previously been within the railway reserve in the southwestern corner of the Plan Change area was subdivided off (Figure 10) and a subdivision was created along Kath Henry Lane (Figure 11).

In the eastern part of the Plan Change area, subdivision occurred from the 1970s, creating what are now 116-140 Waihoehoe Road (the area surveyed): 1972 (Figure 12), 1991 (Figure 13) and subsequently in 1996 (DP 173904 – not shown).

Historical aerial photographs were also reviewed and as can be seen in the aerial photographs from 1942, 1961 and 2017 in Figure 14, the Plan Change area remained largely as undeveloped farmland until at least the 1960s, with buildings clustered in the southeast corner (within 18 and 28 Waihoehoe Road) and at 116 Waihoehoe Road.

The southern part of the survey area and the properties along Kath Henry Lane have been developed in recent years and the northern and central parts of the Plan Change area have remained as paddocks. Within the survey area, the 1942 aerial shows buildings which appear to represent a homestead and farm structures present on the property.

It can also be seen in both the plans and aerial photographs that part of the northeastern boundary of the Plan Change area lies along the Waihoehoe Stream. This stream, which is c.6km in length, flows in a generally north-westerly direction from the Drury Hills to Slippery Creek. It is interesting to note that James Farmer's property at Drury was named 'Waihoihoi. after the Stream.

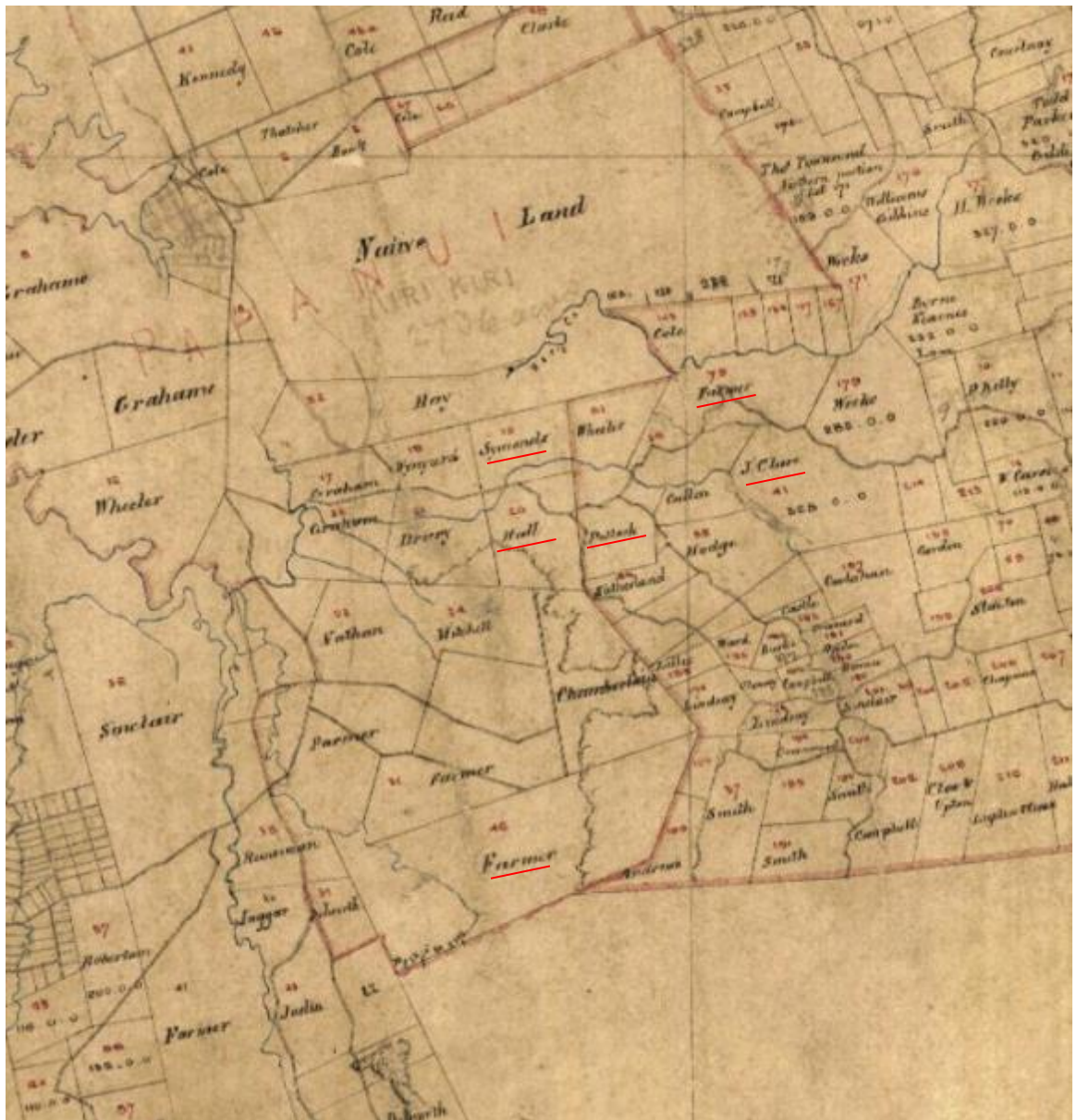


Figure 5. Detail from Deeds roll 64 c.1860's showing the land ownership in the Drury area with names of visited properties mentioned in Ferdinand Hochstetter's 1859 report underlined in red (source: Quickmap)

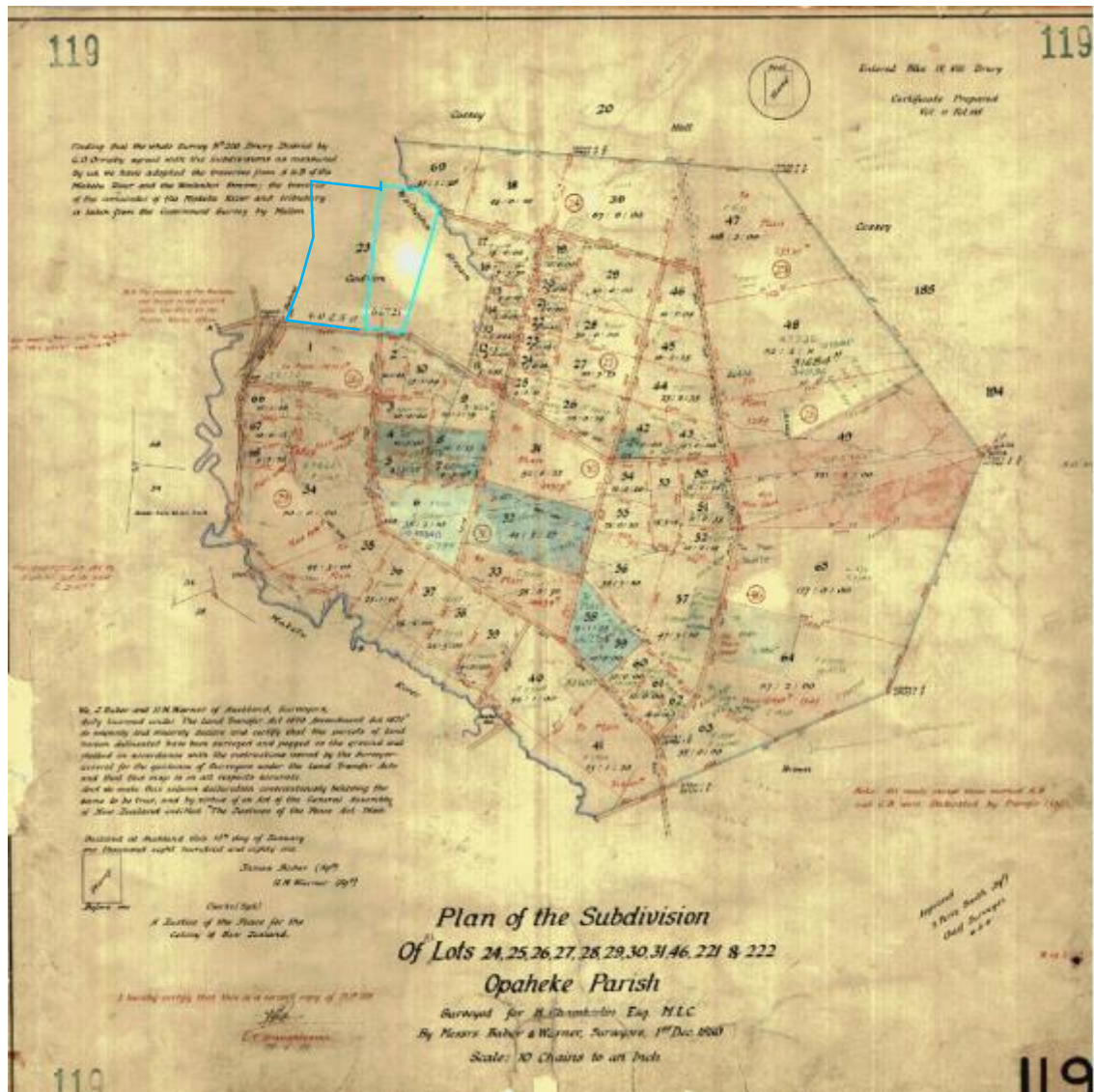


Figure 6. AKC DP 119 I subdivision plan from 1880 commissioned by Henry Chamberlain with the Plan Change area shown outlined in blue (source: Quickmap)

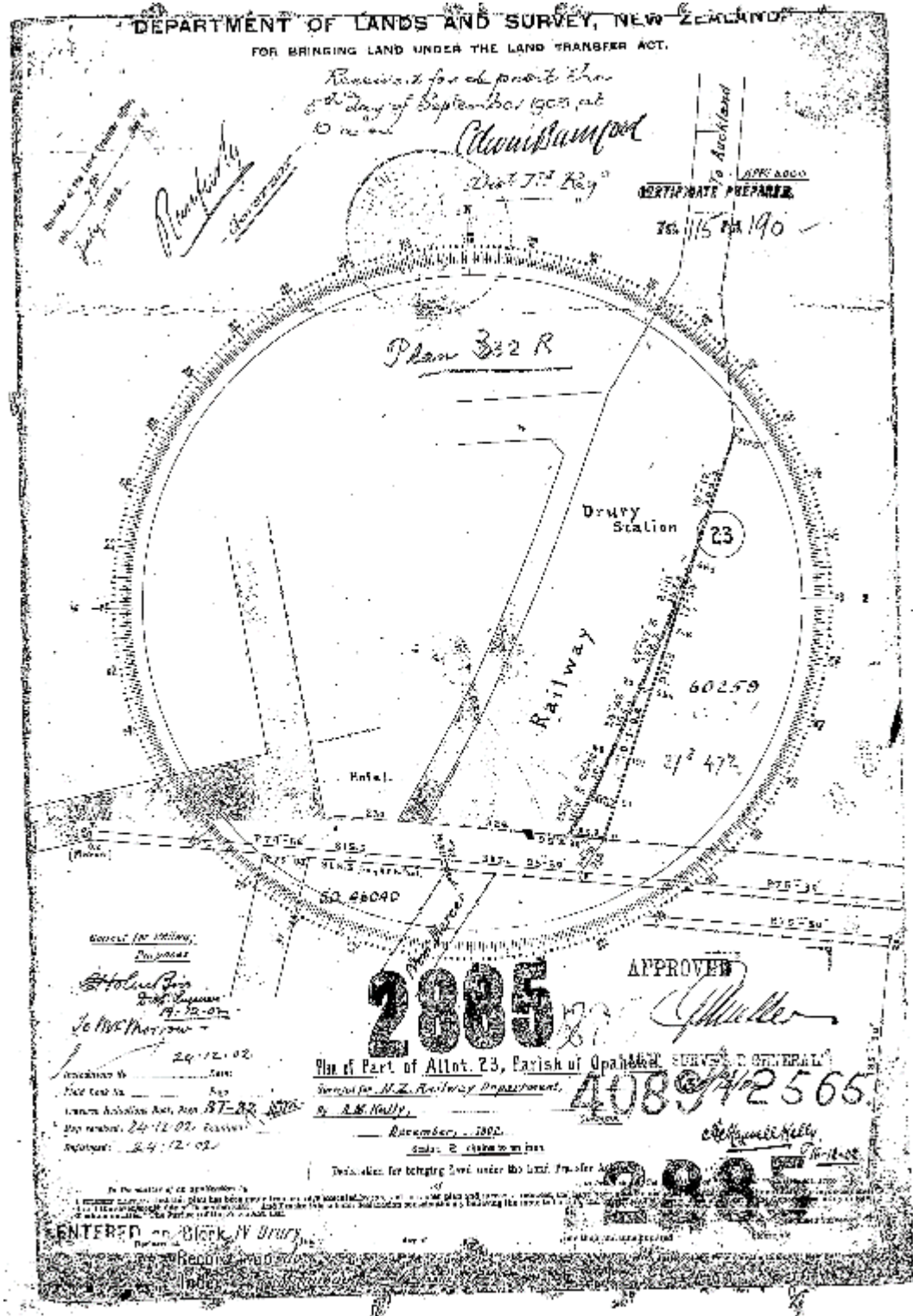


Figure 7. DP 2885 dated 1902, 'Plan of Part of Allot. 23, Parish of Opaheke. Surveyed for N.Z. Railway Department' (source: Quickmap)

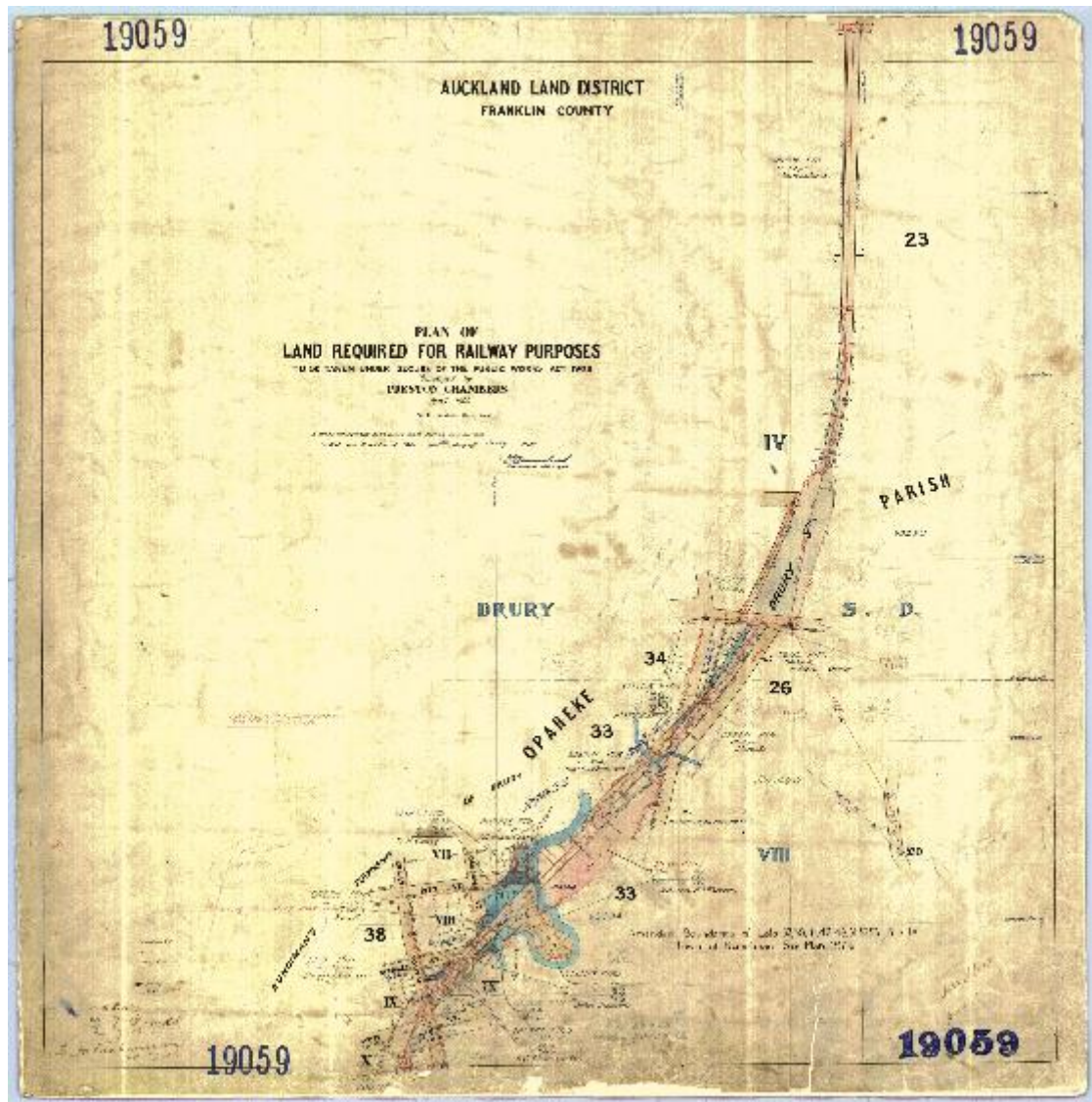


Figure 8. SO 19059 dated 1916, 'Plan of Land Required for Railway Purposes' (source: Quickmap)

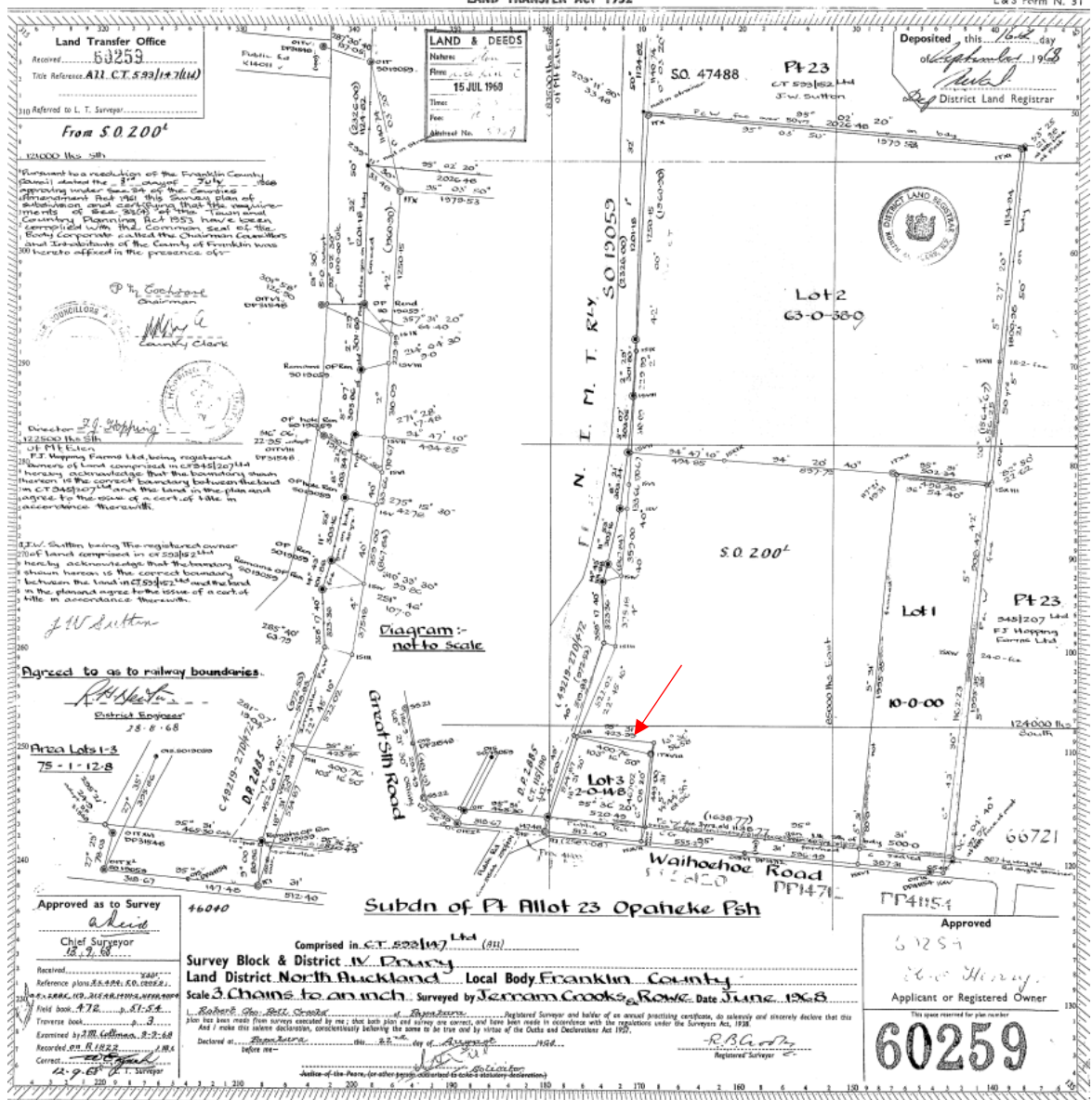


Figure 9. DP 60259 dated 1968, 'Subdivision of Pt Allot 23 Opaheke Parish' (source: Quickmap). Lot 3 (28 Waihoehoe Road) is indicated with an arrow

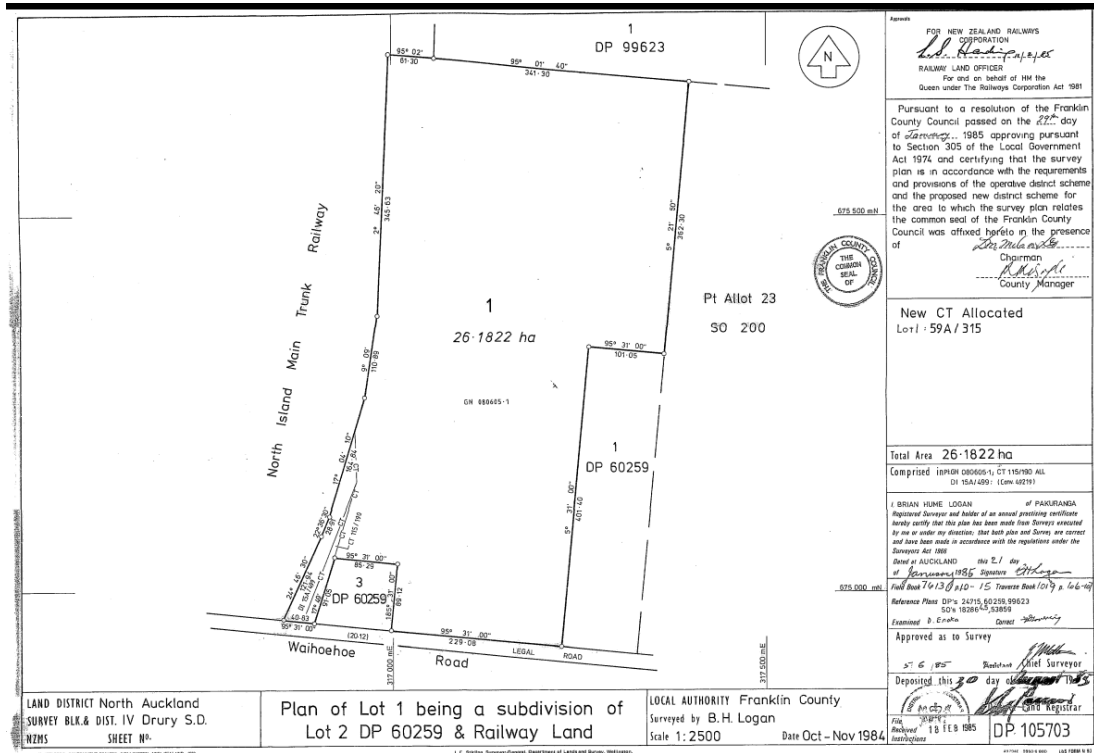


Figure 10. DP 105703 dated 1984. 'Plan of Lot 1 being a subdivision of Lot 2 DP 60259 & Railway Land' (source: Quickmap)

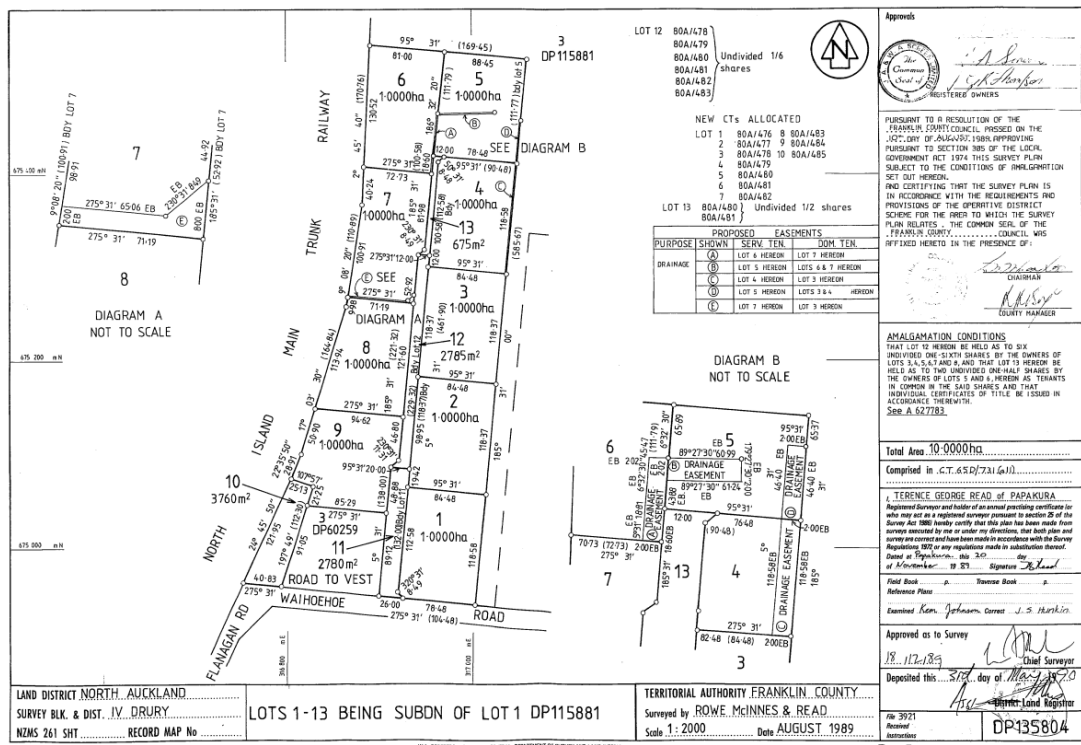


Figure 11. DP 135804 dated 1989, 'Lots 1-13 Being Subdn of Lot 1 DP115881' (source: Quickmap)

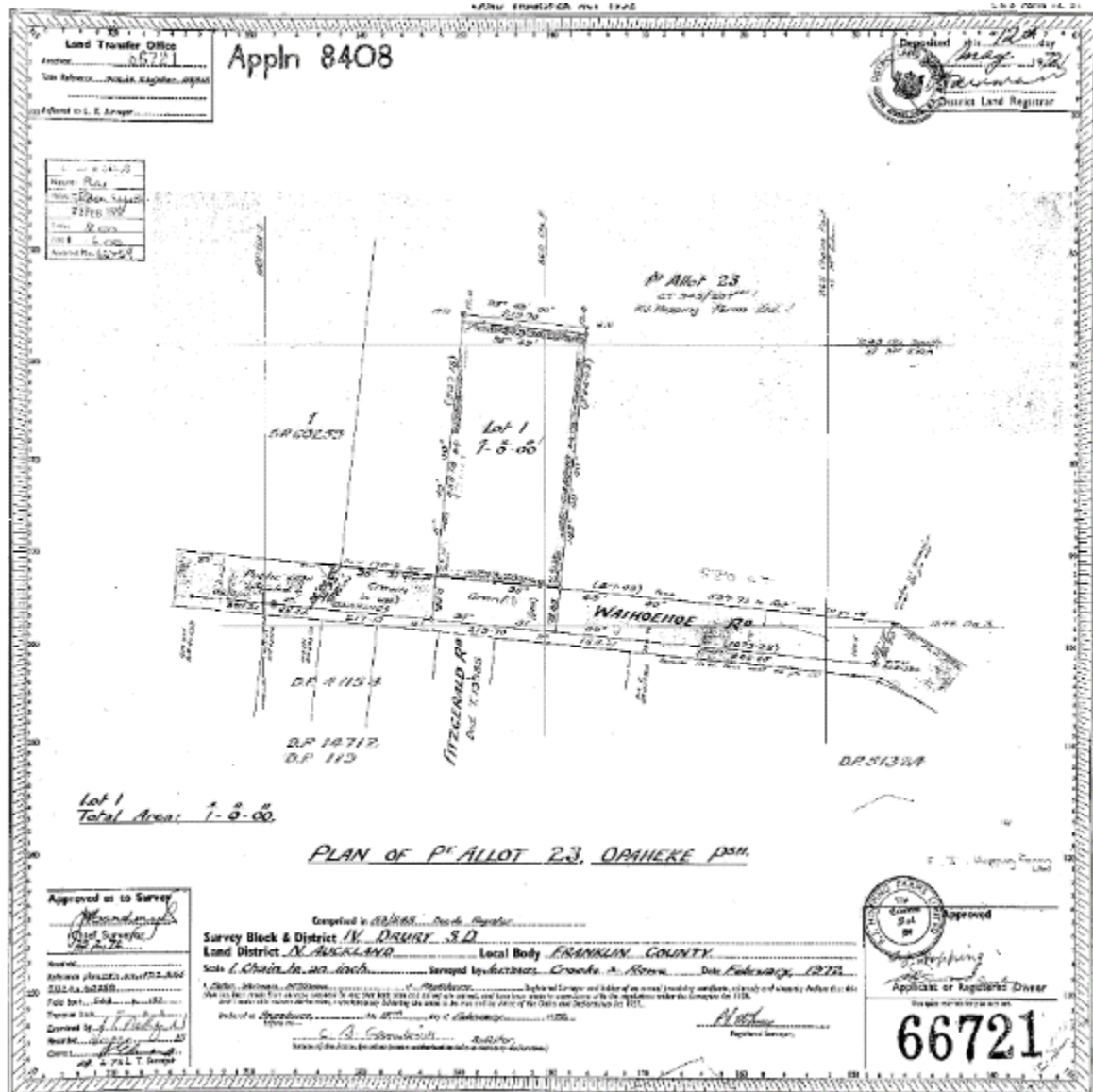


Figure 12. AK DP 66721 dated 1972 showing the boundary of Lot 1 DP 371528 (source: Quickmap)

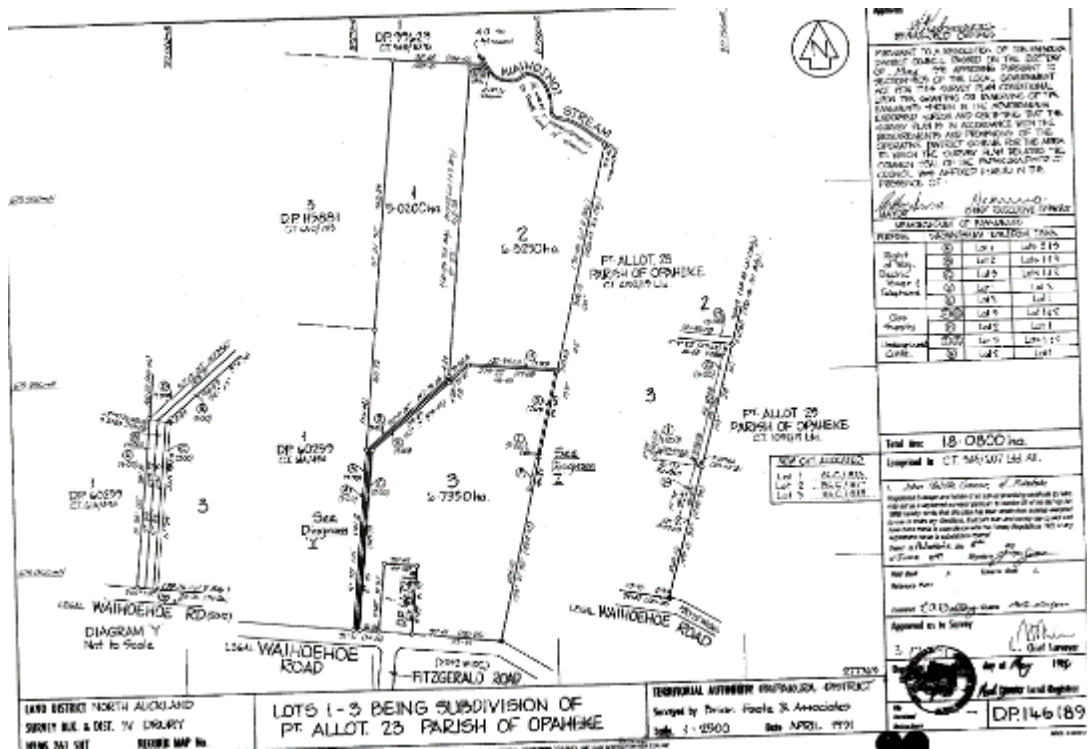


Figure 13. AK DP 146189 dated 1991 showing the subdivision of the survey area into three lots (source: Quickmap)

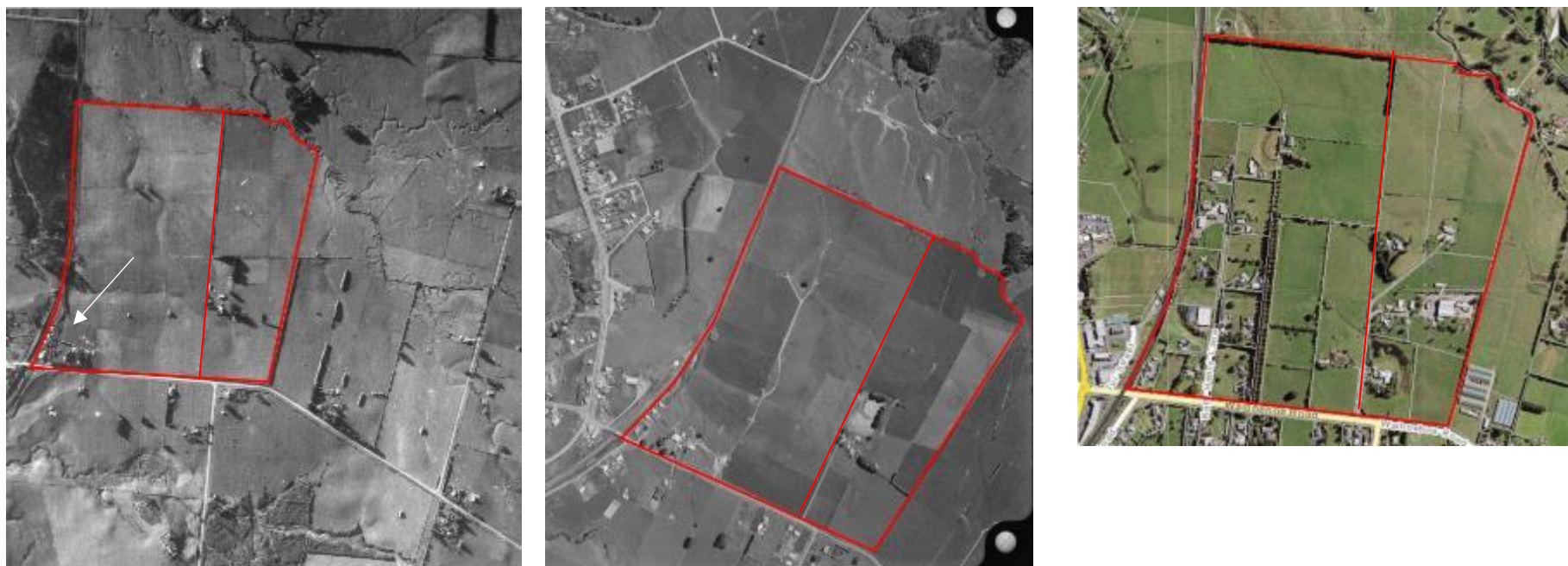


Figure 14. Aerial photographs left to right from 1942 (Crown 192 274 19), 1961 (Crown 1404 S 13) and 2017 with the Plan Change area outlined in red (1942 and 1961 aerials sourced from [http:// retrolens.nz](http://retrolens.nz) and licensed by LINZ CC- BY 3.0 and 2017 from Auckland Council Geomaps). The white arrow on the 1942 photo indicates the still visible route of the former Drury tramway/railway referred to in the Historical Background

ARCHAEOLOGICAL BACKGROUND

Archaeological Sites

There are no recorded archaeological sites within the Plan Change area with the exception of part of the route of the old Drury tramway/mineral railway which was associated with the Waihoihoi Coal Company in the 1850s and Drury Coal Mining Company and pottery works in the early 20th century. This site has been recorded as R12/1122 (CHI 21945) and lies largely to the south of the Plan Change area with the estimated route shown in Figure 15; a photograph of the original Drury station, main trunk railway and tramway/mineral railway in Figure 16; and a 1940s aerial showing the visible route of the former tramway/mineral railway within the Plan Change area in Figure 17. Based on the aerial view in Figure 17 the tramway crossed from the southeast corner of 44 Waihoehoe Road, across Kath Henry Lane and through 15 and 27 Kath Henry Lane to meet the railway line opposite the property at 3 Tui Street. The layout of garden features in 15 Kath Henry Lane and a visible linear feature in 27 Kath Henry Lane (Figure 18) may reflect the tramway/railway route. The 1850s tram had its terminus at Slippery Creek, whilst the railway had its terminus at the original Drury Railway Station which was closed down and replaced by a new station to the south in 1918. Both stations have been demolished, but the location of the 1918 station has been recorded as archaeological site R12/742.

The site record form for the Drury tramway/mineral railway (see Appendix A) gives the site a grid reference near the junction of Fielding and Fitzgerald Roads, well to the southwest of the Plan Change area. However, the site extended for 4-5km and the site record describes it as follows:

‘Horse drawn tramway originally built by Waihoihoi Coal Company to replace 1859- bullock road. Tramway opened 1862, closed ca 1864. Later upgraded to a narrow gauge steam powered mineral railway terminating at Drury station 1904-5 by Drury Coal Company (later Drury Fireclay, Brick and Potteries). Railway upgraded to wider gauge and linked by private siding to main line (1908-). Closed 1921. The route is visible on archival and contemporary aerial photographs, but only small sections are easily discernible on the ground ...Decline, closure and demolition (-1921). Only small sections of the embankment are easily discernible on the ground (e.g. at 111 Drury Hills Road). There were many bridges on the original route and the remains of some of these may be present in waterlogged areas.’

Other archaeological sites recorded in the general area are associated with Maori settlement, the early European settlement of Drury and the New Zealand Wars period. The locations of the sites are shown in Figure 19 and a brief description is provided in Table 2.

To the west of the railway line these include R12/1129 (St John’s Church), R12/733 (the site of the original Drury Village), R12/123 (Drury Redoubt) and R12/774 (a settlers’ stockade and cemetery). To the south these include R12/1125, the Flanagan Homestead which was built by and used by the Flanagan family from the late 19th century, the Flanagan mill (R12/967) and R12/755, the house built by James Farmer in the 1850s and used as General Cameron’s Headquarters’ during the construction of the Great South Road in 1861-62. It is also noted that military camps were located around Drury during the early

1860s and although the exact locations have not been established,³ at least one camp is thought to have been located near General Cameron's house, which was located not far south of the Plan Change area at 111 Fitzgerald Road.

Although located slightly further to the west, two archaeological sites have been recorded that also have relevance to the usage of the general area in the past along Slippery Creek. These are S12/8, a pa site and also where a wharf was later built which served as the terminus of the Waihoihoi Coal Company tramway in the late 1850s and early 1860s. The other is R12/756 which is believed to be the site of the Commissariat Redoubt, which was used as a military store during the New Zealand War Period.

Some distance to the east a number of archaeological sites have been recorded in the Drury Hills, associated with basalt quarrying and stone cutting in the early 1900s and the following sites have been recorded: R12/336, R12/673, R12/675 and R12/1100. A number of sites associated with Maori occupation and usage have also been identified in this area and consist of middens, pits and terraces: R12/331, R12/332, R12/335, R12/337 and R12/338.

Historic Heritage Sites

Auckland Council's CHI records a number of other historic heritage sites such as historic buildings, memorials and heritage trees (see Figure 20 and Table 2). Apart from the Drury tramway/mineral railway, no other historic heritage sites have been recorded on the CHI within the Plan Change area. However, a number of sites associated with Drury Village have been recorded to the west and document the early European settlement and historical associations with the New Zealand Wars. There is one maritime site (CHI 319) which is the landing associated with archaeological site R12/756, the Commissariat Redoubt and also the site used for the coal from the Waihoihoi Coal Company to be loaded onto ships for transport to Auckland. Three of the sites are 'reported' historic sites with no confirmed physical remains: CHI 15105, Drury Presbyterian Church, CHI 15110, the Farncombe Parade Shop and CHI 15880, the Drury Post Office. As well, seven historic buildings have been recorded, namely, CHI 2548, St John's Church (also recorded as R12/1129); CHI 15879, a milepost outside the current Drury Primary School; CHI 14374, Presbyterian Church; CHI 15102, the Former Drury Cheese Factory; CHI 15109, the Drury Commercial Buildings; CHI 15107, Drury Hall and CHI 17035, the Drury WWI Memorial. Two historic botanical sites are also included: the Runciman Oak (CHI 1870) and CHI 19131, a Phoenix Palm).

Six of the archaeological sites described above are also included on the CHI. These are R12/123 (CHI 9443), The Drury redoubt; R12/773 (CHI 14087) Drury Village; R12/774 (CHI 14088), The Settlers' Stockade and Cemetery'; R12/8 (CHI 6860), pa; R12/756 (CHI 14072), Commissariat Redoubt; and (R12/1129, CHI 2548), St Johns Anglican Church.

³ Soldiers' camps were also located in the vicinity of the Hingaia Stream which lies further to the west. Site R12/911 has been recorded along the Hingaia Stream, although this particular location on the stream has been questioned and cannot be verified at present.

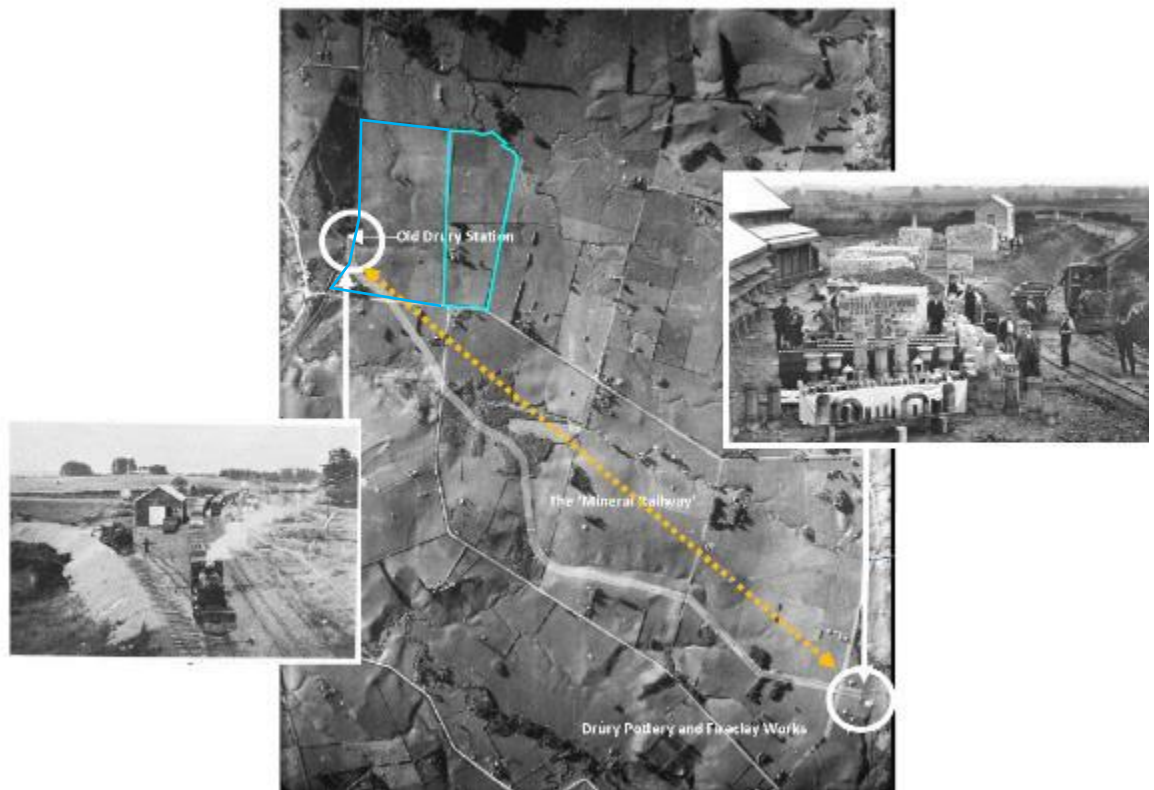


Figure 15. Aerial photograph (centre) with the estimated route of the Drury Tramway/ Mineral Railway (R12/1122) indicated and Plan Change area outlined in blue with photographs of the old Drury Train Station (left) and Drury Fireclay and Pottery works (right) (source: Brown and Brown 2017:53)



Figure 16. The Old Drury Railway Station (source: Brown and Brown 2017: figure 9). The view is towards the south, with the main trunk railway line veering to the right and the Drury tramway/mineral railway to the left. The station is on the right, on the western side of the railway line, while the large shed is on the eastern side (within what is now 15/27 Kath Henry Lane)

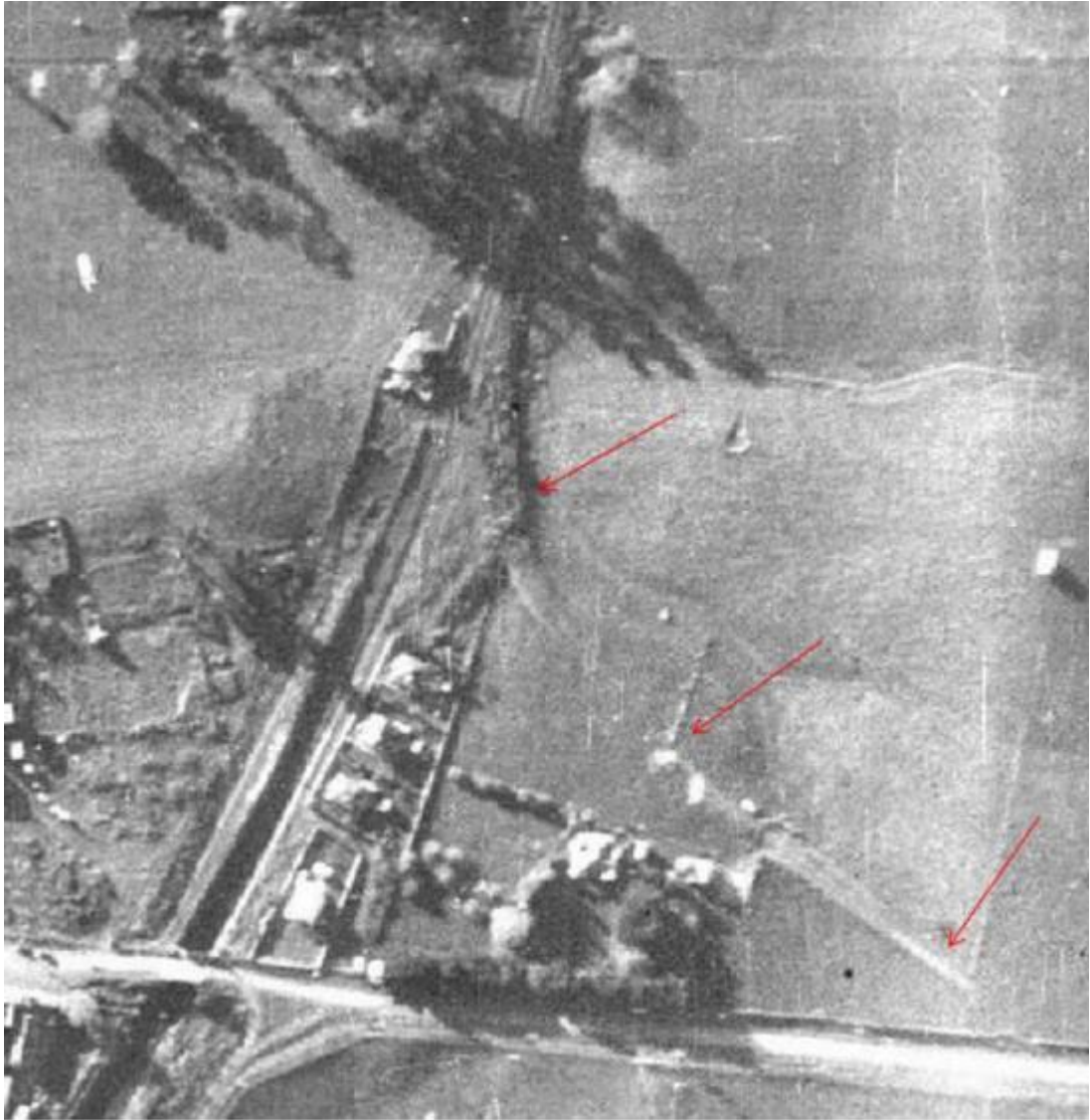


Figure 17. 1940s aerial showing the route of the mineral railway where it connected with the main line (source: Brassey 2017: figure 14)



Figure 18. Recent aerial view showing the likely former route of the Drury tramway/mineral railway within 27 Kath Henry Lane (arrowed) (source: Auckland Council Geomaps 2017)

Table 2. Archaeological sites and other historic heritage sites included within a c.1km radius of the Plan Change area

CHI No.	NZAA Ref	AUP Ref	Site Type	Description	NZTM Easting	NZTM Northing
6860	R12/8	00692 Cat. B	Pa Site	Ditch and banks with shell midden identified to the south-east.	1772699	5892443
9443	R12/123	-----	Military (non- Maori)	Drury Redoubt: Built in the 1860s to house soldiers.	1773470	5891925
11388	R12/742	-----	Transport/ Communication	Railyard and former Drury Station (1918) including two	1773261	5891495

CHI No.	NZAA Ref	AUP Ref	Site Type	Description	NZTM Easting	NZTM Northing
				subways, stock loading ramp and associated walling.		
14071	R12/755	-----	Military (non- Maori)	House believed to have been used by General Cameron during the 1860s.	1773921	5891336
14072	R12/756	02173 Cat. A	Military (non- Maori)	Commissariat Redoubt: A military supply depot used during the 1860s	1772750	5891894
14081	R12/911	-----	Military (non- Maori)	Possible 65th Regiment Camp occupied by soldiers during the 1860s).	1773206	5890887
14087	R12/773	-----	Domestic	Location of old Drury Village during the 1860s.	1772169	5892169
14088	R12/774	-----	Military (non- Maori)	Settlers' Stockade and old cemetery with some early settlers' graves.	1773240	5892293
17871	R12/967	-----	Industrial	Site of old Mill associated with the Flanagan family on the Hingaia Stream.	1773230	5890859
21945	R12/1122	-----	Industrial	The Drury Tramway/ Mineral Railway from the Drury Hills to the Old Drury Train Station.	From c. 1776376 to 1772694	5890145 5892444
-----	R12/1125	-----	Historic Structure	The Flanagan Homestead late 19 th century farm house.	1773392	5891137
2458	R12/1129	00707 Cat. B	Historic Structure	St John's Church constructed in the early 1860s. Structure still present.	1773330	5891888
9284	R12/331	00694 Cat B	Pits/ Midden Possible settlement	Possible shell midden. The nature of the other features is undetermined.	1776381	5892025
9381	R12/332	00695 Cat B	Pits/ Midden Terraces/ Stone-working	Interpreted as a settlement and gardening site (recommended to be combined with R12/338)	1776076	5891683
9710	R12/335	00697 Cat B	Pits/ Terrace /Midden	Pit in a levelled terrace and shell midden deposits.	1776023	5891750
8093	R12/336	00698 Cat B	Pits/ Terrace /Midden	Terraced area and shell midden, hangi stones and stone mounds. May relate to c. 1900 basalt quarry camp.	1776021	5891821
8094	R12/337		Pit terrace	Large terrace with pit.	1775974	5891780
9382	R12/338	-----	Pits/ Midden /Terrace	Interpreted as a settlement and gardening site	1776219	5891679
12260	R12/673	-----	Stone-working/ Quarry	Small stone working area associated with basalt quarrying.	1776045	5892182

CHI No.	NZAA Ref	AUP Ref	Site Type	Description	NZTM Easting	NZTM Northing
12430	R12/675	-----	Basalt Quarries	Part of a local basalt quarry complex in operation c. 1900.	1776165	5891705
14079	R12/1100	-----	Stone-working Area	Deep deposits of debitage.	1775945	5891913
14374	-----	-----	Historic Structure	Presbyterian Church still in use.	1773012	5891700
15102	-----	-----	Historic Structure	The Drury Cheese Factory, now in use as engineering workshops.	1773272	5891846
15107	-----	-----	Historic Structure	Drury Hall	1773513	5891986
15109	-----	-----	Historic Structure	Former commercial buildings/ now demolished and replaced by modern structures.	1773459	5891847
15879	-----	-----	Historic Structure	Mile Post (not thought to be original) outside Drury School.	1773236	5892422
17035	-----	-----	Historic Structure	Drury WWI Memorial	1773530	5891965
15105	-----	-----	Reported Historic Site	Second Presbyterian Church and Cemetery.	1773008	5892214
15110	-	-----	Reported Historic Site	Farncombe Parade Shop (demolished) and replaced by new building	1773415	5891987
15880	-----	-----	Reported Historic Site	Site of old Drury Post Office (demolished)	1773429	5891892
1870	-----	2198	Historic Botanical Site	The 'Runciman Oak'	1772871	5891717
19131	-----	2241	Historic Botanical Site	Four Phoenix Palms on east Street Drury.	1773409	5892356
319	-----	-----	Maritime Site	Slippery Creek Landing: location not verified.	1772820	5891934

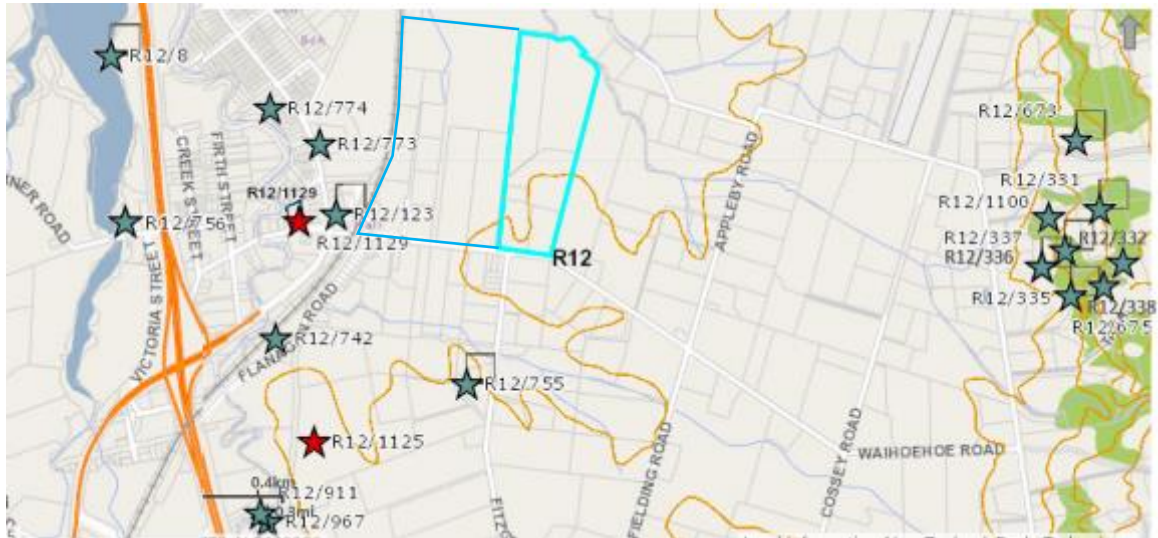


Figure 19. Map showing the Plan Change area outlined in blue and the recorded archaeological sites in the general area (source: NZAA ArchSite)



Figure 20. Aerial plan showing the historic heritage sites in the vicinity of the Plan Change area (source: Auckland Council Geomaps). Blue = historic structures, red = archaeological sites, green = heritage trees, purple = maritime sites, yellow = reported sites

PHYSICAL ENVIRONMENT

Topography, Vegetation and Land use

The Plan Change area is relatively low-lying with the northern and eastern parts being c.10m asl. The land rises up slightly to c.15m asl in the southern half of the Plan Change area, with the highest point along the southeastern boundary at 19m asl (as can be seen in the aerial photograph with contours shown in Figure 21). The Waihoehoe Stream borders the northeastern boundary and a tributary stream runs parallel to this across the property further to the west. It can also be seen that especially in the northeastern part of the Plan Change area a number of ditches (drains) have been dug, indicating that the area is prone to water inundation. Much of the land is in paddocks, with residential buildings mainly concentrated in the southwestern corner and along Kath Henry Lane, and within 112, 116 and 136 Waihoehoe Road. The railway line defines the western boundary of the Plan Change area.



Figure 21. Aerial photograph with contours of the Plan Change area (source: Auckland Council Geomaps)

FIELD ASSESSMENT

Field Survey Results

The field survey of 116-140 Waihoehoe Road covered approximately 12 hectares of the Plan Change area (Figure 22). The three house areas and two industrial sheds within this land block and their immediate surrounds were not included in the survey due to significant surface disturbances. The office manager at the property noted that he was not aware of the presence of any heritage features, such as shell middens. He also noted that during the winter parts of the property are prone to flooding and drainage ditches were present to help control water flow. As the survey was conducted during a dry period in the summer, it was noted that the drainage gullies were quite dried out. In general, ground conditions were less than ideal due to heavy, thick pasture coverage.

A surface scan was undertaken, and one item of historical interest was noted, being a ceramic brick marked: 'DRURY NZ' (photograph in Figure 23), although this was not associated with any structural remains. The age of the brick could not be ascertained but is likely to be of early 20th century date. Pottery was produced in Drury in the 19th century by the Waihoihoi Coal Company until 1885, by the Drury Pottery and Fireclay Works from 1906 to c.1914 and briefly by Drury Potteries Ltd in 1927-28 (see Historical Background). The Drury Pottery and Fireclay works was located some distance to the southwest of the Plan Change area, as shown in Figure 15.

Four test pits (c.20 x 20 cm and 15 cm deep) were placed randomly to assess the subsurface stratigraphy across the property (locations shown in Figure 24). The results showed that there was a consistent 100-150mm of bland topsoil above a light coloured clay (Figure 25). There was no identifiable cultural material within the examined topsoils.

The survey did not reveal any archaeological or historical indicators apart from the brick marked 'DRURY NZ'. General photographs taken during the survey are shown in Figure 26–Figure 29.



Figure 22. Plan showing area accessed during the survey (source: Auckland Council Geomaps)



Figure 23. Photograph of the brick marked with 'DRURY NZ' identified during the survey



Figure 24. Aerial photograph showing the survey area outlined in green and locations of test pits indicated (source: GoogleEarth)



Figure 25. Photographs showing the results of the four test pits



Figure 26. View southwards across the southern paddock towards Waihoehoe Road



Figure 27. View southwest across the northern section of the southern paddock



Figure 28. View northwest mid-way across the western paddock



Figure 29. View northwards along the eastern boundary paddock at right and the southern boundary along the line of solar panels

DISCUSSION AND CONCLUSIONS

Summary of Results

The southwestern corner of the Plan Change area contains part of a previously recorded archaeological site – the Drury Tramway/Mineral Railway (R12/1122, CHI 21945). The tramway/railway ran from Drury Hills Road, near its junction with Macwhinney Drive, entering the Plan Change area at 44 Waihoehoe Road and meeting the main trunk railway within 27 Kath Henry Lane. The mineral railway closed in 1921 but its embankment was still clearly visible within those properties and at 15 Kath Henry Lane in photographs dated to the 1940s.

No other archaeological/historic heritage sites have previously been recorded in the Plan Change area and none were identified during the survey of 116-140 Waihoehoe Road. A single brick marked ‘Drury NZ’, probably dating to the early 20th century, was found during the field survey but was not associated with any structural remains. Archaeological sites associated with Maori occupation have been recorded to the west along the larger waterways that connect up with the Pahurehure Inlet and to the east in the Drury Hills, but none have been identified in the area between. The Plan Change area borders one of the many smaller streams that run through the area between the above two mentioned places and it is noted that the low-lying wetlands around the stream would have provided an area of rich natural resources for people living to the east and west. Although the presence of Maori settlement sites in the Plan Change area is considered unlikely, and no settlement remains were observed, there is some potential for isolated finds, such as shell midden representing small encampments in the area bordering the Waihoihoi Stream.

The land containing the Plan Change area was sold to European settlers in the mid-19th century and is likely to have been in use for general agricultural purposes. The land to the south of Drury Township was the location of military camps under the command of General Duncan Cameron during the construction of the Great South Road in the early 1860s. The Plan Change area lies c.450m to the north of the house used as General Cameron’s headquarters and is located away from known areas of encampment. It would appear unlikely that it would contain archaeological remains associated with activities from this period.

Apart from the mineral railway there are no historic heritage sites identified within the Plan Change area. A number of historic structures and reported historic sites are located in Drury Township to the west of the railway but are all outside the boundaries of the Plan Change area.

Maori Cultural Values

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

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.

Only the eastern third of the Plan Change area could be accessed for archaeological survey, and thick grass cover hindered inspection of much of the ground surface.

Historic Heritage Value and Significance

The Plan Change area includes a small part of the route of the tramway/railway used to transport coal and pottery from the Drury Hills to Drury Township in the mid-19th and early 20th centuries. The historic heritage values of the site were recently assessed by Auckland Council for management purposes (Brassey 2017). The report is included in the site record form attached as Appendix A. Brassey concluded (pp.18-19) that:

‘The early mining and clay-based industries undoubtedly contributed significantly to the historical development of Drury. The tramway and railway were important components of these industries. There is however little physical evidence that is discernible on the ground of the Drury industrial tramway/railway within the Drury structure plan area.’

The following recommendations are based on a brief inspection of places associated with the ceramics industry in and adjacent to the Drury South structure plan area:

1. The tramline/mineral railway route likely meets the criteria for inclusion in the heritage schedule based on the historical significance criterion. However evaluation for scheduling is not recommended because the route is almost 4 km long, and passes through multiple properties. Scheduling would not, in my opinion, provide reasonable use of the land.
2. While the tramway/railway route can be identified from historical records, I do not consider that it is well suited to public interpretation or use as a public walkway/cycle way/bridle path. It is almost entirely on privately owned land and it is unclear how public access through those properties could be obtained. Furthermore, although the route has historic significance, it would appear to have little practical/utility or scenic value.
3. The former manager’s house (and outbuilding) at 93 Drury Hills Road appears to be substantially intact. Although just outside the study area, it is the most clearly identifiable reminder and most intact element of this locally important industry. Consideration should be given to evaluating the property for potential inclusion in the AUP Schedule of Historic Heritage.
4. There are elements of the industrial complex within the council owned Macwhinney Reserve, which is located close to the site of the 1904-works and pit, and includes part of the tramway route. Although these are not readily recognizable, they could potentially be interpreted using archival photographs. At present the reserve appears to receive very little public use, and installation of interpretive material would not, in my opinion, be justified. However, this situation may change in the future.

5. Opportunities to reference the history of the study area using place names or in the design or alignment of infrastructure (where practicable) should be considered.’

The tramway/railway is also a recorded archaeological site (R12/1122). The archaeological value of sites relates mainly to their information potential, that is, the extent to which they can provide evidence relating to local, regional and national history using archaeological investigation techniques, and the research questions to which the site could contribute. The surviving extent, complexity and condition of sites are the main factors in their ability to provide information through archaeological investigation. For example, generally pa are more complex sites and have higher information potential than small midden (unless of early date). Archaeological value also includes contextual (heritage landscape) value. Archaeological sites may also have other historic heritage values including historical, architectural, technological, cultural, aesthetic, scientific, social, spiritual, traditional and amenity values.

The archaeological values of the site have been assessed in Table 3, based on Heritage NZ criteria that are specific to archaeological sites (condition, rarity, contextual value, information potential, amenity value and cultural associations) (Heritage NZ 2006: 9-10). This assessment is based on the information in the site record form and Brassey 2017. Overall the site has limited archaeological value in terms of the information that could be recovered through archaeological investigation. Its main value is its historical significance based on its contribution to the development of Drury’s industries in the 19th and early 20th centuries.

It is also noted that the northern part of the property is bounded by the Waihoehoe Stream and a surrounding low-lying area that would have provided a rich wetland habitat for resource collection prior to European farming activities that converted the land to pasture. The potential for archaeological remains in the form of find spots of artefacts within the swampy/wetland area, and midden in the north along the stream banks cannot be excluded but is considered to be low. The Plan Change area is also located a few hundred metres from the likely location of New Zealand Wars military camps, but the potential for discoveries related to this period is low.

Table 3. Assessment of the archaeological values of site R12/1122 based on Heritage NZ criteria (Heritage NZ 2006: 9-10)

Value	Assessment
Condition	The condition of the site is poor, with only small sections of the embankment easily discernible on the ground (e.g. at 111 Drury Hills Road). The embankment was visible within the Plan Change area in 1940s aerials, but is generally not apparent today, although its route may be reflected in the layout of garden features within 15 Kath Henry Lane and a visible linear feature within 27 Kath Henry Lane. No tracks remain.
Rarity	A number of early tramway/railway routes have been recorded around the country associated with early extractive and manufacturing industries
Contextual value	The tramway/railway contributes to the historical landscape of the Drury area.

Value	Assessment
Information potential	The site has little information potential. The only surviving element appears to be sections of the embankment, and archaeological investigation could provide little information additional to what is already known from historical photographs and previous research.
Amenity value	The site has little amenity value along most of its route, being located in private properties and no longer being visible on the ground. However, there is potential for interpretation of the site within Macwhinney Reserve, which is Council owned (Brassey 2017: 19)
Cultural associations	The site is associated with early European settlement in the Drury area
Other	The site is of local historical significance based on its contribution to the historical development of Drury and its industries.

Effects of the Proposal

Future development as a result of the proposed Plan Change has the potential to impact on the route of the Drury tramway/mineral railway (R12/1122) within the properties at 44 Waihoehoe Road and 15 and 27 Kath Henry Lane. However, based on inspection of recent aerial photographs there are unlikely to be any clear remains of the tramway/railway route except possibly within 27 Kath Henry Lane (Figure 18). As the physical (archaeological) values of the site in this area are limited, any adverse effects would be minor. However, the potential effects should be assessed in more detail during the consent process for any future development of these properties.

Otherwise, future development as a result of the proposed Plan Change will have no known effects on historic heritage values as no archaeological or other historic heritage sites have been identified. The background research undertaken as part of this assessment indicates that the known sites associated with Maori occupation were located to the west along Slippery Creek and to the east in the Drury Hills. While the possibility that isolated finds, remnant small camp sites or small middens could be present, especially in the swampy areas in the northern parts and alongside Waihoehoe Stream, cannot be excluded, this potential is low.

Background research also identified that the land containing the Plan Change area was purchased during the 19th century and is likely to have been used for general agricultural purposes, while military camps and sites related to the New Zealand Wars were located to the south and west of the Plan Change area. It is considered that archaeological remains relating to early European settlement or the New Zealand Wars period are unlikely to present within the Plan Change area.

A brick manufactured in Drury, probably during the early 20th century, was identified during the survey, but was not associated with any identifiable structural remains.

The possibility that unidentified archaeological sites may be present is provided for under the AUP OP Accidental Discovery Rule (see next section).

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 provisions 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 places in the AUP OP within the Plan Change area. This assessment has established that future development as a result of the proposed Plan Change has the potential for adverse effects on the route of the former Drury tramway/mineral railway in properties along Kath Henry Lane. However, the site is of limited archaeological value and any effects are likely to be minor and could be addressed at the resource consent stage for any further development of these properties. Otherwise, future development would have no effects on any known archaeological or other historic heritage remains, and has only low potential to affect unidentified subsurface archaeological remains that may be exposed during earthworks. Any potential adverse effects can be appropriately managed and mitigated through provision of a buffer zone along the boundary of Waihoehoe Stream, the AUP OP Accidental Discovery Rule and under the provisions of the HNZPTA (2014).

Under the Accidental Discovery Rule (AUP OP E12.6.1) works must cease within 20m of the discovery and the Council, Heritage NZ, Mana Whenua and (in the case of human remains) NZ Police must be informed. The Rule would no longer apply 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)⁴, –

(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’

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.

Any future development proposed within 44 Waihoehoe Road, and 5 and 27 Kath Henry Lane would require more detailed archaeological assessment including field survey, to determine whether an archaeological authority is required.

Conclusions

Based on background research and an archaeological survey of part of the Plan Change area at 116-140 Waihoehoe Road, it is considered unlikely that archaeological deposits or features will be affected by future development within most of the Plan Change area. However, the properties at 44 Waihoehoe Road and 15 and 27 Kath Henry Lane contain the route of the former Drury tramway/mineral railway (R12/1122), and any further development within these properties has the potential for minor adverse effects on the site. The site has few physical remains and is of limited archaeological value, but more detailed assessment of effects will be required at the resource consent stage if future development of the properties is proposed, and an archaeological Authority under the HNZPTA may be required.

There is some, but limited potential for unidentified sites related to Maori settlement to be present in the vicinity of the Waihoehoe Stream. As the potential for this is low, the possibility can be appropriately managed under the AUP OP Accidental Discovery Rule.

⁴ Under Section 42(3) an Authority is not required to permit work on a pre-1900 building unless the building is to be demolished.

⁵ Under Section 43(1) a place post-dating 1900 (including the site of a wreck that occurred after 1900) that could provide ‘*significant evidence relating to the historical and cultural heritage of New Zealand*’ can be declared by Heritage NZ to be an archaeological site.

RECOMMENDATIONS

- The potential for minor adverse effects on the Drury tramway/mineral railway route (R12/1122) within the properties at 44 Waihoehoe Road and 15 and 27 Kath Henry Lane should be addressed at the resource consent stage if further development of these properties is proposed. This should include an archaeological survey of the properties and a more detailed assessment of effects.
- Otherwise there should be no major constraints on the proposed Plan Change and future development on archaeological grounds, as no other known archaeological sites will be affected, and the possibility that unidentified archaeological remains may be present can be appropriately managed and mitigated under the AUP OP Accidental Discovery Rule and the provisions of the HNZPTA.
- 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 Plan Change area.

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APPENDIX A: SITE RECORD FORM R12/1122

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

 <p>Site Record Form</p>		<p>NZAA SITE NUMBER: R12/1122</p> <p>SITE TYPE: Commercial</p> <p>SITE NAME(s): Drury tramway/mineral railway</p> <p>DATE RECORDED:</p>	
<p>SITE COORDINATES (NZTM) Easting: 1774443</p>		<p>Northing: 5890387</p>	
<p>Source: On Screen</p>			
<p>IMPERIAL SITE NUMBER:</p>		<p>METRIC SITE NUMBER: R12/1122</p>	
			
<p>Finding aids to the location of the site</p> <p>Gnd ref is nominal location on tramway route, which extended over 6km from ca 1776375 5890145 to 1772694 5892444 See attached sketch</p>			
<p>Brief description</p>			
<p>Recorded features</p> <p>Tramway</p>			
<p>Other sites associated with this site</p>			

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30/03/2019

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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD HISTORY	NZAA SITE NUMBER: R12/1122
<p>Site description</p> <p>Updated 02/05/2018 (Field visit), submitted by robertbrassey , visited 23/11/2017 by Brassey Robert Grid reference (E1774443 / N6980687)</p> <p>Horse drawn tramway originally built by Waihoihoi Coal Company to replace 1853- bullock road. Tramway opened 1862, closed ca 1864. Later upgraded to a narrow gauge steam powered mineral railway terminating at Drury station 1904-5 by Drury Coal Company (ater Drury Fireclay Brick and Potteries). Railway upgraded to wider gauge and linked by private siding to main line (1908-). Closed 1921. The route is visible on archival and contemporary aerial photographs, but only small sections are easily discernible on the ground</p> <p>Updated 02/05/2018 (Field visit), submitted by robertbrassey , visited 23/11/2017 by Brassey Robert Grid reference (E1774443 / N6980687)</p> <p>Horse drawn tramway originally built by Waihoihoi Coal Company to replace 1853- bullock road. Tramway opened 1862, closed ca 1864. Later upgraded to a narrow gauge steam powered mineral railway terminating at Drury station 1904-5 by Drury Coal Company (ater Drury Fireclay Brick and Potteries). Railway upgraded to wider gauge and linked by private siding to main line (1908-). Closed 1921. The route is visible on archival and contemporary aerial photographs, but only small sections are easily discernible on the ground</p> <p>5. Decline, closure and demolition (-1921).</p> <p>Condition of the site</p> <p>Updated 02/05/2018 (Field visit), submitted by robertbrassey , visited 23/11/2017 by Brassey Robert</p> <p>Only small sections of the embankment are easily discernible on the ground (e.g. at 111 Drury Hills Road). There were many bridges on the original route and the remains of some of these may be present in waterlogged areas</p> <p>Updated 02/05/2018 (Field visit), submitted by robertbrassey , visited 23/11/2017 by Brassey Robert</p> <p>Only small sections of the embankment are easily discernible on the ground (e.g. at 111 Drury Hills Road). There were many bridges on the original route and the remains of some of these may be present in waterlogged areas</p> <p>Statement of condition</p> <p>Current land use:</p> <p>Threats:</p>	

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SITE RECORD INVENTORY	NZAA SITE NUMBER: R12/1122
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Supporting documentation held in ArchSite

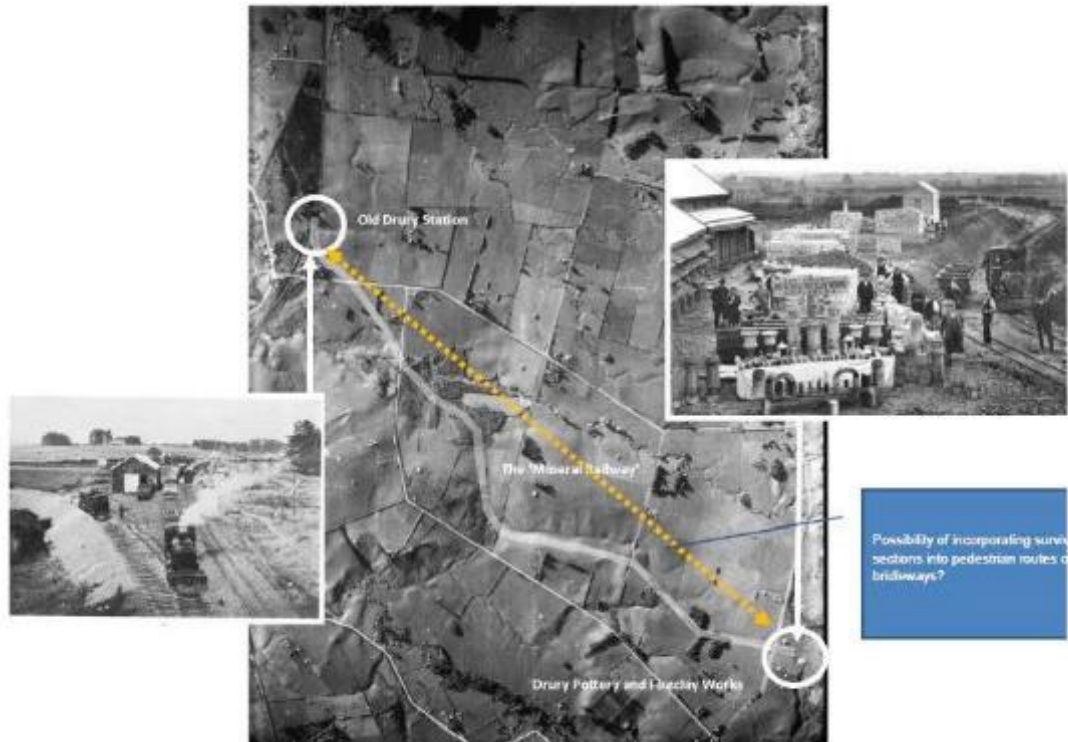
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Sketch plan of tramway route. Source: Plan.Heritage 2017. Historic Heritage Topic Report: Drury Structure Plan. Report to Auckland Council, August 2017.



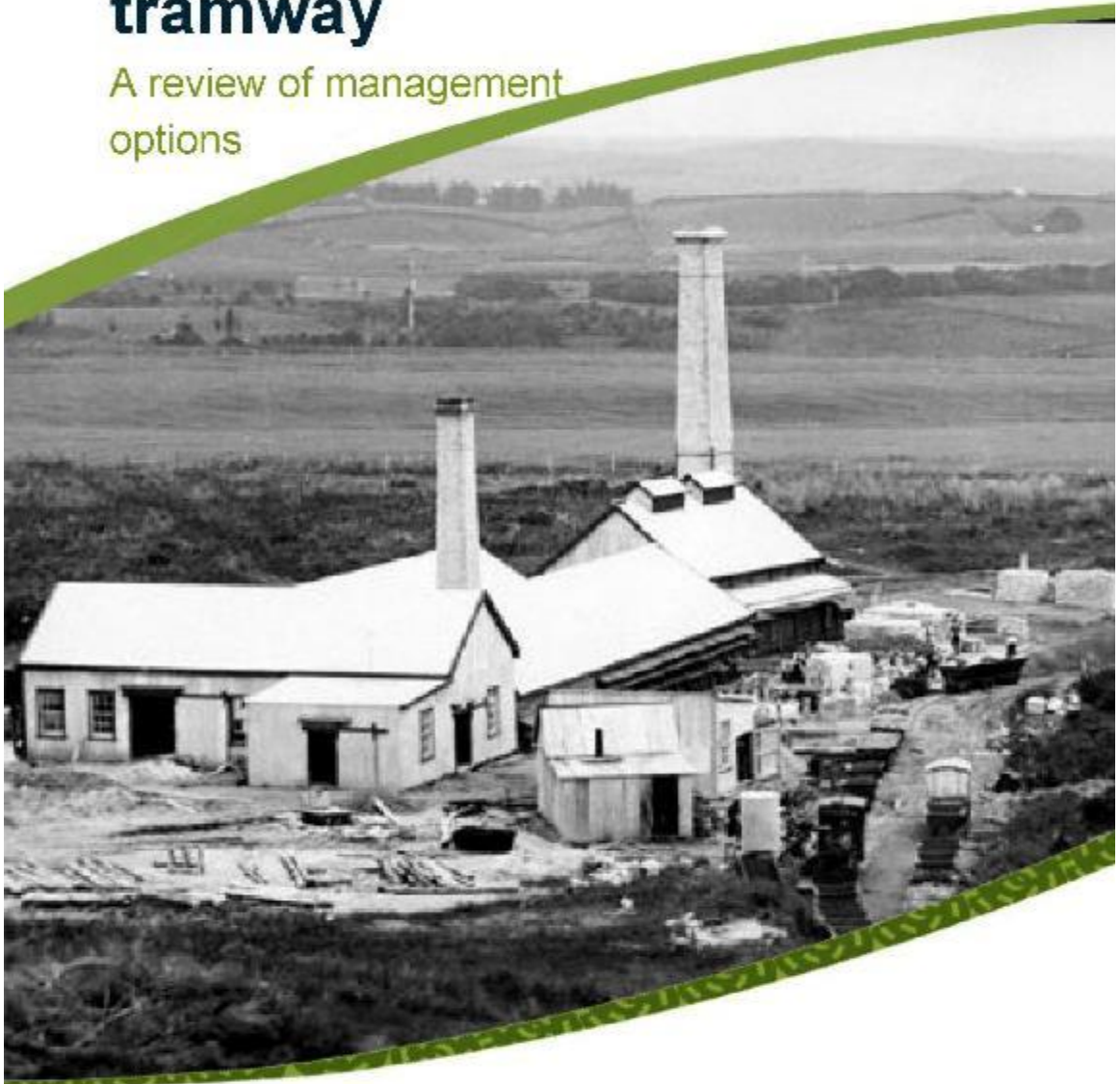
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The Drury industrial tramway

A review of management options



Robert Brassey
December 2017

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Cover image: Detail of Drury Pottery and Fire Clay Works, Drury - Henry Winkelmann photograph Auckland War Memorial Museum.

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1 Introduction

This report has been prepared to give effect to recommendations included in the Drury Structure Plan historic heritage topic report (Plan.Heritage 2017) in relation to an early tramway and railway route within the structure plan area.

The topic report noted that there have been a number of early roads, railway routes and other forms of early transport infrastructure within the future urban zone (FUZ). Places of historical or archaeological interest identified in the report include part of the line of what is reputed to be the earliest tramway in the North Island, and the route of a 'mineral railway' established in the early 20th century to serve the Drury Coal mines, Pottery and Fireclay works.

The topic report concluded that archaeological remains associated with early transport within the FUZ are poorly recorded and understood, but potentially of significant interest, and are likely to be affected by development. The report identified an opportunity for these routes and associated sites to be investigated and potentially interpreted as part of the structure plan process. The topic report included a number of proposals for further action or research. This included a recommendation that the tram/railway route/s be interpreted, and potentially developed as future cycling, walking routes or bridal paths (Plan.Heritage 2017:5; 46; 53).

2 Scope

This report has been prepared to give effect to the recommendations of the historic heritage topic report in relation to the early tramway and subsequent railway within the structure plan area. In particular it considers the recommendation that the route/s be interpreted in part by the provision of cycling or walking routes.

The scope of the work has been limited to targeted historical research, observations based on aerial photography and brief site visits from the public realm.

3 History of the Drury tramway and 'mineral railway'

3.1 The first phase – ca 1859-1864

Coal was mined at Waihoihoi [Waihoehoe]¹ by the Waihoihoi Coal Mining Company from the late 1850s on land owned by James Farmer (Fig. 1).

<p style="text-align: center;">Coal Mines.</p> <p>WANTED—Two Practical Miners to open and work the Opaheki Coal Seams on Mr. Farmer's land known as the Waihoihoi.</p> <p style="text-align: center;">Apply to Mr. R. TURNBULL, One Tree Hill.</p> <p>September 24, 1858.</p>	<p style="text-align: center;">DRURY COAL FIELDS.</p> <p>THE COAL MINE at Waihoihoi, having now been opened sufficient to prove the value of the Coal, as well as its superior quality for Steam and Domestic purposes, the undersigned are prepared to receive Tenders until WEDNESDAY, 24th instant, leasing the same for a period of Six Months upon a royalty.</p> <p style="text-align: center;">TURNBULL & FARMER, Care of MESSRS. BROWN & CAMPBELL</p> <p>November 11. 1858.</p>
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Figure 1. *New Zealander* 25 September 1858;2. *Daily Southern Cross* 23 November 1858.1.

A short self-acting tramway ¼ mile long was used to extract the coal from the mine. Initially the coal was transferred by bullock teams to the Drury wharf to be shipped by sea to the company's coal wharf at Onehunga. From there it was transported by horse and cart to the town of Auckland. This method proved unsatisfactory due to the swampy nature of the ground, and by 1860 plans were being made to extend the tramway by an additional 2 miles to Abraham's Point near the mouth of Slippery Creek (*New Zealander* 11 January

¹ Aka Waihoihohi. While the Waihoehoe Stream and locality is located further north on land that was owned by Henry Chamberlin (see SO 200: Deeds Roll 64), the range of hills appears to have been known as the Waihoihoi Range. Kear (1859:849) shows the 1850s-60s Waihoihoi and later Drury mines as being close together on land that was owned by Farmer, in the vicinity of what is now Macwhinney Drive. It is unclear if coal was worked on the Chamberlin property.

1860:3). A brickworks and pottery were also being planned to take advantage of the cheap fuel and good quality fire clay associated with the coal.

The entire length of the line is 3½ miles. The gauge is 4 feet 8½ inches, and the rails are of rimu, which is a timber admirably suited for this purpose. In the construction of this tramway 105,000 feet of sawn timber has been used; besides which the following go to make up the total of the materials, and will give some idea of the magnitude of the work:—

45,000 sleepers of puriri, rata, and mati;
6,000 puriri trenails;
20,000 feet squared timber for viaducts, &c.;
4,000 split slabs for covering ditto;
200 short and 40 long puriri piles;
2 tons nails and spikes;
2 tons iron fixings.

There are about 1,000 feet in length of bridges and viaducts, which is occasioned by the swampy nature of the ground. Upwards of 3,000 yards of earth cuttings have been executed, and 10 miles of drains formed.

At present the rolling stock consists of eight trucks, each carrying 1½ ton coal, but these will be increased as the business requires extension. Mr. Vickery, of Auckland, did the castings for these trucks; Mr. Young, of Drury, supplying the remaining iron work. The works on the tramway were let in sub-sections, the whole being carried out in a most creditable manner under the direction of Mr. Thomas Hyde, the manager, whose practical talents are well attested by the stability and completeness of the line. This tramway cost the company about £400 a mile; and will be worked by horse power. Owing to the incline from the mouth of the pit, which is a drive into the side of the hill, the trucks laden with coal will run half the distance to Slippery Creek most easily, so that the horse labour will not be so much as at first sight may appear. The cost of car-

Fig. 2. Description of the tramway. (*Daily Southern Cross* 6 May 1862:4)

The route for the tramway, designed by civil engineer James Stewart, had been marked out by June 1860 (*Daily Southern Cross* 28 June 1860:1). The tramway was finally opened on 1 May 1862, construction having been delayed for six months by adverse weather conditions (*Daily Southern Cross* 13 December 1861:3).

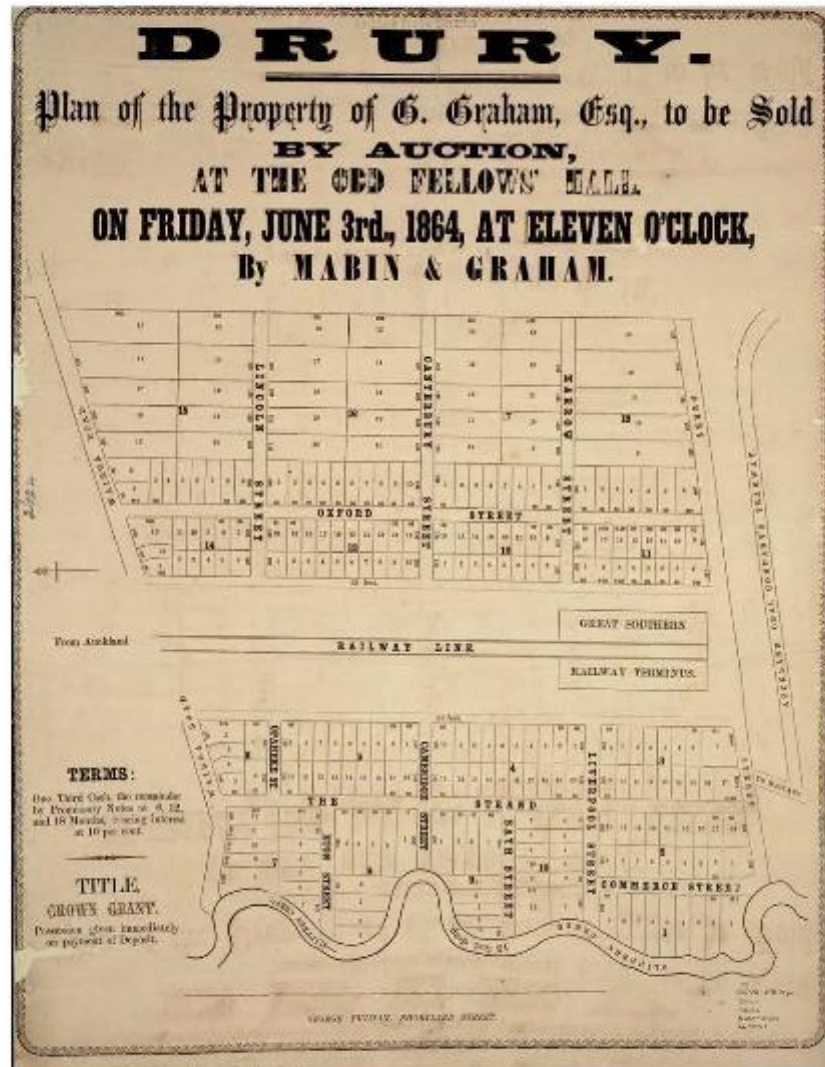


Figure 3. An 1864 plan showing the location of the tramway (right side of image) near Slippery Creek. NZ Map 455.

The single line horse-drawn tramway was built upon an embankment of shale tailings from the mine. The sleepers were made from locally cut puriri, and the rails of 5" square rimu. Provision was made for the passing of return wagons. The cost to build the tramway was £1500, considerably less than had been estimated (*New Zealander* 5 July 1862:4).

The mine was found to be uneconomical due to transport costs, the poor returns from the sale of the low quality sub-bituminous brown coal and the nature of the deposit². The operation lasted less than a year in full production, and finally closed during the Land Wars (*New Zealand Herald* 18 April 1904:6).



Figure 4 Location of Waihoehoe Coal Company terminal and wharf on Slippery Creek

3.2 Auckland-Drury railway

In 1864 the Provincial Government authorised the construction of a railway from Auckland to Drury (*The Colonist* 12 February 1864:5). Construction commenced in 1865, but was halted again in 1867 when the Provincial Government ran out of money (Ball 2009; La Roche 2012). The project was resurrected in 1870 and by 1874 the main line had reached Drury. The availability of this rail connection would influence subsequent changes to the route of the tramway/railway from the mine.

3.3 Second phase – 1904>

In 1904-5 a new syndicate, the Drury Coal Company, opened a coal mine and built a new

² The coal seam was only 2m thick with an uneven floor and was quickly worked out.

'mineral railway'. The mine appears to have in close proximity to the ca 1859-64 coal mine and they appear to have upgraded and modified the existing tramway route to create the new railway. The railway terminated at Drury station rather than at Slippery Creek (Fig.5). The availability of substantial quantities of fireclay associated with the coal lead to the development of a pottery and brickworks which opened on 12 October 1906, using the coal to fire the kilns (*New Zealand Herald* 13 October 1906:6). The company was renamed the Drury Fireclay, Brick and Potteries Limited.

Demand for the company's products had increased to the extent that expansion of the works was necessary in 1906 and in 1908, and the 'mineral railway' was upgraded to the government railway gauge so that ordinary railway trucks could be used to deliver the firm's products directly via a private siding without being transferred (*New Zealand Herald* 4 December 1906:3; *Auckland Star* 20 August 1908:7). Problems were experienced with obtaining an adequate water supply, necessitating the construction of a new pipeline in 1908 (*Auckland Star* 21 February 1908:6).

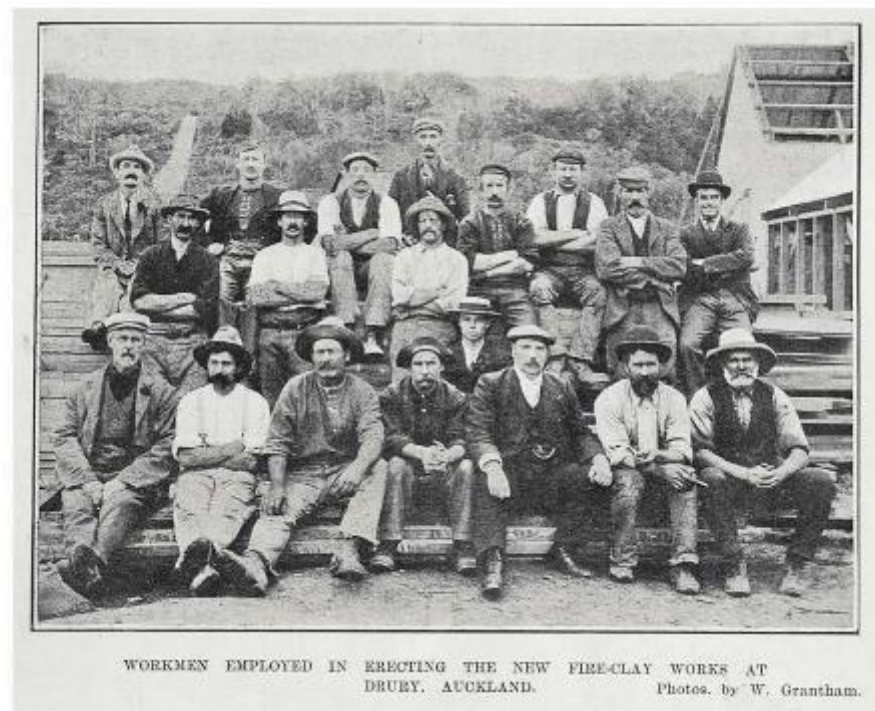


Figure 5. Photograph taken during construction of the new works, with the tramway route to the mine visible in the background.



Figure 6. Transporting ballast material to construct the new railway line, 1905.

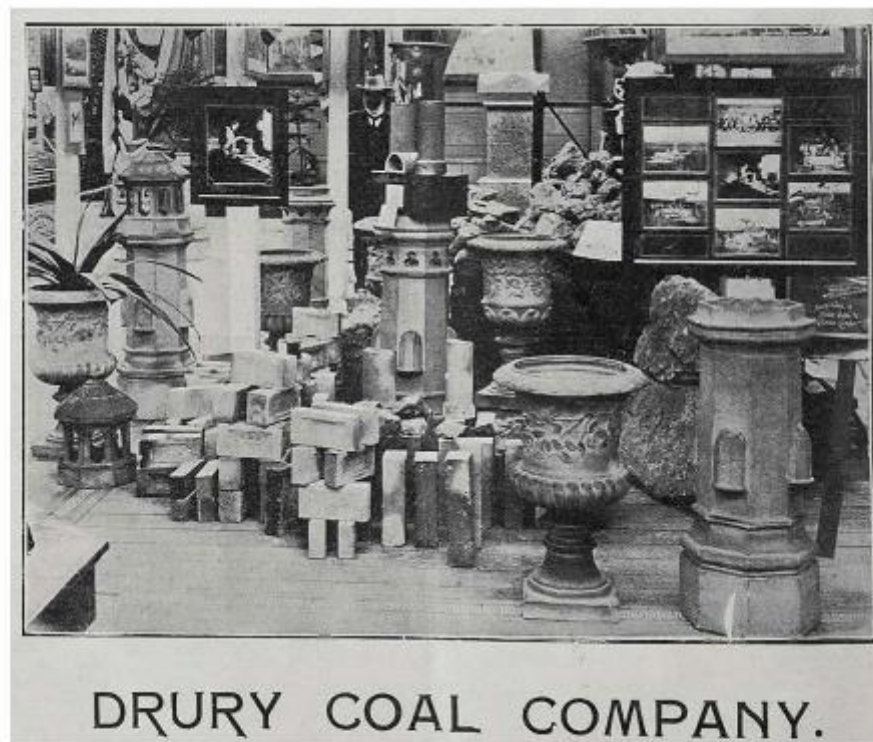


Figure 7. Exhibition stand showing the range of products produced at the works.

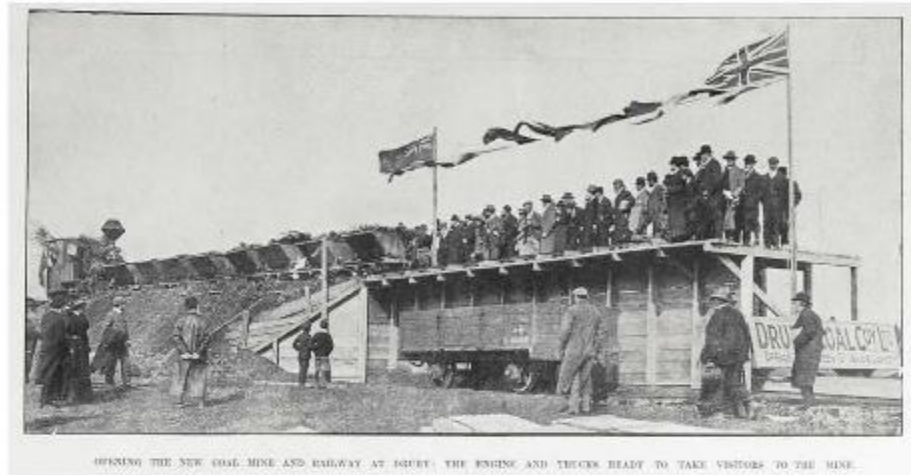


Figure 8. Termination of the new railway near Drury Station.



Figure 9. The branch line to the mineral railway, 1905

3.4 Decline and eventual closure of the works

The venture was not a financial success. The company went into liquidation to shed liabilities, only to be reformed again under the same name. By 1912³ the company was again in trouble, and was liquidated yet again in 1913 (*New Zealand Herald* 29 August 1913:12) and the assets advertised for sale in 1914. The works were reopened under the new name Drury Brick and Tile Company in 1915 (*Pukekohe & Waiuku Times* 18 June 1915:3). The works were for sale again as a going concern in 1917 (*New Zealand Herald* 10 February 1917:2 and again in 1921 (Fig.10).

**THE WHOLE OF THE BUILDINGS,
BRICKS AND SUNDRIES
OF the
DRURY BRICK CO.,
Two Miles from Drury Station.**

The Buildings are of wood and iron,
covering an area of 180 by 130; also 5 small
buildings (wood and iron).
The quantity of Bricks is estimated at
250,000, including a percentage of fire bricks.

For further particulars apply to
**A. W. BRYANT,
2, Waitemata Chambers,
Customs Street West.**

Figure 10. Advertisement from the *New Zealand Herald* 8 January 1921:2

By April of that year the sheds and kilns were being demolished, reportedly to be re-erected in Devonport for the Auckland Gas Company (*Pukekohe & Waiuku Times* 1 April 1921:5)⁴. Quantities of brick seconds and brickbats were subsequently advertised for use as paving around cowsheds.

Another company known as Drury Potteries Limited had been formed in 1927, but this firm also went into liquidation, in 1928 (*New Zealand Herald* 13 July 1927:9; *Auckland Star* 13

³ One source suggests that the company's coal mine was closed down in 1911, but the pottery works remained in operation until 1915. The 'Drury Brick, Tile and Coal Company' was said to be in liquidation in 1911 (*New Zealand Herald* 12 May 1911:7), but it is unclear what the relationship was between the various companies. 'Drury Brick' continued to trade on the share market until 1912.

⁴ Diamond (1976:11) states that the Amalgamated Brick and Pipe Company of New Lynn purchased the works in or around 1929 and sold off the machinery. This date appears to be incorrect.

December 1928:28). It is unclear if they were involved with the site near Macwhinney Drive. Diamond (1978: 11) states that a brickworks was started around 1936 on a site near the concrete bridge on the Great South Road using clay from the old works above Drury Hill Road. There are enigmatic reports of a case in 1932 brought against the former directors of the Drury Brick and Tile Company. The directors were subject to unsuccessful litigation over the quality of its bricks supplied in 1930 (*Auckland Star* 30 September 1932:3). This suggests that this company may have been operating from a different site at this time – perhaps that referred to by Diamond.



Figure 11. View of brickworks/brickery and tramway in 1906 (ref).

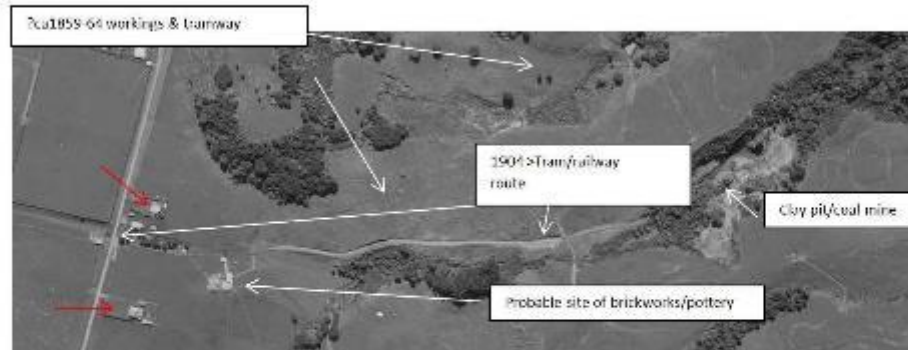


Figure 12 Site of the 1804- clay pit/coal workings (disturbed ground), tramway and works. The tramway route crosses what is now Drury Hills Road. The house in the lower left corner of the picture (red arrow) is thought to be a manager's house and is still intact. The one north of the tramway is substantially modified. What appear to be the earlier mine and tramway route are visible just to the north. SN 1829R/22 (1980).

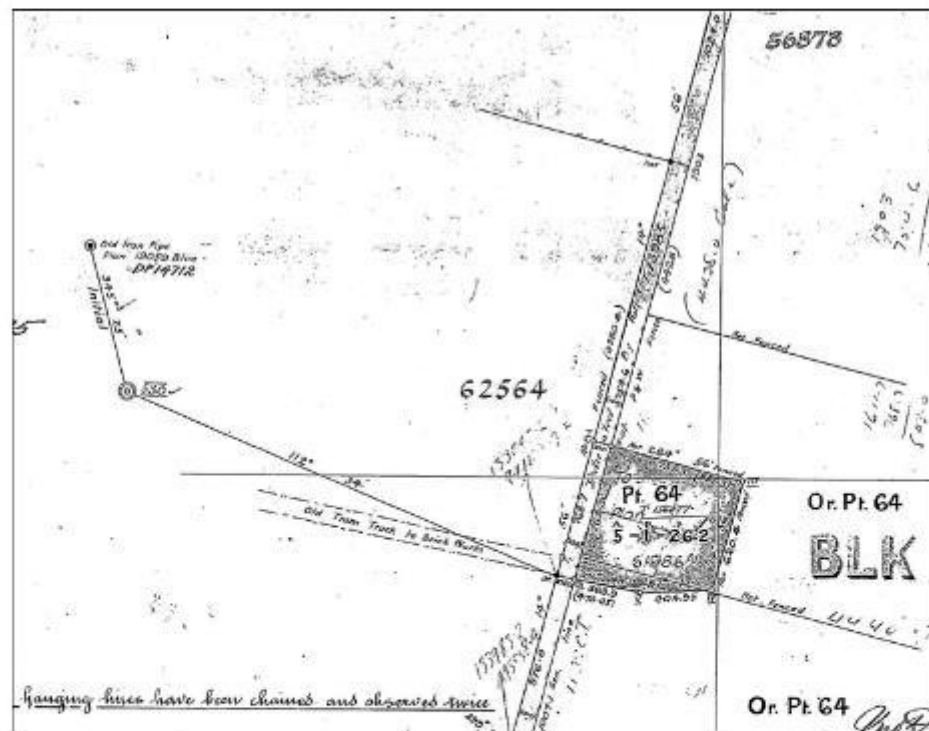


Figure 13. Sectional view of SD 14960 (1920) showing intersection of 'old tram track' with Drury Hills Road.

3.5 Summary of history

The phases of construction of the tram/railway are as follows:

1. Self-acting incline from mine. Bullock road to Slippery Creek wharf (1859-)
2. Horse-drawn tramway replaces bullock road (1862-)
3. Narrow gauge steam powered railway replaces tramway, terminates at old Drury station (1906-)
4. Railway upgraded to wider gauge and linked by private siding to main line (1908-)
5. Decline, closure and demolition (-1921).

4 Field inspection

An inspection was made of selected portions of the 1904 - tramline route that were accessible or visible from the public realm on 18 December 2017. Several places where the tramline is intersected by modern roads were viewed.

Although the route can be traced on aerial photographs (Fig. 14), the tramline route is generally not readily recognizable on the ground, except for small sections near the beginning (Figs. 12, 16) and end. The section between the mine pit and pottery/brickworks site has largely been formed as a road and sealed.

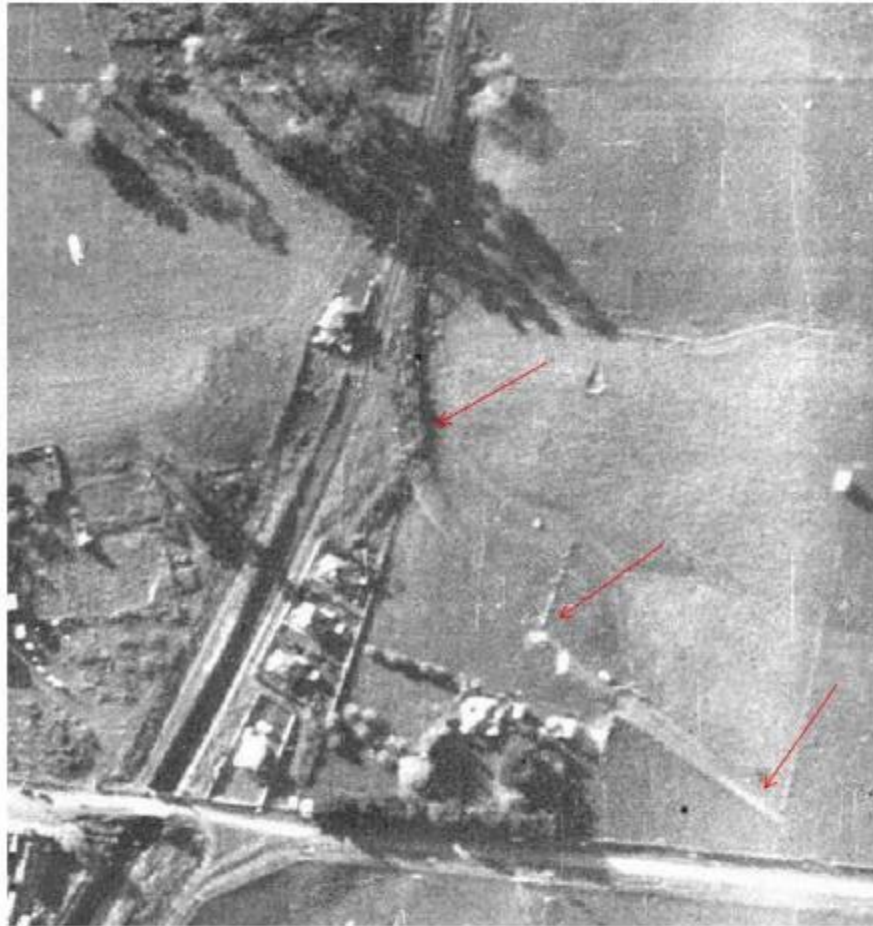


Figure 14. 1940s aerial photo showing the route of the railway where it connected with the main line.

The likely terminus and wharf remains of the 1859-64 tramway is located on Department of Conservation land at 27 Bremner Road, at the junction of Ngakoroa Stream and Slippery Creek. This was formerly known as Abraham's Point. It has been identified and scheduled as a Māori pā site (site R10_08, CHI 6860). However it is possible that some or all of the features formerly visible relate to the use of the wharf and tramway or later uses rather than being of Māori origin. In particular the feature recorded as a defensive ditch at the tramway terminal appears to bisect and thus post-date the tramway embankment (Figure 15). The recorded bank has planting along it in the 1942 aerial photograph. This suggests that it was fenced at the time. The possibility that it was constructed as a historic era ditch and bank stock enclosure (which were typically topped with hedgerows) should be considered.

The site is outside the structure plan area and is overgrown with gorse/weeds and was not accessed.



Figure 15. Traces of the 1859-64 tramway to the wharf at Abraham's Point are visible on this 1942 aerial photograph. The linear feature recorded as a ditch appears to bisect and thus post-date the tramway embankment. Shadows indicate that the feature recorded as a bank has planting along it.

A remnant portion of the tramway/railway embankment is visible at the eastern end just outside the structure plan area on where it intersects Drury Hills Road (Fig. 16).

It is possible to identify the location of the 1904- clay/coal pit and tramway route, and what appears to be the 1859-coal workings and tramway route on early aerial photographs (Fig. 12). However these are outside the study area. The environment has been substantially modified and these features are no longer readily identifiable on the ground.



Figure 18. Remnant of the raised tramway/railway embankment where it intersects Drury Hills Road. In the background (at 93 Drury Hills Road) is the manager's house with chimney pots which appear to be products of the firm.

5 Conclusions and recommendations

The early mining and clay-based industries undoubtedly contributed significantly to the historical development of Drury. The tramway and railway were important components of these industries. There is however little physical evidence that is discernible on the ground of the Drury industrial tramway/railway within the Drury structure plan area.

The following recommendations are based on a brief inspection of places associated with the ceramics industry in and adjacent to the Drury South structure plan area:

1. The tramline/mineral railway route likely meets the criteria for inclusion in the heritage schedule based on the historical significance criterion. However evaluation for scheduling is not recommended because the route is almost 4 km long, and passes through multiple properties. Scheduling would not, in my opinion, provide reasonable use of the land.

2. While the tramway/railway route can be identified from historical records, I do not consider that it is well suited to public interpretation or use as a public walkway/ cycle way/bridle path. It is almost entirely on privately owned land and it is unclear how public access through those properties could be obtained. Furthermore, although the route has historic significance, it would appear to have little practical/utility or scenic value.

3. The former manager's house (and outbuilding) at 93 Drury Hills Road appears to be substantially intact. Although just outside the study area, it is the most clearly identifiable reminder and most intact element of this locally important industry. Consideration should be given to evaluating the property for potential inclusion in the AUP Schedule of Historic Heritage.

4. There are elements of the industrial complex within the council owned Macwhinney Reserve, which is located close to the site of the 1904-works and pit, and includes part of the tramway route. Although these are not readily recognizable, they could potentially be interpreted using archival photographs. At present the reserve appears to receive very little public use, and installation of interpretive material would not, in my opinion, be justified. However this situation may change in the future.

5. Opportunities to reference the history of the study area using place names or in the design or alignment of infrastructure (where practicable) should be considered.

6. This study has identified the location of the tramway and coal pit associated with the 1859- mine, and of features associated with the subsequent clay industry. This information will be recorded in ArchSite and the Auckland Council CHI. Effects on pre-1900 sites and features arising from future development can be managed under the archaeological provisions of the Heritage New Zealand Pouhere Taonga Act.

6 References

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Newspapers – full references are in body of text