Before a Board of Inquiry
MacKays to Peka Peka Expressway Proposal

under: the Resource Management Act 1991

in the matter of: Notice of requirement for designation and resource consent applications by the NZ Transport Agency for the MacKays to Peka Peka Expressway Proposal

applicant: **NZ Transport Agency**
Requiring Authority

Statement of evidence of **Mary O'Keeffe** (Archaeology) for the NZ Transport Agency

Dated: 3 September 2012

REFERENCE: John Hassan (john.hassan@chapmantripp.com)
Suzanne Janissen (suzanne.janissen@chapmantripp.com)

Chapman Tripp
T: +64 4 499 5999
F: +64 4 472 7111

10 Customhouse Quay
PO Box 993, Wellington 6140
New Zealand

www.chapmantripp.com
Auckland, Wellington,
Christchurch

TABLE OF CONTENTS

STATEMENT OF EVIDENCE OF MARY O'KEEFFE FOR THE NZ TRANSPORT AGENCY

QUALIFICATIONS AND EXPERIENCE

1 My full name is Mary Patricia O'Keeffe.

2 I am a consultant archaeologist, and have run my own consultancy (Heritage Solutions) for the last fifteen years. I have also worked as an archaeologist or heritage professional with the New Zealand Historic Places Trust Pouhere Taonga and the Department of Conservation. I hold a Bachelor of Arts and a Post Graduate Diploma in Anthropology from Otago University, and a Masters of Literature in Anthropology from the University of Auckland.

3 I am a current member and past president of ICOMOS New Zealand,[1] a member of the New Zealand Archaeological Association (*NZAA*), a member of the Australasian Society of Historic Archaeologists, a member and previous New Zealand Councillor for the Australasian Institute of Maritime Archaeology and I am the NZAA representative on the Royal Society's Social Science Committee.

4 I have undertaken archaeological assessment on a number of other previous and current roading projects including; the Wellington Inner City Bypass, Kāpiti Coast's Western Link Road, the Transmission Gully Motorway, and the Wellington Tunnels Duplication Project.

5 I have given evidence as an expert witness in the Environment Court in respect of the Wellington Inner City Bypass, Kāpiti Coast's Western Link Road, Meridian's Project West Wind wind farm, and the proposed Hilton Hotel on Wellington's Queen's Wharf. I have given evidence before a Board of Inquiry in respect of the Transmission Gully Motorway project.

6 I have also worked on other infrastructure projects such as Meridian's West Wind windfarm and Mill Creek windfarm, OnTrack's rail developments on the Kāpiti Coast and in the Wellington railyards, and development of the Kāpiti Airport. In addition, I have worked on numerous urban and rural developments such as the construction of the Wellington Regional Hospital, the refurbishment of Government House and the Telecom Building site in inner Wellington and many rural subdivisions on the Kāpiti Coast.

7 My evidence is given in support of the Notice of Requirement (*NoR*) and applications for resource consent lodged with the Environmental Protection Authority (*EPA*) by the NZ Transport Agency (*NZTA*) for

[1] ICOMOS is the International Council of Monuments and Sites.

the construction, maintenance and operation of the MacKays to Peka Peka Expressway (*the Project*).

8 I am familiar with the area that the Project covers and the State highway and local roading network in the vicinity of the Project.

9 I am the author of the Archaeological Assessment technical report[2] that formed part of the Assessment of Environmental Effects (*AEE*) lodged in support of the Project.

10 I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2011), and I agree to comply with it as if this Inquiry were before the Environment Court. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

11 My evidence will deal with the following:

11.1 Background and role in relation to the Project;

11.2 Relevant statutory principles;

11.3 Methodology used for the archaeological assessment;

11.4 Archaeological values and effects of the Project;

11.5 Measures for protection;

11.6 Response to submissions;

11.7 Response to section 149G(3) Key Issues Reports;

11.8 Proposed conditions; and

11.9 Conclusions.

EXECUTIVE SUMMARY

12 There are 20 recorded sites that will be adversely affected by construction of the proposed Expressway. There is also the potential for further unrecorded sites to be adversely affected. I have developed a predictive model to assist me in coming to these conclusions.

---

[2] TR9.

13 Due to the locational relationship between sites and the sand dunes, and the lack of visual clarity of unrecorded sites, total avoidance of unrecorded sites is not possible. I have provided archaeological advice during the development of the Project, and consulted and attended meetings with key heritage partners around the archaeology of the Project, especially in relation to the Takamore area. I commissioned specific investigative work to clarify knowledge of the archaeology of the Takamore area.

14 I conclude that adverse effects on the archaeology of the Expressway can be adequately mitigated by a series of conditions under both the Resource Management Act 1991 and the Historic Places Act 1993.

15 I have reviewed all the submissions raising archaeological issues and confirm that the views expressed in my technical report and evidence are unchanged.

BACKGROUND AND ROLE

16 I was engaged by the MacKays to Peka Peka Alliance (*Alliance*), on behalf of the NZTA, in July 2010 to provide an archaeological assessment of and to provide archaeological input for the Project. While my role has encompassed the requirements of both the Resource Management Act 1991 (*RMA*) and the Historic Places Act 1993 (the *HPA*), I understand this Inquiry is confined to RMA matters only.

17 I am the author of Technical Report 9: "Archaeological Assessment" (*TR9*). I have worked closely with **Mr Amos Kamo** in undertaking my assessment for the purposes of this evidence. I stress that archaeological and cultural values (which **Mr Kamo** addresses) are not the same thing, but they have a close relationship, in terms of origin of data and implications for the route selected.

Multi-criteria analysis

18 I participated in the Multi Criteria Analysis (*MCA*) process of analysing proposed routes, and alignments options within the preferred route for the Expressway. The MCA process is detailed in Chapter 9 of the AEE.[3] I found this process particularly useful as it provided me with an opportunity to engage with the full Project team on the issues and implications of the Project on archaeology. It also allowed the archaeological issues to be fully discussed and understood in the context of all the environmental issues. I was able to ensure that archaeological values were appropriately scored under the MCA process.[4] Equally the process allowed me to

[3] Chapter 9 AEE: Consideration of Alternatives.

[4] See Chapter 9 AEE: Consideration of Alternatives for the results of the MCA process.

understand and participate in the overall decision making for the route and ensure archaeology issues were appropriately considered in this process.

RELEVANT STATUTORY PRINCIPLES

Resource Management Act: Part 2

19 My archaeological assessment and recommendations as to mitigation in TR9 and this evidence are informed by my understanding of the RMA, in particular Part 2.

20 An important reference point in the RMA is section 6(f). This specifies, as one of the matters of national importance to be recognised and provided for, "...the protection of historic heritage from inappropriate subdivision, use and development". The RMA's definition of "historic heritage" refers to " those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures" deriving from various listed qualities, including "archaeological". The RMA definition goes on to refer to "historic heritage" as including a range of different types of sites and places. Of the types listed, the Project site and surroundings include, "archaeological sites" and "sites of significance to Māori, including wāhi tapu". As I have noted, I consider there is a close relationship between those types of historic heritage in the context of this Project.

21 Section 5(2)(c) refers to avoiding, remedying, or mitigating any adverse effect of activities on the environment. I understand that to encompass effects on "historic heritage" resources, such as archaeological sites. As I note in TR9, remedying adverse effects on archaeological sites is never possible, in that damage or modification is permanent and irreversible. Hence, the relevant RMA options are avoidance or mitigation.

Historic Places Act 1993

22 While this Inquiry is in relation to RMA, outcomes under the HPA are also relevant to understand how archaeology will be managed for this Project. The HPA is New Zealand's primary legislation for management and protection of historic heritage. The HPA is intended to have a functional and statutory relationship with the RMA, and contains internal references to the RMA. Thus RMA outcomes (such as designations and resource consents) and conditions imposed are only part of the measures for managing and mitigating effects on archaeology resulting from this Project.

23 Part 1 of the HPA deals with protection of historic places and includes provisions as to archaeological sites. Under those provisions, the NZTA will need to also apply for and obtain archaeological authorities from the NZ Historic Places Trust Pouhere Taonga (*NZHPT*) before it will be able to undertake activities on the

Project that may destroy, damage or modify archaeological sites. My archaeological assessment work on the Project is also for the purposes of the HPA processes, and my recommendations for mitigation in the RMA context are made in the expectation that further investigative work is highly likely to be required for HPA processes. I briefly touch on the mitigation package under the RMA and HPA later in my evidence.

METHODOLOGY USED FOR THE ARCHAEOLOGICAL ASSESSMENT

24 I summarise my methodology at section 4, pages 16 - 18 of TR9.

Data and other analysis and information

25 I considered data on recorded archaeological sites from Archsite,[5] and also from the NZHPT and Kāpiti Coast District Council (*KCDC*) district plan registers, and historic maps and survey plans.

26 I consulted published and historical sources that provided information on early (pre-European and post contact) land use, archaeological research that has been undertaken on the Kāpiti Coast in the last 30 years (noting the locations and types of known archaeological sites in the vicinity of the Project area), and research from the 19th century and early 20th century.

27 I also considered contextual data on the topography, geomorphology[6] and geology of the Coast. This data was obtained from LINZ and documentary sources.

Site familiarisation visits

28 From my previous work on archaeological projects in the immediate and wider proximity of the Project (including the Kāpiti Western Link Road (*WLR*)), I was generally familiar with the Project environs. However, I undertook further site visits to check and verify recorded sites, and check areas where archaeological surveying had previously not taken place, and to assist the development of my predictive model (elements of which I discuss later in this evidence). I have walked the route (except where impassable vegetation meant I was confined to having to view the landscape and landforms from suitable vantage points).

Consultation

New Zealand Historic Places Trust

29 I was actively involved in consultation with the NZHPT to discuss the scope of the project, probable impacts on the archaeological resource and implications of these impacts, and methods for mitigation.

---

5 The on-line database of the NZAA.

6 The study of the evolution and configuration of landforms.

30 I participated in about nine meetings with various NZHPT national office and regional office staff on a number of aspects of the project including geotechnical testing, the archaeology of the Takamore ridge, proposed mitigation under the RMA, HPA authority outcomes, and specifics around proposed high level archaeological investigations.

31 I have also participated in a site visit with David Rudd and Sacha Walters of NZHPT regional office, to walk over the Takamore ridge and confirm specific aspects of the likely archaeology and geomorphology of the ridge in relation to the Project and likely impacts from the proposed works.

Iwi

32 To help my understanding of the traditional and cultural history of occupation of the Coast, and to explore the possible existence of unrecorded sites, I had a number of meetings and conversations with iwi representatives. Those included meetings with the Kaumatua committee of Te Āti Awa ki Whakarongotai, and with Takamore Trustees. In addition, iwi members (Ani Parata and Danny Mullen) accompanied me on some site visits and geophysical investigations.

Predictive model

33 Predictive modelling is a conceptual tool used relatively commonly by archaeologists. It uses existing and verified data on site occurrence, site type, site density and relationships between the sites and the environment so as to consider and predict the probability, locations, and nature of further unrecorded sites. As a scoping tool, it has particular application in a context, where sites are largely not visible as it helps predict the likely locations of sites, and the likely nature of those sites.

34 As a conceptual tool it is not computer based, but instead uses a broad range of available data to establish known context and then speculate on probability and likelihood of site occurrence and location. Its parameters and limitations are the range and veracity of the available data. On the Kāpiti Coast, good data on geomorphology and environment is available, plus about 30 years of data on archaeological site recording; both these data sets give the model robustness.

35 A predictive model is of particular use and validity in an environment such as the Kāpiti Coast where the archaeological sites are present but not visible on the ground surface. This aspect of site visibility is in marked contrast to most other coastal areas of New Zealand where sites are moderately or highly visible, and it adds a dimension of complexity to archaeological research and management on the Kāpiti Coast.

36 I developed a predictive model for this Project to help predict the likely presence, nature and locations of archaeological sites in the vicinity of the proposed expressway.[7]

37 The predictive model identifies that:

37.1 There are over 280 recorded archaeological sites on the Kāpiti Coast;

37.2 They are of both pre-European Maori and European origin;

37.3 The most common site type is shell midden;

37.4 Middens are occasionally, but not always, found in association with ovens;

37.5 Another common site type is individual or small group burials within the dunes;

37.6 The vast majority of sites are found on the sand dune ridges;

37.7 The dunes themselves have been identified and dated; relative ages of sites can be extrapolated from the original dune surface on which they are found;

37.8 The oldest and most stable dunes are found inland;

37.9 The younger coastal dunes are geologically dynamic;

37.10 Due to the dynamic nature of the unstable dunes, sites can be found several metres below the ground surface, and thus there may be no surface evidence of them;

37.11 The dunes closer to the coast tend to be lower than the older dunes further inland;

37.12 The dunes south of the Waikanae River are more linear, tend to run parallel with the coast, and can be steep sided and quite high;

37.13 The dunes north of the Waikanae River are more meandering, do not run parallel to the coast, and tend to be lower with less steep slopes than those south of the river;

37.14 At the time of human settlement, the dunes would have been largely forested; this has been inferred through analysis of

[7] Further information on the predictive model is set out at section 4.1 and 5.7 of TR9.

landsnails found in archaeological deposits taken from the dunes;

37.15 The dunes are interspersed with peat swamps; these were rich sources of food and raw materials, including birds, eels and plant species;

37.16 Earthwork sites – pits, terraces, pa – are also found on the coast, but are less likely to be visible on the surface because their more fragile nature is prone to wind and stock erosion;

37.17 More earthworks sites have been recorded north of the Waikanae River than south of it. The reasons for this are not clear and require further analysis. This may be a reflection of human activity and resource utilisation, but is more likely to be a result of more stable sand and dunes in the area north of the River;

37.18 Little evidence of gardening has been recovered on the Kāpiti Coast; and the limited evidence that is available does not assist is coming to conclusions on gardening activities; and

37.19 Very little cultural material has been recovered from swamps or wetlands by archaeologists on the Kāpiti Coast; this is in marked contrast to the material recovered from the edges of Lake Horowhenua.

38 Two key conclusions which I have drawn from this data are that:

38.1 Sites have a strong locational relationship to the sand dunes of the coast, in that sites are usually found through the high dunes, and not in areas of former wetland. This is significant for the Project because it highlights where sites are likely to occur, likely impacts from construction, how the sites should be managed and mitigation options. The model also indicates where sites are far less likely to occur.

38.2 As noted, by contrast to many other parts of New Zealand, the archaeological resource on the Kāpiti Coast is not visible – sites are present beneath the vegetation cover or overlying sand, but cannot be seen. This aspect presents particular problems and issues in site protection, management and mitigation.

39 These factors combine to highlight an issue for the overall proposed alignment in terms of possible avoidance. The majority of the Kāpiti Coast is comprised of sand dunes, probability of sites is high, but these sites on the whole are not visible. This therefore makes avoidance for any proposed alignment extremely difficult.

Approach to Takamore Cultural Precinct

40 The Takamore cultural precinct is an area in the vicinity of Puriri Road and Greenaway Road consisting of a several sites of archaeological importance and high cultural values. The precinct includes the Takamore urupa, Maketu tree, Tuku Rakau Village and the NZHPT registered wāhi tapu area.

41 The precinct is of particular significance to iwi, and hence I gave it particular attention in my assessment and recommendations to the Project team.[8] I note again the difference between archaeological and cultural values. High cultural values do not necessary imply or result in associated high archaeological values. However, the Takamore precinct is an area of known and potential archaeological sites, so warranted extra attention to enable robust decision making on alignments through the area. The chosen route alignment, adjacent to the Takamore cultural precinct, was designed to avoid as many known archaeological sites as possible.

42 The Takamore Wāhi Tapu Area is included in the Historic Places Trust's (HTP) register. At the time of writing my technical report, an application had been made by the Takamore Trust to the NZHPT to review the registered Wāhi Tapu Area. The Area was confirmed and increased in size by the NZHPT's Māori Heritage Council in December 2011, with the support of NZTA. **Mr Kamo** discusses this process in his evidence and attaches maps to his evidence showing the original Wāhi Tapu Area and the extended Wāhi Tapu Area.

43 To further add to our state of knowledge of the precinct, I arranged for three geophysical surveys to be undertaken. Geophysical surveying is a non-invasive archaeological technique that can provide data on subsurface features. There are a variety of different geophysical survey methods; on the Takamore Ridge the specific survey method was a geomagnetic survey using a fluxgate gradiometer. A geomagnetic survey measures changed magnetic anomalies in the soil that can be produced when a hole is dug and filled in, this is because the filled soil has a different magnetic signature to the intact soil around it.[9] Changes in the soil that show up on the survey are called anomalies.

44 Geomagnetic surveying can also locate the changed magnetic signature of rocks that have been fired in a hangi pit, or shells that have been heated in a hangi, or of iron objects buried in the ground. As a non-invasive technique, geophysical surveys do not require ground disturbance to produce the results, so no site modification or damage is necessary. The technique has limitations in that it can

[8] The evidence of **Mr Kamo** will describe the relationship between iwi and the Takamore Cultural Precinct.

[9] The geophysical surveys are discussed at page 66 of TR9 and the methodology is set out in the three reports appended to TR9. For example see section 4 of Appendix 9.A Fluxgate Gradiometer survey of Maketu Tree.

indicate a hole has been dug, but it cannot differentiate between, for instance, a 200 year old human burial and a 30 year old cow burial. However the relative dimensions of the anomaly can indicate probable human burial in contrast to farming activities.

45 The three geophysical surveys I arranged were undertaken in the vicinity of the Takamore ridge:[10]

45.1 A survey on the Maketu tree dune area to see if any further burials were present. The survey revealed the presence of nine further probable graves, a metal installation beside the urupa (burial ground) that could be an entrance gate, and also a track leading up the dune to the urupa;

45.2 Another survey was undertaken on the flat area at the base of the Takamore crescent dune to check for site presence. No anomalies that could be interpreted as sites were recorded in the flat area at the base of the Takamore crescent dune; however the impact of construction of the Kapuni gas pipeline was apparent; and

45.3 A third survey was undertaken on the north-eastern end of the Takamore crescent dune ridge to see if any burials were present on this end of the ridge where the proposed Expressway will run. No anomalies that could represent sites were recorded. Several large areas of metal were discounted as were known waratahs (metal fence posts) or probable deposits of farming material (for example, fencing wire). Two small anomalies were recorded. The fluxgate gradiometer operator, an experienced archaeologist, suggested they might be burial pits, but considered it unlikely, given the small shape and size of the anomalies. I agree with this assessment. Even though there do not appear to be burials on this end of the ridge, in my view, it is likely there are middens located there. This is because, as established by the predictive model, middens are the most likely site type on the Kāpiti Coast and most often are located on the tops of high ridges.

Summary observations concerning methodology

46 All of this work outlined in this section of my evidence on methodology has enabled me to write what is in effect a brief regional synthesis of the archaeology of the Kāpiti Coast.[11] Unlike most archaeological projects on the Coast that focus on a small localised geographic area (for example, a subdivision), a 16km long project impacts on different types of landforms and environments, thus requiring a comprehensive understanding of the archaeology

[10] These reports are appended to TR9.

[11] TR9 Archaeological Assessment.

and physical environment of the entire Coast. The nature of such a project allows for a more integrated and comprehensive approach both to assessing the archaeological resource and to design of mitigation.

ARCHAEOLOGICAL VALUES AND EFFECTS OF THE PROJECT

Recorded and unrecorded sites affected by the Project

47 On the basis of available data:

47.1 There are 20 recorded archaeological sites that will be adversely affected by construction of the Project. The 20 sites are identified in the Table in **Annexure A** to my evidence along with a summary of my assessment of their current condition and the impact of the Project on each site.

47.2 The number of unrecorded sites is unknown and hence assessment of the effects of construction of the Project involves prediction.

48 Drawing on the predictive model, I developed and applied a simple scoring system to summarise probability of site occurrence, and then identified an appropriate archaeological mitigation method to each score, based on its probability of occurrence.[12]

49 The site probability scores are:

Score	Implications	Archaeological mitigation method
0	No chance whatsoever of sites	ADP[13]
1	Sites highly unlikely	ADP
2	No sites in vicinity of proposed Designation, low chance of sites according to predictive model	Monitoring
3	Sites in wider vicinity of proposed Designation, moderate chance of sites according to predictive model	Monitoring
4	Sites in close vicinity of proposed Designation, high chance of sites according to predictive model	High level investigations
5	Sites visible within proposed Designation	High level investigation

[12] This is further explained in TR9, page 72.

[13] ADP – Accidental Discovery Protocol. See Appendix D of this report.

50 I then divided the Project into six geographic sections, identified the recorded archaeological sites in each section, assessed the potential for further sites in each section, and applied the probability score to each section.[14]

51 The table at page 79 of TR9 is reproduced below:

52 The following table summarises my assessment of site probability potential in the various sections:

Section	Archaeological score
1: QE Park to Kāpiti Rd	1 in QE Park through low former wetlands north of Poplar Ave 2 in low dunes either side of Raumati Rd 3 on dunes south of Kāpiti Rd
2: Kāpiti Rd – Mazengarb Rd	1 in pocket of wetland 2 on high dune
3: Mazengarb Rd – Waikanae River	3 between Mazengarb Rd and Otaihanga Rd 5 in immediate vicinity of known sites north of Otaihanga Rd 4 elsewhere on dune north of Otaihanga Rd
4: Waikanae River to Te Moana Rd	2 from river to adjacent to Maketu Tree 4 though Takamore Ridge 3 on floodplain from Takamore Ridge to Te Moana Rd
5: Te Moana Rd to Ngarara Rd	4-5 in high dunes especially in close proximity to known sites
6: Ngarara Rd to proposed Expressway end	4 on high dunes in vicinity of Ngarara Rd 2 on lower rolling dunes to north 1 on wetlands in vicinity of Peka Peka Rd

[14] Section 6.4 of TR 9 from page 82, also Figure 38, page 78.

Assessment of the historic heritage values of recorded sites

53 I assessed the known and potential archaeological values of the sites likely to be impacted on by the Project, by reference to a set of criteria as follows:

53.1 "Condition/integrity value" – this considers what physical state the site is in, what its level of intactness is, and its potential for containing intact and reliable data.

53.2 "Representativeness/rarity value" – this considers how typical or unusual the site type is in its local or wider geographic context.

53.3 "Contextual value" – this considers the site type in its local or wider geographic content, whether it is in a typical or unusual physical location, and whether it is typical or unusual in the context of the other sites around it.

53.4 "Scientific value/information potential" – this considers both the scientific data the site may contain (for example, species of shellfish or fishbone, landsnails that may contribute to paleoenvironmental reconstructions, robustness of material for radiocarbon dating) and whether it contains some other information that may contribute to a wider environmental or knowledge context (for example, particularly small shell in a midden indicating a seasonal scarcity or inundation of shellfish beds from a seismic event).

53.5 "Amenity value – public interpretation/education" – this measures the potential the site has to "tell stories" that is, to contribute to public understanding of the environment and the way people have interacted with it over time.

53.6 "Cultural associations" – this takes into account the particular associations a site may have with an associative community, but it does not attempt to place a relative value or weight on these associations. I have already noted that archaeological values and cultural values are not the same thing, and high archaeological values do not necessarily imply associated high cultural values.

54 I stress that this assessment was applied to both known sites and potential sites, as identified by the predictive model. Such an assessment is of course speculative, but based on robust and credible data.

Condition/integrity value

55 The vast majority of midden sites are in intact condition, and can be examined or sampled to gain useful archaeological data. Earthwork sites, where found, are in moderate condition and appear to have

suffered from wind and stock erosion. Burials are generally in good intact condition, and can be examined or sampled to gain useful data.

Representativeness/rarity value – is this area unique?

56 The proposed Expressway cuts through a range of different environments on the Kāpiti Coast, including dunes, current and former wetlands, and river flood plains. Archaeological sites are found in most of these environments. The known sites are not of themselves unique or rare, either on the Kāpiti coast or in New Zealand. However they have representative value in that their presence and occurrence presents a distinct picture of the nature of archaeology and human occupation on the coast, which can be compared and contrasted with other coastal environments such as, for example, the Bay of Plenty or Taranaki.

Contextual value

57 The majority of recorded sites are of local significance, in that they do not contain information or features that are different to the majority of the sites on the Kāpiti Coast. Some sites which are distinctive in some way may have regional significance, perhaps through the size or extent of the site, the density of shell in a midden, the presence of unusual shell or perhaps fish or mammal bone in a midden, or earthworks sites which are less common on the coast. However the sites collectively have regional significance beyond their individual values, as they cumulatively present a distinct picture of the archaeology of the Kāpiti Coast, which can be contrasted with other coastal environments.

Scientific value/information potential

58 Every site contains scientific value, for its type and nature, its location, its extent, its relationship with its environment and with surrounding sites, and its age if a radiocarbon date is sought. The data from each site cumulatively creates an archaeological picture for the Kāpiti Coast.

Amenity value – public interpretation/education

59 Not many sites revealed or recorded thus far have distinct public interpretation or education value in situ, as the majority are not large or "grand" or visually distinctive, by comparison with, say, the visually impressive large pa of the Auckland Volcanic cones or the Bay of Plenty.

Cultural associations

60 The author understands that the majority of sites have some cultural value with the iwi and hapu of the coast, but the nature of these associations is not for me to comment on.

Summary of values

61 Based on current knowledge of the nature and location of known archaeological sites, and the predictive model, the inferred significance of known and probable individual sites on the coast is local. The vast majority of the sites are similar in nature, size and environmental location. However, this consistency of site nature is in itself useful and significant information about the nature of occupation and site utilisation on the coast: the data from all the sites on the coast collectively contributes to an understanding of the archaeology of the Kāpiti Coast. In this way, information on site nature and occurrence on the Kāpiti Coast can be compared and contrasted with other regional locations throughout New Zealand.

62 Thus the cumulative nature and values of the sites on the Kāpiti Coast as a collective whole is different to the values of the individual sites – individual sites have local significance, whereas the sites as a collective whole have regional significance, and can tell a regional story about the history of the Kāpiti Coast. We are still gathering and analysing data to help tell this story, and thus mitigation measures outlined later can assist in this process.

Construction impacts on the archaeological resource

63 For each of the six sections of the Project that I describe, TR9 also includes a description of proposed construction[15] in that section.

64 The following table describes the construction activities, and consequential probable effects on the archaeological resource, within each sector:

Sector	Construction activity	Archaeological probability
1: QE Park to Kāpiti Rd	Preload along on edge of existing SH1. Vegetation cut down to ground level; no removal of roots. Slight topsoil strip immediately north of Poplar Ave, for new Poplar Ave alignment. Preload of peat areas. Pockets of peat between low dunes – replacement of peat	Impact on probable sites in dunes beside Kāpiti Rd. Low likelihood in peat wetlands, based on existing site occurrence and predictive model. Sites possible in dunes either side of Raumati Rd, but some fill for rising embankment, so sites

[15] This construction detail was reconfirmed by Project Construction Manager, **Mr Andrew Goldie** for the purpose of this evidence.

Sector	Construction activity	Archaeological probability
	by aggregate and cut to fill (cutting of dunes to required level, and dragging sand over peat pockets). Bridge over Raumati Rd, deposition of fill for rising embankment to bridge height. Embankment dropping from bridge over Raumati Rd, fill for embankment over Wharemauku Stream. Peat pockets within sand dunes – peat removal, and cut to fill. Bridge over Kāpiti Rd.	present may be buried beneath fill.
2: Kāpiti Rd to Mazengarb Rd	Pockets of peat within dunes, so peat replacement, and cut to fill. Current level of Mazengarb Rd lowered, bridge over top, approaches to bridge at about current height of dunes	High likelihood of sites in high dune.
3: Mazengarb Rd to Waikanae River	Large amount of fill on north side of Mazengarb Rd. Peat removal and cut to fill. Preloading from landfill to Otaihanga	High probability of sites in dune between Mazengarb Rd and Otaihanga Rd, but historic action of planting and removing pines reduces probable condition

Sector	Construction activity	Archaeological probability
	Rd, because of risk of contaminants from landfill. Dunes will be cut and dragged. Bridge over Otaihanga Rd, at about current dune height. Realignment of small local road which joins Otaihanga Rd just west of proposed Expressway Alignment. Substantial cuts through dunes leading to river edge, batters up to 8m high. Rising to embankment over river, but little fill because of existing height of dunes.	and integrity of sites. Known sites north of Otaihanga Rd, and high probability of further sites. Dunes will be cut, so sites will be adversely affected.
4: Waikanae River to Te Moana Rd	Embankment leading off bridge, fill from river edge to about adjacent to Maketu tree. Cut through Takamore ridge, battered on each side. Embankment to bridge over Te Moana Rd, built on fill.	Low probability of sites in Waikanae river floodplain, but area will be covered in fill by embankment, so sites would be buried anyway. Cut through Takamore ridge will adversely affect sites that may be there. Low probability of sites in stream floodplain beside Te Moana Rd, but area will be covered in fill by embankment, so sites would be buried anyway.

Sector	Construction activity	Archaeological probability
5: Te Moana Rd to Ngarara Rd	Embankment on fill off Te Moana Rd. Substantial cuts through dunes, batters up to 12m high. Some very small pockets of peat, mainly sand dunes.	Known sites within or close to proposed designation. High probability of further sites. Cuts through dunes will adversely affect sites.
6: Ngarara Rd to proposed Project end	Ngarara Rd slightly realigned, Ngarara Rd is bridged over proposed Expressway, proposed Expressway running at level lower than current Ngarara Rd. Cuts through high dunes adjacent to Ngarara Rd, then dunes get lower, and interspersed with pockets of peat, peat being replaced, and cut to fill. Smithfield Rd being realigned, will run beside access road to Nga Manu. New road mostly on fill. Beyond new Smithfield Rd, peat replacement and cut to fill to point about 1.5km south of Peka Peka Rd. From this point to end of proposed Expressway Alignment is preloading on peat.	Known sites within or close to proposed designation. High probability of further sites. Cuts through dunes beside Ngarara Rd will adversely affect sites.

MEASURES FOR PROTECTION

Meaning of Protection

65 As I understand it, section 6(f) of the RMA does not intend "protection" of archaeological sites as an absolute concept; rather, it is a continuum of possible activities and approaches. At one end of the spectrum, the prohibition of certain activities can result in the active protection of an archaeological site; while at the other, investigation of the likely nature, occurrence and location of archaeological sites within a geographic area can lead to improved care of the wider archaeological resource through the increased understanding derived from the information obtained. In my view, protection can, therefore, infer continued care of the wider archaeological resource through increased information on likely site nature, occurrence and location, gained through investigation. In my view, "understanding and appreciation of New Zealand's history and cultures" (as it is referred to in the definition of definition of "historic heritage" in the RMA) requires a degree of site investigation and analysis in order to gain the information to facilitate this understanding.

66 The Project presents an opportunity, through strategic archaeological investigation, to enhance our understanding of the archaeology of the Kāpiti Coast. The Expressway route runs through a contiguous corridor of unmodified land, and archaeological investigations can therefore be undertaken in a co-ordinated and comprehensive manner at one time as opposed to a piecemeal approach. In this way, the archaeological sites found in different environments and locations along the corridor can be systematically compared and contrasted, with the likely prospect that the information derived will increase our understanding and appreciation of New Zealand's history, particularly in the Kāpiti Coast area.

Avoidance

67 The design of the Project has resulted in avoidance of known archaeological sites with high cultural associations (such as the urupa and Maketu Tree).

68 If the Project is to proceed, further avoidance of sites is not realistic or achievable. By contrast to many other parts of New Zealand, the archaeological resource on the Kāpiti Coast is by and large not visible. As I have noted, the predictive model indicates that there is a high likelihood of unknown and unrecorded archaeological sites being present in the dunes. Construction of the Project inherently involves substantial excavation and other activities in these dunes. Because these sites cannot be seen, and thus their locations are not known prior to construction, avoidance of these sites by construction activities for the Project will not be practicable. In

addition the probably density of sites (based on known data) means that avoidance also would not be practical.

69 I do not consider that any of the recorded sites within or adjacent to the construction corridor require avoidance for protection due to their known or probable significance being so high as to prevent construction. In my view, the sites that will be damaged or destroyed do not represent unique examples of archaeological sites, some are already damaged and their excavation and recording will enhance our understanding of the archaeology of the Kāpiti Coast. A description of the sites directly affected, their current condition and the likely result of construction is set out in my **Annexure A**.

Investigation research themes

70 The historic WLR designation has created a unique archaeological opportunity. The 16km of the WLR designation has remained undeveloped for the last 50-odd years, and it passes through a variety of geomorphological and ecological environments. In my view the Project constitutes an important and unique opportunity for high level archaeological research on major themes such as chronology, settlement, resource exploitation, cultivation and geomorphology. The irony is that destruction of the sites within the construction corridor will enable gathering a wide assemblage of archaeological data that has the potential to significantly add to our state of knowledge and understanding of the Kāpiti Coast.

71 In my technical report, I outline a series of research themes that will guide the archaeological work I have recommended as mitigation.[16] In summary the research themes address how people lived on the Coast, what was the nature and quality of life on the Coast, and did the nature and quality of life change over time, and if so how and why. I note that these themes are high level in nature, and pose some important questions that will further our understanding of the archaeological resource of the Kāpiti Coast, the relationship between archaeology and the environment, and will contribute to future decision making on the Coast.

72 These research themes will guide archaeological investigations that are proposed as mitigation under the RMA and as required outcomes under the HPA.

Mitigation recommended and proposed for designation conditions

73 Attached to my evidence as **Annexure B** are the proposed designation conditions addressing archaeology that have been developed from the recommendations in TR9. I support these proposed conditions.

[16] Section 5.6 of TR9 – Archaeological Assessment.

74 For those sites that will be adversely affected, I have proposed mitigation measures that I believe will appropriately contribute to the "protection" sought by section 6(f). These measures are detailed in my technical report, I provide a summary below.

Accidental discovery protocol

75 An Accidental Discovery Protocol (*ADP*) is an operating procedure to guide construction workers in the event of archaeological material being unexpectedly revealed. An ADP will be used in areas of low archaeological probability, as determined by the predictive model. A copy of the ADP is attached to TR9 as appendix 9.D.

76 The ADP is proposed to apply to the parts of the Project that will not be covered by HPA authorities. These places are:

76.1 QE Park through low former wetlands north of Poplar Avenue;

76.2 Pocket of wetland immediately north of Kāpiti Road; and

76.3 Wetlands in the vicinity of Peka Peka Road.

Roadside interpretation

77 Proposed designation condition DC.61 provides for a series of fixed interpretation panels to be developed that reflect the history of human occupation of the Kāpiti Coast, as seen through the archaeological resource and cultural tradition. Consultation will be required with Te Āti Awa ki Whakarongotai, the Takamore Trust, NZHPT and KCDC. The panels will only contain cultural information deemed appropriate by the iwi consulted and the panels will be linked visually to the landscape. The panels should be placed along the cycleway/walkway to enhance the experience of users.

78 Unlike other parts of the country where sites are large and visually apparent, for example the large pa of Auckland or the Western Bay of Plenty, there are no key visual sites on the Coast where the panels could logically be placed. Instead they could be placed at significant or strategic locations, such as near the Takamore cultural precinct, or near a suitable roadside rest area or viewpoint along the cycleway/walkway. However, where investigations of individual sites undertaken for the proposed Expressway construction have yielded significant information specific to that place, it could be appropriate to include additional panels near to those locations.

Travelling stories

79 In addition to the fixed interpretive panels, a set of smaller portable panels are also proposed in designation condition DC.61. As these panels are intended to be moveable they could be displayed in a variety of community locations, such as marae, schools, or the local library or civic centre. These panels can assist in telling the stories

of the human history and occupation of the Kāpiti Coast as revealed by the archaeology of the Project.

Booklet

80 A highly illustrated booklet on the archaeology of the Project is proposed in designation condition DC.61. This strategy has been successfully utilised in other parts of New Zealand following major archaeological investigations (most notably at Papamoa in the Bay of Plenty). Like the roadside panels and the travelling panels, a booklet can help tell the stories of the people and occupation of the Kāpiti Coast.

Open days

81 During proposed high level archaeological investigations open days could be held, so the public can see the archaeologists in action, and see what kind of information can be obtained. The archaeologists can put their work into both a geographic context, but also a research context by explaining what further analysis will be undertaken and what this analysis might reveal. These open days are provided for in proposed designation condition DC.61.

Recording at Takamore urupa

82 A detailed geophysical survey could be undertaken at Takamore urupa. Proposed designation condition DC.62 provides for this survey to be undertaken if the Takamore Trust agrees. A survey would result in two outcomes: first unmarked burials of tupuna could be identified and marked on the ground surface with pegs or similar to show their location and to indicate available unused ground for further burials; and second the cadastral boundary of the property could be marked out on the ground with tape or similar, to show the legal boundaries as opposed to the current fences.

Additional high level archaeological investigations through HPA processes

83 As noted above, I have been engaged to provide an archaeological assessment both for the present RMA processes and the required further HPA "archaeological authority" processes to follow.

84 I endorse the conditions that are recommended for inclusion in the designations as being suitable and sufficient mitigation measures for this RMA phase. This is on the understanding that further HPA processes must follow, and additional measures can be expected to be required by the NZHPT as conditions of archaeological authorities. In my view, it is appropriate that those further measures be addressed through the HPA and not overlapped by RMA conditions on the same matters.

85 For completeness, however, I outline here what I consider as suitable additional HPA measures, so as to present the full suite of archaeological outcomes I consider appropriate for the Project.

86 In my opinion, high level strategic, detailed investigations should take place in sections of the proposed Expressway that have high site probability, prior to the construction phase. This investigative work would be undertaken by a team of archaeologists, with virtually every archaeological feature present within each section of road being investigated in detail. This work will allow recovery of a lot of data and will contribute to an understanding of the physical, spatial, temporal and social relationships between all the sites within an area. The benefit of this type of investigation is that it enables data to be gathered from a large number of archaeological sites and for the values of these sites to be analysed collectively as opposed to on a sporadic or piecemeal site by site basis.

87 High level investigations should be carried out in the following places:

87.1 High dune between Kāpiti Road and Mazengarb Road;

87.2 Immediate vicinity of known sites north of Otaihanga Road;

87.3 Dunes around Otaihanga Road;

87.4 Through Takamore ridge;

87.5 High dunes between Te Moana Road and Ngarara Road; and

87.6 High dunes in the vicinity north of Ngarara Road.

88 All matters relating to the high level investigations can be addressed through the HPA authority process, and can be subject to conditions of the authorities, if granted. The NZHPT is the appropriate regulatory body to ensure compliance with these conditions. It is therefore unnecessary and undesirable, in my view, to have any conditions on the designation or resource consents.

Monitoring during construction

89 The second type of investigation will be monitoring during construction of those sections of the road where site density is not expected to be high. Monitoring will enable sites to be briefly recorded and sampled during construction, but not to the same level of detail and analysis as for the high level investigations.

90 Monitoring during construction should occur in the following places:

90.1 Low dunes either side of Raumati Road;

90.2 Dunes south of Kāpiti Road;

90.3 Dunes between Mazengarb Road and Otaihanga Road;

90.4 Waikanae River to adjacent to the Maketu tree;

90.5 Floodplain from Takamore ridge to Te Moana Road; and

90.6 Lower rolling dunes to the north of Ngarara Road.

91 Similarly to the high level investigations, the NZHPT is the appropriate regulatory body to direct the undertaking of these investigations under conditions of archaeological authorities if granted by the NZHPT.

92 It is therefore unnecessary to have any conditions on the designation or resource consents.

93 I note that an archaeological management plan is likely to be required by NZHPT as a condition of the archaeological authorities. Archaeological management plans are usually written after authorities are granted, to set out how the authority is to be exercised.

RESPONSE TO SUBMISSIONS

94 A large number of submitters made general reference to the adverse impact of the road on archaeological sites or the history of the coast, without noting any specific detail.

95 Six submitters did note detail in relation to historic heritage: Te Runanga o Te Āti Awa ki Whakarongotai (0708); Ani Parata (0625); Takamore Trustees (0703); Highway Occupants Group (0542); and New Zealand Historic Places Trust Pouhere Taonga (0647). I will summarise their concerns and provide my response below.

96 Te Runanga o Te Āti Awa ki Whakarongotai notes the adverse effect of the proposal on the cultural landscape, including heritage sites and places.

97 The Runanga states it is not formally opposed to the proposal, noting its preference for an alternative route that would avoid impacts on the cultural landscape. However, the Runanga states its Expressway Committee is working towards a comprehensive mitigation agreement to offset the impacts of the proposal. Such mitigation will include measures and mitigation for archaeology in terms of both the RMA and the HPA. I am comfortable that the conditions proposed in my evidence and the HPA process discussed will address the concerns the Runanga has on archaeology.

98 Ani Parata has made a submission on behalf of Te Ati Awa/Ngati Awa ki Waikanae nga Iwi, in which she notes that "*the Cultural Impact Assessments for this project from Te Atiawa ki Whakarongotai is not to be taken that there is agreement from*

whanau and hapu that they support this Expressway". Ms Parata also notes the disruption of sites of cultural significance from the proposal. It is my view, as set out in this evidence, that significant known archaeological sites have been avoided and I have recommended appropriate mitigation for the remainder sites and any unknown sites. The cultural significance of certain sites will be addressed by **Mr Kamo**.

99 The Takamore Trust records its opposition to the western option road alignment, due to, among other things, the significant adverse effects on historical, cultural and archaeological values, which will not be avoided, remedied or mitigated by the proposal. The Trust has attached their Cultural Impact Assessment (*CIA*) to their submission.[17]

100 In section 6 of their CIA, the Takamore Trust lists traditional settlements, wahi tapu areas and cultivation areas. Some of these places are also recorded as archaeological sites; many are not as there is no physical evidence of them.

101 The Takamore Trust makes a number of recommendations in section 8 of the CIA in relation to archaeology:

101.1 Development of a robust management strategy for minimising or avoiding impacts on areas that may contain significant archaeological sites. I agree with this as a desired approach, noting of course that unrecorded sites generally have no surface features by which to identify them, making avoidance difficult. In my view the proposed designation conditions and the HPA process provide a robust management strategy;

101.2 The Takamore Trust notes that immediate impacts on burials associated with the Takamore urupa, Maketu tree and Tuku Rakau village are unacceptable. Again, as an archaeologist I agree with this statement, and note that substantial work has already been undertaken to attempt to identify areas of burials in the vicinity of the Takamore urupa and the Maketu tree, including geophysical surveying. The proposed route has been deliberately selected so as to avoid adverse effects on these locations. The locations of burials associated with Tuku Rakau Village are not known, so avoidance becomes difficult. However, an appropriate protocol for dealing with koiwi (human remains) that may be encountered anywhere in the project area will be developed in consultation with both the Trustees and with Te Āti Awa ki Whakarongotai. This will form part of the ADP required under Proposed designation condition DC.60;

[17] The CIA also forms part of the AEE for the Project as TR11.

101.3 The Trust requires the preparation of a comprehensive archaeological management plan for the Takamore Cultural Precinct. The Trust states that the plan will need to outline the process by which iwi will contribute to decision making processes, as well as cultural monitoring and educational opportunities for its members. Again, I agree with this recommendation. In fact an archaeological management plan is very likely to be a condition of any authorities that may be granted for the project by the New Zealand Historic Places Trust Pouhere Taonga, and I would expect that provision around decision making for unexpected finds, protocols for discovery of koiwi, iwi monitoring and other matter would be part of this plan.

102 The NZHPT submission noted the presence of recorded and unrecorded archaeological sites in the vicinity of the road.

103 NZHPT notes in its submission that it is satisfied that avoidance and mitigation offered by the applicant is sufficient to ensure the effects on archaeology over the entire route are less than minor.

104 The majority of NZHPT's submission is in relation to the registered Takamore wāhi tapu area, and the adverse effects on that. NZHPT notes significant adverse effects on the heritage values of the wāhi tapu area as a result of the Project; I note that these heritage values are in relation to cultural and spiritual associations, not archaeological values.

105 The Highway Occupants Group note the "high probability of Maori artefacts" adjacent to Poplar Ave, because of the presence of Mataihuka Pa (this assertion is based on a reputable archaeological source by Beckett). The group is correct that Mataihuka Pa was located nearby, but the pa was on the top of the wave cut cliff overlooking Queen Elizabeth Park. The group is also correct in asserting that Beckett notes evidence of occupation including a pa, settlements, an urupa and a Tauranga waka (canoe launching area). However, such sites were either on top of the cliff, of at the base of the cliff on the eastern side of State Highway 1. Archaeological sites already revealed in Queen Elizabeth Park have been within the coastal dunes. The road alignment through the Park runs through present and former wetlands, where the chance of archaeological sites is considered very low. In my view, there is a very low probability of archaeological sites in the vicinity of Poplar Avenue and Queen Elizabeth Park. The ADP will ensure that any sites that are discovered are appropriately managed.

RESPONSE TO SECTION 149G(3) KEY ISSUES REPORTS

106 The section 149G(3) report prepared by KCDC raised the avoidance and management of archaeological sites as a key issue. This issue has already been addressed throughout my evidence and TR9.

PROPOSED CONDITIONS

107 I have reviewed the proposed designation conditions DC.60, DC.61 and DC.62. I consider these are appropriate to address the development and implementation of the accidental discovery protocol; post construction interpretation activities, and the proposed survey of the Takamore urupa.

108 Conditions are not required for the high level investigations and monitoring I have proposed (including for the Takamore cultural precinct area). All authorities for these investigations will be obtained from the NZHPT and the conditions will attach to those authorities.

CONCLUSIONS

109 If an Expressway (or any public road for that matter) is to be constructed anywhere on the Kāpiti Coast, total avoidance of all archaeological sites is not possible. The majority of archaeological sites on the Coast are not visible, and sites are located throughout the sand dunes of the Coast, which form the major landform feature of the Coast.

110 Various sections of the proposed alignment were identified as having high, medium or low probability of sites present. This was based on the predictive model and most notably on known site occurrence and geomorphology.

111 In summary, my professional opinion is that, whilst construction of the Expressway will result in the permanent destruction of archaeological sites, this adverse effect can be offset against the information that can be extracted from the sites through high level detailed archaeological investigations. These proposed high level investigations are at the top of the range of archaeological mitigation, and they have the potential to extract and reveal a great deal of significant scientific information. Such information has the potential to add considerable information to the body of knowledge on the archaeology of the Kāpiti Coast, and to answer broad ranging and regionally significant research questions.

Mary O'Keeffe
3 September 2012

ANNEXURE A: TABLE OF RECORDED SITES TO BE DESTROYED OR DAMAGED

NZAA	Site Type	Condition	Consequences of Project	Archaeological mitigation
Section 3 Mazengarb Road to Waikanae River				
R26/369	Possible pit and terraces	Recorded 2006, under grass. Good condition	Will be destroyed	High level investigation
R26/370	Midden and two possible terraces	Recorded 2006, near high point on ridge, under grass. Two possible terraces and sparse midden	Will be destroyed	High level investigation
R26/409	Midden/Oven	Recorded 2008. Now destroyed by construction of road; possible sites in vicinity	Already largely destroyed, but on edge of construction corridor	High level investigation
R26/455	Possible terrace	Recorded 2011, on spur running off high dune. Possible terrace	Will be destroyed	High level investigation

NZAA	Site Type	Condition	Consequences of Project	Archaeological mitigation
Section 4 Waikanae River to Te Moana Road				
R26/368	Midden	Recorded 2006, on dune ridge. Sparse midden	On edge of construction corridor, could possibly be avoided, depending on extent	High level investigation
R26/281	Tuku Rakau village site	No surface features known. Main village site is east of and well outside construction corridor. Possible that cultivation grounds may be exposed by construction activities	Possible impact on part of cultivation grounds; main village site avoided	Monitoring
Section 5 Te Moana Road to Ngarara Road				
R26/38	Midden	Recorded 1961 on dune ridge, described then as "half destroyed"	Will be destroyed	High level investigation
R26/39	Midden	Recorded 1961 on dune ridge, described then as "blown out and scattered"	Will be destroyed	High level investigation

NZAA	Site Type	Condition	Consequences of Project	Archaeological mitigation
R26/363	Midden	Recorded 2006, in cutting in side of dune ridge. Thin lens of shell	On edge of construction corridor, damage could be limited depending on extent of site	High level investigation
R26/365	Group of 6 terraces, possible pit and dense midden	Recorded 2006, on dune ridge in pine plantation. Group of poorly defined terraces, dense midden	On edge of construction corridor, damage could be limited depending on extent of site	High level investigation
R26/429	Platform	Recorded 2010, On edge of dune ridge	On edge of construction corridor, damage could be limited depending on extent of site	High level investigation
R26/431	Midden	Recorded 2010, on slope of dune, surface scatter of shell	Will be destroyed	High level investigation
R26/430	Pit and midden	Recorded 2010, large pit and large scattered midden	On edge of construction corridor, damage could be limited depending on extent of site	High level investigation
R26/433	Platform, pits and terraces	Recorded 2010, on high point	On edge of construction corridor,	High level investigation

NZAA	Site Type	Condition	Consequences of Project	Archaeological mitigation
		of ridge, flat topped ridge, two terraces and two pits	damage could be limited depending on extent of site	
Section 6 Ngarara Road to Peka Peka (end of the Project)				
R26/70	Midden	First recorded 1961, revisited 2006, midden exposed on edge of SH1, shell, metal and glass	On edge of construction corridor, damage could be limited depending on extent of site	Monitoring
R26/366	Midden and possible terrace	Recorded 2006, on moderate rolling dunes, single terrace and small scatter of shell	Will be destroyed	Monitoring
R26/373	Platform and midden	Recorded 2006, on moderate rolling dune, on a low knoll & lens of midden	Will be destroyed	High level investigation
R26/377	Terrace and depression	Recorded 2006, on moderate rolling dune, large terrace and	Will be destroyed	High level investigation

NZAA	Site Type	Condition	Consequences of Project	Archaeological mitigation
		possible pit		
R26/447	Terrace	Recorded 2011, on low dune, single terrace	On edge of construction corridor, damage could be limited depending on extent of site	Monitoring
R26/448	Eel channel	Recorded 2011, cut in low point between two low dunes	Will be destroyed	Monitoring

ANNEXURE B: PROPOSED DESIGNATION CONDITIONS ADDRESSING ARCHAEOLOGY AND CULTURAL HERITAGE

	Archaeology and Heritage
DC.60	The Requiring Authority, in consultation with, Te Rūnanga o Ati Awa ki Whakarongotai Inc, Takamore Trust, the New Zealand Historic Places Trust, and, in respect of Queen Elizabeth Park, Te Rūnanga O Toa Rangātira, shall prepare an Accidental Discovery Protocol to be implemented in the event of accidental discovery of cultural or archaeological artefacts or features during the construction of the Project in areas of swamp or wetland not covered by archaeological authorities obtained under Part 1 of the Historic Places Act 1993. This protocol shall be submitted to the Manager at least 15 working days prior to any construction or enabling Work commencing on the Project. The protocol shall include, but need not be limited to: a) Training procedures for all contractors regarding the possible presence of cultural or archaeological sites or material, what these sites or material may look like, and the relevant provisions of the Historic Places Act 1993 if any sites or material are discovered; b) Parties to be notified in the event of an accidental discovery shall include, but need not be limited to Te Rūnanga o Ati Awa ki Whakarongotai Inc, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park), the New Zealand Historic Places Trust, GWRC, KCDC and, if koiwi are discovered, the New Zealand Police; c) Procedures to be undertaken in the event of an accidental discovery (these shall include immediate ceasing of all physical works in the vicinity of the discovery); and d) Procedures to be undertaken before work under this designation may recommence in the vicinity of the discovery. These shall include allowance for appropriate tikanga (protocols), recording of sites and material, recovery of any artefacts, and consulting with Te Rūnanga o Ati Awa ki Whakarongotai Inc, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park) and the New Zealand Historic Places Trust prior to recommencing works in the vicinity of the discovery. ***Advice Note:*** *The Requiring Authority will be seeking separate archaeological authorities from the New Zealand Historic Places Trust under section 12 of the Historic Places Act 1993, prior to the commencement of construction. The authorities are likely to include requirements for detailed investigations and monitoring effects and are also likely to require the preparation of an HMP (or an Archaeological Management Plan).*
DC.61	Following completion of construction works the Requiring Authority shall, in consultation with Te Rūnanga o Ati Awa ki

	Whakarongotai Inc, the Takamore Trust, the Kāpiti Coast District Council and the New Zealand Historic Places Trust and where any investigations have been undertaken in accordance with any archaeological authorities granted under Part 1 of the Historic Places Act based on the information obtained as part of those investigations, undertake for public information and educational purposes; a) The preparation of a series of fixed interpretive signs and the placement of those signs at culturally and/or archaeologically significant or strategic locations adjacent to the combined pedestrian footpath/cycleway; b) The preparation of a complimentary set of portable interpretive panels to be supplied to the Kāpiti Coast District Council for use and distribution; c) The preparation of a booklet that provides an overview of the history of occupation on the Kāpiti Coast; d) A series of open days associated with any archaeological field investigations.
	Cultural Heritage
DC.62	Prior to the Expressway becoming operational, the Requiring Authority shall write to the Takamore Trust offering to commission a detailed geophysical survey of the extent of the Takamore urupa. If the Takamore Trust confirms to the Requiring Authority that it agrees to them undertaking the survey within 1 year of the Requiring Authority making the written offer to the Trust, the Requiring Authority shall undertake the survey and supply the Takamore Trust with a copy of the information derived from the survey as soon as reasonably practicable following completion of the survey.