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## **Proposed Newton King Memorial Gates**

to enhance and protect Brooklands Park

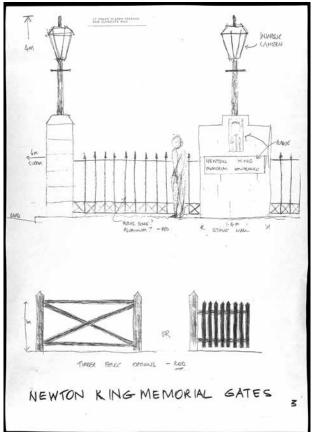
The Memorial Gates will go across the lawn verge at the lower end of Brooklands Drive:

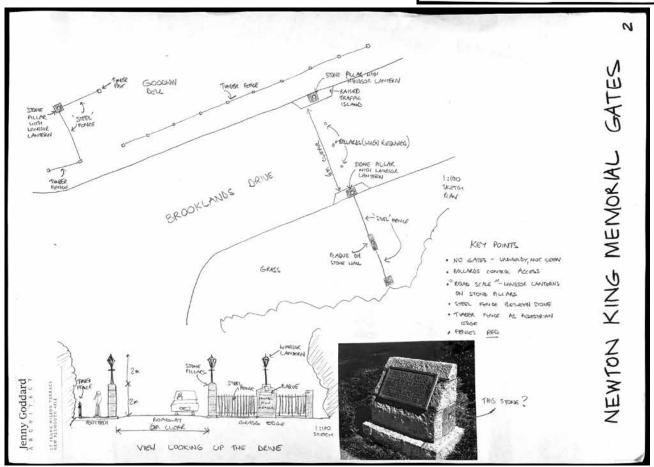
- as a tribute to Newton King
- to enhance the entrance to Brooklands
- and to add security to the Park.

With electronic bollards added to close the road.

The Friends will be driving fundraising for these gates. N.P.D.C. will carry out the project.

These sketches from Jenny Goddard are concept plans. The Friends want feedback on the design and suggestions or offers for fundraising. These gates will be a major project for us.





Contributions should be sent to

Friends of Pukekura Park, P.O. Box 484, New Plymouth 4340.

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Seat Dedication. Adrienne Tatham

On a hot and humid Saturday at the end of January, six months after George Fuller's death, four members of his family of five children, some from Hastings and Hamilton, came to dedicate a seat in his memory.

Installed part way up Jellyman Walk the seat is a place to rest and reflect on George's twenty five year tenure as Curator of the Park, and the changes he wrought.

Also in attendance were a large group of the Fuller family, some Orchid society members and a few members of the Friends of Pukekura Park, Elise Smith, Adrienne Tatham and Heather Allen who with George was a driver for the formation of the Friends. Ken Davey, his wife and daughter also attended, with Ken relating some of the antics he and George shared.





Photos Adrienne Tatham

FoPP Magazine, Volume 11,  $\mathrm{N}^{\circ}$  1. Page 3

## Pukekura Park water management work

#### Chris Connolly Pukekura Park Curator

Over recent years, with the support of consultants, the Council has carried out several projects designed to improve the flow and the quality of the water in Pukekura Park. Before the physical work could start, considerable monitoring and research work was needed to better understand the issues and to ensure the planned work would deliver the desired beneficial outcomes. This included researching Council records for information accumulated over the years on this issue plus on-site testing to measure silt particles and contaminants in the water. We also tested the water flow at several sites on the streams feeding Pukekura and measured the quantity of water flowing out of the park. Sub-terrain water levels were also measured over a period of two years at 20 different locations within the park and silt and sediment samples were taken from a number of sites in the lakes to identify and measure the contaminants.

As a result of the findings, contaminated water entering the park from the racecourse was addressed. Instead of this water being discharged into the park, work was carried out to capture it on-site and direct it into the stormwater and sewer systems.

We also planned to remove up to 10,000 cu meters of the silt from the park's lakes as the silt has high levels of contaminants that continue to pollute the water flowing through the park as well as planning to build structures on the steams feeding the park to stop new silt coming into the lakes network. The siltation issue is not a new one and has been addressed on a number of occasions over the years, with several different work methods used to remove the silt from the lakes. Some were more successful than others, and in 1955 the first structure to capture silt was built in the Truby King Dell and another at the top of the Serpentine in 1979.

Water quality, on the other hand, had not been addressed and with the declining quality of the water in the park we required a better understanding of the causes and how to address these in order to make a difference.

Nutrient-rich waste coming from run-off and wash downs at the racecourse was an obvious significant contributor and was addressed early on in the process. Other contributors identified are the waterfowl, vegetation, contaminants from the stormwater systems that drain into the park, discharge from commercial and private residences into streams which feed the park, leachate from composting organic material, chemicals used in the park's maintenance operations plus the contaminated silts and sediments already deposited in the lakes. Some of these are difficult to address and will require a longer term approach while others, like chemical use and composting activities, were addressed immediately.

The agreed approach to deal with the siltation issue was first to build new structures to stop silt coming into the park, then to remove the build-up of silt already accumulated in the lakes. The first structure built was a below water level rock structure in the upstream end of the Bowl Lake. This structure was designed to allow the water



Vogeltown sub-catchment. The low dam is visible in the lower photograph.



to flow through it, while capturing the silt on the upstream side of the structure where it could be easily removed and with minimal impact on the park. A slightly different approach was designed for the stream feeding the park from the Vogeltown sub-catchment which enters Pukekura near Goodwin Dell. A low dam was built to capture the silt and a planting in the upstream shallow areas used plants that have the ability to filter contaminants out of the water. The establishment of this planting is still a work in progress.

The final work completed as part of this project was the installation of a piped water bypass, which is able to be controlled by a valve, between the Main Lake and the Fountain Lake. This is designed to improve the movement of water through the park's water system by reducing the time that water is sitting captured in the top end of the Fountain Lake.

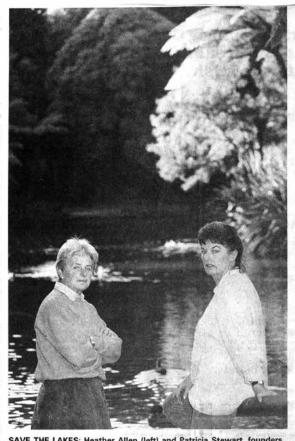
The last initiative, the removal of silt from the lakes, has not been achieved due to failure of the system contracted to deliver. This issue will need to be addressed in the future.

## 20 years later - The Friends of Pukekura Park

A conversation between George Fuller and Heather Allen in 1995 about the need for public support for Pukekura Park, and how to raise awareness of the Park's water problems, led to a public meeting at Central School. George Fuller had become increasingly concerned about the problems he could see, having lived and worked in the Park for so many years. He was intimately aware of issues which required immediate attention, from fern fronds blocking water outflows, to swans in distress. After he retired the management was based in the main Council offices, and became remote from practical issues. The hot summers and low flow of water had made the Park Lakes less inviting, and George and Heather determined to see what could be done, and with the help of Trish Stewart organised meetings to provide a focus. Within a few weeks a core group came together and in February 1996 they formed the new Incorporated Society, the Friends of Pukekura Park.

The Friends enthusiastically arranged regular guided walks in the Park, worked on tedious tasks like removing onion-weed from the Bowl, and started projects to record the significant plants, the history, and to monitor the water quality.

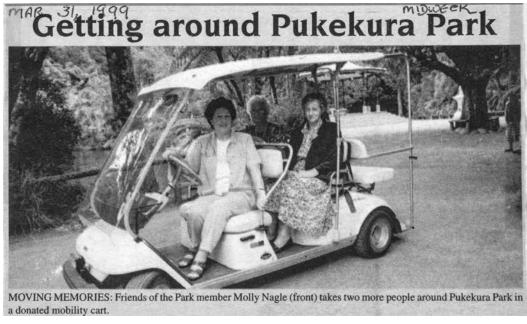
In twenty years there have been significant changes and a raised awareness of the challenges in managing the "Jewel in the Crown". We are now pleased to have a Curator based in the Park and a Plant Records Officer, both essential for the Park with its dual roles of "Recreation Ground" and "Botanic



SAVE THE LAKES: Heather Allen (left) and Patricia Stewart, founders of Friends of the Park, say lakes like this in New Plymouth's Pukekura Park deserve saving.

Photo: TREVOR READ

Garden". The Friends continue to enjoy guided walks, have the onion weeds under control in the Bowl, and carefully tend the Gables Garden. We still write submissions on Council proposals, and hope that our work will provide better ways for the public to engage with the Park. With greater knowledge of the plants and wildlife, we appreciate the Park even more than just a beautiful venue for events.



1998 - The first buggy operated by The Friends of Pukekura Park. Donated by Saywell Motors. Carried up to five passengers.

## From the Friends Archives cont'd

### A few examples of Friends input to the Park from the last 20 years.

2009 - Standing in front of the large *puriri* on the Bowl Road two incredibly knowledgeable horticulturists, members of the Friends, both dedicated to preserving and protecting The Park, George Fuller and David Medway.

George, assisted by the Friends, successfully campaigned to save the *puriri* and other trees on the Bowl Road.

George and David have both passed on between them they have left a huge legacy of information to the Park.





1997 - Getting into the onion weed.



2009 - Ceremonial planting in the Gables garden by the Friends.



2016 - Setting up for the Friends 20th birthday celebrations.



Fernery minding.



Plant sales.

# From the Friends Archives cont'd

### The Buggy.

Since 1988 the Friends have been operating a buggy in Pukekura Park providing access to the Park's spectacular content to anyone. In conjunction with the mobility scooters at the Tea House less mobile visitors can easily get round the Park. Feedback from people who have been able to revisit the Park and reawaken memories from their past has been very heartwarming.



Left: 1999 eight seater.

Right: 2008 electric eight seater.

Below: 2014, the cuurrent buggy, an eight seater.





assist with the buggy.

# Track clearing in Egmont National Park, 1-6 December 1946 Entries from the diary of George Fuller, New Plymouth

#### Sunday 1 December

Set out for Pouakai Range for a week of clearing tracks. As this is going to be a week of very solid work and perhaps cold conditions, it is necessary to take an abundance of supplies and bedding etc. We are undertaking the job at 2/6 per hour, but actually I am going up more for a holiday and a bit of experience with the other two chaps.

My two cobbers are Owen Gibson and Billy Garner, two very keen young chaps on native stuff (plants). Together with our bedding, food supplies, utensils, etc., our packs average about 65-70 lb, which is quite some weight to carry up 3,700'.

All prepared, we set out about 2.15 pm and luckily got a lift the first 8 miles to the foothills in a car. From there we collected our gear, slasher, etc. together and set out. Believe me, that climb with these terrifically heavy packs up overgrown tracks was no joke. It was a real test of endurance.

We arrived at Mangorei Hut about 6.45 pm after a trying hike, only to find that the hut door had been left open, and goats had made their home there. The place was in a state of chaos; they had been sleeping on the bunks and their droppings were inches deep on the floor and the smell was unbelievable. We set to work, pulled down all the old board bunks, erected new ones, scraped the floor built a good new stone fireplace, erected a stout table and cooked a meal. By midnight things were looking shipshape and somewhat hospitable, so we retired to pretty hard beds.

## Monday 2 December

We were up at 5.00 am on a vey dirty morning and given the rain, could not start work until 1.00 pm, working till 7.00 pm. Cleared track from hut down almost to first patch of bush. This part of the track was only 6-12" wide in parts, so we set to work and cleared it back to 10-12'. The going was very hard, and real manual labour, but I had no serious blisters. We came back soaked through and rather miserable, but things looked up towards evening and we awoke next morning (Tuesday) and set in to work.

#### **Tuesday 3 December**

After a meal of fried bacon etc. we set to work down the track. In contrast to yesterday, today was a good one and we got 11 hours work in. We were soon in the bush and progress was somewhat easier, although we met up with some fairly solid chopping. The slashers we are using have an 8" blade, are broad and have shortened handles. They are very good to use, but the jar is something terrific. It is hard on the left hand. Cleared down as far as "lookout" and came home to a real good meal.

#### Wednesday 4 December

Woke up with wrists aching frightfully. I don't think I could hold a pound of butter up in my outstretched hand. The jar seems to affect particularly the third finger of the left hand and the wrist of the same hand.

A real good day and we got 10 hours in and almost reached the radius line.

One very important factor up here is that I have been sleeping very well. A big problem is to keep warm and the whole happy nature of the stay depends on the sleeping. Our meals have been very good and we ought to derive great benefit from our holiday. The work is hard and the hours long, but the meals and sleep keep a happy balance.

Today we got a tremendous pile of firewood and I did some really strenuous axe work after almost utter fatigue carrying a huge *Griselinia littoralis* trunk.

We did a bit of botanising to the north and a little above the radius line. Found some wonderful groves of ferns and also a few isolated patches of *Corysanthes rivularis*, a rather rare form of this ground orchid, although we have found numerous specimens. Found three plants of the fairly rare *Pittosporum kirkii*, an epiphytic variety not frequently come across.

#### Thursday 5 December

Woke fairly late and owing to adverse conditions only got in five hours. Started cutting track above the hut and found it pretty hard going. It embraces many steps and we are endeavouring to cut as many as possible out.

Found a rather rare fern, Gleichenia dicarpa.

This evening we beheld one of the most glorious sights imaginable. From Graylings Flat we looked out towards New Plymouth to see the sun in its last array cast a gorgeous shaft of light between the two ranges and out into the distance beyond. It was a sight, the full beauty of which could only be appreciated from a vantage point such as ours. The brilliance of colours and the delicate toning absolutely left us speechless. As the sun gradually subsided the clouds became more deeply coloured, and the gorgeous green haziness passed through all the intervening shades until, ultimately, the countryside was enveloped in a rich violet shade. It all had the effect of a brilliant searchlight casting a beautiful green shaft of light between the ranges into an expansive green lawn. The sun gradually descending, cast the shadow of the tallest peak of the range far out over the country and from its apex there emitted, high into the heavens, several bright rays of light, gradually broadening at their extremities. The whole sustained spectacle was most picturesque and one which could only be fully appreciated from a vantage point such as ours. Oh, what the people below missed.

#### Friday 6 December

Put in 8 hours, completing 40 for the week, clearing to about half a chain below the radius line. The going was pretty heavy, but we cleared it alright, and as we had brought all our gear down with us, went off for home in the mid afternoon.

For the sake of indulging in a little botanising, we struck off west along the radius line in the direction of the Kiri valley. The drop into the valley was very steep, and a magnificent display of tree ferns was becoming established where the line had been cut. Just at the bottom I spotted a goat, and set off in headlong pursuit. The bush was fairly thick, and after grounding myself on a "supple jack", just missed him by about 12".

We continued from there parallel with the stream and found many interesting specimens, including a grove of *Gleichenia dicarpa* and a fallen tree bearing a flowering mass of the tiny cream scented orchid *Earina mucronata*.

It was further down the valley I spotted basking in the sun beside me the largest spider I have yet seen caught in New Zealand. It was a magnificent specimen, measuring across its outstretched legs, practically 4". It sure scared me for a minute. The only way we had of killing him in a condition for keeping was to put a knife through his thorax and put him in a matchbox. He was certainly worth keeping. His markings are a beautiful fawny brown, with darker patches of brown on his body. It was on a rock at the side of a stream, but I am pretty sure that it was not the ordinary brown water spider.

On some of the banks we found marvellous specimens of the tiny ground orchids *Corysanthes oblongifolia* and *C. rivularis. Corybas oblongifolia* is a gorgeous little thing with a bright purply labellum.

Nearly out to the open, we struck some more sport. Rounding a corner we came across a brown and white nanny goat with her beautiful black kid. We approached until they turned to run and then came the hot pursuit. The nanny misjudged jumping a log, and stumbled. Snow Gibson drew on her after this, grabbed her, and I continued after that fine black kid. Meanwhile, Bill had tripped over a supple jack, and was well out of the

# From the Archives cont'd

picture. I succeeded in rounding off the kid, but owing to lack of support (Snow was holding the nanny), he was just a little smart for me. He cut back, passing Snow by yards, and made off for the tall timber flue; he had it all over me, and sad to say, I lost him. We did the nanny in, and passed out of the bush into the open paddocks and got ready for the last 9 miles home by bike.

Down the Kiri valley we followed a long disused tramline for bringing timber out. As I didn't have a bike, I was lucky in striking a car ride from the tramline to within half a mile of home, and thus ended, on a beautiful Friday afternoon, my week in the Pouakai Ranges, and possibly my last trip there.

It is a native [plant] enthusiast's paradise, and the time I spent there was most educational, most enlightening and most happy, not to mention the beneficial hard work.

I make no apology the poor writing, blots etc., for most of it was done by firelight on a none too comfortable stool.



Some of the plants found by George on this track clearing expedition.

Right: Pittosporum kirkii

Lower right: Earina mucronata

Below: Corybas oblongus





FoPP Magazine, Volume 11,  $N^{\circ}$  1. Page 10

#### Natasha Phillips.

When Natasha learnt that the New Plymouth District Council had accepted her as an apprentice she was rapt. A mother of three, she had already experienced work in nurseries and other horticultural enterprises so it was a natural progression for her and she really enjoys her work in Pukekura Park.

Born in Opunake in 1975 to a schoolteacher mother and a father who was working in a quarry, but followed this up with pipeline and roading work, she moved with her parents when she was one year old. The family bought a farmlet on Frankley Road where they kept a variety of livestock. Frankley School was very handy for this family of five children and it was during her time here that Natasha discovered the natural world, for the students there spent time in the bush environs, and were taught about nature. Following a move to Waitara



she began enjoying horses and competitive riding and was involved in this sport from the age of ten until she was seventeen. She attended Waitara High School and then began an IT course at Witt in New Plymouth where she soon discovered that she really belonged in the great outdoors, so she left early.

Married at eighteen years old, she took up a part time job at Solely Flowers on Corbett Road where the firm grew carnations, *freesias* and *gypsophilas*. When this business closed she, along with a sister found employment at Stepping Stones where she at first was required to wash the roots of *Acer* stock prior to being packed for export, for no soil was permitted. She shaped the plants and tied them, and learnt to bud and graft the *Acers*. Another requirement was driving the forklift during the 2008 year and when she became pregnant she collected the scions for grafting. Having spent time with her new baby she then took up part time home gardening for less able customers and met many older women whose company she enjoyed. After this Natasha worked for two different landscaping enterprises for two years.

She successfully applied three years ago for the apprenticeship with Council and there her knowledge of plants is continually expanding.

In her spare time Natasha gardens at her home. What else? But in the end her love of horses will endure.

## Antony Rogers.

One of the Park apprentices is Antony.

Born in New Plymouth in 1995, he is one of eleven children and was home schooled. His schoolwork was regularly assessed and covered the conventional subjects. Children involved in home schooling attend camps where they interact with others, and he enjoyed this company. When he finished this part of his education he through Correspondence School expanded his base knowledge by learning about biology, some agriculture and horticulture, maths and physics and then sat a public examination which was daunting and a real learning curve.

Much of Antony's time is spent with his own family and they sometimes play five a side soccer together at Merrilands

Photos Adrienne Tatham

Domain. He babysits his family often and at other times he hunts goats and rabbits on a forestry block.

Antony lives at home and has a great interest in carnivorous plants, in particular *Drosera binata*, which he finds is colourful and fascinating. Insects are lured to the sticky liquid sparkling on the red tentacles on the sundew's leaves, and as they struggle to free themselves become entrapped. The plant then dissolves the soft tissues of the victim and the hard parts eventually blow away.

Antony enjoys his time in the Park and finds he is learning many different aspects of the garden.

#### What's new at the zoo?

#### Eve Cozzi Brooklands Zoo Coordinator

Brooklands Zoo's backyard wildlife area has been strongly focused on recently. Extensions have been made to the existing monarch butterfly garden display with additional swan plants, feeding flowers as well as over-wintering shrubs (thanks goes to the Pukekura Park and Hobson Street staff for their contribution!).

The weta hotels that were installed a few years ago continue to provide accommodation for local tree weta with some hotels remaining full (with no vacancies!).



An endangered-plants garden has been created to reinforce visitor education connections between animals and plants. The garden contains four species of native plants whose conservation status is 'nationally threatened' or 'at risk'.

Information is provided in the zoo barn about Brooklands Zoo's contribution to native wildlife rehabilitation, including information on what to do if you find an orphaned or injured bird.

Also, an insect hotel has been created by keepers and is now on display to encourage our visitors to expand their knowledge of and to fall in love with bugs!



The free keeper talks we offer are very popular and have recently been revamped with new content, including a much easier booking process for our visitors to use and a feedback form for suggestions on what we can do to keep improving this service. A portion of the 111,000-plus annual visitors to Brooklands Zoo request free keeper talks either through school group bookings or as general group bookings. We also regularly hold 'Meet the Keeper' sessions during weekends and school holidays.

To complement these changes, staff have received internal coaching on interpretive keeper talks and are always keen to educate our visitors, such as

how they can help with conservation and biodiversity locally and at an International level.



Improved biodiversity is just an app away... The World Association of Zoos and Aquariums (WAZA) have recently created the Biodiversity is Us app. This is being strongly promoted at Brooklands Zoo and is a free, fun and interactive app for both children and adults that shows how simple, everyday actions can make a big difference. The app includes animal facts plus videos and games for all ages. Give it a go by checking out!