



NEW ZEALAND  
ARCHAEOLOGICAL  
ASSOCIATION

## ARCHAEOLOGY IN NEW ZEALAND



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## FIELDWORK AND OTHER ACTIVITIES

### Remote Sensing Workshop

On Friday 14 November 2008, the New Zealand Archaeology Professional Development Cell (PDC) ran a workshop on remote sensing at Highwic House, Auckland. This was the seventh in their series of professional development workshops. Five experts – Allan Juffermans (Juffermans Surveyors), Caroline Phillips, Ian Lawlor, Hans-Dieter Bader (Geometria) and Daniel Parker – presented current information, illustrated by recent examples of their work. The workshop was supported by the New Zealand Historic Places Trust (NZHPT) and Opus International Consultants, and thanks must go in particular to Hans who devised the topic and organised the speakers; to Chris Mallows for photocopying handouts; and Meri Low for organisation.

The workshop discussed non-intrusive remote sensing techniques that are currently being used in New Zealand. These are especially valuable when they are all used in an archaeological project and the information is transformed into multiple overlays. The results can provide an important tool for archaeological assessment or preparation for intrusive investigation, and also has the ability to better provide for the preservation of representative sites or parts of sites.

Allen Juffermans briefly looked at the history of surveying in New Zealand, detailed the different types of plans and their current availability, and described current methods of cadastral surveying. Caroline Phillips discussed the use of aerial photos, focusing on the information that could be gained from a series taken over time of the same locality (time-layered aerials). Ian Lawlor followed with examples of geo-referencing oblique aerial photography and infra red photography. Hans-Dieter Bader, with contributions from Matt Watson and colleagues in Germany, described the current geophysical techniques used here and in Europe including, ground penetrating radar (GPR), soil resistivity and magnetometry. He illustrated this with examples from both Germany and New Zealand. Daniel Parker spoke about digital elevation models (DEM) and

overlaying all forms of information using geographic information systems (GIS), and as an example used his work with Geometria in the Horowhenua

*Professional Development Cell*

## **Northland**

Clough and Associates Ltd have undertaken work at Wiroa Station, Purerua Peninsula, Bay of Islands. Monitoring of a large residential development is being carried out with Dianne Harlow under an authority from the NZHPT. It is an area rich in archaeology with several significant archaeological sites, including two pa. The development has been designed to avoid the most significant sites. Initial earthworks have uncovered settlement remains in the form of midden and hangi which have been recorded and dated. Two dates from sites P04/346 and 349 suggest occupation between 1680 and 1870 AD.

Clough and Associates have also undertaken work at Mourees Bay, Whananaki. The coastal subdivision here has been designed to avoid most of the archaeology. A general authority has been granted by the NZHPT to deal with any unrecorded archaeology and some terraces that will be impacted on by the development. To date, investigation of a small camp site has unearthed evidence of lithic production and maintenance in the form of an obsidian core, sharpening stone and small adze. Apart from one post-hole there was very little evidence of structural remains although elsewhere on the property are complexes of terraces, pits and a pa site.

Clough and Associates have also been working on the Whangarei Heads Sewerage Upgrade. During the course of this project numerous archaeological midden deposits were exposed during the construction of pumping stations and related infrastructure. These deposits were investigated and recorded. Several koiwi were recovered and were analysed and reported on by Judith Littleton (Department of Anthropology, University of Auckland). Complex stratigraphy was exposed in both Urquharts and Taurikura Bays, indicating an intensity and depth of settlement around the harbour. The material is currently being analysed and will form the basis of a detailed report to NZHPT and the Whangarei District Council (WDC).

Other work undertaken by Clough and Associates in Whangarei has been carried out in conjunction with the University of Auckland field school, at the WDC Puwera landfill site, Portland, Whangarei. The preliminary fieldwork at this site has been reported on previously. Analysis of the remains and artefactual material from investigation of the three sites (Q07/1091, 1092 and 1103) is progressing. The stratigraphic observations during the excavation were supported by charcoal analysis (Rod Wallace at the University of Auckland) which confirmed multiple phases at the site from initial land clearance through

subsequent burning and abandonment of the site. The emphasis of the sites appears to be on storage, with a predominance of storage pits; radiocarbon dates from various site features indicate occupation over a 300 year period from c.1450-1750AD.

Dianne Harlow reports that works continue on the sewerage scheme at Mangawhai Village and Mangawhai Heads townships. Barry Baquie and Jennifer Low are helping with the monitoring of pipelines, rising mains and grinder systems while Cristany Milicich, a graduate student at the University of Auckland, spent two days at the site as part of her course work for Marianne Turner's CRM paper.

Simon Bickler and Dianne Harlow have just completed an assessment report for the proposed Marsden Town centre at Ruakaka. The location is inland on low-lying land and, sadly for the archaeologists, unlikely to yield any archaeological information.

James Robinson has done an archaeological assessment to modify a road in front of St Michaels Church and an authority has been applied for. The site is located on the Taiaimai Plains, inland from the Bay of Islands, in the area of Ngawha approximately 4 km west of the township of Ohaeawai. St Michaels stands on the site of Pene Tau's pa, which was in 1845 a scene of battle (the Battle for Ohaeawai Pa) between Maori (led by Hone Heke amongst others) and the British forces during the Northern Wars (1844-1846). The pa had been fortified with innovative techniques, was almost impregnable, and many British soldiers and some Maori lost their lives. St Michael's Church is one of the earliest surviving churches in Northland. The church is nationally significant as the site of this seminal battle, and symbolises progress towards peace between Maori and Pakeha. The proposed development is away from the church and pa and is unlikely to be a direct threat; however, the archaeological investigation may yield more information about associated features or activities.

Leigh Johnson and Elizabeth Callaghan have been involved with monitoring and recording the removal of the Kerikeri River Bridge. The removal of the bridge is intended to reduce the affect and damage caused by traffic vibration to the Stone Store and by flooding to the Stone Store, Mission House and grounds. The road abutments on the northern and southern side of the river have been removed and the banks re-contoured. The works occurred in the area of the former Kerikeri Mission Station established in 1819. There may be evidence of pre- or post-contact Maori use of pedestrian access across the river by means of a ford, or the informal dray/cart track approach on the northern

side during historic times. There may also be evidence of the original seven foot board paling fence that surrounded the mission grounds.

*Bill Edwards*

## **East Coast**

On 20 December 2007 Gisborne suffered a significant earthquake which caused a range of damage to buildings in the area. The NZHPT has been working closely with the council to ensure work on heritage buildings is appropriate. Some buildings are also associated with potential archaeological sites and there are a number of authorities in the pipeline for this work.

Three stands of pines in the Whanarua Bay Historic Reserve in the Bay of Plenty are currently being logged to improve the biodiversity of that coastal reserve. This will include the removal by felling to waste of about a dozen trees which are on the first few terraces of a large pa. This work will be ongoing for 4-6 weeks and will be monitored by DOC staff.

*Pam Bain*

## **Whanganui-Taranaki**

The country's newest historic reserve was gazetted during August of this year. St George's Redoubt Historic Reserve is located on the Tataraimaka coastline, some 25 kilometres west of New Plymouth. The general area was highly contested during the First and Second Taranaki Wars of the 1860's and a major engagement between British and Māori forces took place close to St George's Redoubt. With the successful subduing of the South Taranaki Māori at Tararaimaka, the Colonial government was better placed to transfer military resources away from the Taranaki region and to the struggling Waikato campaign.

Although very little surface evidence remains of the redoubt, a geophysical survey of the area of the redoubt's location (undertaken by Geometria in 2005) indicates a high degree of intactness of features beneath the 'plough zone'. The NZHPT have granted an archaeological authority for fencing the reserve boundary and the information obtained from the associated archaeological investigations (which are to be managed by Ivan Bruce from Archaeological Resource Management) should greatly assist in the interpretation of the site. The protection of this significant site is due, in no small part, to the many years of effort by Nigel Prickett.

In other news, further survey work has been undertaken in the Mangapurua Valley by the Department of Conservation. The Department is approximately half-way through a ten year effort to identify and accurately map features relating to the Mangapurua-Kaiwhakauka World War I Returned

Servicemen Settlement, possibly New Zealand's largest registered historic area. This year's survey was carried out with the assistance of historian Jim Parnell and Ivan Bruce.

Further survey work has also been carried out in the South Beach area, Whanganui, this time concentrating on the land forming part of Oceanview Speedway which is located atop Landguard Bluff. A number of features of probable Māori origin, namely hangi and shell midden, were observed and evidence from this and other archaeological surveys undertaken during the past five years suggests that the whole of the Landguard Bluff formation was once intensively occupied by Māori, particularly at times of food gathering. Considerable development, in the form of lifestyle blocks and infrastructure facilities, continues largely unmonitored on and around Landguard Bluff despite efforts by local heritage professionals and iwi for tighter planning and consent requirements.

*Jonathan Welch*

## **Wellington**

Opus Wellington archaeology has had some changes. We are sad to see Elizabeth Pishief return to the Hawkes Bay, to focus on her PhD thesis and be nearer family, and also Amber Aranui who has taken on a repatriation role at Te Papa. Fantastic developments for both, but a sad loss to us. The remaining Opus staff have been working on various Kapiti coast developments, monitoring, and assessments, as well as facing the analysis and reporting backlog. There has been some media coverage of a disputed development on the Wairarapa Coast (Tora), that has been resolved with a fence line thankfully altered so that it no longer runs through a pit and terrace ridge site.

Mary O'Keeffe and Kevin Jones had a grand time investigating a c.1880 house in Ngaio, Wellington, prior to its demolition. Extant features included intact wallpaper with friezes and a beautiful tiled hearth. Mary has undertaken assessments for developments a Paraparaumu Airport, and expansion of the mail trunk rail line at Kapiti.

*Mary O'Keeffe*

## **Canterbury/West Coast**

Michael Trotter has been involved in discussions and planning, involving the Wairewa Runanga, NZHPT, Christchurch City Council and planning consultants, for the protection of a trio of prehistoric pits at Birdlings Flat, Canterbury. The pits (site M37/317) are probably the remnants of dwellings and are the only remaining earthworks associated with Mata Hapuka pa (site M37/22) that are relatively undisturbed. They are in the middle of a proposed

housing development, and current proposals are to cover them with soil and have them securely fenced off from other sections as a reserve. Suitable signage would explain their significance.

At South Bay, Kaikoura, Michael has found a neck vertebra of the extinct flightless goose, *Cnemiornis*, in a test pit on the recreation reserve (site O31/27). This indicates that the site here is of considerable age as this species has been found on only a few other very early sites. Radiocarbon dates suggest that there may have been two periods of occupation – two samples averaged AD 1236 and another two AD 1662. Although further investigative work is clearly called for here, nothing is planned at present. The idea of two separate occupations fits in with the reports of excavations carried out nearby in the 1960s by Tony Fomison, Ron Scarlett and Owen Wilkes.

Field work at Pegasus is much scaled down, but continues on the northern end where there are sites on an old beach ridge surface. These are middens with heavily fragmented moa bone that might be “transitional” or “terminal Archaic” in age. One of these sites seems to have a house floor of compacted shell with what appear to be shallow post holes.

It is now clear that the field work will continue into the New Year. An important issue at this stage is planning the analysis and report writing phase. This will need to account for a period of about three and a half years of field work during which there has been a vast accumulation of data.

On Globe Hill, Reg Nichol and Les Wright have just excavated and recorded the concrete foundation for the upper terminal of the 1898 Progress bi-cable aerial tramway. A highlight has been the discovery of the 1.8m diameter return and brake wheels that were believed to have been scrapped but were in fact buried by spoil from either a landslip or 1970s drill road construction.

Components of the Globe company’s 1883 mono-cable aerial have also been recovered, including several buckets, support wheels, a possible return wheel and the loading bucket. Built by Kincaid and McQueen in Dunedin, it is of particular interest as it was the first aerial tramway installed on the West Coast.

Also recovered, with a view to reconstruction, was a hut fireplace that features a few components that would have been company property including boiler firebars for a grate and large refractory bricks from South Yarra, Melbourne.

Les and Reg recently completed an inventory of artefacts recovered during the past year for Oceana Gold Ltd under the terms of its consent.

Katharine Watson has undertaken archaeological surveys of various pastoral leases for the Department of Conservation as part of the tenure review process. The leases surveyed include Mt Gerald, Bendrose and the Gramp-

ans, all of which are in the Mackenzie country. A number of huts have been located during these surveys, as well as the remains of earlier roads, tracks, sheep yards and fence lines, including the remains of an 1880s snow fence on Mt Gerald station.

Katharine has also carried out an archaeological survey of the Porter Ski Area, near Porters Pass. The remains of an early track that connected the Arthurs Pass and Browning Pass roads via Coleridge Pass were recorded during this survey, and the site of a stone hut close to the Arthurs Pass road was revisited. The remains of The Springs stables were also recorded during this survey. These stables provided a place for coaches to change their horses during the course of their journey through the pass and were so named due to the proximity of natural springs.

Ian Hill and Katharine Watson have revisited the first Ball Hut site in relation to a Department of Conservation proposal to build a new Ball shelter in the area (the current shelter is threatened by the collapsing moraine wall of the Tasman Glacier). During this visit a stone structure (probably a hut and associated storeroom) were also recorded. Efforts are currently under way to uncover more about the history of this structure – all attempts thus far have drawn a blank.

Ian Hill has also revisited Pa Island, just off Banks Peninsula.

*Katharine Watson*

## Otago/Southland

Jill Hamel is doing an assessment of a garden established at one of Otago's first tourist lodges – Paradise at the head of Lake Wakatipu – designed by the architect William Mason in the 1880s. There has been little modification of the old-fashioned cottage garden, designed for independent subsistence with fruit trees, berry fruits and hops for making potato yeast. Jill hopes to identify the remaining old fruit trees, one of which should be an apple called Irish Peach grown for making cider.

In October Ian Smith, Angela Middleton and a group students began the first phase of a long-term project on the historical archaeology of St Bathans. It was focused on the sites of William Pyle's General Store and the Montezuma Hotel, both dating from the early 1860s, and involved vegetation clearance in preparation for mapping, and the sorting and recovery of litter from the floor of one of the surviving outbuildings on the Pyle site. The latter produced a remarkable array of paper records from the store and mining companies along with personal memorabilia and pages from novels. These will be studied in



due course as part of a wider programme of excavations, historical and oral history research.

Matt Schmidt of the NZHPT spent five weeks in Japan as a guest of UNESCO on an ICCROM Course on conservation and protection of archaeological sites (for detailed information see the web page: [http://www.iccrom.org/eng/01train\\_en/announce\\_en/2008\\_09archaeolNara\\_en.shtml](http://www.iccrom.org/eng/01train_en/announce_en/2008_09archaeolNara_en.shtml)). The course brought people from 15 countries together to discuss management of archaeological sites in different countries and to learn site and artefact preservation techniques from Japanese experts. This was very relevant to New Zealand as the Japanese sites deal with sites where wooden structures dominated with only a bit of stonework, like Maori sites.

Matt has also been undertaking many site visits to Maori, Pakeha and Chinese sites in Otago, Southland and the Waitaki. One common issue has been site management in areas of massive coastal erosion which seems to be accelerating. It appears a lot of site information is being lost, especially at iwi sites, but this is difficult to manage. Consultants have all been busy and the work being undertaken has been very interesting.

The University of Otago archaeologists have commenced a new research project at Wairau Bar. The project is part of a larger cultural heritage initiative of Rangitane which involves the Canterbury Museum, Department of Conservation and the Anatomy Department at the University of Otago. The first archaeological work was carried out in November, directed by Richard Walter, Chris Jacomb and Emma Brooks from Southern Pacific Archaeological Research. It involved carrying out a geophysical survey, using the fluxgate gradiometer, of the entire site. The fluxgate work was run by Hans Bader of Geometria. Ground truthing excavations were carried out to test the geophysics results. The excavations confirmed the validity of the geophysical survey and provided new information regarding stratigraphy and the patterning of cultural material across the site. Column samples of faunal remains were also obtained and these will contribute towards the development of a more comprehensive understanding of economic practices at the site. Further excavation work will take place in the early new year.

In early November a team (Adrian Taylor, Lily Van Sant, Erin Williams, Leanna Frame, Jason Gay, Tim van Duyl, Sheryl McPherson and Azade Seid-Fateni) led by Guy Williams descended on Hayes Engineering Works in Oturehua for a week of accessioning. Hayes Engineering Works is probably the best largely extant example of an engineering works in the southern hemisphere, and is where numerous farming items including the Hayes wire strainer and the Hayes windmill were created. Hayes is listed as a Category I Historic Place, and is owned by the NZHPT. The accession project was funded by NZHPT,

and the aim was to accession as many Hayes artefacts as possible in a week. Accessioning involved cleaning many years of grime from the artefacts, prior to allocating and painting on accession numbers, photographing, and describing. Although several thousand artefacts have now been accessioned, we estimate that there are still several thousand more.

Guy Williams, Erin Williams and Tiffany James-Lee are also working on an initial assessment of the Hillhead farmstead at Otokia, on the south-eastern Taieri Plains. The main house is believed to possibly date to as early as 1865, when Otokia was a growing settlement on the main road to Milton and Central Otago.

Shar Briden of DOC has completed an assessment for the Bannockburn Track Upgrade. Shar monitored the completion of sewerage works on the main road of St Bathans, involving a trench cut across from the St Bathans hall. She has also been kept busy with ongoing tenure review assessments.

*Tiffany James-Lee*