



## Heritage Happenings for September 2008

### Tony's Tales

Hi again everyone. The last couple of months have been pretty hectic. We have had another successful trip to Bunnythorpe and have added many items of equipment and photos to our ever growing PastPerfect database. Our paper storage area at Bunnythorpe is working well and is now temperature and humidity controlled.



Richard, Les (seated), Tony and Brian all busy putting information into PastPerfect.

### Early Hot Wire Voltmeter.

This voltmeter was purchased by Reefton Light & Power Co. about 1887 and is reputed to be the first voltmeter in New Zealand.



Cardew Voltmeter mounted on wooden board.

The voltmeter was refurbished in the 1990's and was displayed in the ground floor foyer of Rutherford House for several years. It was later displayed in Kieran

Devine's office on the 6th floor of Rutherford House. It was then purchased by Kieran and displayed at his home in Tawa until 2008 when it was presented to GridHeritage. Pop into Level 2 at Transpower House and have a look at this unique piece of our history. The photo doesn't indicate the size of the voltmeter, nothing pocket sized about this one, it stands about 1.5 metres high.

### Maori Title for GridHeritage

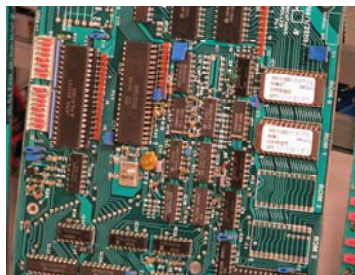
We have consulted with our Maori experts and have proudly added "**Te Mana Hiko Tuku Ihu**" to all of our Newsletters and correspondence.

**Te Mana Hiko**, meaning grid or the electricity or power authorities. **Tuku Ihu**, meaning heritage or things handed or remembered. Many thanks to David Young and Pat Toi for their expertise.

### New additions to our collection

We continue to attract a wide variety of new material. Kelvin Brown has compiled a 54 page paper on the history of Hororata substation and has presented us with a copy of this, plus 28 black and white photos of early Hororata.

Not all of our collection is ancient, this circuit board is dated 1989 and we need to ensure that we keep collecting gear as it is written off.



Dataterm Circuit Board

Chris Currie has sent us papers on Standard Units, some from Harry Hitchcock. He also gave us a 1974 NZ Electricity Newsletter. Interestingly they were then recovering from a dry winter and power restrictions.

### Mangakino Township's 60<sup>th</sup> Anniversary

Would you believe that this year marks the 60<sup>th</sup> Anniversary of Mangakino. It will be held over Labour Weekend, commencing



## Heritage Happenings for September 2008

on Saturday 25 October, 2008. Have a look at their website.

<http://www.mangakino60.co.nz/index.html>

### Video preservation project

GridHeritage holds over fifty historic videos, some we have copied from film and others that were created as promotional videos. We are starting on a project that will copy the videos onto DVDs and we will also copy them to a large storage unit to ensure that the information will be more permanent. When this is done we hope to give the originals to the NZ Film Archives for permanent storage.

### New Computers for GridHeritage

Transpower has provided GridHeritage with two PCs to help us with our work at Bunnythorpe. One has already been setup in our document storage area and the other will be housed with our collection. Having PCs on site means that we don't spend our lives carrying them to Bunnythorpe and back again each trip. Thanks to Ian Harrop for facilitating this equipment.

### How high is the building?

Sometimes we receive a very special story and to me this one has to be shared.

The following concerns a question in a physics degree exam at the University of Copenhagen:

"Describe how to determine the height of a skyscraper using a barometer."

One student replied:

"You tie a long piece of string to the neck of the barometer, then lower the barometer from the roof of the skyscraper to the ground.

The length of the string plus the length of the barometer will equal the height of the building."

This highly original answer so incensed the examiner that the student was failed.

The student appealed on the grounds that his answer was indisputably correct, and the university appointed an independent arbiter to decide the case.

The arbiter judged that the answer was indeed correct, but did not display any noticeable knowledge of physics.

To resolve the problem it was decided to call the student in and allow him six minutes in which to provide a verbal

answer which showed at least a minimal familiarity the basic principles of physics.

For five minutes the student sat in silence, forehead creased in thought.

The arbiter reminded him that time was running out, to which the student replied that he had several extremely relevant answers, but couldn't make up his mind which to use.

On being advised to hurry up the student replied as follows:

"Firstly, you could take the barometer up to the roof of the skyscraper, drop it over the edge, and measure the time it takes to reach the ground.

The height of the building can then be worked out from the formula  $H = 0.5g \times t^2$  squared. But bad luck on the barometer."

"Or if the sun is shining you could measure the height of the barometer, then set it on end and measure the length of its shadow. Then you measure the length of the skyscraper's shadow, and thereafter it is a simple matter of proportional arithmetic to work out the height of the skyscraper."

"But if you wanted to be highly scientific about it, you could tie a short piece of string to the barometer and swing it like a pendulum, first at ground level and then on the roof of the skyscraper.

The height is worked out by the difference in the gravitational restoring force  $T = 2\pi \sqrt{l/g}$ ."

"Or if the skyscraper has an outside emergency staircase, it would be easier to walk up it and mark off the height of the skyscraper in barometer lengths, then add them up."

"If you merely wanted to be boring and orthodox about it, of course, you could use the barometer to measure the air pressure on the roof of the skyscraper and on the ground, and convert the difference in millibars into feet to give the height of the building."

"But since we are constantly being exhorted to exercise independence of mind and apply scientific methods, undoubtedly the best way would be to knock on the janitor's door and say to him, 'If you would like a nice new barometer, I will give you this one if you tell me the height of this skyscraper'."

The student was Niels Bohr, the only person from Denmark to win the Nobel Prize for Physics.