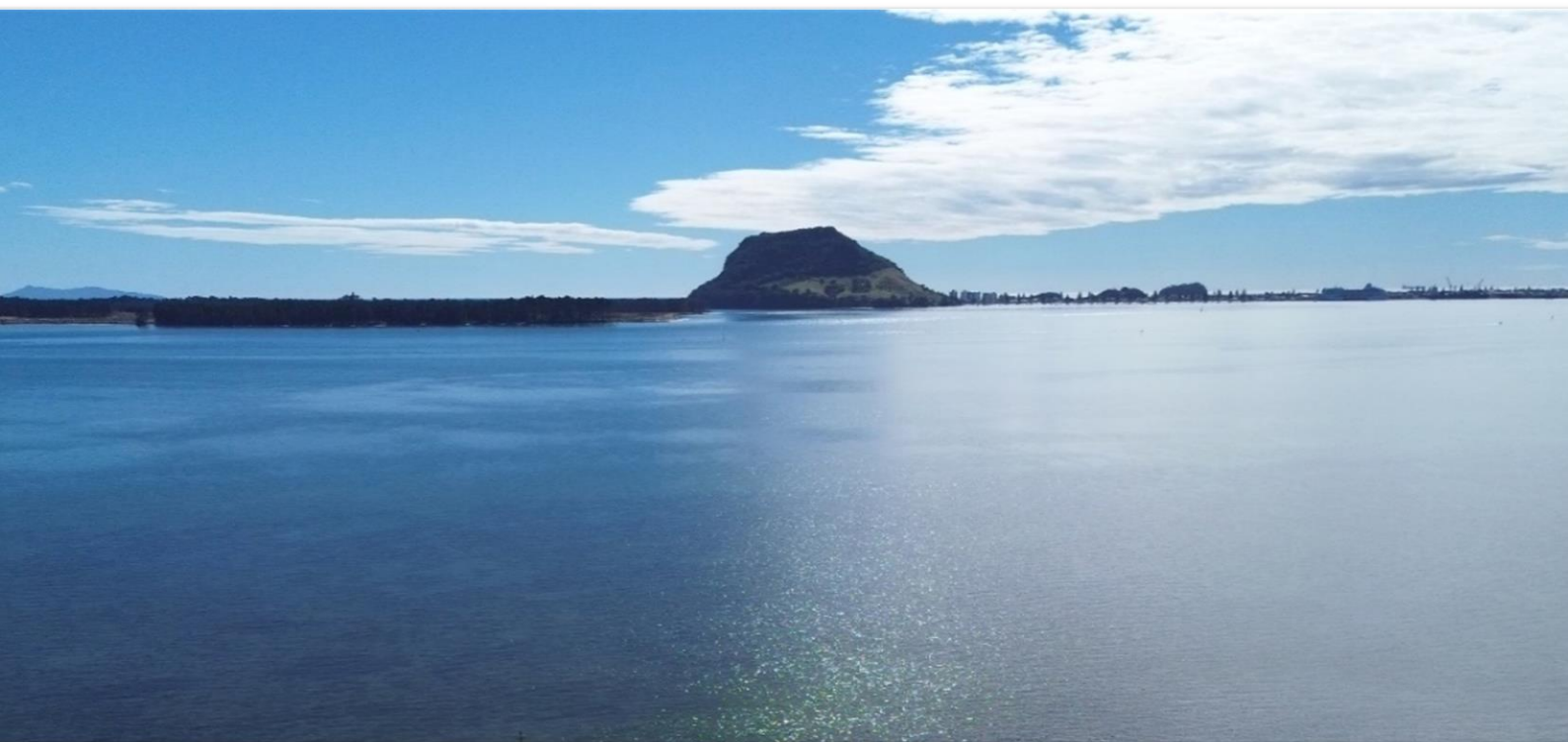




**NEW ZEALAND
ARCHAEOLOGICAL
ASSOCIATION**



Annual Conference

15th - 18th July 2025

Mount Maunganui, Tauranga

Tai timu, tai pari

Promoting and fostering archaeological research in New Zealand

Cover Image: Mauao, Courtesy of Archaeology BOP Heritage Consultants

Who We Are

The New Zealand Archaeological Association is the national organisation for archaeology with a membership spanning professionals, amateurs, students, organisations, businesses and institutions involved or interested in New Zealand archaeology and heritage. We actively aim to unite all persons engaged in or interested in archaeology by holding an annual conference and other seminars and workshops, for the discussion and further advancement of archaeological knowledge and practice.

Our objectives are to promote and foster research into the archaeology and history of New Zealand and further afield. Our archaeological record may be short in timespan by old world standards, but New Zealand has a rich heritage of archaeological sites which illustrate its 800-year history. We publish the Journal of Pacific Archaeology, a monograph series and the Association's quarterly newsletter, Archaeology in New Zealand.

As part of our national role, we lobby government and local authorities for the recognition and protection of New Zealand's cultural heritage through planning consultations and direct engagement. The Site Recording Scheme, initiated by the NZAA in the 1950s and today managed by the Association through its online portal, ArchSite, contains the records of over 60,000 archaeological sites in New Zealand. The records are used for the purposes of research and for the protection and management of archaeological sites.

Check out the links to our website and social media pages below and give us a follow!

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Postal Address: P.O. Box 6337, Dunedin 9059, NEW ZEALAND

Email address: nzaa@archaeology.org

Sponsors

The New Zealand Archaeological Association gratefully acknowledges the support of the following sponsors:



Conference Venue Information

Cruise Deck, Club Mount Maunganui

Location 45-47 Kawaka Street, Mount Maunganui 3116
Approx. 10 Minute drive from Tauranga Airport

Car parking There is plenty of free on-site parking at the club.

Public transport There is a bus stop on either side of Totara Street just outside the Club venue outside Blake Park near the intersection with Kawaka Street. Route 5 travels to Mount Maunganui main street (Maunganui Road), Bayfair Shopping Centre and into Tauranga CBD. Bay Bus info is available here: <https://www.baybus.co.nz/route/2405/timetable/>

Coffee

Barista coffee is available to purchase downstairs from 8am every day of conference. There are alternative milks and flavour shots available for an additional cost.

Downstairs Bar Area

NZAA has a special so you can use the downstairs bar at the following times:

Tuesday: 12pm – 6pm

Wednesday: 12pm – 6:30pm

Thursday: 12pm – 6pm

Outside of these hours, everyone must meet membership requirements.

Pool Tables and Dart Boards

The pool tables and dart boards in the bar area are available for use during conference. They are not available from 5:45pm on Wednesday night, and 6:15pm on Thursday night.

Smoking

If guests wish to smoke or vape, please use the carpark area or the designated smoking lounge which is located near the pool table and dart boards. This smoking lounge has seats inside and benches outside.

PROGRAMME OVERVIEW

All paper sessions will be held at the Cruise Deck, Club Mount Maunganui.

Tuesday 15 July

Morning	8:30 am	Registration opens
	9:00 – 9:30 am	Mihi Whakatau and Conference Opening
	9:30 – 10:00 am	Morning Tea
	10:00 – 11:00 am	NZAA Opening Address
Afternoon		Keynote Paper
	11:00 – 12:15 pm	Session 1: Papers
	12:15 – 1:00 pm	Lunch: Registration open throughout
	1:00 – 2:30 pm	Session 2: Papers
	2:30 – 3:00 pm	Afternoon tea
	3:00 – 4:15 pm	Session 3: Papers
Evening	5:30pm Welcome Event, at AstroLabe Brew Bar, 82 Maunganui Road, Mount Maunganui, Sponsored by CFG Heritage	

Wednesday 16 July

Morning	8:30 – 10:00 am	Session 4: Papers
	10:00 – 10:30 am	Morning tea
	10:30 – 12:15pm	Session 5: Papers
	12:15 – 1:00 pm	Lunch
Afternoon	1:00 – 3:00 pm	NZAA AGM and Constitution Workshop
	3:00 – 3:30 pm	Afternoon tea
	3:30 – 4:45 pm	Session 6: Papers

5pm Student Event at Conference Venue, Sponsored by InSitu Heritage

Evening	7:30pm Public Lecture: ‘Tatai Arorangi – Māori Navigation by Astronomy’, Mount Maunganui College Marae, Sponsored by Clough and Associates	
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Thursday 17 July

Morning	8:30 – 10:00 am	Session 7: Papers and Discussion
	10:00 – 10:30 am	Morning tea
	10:30 – 12:15pm	Session 8: Papers
	12:15 – 1:00 pm	Lunch
Afternoon	1:00 – 2:30pm	Session 9: Papers
	2:30 – 3:00pm	Afternoon tea
	3:00 – 4:00pm	Session 10: Papers
	4:00 pm	Mihi poroporoake / Conference Closing
Evening	7 pm Conference Dinner and Award Presentations	

Friday 18 July

Field Trip

Bus transport will run from the conference centre, please be gathered by 8:45 outside the venue as the bus will be departing at 9:00am, returning at 4:00pm. You will need good walking shoes and a reasonable level of fitness as it is a steep walk. There are toilet facilities at the entrance of the reserves that will be available for use. There will be morning tea and a picnic lunch provided but please remember your water bottle.

CONFERENCE EVENTS

Welcome Event

Tuesday 15th July

at Astrolab Brew Bar

82 Maunganui Road, Mt Maunganui | 5:30pm

Sponsored by CFG Heritage



Student Event

Wednesday 16th July

For students to meet heritage professionals
at the downstairs Bar, Conference Venue | 5pm

Sponsored by InSitu Heritage

Public Lecture

‘Tatai Arorangi – Māori navigation by Astronomy’

Wednesday 16th July at Mount Maunganui

College Marae | 7:30-8:30pm

Sponsored by Clough and Associates



Conference Dinner

Thursday 17th July

at Latitude 37

181 Maunganui Road, Mount Maunganui | Seated by 7:00pm

Field Trip

Friday 18th July

Guided Field trip to the Pāpāmoa Hills Cultural Heritage Regional Park and the
Mauao Historic Reserve | Meet 8:45am at venue carpark

MIHI WHAKATAU / CONFERENCE OPENING

8:30am Registration Open

9am Mihi Whakatau / Conference Opening

9:30-10am Morning Tea

Tikanga

We will be welcomed in with a karanga and a haka pōhiri by Ngāi Tukairangi and Ngāti Kuku.

We will then find our seats.

The first speech will be given by tangata whenua followed with a waiata.

The Manuhiri (conference goers) speaker will respond and the group will follow with the following waiata:

**Mā wai rā e taurima te marae i
waho nei?
Mā te tika
Mā te pono
me te aroha e.**

The koha will be given over.

The tangata whenua will finish off with the last speech.

Karakia to open up conference.

We recommend that the first two rows only, go for harirū to limit the possible spread of germs typical of this time of the year.

Karakia for kai followed by morning tea.

PAPER PROGRAMME

Tuesday 15 th July			
10:00 - 11am	10:00 – 10:05am	NZAA Opening Address	
	10:05- 10:45am	Keynote Paper – Ken Phillips	
	10:45 – 11am	Te Haana Jacob	The resilience of land from the crashing waves of human settlement and the imprints left in the receding tides
11:00 - 12:15pm	Session 1		
	Time	Author(s)	Title
	11:00- 11:15am	Cameron McCaffrey and Ken Phillips	People and Place at Ōtūmoetai Pā: Archaeology in a Changing Landscape
	11:15- 11:30am	Arden Cruickshank Matthew Campbell, Andrew McAlister, Brendan Kneebone, Alison Dijs	Takitimu North Link (TNL): a sondage through a city
	11:30- 11:45am	Eliza Thompson	Fishing for Answers: An exploration of changing fishing strategies in the Eastern Bay of Plenty
	11:45- 12:00pm	John Coster	Dots on the Map
	12:00- 12:15pm	Questions	
12:15 - 1:00pm	Lunch		
1:00 – 2:30pm	Session 2		
	Time	Author(s)	Title
	1:00 – 1:15pm	Andy Brown	Māori Food Production - Introductory Remarks
	1:15 – 1:30pm	James Robinson	Garden systems in the horticultural north of NZ
	1:30pm – 1:45pm	Hans-Dieter Bader	Te Māra Pātengi o Te Wai o Uru (R11-2356, 2357, 3556) Continuity and change of a horticultural system in Tāmaki Makaurau
	1:45 – 2:00pm	Caroline Phillips and Kathleen Dons	Dating the Cultivations in Waiariki-ki-Tai
	2:00 – 2:15pm	Warren Gumbley	Concluding Remarks

	2:15 – 2:30pm	Questions	
2:30 – 3:00pm	Afternoon Tea		
3:00 – 4:15pm	Session 3		
	Time	Author(s)	Title
	3:00 – 3:15pm	Janice Adamson	“A Cultivated Perception of the Beautiful” - the East Tāmaki farmstead of the artist Albin Martin - Site R11/1938
	3:15 – 3:30pm	Naomi Woods	The many lives of a commercial place: Cumming & Co’s Bonded Store, Dunedin
	3:30 – 3:45pm	Alana Kelly	Messages from the bottles: investigations of a 19th century aerated water factory in Christchurch
	3:45 – 4:00pm	Any Tuffnell	Building a world made for humans by humans: pumping water to Lyttelton in the 19th century
	4:00 – 4:15pm	Questions	

Wednesday 16 th July			
8:30 - 10:00am	Session 4		
	Time	Author(s)	Title
	8:30 - 8:45am	David Wilton and Neville Ritchie	Te Wheoro’s Pa and Signal Station: A Worthy Challenge in Landscape Archaeology
	8:45 - 9:00am	Mike Johnston	Gun emplacements at Landguard Bluff and Wanganui Airport - A Documentation Review and Site Survey
	9:00 - 9:15am	Bill Edwards	Small things tell big stories: Buttons found at Te Waimate Mission house
	9:15 - 9:30am	Rosanne Hawarden	Recovering Māori Waka Networks of the Wairarapa through the 1843-1852 Journeys of missionary William Colenso, using Scale-free Network theory
	9:30 - 9:45am	Rachel Clark	Communal Living at the Lawrence Chinese Camp: an archaeozoological and historical investigation of the Chinese Company House
	9:45 -10:00 am	Questions	
10:00- 10:30am	Morning tea		

10:30 - 12:15pm	Session 5		
	Time	Author(s)	Title
	10:30 - 10:45am	Dan Witter and Jeremy Habberfield-Short	Introducing the Master Craftsman from the 032 Working Floor
	10:45 - 11:00am	Josh Emmitt, Rebecca Phillipps, Stacey Middleton, and Simon Holdaway	The raw material economisation of adzes on Ahuahu Great Mercury Island
	11:00 - 11:15am	Anne Peilberg	Understanding Māori obsidian knapping: A study of Ahuahu obsidian artefacts
	11:15 - 11:30am	Bradley McDonald	Going with the flow: A pilot experimental investigation into the in-water behaviour of pre-contact Māori fishing lures
	11:30 - 11:45am	Matthew Felgate	Radiocarbon dating the deposition of socket-hafted un-tanged adzes at Mokoia Pa, Panmure, Auckland (R11/98)
	11:45am - 12:00pm	Fiona Petchey, Louise Furey, Atholl Anderson, Simon H. Bickler and Gerard O'Regan	Let's get ready to wiggle; Radiocarbon in a new age
	12:00 - 12:15pm	Questions	
12:15-1:00pm	Lunch		
1:00 – 3:00pm	NZAA AGM and Constitution Workshop		
3:00 – 3:30pm	Afternoon Tea		
3:30 – 4:45pm	Session 6		
	Time	Author(s)	Title
	3:30 – 3:45pm	Lisa McKendry	The Cultural Significance of Twist Direction in Māori Archaeological Cordage
	3:45pm – 4:00pm	Erin Mekerei Tioke	Reflection into our Past
	4:00 – 4:15pm	Teaooterangi Apaapa	Māori heritage of trade, the backbone of the New Zealand Economy
	4:15pm – 4:30pm	Pam Bain	Supporting a sense of place through archaeological outreach

	4:30 – 4:45pm	Questions
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Thursday 17 th July			
8:30 - 10:00am	Session 7		
	Time	Author(s)	Title
	8:30 - 8:45am	Ella Ussher and Edward Ashby	Salvage archaeology on Te Piha/ Whakaari Pā: A response to the impact of Cyclone Gabrielle
	8:45 - 9:00am	Matthew Campbell Brendan Kneebone, Jaiya Hunter, Ella Ussher and Sarah Phear	The Ōmaro Spit midden redux
	9:00 - 10:00am	Climate Change Discussion Panel The climate emergency, implications for heritage, and responses from the archaeological community. Lead by Matthew Campbell, Ella Ussher and Rebecca Ramsay Discussion will be opened to the conference attendees	
10:00 - 10:30am	Morning tea		
10:30 - 12:15pm	Session 8		
	Time	Author(s)	Title
	10:30 - 10:45am	Simon H. Bickler, Fiona Petchey, Gideon Bickler	The Pacific Archaeology Radiocarbon Database
	10:45 - 11:00am	Mary O’Keefe	So what kinda site is that? - reviewing the site types and features in ArchSite
	11:00 - 11:15am	Trish O’Kane	Imagine if you could “unearth” relevant research, “published” anywhere.
	11:15 - 11:30am	Karolyn Buhring and Jeremy Habberfield-Short	Land transport infrastructure in Aotearoa NZ. Recent developments in heritage management
	11:30 - 11:45am	Des Kahotea	Managing Ngapotiki Heritage – Mangatawa, Te Akau, Rangataua and Papamoa
	11:45 - 12:00pm	Rebecca Ramsay	RMA reform, exploring the proposed changes to heritage management in Aotearoa

	12:00 - 12:15pm	Questions	
12:15-1:00pm	Lunch		
1:00 – 2:30pm	Session 9		
	Time	Author(s)	Title
	1:00 – 1:15pm	Charlotte King, Ruth Warren, Hallie Buckley	Connecting with our colonial past: working with descendants and stakeholders to tell the stories of our forebears
	1:15 – 1:30pm	Ben Pick	Ngā Tapuwae ki te hauauru o Te Waiariki: Mai te takutai o Waihi ki te takutai o Ōtamarākau Footprints on Western Bay of Plenty: Waihi Beach to Ōtamarākau Map & Guide
	1:30 – 1:45pm	Simon H. Bickler, Thomas MacDiarmid	A Future of Virtual Archaeological Site Reconstruction in Aotearoa New Zealand
		HNZPT	
	1:45 – 2:00pm	Emma Clifford, Victoria Trow	The Archaeological Authority Portal: Post-launch Update
	2:00 – 2:15pm	Mel Russell	Site Damage: What do we even do?
	2:15 – 2:30pm	Questions	
2:30 – 3:00pm	Afternoon Tea		
3:00 – 4:00pm	Session 10		
	3:00 – 3:15pm	Des Kahotea	Pāpāmoa Hills Cultural Heritage Regional Park - Ngā Pōtiki perspective
	3:15 – 3:45pm	Josh Clarke and Dean Flavell	Papaki tū ana ngā tai ki Mauao
	3:45 – 4:00pm	Questions	
	4:00pm	Mihi poroporoake / Conference closing	

PAPER ABSTRACTS

The resilience of land from the crashing waves of human settlement and the imprints left in the receding tides

“Ahakoa uhi uhi ngā ngaru. Ka ngaro ka ea, ka ngaro ka ea. Ka whakaea anō te toka a Tirikawa.”

“Irrespective of the waves that crash continuously, Tirikawa rock remains resolute”.

Te Haana Jacob, Pouārahi for Pouhere Taonga/Heritage NZ, Ngāi Te Rangi, Ngāti Ranginui, Te Arawa and Waikato

This paper explores the enduring resilience of the land in the face of successive waves of human settlement in Tauranga Moana, from pre-colonial settlement to modern day. The discussion examines the cause and effect of settlement patterns and how these historic patterns influence contemporary consultation practices. Tauranga is a rapidly growing city with unique overlays from the times of Polynesian voyaging through the 1860 New Zealand Wars / Invasion of Tauranga to the present day. This paper will take a closer look at the complex make-up of iwi and hapu boundaries, the establishment of Marae reservations and the process that led to their recognition. It will also draw on traditional stories and landmarks that keep us anchored and connected to Tauranga, even as urban development expands around us.

Session 1

People and Place at Ōtūmoetai Pā: Archaeology in a Changing Landscape

Cameron McCaffrey and Ken Phillips, Archaeology B.O.P Heritage Consultants

In 2023, Archaeology B.O.P. carried out an excavation within the western extent of Ōtūmoetai Pā, a significant Māori settlement in Tauranga Moana. The investigation revealed a dense concentration of archaeological features representing long-term and sustained settlement. A previously unrecorded urupā was also identified, with burial practices reflecting both traditional Māori customs and European influence. The excavation contributes to a broader understanding of the pā's occupation history and the results reflect both continuity and change in material culture over time. This presentation outlines the excavation results and discusses how the findings illustrate the evolving relationship between people and place at Ōtūmoetai Pā. It also highlights how substantial archaeological deposits remain preserved beneath the modern residential landscape, reinforcing the ongoing importance of archaeological work in urban settings.

Takitimu North Link (TNL): a sondage through a city

Arden Cruickshank, CFG Heritage

Matthew Campbell, University of Auckland, CFG Heritage

Andrew McAlister, University of Auckland

Brendan Kneebone, CFG Heritage

Alison Dijs, CFG Heritage

TNL is a 6 km offline motorway being constructed to meet the future growth needs of Tauranga. The alignment threaded through a mainly agricultural landscape, and more than 3000 features represented by 69 discrete clusters were investigated during a two-year period. This project provided a unique opportunity to compare distribution and survivability of archaeological features across the landscape.

We will provide a brief overview of the project; discussing the site and feature types that were encountered and what can be expected to survive modern horticultural practices. We will discuss in further detail two sites; U14/572 and U14/3811, which were less modified by 20th century horticulture than the rest of the alignment and can provide a glimpse into what is likely missing from the archaeological record for TNL.

Fishing for Answers: An exploration of changing fishing strategies in the Eastern Bay of Plenty

Eliza Thompson, InSitu Heritage

Until recently, very few assemblages containing fish bone had been recorded within the Eastern Bay of Plenty. The largest fish bone assemblage in the area came from Kōhika (V15/80); a large well-preserved 17th century wetland pā located within the former Rangitāiki wetland west of Whakatāne. Within the last five years, increased roading maintenance and stop bank upgrade works between Whakatāne and Matatā have resulted in the excavation of a number of sites containing fish bone rich faunal assemblages. Radio-carbon dating of these sites show that they span the period from the 16th to the 19th centuries. This paper takes a look at the faunal assemblages from these sites and considers how their varying composition provides insight into how fishing strategy in the Eastern Bay of Plenty changed over the last few hundred years.

Dots on the Map

John Coster, Lower Kaimai

An unusually high density of pre-European and contact-period sites are recorded on a rural property at Lower Kaimai near Tauranga. This paper examines the results of site recording by one individual over a prolonged period and compares the accuracy of site locations determined from the NZMS 1 and NZMS 260 map series with subsequent GIS and hand-held GPS readings.

Session 2

Māori Food Production - Introductory Remarks

Andy Brown, Horizon Archaeology Ltd

Economic models have formed an important part of the archaeological understanding of Aotearoa. Over the last several decades, and with increasing frequency, archaeologists have described a range of cultivation systems and considered them in terms of the affordances and restrictions of local environments. This session discussed several other lenses through which horticultural systems can be viewed. In this paper I briefly introduce these themes and consider gardening in the context of early settlement models.

Taitokerau Garden Systems

James Robinson, Heritage New Zealand Pouhere Taonga

Garden systems in the horticultural north of New Zealand are associated with wetlands, volcanic soils, and a range of micro climates that were suitable or could be modified to be suitable by Māori for the cultivation of a range of crops from both south East Asia and from South America. Examples of such garden systems in the Tai Tokerau region are discussed and then compared to that found on Mangaia in the southern Cooks. It will then be argued that New Zealand horticulture prior to European arrival was extensive rather than intensive due to a range of factors.

Te Māra Pātengi o Te Wai o Uru (R11-2356, 2357, 3556) Continuity and change of a horticultural system in Tāmaki Makaurau

Hans Dieter-Bader, Archaeology Solutions Ltd

Excavations by Archaeology Solutions on Te Māra Pātengi o Te Wai o Uru (Fisher & Paykel Healthcare, East Tāmaki (R11-2356, 2357, 3556)) provided evidence of a continuous occupation by mana whenua beginning from the late 1300s or early 1400s and ending in the 1880s. This talk discusses the development of the māra kai.

It was found that the first kāinga had been lost to erosion, but during the 16th and 17th centuries a new fishing village and a complex rua site developed alongside what would have been extensive Māori gardens. While the planting soils found here compared well to other archaeological garden soils in Tāmaki Makaurau these contrasted when compared with Turangi (North Taranaki).

In addition, excavated bank and ditch structures surrounded a large planting area and a late 18th century papakāinga that was built on an artificial low platform - similar structures have been recorded in Turangi (North Taranaki). A post-contact period horticulture developed using traditional and European methods side by side.

The final phase of occupation by mana whenua saw the papakāinga replaced by the homestead of Albin Martin. Janice Adamson will be talking about this aspect of the site. Contemporary to this is a small whare to the north of the homestead representing the

last phase of Māori presence on the site and is similar in structure to a recorded site less than a kilometre away.

The length of the occupation of the site, the changes in functionality over time, and the apparent co-occupation of the site during the second half of the 19th century are all interesting aspects of the history of Te Wai o Taiki (Tāmaki River).

Dating the Cultivations in Waiariki-ki-Tai

Caroline Phillips and Kathleen Dons, “Mysteries of the Trowel”

Often consultancy archaeology is criticised for being non-academic. Although research questions are routinely identified in archaeological assessments and are a requirement by Heritage New Zealand Pouhere Taonga, they are often very general, and the accompanying reports may say little new. This is understandable if consultants travel around the country, seldom returning to locations near their previous projects, or work in areas where there has been little reported archaeology.

However, since 2016, Caroline Phillips and her team, informally known as “Mysteries of the Trowel”, have had the opportunity to revisit one small part of the Bay of Plenty. Waiariki-ki-Tai is approximately 25 x 15km and is an unusual landscape. Initially, the research questions were basic ones, such as where are the gardens (the kumara pit stores were more visible), then where are the houses? As these questions were answered, others were proposed; often due to chance finds. To date, five main questions have been posed and answered: 1/ environmental change post Kaharoa eruption, 2/how and where gardening developed, 3/ range of pit structures, 4/ construction details and age of house, and 5/ how much was cleared in any area for each new phase of cultivation. However, other issues are still being debated.

This presentation reviews the process undertaken and the questions that have been addressed. In particular it examines recent key findings regarding the difference in the dates of the coastal and inland garden and storage sites. This issue has been explored by Kathleen Dons in her MA dissertation.

Session 3

“A Cultivated Perception of the Beautiful” - the East Tāmaki farmstead of the artist Albin Martin - Site R11/1938

Janice Adamson, Archaeology Solutions Ltd

On Fisher and Paykel Healthcare’s sprawling East Tāmaki industrial site, situated on the Pakuranga Creek tributary of the eastern side of the Tāmaki river in Tāmaki-Makaurau, Archaeology Solutions Ltd excavated a multi-faceted landscape. This paper discusses one facet of this complex site, being the history and archaeology of the farmstead of the 19th century artist Albin Martin.

In 1852 Artist Albin Martin and his family purchased the 95 acre block Lot 36, residing in a house he called “Stour House”, in which they lived for nearly 30 years. Albin Martin, in

discussing his land, suggested to his friend and mentor John Linnell in a letter in 1852 that the land he had purchased was “the very best kind and can be brought under cultivation with very little trouble” – i.e. taming a landscape that in reality had a long whakapapa of tangata whenua occupation and cultivation.

The site was first recorded by Russell Foster in 1997, who noted bottle glass, brick, ceramics and the location of the well, and he thought it most likely to be the site of the Martin homestead. Since this 1997 assessment was carried out, and another in 2006 by Baquie and Clough, a number of artworks by Albin Martin have become available to view in museum and online collections, meaning we have managed to relocate in today’s landscape the perspective of some of his paintings. Together with geophysical survey and excavation results we are able to confirm Foster’s initial hypothesis of this being the site of Albin Martin’s homestead. This paper accompanies another by Hans Bader who is presenting on the whakapapa of Māori occupation on the same piece of land.

The many lives of a commercial place: Cumming & Co’s Bonded Store, Dunedin

Naomi Woods, New Zealand Heritage Properties

Placemaking in colonial New Zealand was a constant, fluid process that occurred even in the most unassuming of spaces. The commercial store at 11 Stafford Street was one such place that was assigned a plethora of meanings throughout its long and colourful life, but also in return expressed its own agency over the people who interacted with it. The life story of this building and its many incarnations highlights the dynamic nature of this placemaking process as it played out in urban Dunedin in the nineteenth, twentieth and twenty-first centuries.

Messages from the bottles: investigations of a 19th century aerated water factory in Christchurch

Alana Kelly, Underground Overground Archaeology Ltd

Established in 1860, Milsom’s Lemonade and Cordial Factory on Saint Asaph Street was the second of many aerated water factories to be founded in Christchurch. Between 1860 and 1887, it was owned and operated by various members of the Milsom family, who became well known figures in the aerated water industry across Canterbury. The factory was later purchased by Henry Mace who continued with aerated water manufacture on the site between 1887 and 1906.

In 2022 Underground Overground Archaeology undertook excavations at the site as part of a redevelopment project. During these investigations, archaeological features and materials associated with both the commercial operations of the factory and domestic occupation were identified. This paper looks at the establishment and continued operation of the business throughout the 19th century, exploring how the archaeological evidence relates to the early stages of the aerated water factory and how it represents both commercial and domestic place making in early Christchurch. It also examines how we can see it grow and change over time.

Building a world made for humans by humans: pumping water to Lyttelton in the 19th century

Amy Tuffnell, Underground Overground Archaeology

Struggling with drainage problems and muddy wells, the township of Lyttelton sought to solve their ongoing problem of adequate fresh water in the 1870s by pumping it from the other side of the Port Hills. M36/189 records the site of the Heathcote Valley pump station, which provided artesian water to Lyttelton from 1877. Recent excavations unearthed part of a brick and concrete water reservoir constructed on the site in c.1877. This paper discusses M36/189, contextualised within the industrial landscape that connected the township of Lyttelton to the rest of Christchurch and deliberates on how the choices made in the 19th century have had lasting impacts to today.

Session 4

Te Wheoro's Pa and Signal Station: A Worthy Challenge in Landscape Archaeology

David Wilton, Volunteer, Coromandel Heritage Trust

Dr Neville Ritchie, Contract Archaeologist

This project sought to identify the location of Te Wheoro's pa and signaling station, which was sited in the vicinity of Queen's Redoubt (QR), Pokeno, during the Waikato military campaign of the early 1860s. The signal station was used for relaying semaphore messages between QR and Bluff Stockade (on the true right bank of the Waikato River, approximately 500m downstream of the Mangatawhiri River mouth), and (later) to the Koheroa redoubts to the south of QR. The site was recorded as having excellent visibility of the Waikato basin to the south, and was therefore used extensively as an observation post (OP) as well as a signal station. Although the site was well recorded in the history of the campaign, the exact location of it had not been determined.

Gun Emplacements at Landguard Bluff and Whanganui Airport – A Documentation Review and Site Survey

Mike Johnston, Maritime Archaeology Association of New Zealand member and New Zealand Archaeological Association member

A complex of concrete gun emplacements is located at Landguard Bluff and surrounding Whanganui Airport. These comprise a Colchester-type 5-inch gun battery position (ArchSite R22/437) on high ground and arrowhead machine gun positions on the seaward low ground (four recorded in ArchSite) all built during World War 2 when there was fear of a seaborne invasion. A documentation review and site study of the existing gun emplacements reveal several distinct features.

The Public Works Department (PWD) designs and plans for the 5-inch gun battery were not fully implemented. Two planned magazines were not built due to a shortage of 5-inch gun ammunition. A stand-alone war shelter was not built. These functions became integrated into the overall gun platform structure. There is also no evidence that later designs to install a range finder were implemented.

It is of note that the burster slab, a usual feature of similar gun platforms designed to protect the gun crew from in-coming shell fire, was erroneously not built.

Four of the original nine arrowhead gun emplacements still exist. Virtually all of the original fixtures and fittings have been removed although a gunners' station and some metal loophole frames remain. The geographic arrangement of the gun battery position and arrowhead gun emplacements form a distinctive defensive layout to protect Whanganui Airport.

A rifle pit site overlooking the airport (ArchSite R22/466) is most likely associated with military training exercises.

Small things tell big stories

Bill Edwards, Heritage New Zealand Pouhere Taonga

A collection of buttons that had been collected when work was undertaken in the basement at Te Waimate Mission house in the mid 1970's came to light. The buttons were cleaned and they revealed a fascinating insight into the military history of the Te Waimate area. These small everyday objects carry big stories, the purpose of the paper is to examine not only the objects but their context and how these objects when interrogated inform us about the past.

Recovering Māori Waka Networks of the Wairarapa through the 1843-1852 Journeys of missionary William Colenso, using Scale-free Network theory

Dr Rosanne Hawarden, Independent researcher

Māori waka or canoe networks and their landing sites are barely acknowledged in historical and archaeological research. Like modern shipping networks, these connected places and people over centuries. The network size would have ebbed and flowed as the human endeavour at each node of the network expanded or contracted. The underlying typology known as a scale free network, maintains a constant structure with a few large hubs or waka tauranga servicing many waka while most nodes would be small with few vessels. The challenge for archaeology is to locate ancient harbours in the Pacific. Proxies for ancient links must be found, where the participating vessels are no longer available. Early shipwrecks such as those of the Mediterranean, provide data on port of origin and destination but are not found in the southern Pacific. This research uses the detailed journals of the missionary William Colenso from 12 arduous journeys on foot and by waka in the Wairarapa from 1843 to 1852 as the data source and Polinode software to visualise them. The waka network of this coast may be inferred from the frequency of his visits and his journal descriptions in conjunction with the known archaeology. The sites of major hubs should be fruitful sites for further exploration. This network methodology can be used to recover other waka networks and locate landing sites on other coasts.

Communal Living at the Lawrence Chinese Camp: an archaeozoological and historical investigation of the Chinese Company House

Rachel Clark, Archaeology Programme, School of Social Sciences, University of Otago

The Lawrence Chinese Camp is an important early Chinese settlement associated with the Central Otago gold rush. The Camp was the gateway to Gabriel's Gully for Chinese miners, and was the seat of leadership for Poon Yue County members in New Zealand. In 2004, the Lawrence Chinese Camp Community Trust purchased the land with the intention of preserving and restoring the site. Five phases of excavation were carried out by Southern Pacific Archaeological Research, resulting in large amounts of archaeological material and data. The Camp itself consisted mainly of stores and service buildings, which differs from the majority of Chinese diaspora sites associated with gold mining in New Zealand. One of these buildings was the Chinese company house, which was built in 1884 and burnt down in 1898. Due to this relatively short time period, very little is known about the function of this building, although it has been theorised to be a communal space. A taphonomic and taxonomic analysis of faunal material from two areas behind the Chinese company house was undertaken, in an attempt to interrogate the kinds of communal activities that may have occurred.

This paper presents the results of the faunal analysis and discusses the implications of the meat cuts and types of butchery marks found in the assemblage. Combining the results of this analysis with historical sources and other artefacts from the Chinese company house, this paper argues for a multi-functional communal space similar to that of Ah Lum's store in Arrowtown.

Session 5

Introducing the Master Craftsman from the 032 Working Floor

Dan Witter, Witter Archaeology and Jeremy Habberfield-Short, Strata Heritage

Excavated material normally is an accumulation of ordinary rubbish and discarded items at a place used by various anonymous occupants. This makes it very difficult to identify an individual person. Occasionally however, it is possible to catch a glimpse of a discrete personality who had a defined role in society.

The case study here comes from the NCTIR excavations that followed the Kaikoura 2016 earthquake. It is from The Pines S117 (P31/01) site complex located in Waipapa Bay on the coast about 30 km north of Kaikōura. The excavations were the result of highway works cutting through about half a kilometre of a dunes north of Waipapa Point by NZTA as a part of the 2016 Kaikōura earthquake recovery (NCTIR). This yielded a variety of deposits, including the context 032 which was an argillite working floor. The radiocarbon date of a hearth from this feature straddles two calibration curves for a range of 1450 to 1630 AD.

In this paper, it our intention is to use quantitative lithic analysis to discern the work of a master craftsman on a large argillite adze working floor. It is proposed that this

represented a single event under unusual circumstances in a distinctive social context. The master craftsman of 032 is identifiable to gender and rank and it is argued that he had a critical role in a social crisis.

The raw material economisation of adzes on Ahuahu Great Mercury Island

Josh Emmitt^{1,2}, Rebecca Phillipps², Stacey Middleton³, and Simon Holdaway²

¹ Auckland Museum

² Anthropology, Faculty of Arts and Education, University of Auckland

³ Auckland Council

Raw materials are used to characterise the early settlement of Aotearoa Te Wai Pounamu New Zealand (hereafter Aotearoa) by Māori. Early wasteful use of raw material is contrasted with later conservative use in response to changing social organisation and reduced resource availability. Here we examine four basalt artefact assemblages from Ahuahu Great Mercury Island to test the assumption of changing resource use of this shift in use. Results suggest conservative use of basalt from the earliest occupation on Ahuahu, with differences in resource use among adjacent locations. We suggest resource use may have involved bulk procurement of stone resources, provisioning of place, and recycling.

Understanding Māori obsidian knapping: A study of Ahuahu obsidian artefacts

Anne Peilberg, PhD student, University of Auckland

This research focuses on the study of obsidian knapping and tool production on the site of Waitapu on Ahuahu (Great Mercury Island), to understand the technological practises of Māori knappers.

My study aims to shed light on the methods used by Māori knappers to manufacture obsidian artefacts. From core preparation through flaking and tool making, as well as recycling practices, the detailed analysis makes it possible to recognise and comprehend the various stages of production. By closely analysing obsidian artefacts present at Ahuahu the research identifies specific practises and preferences in tool production, revealing patterns in technology, skill and decision-making. By analysing reduction sequences and looking for any enduring patterns in the knapping processes, this study aims to gain a deeper understanding of Māori knapping approaches based on the production of obsidian lithic from Waitapu.

Results so far suggest a consistent pattern in knapping practices, aiming for optimal reduction by thoroughly reducing cores, cortical flakes, and tools to exhaustion.

Going with the flow: A pilot experimental investigation into the in-water behaviour of pre-contact Māori fishing lures

Bradley McDonald, Archaeology Programme, University of Otago

In the early human settlement of Aotearoa New Zealand (thirteenth to fifteen centuries) lures made with stone shanks were used in fishing. Little is known how the form and materials of lures impacted their in-water behaviour, and how this behaviour impacted

their use. Given the role of fish in the Māori diet, understanding fishing methods and technologies contributes to our understanding of past human-environmental relationships. This presentation presents the methods and results of a novel project using experimental methods to test the functional behaviour of stone lure shanks. replicas of archaeological lure shank examples from Waihemo/Shag River Mouth were created using 3D scanning and hand carving methods. These replica lures were then tested by monitoring and measuring the behaviour of the lures when exposed to an artificially generated water current at controlled speeds. Footage of this testing was then analysed in Kinovea, a motion tracking software, enabling the assessment of the in-water behaviour of these lure designs and the implications of these behaviours on past fishing methods. The method culminated in the identification of key aspects of shank design that alter the behaviour of the lures. Behavioural variation was observed in the required speed, angular deviation, and movement type, confirming the importance of lure design to fishing strategies, including possible fish species targeting. As such, this project has served as a proof-of-concept study, confirming that pre-European Māori fishing devices can reveal past human-environmental relationships when tested in controlled conditions. This research method may be replicated in international experimental archaeology contexts.

Radiocarbon dating the deposition of socket-hafted un-tanged adzes at Mokoia Pa, Panmure, Auckland (R11/98)

Matthew Felgate, Maatai Taonga Ltd Archaeological Consultancy

Investigation at Mokoia Pa recorded complex, deep stratigraphic relationships in some areas. The deepest stratified deposits were recorded at the cliff edge to the Tamaki Estuary. This permitted Bayesian sequence analysis of radiocarbon determinations using OxCal Bayesian modelling software. Lightly-tanged adzes were recovered from various parts of the site, generally associated with early features of the site. Timing of the deposition of two un-tanged adzes on a terrace surface at the cliff edge, generally considered a later form, was therefore of great interest. Sequence modelling of a comprehensive set of radiocarbon determinations from this area suggested these un-tanged adzes were deposited in the late 1600s AD.

Let's get ready to wiggle; Radiocarbon in a new age

Fiona Petchey: Radiocarbon Dating Laboratory, Te Aka Mātuatua – School of Science, University of Waikato; fpetchey@waikato.ac.nz

Louise Furey; Independent researcher.

Atholl Anderson: Ngāi Tahu; School of Culture, History and Language, Australian National University; Ngai Tahu Research Centre, University of Canterbury.

Simon H. Bickler: Bickler Consultants Ltd; Te Aka Mātuatua – School of Science, University of Waikato.

Gerard O'Regan: Ngāi Tahu; Curator Māori, Tūhura Otago Museum.

Marsden-funded research aimed at improving the calendar resolution of marine shell radiocarbon dates has enabled us to revisit and refine the chronologies of a series of key

early (“Archaic” and “Transitional”) sites around the country. This work is ongoing, but here we outline the process and improvements to dating at two sites; Shag River Mouth (Te Waipounamu) and Opoutere (Te Ika-a-Māui). This work demonstrates the quantitative changes in site chronologies over the last 25 years and how we can achieve even greater precision using a combined shell/charcoal dating approach. This work opens up new avenues of research, in particular, higher resolution study into the events that influenced the lives of Polynesians who settled in Aotearoa, New Zealand.

Get ready (Shoobee-do-be-do) to wiggle. When you wiggle, you can't go wrong!

Session 6

The Cultural Significance of Twist Direction in Māori Archaeological Cordage

Lisa McKendry

Archaeological cordage fragments provide more than quantitative data, they are a tangible lens through which to understand the intricate relationship between plants, people and cultural practices. Internationally, the concept of the enculturation of twist directionality has proven to be a valuable investigative tool, and this presentation explores the cultural significance of twist direction in Māori archaeological cordage. While cordage represents a fundamental technology in customary Māori material culture, the specific choice between S-twist and Z-twist directions has been predominantly attributed to raw material properties rather than cultural preferences. Through detailed analysis of archaeological collections from Te Ana o Hineraki Moa Bone Point Cave and Otauwao Le Bons Bay, this research challenges these assumptions by documenting an unexpected prevalence of S-twist cordage despite the inherent Z-twist tendency of materials like harakeke (New Zealand flax).

The findings suggest that twist direction of Māori cordage in the past may be associated with cultural factors, rather than merely a material-driven technical necessity. Twist patterns across different materials, levels of processing and compositional complexities indicate directionality could be related to regional identity, handedness, or as connections to the past. Much like feather signatures in cloaks, twist direction could have served as a subtle but significant marker in Māori cordage technologies. This presentation demonstrates how detailed technical analysis of seemingly mundane artefacts can reveal new perspectives on the continuity of Māori cordage technologies.

Reflection into our Past

Erin Tioke, Ngati Rangitihi Ki Matata, Cultural monitor for Ngati Rangitihi and Ngati Pikiao

I took the role as an iwi monitor by the request from my Rangitihi elders and the Whakatane District Council. In 2005, I met Ken Phillips and Rachel Darmody at Te Kaokaoroaa in Matata a significant site where koiwi had been discovered. By 2009, I had started my journey monitoring the mitigation works in Matata after the 2005 debris flow. In 2018, I continued working with other archaeologists such as Brigid Gallagher and her team, as well as Dr Caroline Phillips and her team of which my wife and I included.

A role as an iwi monitor is to be very true to your mahi: to represent your iwi, to help and collect as much information possible before land development. Time restrictions and budget constraints dictates weeks or months allocated for projects to be undertaken. But we are hard workers, iwi monitors and archaeologists working together to do the utmost to uncover and analyse our ancestor's footprints: sharing our history with fellow iwi monitors and archaeologists.

Our ancestors partook in wananga during the winter months practicing various karakia for tapu and noa reciting whakapapa: building structures by using wooden and stone implements: hunting, harvesting, cultivating gardens and using natural resources for every day usage and warfare.

Modern development is changing our turangawaewae, and for many of us it brings mamae-pain. Archaeology has given me a wider perspective capturing the essence of the past. As an artist, the drawings I will show are my interpretation depicting our history, to enrich and honour their lives.

Māori heritage of trade, the backbone of the New Zealand Economy

Teaooterangi Apaapa

Heritage New Zealand Pouhere Taonga has a vision for Māori Heritage, that "Māori heritage places are recognised and valued by all and regarded as central to New Zealand's heritage" (Tapuwae, 2017). This promotes the purpose of Heritage New Zealand Pouhere Taonga Act 2014, "to promote the identification, protection, preservation, and conservation of the historical and cultural heritage of New Zealand." How do we as researchers and practitioners achieve this recognition of Māori Heritage places as valued taonga treasures in Aotearoa and pivotal to enhancing biodiversity on farms and private land?

This presentation seeks to answer this question through analysing the case study of Taiea te Taiao mā Mangapiko mai Maungatautari ki Pirongia Te Aroaro o Kahu ahu ake ecological corridor.

Taiea Te Taiao, promotes an ecological corridor to link Maungatautari and Pirongia Te Aroaro o Kahu. This corridor will reconnect these mountains through returning the native birdsong and marking key cultural historical sites acknowledging the rich indigenous stories and history of trade.

Conducting Mātauranga Māori research combining it with modern day science and collaborating with key stakeholders both iwi and Landowners is imperative to achieving this goal.

Māori Heritage sites of trade (pre-European settlement), are within the ecological corridor connecting the history and whakapapa of the whenua/land and wai/waterways in the Waipā, building the NZ economy in the early 1800s, which is central to New Zealand's Heritage.

Supporting a sense of place through archaeological outreach

Pam Bain, Heritage New Zealand Pouhere Taonga

Engagement in archaeology supports people to think about their place in the landscape and Heritage New Zealand Pouhere Taonga (HNZPT) has created a range of outreach and public archaeology events and resources that encourage people to learn more about the profession.

This paper introduces four of these resources and activities.

Two digital projects have been undertaken recently by HNZPT. Firstly, the Te Arō Pā digital interpretation project, in partnership with Te Ātiawa, which consists of a range of digital resources telling the stories associated with this nationally significant place.

Another digital resource developed with Ngāi Te Rangi, Ngāti Ranginui and Core Education is a LEARNZ virtual fieldtrip for schools. It is about Ōtūmoetai Pā, archaeology in Aotearoa New Zealand and the role of HNZPT.

Thanks to input from many archaeologists nationally, HNZPT has developed an Archaeological Activities for Kids kit which has been rolled out nationally at our properties and in association with others. It has a range of archaeological activities for children including excavation, sorting, cataloguing and maritime archaeology.

And finally, this paper will look at the recent Ōtautahi Festival of Archaeology where HNZPT partnered with many local groups to run a very successful event full of archaeological activities for children.

Session 7

Salvage archaeology on Te Piha/ Whakaari Pā: A response to the impact of Cyclone Gabrielle

Ella Ussher, Piha Archaeobotanical Services

Edward Ashby, Te Kawerau Iwi Tiaki Trust

A collaborative project between Te Kawerau a Maki, Auckland Council and Piha Archaeobotanical Services is underway, with a goal to collect information about the preColonial Māori occupation of Whakaari Pā (site Q11/57) on Te Piha/ Lion Rock. In February 2023, Cyclone Gabrielle caused a number of significant slips on Te Piha/ Lion Rock which is a significant wāhi tapu to Te Kawerau a Maki. These slips exposed four areas with a total of five shell midden deposits. A Scientific Archaeological Authority to sample these deposits was applied for by Te Kawerau Iwi Tiaki Trust and granted in September 2024. Three key objectives were identified for this project- 1. To preserve information and material; 2. Challenge existing site typologies in the Waitakere Ranges; and 3. Understand Te Piha/ Whakaari pā within the wider archaeological landscape of the Ranges.

This is only the second approved archaeological investigation within Piha, with the first being that at Te Ahua Pā (site Q11/61) by Turner et al. (2010, 2011). Dates from that site returned a range of 1330 to 1570 cal AD (95.4% probability), which was surprisingly early

for a pā site, and has led to further discussion upon the nature of headland or elevated occupation within the surrounding area, with a suggestion that environmental rather than political reasons may have forced the abandonment of low-lying settlements at that time.

While the samples are still being analysed, early results indicate that those occupying Whakaari pā were utilising a wide range of material from the surrounding valleys, bush slopes, beach and rocky shoreline. Subtle variations in shell midden compositions across the site also suggest that the occupants of the pā were making choices in response to resource availability and also preferences. It is anticipated that two date ranges will provide also some chronological context. Finally, it is also hoped that this response to a potential loss of information from Whakaari pā will be used to help develop a precedent for anticipated impacts on archaeological sites from natural disasters connected to climate change.

The Ōmaro Spit midden redux

Matthew Campbell^{1,2}, Brendan Kneebone¹, Jaiya Hunter², Ella Ussher³ and Sarah Phear⁴

¹ CFG Heritage Ltd

² Anthropology Department, University of Auckland

³ Piha Archaeobotanical Services

⁴ Underground Overground Archaeology

Having excavated and analysed site T10/986 on the Ōmaro Spit, Coromandel Peninsula, and presented the excavation at the 2024 conference in Nelson, we revisit it to see what state it is now in. In short, it has eroded almost entirely due to a series of adverse weather events that we link to the climate emergency. We suggest this situation will become increasingly common, and that only we, archaeologists, have the skills and knowledge to ‘rescue’ information about New Zealand’s history from these sites before they are gone. But what sort of archaeology should we be doing, and how, and why?

Session 8

The Pacific Archaeology Radiocarbon Database

Simon H. Bickler, Bickler Consultants Ltd; Te Aka Mātuatua – School of Science, University of Waikato

Fiona Petchey, Radiocarbon Dating Laboratory, Te Aka Mātuatua – School of Science, University of Waikato

Gideon Bickler, University of Auckland

Radiocarbon (¹⁴C) databases are essential tools in archaeological and environmental research, enabling the synthesis of large chronological datasets. Despite global initiatives such as CARD and XRONOS, and regional databases such as SahulArch cover parts of Near Oceania, Australia and South East Asia, coverage across the Pacific Islands has remained sparse and fragmented. Existing regional compilations largely focused on individual archipelagos or research questions, with few accessible, centralised databases. The Pacific Archaeology Radiocarbon Database (PARD) addresses this gap

by providing a substantial and expanding repository of over 15,000 ^{14}C dates from archaeological contexts across Near and Remote Oceania, including integration of the Aotearoa New Zealand Radiocarbon Database (ANZRD). The database encapsulates over six decades of Pacific archaeological research, incorporating diverse data sources but also reflecting associated inconsistencies and historical issues in radiocarbon sampling and interpretation. It is a useful resource for identifying research gaps, revisiting old excavations, and linking radiocarbon data with broader environmental and settlement studies. Auditing and expansion of the database are ongoing, with community collaboration essential for improving both the data quality and coverage. PARD also facilitates wider access to building Pacific archaeological chronologies, enabling Indigenous stakeholders, researchers, and heritage managers to better engage with and interpret the region's complex human past. PARD is accessible via ArcGIS Online, hosted by the Waikato Radiocarbon Laboratory, and is designed to support both academic research and community heritage management.

So what kinda site is that? - reviewing the site types and features in ArchSite

Mary O'Keefe, ArchSite Central Filekeeper

The site types and features currently in use in ArchSite are based on the first computer-based system devised in 1982.

These types and features are used to identify and categorise sites, and are used in detailed analysis by sorting and grouping sites by their characteristics.

Both technology and the scope of site recording has improved dramatically since the 1980s, and the site types and feature have not kept up.

With the launch of the latest ArchSite platform it is timely to revise, amend and improve them.

The Central Filekeeper has commenced a review, based in part on her work reviewing and approving sites, where she is well placed to spot sites that don't quite "fit" with the current schemas of site types or features.

This paper will outline the background, purpose and context of the review, and outline the new schemas developed thus far.

Imagine if you could "unearth" relevant research, "published" anywhere

1. Build a model of archaeology-relevant concepts/terminology
2. Train AI

Trish O'Kane, Information Architect

Every research discipline has its own "world" of concepts and terminology.

This paper (with diagrams) shows a "proto-model" of archaeology-relevant concepts/terminology and demonstrates how it can be used.

We can assemble archaeology-relevant terminology/concepts (including variations) into a "conceptual model", recording how concepts of artefacts, cultures, places, etc

are/were/could be described by archaeologists and by other experts – e.g. geologists, geneticists. It includes relationships e.g. authors and fields of research.

With a model of archaeology-relevant concepts/terminology, you could find (for example)

- Experts publishing about the same types of artefacts but using different terminology
- Articles in other languages about tool making techniques in different/similar environments
- Remote sensing techniques that aren't called "remote sensing techniques"

We can use the "conceptual model" to train Artificial Intelligence (AI) tools. Benefits include:

- Making it easy to find useful information, through standardised and alternative terminologies description and relationships
- Low "Signal to noise ratio" on search results (better than Google Drive searches)
- Relevant terms can be applied as "keywords" to existing applications/publications

Land transport infrastructure in Aotearoa NZ. Recent developments in heritage management

Karolyn Buhring, NZ Transport Agency Waka Kotahi

Jeremy Habberfield-Short, Strata Heritage

The NZ Transport Agency Waka Kotahi (NZTA) is responsible for the management of an extensive national network of over 11,000kms of state highways. The NZTA key functions include the delivery of an ongoing programme of capital projects, maintaining and operating the network and other general functions as set out in the Land Transport Management Act 2003 (LTMA). The LTMA statutory operating principles explicitly require the agency to exhibit a sense of social and environmental responsibility in meeting its objectives and undertaking its functions. In addition, the NZTA operates in a broader policy and legislative context with many acts, regulations and rules that govern what we do and how we do it.

Our roads closely follow traditional travel paths that connected the historical settlements of Aotearoa NZ. State highway activities have the potential to damage or disturb places of cultural, archaeological or historic importance. This includes places of significance to Māori such as pā, marae and wāhi tapu. Our transport infrastructure also represents a legacy of road and rail building that evolved through time.

Over the years, the NZTA has continuously developed heritage policies, management systems and tools to support sustainable work on transport infrastructure that appropriately manages risks to heritage, and conserves and celebrates these places. This presentation provides an update on recent developments within our heritage

management practices and showcases their implementation through some of our recent transport projects.

Managing Ngapotiki Heritage – Mangatawa, Te Akau, Rangataua and Papamoa

Des Kahotea

The rohe of Ngapotiki is distinctive in Tauranga Moana with a large number of waahi tapu, sites of significance, pa and waahi tupuna (archaeological sites) with a coastal location. This ancestral landscape has been a target for infrastructure demands for the economic growth of Tauranga since the 1910s first with the railway line at Te Maunga followed by the establishment of Mount Maunganui borough and growth of Tauranga demanding the quarrying of Mangatawa pa since the 1950s for wharves, roading and Tauranga harbour bridge (1980s). During the 1970s, when urupa, pa and an estuary were targeted, Ngapotiki leadership, kaumatua and hapu responded with objections and other strategies. This was the era of compulsory taking of Maori land through the Public Works, Town and Country Planning and Municipalities Acts. Tauranga District Council was formed from county, city and borough areas in 1989 and in 1993 the zoning of residential, future urban and commercial areas was made along the Papamoa coast potentially impacting both on waahi tapu and waahi tupuna (archaeological sites). This paper discusses the response Ngapotiki had to make under the RMA and HPA to the effects of high urban growth on heritage in the Papamoa area during the 1990s and 2000s.

RMA reform, exploring the proposed changes to heritage management in Aotearoa

Rebecca Ramsay, Te Kaunihera o Tāmaki Makaurau / Auckland Council

Central Government have announced a reform of the resource management system with two proposed acts, focused on land-use planning, natural resource management, while prioritising private property rights. In March 2025 the Expert Advisory Group released the 'blueprint' for reform, which proposes to remove historic heritage from the new planning system. This paper will set out an overview of the proposed changes including pros and cons of options and provide an opportunity to canvas feedback from the NZAA membership, to inform upcoming lobbying and submissions on legislative change.

Session 9

Connecting with our colonial past: working with descendants and stakeholders to tell the stories of our forebears

Charlotte King^{*,1}, Ruth Warren^{*,1}, Hallie Buckley¹

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Between 2016 – 2020 the Southern Cemeteries Archaeology Project undertook a series of excavations in collaboration with local communities, descendants and landowners to investigate unmarked graves in colonial cemeteries around Otago. This project uncovered the skeletal remains of over fifty previously unknown colonial individuals, with bioarchaeological research prior to reburial allowing us to reconstruct their life histories. The communication of these stories of everyday colonial lives has immense potential for allowing modern New Zealanders to connect with the people of the past. This, however, requires an understanding of the needs of descendant and stakeholder groups, as well as the production of high-quality science communication resources that encourage connection.

Here we detail how our work with descendants and stakeholders has led to the development of a schools programme telling the stories of Otago's colonial inhabitants. We share the results of our first testing of these resources, highlighting how interaction with material culture, skeletal material and archival resources has impacted young people's understanding of the colonial world and their relationship to it.

Ngā Tapuwae ki te hauauru o Te Waiariki: Mai te takutai o Waihi ki te takutai o Ōtamarākau Footprints on Western Bay of Plenty: Waihi Beach to Ōtamarākau Map & Guide

An example of community archaeological outreach and education.

Ben Pick, Heritage New Zealand Pouhere Taonga

Heritage New Zealand's mission is to ensure that our bi-cultural history is understood by all New Zealanders and all peoples. Meaningful community engagement and outreach is a powerful way of ensuring this understanding occurs.

In 2022 in partnership with a local heritage community group, Heritage Bay of Plenty, Heritage New Zealand's Lower Northern Office produced Ngā Tapuwae ki Te Papa - Map and Guide, which was a very successful outreach project based on historic heritage sites in the Tauranga CBD. Following on from this project Heritage New Zealand's Lower Northern Office again in partnership with Heritage Bay of Plenty and other organisations, began developing a larger map and guide with a significantly wider focus across the entire Western Bay of Plenty District.

The Footprints on Western Bay of Plenty map and guide project's aim is to provide an easy and interactive way for the New Zealand public to engage with local place-based

heritage stories and connecting those people to their local heritage places. In this presentation I will present how the map and guide outreach project was initiated, researched, financed and produced and how it is to be used to discover the stories of the Western Bay.

A Future of Virtual Archaeological Site Reconstruction in Aotearoa New Zealand

Simon H. Bickler, Bickler Consultants Ltd
Thomas MacDiarmid

The emergence and accessibility of new-generation gaming development software has opened up unprecedented possibilities for the digital reconstruction of archaeological sites, with previously unparalleled level of quality, scale, and affordability. This paper provides an overview of the evolution of 3D site reconstruction usage in Aotearoa New Zealand, discussing its past applications and how these experiences inform future advancements. We showcase how these reconstructions model archaeological data obtained from diverse sources such as surveys, excavations, topological studies, and environmental research, to facilitate the creation of comprehensive scientific narratives of Aotearoa New Zealand's rich history. We highlight the potential for these reconstructions to conceal underlying assumptions and biases within the data, creating new fictions. Such fictions can and must be challenged using both archaeological evidence and the lens of matauranga Māori. Finally, we highlight the transformative potential of these innovative tools in reshaping public engagement with archaeology throughout Aotearoa New Zealand on a national scale, offering new avenues for immersive and interactive experiences that foster a deeper connection with the country's rich cultural heritage.

HNZPT Updates

The Archaeological Authority Portal: Post-launch Update

Emma Clifford, Heritage New Zealand Pouhere Taonga
Victoria Trow, Heritage New Zealand Pouhere Taonga

Heritage New Zealand Pouhere Taonga launched the Archaeological Authority Portal (AAP) in March 2025. The launch marked a shift from manual applications to online applications through a central portal which enables centralised communications, the ability to add contributors such as iwi/hapu or s.45 archaeologists, access to real-time tracking of the application and reminders about compliance with the conditions of authorities. The focus of this paper will be to provide an update post-launch building on Vanessa Tanner's paper at the NZAA conference in 2024 and will include discussion of some key features and links to the HNZPT's Compliance Delivery Model.

Site Damage: What do we even do?

Mel Russell, Chief Legal Advisor Heritage New Zealand Pouhere Taonga

Most people are aware of the legal requirement for an authority if works will modify or destroy an archaeological site. And I am sure it comes as no surprise that not everyone complies with this requirement.

Heritage New Zealand is notified of potential site damage on a weekly basis from all manner of sources – councils, neighbours, consultant archaeologists, developers and sometimes even the offender themselves. Not all of these reported incidents are an offence under the Heritage New Zealand Pouhere Taonga Act 2014 (the Act), however all reports are investigated and responded to in an appropriate manner.

When considering potential site damage, Heritage New Zealand first has to gather enough evidence to prove beyond reasonable doubt that an offence has occurred. Often through this process, we discover that no archaeological site has been affected – so it is not an incident of site damage at all. In other cases, where there is evidence to support the site damage claim, the approach that Heritage New Zealand takes is to consider the attitude of the offender.

This is done through application of our compliance model, which helps us determine the appropriate response in each case, ranging from training and education to warnings, enforcement orders, and prosecutions.

This presentation seeks to address common questions that I hear as Chief Legal Advisor about what happens after a report of site damage is made, and why do we not undertake more prosecutions.

POSTER ABSTRACTS

The posters will be displayed at the venue throughout the conference.

Spanning the Centuries: a snapshot of 19th century rail bridges in the Canterbury and West Coast regions.

Alana Kelly, Underground Overground Archaeology

The establishment of railway lines in New Zealand in the 19th century was a major development for transportation. Railway lines connected communities, provided integral transportation networks, and facilitated the movement of bulk freight for export and import. While many of our railways featured impressive and difficult engineering feats, they also included a series of simple repeating elements and structures, often built by standard design. This poster examines examples of 19th century rail bridges from the Canterbury and West Coast regions. Rail bridges are an integral part of any transportation network but can easily be overlooked or considered to be mundane infrastructure. This poster examines how the humble rail bridge is typically constructed and explores how each rail bridge has its own sense of individuality.

Pre-European Māori Fishing in the Bay of Plenty

Caitlin Haylock, University of Auckland

This poster presents the historical ecology of pre-European Māori fishing practices in the Bay of Plenty. It discusses the new identification of 7531 fishbones from three areas of the Papamoa SupaCenta site. These areas are compared with 15 fishbone assemblages from across the Western Bay of Plenty, Whakatāne, and Ōpōtiki districts. Two distinct assemblage groups emerged, reflecting differences in fishing strategies influenced by coastal landforms, marine habitats, and capture technologies. Mackerel-focused netting appears to have been the dominant fishing practice, shaped by resource availability and ease of access. This investigation fills a regional gap and lays the groundwork for future fisheries research in Aotearoa.

Exploring Hardship in Colonial Otago Using Biochemical Evidence from Archaeological Hair.

Joseph B. Ogunsetire, Charlotte L. King, Hallie R. Buckley,
Department of Anatomy, University of Otago, Dunedin, New Zealand.

The experiences of those living on Otago's colonial goldfields are of huge interest to researchers. Recent excavations of unmarked graves in colonial goldrush cemeteries enable us to examine these life experiences using bioarchaeological techniques. In this study we focus on the impact of mining techniques on the health of those on the goldfields. We examine exposure to mercury associated with mercury amalgamation, using time-resolved analysis of mercury in human hair. We present pilot data showing

consistent but variable concentration exposure to this toxin, some of which is likely linked to mining activity, some of which almost certainly reflects medicinal use.

Capturing the Past: an analysis of glass plate negatives

Madison Gamble, Archaeology Programme, School of Social Sciences, University of Otago

It is not often that photographs are recovered from the archaeological record, nor that they would be glass plate negatives! Excavated from an Invercargill site - originally home to a photography studio from the mid-1870s into the twentieth century - seventeen glass plates with surviving remnants of negatives were recovered by New Zealand Heritage Properties archaeologists. Of these, fifteen are portraits. As both documentary source and artefact, analysis of these glass plate negatives reveals details about the site, as well as providing a glimpse into the role of photography in colonial New Zealand - even within the southernmost city of Invercargill.

Following the red brick road: Kōkōwai as a provenancing proxy for repatriation of human remains?

Maire Neilson, Dr Charlotte King and Dr Ruth Warren, University of Otago

Kōkōwai (ochre) is a sacred pigment in Te Ao Māori, traditionally used to cover both tūpāpaku (bodies) and kōiwi tangata (human skeletal remains) during primary and secondary burial. However, despite the known importance of kōkōwai in mortuary ritual, there has been little attempt to draw together reports of how and where it is used. Here we undertake a systematic review of published and grey literature describing kōkōwai's association with kōiwi. This information has the potential to be significant, not just for understanding past practices but also for provenancing unidentified kōiwi. We explore the potential for pigment use and placement patterns that may be hapū-specific.

Discoveries in Waiariki-ki-Tai

Jennifer Lane, Caroline Phillips and Team.

Since 2016, Caroline Phillips and team have undertaken nearly 40 projects in one part of the Bay of Plenty (Waiariki-ki-Tai). The combined work, covering over 1,000ha has found over 18,000 features, comprising 42 multi-post row pits, 2,400 storage pits, 3,200 bin pits, 8,000 postholes (many relating to pit structures and 30 houses), 1,200 hangi and 140 gardens. Swidden cultivation (beginning around 1400AD) based on the volcanic ash from the Kaharoa eruption (c.1314) offered an opportunity for kumara cultivation, which is found throughout this region with associated storage pits, dwellings and cooking areas. This poster shows some of the unusual and common features discovered.

All Hands on Deck: Community knowledge and maritime archaeology on Stewart Island/Rakiura, New Zealand

Sasha Joura

This poster presents ongoing maritime archaeological research on Stewart Island/Rakiura, extending a Master's thesis project from Flinders University. Supported by the Walton Fund, the project used a community archaeology approach that acknowledges residents as local heritage experts and identified 22 potential new intertidal and submerged sites of European/Pākehā origin. Fieldwork focused on ground-truthing sites within Paterson Inlet using non-disturbance survey methods. Verified sites, including accurate GPS data, will be submitted to the NZAA ArchSite database to enhance the documentation of maritime heritage in the region.

Hopukioire

Rachel Darmody, Eleanor Sturrock, Te Haana Jacob, Heritage New Zealand Pouhere Taonga and Nathan James, Ngāti Kuku.

Under the shadow of Mauao, is a small but strategically located hill called Hopukioire (Mount Drury) beside Mount Maunganui's main beach. It is densely concentrated with archaeological features including a pā, terraces, midden and caves. It is also one of the earliest sites in New Zealand to be occupied by the British Military following the signing of the Treaty of Waitangi (1842-1843). This poster encourages conference participants to visit the nearby reserve and its archaeological sites, as well as enjoying views of two other significant sites- Waikorire (Pilot Bay) and Moturiki (Leisure Island).



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