

Appendix J – Archaeology Assessment Report

Revised archaeological assessment of the Otaihanga Estates, Waikanae, proposed subdivision by Richard and Alastair Mansell.



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Cover caption

Otaihanga Estates view to south-west with Kapiti Expressway in foreground.

Version of this assessment

Updated 14 November 2020 to incorporate reference to Resource Management Act 1991.

Revised 21 February 2021 to cover changes to the subdivision required under the National Policy Statement for Freshwater Management 2020, including extensive revisions of plots and cut and fill proposals (Cuttriss Rev E). This assessment incorporates the archaeological monitoring results of Geotech test pits carried out under Heritage NZ authority 2020/378 on 27, 28 February 2020.

INTRODUCTION

This archaeological assessment has been commissioned by Chris Hansen Consultants Ltd. Contact: Chris Hansen. M: 02102645108 E: chris@rmaexpert.co.nz .The landowners are Richard and Alastair Mansell.

The proposed work is the subdivision of the Mansell property into 49 rural-lifestyle and residential sections for the Otaihanga Estates.

This is a revision of the original archaeological assessment (Jones and Wooller 2019) due to:

(1) the introduction of the NPS for freshwater management in September 2020 and the need to undertake further investigations regarding the wetland areas and

(2) the preliminary archaeological investigations of Geotech test pits reported 2 March 2020 (Jones and Wooller 2020).

There has been a significant change to the scheme layout. In particular the ‘spine’ road that had been proposed providing access to the rural life-style lots via Otaihanga Rd has been removed, and access to the majority of these lots is now proposed to be via the existing Tieko Street. Access to the residential lots adjoining Otaihanga Rd has also been changed to be located further east. Earthwork cut/fill volumes have also been significantly reduced, and more building exclusion areas on dune ridge lines have been included.

The archaeological monitoring interim report covers the results of Geotech test pits carried out under Heritage NZ authority 2020/378 by RDCL on 27, 28 February 2020. The position of the geotech test pits was planned by RDCL apart from three wide-area archaeological test pits on hill or ridge crests at the centre and towards the north end of the property.

The wide-area test pits were carried out to check for koiwi tangata on the high points. (N.B. If koiwi tangata had been found work would have been ceased immediately and intensive consultation carried out with Te Atiawa ki Whakarongotai.)

The site area is to the west of the Kapiti Expressway and just south of the Waikanae River (Figs 1, 2a).

The grid reference for the private road entry from Otaihanga Road is NZTM E1770227 N5471780.

The general area of the Kapiti Expressway was surveyed by South Pacific Archaeological Research Ltd (SPAR) (University of Otago) and by Heritage Solutions Ltd (O’Keeffe 2009, 2013) as part of the NZTA environmental work. The sites recorded give an indication of what is likely to be on the current development.



Fig. 1. Locality map showing the location of the subdivision.

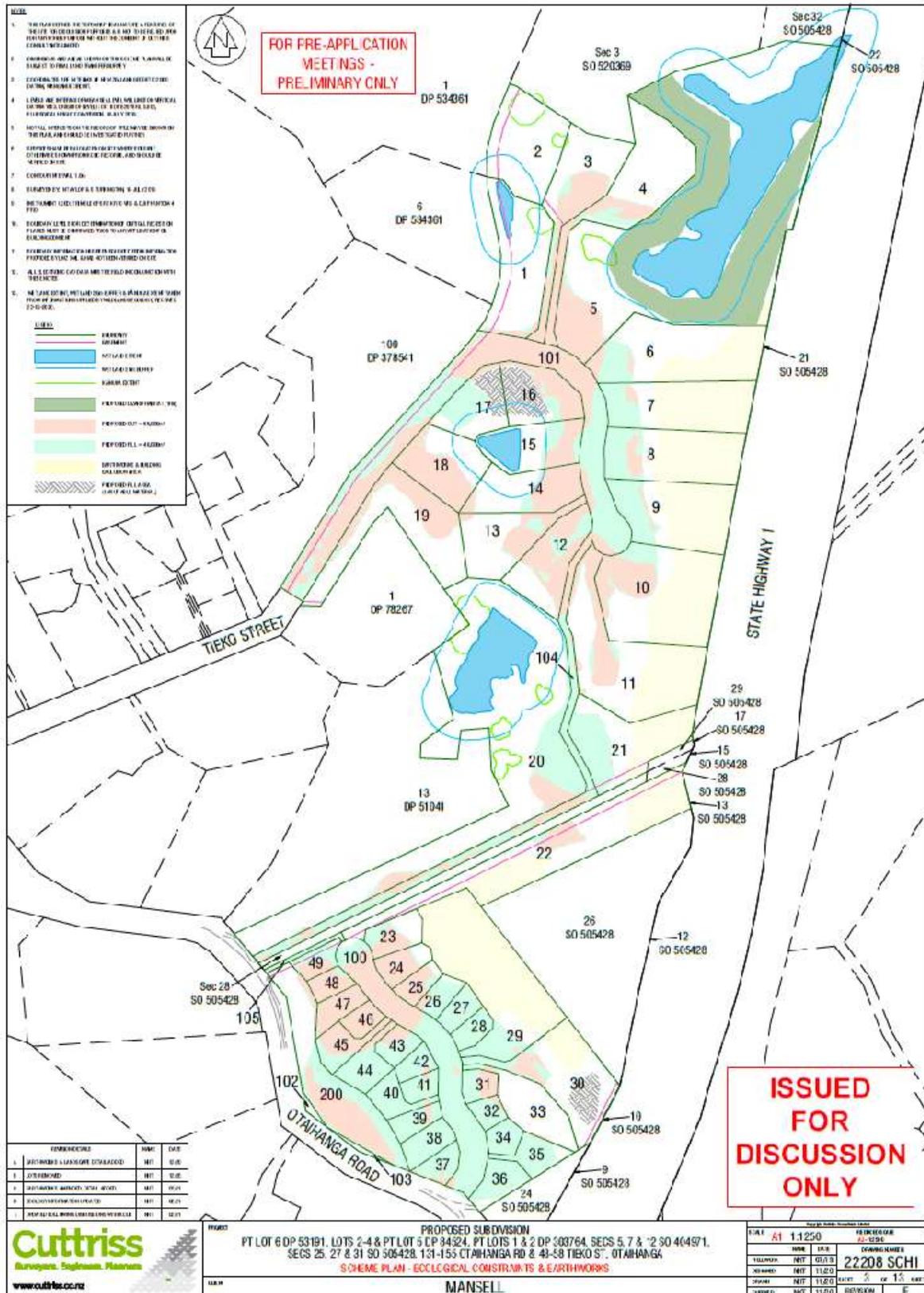


Fig. 2 b. The subdivision locality showing section boundaries, the proposed cut and fill and five wetlands.

The street addresses and legal descriptions of the land are shown in Figure 2 (a).

The land area is approximately 17 ha

This report is an archaeological assessment for an authority under the Heritage New Zealand Act 2014.

This assessment does not cover Maori values or wahi tapu which may be the subject of separate consultation. This report can be submitted to the iwi as part of the consultation process.

Setting

The property is located on Otaihanga Road, south of the Waikanae River (Fig. 2). The property is bordered by the Kapiti Expressway on the eastern margin and by Otaihanga Road to the south.

The subdivision covers a system of steep sand dunes and several areas of wetland. The property appears to have been extensively grazed by cattle in the past. The western sections are currently occupied by horses. Grass covers most of the property with some groves and rows of kanuka, pine, and eucalyptus. The topsoil is a sandy loam.

Statutory definitions and protection of archaeological sites

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act 2014* (HNZPTA) and the *Resource Management Act 1991* (RMA).

Heritage New Zealand Pouhere Taonga administers the HNZPTA. The HNZPTA contains a consent (authority) process for any work affecting archaeological sites, where an archaeological site is defined in s. 6 as:

Subject to section 42(3),—

Any place in New Zealand, including any building or structure (or part of a building or structure), that—

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)

Under s. 42, archaeological sites not to 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.

In addition, any person who intends carrying out work that may damage, modify or destroy an archaeological site, or to investigate a site using invasive archaeological techniques, must first obtain an authority from Heritage New Zealand Pouhere Taonga. The process applies to sites on land of all tenure including public, private and designated land. The HNZPTA 2014 contains penalties for unauthorised site damage or destruction including criminal offences.

Authority means an authority granted by Heritage New Zealand Pouhere Taonga under sections 48, 56, or 62 to undertake an activity that will or may modify or destroy 1 or more archaeological sites.

There are three types of authority:

To undertake an activity that will destroy or modify sites within a specified area of land

Similar to above except that the effects on sites will be no more than minor as set out in s. 47 (5)

To undertake a scientific investigation.

S. 47 (5) (the minor effects clause) states that in the case of an application made under section 44(b), without limiting the matters that Heritage New Zealand Pouhere Taonga may have regard to for the purpose of determining whether an application meets the requirements of subsection (1)(a)(ii) of this section, it must have regard to—

The significance of a site or sites in relation to evidence of the historical and cultural heritage of New Zealand; and
the extent to which the proposed activity will modify or destroy the site or sites.

HNZPT may return an application for an authority that is deficient in documentation.

The archaeological authority process applies to all sites that fit the HNZTPA 2014 definition, regardless of whether:

The site is recorded in the NZ Archaeological Association ArchSite (on-line Site Recording Scheme) or listed by HNZ,

The site only becomes known about as a result of ground disturbance, and/ or

The activity is permitted under a district or regional plan, or a resource or building consent has been granted.

RMA 1991

To achieve the purpose of the RMA, matters of national importance are provided for including the protection of historic heritage from inappropriate subdivision, use and development (section 6f).

Historic heritage is there defined as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, derived from archaeological, architectural, cultural, historic, scientific, or technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas;
- archaeological sites;
- sites of significance to Maori, including wahi tapu;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive and some archaeological sites may include above ground structures or may also be places that are of significance to Maori.

Any resource consent application is required to include an assessment of effects to address cultural and historical matters (RMA 4th Schedule and an RMA plan or statement assessment criteria).

FIELD METHOD

Documentary research

The Kāpiti-Horowhenua regions were settled later than other areas, with most published radiocarbon dates on archaeological samples for the district spanning from the fifteenth to seventeenth centuries.... At the beginning of the nineteenth century the Kāpiti area was settled by the Muaūpoko and Ngāti Apa peoples of Kurahaupo descent, who occupied much of the area between the Horowhenua and Porirua. Muaūpoko, the closely related Rangitāne of the Manawatū, and Ngāi Tara who settled around Wellington Harbour, were descendants of those who arrived on the Kurahaupo canoe which landed at Hawke's Bay. Many of the names of earlier origin in the Kāpiti District, including Paraparaumu and Paekākāriki, are said to have been bestowed by their common ancestor Hau....

In 1821, conflict with other Waikato tribes forced Ngāti Toa from their ancestral home in Kawhia, and Te Rauparaha returned to the lower North Island with allies Ngāti Koata, Ngāti Rarua, Ngāti Tama, Ngāti Mutunga, and Te Āti Awa. Interactions between the migrant groups and resident Ngāti Apa and Muaūpoko were initially peaceful until a failed attempt to assassinate Te Rauparaha near Lake Papaitonga led to war between Muaūpoko and Ngāti Toa. A decisive engagement occurred in 1824 at Waiorua on Kāpiti Island. A large force of Muaūpoko, Ngāti Apa and Rangitāne gathered to attack Ngāti Toa and Te Āti Awa, who successfully repelled the attack. (Edited from Subsurface Ltd 2015.)

Today the area of the proposed Otaihanga Estates is recognised as part of the mana whenua of Te Āti Awa ki Whakarongotai.

The general area of the proposed subdivision is just south of the Kaiwarehou Pā which is adjacent to the south bank of the Waikanae River (see Williams 2019; PDP schedule records WTS0206).

Historical SOs

There is one historical SO on Quickmap pertinent to Otaihangā Road.

WN_SO_12296 c. 1870 (Fig. 3) shows the general area west of the generally depicted timber edge on the coastal plain. It is in fernland and scrubland indicative of ancient burning and clearing. It shows a dray track marked running along the south side of the Waikanae River and taking a loop across the general area of the Mansell subdivision. Up river a number of 'Maori whares' are marked and across the river to the north is the settlement founded by Wi Parata with his homestead prominent.

Overall, this remarkable SO shows that there were substantial areas of settlement on and near the course of the Waikanae River proper.

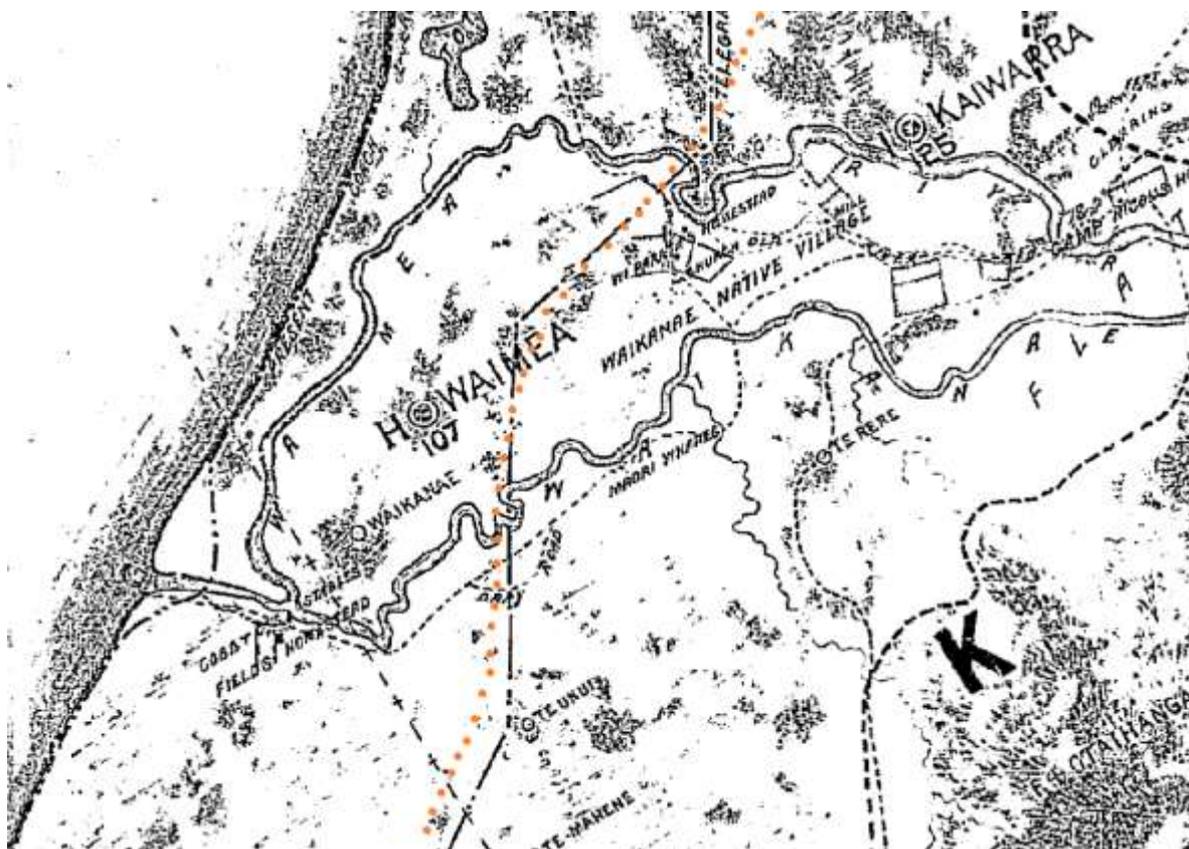


Fig. 3. SO 12296 c. 1870 showing the dray track. The expressway route is marked with the orange dots.

ArchSite

There is a wide range of reports on archaeological site distribution in the Kapiti region, summarised by O'Keefe (2009, 2013) in her study for the Kapiti Expressway alignment. Many middens have relatively simple composition (mainly tuatua) but there are some middens that have a wider range of species.

The duneland settings of archaeological sites have been synthesised by McFadgen (1997). He presents a chronological system of dunes ranging from:

- Waitarere (recent, less than 400 years, dunes near the coast)
- Taupo (dunes about 1000 -1800 years in age about 0.8 to 2 km from the coast) and
- Foxton dunes older than the Taupo eruption (c. 1900 y. BP) and forming the balance of the inland areas.

There are archaeological sites on the Waitarere dunes, but these would have been on unstable dunes exposed to all weathers in the era of human occupation. They may have been specialised shell fishing sites. The highest concentration of sites is on the Taupo- or Foxton-era dunes near swamps or lakes. The Mansell property is on Taupo-era dunes. These would have been stable areas with established forest, when first occupied. The site distribution indicates that they were preferred areas for settlement and will generally have a wide range of archaeological site types.

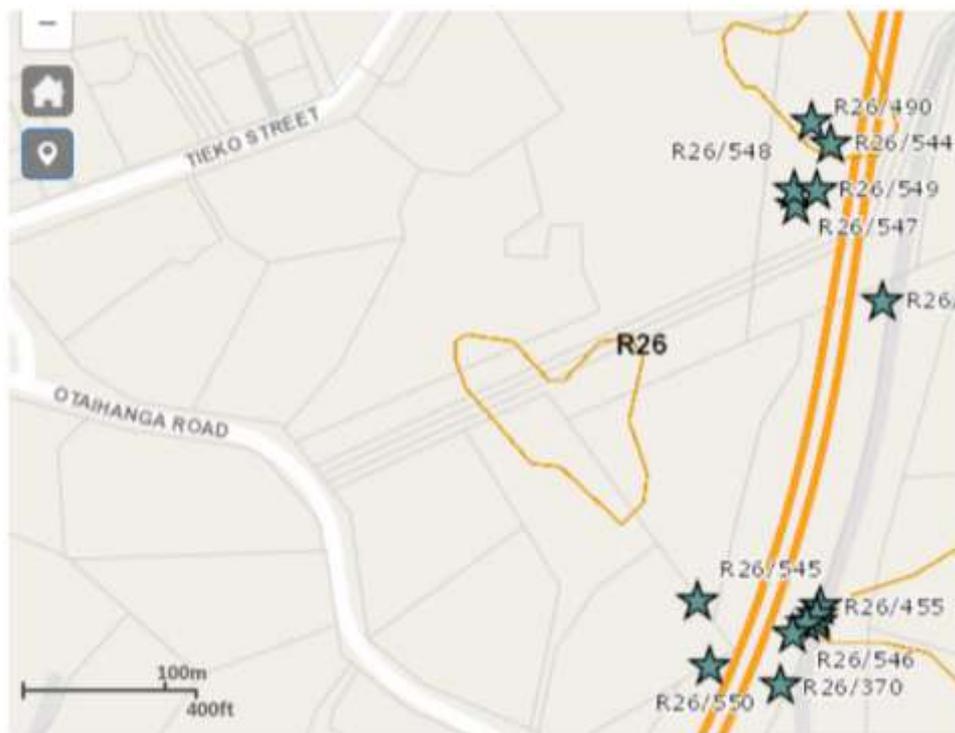


Fig 4. Archsite screenshot showing the distribution of identified sites along the Kapiti Expressway

There are sites bordering or on the fringes of the subdivision (all were excavated during the construction of McKays to Peka Peka Expressway) (Fig. 4):

R26/490 – Sparse shell midden with charcoal-stained soil and fire-cracked rocks.

R26/544 – Dense shell deposit.

R26/548 – Large shell midden with adjacent cluster of ovenstones.

R26/549 – Shell midden deposits.

R26/547 – Fence post dug through small lens of fragmented shell.

R26/545 – Moderate lens of shell midden with some charcoal.

R26/550 – Small dense deposit of shell midden.

A similar site pattern is seen in the wider landscape. Along the route of the expressway, to the north and south of the subdivision, numerous shell middens and haangi remains have been excavated.

North of the subdivision and east of the expressway, approx. 100 m from the river, a single tupapaku (koiwi tangata) was uncovered (R26/502) (O’Keeffe 2016: 16).

Overall, the distribution of ArchSites in the intensively surveyed corridor of the expressway indicates a high likelihood of there being unrecorded sites nearby in places such the Mansell subdivision.

Kapiti Proposed District Plan - Waahi tapu

In addition the Kapiti Proposed District Plan has a section on wahi tapu. There is a waahi tapu surrounding Kaiwarehou Pā to the north of the subdivision (Fig. 5). This is classified as a Wahanga Rua (WTS 0206). A Wahanga Rua has the following characteristics:

Urupā (Māori burial grounds), pā (village), papakāinga (place of settlement).

Land disturbance, construction of new buildings and alterations, additions and relocations of existing building, and network utilities.

Moderate – land is modified and currently occupied by residents and/or businesses.

Moderate – rules intended to allow for a reasonable level of development to occur provided land disturbance volumes are reasonably low and discovery protocols are followed.

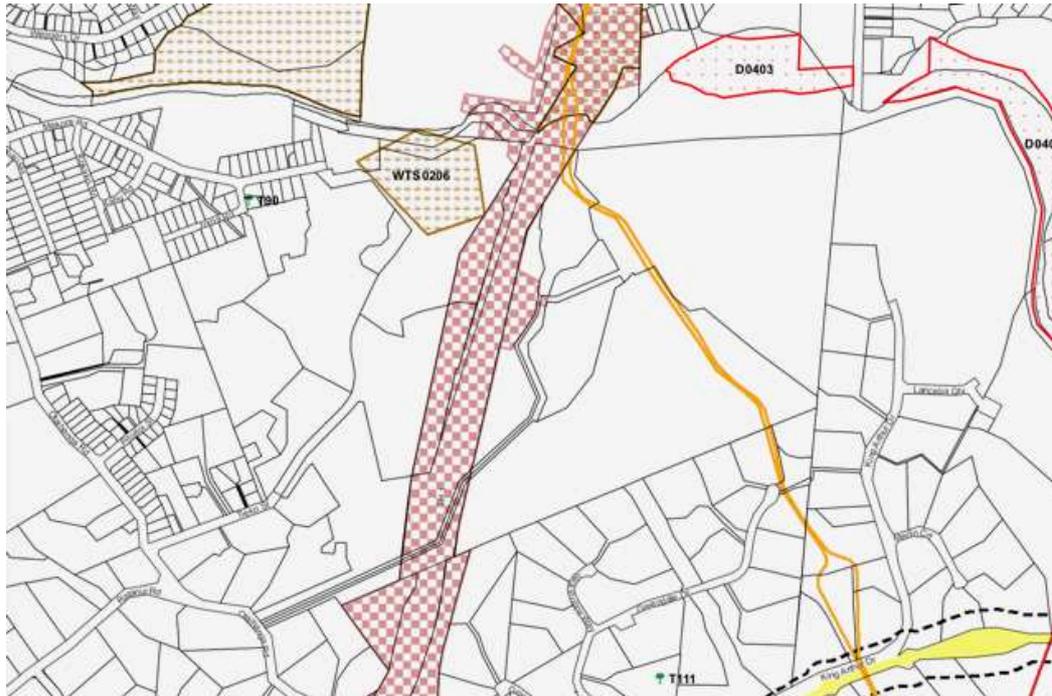


Fig. 5. The wahi tapu Kaiwarehou (WTS 0206) just to the north of the subdivision.

Ra Higgott in evidence to the Waitangi Tribunal (Wai 2200) notes the following:

Kaiwarehou Pa, settlement and cultivation site. Sits on the southern bank of the Waikanae river. It lies a short distance east of the Otaihanga community. This pa was of high importance to Ati Awa. Land court minutes state that about 1853 people of Otaraua, Kaitangata and Rahiri hapu resided here. Enoka and others resided here in 1890. Now in housing.

Overall, the number of ArchSite areas and the presence of Kaiwarehou Pā nearby to the Otaihanga Estates suggest that there is a high likelihood of a range of archaeological sites being on that property as well as high cultural significance.

Aerial photographs

A good series dated 1952 on Retrolens (RN 312/4-5) shows the Mansell property. We have examined a stereopair (RN 312/4-5) which shows a cluster of pits on the dune crest on section 43/42, just south of the northernmost wetland (Fig. 6).

The dray track noted from the SO appears to show on the Retrolens photograph.

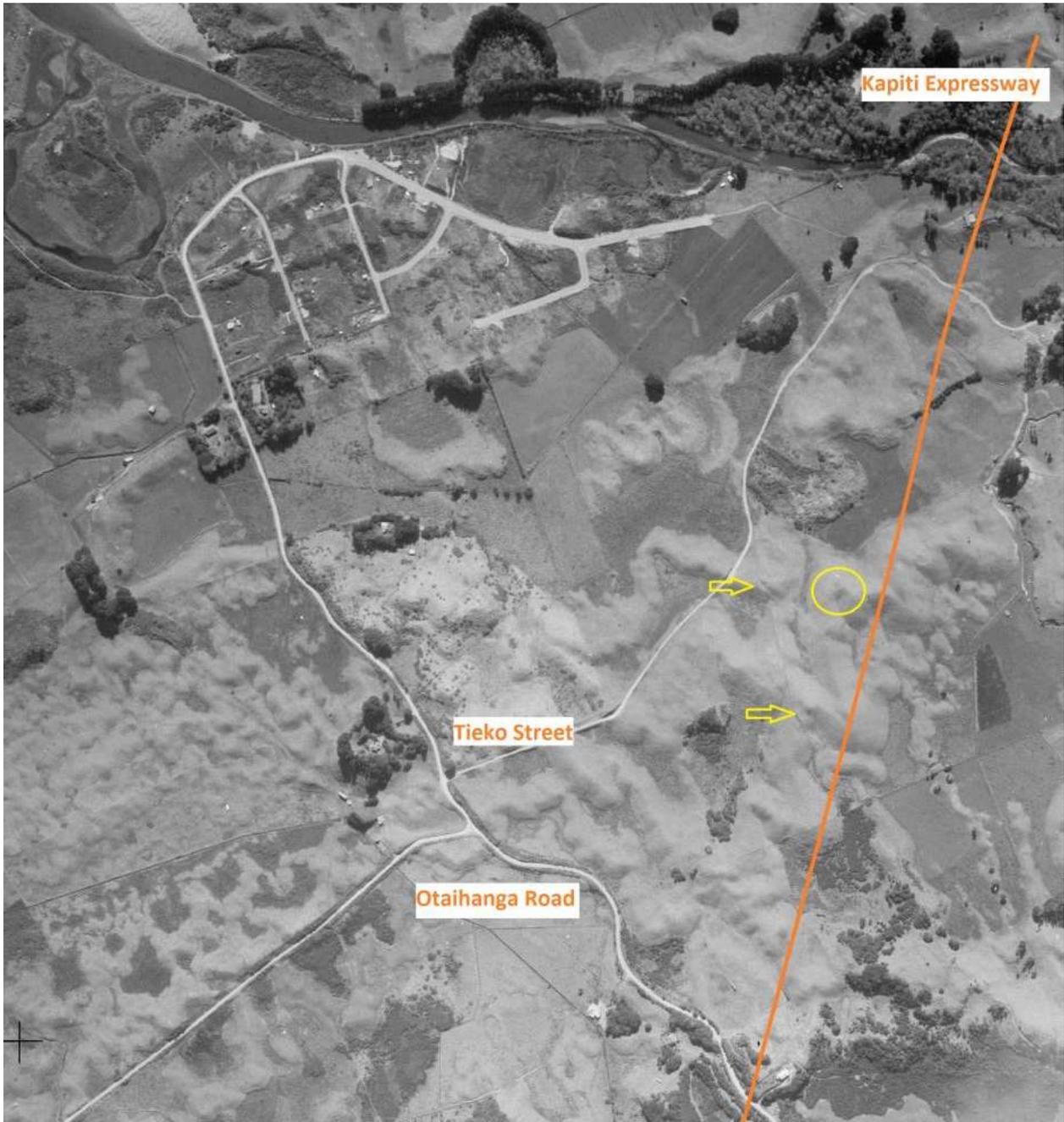


Fig. 6. Retrolens image showing the Mansell property. The topography is very clear. The orange line is the expressway route. The yellow circle marks possible storage pits, the arrows mark parts of a dray track

Site inspections and investigations (see Figs 7 - 22)

References to section numbers were initially based on the Cuttriss draft 24/7/2019. This has been updated to provide the section numbers allocated and wetlands as of 20 February 2021 (Rev E).

23 July 2019 (Figs 7 -9)

We made initial observations of the subdivision from the walking track to the east of the property on 23 July 2019. We walked the full extent of the property north to south.

The hilly sections (3, 4, 5, 6) surrounding the northern wetland were considered to have a high risk of finding archaeological remains, based on height of the dunes, proximity to wetland and to the wahi tapu Kaiwarehou (WTS 0206).

The batters in the former NZTA land running along the western side of the expressway will not contain archaeology. However, on the crests of the hills adjacent to and west of the top of the batters, the western extent of the sections 6, 7, 8, 9, 10 was likely to have archaeological sites. The crests and eastern (expressway) faces of these dunes have been marked as protected in all the proposals. These are likely to be continuations of the archaeological sites ArchSite R27/490, 544, 547, 548, 549) (see Fig. 4 above), uncovered during M2PP excavations.

2 August 2019

A further field visit to the property was conducted on the property and to look closely at the high risk areas identified in the earlier visit. Several cattle scrapes were cleaned down so the stratigraphy could be revealed. These are labelled TP 1 – 3 below.

The dune crest of the building and earthwork exclusion zone in sections 29 – 30 is likely to contain archaeological sites. However, as the proposals have marked this area as protected dune land forms any site should remain safe within the future subdivision.

Future alterations of this provision will need to be accommodated in any archaeological authority. It might or not be mentioned in the authority. If mentioned it will be a form of protected area for possible archaeological sites.

The densest area of small-area sections occurs in the southern end of the Mansell property (sections 23 - 49) (Figs 11 – 15). Along the southwestern border next to Otaihanga Road an area is being returned to wetland, this will drain to the east. This area would have originally been a natural wetland and may have played an important role in Maori subsistence (see Fig. 7). The dune slopes around the wetland are therefore likely to contain archaeological sites relating to this. TP 1 (outlined below) had unusually deep topsoil (70 cm) that suggests disturbances on the upper slopes; it is not entirely clear whether this is a natural phenomenon or due to human activity. TP 2 (in a further exclusion zone next to sections 45-47) appears to be rabbit disturbance. TP 1 and TP 2 are shown in Figures 13 and 15.

The hill crest running approximately east-west through section 30 has a series of linear depressions (Fig. 16). Due to their proximity and alignment we concluded these are a result of modern fencing and stock water facilities and are not archaeological sites.

On sections 10 and 11 there is a prominent broad based trench or linear depression across the crest of the ridge running east west (Fig. 17). It runs for about 30 m and is about 2 m wide at the base. On the cadastral SO 12296 c. 1870 (Fig. 3) a dray track is marked running along the south side of the Waikanae River and taking a loop across the general area of the Mansell

subdivision. This trench feature may be the base of the dray track at this position. It appears to have eased the passage across the crest of the sandhill and perhaps continued to the west along the ridge line of which the new road.

Retrolens historic aerial imagery of section 43 at the northern end of the dune ridge (Figs 6 and 21) shows a cluster of pits on the ridge crest. These were not observed on our field visit, it is possible these have already been destroyed.

Test pits (see Figs 13, 15)

These were created by cleaning down the edges of stock scrapes. Note that Jones and Wooller (2020) have reported on extensive, deep test pits in the subdivision area.

TP 1 on the slope below and to the south east of 24 – 25.

Depth below surface (cm)	
0 – 60	dark sandy loam topsoil
60 – 80	yellow brown subsoil sand
80	base of cut

TP 2 was a long section exposed on the southwestern face of sections 4 and 6 exposed in a cattle scrape.

Depth below surface (cm)	
0 – 20	dark sandy loam topsoil
20 – 30	disturbed yellow brown sand
30 – 35	thin lens of dark sandy loam
35 – 45	yellow brown subsoil sand
45	base of cut

This profile has developed from rabbit burrowing disturbance on this face.

TP 3 (not in figures)

0 – 25	dark sandy loam topsoil
25 – 40	yellow brown subsoil sand
40	base of cut

Generally, the rabbit and stock disturbances were in the southern part of the property. None of the disturbances observed (more than 20 in total) had any signs of charcoally soil, oven stones, haangi bases or rake-out or shell midden. This indicates a generally low risk of archaeological sites but cannot exclude the possibility that there are some smaller archaeological sites on the property.

Monitoring of the Geotech test pits

This has been the subject of a report by Jones and Wooller (2020) which should be tread with this revised assessment. The conclusions of the interim report are as follows:

- 1) The Geotech test pits have given a reasonable sample of the area of the block.
- 2) There is a low to moderate representation of archaeological features on the Mansell land.
- 3) No koiwi tangata or traces of storage pits have been found on the high points of the Mansell block of land.
- 4) The hoanga (grindstone) found in the central wetland (section 20) is an interesting late pre-European artefact and its form is unusual.
- 5) There are some signs of ancient settlement near the central (sections 20, 11 – 13) and northern wetlands and small valley to south of the latter (sections 4 – 10, road 101) and a trace of possible settlement disturbance (a buried topsoil) near the southern wetland (sections 23 – 49, road 100)
- 6) Future monitoring should concentrate on these wetland areas and the nearby sections.
- 7) There are wetlands proposed on the western side of the subdivision (near sections 1 and 2 and at the centre of sections 14 – 18. These wetlands are less likely to have archaeological sites nearby, based on the geotech observations.

Limitations of this report

This revised assessment is based on a field inspection including examinations of several exposed scarps and also extensive archaeological monitoring of the Geotech test pits (Jones and Wooller 2020). This revised assessment should be read in conjunction with that monitoring report. Although the property is mainly grassed some areas were obscured by groves of trees.

Higher hilltops, such as sections 3-4, 6-10, 12-14, and 29-30, were sometimes used for the interment of human remains (kōiwi tangata). The main areas of hill top have been investigated in the preliminary monitoring (Jones and Wooller 2020) and no evidence of koiwi tangata has been found. The human burial R27/502 nearby but on the other side of the expressway remains a fair measure of the risk that pertains in most areas of the Otaihanga Estates area.

Procedures that need to be followed in light of significant archaeological sites and/or koiwi tangata being found have been outlined in the archaeological management plan prepared under Heritage NZ authority 2020/378.

EFFECTS OF DEVELOPMENT

It is understood that there is to be a minimum of disturbance to the overall dune formations to retain the natural landscape appearance in the course of the development. This particularly applies to the eastern (expressway) side of the subdivision.

There will nevertheless be extensive areas modified for the new roading, for services such as storm and waste water and cabling, and ultimately the house platforms and roads on to individual sections.

Risk of archaeological sites remaining on individual sections

It should be noted that Heritage New Zealand is currently granting authorities for subdivision with a condition such as ‘*All prospective property buyers should be informed of the archaeological potential of the lot/s they are considering buying*’. This could mean that future owners of individual sections would need to obtain an authority under the Heritage NZ Act 2014.

It is therefore important that the monitoring programme should be comprehensive to give guidance to prospective land purchasers that there are unlikely to be undiscovered archaeological sites on their particular section.

The archaeologists’ final report on the Mansell property should *inter alia* review the question to the best of their ability as to whether, following the monitoring phase, there is a likelihood of archaeological sites still remaining on any of the individual sections.

Monitoring procedures recommended

The preliminary monitoring report (Jones and Wooller 2020) concluded that:

1) There are some signs of ancient settlement near the central and northern wetlands (and small valley to south of the latter) and a trace of possible settlement disturbance (a buried topsoil) near the former wetland by Otaihanga Road, indicating that future monitoring should concentrate on these areas.

2) Future monitoring (see scheme plan Cuttriss Rev E – ecological constraints and earthworks) should cover the under cutting and topsoil stripping in the vicinity of the five wetlands (see Fig. 2a, b above):

1. the former wetland (by Otaihanga Road) – sections 23 – 49
2. central wetland (where the hoanga, grindstone, was found) – sections 20 and 11 – 13
3. northern wetland (stormwater pond) – sections 4, 5 and 6
4. the small valley to the south of the northern wetland which will be filled – the new road 101, 6-9, 16 – 14
5. the sections adjacent to the small proposed wetlands in the western part of the subdivision (sections 1 and 2, and sections 14-18) are a lower priority.

Some further ridge crests may need to be monitored where under-cutting and topsoil stockpiling is to be carried out.

Construction of the new access roads and service trenches should also be monitored in these areas.

The possible dray road ‘trenches’ can be excavated by digger to seek evidence of their age and nature of construction or development and possible paving.

ARCHAEOLOGICAL VALUES

Tables 1 and 2 review site significance using the criteria of Heritage NZ for evaluating archaeological sites.

Table 1. Archaeological values that may be present on the Mansell property: possible middens, haangi bases, horticulture, etc.

Condition	Minor cattle damage. Some rabbit holes evident. The dune formations are largely intact on the property with no traces of levelling, ploughing or discing.
Unusual, rare or unique?	Middens and haangi bases are widespread on the Kapiti coast and are the most frequently occurring site type in the district.
Early sites	The expressway results indicate that settlement on the coast is relatively late in the pre-European sequence, i.e. from the 16 th C onwards.
Contextual value	Any archaeological features are likely to be similar to those identified in the course of the construction of the Kapiti Expressway. They may help to amplify and complete the picture of ancient lifeways on this coast.
Information potential	Low to moderate: the midden results from the expressway do not vary much from site to site and the results from the Mansell property will be similar to those of the expressway.
Amenity value	Low, the land is part of a private subdivision. The wetlands and earthwork exclusion zones will protect landform and visual amenity and also wetland fauna and flora.
Cultural associations	Relatively high, given that the Mansell area is near the Waikanae River and a listed wahi tapu and pa Kaiwarehou (WTS 0206).

Table 2. Archaeological values that may be present on the Mansell property: possible dray tracks.

Condition	Minor cattle damage. Some rabbit holes evident. No traces of levelling, ploughing or discing which would have destroyed the broad-based trenches marking the possible dray road.
Unusual, rare or unique?	Dray roads are a widespread 19 th C archaeological site type found throughout New Zealand and often recorded on 19 th C maps.
Early site	19 th century.
Contextual value	Any archaeological features are likely to relate to those identified in the construction of the Kapiti Expressway.
Information potential	Limited
Amenity value	Limited

Cultural associations	An important feature of 19 th C New Zealand culture and history.
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In terms of the RMA, an archaeological site is a physical resource. The RMA (as at 2019) has no specific definition of an archaeological site and does not require an archaeological site to be pre-1900 in age.

It is usually accepted that the RM Act may be supplemented by the criteria of significance in s. 66 (3) of the Heritage New Zealand Act 2014, viz.:

- (a) the extent to which the place reflects important or representative aspects of New Zealand history
- (b) the association of the place with events, persons, or ideas of importance in New Zealand history
- (c) the potential of the place to provide knowledge of New Zealand history:
- (d) the importance of the place to tangata whenua
- (e) the community association with, or public esteem for, the place
- (f) the potential of the place for public education
- (g) the technical accomplishment, value, or design of the place
- (h) the symbolic or commemorative value of the place
- (i) the importance of identifying historic places known to date from an early period of New Zealand settlement
- (j) the importance of identifying rare types of historic places
- (k) the extent to which the place forms part of a wider historical and cultural area.

The Otaihanga Estates property has three *possible* classes of site: (a) middens/ovens/horticulture, (b) possible dray track and (c) sites of traditional significance or wahi tapu. The last has not been evaluated here. The following tables review these possible sites using criteria derived from the Heritage NZ Act 2014.

Table 3. Middens, haangi bases, horticulture, etc.

Criterion	Discussion
Important or representative	Middens or haangi are very common on the Kapiti coast and the majority have a similar limited range of species present. Therefore any middens/haangi are likely to be representative only. Low to moderate significance.
Association with events, persons	There are adjacent (in properties to the north of Otaihanga Estates subdivision) wahi tapu associations are mentioned in the Provisional District Plan.
Provide knowledge	The known distribution of middens on the Kapiti landscape would be improved whether or not middens are actually present. A lack of middens in this environment would be of interest. Nevertheless, this would be a matter of low to moderate significance.
Importance to tangata whenua	Moderate to high significance where found.
Public esteem	Low to moderate.
Public education	Low, area will be private land.

Technical accomplishments	Low to moderate significance.
Symbolic, commemorative	Low.
Early site	Most midden and haangi on Kapiti coast are 17 th Century or later. An early midden would be 14 th or 15 th Century in age.
Rare type	No.
Part of wider area	See notes on midden distribution maps above.

Table 4. Dray track, possible.

Criterion	Discussion
Important or representative	Dray roads are a widespread 19 th C archaeological site type found throughout New Zealand and often recorded on 19 th C maps.
Association with events, persons	History of transport has been a key item in the history of the coast and dray tracks were the first land-based vehicle tracks so have moderate interest. No particular known association with persons though.
Provide knowledge	The known distribution of middens on the Kapiti landscape would be improved whether or not middens are actually present. A lack of middens in this environment would be of interest. Nevertheless, this would be a matter of low to moderate significance.
Importance to tangata whenua	Low to moderate.
Public esteem	Low to moderate.
Public education	Low, area will be private land.
Technical accomplishments	Low to moderate significance.
Symbolic, commemorative	Low.
Early site	Not applicable.
Rare type	No.
Part of wider area	Yes, part of historical transport routes.

SUMMARY AND RECOMMENDATIONS

1. Alastair and Richard Mansell have applied for and received a Heritage NZ authority 2020/378 under ss. 48, 56 and 62 of the Heritage NZ Act 2014 which is still current.
2. Little evidence of archaeological sites were observed during the field visits, including the preliminary monitoring under the Heritage NZ authority 2020/378.
3. The cultural associations due to the proximity of the wahi tapu, the precedent of past sites in the expressway earthworks and along the Waikanae River, and the historical documentation of a number of Maori settlements in the region, suggests that undetected archaeological sites may exist on the property.

4. The proximity of the wāhi tapu Kaiwarehou (WTS 0206) just to the north of the subdivision should be an important consideration in any consenting processes governed by s. 6 of the Resource Management Act 1991.
5. There is reasonable cause to suspect that Otaihanga Estates will still contain archaeological sites as defined in the Heritage NZ Act 2014 and that these sites will be discovered in the course of under-cutting and topsoil removal and stockpiling in the main earthworks phase for the subdivision.
6. Archaeological monitoring will be required under the provisions of Heritage NZ authority 2020/3787.
7. The earthworks exclusion zones of the plan dated 24/07/19 will have been submitted as part of the supporting documentation for the Heritage NZ authority 2020/378. There has been little change to the earthworks exclusion zones so no consequent changes to the Heritage NZ authority will be needed in that particular respect.
8. However, there has been significant change to cut and fill and the installation of services and roads in the contouring programme and there will be merit in seeking further advice from Heritage NZ as to whether a new authority is required.
9. A revised archaeological management plan will be required.
10. There remains a low to moderate risk that kōiwi tangata (human bones) could be found on the Otaihanga Estates in the course of the re-contouring and bulk earthworks.

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FIELD VISITS, FIGURES

Note that this revised assessment could be read in conjunction with the archaeological monitoring of the Geotech investigations (Jones and Wooller 2020).



Fig. 7. Te Marara o Kairakau signpost relating to ancient subsistence and wetlands on eastern side of expressway.



Fig. 8. Panorama of sections 21 (top left) to 4 (bottom right).



Fig. 9. Panorama of sections 35 (left) to 21 (right with pine trees).



Fig 10. View north-west across the building and earthwork exclusion zone (sections 29 to 30).



Fig 11. Sections 41 – 49, TP 1 arrowed.



Fig. 12. Sections 23, 24, 48 and 49 and the end of the new road 100.



Fig. 13. TP 1 profile of cattle scrape (Section 24). Unexpectedly deep (70 cm) topsoil (dark layer) suggests disturbances on the slope above and steady slope wash over the years.



Fig. 14. Sections 34 – 43 west and north of the wetland adjacent to Otaihanga Road.



Fig 15. TP2 profile of cattle scarp showing layers of buried topsoil likely to be the result of rabbit burrowing, note rabbit hole at right (exclusion zone next to section 26?).



Fig. 16. The earthwork exclusion zone runs along the near skyline dune ridge-line at the centre and right of the photo, sections 29 - 30.



Fig. 17. A broad-based trench/ ditch runs through the centre of the photo (sections 10, 11). It may be an old dray track.



Fig. 18. High dune point, sections 12 – 14.



Fig 19. Road 101 route, sections 6 - 11 at right overlooking expressway.



Fig. 20. Looking towards the kanuka grove (section 5).



Fig. 21. Hill with cluster of ‘pits’ showing on Retrolens aerial imagery (section 6), no pits showed in the monitoring (Jones and Wooller 2020) .



Fig. 22. Sections 6 - 10 in distance, view to south-east.

Appendix K – PDP Objectives and Policies

Kāpiti Coast District Plan (to be operative 30 June 2021)

REFERENCE	PROVISION
Objective 2.1	To work in partnership with the tāngata whenua of the District in order to maintain kaitiakitanga of the District's resources and ensure that decisions affecting the natural environment in the District are made in accordance with the principles of Te Tiriti o Waitangi (Treaty of Waitangi).
Objective 2.2	To improve indigenous biological diversity and ecological resilience through: <ol style="list-style-type: none"> a) protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna; b) encouraging restoration of the ecological integrity of indigenous ecosystems; c) enhancing the health of terrestrial and aquatic ecosystems; and d) enhancing the mauri of waterbodies.
Objective 2.3	To maintain a consolidated urban form within existing urban areas and a limited number of identified growth areas which can be efficiently serviced and integrated with existing townships, delivering: <ol style="list-style-type: none"> a) Urban areas which maximise the efficient end use of energy and integration with infrastructure; b) A variety of living and working areas in a manner which reinforces the function and vitality of centres; c) Resilient communities where development does not result in an increase in risk to life or severity of damage to property from natural hazard events; d) Higher residential densities in locations that are close to centres and public open spaces, with good access to public transport; e) Management of development in areas of special character or amenity so as to maintain, and where practicable, enhance those special values; f) Sustainable natural processes including freshwater systems, areas characterised by the productive potential of land, ecological integrity, identified landscapes and features, and other places of significant natural amenity; g) An adequate supply of housing and areas for business/employment to meet the needs of the District's anticipated population which is provided at a rate and in a manner that can be sustained within the finite carrying capacity of the District; and h) Management of the location and effects of potentially incompatible land uses including any interface between such uses.
Objective 2.4	To have a coastal environment where: <ol style="list-style-type: none"> a) Areas of outstanding natural character and high natural character, outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna are identified and protected; b) Areas of outstanding natural character and high natural character are restored where degraded; c) The effects of inappropriate subdivision, use and development are avoided, remedied or mitigated;

REFERENCE	PROVISION
	<ul style="list-style-type: none"> d) Public access to and along the coast to facilitate active and passive recreational use is maintained and enhanced while managing inappropriate vehicle access; and e) Inappropriate development does not result in further loss of coastal dunes in the area mapped as the coastal environment.
Objective 2.5	To ensure the safety and resilience of people and communities by avoiding exposure to increased levels of risk from natural hazards, while recognising the importance of natural processes and systems.
Objective 2.6	<p>To sustain the productive potential of land in the District, including:</p> <ul style="list-style-type: none"> a) retaining land which is suitable for a range of primary production activities; b) achieving added economic and social value derived from primary production activities through ancillary on-site processing and marketing; c) enabling activities that utilise the productive potential of the land in the rural environment; d) reducing conflict between land uses in the rural environment and adjoining areas; and e) avoiding, remedying or mitigating adverse effects on the efficient operation of existing primary production activities from sensitive activities establishing on adjoining sites; f) while safeguarding the life-supporting capacity of air, water, soil, and ecosystems by avoiding, remedying or mitigating adverse effects on the environment.
Objective 2.7	<p>To protect historic heritage in the District for the social, cultural and economic wellbeing of the Kāpiti Coast community and future generations, including:</p> <ul style="list-style-type: none"> a) supporting the contribution of historic heritage features and their values to the identity, character and amenity of places and landscapes; b) recognising and protecting tāngata whenua historic heritage, including waahi tapu and other places and areas significant to Māori; and c) providing for appropriate use and development of natural and physical resources with historic heritage values, while ensuring any adverse environmental effects are avoided, remedied or mitigated.
Objective 2.8	<p>To support a cohesive and inclusive community where people:</p> <ul style="list-style-type: none"> a) Have easy access and connectivity to quality and attractive public places and local social and community services and facilities; b) Have increased access to locally produced food, energy and other products and resources; c) Have improved health outcomes through opportunities for active living or access to health services; and d) Have a strong sense of safety and security in public and private spaces.
Objective 2.9	<p>To protect the District's identified outstanding natural features and landscapes from inappropriate subdivision, use and development; and</p> <ul style="list-style-type: none"> a) maintain or enhance the landscape values of special amenity landscapes and identified significant landforms; and b) avoid, remedy or mitigate adverse effects of earthworks on natural features and landforms.
Objective 2.11	<p>To maintain and enhance the unique character and amenity values of the District's distinct communities so that residents and visitors enjoy:</p> <ul style="list-style-type: none"> a) relaxed, unique and distinct village identities and predominantly low-density residential areas characterised by the presence of mature vegetation, a variety of built forms, the retention of landforms and

REFERENCE	PROVISION
	<p>unique community identities;</p> <ul style="list-style-type: none"> b) vibrant, lively town centres supported by higher density residential and mixed use areas; c) neighbourhood centres, village communities and employment areas characterised by high levels of amenity, accessibility and convenience; d) productive rural areas, characterised by openness, natural landforms, areas and corridors of indigenous vegetation, and primary production activities; and e) well managed interfaces between different types of land use areas (e.g. between living, working and rural areas and between potentially conflicting land uses, so as to minimise adverse effects.
Objective 2.12	<p>To meet diverse community needs by increasing the amount of housing that:</p> <ul style="list-style-type: none"> a) Is of densities, locations, types, attributes, size and tenure that meets the social and economic wellbeing needs of households in suitable urban and rural locations; b) Is affordable and adequate for lower income households; and c) Can respond to the changing needs of residents, regardless of age, mobility, health or lifestyle preference; <p>While enhancing the amenity of living environments and contributing to the sustainability of communities and compatibility with the goals of environmental sustainability, in particular, resource, water and energy efficiency.</p>
Objective 2.13	<p>To recognise the importance and national, regional and local benefits of infrastructure and ensure the efficient development, maintenance and operation of an adequate level of social and physical infrastructure and services throughout the District that:</p> <ul style="list-style-type: none"> a) meets the needs of the community and the region; and b) builds stronger community resilience, while avoiding, remedying or mitigating adverse effects on the environment.
Objective 2.14	<p>To ensure that the transport system in the District:</p> <ul style="list-style-type: none"> a) integrates with land use and urban form and maximises accessibility; b) improves the efficiency of travel and maximises mode choice to enable people to act sustainably as well as improving the resilience and health of communities; c) contributes to a strong economy; d) avoids, remedies or mitigates adverse effects on land uses; e) does not have its function and operation unreasonably compromised by other activities; f) is safe, fit for purpose, cost effective and provides good connectivity for all communities; and g) provides for the integrated movement of people, goods and services.
Objective 2.17	<p>To have a rich and diverse network of open space areas that:</p> <ul style="list-style-type: none"> a) is developed, used and maintained in a manner that does not give rise to significant adverse effects on the natural and physical environment; b) protects the District's cultural, ecological and amenity values, while allowing for the enhancement of the quality of open space areas; c) supports the identity, health, cohesion and resilience of the District's communities; and d) ensures that the present and future recreational and open space needs

REFERENCE	PROVISION
	of the District are met.
Policy DW1	<p>New urban development for residential activities will only be located within existing urban areas and identified growth areas, and will be undertaken in a manner which:</p> <ul style="list-style-type: none"> a) Supports the District’s consolidated urban form; b) Maintains the integrity of the urban edge north of Waikanae and Otaki; c) Manages residential densities by; <ul style="list-style-type: none"> i. enabling medium density housing and focused infill housing in identified precinct areas that are close to centres, public open spaces, and public transport nodes ii. retaining a predominantly low residential density in the Living Zones; iii. Avoiding any significant adverse effects of subdivision and development in special character areas identified in Policy 5.4 d) Avoids urban expansion that would compromise the distinctiveness of existing settlements and unique character in the rural environment between and around settlements; e) Can be sustained within and makes efficient use of the existing capacity of public services and strategic infrastructure; and f) Promotes the efficient use of energy and water.
Policy DW3	<p>An increased mix of housing forms and types will be encouraged within parts of the District where increased variety and densities of housing are able to cater for changing demographics, while maintaining high amenity values. This will include provision for:</p> <ul style="list-style-type: none"> a) Smaller household sizes, including 1 and 2 bedroom household units; b) Housing for older persons; c) Supported living accommodation; d) Papakainga; e) Shared and group accommodation; f) Minor flats; and g) A range of lot sizes and land tenure arrangements to facilitate these typologies
Policy DW4	<p>Residential intensification will be managed to ensure that adverse effects on local amenity and character are avoided, remedied or mitigated, including through achievement of the following principles:</p> <ul style="list-style-type: none"> a) development will complement the existing environment in terms of retaining landforms, yard setbacks and relationship to the street and open spaces; and b) building bulk and scale will be managed.
Policy DW5	<p>The density of subdivision and development will be managed through an area-specific approach to achieve an appropriate range of housing types across the District, as set out below:</p> <ul style="list-style-type: none"> a) the highest densities, including apartments as part of mixed use developments, will be located within and in immediate proximity to centres; b) medium density housing will be limited to specific precinct areas within walking distance of centres; c) focused infill will be encouraged in specific areas where there is good access to shops and services; d) within the Neighbourhood Development Areas identified in the Ngārama Zone Structure Plan in Appendix 5.7, the provision of affordable housing

REFERENCE	PROVISION
	<p>will be encouraged at appropriate locations with good access to shops and services;</p> <ul style="list-style-type: none"> e) traditional low density residential subdivision will be allowed within the general residential area; f) overall existing low densities will be maintained in special character areas identified in Policy 5.4; g) especially low densities will be applied in Low Density Housing precinct areas (identified on the District Plan Maps) as transitions between rural and urban environments); and h) in areas where infrastructure constraints exist (such as water, wastewater or roading), densities will reflect those constraints. <p>Note: Low density areas include: Otaki and Paraparaumu Low Density Precincts, Pekawy, Ferndale, Panorama Drive Precinct, Manu Grove Low Density Precinct, and PekaPeka North. The Waikanae Garden Precinct is also characterised by a slightly lower density than the general residential area. In many cases, the low density nature of the above areas is not only a product of their transitional nature between urban and rural areas, but also due to the high natural character or ecological values of the areas, or physical constraints that otherwise preclude higher densities being able to be sustained there.</p> <p>Paekākāriki and Te Horo are examples where the amount of development that can be sustained there is limited due to existing constraints on necessary infrastructure. In these areas, development intensity which exceeds these constraints will be avoided.</p>
Policy DW10	Subdivision, land use and development will be undertaken in a manner which enables all urban residences to have access to public open space within a distance of 400 metres.
Policy DW11	<p>A. New publicly accessible local parks which are of a size, shape and location that meet the open space and recreational needs of the Community will be provided within new <i>subdivisions</i>; and</p> <p>B. New parks or upgrades to parks will be provided for to accommodate <i>open space</i> and recreational demand created by <i>infill</i> housing.</p>
Policy DW13	<i>Council</i> will ensure the continued development and maintenance of a public cycleway, walkway and bridleway network as part of the wider open space network in co-operation with relevant stakeholders, linking residential areas with open space, schools, commercial and community facilities, public transport nodes and important natural areas.
Policy DW14	<p>A. New subdivision, land use and development within reserves and areas of significant scenic, ecological, cultural, scientific and national importance will provide for the amenity values of these areas, including (but not limited to) values associated with:</p> <ul style="list-style-type: none"> a) a sense of openness and visual relief from more intensive urban areas; b) indigenous vegetation (excluding planted vegetation); c) significant landforms; and d) natural character. <p>B. New subdivision, use and development of land outside of the areas identified in (A.) above will be undertaken in a manner that does not compromise the amenity values of those areas.</p>
Policy DW15	New <i>subdivision</i> , use and development may provide for privately-owned or managed reserves, open space covenants, ecological reserves and other areas where building is restricted, provided that they are effectively managed and safe for end users.
Policy DW16	<p>Quality urban design outcomes will be promoted so that public and private places and spaces:</p> <ul style="list-style-type: none"> a) are liveable and safe;

REFERENCE	PROVISION
	<p>b) enhance the local economy, <i>environment</i> and community; c) are sustainable, enduring and resilient; d) provide a strong sense of place reflecting cultural values and distinct community identities; e) are enjoyable, comfortable, welcoming and provide a diversity of experiences; and f) are easy to move around and through, by encouraging a well-connected and integrated <i>transport network</i>;</p> <p>at all levels of urban design, from macro (urban structure and subdivision) to micro (building details and materials) scale.</p>
Policy DW17	Development, use and subdivision will be consistent with the Subdivision and Development Principles and Requirements 2012 and Crime Prevention through Environmental Design (CPTED) Guidelines to enhance safety and security of residents and visitors.
Policy 3.1	Protect areas of significant indigenous vegetation and significant habitats of indigenous fauna (including ecological sites identified in Schedule 3.1, key indigenous tree species in Schedule 3.2, key indigenous trees in Schedule 3.2A, and rare and threatened vegetation species in Schedule 3.3 of this Plan). Protect outstanding natural features and landscapes (identified in Schedule 3.4 of this Plan), geological features (identified in Schedule 3.6 of this Plan), and the values associated with these areas and features, from inappropriate subdivision, use and development.
Policy 3.3	Consider biodiversity offsets proposed as part of resource consent applications where it is anticipated that there will be significant residual adverse biodiversity effects from the proposed activities on significant indigenous vegetation or significant habitats of indigenous fauna after appropriate avoidance, minimisation, remediation and mitigation measures have occurred, in order to achieve no net loss and preferably a net gain in indigenous biodiversity values, having particular regard to the principles for biodiversity offsets in Schedule 3.7 of this Plan.
Policy 3.8	<p>Adverse effects, including cumulative effects, from subdivision, use and development on significant indigenous vegetation and significant habitats of indigenous fauna including aquatic ecosystems will be avoided, or where it cannot be avoided, remedied or mitigated in order to maintain the values and characteristics of the significant indigenous vegetation or significant habitats of indigenous fauna, including by:</p> <ul style="list-style-type: none"> a) avoiding where practicable the modification of significant indigenous vegetation, in particular all indigenous vegetation within ecological sites; b) managing land use activities resulting in increased sediment and contaminant levels of surface water, including storm water, to reduce the likelihood of aquatic ecosystems being detrimentally affected; c) creating and maintaining appropriate buffers around ecological sites, key indigenous trees and rare and threatened vegetation species, significant habitats of indigenous fauna including aquatic ecosystems to ensure that wider ecological processes are considered when making decisions about applications for subdivision and land use consent; d) preventing where practicable the introduction or spread of exotic weed species and pest animals both terrestrial and aquatic; e) enabling pest and weed management and passive recreational activities within ecological sites including the associated construction and maintenance of tracks (where the biodiversity gains from pest control will outweigh the loss of significant indigenous vegetation from track construction) and the construction and maintenance of fences at the margins of ecological sites; f) providing for appropriate trimming of indigenous vegetation while avoiding inappropriate trimming of significant indigenous vegetation. g) ensuring that subdivision which creates lots which are entirely within an ecological site or which necessitate modification of any key indigenous tree species or rare and threatened vegetation species protects the

REFERENCE	PROVISION
	<p>values and characteristics of those areas.</p> <p>h) ensuring that subdivision which creates boundaries that cut through any ecological site, or any key indigenous tree species or rare and threatened vegetation species, protects the values and characteristics of those areas.</p>
Policy 3.8A	Subdivision, land use and development shall be undertaken in a manner to maintain indigenous biodiversity within large areas of contiguous indigenous vegetation and riparian and coastal vegetation.
Policy 3.9	Where a subdivision or development is undertaken on land containing rare and threatened vegetation species, or an ecological site, enhancement of the ecological site or rare and threatened vegetation species will be encouraged.
Policy 3.10	<p>To enable tangata whenua to maintain and enhance their traditional relationship with the natural environment, while:</p> <p>a) supporting the enhancement of the mauri of aquatic environments; and</p> <p>b) having particular regard to the exercise of kaitiakitanga by tangata whenua in the management of the District's resources.</p>
Policy 3.12	Outstanding natural features and landscapes will be protected from inappropriate subdivision, use and development which has the potential to adversely affect and erode the values of features and landscapes identified in Natural Environment Schedule 3.4 of this Plan.
Policy 3.13	Subdivision, use and development in special amenity landscapes will be located, designed and of scale and character that maintains or enhances the values of the landscape areas identified in Schedule 3.5 of this Plan and taking into account existing land uses including primary production.
Policy 3.14	<p>All earthworks activities will:</p> <p>a) be managed to protect geological features identified in Schedule 3.6 from disturbance; and</p> <p>b) be sympathetically located and of a scale that protects the values of outstanding natural features and landscapes identified in Schedule 3.4; and</p> <p>c) avoid or mitigate erosion and off-site silt and sediment runoff to the Council's reticulated stormwater system and waterbodies; and</p> <p>d) be managed to ensure adverse effects on natural landforms, residential amenity values and rural character values are remedied or mitigated.</p>
Policy 4.1	<p>Recognise the extent and characteristics of the <i>coastal environment</i> including:</p> <p>a) areas or landforms dominated by coastal vegetation or habitat of indigenous coastal species;</p> <p>b) landform affected by active <i>coastal processes</i>, excluding tsunami;</p> <p>c) elements or features, including coastal escarpments, that contribute to the natural character, landscape, visual quality or <i>amenity value</i> of the coast; and</p> <p>d) sites, <i>structures</i>, places or areas of <i>historic heritage</i> value adjacent to, or connected with, the coast, which derive their heritage value from a coastal location.</p>
Policy 4.2	<p><i>Natural character</i> in the <i>coastal environment</i> is identified and mapped in the District Plan using the following criteria:</p> <p>1. For areas of outstanding <i>natural character</i> and areas of high <i>natural character</i>:</p> <p>a) natural elements, systems, processes and patterns, which are relatively unmodified;</p> <p>b) the presence of water (lakes, rivers, sea), geological and geomorphological features;</p> <p>c) natural landforms and landscapes which are legible and uncluttered by <i>structures</i> or 'obvious' human influence</p>

REFERENCE	PROVISION
	<p>including the natural darkness of the night sky;</p> <p>d) places dominated by natural patterns such as the natural movement of water and sediment; and</p> <p>e) places or areas that are wild or scenic including the presence of vegetation (especially native vegetation) and other ecological patterns; and</p> <p>2. In addition to the features listed above in 1, areas of outstanding <i>natural character</i> will have the following characteristics:</p> <p>a) they are exceptional, pre-eminent and clearly superior to areas of high <i>natural character</i>; and</p> <p>b) they have a combination of elements, patterns and processes that are exceptional in their intactness, integrity and lack of built structures and other modifications compared to areas of high <i>natural character</i></p> <p>Explanation This policy is to give effect to the NZCPS 2010 and the WRPS.</p>
Policy 4.3	<p>Preserve natural character in the coastal environment, and protect it from inappropriate subdivision, use and development, including by:</p> <p>a) avoiding adverse effects of activities on natural character in areas of outstanding natural character;</p> <p>b) avoiding significant adverse effects, and avoiding, remedying or mitigating other adverse effects of activities on natural character in all other areas of the coastal environment;</p> <p>c) reinstating dunes which function as natural buffers where practicable;</p> <p>d) providing managed public access ways to the beach and foreshore and limiting damage to dunes from unmanaged access;</p> <p>e) regulating encroachment of permanent structures and private uses onto the beach or public land;</p> <p>f) removing existing unnecessary structures and associated waste materials from the beach;</p> <p>g) retaining a natural beach and foreshore including a dry sand beach where practicable.</p> <p>Explanation This policy is to give effect to the NZCPS 2010 and the WRPS.</p>
Policy 4.4	<p>Promote restoration of the natural character of the coastal environment where practicable, by:</p> <p>a) creating or enhancing indigenous habitats and ecosystems, using local genetic stock;</p> <p>b) encouraging natural regeneration of indigenous species, while effectively managing weed and animal pests;</p> <p>c) rehabilitating dunes and other natural coastal features or processes, including saline wetlands and intertidal saltmarshes;</p> <p>d) restoring and protecting riparian and intertidal margins;</p> <p>e) removing redundant coastal structures and materials that do not have heritage or amenity values; or</p> <p>f) redesign of structures that interfere with ecosystem processes.</p> <p>Explanation This policy gives effect to the NZCPS.</p>
Policy 4.5	<p>Maintain and enhance <i>amenity values</i> in the <i>coastal environment</i>, such as open space and scenic values, and provide opportunities for recreation and the enjoyment of the coast, including the enjoyment of a high tide dry beach by the public. Public access to and along the coast will be maintained and enhanced while minimising any significant adverse <i>effects</i> on the public's use and enjoyment of the coast.</p>

REFERENCE	PROVISION
Policy 4.7	Natural dune systems will be protected and enhanced (including through restoration) and natural dune function will be enabled where practicable.
Policy 7.2	<p><i>Subdivision</i>, use and <i>development</i> in the Rural Zones will be undertaken in a manner that maintains or enhances the District's rural character, including:</p> <ul style="list-style-type: none"> a) the general sense of openness; b) natural landforms; c) overall low density of <i>development</i>; and d) the predominance of <i>primary production activities</i>.
Policy 7.10	<p>New <i>household units</i> and other <i>buildings</i> in all the Rural Zones will be provided in a manner which avoids, remedies or mitigates adverse environmental <i>effects</i> (including cumulative <i>effects</i>) on the <i>productive potential</i> and landscape character of the rural area, including:</p> <ul style="list-style-type: none"> a) limiting the number of <i>household units</i> and <i>minor flats</i> to one of each per <i>site</i>, except where Development Incentive Guidelines are complied with; b) managing the location and scale of <i>buildings</i>; and c) recognising the operational requirements for <i>buildings</i> that are <i>ancillary to primary production activities</i>.
Policy 7.11	<p>Rural residential living will be provided for in identified locations zoned Rural Residential which:</p> <ul style="list-style-type: none"> a) can be efficiently accessed and are close to urban settlements; b) are characterised by land with relatively low <i>productive potential</i>; c) avoid potential <i>reverse sensitivity effects</i> on adjacent <i>primary production activities</i> and other lawfully established rural uses; and d) are at a scale and in locations that avoid creating or expanding urban settlements.
Policy 9.2	<p>A risk based, all hazards approach will be taken to subdivision, land use, and development within areas subject to the following natural hazards:</p> <ul style="list-style-type: none"> a) flood hazards; b) earthquake hazards; and c) fire hazards. <p>Hazard categories will be developed for flood and seismic hazards to guide decision making and help minimise potential harm to people and damage to property due to these hazards, while allowing appropriate use.</p>
Policy 9.3	In areas identified on the District Plan Maps, new subdivision, use and development will be managed in a way that avoids increasing risks from natural hazards. Subdivision, use and development will be allowed only where it can be shown that any potential increase in risk exposure on or beyond the land itself has been avoided, remedied or mitigated.
Policy 9.4	A precautionary approach will be taken to the management of risks from hazards that may impact on subdivision, use and development, where there is uncertainty about the potential effects and where the effects are potentially significantly adverse.
Policy 9.5	<p>Natural features that have the <i>effect</i> of reducing hazard <i>risk</i> by buffering <i>development</i> from the <i>effects</i> of <i>natural hazards</i> will be protected through:</p> <ul style="list-style-type: none"> a) <i>development</i> controls, including the use of minimum setbacks, from rivers and streams for new and relocated <i>buildings</i>; and b) undertaking and encouraging restoration of such natural features.
Policy 9.10	All new lots must have flood and erosion-free <i>building</i> areas based on 1% AEP flood modelling.
Policy 9.11	A higher level of control on <i>subdivision</i> , use and <i>development</i> will be applied within <i>river corridors</i> , <i>stream corridors</i> , <i>overflow paths</i> and <i>residual overflow paths</i> areas. A generally lesser level of restriction on <i>subdivision</i> , use and <i>development</i> will be applied in <i>ponding</i> , <i>residual ponding</i> , <i>shallow surface flow</i> ,

REFERENCE	PROVISION
	<i>flood storage and fill control areas.</i>
Policy 9.13	<p>When assessing applications for <i>subdivision</i>, use or <i>development</i> within a <i>ponding</i>, <i>residual ponding</i>, <i>shallow surface flow</i>, <i>flood storage</i> or <i>fill control area</i>, consider the following:</p> <ul style="list-style-type: none"> a) the <i>effects</i> of the <i>development</i> on existing flood mitigation <i>structures</i>; b) the <i>effects</i> of the <i>development</i> on the flood hazard – in particular flood levels and flow; c) whether the <i>development</i> redirects floodwater onto adjoining <i>properties</i> or other parts of the floodplain; d) whether access to the <i>site</i> will adversely affect the flood hazard; e) the extent to which buildings can be located on areas of the <i>property</i> not subject to flooding; and f) whether any <i>subdivision</i> or <i>development</i> will or may result in damage to property or harm to people.
Policy 9.16	<p>When assessing applications for <i>subdivisions</i> which are located on sandy, alluvial or peat soils, a <i>risk</i> management approach shall be adopted and <i>Council</i> will consider a range of matters that seek to reduce the <i>risk</i> to people and property, including:</p> <ul style="list-style-type: none"> a) geotechnical information from a suitably qualified person on <i>liquefaction</i> provided with any <i>subdivision</i> or <i>development</i> application; b) the intensity of the <i>subdivision</i> and nature of future <i>development</i> of the lot, including building design and construction techniques; and c) the risk to people and property posed by the <i>liquefaction</i> hazard and the extent to which the activity could increase the <i>risk</i> posed by the <i>natural hazard</i>. <p>These investigations may result in identifying that some <i>lots</i> are not suitable for <i>development</i> and any such proposal would be declined.</p>
Policy 9.18	<p><i>Risks</i> to people and property from fire hazards will be minimised by:</p> <ul style="list-style-type: none"> a) requiring <i>plantation forestry</i> and forestry harvesting activities in rural and <i>open space zones</i> to be designed to enable quick response to fire; b) requiring <i>subdivision</i>, use and <i>development</i> in rural zones to provide water for firefighting; and c) requiring access and adequate firefighting water supplies to be provided for fire appliances in all <i>zones</i>.
Policy 11.3	<p>Natural systems are recognised as taonga and will be protected from any adverse environmental effects arising from the establishment, operation, maintenance and upgrading of infrastructure that affect the mauri of these systems in accordance with local tikanga.</p>
Policy 11.7	<p><i>Subdivision</i>, use and <i>development</i> of land for urban growth and intensification will be focused on certain areas (i.e. in existing <i>urban</i> areas).</p> <p><i>Subdivision</i>, use and <i>development</i> will be avoided in areas where it:</p> <ul style="list-style-type: none"> a) is unable to be efficiently integrated with existing <i>infrastructure</i>, or be serviced by new <i>infrastructure</i> in an efficient and cost-effective manner; b) does not promote the efficient end use of energy, including energy use associated with private vehicular transport, and efficient use of water; c) does not align with Council’s <i>infrastructure</i> asset management planning; d) would lead to inefficient or unduly high operation and maintenance costs for public <i>infrastructure</i>; e) is unable to make the most efficient use of the <i>transport network</i>; and f) would lead to further growth pressures and demand for <i>infrastructure</i> investment ahead of the community’s or <i>infrastructure</i> provider’s ability to fund, or its desired funding programme.

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Policy 11.11	<i>Development and subdivision</i> , and the provision of associated <i>infrastructure</i> will be undertaken in accordance with the Council's Subdivision and Development Principles and Requirements, 2012.
Policy 11.14	Unless otherwise technically or operationally, impracticable, new <i>network utility infrastructure</i> will be placed underground. Where undergrounding is technically or operationally impracticable, any new aboveground <i>network utility infrastructure</i> will be well designed and resilient to identified <i>natural hazards</i> .
Policy 11.16 [network utilities section]	<p>The following assessment criteria shall be applied, where applicable, when considering <i>resource consent</i> applications and notices of requirement for the development, construction and upgrading of <i>network utility</i> activities:</p> <p>General</p> <ul style="list-style-type: none"> a) the extent to which the proposed <i>network utility</i> benefits the local community, the wider region and nation; b) the degree, extent and <i>effects</i> of the non-compliance with the <i>permitted activity</i> standards; c) the risks to public health and safety; d) any adverse <i>effects</i> on traffic and pedestrian safety including sight lines and visibility of traffic signage; e) whether the size and scale of the proposal is generally compatible with other <i>development</i> in the area; f) the design and external appearance, including: <ul style="list-style-type: none"> i. the maximum <i>height</i> and diameter of any <i>mast</i>; ii. the maximum <i>height</i>, area or diameter of any <i>antenna</i>; iii. the use of external colour and material to minimise the visual contrast with the surrounding <i>environment</i>; iv. whether potential adverse visual <i>effects</i> can be mitigated by sensitive siting and design or appropriate planting and/or screening; v. proposed mitigation measures incorporated into the location, design, construction and operation of the <i>network utility</i> project, and the identification of any residual adverse <i>effects</i> on the <i>environment</i>; and vi. whether alternative locations, routes or methods are physically or technically practicable to safeguard the <i>environment</i>; g) the extent to which the design mitigates the risk of damage from <i>natural hazards</i> to ensure security of supply and maintain levels of service; h) any potential interference with public use and enjoyment of the land; i) amenity <i>effects</i>, including noise, vibration, odour, dust, <i>earthworks</i> and lighting; j) visual <i>effects</i>, including impacts on: <ul style="list-style-type: none"> i. landscape values, ii. the residential and recreational use of land in the vicinity of the proposed utility; iii. the existing character, landscape, streetscape and <i>amenity values</i> of the locality; iv. the extent to which the proposal will be visible from key public places, public viewing points, the coast, significant recreational areas, and Kāpiti Island; k) in respect of <i>historic heritage</i> identified in Schedule 10.1 – Schedule of Historic Heritage, whether the significance of the feature is affected by the construction or placement of the <i>network utility</i> structure, <i>mast</i> or <i>antenna</i>; l) where proposed within an <i>outstanding natural features and landscapes, ecological site</i> or within the Open Space (Conservation and

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	<p>Scenic) Zone, with regard to:</p> <ul style="list-style-type: none"> i. the visibility of the subject site and the <i>network utility structure(s)</i> in relation to neighbouring views and whether the <i>structure(s)</i> will be seen against a landscape backdrop or the sky; ii. the potential to co-locate the <i>structure</i> with any similar existing <i>structures</i> or other <i>buildings</i>; and iii. the potential for the <i>site</i> to be screened where appropriate; <p>m) whether the <i>network utility structure</i> damages habitats or ecosystems or causes a loss of vegetation, and the rehabilitation of the <i>site</i> following any construction or future maintenance period;</p> <p>n) the nature and extent of the activity and the degree to which it may disturb natural landforms or vegetation, create soil instability or lead to adverse ecological <i>effects</i> on natural habitats;</p> <p>o) the extent to which affected parties have been consulted; and</p> <p>p) cumulative <i>effects</i>.</p> <p>Telecommunications and Electricity</p> <ul style="list-style-type: none"> a) the extent to which it is technically, economically and practicably reasonable for <i>masts, antennas</i> or other <i>network utilities</i> to be co-located within corridors or co-sited with similar <i>structures</i> or <i>buildings</i> to minimise their visual impact; b) with respect to extensions to, or new above ground electricity or telecommunication distribution and <i>transmission lines</i>, any adverse <i>effects</i> associated with upgrading the thickness of <i>lines</i>, <i>height</i> above ground and relationship to existing <i>lines</i> and associated <i>structures</i>, length of the <i>line</i>, including any cumulative <i>effects</i> associated with any previous extensions of the <i>line</i>; and c) whether there are difficult ground conditions, or any technological, operational or topographical reasons why the <i>network utility</i> cannot be placed underground. <p>Underground Network Utilities</p> <p>a) In the case of underground <i>network utility</i> services:</p> <ul style="list-style-type: none"> i. the appropriateness of the <i>network utility</i> in the proposed location; ii. whether alternative locations are proposed; iii. with regard to pipelines, the nature of any liquid or substance carried; iv. the extent to which the work is able to be conveniently accommodated underground without adversely affecting existing underground <i>network utility</i> services or seriously limiting the opportunity for additional underground <i>network utility</i> services in the future; and v. the nature of the subsoil. <p>Note: This policy gives effect to the Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 and the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016.</p>
Policy 11.16 [Managing demand on water supply etc]	<p><i>Subdivision</i> and <i>development</i> will be designed to ensure that the stormwater runoff from all new impermeable surfaces will be disposed of or stored on-site and released at a rate that does not exceed the peak stormwater runoff when compared to the <i>pre-development</i> situation.</p> <p>Note: This policy gives effect to the Regional Policy Statement for the Wellington</p>

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	Region.
Policy 11.17	<p>The adverse effects of stormwater runoff from subdivision and development, in particular cumulative effects, will be minimised. The following assessment criteria will be applied when considering resource consent applications for subdivision and development:</p> <ol style="list-style-type: none"> a) whether there is capacity in Council's existing infrastructure; b) the extent to which the capacity and environmental values of watercourses or drains and the associated catchment areas will be compromised; c) the extent to which development styles and stormwater management methods mimic natural, pre-development runoff patterns; d) the extent to which riparian vegetation is protected and enhanced; e) whether minimal vegetation loss in riparian areas associated with development is achieved; f) the extent to which water quality is ensured to enhance and maintain aquatic ecosystem health; g) the extent to which a healthy aquatic system is maintained, including maintenance of sufficient flows and avoidance of unnatural fluctuations in flows; h) the extent to which degraded, piped or channelled streams are restored and realigned into a more natural pattern; i) where practicable, the extent to which low impact design, including onsite disposal of stormwater, soft engineering or bioengineering solutions and swales within the legal road are used; j) the extent to which straightening and piping of streams is avoided; and k) the extent to which the adverse effects of stormwater runoff, in particular cumulative effects, from subdivision and development will be minimised.
Policy 11.18	<p>New residential development connected to the public potable water supply and reticulation network will be required to provide rainwater storage tanks, water re-use systems or other water demand management systems to supply water for toilets and all outdoor non-potable uses.</p> <p>Note: This policy gives effect to the Regional Policy Statement for Wellington Region.</p>
Policy 11.19	<p>All new <i>subdivision</i>, land use or <i>development</i> will have an adequate supply of water in terms of volume and quality for the anticipated end uses, including firefighting supply. Where a new connection to the reticulated network is proposed, evidence may be required to support its viability.</p>
Policy 11.20	<p><i>Subdivision</i>, land use and <i>development</i> will ensure that the treatment and disposal of <i>wastewater</i> will be adequate for the anticipated end uses appropriate to the location. The treatment and disposal of <i>wastewater</i> will be undertaken in a manner that avoids, remedies or mitigates adverse <i>effects</i> on the <i>environment</i> and maintains public health and safety. Where a new connection to the reticulated network is proposed, evidence may be required to support its viability.</p>
Policy 11.30	<p><i>Development</i> and <i>subdivision</i> will be integrated with and consistent with the <i>transport network hierarchy</i> in Schedule 11.2, and undertaken in a manner and at a rate to ensure:</p> <ol style="list-style-type: none"> a) the <i>transport network</i> is capable of serving the projected demand safely and efficiently; b) the location of <i>development</i> is appropriate, including providing for the co-location of compatible <i>developments</i> and land use and <i>transport networks</i> to reduce unnecessary travel; c) travel time and distance to services are minimised for all modes of travel; d) development is consistent with Council's Subdivision and

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	Development Principles and Requirements 2012; and e) enhanced community connectivity is achieved, resulting in more efficient travel patterns from the community.
Policy 11.31	<p><i>Development</i> and <i>subdivision</i> will be integrated with a transport system that offers a wide range of travel mode choices, which connects residents to essential community services, centres and social infrastructure, through:</p> <ul style="list-style-type: none"> a) well-integrated and connected communities; b) <i>development</i> that is conducive to active modes of travel, particularly walkable communities which reduce demand for vehicular travel, particularly by private vehicle; c) land use that is integrated with the <i>transport network</i>; d) improved public transport services to the District; e) <i>travel plans</i> and <i>transport assessments</i> for <i>major traffic activities</i> as part of an application for consent for new <i>developments</i>; f) consistency with the Council's Subdivision and Development Principles and Requirements 2012; and g) <i>development</i> that ensures adequate access and space for all modes, including pedestrians, people with mobility problems, cyclists, public transport and private car travel.
Policy 11.35	<p>The safety of all transport users will be enhanced during the development, operation, maintenance and upgrading of the <i>transport network</i>, by:</p> <ul style="list-style-type: none"> a) implementing the principles set out in Appendix 5.5 - Crime Prevention Through Environmental Design (CPTED) Guidelines; b) requiring that all <i>developments</i> provide for safe vehicular and pedestrian access, and have adequate visibility (sight lines); c) requiring all <i>developments</i> to have safe connections to the wider <i>transport network</i>; and d) requiring adequate visibility and sightlines for level crossings.
Policy 11.36	<p>All new <i>subdivision</i> and <i>development</i> shall provide for safe vehicular and pedestrian access and appropriate vehicle parking areas by:</p> <ul style="list-style-type: none"> a) providing parking numbers, layouts and dimensions consistent with parking standards; b) supplying adequate off street parking to meet the demand of the land use while having regard to the following factors: <ul style="list-style-type: none"> i. the intensity, duration location and management of the activity. ii. the adequacy of parking in the location and adjacent areas. iii. the classification and use of the <i>road</i> (as per <i>transport network hierarchy</i> in Appendix 11.2), and the speed restrictions that apply. iv. the nature of the <i>site</i>, in particular its capacity to accommodate parking. v. the characteristics of the previous activity that utilised the <i>site</i>; c) taking <i>effects</i> on neighbouring areas into account when designing the location, layout and number of parking spaces (including car and cycle parks and disability car parks); d) ensuring the location, layout and number of disability carparks and cycle parks is safe, user-friendly and appropriate; and e) achieving a balance between encouraging mitigation of parking overflow <i>effects</i> (e.g. shared use of <i>car parking</i>), and discouraging car-based travel through use of <i>travel plans</i>.
Policy 11.37	<p><i>Subdivision</i>, use and <i>development</i> will be as far as practicable, located and designed to make walking, cycling and the use of bridleways safer, more enjoyable and convenient in accordance with the Crime Prevention Through Environmental Design (CPTED) Guidelines set out in Appendix 5.5 and the</p>

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	<p>following principles:</p> <ul style="list-style-type: none"> a) new street linkages will provide safe pedestrian access to <i>shops</i> and services and public transport nodes; b) <i>subdivision</i> and <i>development</i> will: <ul style="list-style-type: none"> i. enable cycle and pedestrian routes, both on and off <i>road</i>, which offer good continuity; ii. avoid large blocks that severe connectivity; and iii. consider opportunities to provide bridleways in suitable locations; and c) <i>development</i> will provide for convenient cycle parking facilities in centres; and d) pedestrian and cycle routes will have well designed and built facilities including surface conditions, lighting, signage and passive surveillance from adjacent <i>development</i>
Policy 12.1	<p>A <i>financial contribution</i> based on <i>Household Unit Equivalent (HUE)</i> will be required for all granted land use and <i>subdivision</i> consents and as a requirement for permitted land use activities where it is determined they will increase the demand for reserves and public <i>open spaces</i> within the District and a financial or development contribution has not already been taken for the same <i>development</i>, purpose, and at the same level and intensity of <i>development</i>.</p> <p>Council will use the contribution for reserves and public <i>open spaces</i> to:</p> <ul style="list-style-type: none"> 1. contribute to District-wide facilities, and 2. address deficits within the District, and 3. undertake improvements to existing reserves and public <i>open spaces</i>. <p>The level of <i>financial contribution</i> that is required reflects the demands on and costs of acquiring and improving reserves and public <i>open space</i> are as follows:</p> <ul style="list-style-type: none"> 1. the urban <i>HUE</i> value provides for the achievement of Policies DW10 and DW11; 2. the Otaki urban <i>HUE</i> value, set at 67% of the Urban value, recognises the lower land values compared to the rest of the District; and 3. the rural <i>HUE</i> value, set at 50% of the Urban value, recognises that rural areas generally have less need for or immediate access to local and neighbourhood parks. <p>Council will apply credits in particular circumstances.</p> <p>Explanation</p> <p>The price of the contribution per <i>HUE</i> is based on August 2011 Quotable Value data.</p>