

Heritage Solutions

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TO: Susan Jones, MitchellDaysh

SUBJECT: Proposed Osborne plan change, Waikanae

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1. Introduction

Susan Jones, of MitchellDaysh, has asked Mary O'Keeffe, of Heritage Solutions, ("the archaeologist") for an archaeological assessment of a parcel of land on the Kapiti Coast, to inform the process of a proposed plan change.

The parcel is located at 100-110 Te Moana Rd, Waikanae.

Its location is shown in Figure 1.



Figure 1: Location of subject property

2. Exclusions and limitations of this report

Whilst a site visit was undertaken by the archaeologist on 24 July 2024, accompanied by the property owner¹, no invasive testing was undertaken, as this would have required an archaeological authority from Heritage New Zealand Pouhere Taonga.

This report only addresses the scientific values of the known and potential archaeology of the subject property. Given the proximity to Takamore urupa and wahi tapu, it is assumed by the archaeologist that the property will also have significance to iwi. However iwi are the only people who can appropriately state and describe these cultural values and associations, and to determine their culture history; it is not the place of an archaeologist to do this.

3. Contributing data

A particular characteristic of the archaeology of the Kapiti Coast is that while sites may be present, they usually cannot be seen on the ground surface. Therefore a predictive model for determining archaeological potential of the subject parcel will be used. This predictive model sources data from:

- The physical environment
- History of land use
- Previous archaeology
- Historic sources, such as survey plans

¹ The iwi cultural manager was also invited to attend this field trip, he was unavailable at e last moment

It is noted from the outset that a key piece of data is the archaeological programme undertaken by the archaeologist for the constriction of the MacKays to Peka Peka Expressway ("M2PP"), which is adjacent to the subject property.

3.1 Physical environment

The physical environment is a profoundly important factor in understanding and interpreting the archaeological record of the Kapiti Coast. As McFadgen states

"People in pursuit of their everyday lives exploited and changed their environment to meet their needs for food, clothing and shelter and their culture was, in turn, conditioned by it. The flow of information in this approach is two way: archaeological remains provide an historical perspective for the landscape as it appears today; and understanding the natural and cultural processes which have shaped the landscape is important for the interpretation of human and natural history"².

A summary of the key characteristics of the physical environment of the coast, based largely on M2PP research is presented here:

- The coastal flat is dominated by bands of sand dunes
- The older dunes are inland, and younger dunes are still being formed by coastal dynamics, including wind, longshore drift and river deposition
- These dunes are all quite dynamic, with dunes being blown out by the wind and redeposited sand overlying older dunes
- Between the dune bands are bands of wetlands
- The dunes south of the Waikanae River are protected from the prevailing north-west wind by Kāpiti Island and are relatively linear in form, parallel with the coast
- The dunes north of the Waikanae River are not protected from the prevailing northwest wind and have been blown and reformed into parabolic curves

Detail contained in historic survey plans, most notably ML 1491 (1898, Figure 2), reveal landscape evidence in the wider area: there are large stands of native trees on sand dunes, interspersed with pockets of wetlands.

² Cited in O'Keeffe, 2019: 174



Figure 2: Detail from ML 1491, 1898 QuickMap

Data obtained from the M2PP project suggests these wetlands were extensive and navigable, based on the locational relationship of sites to the edges of the high dunes.

3.2 History of land use

Radiocarbon dates from the M2PP project show that Māori have occupied the coastal dunes of Kapiti since the 16th century. The dates and sites they are based on are notable for not including dates or fauna typical of the early period of human occupation of New Zealand.

Data from the M2PP project suggests the dunes were periodically occupied by groups of people on resource gathering expeditions. No evidence of permanent settlement on the coastal dunes (such as postholes from whare) was recorded during M2PP; permanent settlement does not appear to have commenced until the early 1800s. These periodic gatherers were utilising the rich coastal resources, plus the resources available on the dunes such as birds inhabiting the forest trees, and eels in the wetlands.

Most notably, no evidence of precontact gardening, such as kumara or taro, was found. This makes the Kapiti dunes one of the very few coastal tracts of the North Islan without Māori gardening. The likely cause is the geomorphology of the area – the prevailing winds create very unstable dune surfaces which are not conducive to establishing or maintaining gardens.

Utilisation of newly available European resources, such as tools and plant crops, modified Māori settlement and lifestyle.

The land on which Waikanae now sits was originally Māori land blocks comprised of farmed and open land

The Township of Waikanae was founded by Wi Parata in 1886, and was originally known as Parata. The town was established by Wi Parata in part to take advantage of the newly constructed railway line, completed in 1886. It is notable that the first part of the town was located on the east side of the railway line, to provide easy access to the railway station.

3.3 Previous archaeology

As noted, a key piece of work that discusses and analyses the archaeological landscape of the Kāpiti Coast is the M2PP study, authored by the archaeologist. Although the expressway is not located near the project area, the M2PP report considered and analysed the archaeology of the entire coastal area, so its findings are relevant.

The M2PP project facilitated the creation of a regional model for the archaeology of the Kāpiti Coast.

The model comprises the following characteristics:

- The most common site type is shell midden
- Middens are occasionally, but not always, found in association with ovens
- Another common site type is individual or small group burials within the dunes
- The dunes are interspersed with current or former wetlands; these were rich sources of food and raw materials, including birds, eels and plant species.
- The vast majority of sites are found on sand dune ridges, especially on dunes adjacent to navigable wetlands
- There is a preference for occupation locations on dunes beside previously navigable waterways; these waterways were used as transport routes
- Earthwork sites pits, terraces, pa are very rarely found on the coast
- No evidence of pre-European gardening has been recovered on the coastal dunes; traditional and ethnographic evidence of gardens suggests these were post contact crops being grown by Māori, such as wheat and potatoes.
- Very little cultural material has been recovered from swamps or wetlands by archaeologists on the Kāpiti Coast.

3.3.1 Relationship between archaeology and the environment

There is a strong functional relationship between the environment and the archaeological resource.

Archaeological data on site type, size and location obtained from the M2PP project shows that sites are largely located on the dunes, beside areas of formerly navigable wetlands.

Along the Kapiti-Horowhenua Coast, the predominant site type on the coastal dunes is middens. These are deposits of shell, occasionally with oven evidence or some bone, marking either a temporary resting place of groups of people, or occasionally locations of more permanent settlements.

The locational data also shows a strong preference for the dunes north of the Waikanae River – the midden sites here tend to be larger and comprised of more diverse species than sites south of the river.

The shell content of the midden varies. Whilst the dominant species is tuatua, other species, including both coastal and estuarine species, are present in middens, indicating exploitation of the resource from both locations. Fishbone, birdbone and mammal bones have also been found in the middens.

Archaeological work along the coast shows that due to the dynamic nature of the unstable dune sites can be found several metres below the ground surface. Middens especially can be inundated by windblown sand.

The nature and location of sites on the coastal Kāpiti dunes is determined by the physical environment and the opportunities it presents. Very large complex middens were located on these high parabolic dunes, indicating large scale exploitation of the shellfish and fish resources of the coast. The sites themselves within in the dunes are located up to 1.5km from the coast, suggesting people deliberately carried the resources a long way inland to process them. The sites are generally reasonably uniform in nature and form – they range in size from moderate to large deposits, and contain a complexity of constituent elements – various species of shellfish, plus fishbone, birdbone and rat bone.

However, the dunes and surrounding wetlands also played a role in the subsistence economy. The wetlands surrounding the high dunes contained additional resources such as birds and eels, plus flax to make containers. In addition, the wetlands surrounding the high dunes would have been navigable by waka. This pattern is seen along the M2PP route – sites are located on high or moderate dunes, beside navigable waterways.

3.4 Survey plans

Numerous historic survey plans are available for the Kapiti Coast, which show detail of physical environment, land use, and human activity. One such plan, ML 1491, has been noted above.

SO 15032 (1903, Figure 3) shows the development of roads and division of land parcels of the land north of the Waikanae River (including the subject parcel).



Figure 3: SO 15032, 1903 QuickMap

Plan ML 3930 (1926) shows the landform and topography of the subject parcel, including a swamp, flat grassed land, and hilly land covered in lupin.



Figure 4: ML 3930, 1926 QuickMap

4. Assessment of the subject parcel

All the factors and information presented above are gathered to describe the subject parcel and assess its archaeological potential.

The subject parcel is within the band of high rolling sand dunes north of the Waikanae River, shown in Figure 5.



Figure 5: Subject parcel and contours Subject parcel shown as red outline Georeferenced by author

These high, rolling, often parabolic shaped dunes contained many sites recorded in the M2PP programme. Of note is the fact that the largest sites recorded in the programme, and the sites with the greatest faunal diversity recorded in the programme, were located in these parabolic dunes north of the Waikanae River.

When survey plan ML 3930 is shown in relation to the subject parcel (Figure 6), it shows that the northern part of the subject parcel is flat ground, being part of the flood plain of the Waimeha Stream. There is a swamp through the central part of the parcel which still exists today. The southern part of the subject parcel rises to a high dune.



Figure 6: ML 3930 shown overlaying subject parcel Subject parcel shown as red outline Georeferenced by author

The recorded sites in the wider vicinity of the subject parcel are shown in Figure 7. The relative density of sites is noted. This corresponds with the preference for high dunes as noted in the predictive model above.



Figure 7: Recorded sites in subject parcel, with contours Subject parcel shown as red outline Archaeological sites shown as red dots Archaeological data sourced from ArchSite Georeferenced by author

Recorded sites within and in close proximity of the subject parcel are shown in Figure 8.



Figure 8: Recorded sites within and near subject parcel Subject parcel shown as red outline Archaeological sites shown as red dots Archaeological data sourced from ArchSite Georeferenced by author

Site number	Date recorded	Detail
R26/277	1997	Shell midden
R26/278	1997	Shell midden & oven
R26/279	1997	Oven
R26/280	1997	Ovens
R26/330	2003	Shell midden, ovenstones
R26/367	2006 (prep for M2PP)	Shell midden, possible terrace
R26/368	2006 (prep for M2PP)	Shell midden
R26/507	2014 (M2PP earthworks)	Shell midden, oven
R26/508	2015 (M2PP earthworks)	Shell midden, oven
R26/633	2015 (M2PP earthworks)	Shell midden, oven

Details of the sites are:

R26/711	2016 (M2PP earthworks)	Oven
R26/713	2017	Shell midden
R26/749	2019	Shell midden
R26/750	2019	Shell midden

All of the sites are shell middens or ovens, consistent with the most likely site type as determined by the predictive model.

R26/367 is located within the subject parcel. This site was recorded in 2006 by a team from Otago University to inform the then Western Link Road project. The site was described as "midden site containing fragmented sparse *dosinia anus* and tuatua on and near a possible terrace. The odd fragment of shell was found in the garden behind the house".

A significant neighbouring cultural feature is the Takamore Wahi Tapu. This wahi tapu is listed on the Kapiti Coast District Council District plan (Schedule 9, W1), and is included in Heritage New Zealand's Heritage List Rarangi Korero as a Wahi Tapu Area (list no 7263). The entry for Takamore in HNZ' s Heritage List Rarangi Korero states the "wahi tapu area contains sites of cultural and historical importance, including wahi tapu, and interrelated cultural features such as the Takamore urupa, the Maketu tree and grave, whare kohanga, punawai, koiwi, Ngahuruhuru area, and a range of archaeological sites".

The extent of the wahi tapu and locational relationship to the subject parcel is shown in Figure 9.



Figure 9: Takamore Wahi tapu area in relation to subject parcel Subject parcel shown as red outline Wahi tapu area shown in yellow Archaeological sites shown as red dots Archaeological data sourced from ArchSite Georeferenced by author

Whilst the wahi tapu area contains recorded archaeological sites, it was listed primarily for its cultural and intangible values. Its probably of containing unrecorded archaeological sites is no higher than any other area within this band of high rolling dunes north of the river.

The Takamore urupa is well south of the subject parcel, shown in Figure 10.



Figure 10: Takamore urupa, in relation to subject parcel Subject parcel shown as red outline Urupa shown as yellow outline Georeferenced by author

Whilst burials are recorded sporadically in the coastal dunes, the subject parcel is no more likely to contain unrecorded burials than any other area within this band of high rolling dunes north of the river.

Site visit

As noted the archaeologist made a site visit to the subject parcel on 24 July 2024. She walked the land surface, viewing topography³.

Site R26/367 was viewed as a scatter of shell on the dune surface within an area of about 2 metres². Shell visible was whole tuatua (*Paphies subtriangulata*), ringed dosinia (*dosinia anus*), and trough shell (*mactra sp*).

The subject parcel is immediately adjacent to the M2PP expressway The current owner noted it was acquired by NZTA for the road, but was not needed, so sold back to the

³ The archaeologist took photos during the site visit, but a SD card malfunction meant these pictures were not retained

owners. In the years that NZTA owned it, the current owner states no maintenance was undertaken so when the new owner got it back again he was appalled to find head high blackberry and weeds all over it. In the last few months he got a bulldozer and scraped the ground surface to clear the weeds. He has also cleared the large old pines that were on the land.

In doing this work he has possibly disturbed a couple of probably relatively small middens. Apart from R26/367 the archaeologist observed occasional fragmented bits of shell scattered sporadically over the sand. Alternatively the sporadic scattered shell may have been dragged from R26/367 by machinery over the ground surface.

5. Assessment of subject parcel

The data presented thus far in this report on physical environment, historical context and recorded archaeology can be assessed to determine the probability of unrecorded archaeological sites of features within the project area.

The data presented in this report shows that there was human settlement and activity in the vicinity of the project area. The wider Kāpiti Coast was comprised of sand dunes interspersed with wetlands; the archaeological model derived from the M2PP project shows that archaeological sites were located on these dunes. Numerous sites have been recorded within and in the vicinity of the subject parcel; historic survey plans show the area was previously comprised of dunes, so further unrecorded sites are likely to be present.

The subject parcel is located on a dune adjacent to a previously navigable waterway, a typical location for sites to occur as established by the M2PP archaeological programme.

As noted during the site visit, the surface of the dune within the subject parcel has been adversely affected but the depth of disturbance is relatively shallow, seen by the in situ survival of R26/367. There is potential for further intact sites immediately beneath the zone of disturbance. Such sites are likely to be shell middens, with a lesser possibility of ovens.

Therefore this report concludes there is a high probability of encountering further intact archaeological sites and features.

However the presence of these sites is not a deterrent to a proposed plan change resulting in development. The site known to be present, and likely further unrecorded sites are very likely to be typical in nature and form to sites found in the wider vicinity.

Such sites contain archaeological value: they can be compared and contrasted to the type and nature of sites around them, and shell middens can provide useful environmental and human behavioural data through the types and relative proportions of the species in the midden. This scientific data can be extracted in a managed process through investigation of the sites prior to and during construction earthworks. Adverse effects on the archaeological resource can be mitigated through collection of the scientific data they contain.

6. **Recommendations:**

- There is no reason on archaeological grounds why the proposed plan change should not proceed
- Prior to earthworks being undertaken that arise from the plan change, the developer should seek an archaeological authority from Heritage New Zealand Pouhere Taonga in terms of Part 3 of the Heritage New Zealand Pouhere Taonga Act 2014.
- Conditions in this authority are likely to direct work to investigate known sites and to locate an investigate unrecorded sites, prior to bulk earthworks.
- A site instruction will guide detail of such archaeological works. The potential for burials is always present on the Kapiti Coast, so must be accounted for, but this is a relatively low possibility. This potential can be managed both by protocols within the site instruction which will be developed with input and approvals from iwi, and by a cultural management plan to be commissioned from the iwi

Sources

ArchSite

Historic survey plans (QuickMap):

SO 15032, 1903

ML 3930, 1926

O'Keeffe, M. 2019. Archaeology of the MacKays to Peka Peka Expressway; Volume 1: Report on archaeological investigations and monitoring. Report to New Zealand Transport Agency and Heritage New Zealand Pouhere Taonga