



NEW ZEALAND
ARCHAEOLOGICAL
ASSOCIATION

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Tēnā koutou

NZAA SUBMISSION ON THE GOVERNMENT INQUIRY INTO CLIMATE ADAPTATION

Submitter details

Full name: New Zealand Archaeological Association Incorporated

Address for service: P.O. Box 6337, Dunedin 9059

Contact: Rebecca Ramsay

Email: submissions@nzarchaeology.org

The New Zealand Archaeological Association (NZAA) welcomes this opportunity to provide feedback on the inquiry into climate adaptation. We are looking forward to engaging with the Ministry of Environment on matters that enhance the management and protection of Aotearoa / New Zealand's cultural heritage.

Our submission sets out an introduction to the NZAA, key themes or submission points in relation to climate adaptation and response to the inquiry questions.

We have previously provided a submission on the National Adaptation Plan, which provides additional background on current climate change impacts on archaeological sites, and the importance of archaeological site recognition and protection.

Our main submission points are:

- Secure and dedicated funding is required for all types of cultural heritage places, specifically regarding climate change and natural hazard related work. This is also a time sensitive need, due to the number and nature of exposed and vulnerable places to hazards.
- Holistic adaptation approaches must be considered for cultural heritage places prior to retreat or relocation. Due to the nature of heritage and cultural values of a place or landscape, retreat may not always be a feasible option with potentially negative adverse effects on both tangible and intangible values.
- Adaptation planning for cultural heritage must consider the suitability of alternative locations and ongoing management and nourishment of cultural connection to any places left in situ following the retreat of a local community.



The New Zealand Archaeological Association

The New Zealand Archaeological Association (NZAA) is the national organisation for archaeology with a membership spanning professionals, amateurs, students, organisations, businesses, and institutions involved or interested in Aotearoa / New Zealand's archaeology and history. Our objectives are to promote and foster research into the archaeology and history of Aotearoa/ New Zealand. Above all we encourage the protection of archaeological sites. We do this in a range of ways, one of which is by engaging with government and local authorities for the recognition and protection of Aotearoa's cultural heritage. An important part of our kaupapa is the management of ArchSite, the national database of recorded archaeological sites. This web-based service is essential to the management and protection of archaeological sites. To date, it contains information about more than 73,600 recorded archaeological sites, most of which are Māori in origin. There are many more unrecorded archaeological sites in Aotearoa.

Archaeological sites and features contain unique and irreplaceable evidence of the human history of Aotearoa / New Zealand. Archaeological research studies all periods of Aotearoa's history, from the first visits by Polynesian voyagers, to the exploration and settlement of Aotearoa by Māori, representing the last significant land mass to be colonised, the emergence of a distinct Māori culture and society from East Polynesia, megafaunal extinctions and human adaptations to new and changing environments and climates, through to the development of modern cities and industries by a diverse range of people and cultures. Archaeology provides details about aspects of people's daily lives, such as what people ate, the tools they used and how their houses were constructed. These details are not always captured by traditional, oral, or recorded histories but are vital for understanding past environments, economies, and lifestyles. The archaeology and history of New Zealanders is significant on national and international levels.

General feedback to the climate adaptation inquiry

Adaptation and Retreat

Four adaptation options are provided within the context section of this paper, although the focus is on retreat/managed retreat/community-led retreat.

Clarification should be provided about how the other three options (protect, avoid, and accommodate) will be addressed in the Climate Change Adaptation Bill. Place-based contextual values of cultural heritage places and landscapes restrict the efficacy and practicality of their relocation or managed retreat. Some cultural heritage places and landscapes will remain in their current locations after community retreats. Determining suitable interventions or adaptation strategies becomes imperative to safeguard these cultural heritage places and landscapes, particularly in the context of short- and medium-term planning.

This concern holds particular importance when considering archaeological sites, emphasizing the need to integrate further retreat strategies into the broader framework of adaptation solutions within a Dynamic Design and Adaptation Plan (DDAP). Such a plan should comprehensively consider both the tangible and intangible elements of a place while also exploring the potential for new settings.

The terminology given for 'community-led retreat' suggests heritage can be moved out of harm's way. However, this will not always be a viable option. For example, masonry buildings are more difficult (but possible) to relocate compared to those of timber. Similarly, archaeological sites, like earthwork terraces of a headland pā or a buried midden deposit, are effectively immobile. Attempts to move such sites would not only remove their contextual values, such as their location in relation to local



waterways, place names, and significant places, but it would also destroy the potential information that may be obtained through their systematic archaeological investigation.

Akuhata Bailey-Winiata's (2021) work is also useful in relation to the consideration of the DAPP process related to archaeological sites. He provides a useful parallel example of the values and objectives crucial to the coastal marae, hapū, or iwi in relation to the possible hazards marae would face in relation to SLR. He suggests that the following question, "What can we do about it?", is often a topic of discussion among the marae communities. Practical solutions and options for action are sought, for example, accommodate (adjusting existing structures and mitigating hazard risks), Protect (natural or engineered protective structures), Retreat (managed relocation); and Avoidance, (which suggests avoiding the construction of new marae in susceptible zones to SLR impacts). As Bailey-Winiata (2021) notes "How can we implement the strategy?", is where the DAPP process proves valuable. It generates a series of actions and pathways to achieve objectives, which may evolve based on the prevailing climate conditions and information.¹

Cultural Heritage Definition

It is important to recognise that the term, 'sites of cultural significance', includes the wider sphere of cultural heritage places and areas as defined in the Natural and Built Environment Act.

Cultural Heritage and Resilience

The archaeology of climate change offers opportunities to identify the factors that promoted human resilience in the past and apply that knowledge to the present, contributing a much-needed, long-term perspective to climate research. One strength of the archaeological record is the cultural diversity it encompasses, offering cross-cultural alternatives to the solutions proposed from within the Western agro-industrial complex. While contemporary climate discourse focuses on the importance of biodiversity, we highlight the importance of cultural diversity as a source of resilience.²

Further, the historical and archaeological records underscore several key themes embedded in the Sustainable Development Goals (SDGs). These include the significance of diversity, inclusion, learning, and innovation in mitigating vulnerability to sudden changes, as well as the pivotal role of connectivity.³

¹ Bailey-Winiata, A. P. S. (2021). *Understanding the potential exposure of coastal marae and urupā in Aotearoa New Zealand to sea level rise* (Doctoral dissertation, The University of Waikato).

² Burke, A, Peros MC, Wren CD, Pausata FSR, Riel-Salvatore J, Moine O, de Vernal A, Kageyama M, Boisard S. *The archaeology of climate change: The case for cultural diversity*. Proc Natl Acad Sci U S A. 2021 Jul 27;118(30):e2108537118.

³ K J Allen et al. 2022. *Coupled insights from the palaeoenvironmental, historical and archaeological archives to support social-ecological resilience and the sustainable development goals*. Environmental Research Letters. 17 055011



Response to specific inquiry questions:

Question 1

Do you think we should use the term ‘community-led retreat’? If not, what do you think we should use and why?

Naming of retreat process

- While understanding community needs and values are critical to informed decision making, “community-led” terminology is misleading in terms of where responsibly and funding lies to undertake action.
- A te reo term could be appropriate however, no translation of explanation is provided for either alternative term provided in para 20 of the inquiry document.

Question 2

Are there other barriers to Māori participation in adaptation and upholding Māori rights and interests? How can we better support Māori?

Building capacity and capability

- To make informed and timely decisions capacity and capability needs to be improved for Māori and communities. How are hazards and associated risks communicated to Māori and local communities and the impact to culturally significant places?
- **Recommendation** – develop and sustain the resourcing of specific training for kaitiaki Māori, including workshops and guidance documents with relevant specialist input (i.e., coastal engineers, heritage specialist) to identify hazards, risks and potential impacts on culturally significant places and appropriate options for retreat. Consideration should be given to understand other legislative requirements for taonga and culturally significant places under the Heritage New Zealand Pouhere Taonga Act 2014 and Protected Objects Act 1975. Will also give effect to the NAP action 5.8: **Support kaitiaki communities to adapt and conserve taonga and cultural assets.**
- **Recommendation** – provide Master’s level tertiary education scholarships for Māori in conservation, heritage management and archaeology (i.e., taonga management skills). This will facilitate the growth of future leadership in these areas, i.e., rangatiratanga of hapū and iwi Māori.

Telling stories of change

- How do we continue to recognise the intangible values of a place where the tangible (physical or heritage fabric) has been relocated (or lost), and where do we hold stories of retreat for current and future generations? How and where do we archive climate stories to ensure they are accessible, and that the decision-making process is clear for current and future generations?
- There needs to be consideration to provide tangible solutions to maintain connection to place, following loss or retreat. For example, stories retained through documented oral histories, cultural mapping, physical markers, digital capture, virtual and augmented reality, and research.



- There may be issues to work through regarding the confidentiality and data sovereignty of mātauranga or other cultural information on sensitive places. – ties into active protection under paragraph 34 of the inquiry document.

Question 3

Are there other issues that affect the quality of risk assessments and local adaptation planning? How can we strengthen our approach?

Knowledge gaps

- In the case of heritage sites, our records often lack comprehensive information regarding the precise location, extent, and condition of archaeological sites throughout Aotearoa. There is no systematic programme or funding available to undertake regular site upgrades or monitoring on public and private land. This has a direct impact on understanding and planning for risks to cultural heritage places. The loss, or destruction of these places may have strong negative impacts on the cultural well-being of all descendant communities. See also *Page 25 of Report prepared for Manatū Taonga Ministry for Culture and Heritage by Robyn L Kannemeyer, Oshadhi Samarasinghe, and Shaun Awatere of Manaaki Whenua – Landcare Research, June 2023*. Also relates to NAP **Action 3.27: develop a framework for assessing exposure and vulnerability of cultural assets/taonga to climate change**.

Lack of national direction and coordination

There is no national direction or standards for cultural heritage to set consistent and strategic goals for cultural heritage in relation to the identification, recognition and protection of places in wider planning outcomes. There is no guidance to plan for adaptation of cultural heritage, what adaptation solutions look like for cultural heritage places and where cultural heritage intersects with wider disciplines. We encourage the development of holistic approaches that break down culture and nature binaries, and are consistent with mātauranga Māori.

- Data is often segmented over a range of sources and provided at differing scales across regions or national levels. Consolidation of climate change modelling to a multitude of hazards and assets and places should be undertaken. This should also include clear workstreams at local, regional and national levels to encourage collaboration or consolidation of programmes and funding.
- Coordination is required between local and central government agencies with a duty to protect and care for Aotearoa's cultural heritage.

Question 4

Are there other issues that limit our ability to retreat in advance of a disaster? How can we improve our approach?

Cultural heritage conservation principles

- There is a tension between best practice heritage conservation and retreat. There is a need for the Protect, Avoid, Accommodation adaptation options to be considered in advance of retreat using the Dynamic Adaptation Planning Process.



- See point 10 (relocation) of the ICOMOS NZ Charter: *“In exceptional circumstances, a structure of cultural heritage value may be relocated if its current site is in imminent danger, and if all other means of retaining the structure in its current location have been exhausted. In this event, the new location should provide a setting compatible with the cultural heritage value of the structure.”* From a heritage perspective the four options need to be considered as a whole, specific to the heritage place and values.
- What is the process if relocation of a culturally significant place is inappropriate or not feasible? This may include a lack of suitable alternative locations.
- If a cultural heritage place is to be relocated is there an appropriate site and how do we recognise the cultural values of the original setting to maintain connection to place?
- In the case of historic buildings, landowners may no longer wish to retain the building or heritage feature on a new site once their land is compromised. This can result in situations where landowners may expect councils to purchase buildings and relocate them to council reserves. This is not a realistic solution across the board.
- There is no clear research which explores the intersection between loss or damage to cultural heritage and well-being, or into the scale of historic and ongoing loss to cultural heritage places. Cultural heritage should be valued by all new Zealanders and the wider cultural connections and stories of place, and their historical values also have to be accounted for. – relation to paragraph 50 of the inquiry document, NAP Action 7.1: research how cultural heritage contributes to community wellbeing and climate change adaptation, and Treasury well-being outcomes (Tikanga, Whanaugatanga, Kotahitanga and Manaakitanga)⁴.
- There is a philosophical tension (within and outside the heritage community), regarding whether cultural heritage places should be subject to interventions to retain places, or left exposed to natural hazards and climate change effects.
- There may be adverse effects of managed retreat for cultural heritage places and landscapes in the location where communities and assets are being relocated to.

Question 5

Are there other issues with the way we fund adaptation? How can we improve our approach?

Funding Gaps

- The Climate Change Adaptation Bill must clarify funding options for mitigation (carbon reduction and sustainability), adaptation (i.e., avoid, protect and accommodation) and retreat (compensation).
- The report prepared for Manatū Taonga Ministry for Culture and Heritage on Climate Change Risk and Adaptation Tools for Aotearoa New Zealand’s cultural heritage, by Robyn L Kannemeyer, Oshadhi Samarasinghe, and Shaun Awatere of Manaaki Whenua – Landcare Research, June 2023, provides a useful starting point for understanding the

⁴ Wolfgramm, R., Spiller, C., Henry, E., & Pouwhare, R. (2020). *A culturally derived framework of values-driven transformation in Māori economies of well-being (Ngā hono ōhanga oranga)*. *AlterNative: An International Journal of Indigenous Peoples*, 16(1), 18-28.



current situation. But overall, more secure and dedicated funding is required for all types of cultural heritage places, specifically for climate change and natural hazard related work.

- However, there is a concern regarding funding available to achieve goals set and actions in the NAP, and there must be greater coordination between local and central government ministries and agencies to align workstreams and leverage funding.
- Ultimately, funding will be limited in the scheme of the costs incurred to landowners and funding will likely only be part of the solution.
- There are and will be increasing pressures to undertake archaeological excavations on vulnerable places experiencing loss. This process is taken under the framework of salvage excavation. Who pays for this work is not clear, including analysis of material and dissemination of information. Further, the storage and archiving of archaeological collections requires space and clear and secure funding streams and lines of responsibility – i.e., museums, iwi/hapu, local communities.
- There may be high cost associated to the relocation of cultural heritage places and contexts, on-going costs for conservation treatments of any relocated cultural heritage objects or structures. For example, Plimmer's Ark, Daring shipwrecks.

Question 6

What do you think the costs are of a failure to adapt or failure to adapt well?

Cultural heritage and well-being

- Missteps in adaptation can lead to detrimental consequences for heritage, including the loss of place and value. For instance, when timely decisions are not made, depleting alternative heritage solutions before resorting to retreat.
 - One plausible scenario involves a heritage site facing high risk, where inaction within the appropriate timeframe could result in the physical loss of the place. This loss might have been potentially averted through adaptation or relocation efforts. Consider, for instance, the failure to initiate the relocation of an historic timber residence, already precariously close to an eroding cliff, to a safer location within the next few years. This inaction might leave the building vulnerable to storm events, causing an irreparable loss that could have been otherwise prevented.
- There are gaps in our comprehension of the relationship between the loss of heritage places and values, the long-term impact on cultural well-being and identity. This aligns with NAP Action 7.1.
- We forego a valuable opportunity to draw lessons from the past for adapting to the future. Exploring how past communities adapted to changing climates and environments can provide insights into historical resilience that we can apply in the present.
- It is essential to recognize the wider sphere of cultural heritage places and values and their significance to diverse communities.
- Assigning economic value to a cultural heritage place has always posed inherent challenges. The loss of cultural heritage represents a significant impact that should be assessed beyond a purely economic framework. The repercussions of such losses might not manifest immediately but can affect future generations. Thus, we need to consider



the long-term impact of heritage loss. Heritage places are finite and irreplaceable once destroyed.

- Loss of potential archaeological information about our nation's ancestors.

Question 7

What does a te Tiriti-based approach to adaptation mean to you?

Land Ownership and Cultural Heritage

- Under Article II of te Tiriti, the Crown recognises the fundamental relationship between Māori and their interests (ngā taonga katoa), not exclusively including lands, and cultural heritage places and objects. Furthermore, the article affords Māori leadership absolute sovereignty over those interests. This means that whānau, hapū and iwi must be afforded decision-making power in Crown processes that affect those interests. With regard to cultural heritage places and landscapes, the Crown must recognise both the importance of Māori heritage and the central role of Māori authority over the managed retreat process of Māori heritage (and ngā taonga katoa).
- Furthermore, the places mentioned in the document are types of Māori heritage places often within Māori ownership. It is important to recognise that many of the places of importance to Māori, may not be located on Māori freehold land. For example, several colonial processes, including land confiscation and privatisation under the former Native Land Court, have led to former whenua tūpuna (ancestral landscapes) and wāhi tūpuna (ancestral places) now being in Crown or private ownership. Values associated with rangatiratanga, reconciliation, the historical context of Māori land alienation, and current private land ownership rights may cause tension in managed retreat associated with Māori cultural heritage places. However, such tension may be overcome with transparent communication, long term planning and meaningful partnerships.

Partnership between Mātauranga Māori and Archaeology

- In Point 57 of the inquiry document, the incorporation of mātauranga Māori and archaeological science is emphasized. Archaeological sites, such as middens, serve as invaluable repositories of historical information, encompassing essential paleoenvironmental and cultural data. This data can be harnessed to inform future adaptation solutions, offering insights into past aspects like vegetation cover, biodiversity, and earlier adaptive strategies that showcase resilience.
- Two projects which exemplify this approach can be observed, firstly, in the Otata Project, a multidisciplinary endeavour that combines archaeology, mātauranga Māori, and biodiversity research to derive lessons from the past for the purpose of guiding environmental restoration projects (For additional information, visit: <https://www.thenoises.nz/>). Secondly, in Isaac (Zac) McIvor's PhD thesis, an example of interfacing chronological information from mātauranga Māori and archaeology to understand change in settlement patterns, migrations, community integration etc., through time and space.⁵

⁵ McIvor, Isaac H. [submitted 2023]. An interface of mātauranga Māori and archaeology to generate a whakapapa of pā tawhito. Unpublished PhD thesis, Te Pua Wānanga Ki Te Ao (Faculty of Māori and Indigenous Studies), University of Waikato.



- When executed appropriately, there are abundant opportunities to extract significant archaeological insights from locations across Aotearoa. These findings can contribute to the enrichment of our comprehension of the past at local, regional, and national levels. To further augment these endeavours, the development of regional and national thematic research questions is highly recommended.
- Collaboration between whānau, hapū and iwi Māori, heritage specialists, research or educational institutions and government agencies, will guide archaeological impact assessments and statements. However, a potential hurdle is the continuum of collaboration that exists in post-colonial societies such as Aotearoa, which ranges from colonial control (Museums, Government heritage institutions, Archaeological organizations) to community control, highlighting the various modes of practice and the goal of empowering communities to have control over their heritage (Colwell 2016⁶). Meaningful community engagement in such processes requires capacity building and resourcing (e.g., answers to Question 2, above).

Question 15

What do you think makes a risk tolerable or intolerable (i.e., acceptable or unacceptable)?

- What might this mean in a cultural / historic heritage context? Who makes this determination? How might risk of place and value be compared at local, regional and national scales?
- Where a site/area has cultural heritage values, in particular where those are recognised by statutory management (i.e.: scheduled in a district/regional/unitary plan or subject to a Heritage New Zealand covenant) risk needs to be considered in a particular way that may differ from a site that has not been identified for its heritage values, or not identified to have as significant a value.
- Measuring what a tolerable risk is for heritage may be hard to put into a one size fits all approach. An approach for sub surface archaeology may be quite different to a timber residence, for example. There must be tolerances for types of places and levels of significance.
- Also relates back to our general comments regarding **Cultural heritage conservation principles**.

Question 16

Do you think local risk assessments should be carried out or reviewed by a centralised agency or a local organisation? Why?

- If council is going to have this role moving forward, which will be on a far more extensive scale than currently, it is critical that they are appropriately resourced to carry out risk assessments.

⁶ Colwell, C. (2016). Collaborative archaeologies and descendant communities. *Annual Review of Anthropology*, 45, 113-127.



- Regardless of by whom, it will be critical that cultural heritage practitioners are involved in the wider risk assessment process. While engineering and science are a critical part of it, other specialists such as heritage experts have an important supporting role. Archaeologists have an important role to work alongside mātauranga Māori expertise in relation to archaeological sites or Māori origin.

Question 17

Should risk assessments be carried out only by technical experts or should other people also have a role? What role should other people and organisations have?

- As per question 16, it is critical that technical heritage experts are involved in risk assessment, working alongside other technical experts.
- Communities of interest are, however, also an important part of heritage, such as historical societies or local resident groups. Their contributions can also be valuable, and can provide insights into change over time, impact of past disaster events and lessons from previous recovery efforts. However, this maybe needs to be a specific part of the risk assessment, which differs from the technical inputs of engineers, scientists and heritage specialists etc.
- This question also leads on to whether risk assessments should be subject to peer review processes to ensure check and balances are in place.
- Having a space to share adaptation responses and their effectiveness to response to climate change effects and natural hazards by improving resilience and adaptative capacity would be of use. This would allow the dissemination of knowledge and key learnings and develop innovative adaptation solutions for a New Zealand context.

Question 23

What do you think are the most important outcomes and principles for community-led retreat?

- All the principles and outcomes mentioned in Table 7 of the inquiry document are important. For heritage ensuring that decisions are evidence based, while accepting there will be some uncertainty will be important. However, as heritage ultimately relates to the connection between people and place, the involvement of communities in decisions that affect them will also be critical. Particularly for highly social based heritage places such as churches, schools and community halls.

Question 25

Do you agree that affected land should no longer be used at the end of a retreat process (with limited exceptions for things like ceremonial events, recreation, some agricultural or horticultural uses and mahinga kai gathering)? Why or why not?

- In cases where heritage buildings persist at the culmination of the retreat process, their preservation should be contingent upon any prevailing health and safety concerns.
- We endorse the idea of accommodating exemptions concerning ceremonial events and access, provided they can be carried out safely. Even when the physical heritage feature is



no longer present, there may still exist a significant connection to the site, which may have functioned as a former graveyard, homestead, or war memorial site.

- Continual cultural considerations and areas of sensitivity may apply to certain lands, such as the original location of an urupa that has been relocated.
- Additionally, there exist opportunities for deploying digital and, where appropriate, physical interpretative tools to help acknowledge the site and its historical significance, particularly when its features are no longer as easily discernible as they once were.

Question 42

Are there any other issues that make it difficult to adapt during a recovery?

- Lack of national guidance for the management of cultural heritage in relation to natural hazards and disasters – **NAP Action 3.26: produce guidance for disaster risk management for cultural heritage** - This action will improve disaster risk management for cultural heritage through guidance on reducing risks before, during and after disasters.
- Further guidance could include:
 - *Pre-Disaster Planning and Risk Assessment*: Develop and regularly update a cultural heritage risk assessment, identifying vulnerable sites and objects. Create and rehearse disaster response plans to protect cultural assets.
 - *Inventory and Documentation*: Maintain an up-to-date inventory of cultural heritage assets, including photographs, detailed descriptions, and condition assessments. This documentation can aid in post-disaster recovery efforts.
 - *Disaster-Resilient Infrastructure*: Invest in building resilient structures to house valuable cultural artifacts and collections. Employ technologies like climate-controlled storage and structural reinforcements to protect against disasters.
 - *Education and Training*: Provide training to personnel responsible for cultural heritage preservation, as well as first responders, on disaster response protocols and the safe evacuation and recovery of cultural items.
 - *Public Awareness*: Promote awareness among the public regarding the importance of protecting cultural heritage. Encourage individuals to take precautions and report damage during and after a disaster.
 - *Collaboration and Networks*: Foster partnerships with relevant agencies, organizations, and communities to mobilize resources and expertise for disaster mitigation, response, and recovery for cultural heritage sites.
 - *Post-Disaster Recovery and Restoration*: Establish post-disaster recovery teams equipped to assess damage, salvage artifacts, and engage in restoration efforts. Maintain clear documentation of recovery and restoration processes for future reference.