



Urenui UFB2 Build (HNZPTA authority 2020/746): final report

report to
Heritage New Zealand Pouhere Taonga
and
Chorus

Arden Cruickshank

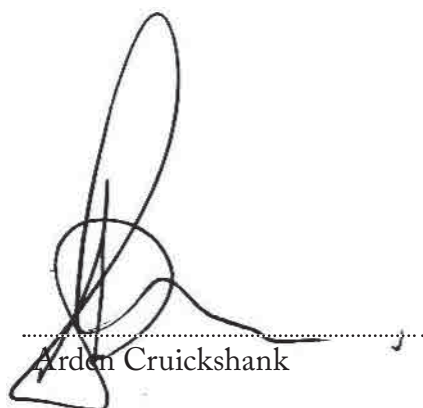


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Chorus have installed a new fibre optic cable network around Urenui as part of the second stage of the National Ultra-Fast Fibre project (UFB2). The installation of the cable mainly involves excavating small pits at regular intervals (usually in line with every second property boundary) within existing service trenches, and directional drilling between these. Other pits were opened to locate services or extend the cable to property boundaries, with trenching used on rare occasions when underground services could not be confidently located. During the initial assessment (Glover 2019), a desktop study was undertaken to identify areas within the build where archaeological sites would potentially be impacted during works. This identified two sites (Q19/71 and Q19/140) recorded in the New Zealand Archaeological Association (NZAA) Site Recording Scheme (SRS) in the project area. These areas were confirmed by Marlene Benson of Ngāti Mutunga as being similar to areas identified as wāhi tapu within Urenui. Chorus applied to Heritage New Zealand Pouhere Taonga (HNZPTA) for an archaeological authority to modify or destroy these sites under section 44 of the Heritage New Zealand Pouhere Taonga Act (2014). Authority 2020/746 was granted by HNZPT on 29 June 2020.

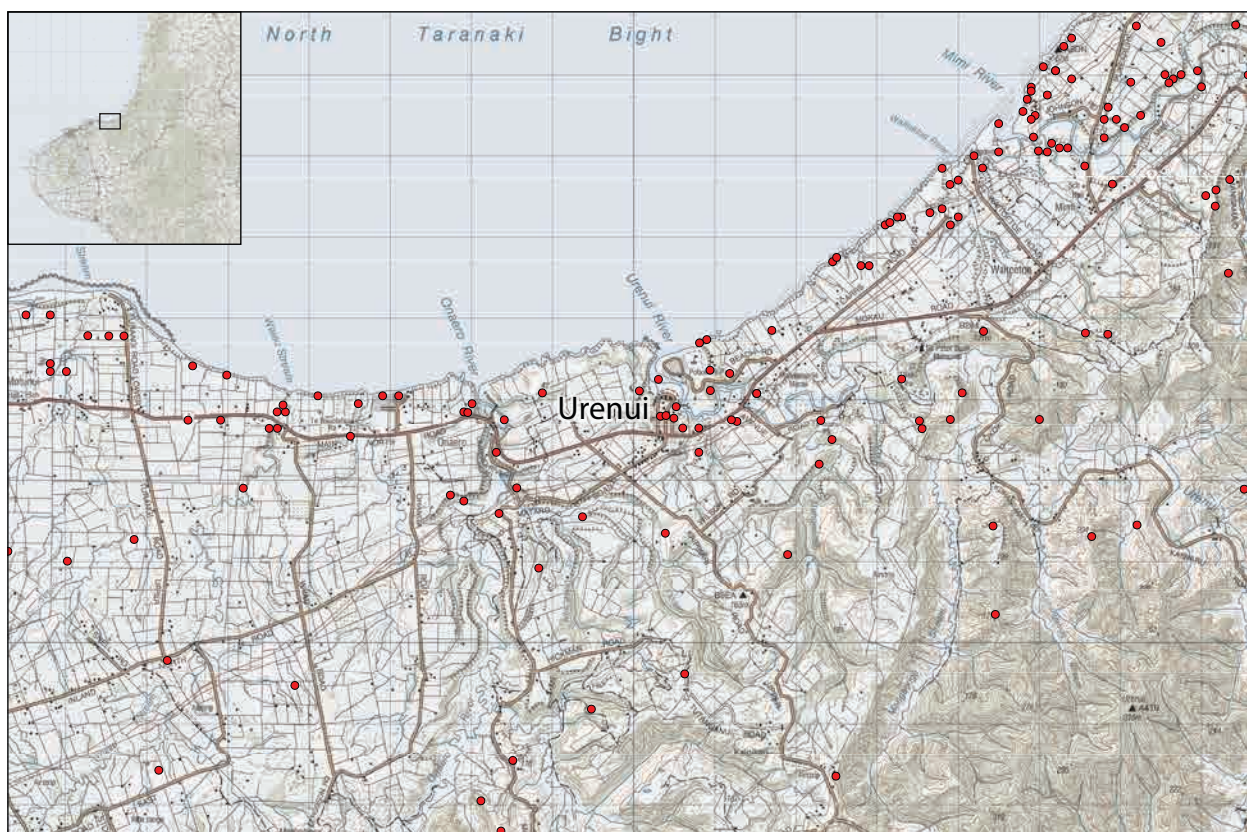


Figure 1. Location of Urenui showing recorded archaeological sites in the area.

Methodology

Work commenced on 14 September 2020, with earthworks completed in January 2020. Ground disturbance in areas identified as medium or high risk (Glover2019), were archaeologically monitored to see if any evidence of Q19/71 or Q19/140 or previously unrecorded archaeological sites could be identified. Works down northern portion of Whakapaki and Mokena Streets was also inspected to see if any unrecorded sites were visible.

In addition to two recorded pre-European Māori sites identified during the assessment (Q19/71 and Q19/140) that had potential of being affected by works, subsequent works undertaken for stormwater works encountered historic evidence of drains and the old road down Ngakoti and Epiha Streets (Dan McCurdy pers. coms). This has since been recorded as site Q19/450 and is marked on Figure 2. Monitoring was undertaken by Arden Cruickshank of CFG Heritage Ltd.

Construction methodology

Installation of the fibre network consisted primarily of directional drilling to minimise ground disturbance. These consisted of insertion and receiving pits which were generally 1.2 x 1.2 m, with varying depths, generally around 1 m. These pits also housed the underground cabinets which centralised the connections for a neighbourhood. Although drill shots were capable of being more than 200 m long, they were generally at distances of approximately 40 m to allow for individual house connections. In addition to the insertion pits, a number of 'potholes' were required to identify the location and depth of services prior to a drill shot being made. Because of the inherent risk of sub-surface drilling near existing services, the drill shots were often made next to existing service trenches to allow for accepted minimum distances from high voltage cables and other potentially hazardous services. It cannot be assumed that the areas where the fibre is being installed have been previously disturbed. Drill shots were generally run 600–900 mm beneath the ground surface and have the potential to run through sub-surface archaeological features such as pre-European Māori storage pits and fire scoops as well as historic period features.

The level of ground disturbance associated with this project depended on the complexity of services in a particular street and is not consistent over the build but is still less than traditional trenching methods for installation of services.

Due to this type of ground disturbance, assessing the archaeological effects and interpreting features and the landscape is not as straight forward as typical archaeological monitoring projects. Trenching would traditionally be used for installation projects of this magnitude which would allow an archaeologist to view soil profiles over a significant length and identify subtle landscape modifications that would indicate human activity. Similarly, large scale topsoil stripping such as with housing developments provide an archaeologist with a complete knowledge of the sub-surface archaeological deposits within the project extent.

The drawback of those methods of extensive earthworks is that any archaeological features that are within it are significantly modified. The purpose of the Heritage New Zealand Pouhere Taonga Act 2014 is "...the identification, protection, preservation and conservation of the historical and cultural heritage of New Zealand", with avoidance and minimisation of damage the preferred approaches for archaeological landscapes. With this in mind, the approach for these projects is to manage the archaeological landscape and the effects on it, rather than to create a robust record of all archaeological sites within a build.

Archaeological monitoring and investigation procedures were developed to ensure disturbance to both archaeological features and council assets was minimised.

- 1 If archaeological features are discovered during works, the archaeologist will not extend the hole beyond its intended size. This was a two-fold limitation, as this would increase the modification of the feature, and has the potential of destabilisation of the road and other infrastructure. The only exception to this would be if kōiwi were encountered, which would be dealt with upon discussion with mana whenua, the New Zealand Police, Heritage New Zealand and Auckland Council.
- 2 Where archaeological features are discovered, drilling will be done at a depth of 1200 mm, or a suitable depth determined by the archaeologist as likely to avoid archaeological features.

The results of this project should not be seen as an exhaustive list of archaeological sites that exist within the road reserves around Urenui, or even a representative sample; but rather an exercise in minimising potential effects on the archaeological landscape.

Background

Urenui is located in northern Taranaki, at the mouth of the Urenui River. In terms of landforms, the coastline is built up from uplifted late quaternary marine terraces, giving a step-like appearance to the area. Further inland, the area consists of ridges and eroded hills cut by numerous streams and rivers (Allen et al. 2002; Buist 1964). Soils around the Urenui River are primarily silt and clay loams, with New Plymouth black loam in the wider area surrounding the township.

Prior to forest burning, it is likely that vegetation extended to the coast, and would have included a range of tall trees such as rimu, totara, and beech, with kahikatea near the swamps and wetlands and pohutakawa along the coast (Allen et al. 2002). After burning, much of the vegetation along the coast was dominated by bracken and scrub, while forests remained inland (Buist 1964).

Pre-European Maori

The Urenui River is thought to have come by its name as the Tokomaru waka with Manaia and his party crossed the winding river. Manaia then named it for his son Tu-Urenui (de Jardine 1992). The area around the Urenui River mouth was intensively settled by Maori. The estuary was surrounded by hills with flattened tops, making it ideal for the establishment of pā (Bargh 1995). The number of archaeological sites within Urenui attests to the intensity of settlement. There are 53 Māori sites within the Urenui district, including 40 pā sites as well as midden sites and earthworks.

European Settlement

One of the first Europeans to pass through Urenui was probably Captain Jack Guard, on his way to Mokau in the 1830s, followed by Rev. James Buller in 1839, as he travelled to Port Nicholson from Kaipara (de Jardine 1992). In 1840 Urenui was investigated by Dr Ernest Diffenbach as a potential location for European settlement. While the surrounding lands were fertile, there was no site for a harbour, so it was deemed unsuitable (de Jardine 1992).

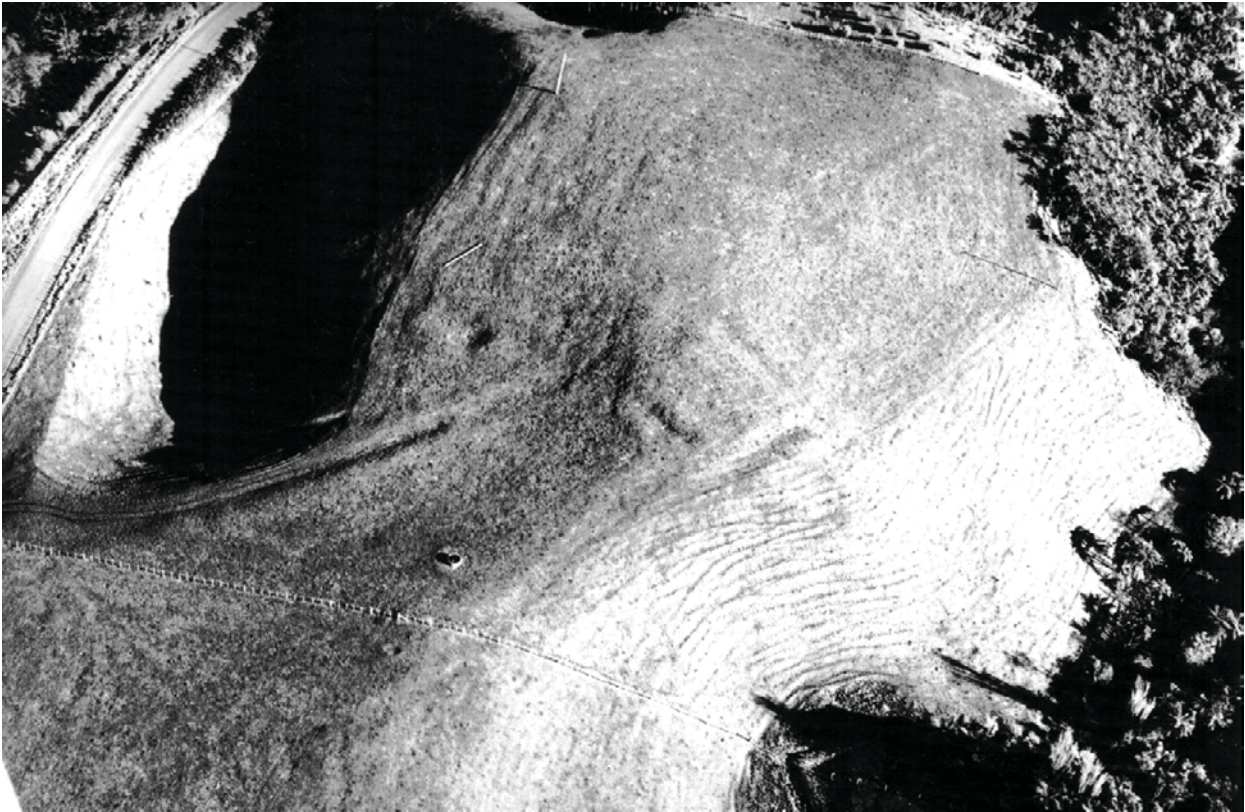


Figure 2. Aerial view of the Urenui Redoubt (Prickett 2016: 146).

European settlement of Urenui begun with the establishment of the Urenui Redoubt at Pihanga pā in 1865 during the Second Taranaki War (Lambert 2009). The redoubt was established by a Māori force, under the leadership of Captain Good, for the purpose of securing communication with the Pukearuhe Redoubt in Waiti. Māori and Pākehā troops held this post for twenty years, and in 1869/1870, after the raid on Pukearuhe, it was one of the strongest redoubts in Taranaki (Prickett 2016). In 1869 the Urenui North Redoubt was established in response to the attack on Pukearuhe, but this was abandoned two months later (Prickett 2016). The military withdrew from Urenui Redoubt in 1884/1885 (Prickett 2016).

At the time of the initial establishment of the Urenui Redoubt, settlers began forming a township on Snapper Flat. One of the early settlers, Decimus Atkinson, established a brick factory up the river using clays from the riverbanks (de Jardine 1992). Export of these bricks continued through to the 1880s. Various roads and bridges were built in this time, and the settlement grew (de Jardine 1992). In 1888 St Paul's Church was constructed in the Urenui township, and this building is now recognised as a Category 2 Historic Place on the HNZPT List / Rārangī Kōrero. The building is characteristic of late 19th century Gothic Revival architecture and was designed by a local architect named Edward Wickham (Astwood 2017). As roads were improved in the late 1890s and early 1900s, the port was used less and less as the roads were safer and more reliable for exports (de Jardine 1992).

Sir Peter Buck (Te Rangi Hiroa) was born in Urenui in 1877 and became a doctor who worked to improve the health and wellbeing of Maori people and communities (Sorrenson 2002). Buck later helped recruit a Maori volunteer contingent when war was declared in 1914, and went to the Middle East in 1915 as a medical officer with this contingent, soon becoming a

major and second-in-command of the New Zealand Pioneer Battalion after the withdrawal from Gallipoli. After this, Buck accomplished much in the field of anthropology, before he died in 1951 (Sorrenson 2002). His ashes are buried at Okoki, under a canoe-prow memorial (Lambert 2009).

Archaeological Investigations

In 1960 Robinson surveyed the region between Onaero River and Mimi River to record fortified sites, using Best's map from "Pa Maori" as an initial guide (Robinson 1961). Robinson identified 45 pā sites within this area, 29 of which were previously unrecorded.

Kumara-Kaiamo Pā (Q19/71) was excavated from 1961 to 1962 under the direction of R. Parker (Buist 1964). The pā is characterised by a large flat platform with a large defensive transverse bank which rose up to 1.8 m above the platform and was 6 m wide. A wide outer ditch was also recorded, as well as a narrow terrace and an outer transverse bank (Buist 1964). Numerous pits and associated features were located, and interpreted as representing numerous distinct stages of occupation. Buist (1964) notes five periods of occupation in which the site platform was modified, houses and storage pits built, with a defensive ditch dug in the fifth period, transforming the kāinga into a defensive pā. After this, a layer of grey sand represents potential abandonment, though kumara cultivation seems to have occurred at this time, after which two more periods of occupation are proposed. In these periods, defences are rebuilt and expanded, and villages constructed (Buist 1964).

In 1963 Dick Jonas and colleagues partially excavated Q19/140 after artefacts were located. The site contained midden and storage pits below 450 mm of topsoil. Unfortunately, much of the archaeology at the site was likely obscured as a result of using heavy machinery that were not ideal for the task to strip topsoil.

From 1999 to 2001 University of Auckland researchers and Ngāti Mutunga engaged in collaborative work to better understand Maori settlement around wetland areas in Urenui and surrounding areas, and to restore lost taonga to Ngāti Mutunga (Allen et al. 2002).

In 2019 Dan McCurdy uncovered archaeological material while monitoring watermain upgrades on Ngakoti Street. Evidence of early European settlement was found within the road reserves, including a drain, the original road surface and some European artefacts. This has recently been recorded in the SRS as Q19/450 and it is likely that additional evidence related to early settlement, including previous roads and hotels, is present in the surrounding areas (McCurdy, pers. comm. 13 November 2019).

Although relatively little archaeological investigation has occurred in Urenui, there is a high density of archaeological sites recorded in the area, with an especially high proportion of pā sites. This suggests that Urenui was intensively settled, and that there is a high likelihood that additional archaeological features and remains exist in the area.

Field work

Due to changes in the route utilised for installation, the areas monitored and inspected differed slightly from what was recommended in the assessment for the build (Glover 2019). No works were required on Epiha Street, with the main feed for the northern portion of Ngakoti Street coming off Mokena and Whakapaki Streets. Because of this route, the insertion holes down Whakapaki and Mokena were able to be inspected as part of the project.

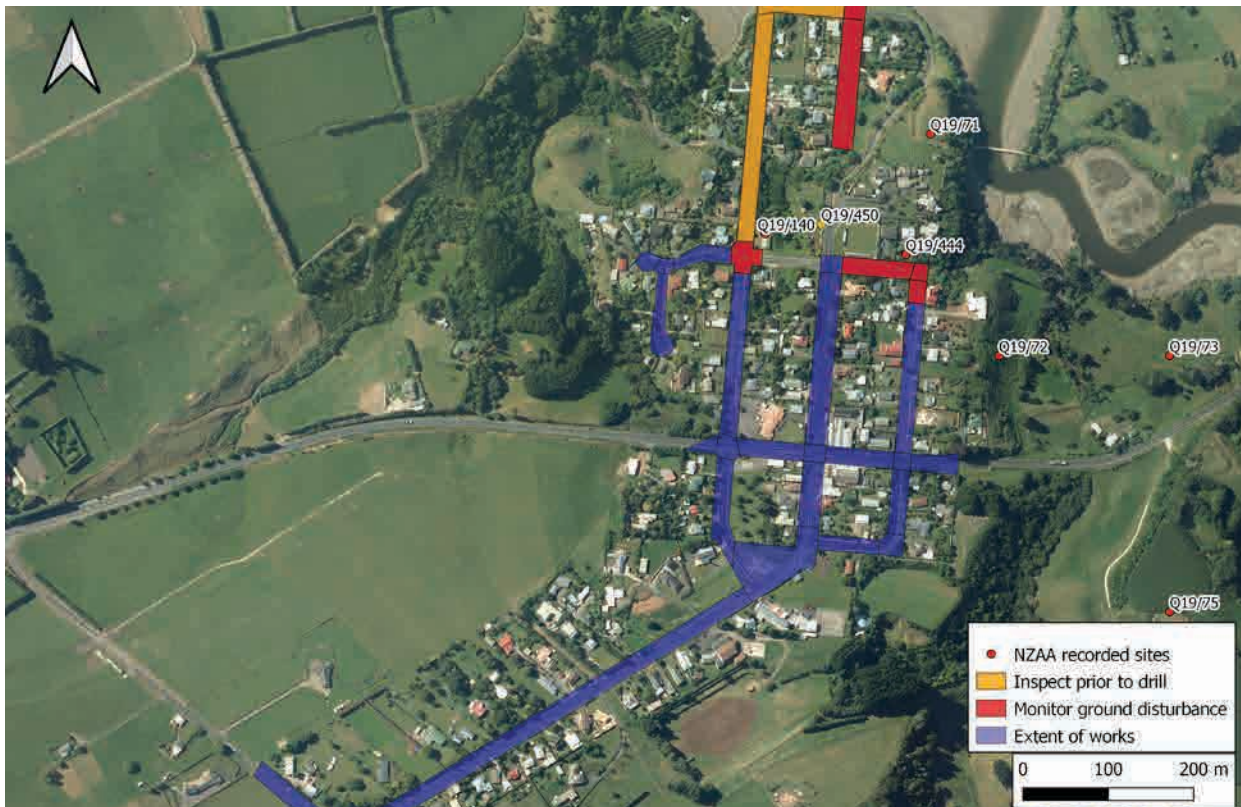


Figure 3. Areas monitored or inspected during build.

Q19/71

Kumara-Kaiamo pā (Q19/71) is located in the north-east of Urenui township, on a headland on the left bank of the Urenui River. Originally recorded in the SRS by Robinson in 1961, the pā was previously described in detail by Best in *The Pa Maori* (1927). Erosion due to logging operations has led to the deterioration of some surface features, but overall preservation is still relatively good, and subsurface remains including kōiwi, lithic artefacts, and midden have been found at this site.

Works within 200 m of Kumara-Kaiamo pā were monitored. Because Epipha Street was omitted from the build, this included the northern portion of Ngakoti street and Ritimona Street.

Ngakoti Street

There were two trenches excavated in this street to join the drill shots to meet power poles, the first outside number 47, and the second outside number 51. The first trench was in an area that had previously been disturbed to a depth of approximately 400 mm, with mid-to-late 20th century rubbish including, fibrolite, brown beer bottle glass and part of an old D-Cell battery. There was also a deposit of drainage material in the form of water rolled pebbles where the watermain intersected the trench.

The soil in the second trench was a mix of topsoil and gley, with rootlets and organic material within it. This area appears to be naturally flat and is likely a drained former wetland.



Figure 4. View south of trench outside 47 Ngakoti Street.



Figure 5. View west of trench outside 51 Ngakoti Street.

The remainder of the holes inspected along Mokena Street had a similar matrix of gleys, with it continuing up Whakapaki Street until the drain located between numbers 42 and 44, after which loams are once again identified.

Ritimona Street

The insertion holes and potholes dug along this street showed that heavy modification had occurred, probably from levelling for road and house lot development and subsequent improvements over the years.

An insertion hole was dug on the corner of Ritimona and Ngakoti Streets which had a deep mixed topsoil layer 600 mm deep at the southern end, with the natural surface sloping down northwards. The hole was abandoned at 900 mm and sterile soils were not reached in the northern side.

Within this mixed topsoil layer some undiagnostic ceramic fragments were found. It is likely that this area was subject to fill activities prior to the formation of Ritimona Street and Bowling Club and is probably associated with the drainage and road identified by McCurdy at Q19/450.

The works along Ritimona Street were undertaken near Q19/444, a findspot identified in the property of 2 Ritimona Street. This findspot represented a single human proximal phalanx, which was deemed to be likely pre-European or early contact due to the condition of the



Figure 6. View east of insertion hole at corner of Ritimona and Ngakoti streets showing likely original slope of hill prior to fill event. Photo scale = 0.5 m.

bone. This single bone was encountered by the owner while gardening, and it is thought that it came from elsewhere in the surrounding area (possibly associated with Q19/71) as the soil was redeposited. Because of this additional findspot, extra attention was paid to works outside 2 Ritimona Street to see if any additional kōiwi were present within the road reserve.

Outside 2 Ritimona Street the soil profile was a mix of grey clay, concrete, some 20th century rubbish and water rolled stones. There was a 300 mm concrete/ACM pipe exposed within a trench, which appears to be the stormwater main which discharges into the Urenui River. Beneath the pipe was similar mixed topsoil that was observed in the insertion hole on the corner of Ritimona and Ngakoti Streets indicating that there has been significant fill imported to build up the surface. The remainder of the potholes outside number 2 Ritimona Street had similar 20th century fill, likely associated with service installation and building up the road surface.

Q19/140

Q19/140 is a pit/terrace site located at Yandle Park, near the corner of Whakapaki Street and Ritimona Street, west of a gully. The site was recorded by Jonas in 1963 when it was partially excavated by Jonas and colleagues. While they did not complete their excavations before the site was levelled, they recorded five pits, two rua and two midden deposits. While any surface evidence has been destroyed, it is possible that deeply cut features remain in situ at this site.

The works in the vicinity of this site were associated with multiple insertion holes required for the road crossing of Ritimona and Whakapaki Streets.



Figure 7. View east of insertion hole outside 2 Ritimona Street showing 300 mm stormwater pipe.



Figure 8. Additional holes dug outside 2 Ritimona Street.



Figure 9. View of hole outside Scout Den showing lack of topsoil compared to description in the site record.

The first hole was directly outside the Scout Den, in the vicinity of Q19/140. The original site record mentions that there was 18 inches of topsoil across the site, but less than 10 mm of topsoil was observed in this hole indicating there has been extensive cut not only within the lot where Q19/140 was located but in the road reserve also.

The second hole was south east corner of the intersection outside 26 Whakapaki Street. This hole was different to what was observed outside the Scout Den, with 100 mm of topsoil sitting on a lower layer of mixed clay and tree roots. At 500 mm, clay and metalled roading surface from previous road level were encountered. Below this was sterile. The road surface identified by McCurdy (Q19/450) consisted of locally acquired river rolled pebbles, but this surface was basalt roading metal so likely represents a later roading surface when non-local material was imported.

The insertion holes excavated on the western side of the intersection featured a modern topsoil layer deposited on a thick B-horizon of loam. This side of the intersection appears to have been cut down significantly (up to 3 m in the south western portion) which would have obliterated any archaeological material in the vicinity. No archaeological material was encountered in the insertion holes dug around this intersection.

Discussion and conclusion

Works undertaken in Urenui have indicated that there has been extensive modification to the ground surface in areas where cut and fill activities have been undertaken for the formation of roads and house lots, but as McCurdy identified (Q19/450) there is evidence of pre-1900 roading, and likely pre-European Māori sites still present within road reserves throughout the township.

As with the other UFB2 builds undertaken in recent years (for example, Cruickshank 2020; Cruickshank and Craig 2020; Cruickshank and Ussher 2020, Cruickshank 2021) this type of directional drilling often does not produce the levels of archaeological evidence that would be produced through trenching or large-scale earthworks projects. Even in builds such as Omokoroa (Cruickshank 2020) where the density of archaeological sites on the peninsula is well documented and has been subject to dozens of archaeological investigations in the past 15 years, in situ archaeological material was only encountered in four separate insertion holes, with no material occurring in the next closest holes. Finding archaeological material during the fibre builds proves to be rare, even in dense archaeological landscapes.

The lack of archaeological evidence encountered during this build should not be seen as a lack of archaeological evidence within Urenui, but is a justification of the use of minimal disturbance methods such as directional drilling and avoidance of high-risk areas.

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