

Archaeological monitoring at Pakuranga Substation, Auckland

**report to
The New Zealand Historic Places Trust
and
Transpower New Zealand Ltd**

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Transpower are extending and upgrading the Pakuranga Substation, 109 Golfland Drive, Pakuranga (Lot 146 DP 168165, Lot 1 DP 14331 and Lot 2 DP 167430) as part of the North Island Grid Upgrade Project. Three archaeological sites are recorded in and around the area to be developed. These are R11/2381 and R11/2382 recorded as shell middens, and R11/2398 recorded as a possible pre 1900 remnant hawthorn hedge. An archaeological authority to modify the hedge was applied for from the New Zealand Historic Places Trust under section 14 of the Historic Places Act 1993, and authority 2010/14 was subsequently granted. As further mitigation against the accidental discovery of any archaeological features or previously unknown sites archaeological monitoring of topsoil stripping was undertaken in areas that were assessed as undisturbed.

Method

The New Zealand Archaeological Association online site file (www.archsite.org.nz) was searched for any recorded archaeological sites within the development area and to give an indication of what sites, if many, might be uncovered by the development. To ascertain whether any historic pre-1900 buildings may have once been present on the site Land Information New Zealand's online database (www.landonline.govt.nz) was searched for any relevant survey plans.

Historical Background

A survey plan, DP 782 (Figure 1) dated 1889, shows the area of the substation grounds as part of a pre 1900 farm, but the homestead, a shed and another building are depicted on the south side of what is now Te Rakau Drive. A historic homestead still stands on the property at 415 Te Rakau Drive in this location, but whether this is the original homestead is not known, as the historic background was not researched further. Historic features relating to this farm which may have been present on the substation grounds include fences, tracks, and drains. These features are not considered archaeologically significant and are likely to have been modified or destroyed by 20th century farming practices and other development. DP 2870, dated 1896 (Figure 2), shows hawthorn hedges around the homestead and to the north of the substation site.

Recorded Archaeological Sites

Three archaeological sites have been previously recorded either on or in close proximity to the Pakuranga Substation property. The Pakuranga Substation grounds were archaeologically surveyed between October 2006 and March 2007 by Brent Druskovich and Margaret Rika-Heke and they recorded two middens and a hawthorn hedge as archaeological sites. Sites R11/2381 and 2382 are both small midden sites that appear to have been damaged in the past through farming and other land management practices. The sites are located on the edge of Pakuranga Creek on the southern boundary of the site. They are most likely located within the adjoining Drainage Reserve, which was overgrown at the time of our visits.

During the same survey an alignment of hawthorn (*Crataegus monogyna*) on the substation grounds was interpreted as the remnant of an old hawthorn hedge marking an internal paddock boundary, and was recorded as site R11/2398. The age of the hawthorn plants was not known but it was thought to be possibly pre 1900.

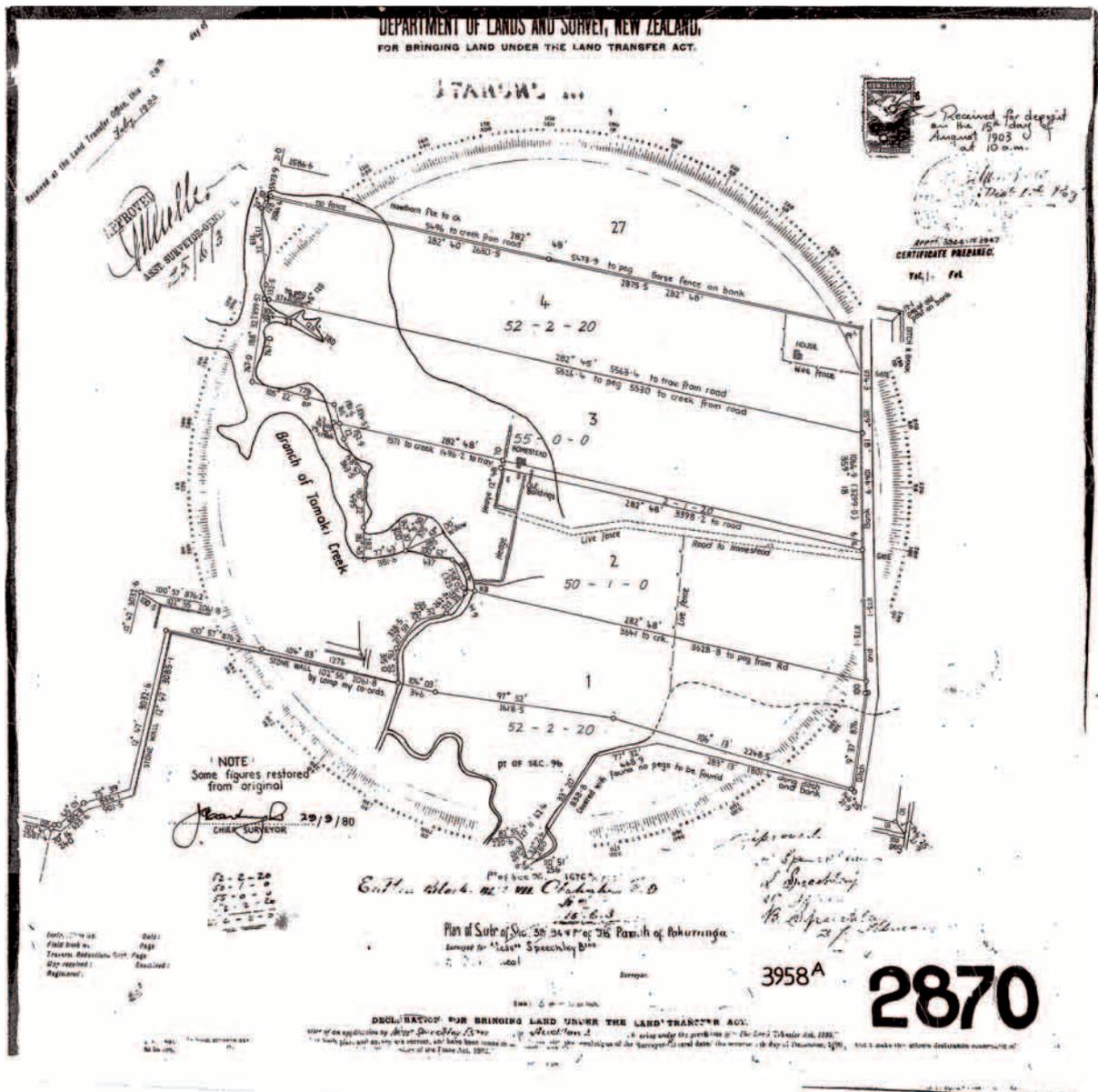


Figure 2. DP 2870, dated 1896 (redrawn 1903), showing hedges north and south of the substation site.

sawn from near the base of the trunk and were approximately 120 mm in diameter (Figure 3). Dendrochronological analysis was undertaken by Gretel Boswijk, Department of Geography, University of Auckland. The samples were 24 and 32 years old.

Examination of standing plants showed a maximum diameter of about 170 mm, though whether half as large again is equivalent to half as old again is unclear. Some stems were much larger but on examination proved to be multiple stems grown together or around each other. Some plants could be seen to be sending up suckers, but these were all much smaller and the main trunks were clearly well aligned, indicating that they were the original plants and were not suckers. The hedge is not shown on the 1896 plan when others in the vicinity are. It is unlikely that any part of the hedge is 110 years old, i.e., predating 1900. We recommend that site R11/2398 be removed from the site file.



Figure 3. Sample 1 taken from the hawthorn hedge for dendrochronological analysis.

Only one further hawthorn plant is in the area of the current development and the remainder of the alignment will be preserved.

Monitoring

Topsoil stripping was monitored by Matthew Campbell 2 March 2010 and Jaden Harris on 11, 12 and 13 March, with a final site inspection on 18 May. No new archaeological sites or features were identified. The land around the gully was found to be least disturbed, while the flatter parts of the site had already been modified.

The only feature of any historical interest relating to farming of the property was a field tile drain running down the centre of the gully which cuts through the site. The drain was buried up to a metre or more deep and was made up of ceramic field tile sections 300 mm long by 100 mm in diameter. While the drain undoubtedly relates to past farming of the property, the age of the feature is uncertain. Given that the hawthorn hedge has proven to be post 1900 it would seem more likely that the drain was part of improvements made to the farm in the early 20th century.

During the final inspection of the earthworks on 18 May 2010 a small amount of shell was noted in the southern corner of the construction area. Upon closer inspection a thin lens of mixed shell and soil was identified in the baulk at the edge of the excavation. The shell consisted of fragmented and weathered cockle (*Austrovenus stutchburyi*) and was contained just below the turf in a soil matrix containing topsoil, lumps of clay and stone. The stone had the appearance of metal or aggregate, rather than fire cracked rock that may have been used in an earth oven. The mixing of the topsoil and the clay shows that the area has been heavily disturbed in the past and the shell has possibly been redeposited from elsewhere on the site. None of the shell could be described as *in situ* and while archaeological deposits may have once been present in this location, these have now been destroyed. The location of this disturbed midden is approximately 100 m north of the recorded midden site R11/2381 and this area is not scheduled for development.