

## A RETURN VISIT TO WAITOMO

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### *The new visitor centre at Waitomo Glow worm Cave*

In November of 2010, in the course of a two-week car tour in the North Island of New Zealand, Rhonwen and I spent two days at Waitomo, renewing acquaintances with local ACKMA members and seeing some of the significant cave tourism developments and changes. We were last at Waitomo for the 12th ACKMA Conference that was held there in 1997.

The most striking change of course is the recently completed new visitors centre at the famous Waitomo Glowworm Cave. As reported by Greg Martin in ACKMA Journal No 81, the new visitors centre was officially opened on 21 October 2010 – only days before our visit – and replaced the previous centre that was burnt down in 2005.

As Greg outlined, the new centre is characterized by its evocative roof, fashioned to be reminiscent of the Maori woven hinaki or eel catcher. The lightweight ribs of the roof structure support a double layer of transparent plastic fabric with a sustained static air space between the inner and outer parts to afford convective heat insulation. It had already been dubbed ‘the bubble-wrap roof’ by some wags.

The roof soars above and is largely separate from the excellent functional building spaces beneath it. These include a front-of-house ticket purchase foyer, an interpretation theatrette, an exhibition area, a café and a restaurant, plus a well-stocked gift and souvenir shop.

At the time of our visit, the exhibition area had an informative series of panels explaining the architectural concepts embodied in the new visitors centre and its link to indigenous cultural heritage, as well as pictures of the construction phase.

We enjoyed a lunch in the spacious restaurant area beneath the cavernous roof. It was a bright sunny day and the solar radiation transmitted through the essentially clear roof fabric made itself felt, notwithstanding that the high roof is open at each end to allow a through draft. This comfort issue may have since been addressed.

The longevity of the unusual roofing fabric will be something to watch, however, there is no doubting that it is visually impressive as well as making an important cultural connection with Waitomo’s past.

Our first entry into the local 'underworld' was with Van Watson, in company with Pete and Libby Chandler, to see the then recent upgrading works in Aranui Cave under Van's able planning and management.

In particular, many new sections of walkway have been installed along the main passage using steel framing, galvanized after fabrication and typically supported off and fixed into the adjacent cave walls. In much of this cave the deep sediments on the passage floors precludes getting a sound footing for support piers. New decking material comprised around 20mm thick, black plastic grid-mesh tread spanning up to 900mm. This same material had also been used for the treads on new and old concrete stairs, with spacers inserted to facilitate occasional hosing out of accumulated dirt.

The walkway upgrading works within the cave had been accomplished between regular cave tours and at night, such that there had only been one three-day interruption to normal tour operations. A very commendable achievement. Aranui is essentially an old 'fossil cave' with a typically high and narrow ascending main passage with some fine sculptured passage shaping and sections of good speleothems.

Much of the floor is covered by deep sediment, and although generally dry, a small flow occurs in wet weather. The cave lighting was also upgraded as a part of the redevelopment works to enhance the visitor experience and safety.



*Suspended walkway in Raukuri Cave.  
Photo: Rhonwen Pierce.*

Returning to the visitor centre, we were given the opportunity to join a regular guided tour of Ruakuri Cave and duly joined a minibus for the 3km trip out to the Ruakuri carpark. The upper parts of Ruakuri Cave that had been used for cave tours for many years in the early days were closed in 1988 due to complex land ownership issues and 'bureaucratic hurdles'. Subsequently, cultural sensitivities arising from recognition that the main upper level entrance had once been used as a Maori burial site and its inclusion in a special reserve precluded its reuse as a show cave entry point. After eventually reaching agreement with the various ownership parties, Tourism Holdings Limited (THL) embarked on an ambitious and costly project to construct a new artificial entrance.

After much careful planning and design, the new artificial entrance took form as a 10m by 15m deep reinforced concrete shaft with a wheelchair friendly helical ramp around the internal periphery. Softly lit with LED track lights only, it is indeed an unexpected and visually impressive entrance - particularly to an engineer like me. The entrance is worth a visit in its own right! Van Watson acted as THL's on site, hands-on development person with John Ash assisting in a consulting and advisory capacity.

At the bottom of the entrance shaft, a 22m long diameter concrete pipe tunnel with airtight doors at each end gives access to the upper passageways of this extensive active stream cave. Ruakuri Cave was reopened for regular cave tours in 2005 and as well as its innovative new artificial entrance it has extensive sections of walkway bracketed off the cave passage walls and/or suspended by stainless steel cables from bolt fixings into the roof.

In places, the walkways are suspended above the perennially active streamway. Like the recent upgrading in Aranui Cave, the new elevated walkways utilise post-fabrication galvanized steel frames and plastic grid-mesh tread. Elsewhere, concrete paving maintains a smooth flat or gently graded path for the approximately one kilometre loop.

Understated low-voltage lighting is employed throughout and the guided tour has the rare distinction of being fully wheelchair friendly despite its significant length and the many challenges that were presented by the passage shapes and sections that traverse above the active streamway well below. In all, it is a great achievement and a credit to all who were involved in its conception and successful implementation.

More information on the redevelopment of Ruakuri Cave is contained in articles in ACKMA Journals Nos. 57 and 60, and particularly in the paper on the subject presented at the 16th ACKMA Conference by Greg Martin and John Ash. Recourse has been had to these sources for some of the details mentioned above.

The lower streamway part of Ruakuri Cave has continued to be used for the ever popular 'Blackwater Rafting' adventure caving operation, originally set up by John Ash and Pete Chandler, and now operated by THL.

Finally, Rhonwen and I were treated by our Waitomo hosts, Pete and Libby Chandler to a personally guided look at their 'Spellbound' experience. This operation utilises two caves that at the time of the 1997 Conference were operated in a relaxed low-key way by Derek Mason on his farm property.

Pete and Libby have continued this style but enhanced the operation with their own imaginative and practical improvements. The tours are limited to a maximum of twelve participants and include a minibus ride through the picturesque Waitomo countryside and the impressive dissected karst landscapes when nearing the site.

On alighting the minibus, participants have the opportunity of observing and feeding tame eels lurking in the surface stream before donning light equipped helmets and walking the short distance to the swallet entrance of the Mangawhitikau glowworm cave.

After traversing the delightfully sculptured entrance series, including crossing the stream on a bridge – with another opportunity to spot eels – the visitors board an inflatable dinghy, turn off their lights, and for the next half hour or so can take in the prolific glowworm display whilst their guide propels the craft using a guide rope. There is an opportunity to disembark just prior to the removable dam which makes the streamway navigable, and observe the latter end of the cave near where it sumps.

A leisurely return is then made in the dinghy, giving a second opportunity to appreciate the bio-chemical illumination produced by the prolific glowworm population, with the visitors eyes by now fully dark-adapted.

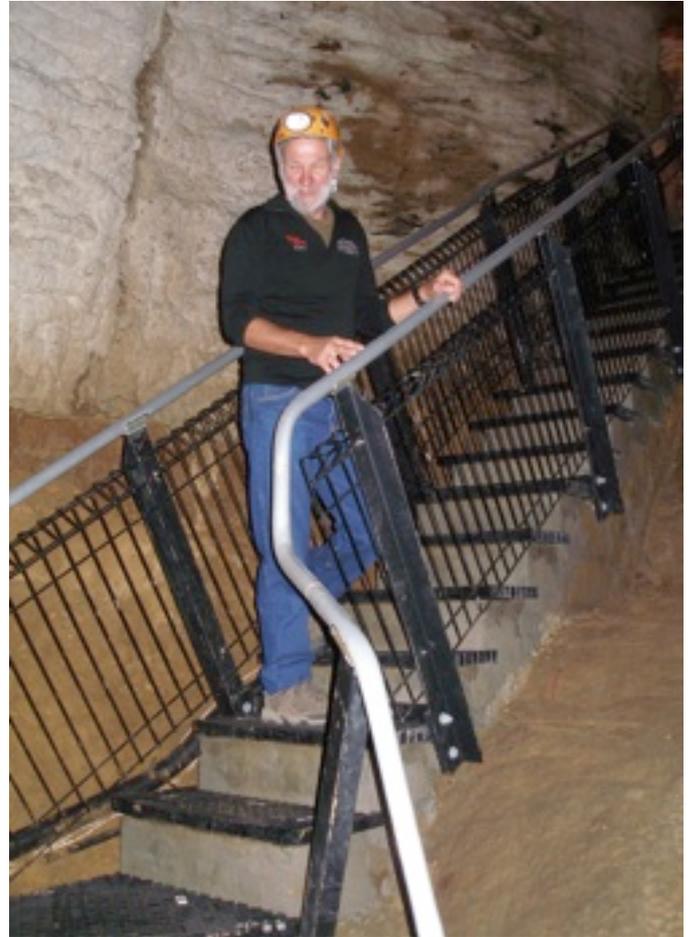
After exiting the glowworm cave, a short excursion in the karst gorge takes visitors to Te Ana o Te Atua or 'Cave of the Spirit', a spacious horizontal former stream passage. Pete and Libby and their team have completed placing concrete paving and sections of marginally elevated walkway, plus installed low-voltage track lighting powered from a small engine-generator in a shed outside.



*Pete and Libby Chandler in Mangawhitikau Cave.*

The cave is a very easy walk-in and return the same way, with interesting passage shapes, bedding plane exposures and patches of nice speleothems, plus a cache of animal bones. Two roof windows – tomos – that admit dappled outside light, also add to the interest of this cave. (Issue 57 of the ACKMA Journal referred to above also has information on the development – then at an earlier stage – of the Spellbound experience).

In all, Spellbound offers 3+ hours of diverse karst experience in a relaxed and friendly style for small parties. For 'free independent travelers' and others who have the time, Spellbound provides a different and more intimate way to observe glowworms compared to the Glowworm Cave in Waitomo itself which caters for large groups with frequent tours to meet the needs of the many package tours that include Waitomo on their itinerary, in addition to other casual visitors.



*Van Watson on refurbished stairway in Aranui Cave.*

Waitomo truly has something for everyone. Its world renowned Glow Worm Cave, now replete with its new and distinctive visitor centre, the associated show cave options of Ruakuri Cave and Aranui Cave, a range of adventure caving options including the well known Black Water Rafting and other challenging privately run operations.

Then, for those not wanting to don a wet suit or otherwise indulge in strenuous guided wild caving, Spellbound offers a non physically demanding opportunity to spend three hours learning about and appreciating the local karst, two delightful caves and a different glowworm observing experience.

Rhonwen and I would particularly like to record our sincere thanks to Robert Tahiri and Van Watson of THL and to Pete and Libby Chandler for making our return visit to Waitomo after thirteen years so rewarding and enjoyable.