

Appendix D

Archaeological Report

ARCHAEOLOGICAL ASSESSMENT

PROPOSED STORM WATER UPGRADE MATUA, TAURANGA

PREPARED BY

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FOR

BECA

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ARCHAEOLOGY B.O.P.

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INTRODUCTION

PROJECT BACKGROUND

This archaeological assessment has been prepared for Beca in order to determine if archaeological resources will be affected by the proposed stormwater upgrade work on the Matua Peninsula Tauranga. The upgrade proposal examines options for new stormwater outfalls on the northern and southern coastal of the peninsula. This report examined archaeological issues associated with seven possible new storm water outfalls.

The construction of new outfalls will typically involve a combination of directional drilling, open trenching and open excavation at the coastal outlets. There are several known archaeological sites in the general vicinity of the seven outfall sites including Matuaiwi Pa (U14/197).

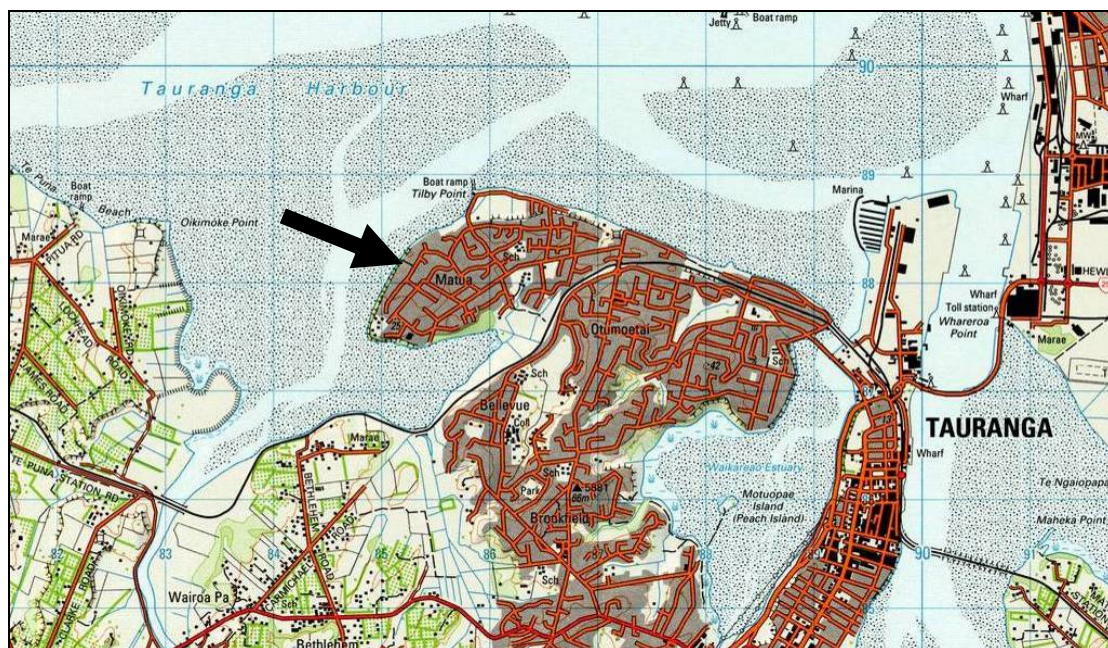


Figure 1. Part Topographic Map Sheet U14 showing the approximate location of the project.

RELEVANT LEGISLATION

Heritage New Zealand Pouhere Taonga Act 2014

An archaeological site, as defined by the Heritage New Zealand Pouhere Taonga Act 2014 6(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

Archaeological sites cannot be modified or destroyed unless an authority is granted under section 48, 56(1)(b), or 62 in respect of an archaeological site, no person may

modify or destroy, or cause to be modified or destroyed the whole or any part of that site if that person knows, or ought reasonably to have suspected, that the site is an archaeological site.

RMA

The RMA 1991 recognises as matters of national importance: ‘the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga’ (S6(e)); and ‘the protection of historic heritage from inappropriate subdivision, use, and development’ (S6(f)).

Territorial authorities are required under Section 6 of the RMA to recognise and provide for these matters of national importance when ‘managing the use, development and protection of natural and physical resources’.

Historic heritage is defined 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’. (S2).

CULTURAL IMPACT ASSESSMENT

Consultation with tangata whenua is being carried out separate to this report. An assessment of the cultural significance of an area can only be competently made by the affected tangata whenua. It should be noted that an assessment of cultural significance might not necessarily correlate with an assessment of archaeological significance.

PHYSICAL LANDSCAPE

The Matua peninsula is comprised of fluvial terrace deposits, primarily derived from the volcanoclastic sediments of the extensive ignimbrite formations backing Tauranga Harbour. Overlying the terraces are allophonic soils of the Katikati series derived from thin rhyolitic tephra including Taupo Pumice and Tuhua tephra. The Topography of the peninsula comprises a raised undulating tableland rising to a prominent high point on which Matuaiwi Pa was located. The table lands drop away to the north east to a broadening coastal terrace that defines the northern coastal margin of the Matua Otumoetai peninsula. To the west of the Matuaiwi Pa erosion of the coastal escarpments becomes steeper and higher as it becomes increasingly affected by erosion from the Wairoa River channel.

The landscape affected by the project is located within intensive residential subdivision that commenced in the 1960s with subsequent infill housing on many properties. The natural topography of the area is, however, largely unmodified

compared to more recent developments in central Tauranga involving extensive earthwork.

SEVEN OUTFALL OPTIONS

Seven sites have been identified on the peninsula as possible stormwater outfalls. Storm water pipelines and outfall structures have not been finalised for any of the options. This report assesses archaeological values of the wider catchments potentially effected by each of the seven options including associated works such as pipe installation alignments and outfall structures.

The seven options include 4 locations on the northern coast and three options on the southern coast. The Northern options are located in the general vicinity of Manuwai Drive, Strange Grove Kiriwai Place and Percival Avenue. The southern options are located in the general vicinity of Heron Avenue, 202 Levers Road and Sylvania Drive.

Of these options possible outfalls at Manuwai Drive and Strange Grove are in close proximity to a known archaeological sites. There are no known sites within the general vicinity of the remaining five options. Consequently this report will focus on the two northern sites that may potentially affect recorded or unrecorded subsurface archaeological features.



Figure 2. Aerial photo showing the location of the seen possible stormwater outfalls.

ARCHAEOLOGICAL LANDSCAPE

Early settlement of the peninsula probably began in the 14th Century on the northern coastal bench near Kulim Park (U14/2686), Waikareao Pa (U14/3119) and Kaiarero (U14/2684) where artifacts typical of the archaic period of Polynesian settlement have been found.¹ The coastal bench offered a canoe landing area and likely continued to be a preferred activity/occupation area when pa building began in the 16th Century.

When Europeans first arrived in the area in the second quarter of the 19th Century Otumoetai Pa was the main stronghold of the people of Tauranga. The importance of the northern coastal bench was evident to Europeans when in 1828 William's, Hamlin and Davis, counted some 1000 canoes on the beach between Otumoetai and Te Papa.

There are six identified pa on the northern Matua / Otumoetai peninsula including Otumoetai pa considered one of the most historically important sites in Tauranga. The five pa in the general vicinity of Otumoetai pa gain little or no mention by early European visitors and when the Otumoetai Block was surveyed in 1865 only Otumoetai, Oreanui and Matuaiwi pa are shown on survey plans.

In addition to the pa, current archaeological evidence suggests numerous undefended settlement and cultivation sites were located throughout the peninsula many of which were probably contemporaneous with and affiliated to one or other of the pa².

PREVIOUS ARCHAEOLOGICAL RESEARCH

Ken Moore, an amateur archaeologist from Kawerau, began recording archaeological sites in the Otumoetai, Matua area in the early 1970s focusing primarily on prominent pa mentioned in early archives including Matuaiwi Pa (U14/197) and Oreanui Pa (U14/216). Kathleen Fletcher was also recording sites on the peninsula in the 1970s but focused more on empirical archaeological evidence including archaic middens along the northern coastal bench.

Further archaeological sites were identified on the peninsula during the 1985 survey of Tauranga District instigated by the New Zealand Historic Places Trust (U14/2863, 2864, 2865). The survey primarily focused on land affected or potentially affected by the large scale orchard and residential development that was dramatically reshaping the district at that time. Previously modified residential areas within Tauranga received a cursory inspection.

More recently Phillips has carried out a number of surveys and archaeological investigations on the Otumoetai / Matua Peninsula. This work has included the identification of two previously unrecorded pa and excavations within four of the six pa on the peninsula including Otumoetai, Waikareo, Tapuaerau and the Crescent Road Pa.³ In addition a prehistoric occupation site and one burial site at 55 Manuwai Drive were investigated by Phillips in 2006 (U14/A Figure 8).

¹ Archaic is an archaeological term used to describe an early New Zealand Maori cultural phase relating to the first colonists who brought with them a distinctly Polynesian material culture.

² Phillips 2004

³ Phillips 2002, 2003, 2004, 2007

The archaeological record of the pre confiscation (pre 1865) occupation of the area has been significantly obscured by residential development in the second half of the 20th Century, however, recent excavations including those listed above have shown that many significant archaeological features survive beneath this development. Consequently, the archaeological site inventory for Matua and Otumoetai is increasing as infill housing and infrastructure work uncovers further archaeological evidence providing a clearer picture of the nature and extent of prehistoric activity in this area.

RECORDED ARCHAEOLOGICAL SITES

Prior to the survey the records of the New Zealand Archaeological Association (NZAA) were consulted in order to determine if archaeological sites have been recorded on or in the immediate vicinity of the proposed storm water project. The NZAA Site Recording Scheme indicated two previously recorded sites are located in the immediate vicinity of land affected by the project. They include Matuaiwi Pa (U14/197) and an occupation and Burial site at 55 Manuwai Drive (U14/A NZAA site number pending).



Figure 3. Plan SO 425 A1 produced in the late 1860s showing the location of Oreanui and Matuaiwi Pa.

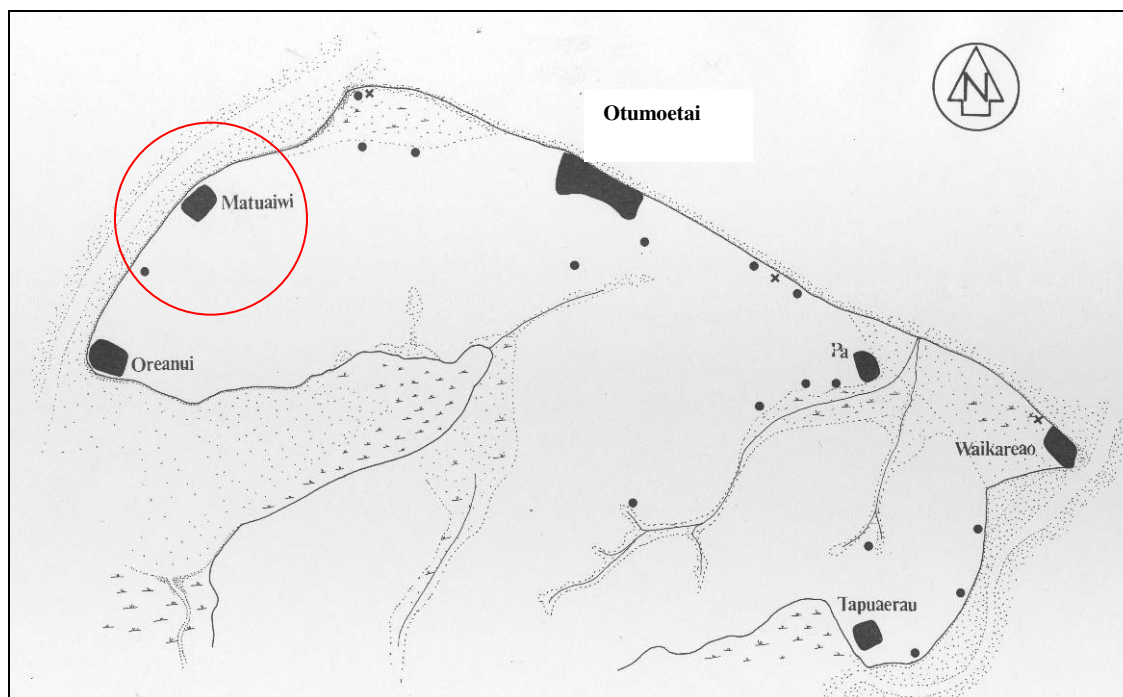


Figure 4. Sketch plan showing the location of the six pa on the northern end of the Matua / Otumoetai peninsula in relation to the project area circled red. Black dots indicate recorded midden sites. (Sketch by K. Phillips 2002).

Matuaiwi Pa (U14/197)

Matuaiwi Pa is located in close proximity to the two proposed stormwater outfalls. It is a relatively well documented site reputed to have been a very early pa for Tauranga with commanding views over the harbour and the Wairoa River mouth. It was occupied by Ngapuhi in 1820 and was subsequently visited by missionaries such as Henry Williams before the land wars resulted in its abandonment and confiscation in the 1860s. When part of the pa was levelled for residential development in the 1960s many artefacts were reportedly uncovered including some 30 adzes, carved bone and greenstone artefacts and extensive shell midden deposits.

The remains of the pa proper are now located within 13, 111, 115, 117, 119 and 121 Manuawai Drive. Some terrace features are still identifiable within these properties

Site No.	Site Type	Easting	Northing
U14/197	Matuaiwi Pa	2785300	6388200
U14/202	Otumoetai Pa	2786700	6388000
U14/216	Oreanui Pa	2784900	6387400
U14/2683	Midden / Artefact find spot	2786100	6388600
U14/2684	Artefact find spot	2785960	6388840
U14/2685	Midden	2787170	6388470
U14/A	Midden - Burial	2785200	6388100

Table 1. Previously recorded archaeological sites located at Matua.

U14/A Midden / Burial

This site was exposed during residential subdivision at 55 Manuwai Drive. The site comprised a shell midden deposit and one crop storage pit. Widening of the right-of-way also disturbed a burial which was excavated and removed by Ngai tamarawaho. The full extent of the archaeological site was not established at the time but likely extends into adjacent properties and may form part of a continuous archaeological landscape extending west along the top of the coastal escarpment between Matuaiwi and Oreaui Pas.

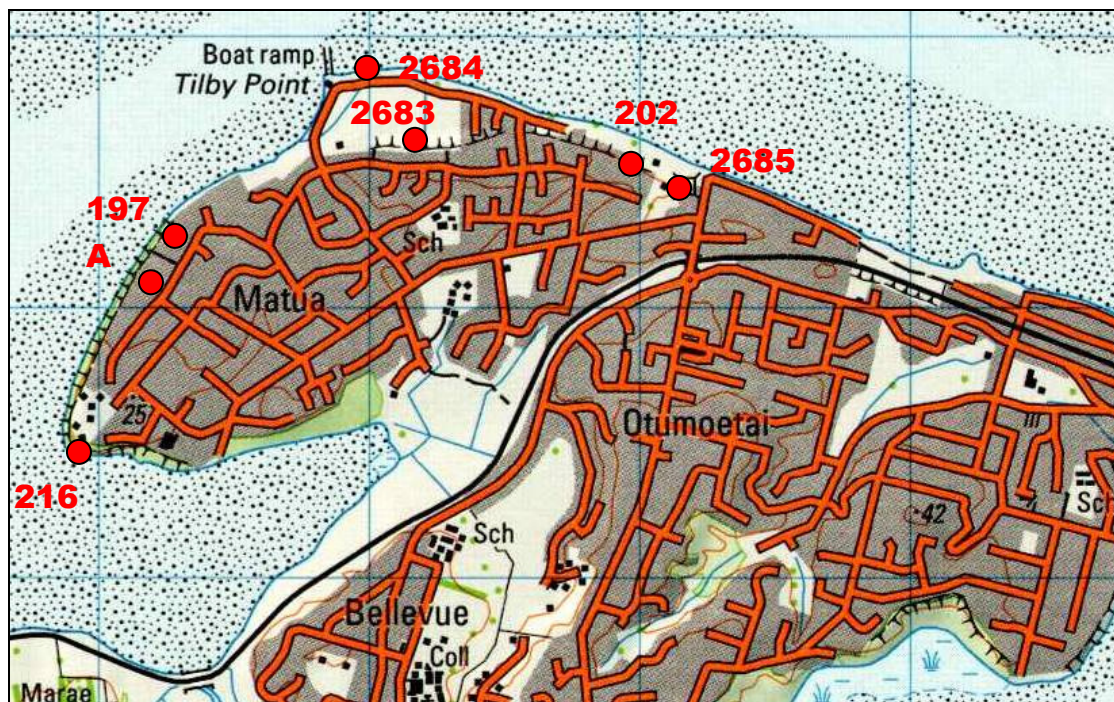


Figure 5. Recorded archaeological site distribution at Matua based on single point coordinates provided by the NZAA Site Recording Scheme.

RESULTS OF THE JUNE 2014 ARCHAEOLOGICAL INSPECTION

METHODOLOGY

Ken Phillips completed an archaeological field inspection of land affected by the seven stormwater outfall options as well as surrounding land including coastal escarpments and terraces in the immediate vicinity of the outlets and probable stormwater pipe alignments to the outfall sites. Sub-surface testing was carried out in order to determine if buried archaeological deposits could be identified. This involved an examination of existing exposed cuttings and disturbed soils and spade test pitting where possible.

17 – 33 Manuwai Drive Outlet

The proposed pipe alignment between 17 and 33 Manuwai Drive is located within a Local Purpose Reserve (Lot 15 DP 34289). The reserve is located within 50 metres of the southwestern end of Matuaiwi Pa. While land affected by the alignment is bounded by intensive residential development it appears to retain its original contour with only minor earthwork for the construction of the concrete path and coastal escarpment steps.

Eroding shell midden was noted along the eastern side of the concrete path and extensive shell midden deposits are eroding down the coastal escarpment on either side of the steps down to the beach. The shell is indicative of occupation on the raised level ground immediately above the escarpment and may relate to undefended occupation directly associated with Matuaiwi Pa.

11 Strange Grove

Two possible pipe alignments through 11 Strange Grove are offered in the Storm Water upgrade proposal. Both options involve extensive ground disturbance in the form of open trenching. One alignment option (Scenario 1) extends along the eastern property boundary while the second option (Scenario 2) extends through the centre of the property beneath the existing dwelling.

This property is situated on a low coastal terrace on the west side of a former wetland and stream and approximately 100 metres north east of Matuaiwi Pa. The construction of the existing dwelling and section landscaping in the 1960s has likely had limited impact on the natural contour and substrata within the property.

Due to the current land use and surface treatments it was not possible to carry out subsurface testing along the two alignment options and the concrete wall covering the low coastal step prevented visual inspection of the former erosion scarp. The exposed coastal scarp 20 metres to the north east was equally uninformative due to reclamation fill obscuring the natural soil profile.



Figure 6. View of southern entrance to Lot 15 DP 34289 between 17 & 33 Manuwai Drive.



Figure 7. View of minor cutting on north side of footpath within Lot 15 DP 34289 where shell midden is exposed.



Figure 8. View of steps down coastal escarpment at northern end of Lot 15 DP 34289. Eroding shell midden is visible on the escarpment immediately adjacent to the steps and in the immediate vicinity of the proposed storm water pipe exit.



Figure 9. View of the concrete wall and slipway along the northern end of 11 Strange Grove where the storm water outlet is proposed.



Figure 10. Aerial photo showing the location of known archaeological sites in relation to properties affected by the Stormwater upgrade proposal.

Kiriwai Place & Percival Avenue

Both the Kiriwai Place and Percival Avenue outfall options are located within a section of the northern coast that was formerly a poorly drained wetland partially impounded by a mobile sand bank. There are no previously recorded archaeological sites within the immediate area of the two options and no archaeological sites were identified during the June 2014 archaeological survey of the area.

The two natural spring fed streams that enter the harbour in this area and the resources typically associated with wetlands may have been the focus of pre 1900 activity however it is considered unlikely that insitu archaeological remains associated with pre 1900 occupation will be encountered in this area.



Figure 11. Oblique aerial photo taken in 1968 showing the former wetland where the Kiriwai and Percival outfall options are located.

Southern Coast outfall options

The three outfall options at Heron Avenue, 202 Levers Road and Sylvania Drive located on the southern coast of the peninsula are characterised by poorly drained coastal margins below the southern escarpment of the Matura tablelands.

The location of the three possible outfalls and the probable routes of stormwater pipes connecting the outfalls to associated catchments were examined for evidence of surface archaeological features. There are no previously recorded archaeological sites within the immediate area of the three options.

Elevated ground immediately above the coastal margin and the three outfall options may have been utilised in prehistory for settlement and cultivation of crops however the area has been significantly modified by late 20th Century residential development and no archaeological sites were identified during the June 2014 archaeological survey of the area and it is considered unlikely that in situ archaeological remains associated with pre 1900 occupation will be affected by either of the three options on the southern coast of the Matua peninsula.

SUMMARY & DISCUSSION

The seven possible outfall options associated with the proposed Storm Water upgrade project on the Matua Peninsula will not affect recorded archaeological sites, however, the two northern outfall options at Manuwai Drive and Strange Grove are located in close proximity to Matuaiwi Pa where there is reasonable cause to suspect that the presence of extensive unrecorded subsurface archaeological features and sites may be encountered during ground disturbance associated with the proposed storm water upgrade project. While the project may result in damage to archaeological features it may also assist in the identification, future protection and public interpretation of the archaeological resource in the area.

17 – 33 Manuwai Drive Outlet

The proposed directional drilling of the storm water pipe through the reserve will limit ground disturbance to entry and exit points, however given the intensive nature of the archaeological landscape there is a possibility that subsurface archaeological features will be disturbed at both locations.

11 Strange Grove

Despite the lack of tangible archaeological information within 11 Strange Grove and the adjacent coastal and road reserves there is reasonable cause to suspect that intact subsurface archaeological features are present within the property that may be disturbed by either of the two storm water pipe alignment options.

RECOMMENDATIONS

The following recommendations for avoidance or mitigation are provided as points of discussion between the applicant, statutory agencies and tangata whenua.

1. That an authority is obtained from Heritage New Zealand to modify damage or destroy any unrecorded archaeological sites encountered during earthwork associated with the Matua Storm Water Upgrade.
2. That archaeological monitoring is carried out during earthworks associated with the project. The monitoring should be carried out by a suitably qualified archaeologist in order to determine if archaeological features are encountered.
3. That if archaeological sites are encountered during earthworks all work must stop in the immediate area until appropriate investigation and recording is carried out in accordance with conditions of the Heritage New Zealand authority.
4. That if koiwi tangata (human remains) are encountered, no further modification of the site concerned shall occur until tangata whenua and the Trust have been advised and their responses received.
5. Archaeological survey cannot always detect sites of traditional value to Maori, such as wahi tapu. Tangata whenua should be consulted regarding the possible existence of such sites and informed of the recommendations of this report.

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