

April Update, 2016

Vol. 9, Issue 1

Occasional musings in history, archaeology and Oakley Creek

Part 4: Harbutt Reserve dam discovery by Brent Druskovich, Consultant Archaeologist

If you are wandering through the wilds of Harbutt Reserve, you may just come across the remains of an unusual archaeological site, at least within urban Auckland. I personally hadn't spotted it, despite passing it a number of times, and neither had the noted wanderer and observer Wendy. Now, neither of us can walk past the spot without seeing it clearly. The dam has presumably eroded much over the years and is today held as a dam by a large tree that has lodged in the middle of it. It is first recorded on an old survey plan - DP 40792 of 1953. This plan adds mention of a dam, but doesn't actually illustrate it just the location of the lagoon formed by it.

Survey at the point illustrated on the plan found the remains of a drystone wall, that would have once stood more or less on the boundary of the property. Unfortunately, only basal stones remain (spread on a 12.5m long alignment). Also found were the remains of what appears to have been an earthen dam, that may or may not have had some of the local basalt used in it as well.



Part of DP40792 of 1953 - note comments "Lagoon formed by artificial dam."



The lagoon and dam are now recorded as part of the archaeological record as R11/3009.

Photo: B. Druskovich

It is not obvious whether the basalt rock within Oakley Creek at the dam face is original or added later. Some basalt boulders are found on the western side of the creek, which has no naturally occurring basalt.

There is still a deep and relatively still lagoon at this location, though now it is formed by a combination of the dam and a couple of very large fallen trees that have filled gaps in the former dam face. There are what appear to be flat areas cut out of the bank immediately downstream of the dam. While the evidence is not strong enough to prove it, it seems reasonable to suspect that the earth that formed the dam was removed from the slopes at this point, right on site. A drystone rock retaining wall is also found upslope, between the drystone wall remains and a large macrocarpa at the top of the hill.

Examination of the "retaining wall" found that it was constructed between areas of earthworks, and I do not believe it to be a pre-1900 feature like the other wall remains. In fact, I believe it probable that stone was borrowed from the older wall to create the new one, most likely post-1940. Therefore, it could be considered a historic heritage item. The older wall, earthen dam and macrocarpa tree are all likely related farming features and have been recorded with the New Zealand Archaeological Association records as site R11/3009. Whilst it is unlikely that the drystone wall doesn't predate 1900, the age of the dam is less certain, just that it must predate 1953. All of this evidence is found within Remnant Mahoe Rock Forest Area E, mostly within Management Unit 10. However, components of the dam may be just in MU9. So now that you know it is there, and if you like to venture off track a little, see if you can find this urban dam - I dare say you will find no other.

> Brent at the lagoon dam. Photo: W. John



Dates for your diary

Bring your family and friends - and spread the word about:

Saturday, 30th April, 9:00am: A Rocha Community Working Bee All welcome. Meet at Cradock St Bridge

Sunday, 1st May, 10.00am: Community Working Bee Meet at Harbutt Reserve, upstream of Cradock St Bridge. Wear sturdy footwear and bring a spade or garden fork, if possible.

Saturdays 7th 14th & 21st May, 9.00am: Rodent Baiting Meet at Unitec Student carpark, by Building 76.

Sunday, 5th June, 10.00am: Community Planting

Saturday, 25th June: Annual Bird Survey

Sunday, 3rd July, 10.00am: Community Planting

See <u>www.oakleycreek.org.nz</u> or contact Wendy John, email: <u>info@oakleycreek.org.nz</u> or phone: 815 3101 or 027 232 6454, for more information.

Te Auaunga Awa Underwood & Walmsley Reserves Stormwater Project

The Walmsley and Underwood Reserves section of Oakley Creek Te Auaunga Awa (approx. 1.3km between Sandringham Road and Richardson Road) is about to be transformed as part of an Auckland Council project to help reduce flooding and improve the two reserves. This will be done by removing the existing concrete channelling and creating a naturalised stream environment. And, as well as alleviating flooding, the project aims to restore the native ecology; and provide walking trails, cycle ways and leisure opportunities for the community to enjoy.

Friends of Oakley Creek submitted on the project, and is involved in a Community Advisory Group (CAG), for the project, that acts as a conduit between the Council, and the community. Some of the outcomes from the CAG discussions include improvements to the project design which will result in enhanced biodiversity and water quality, cycling options, play and recreation (including the integration of Māori traditional play opportunities).

Thanks Helen, Jane and Dominic!

We would like to express our great appreciation to Helen Mellsop, Jane Shand and Dominic Hutching, who are stepping down from the committee.

Helen was a founding member of the organisation, has managed all our fundraising applications and grant reporting requirements, helped with planting plans and carried out lots of other committee work besides. She assures us that she will still be around to help out at working bees.

Jane is moving back down to the East Coast, but will continue her job as Teasurer, remotely, until the end of the financial year tasks have been done. As well as being Treasurer, Jane has co-ordinated and participated in our trapping programme, plus much else.

Also a founding member of the committee, who returned two years ago, Dominic has written many words as part of his contribution - as Secretary and as a major contributor to various submissions, helping to protect the stream. He is now heading off overseas for some new adventures.

So, many thanks go to you all and best wishes for the future. If anyone would like to volunteer for the committee, it is lots of fun and very interesting. Meetings are at 7.30pm on the third Monday of each month. Please get in touch if you would like to know more.



Photo: Construction Management Plan AECOM Oakley Creek - Te Auaunga Rehabilitation Project Auckland Council 2015.

For more information go to:

http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/CouncilProjects/Pages/teauaungaawawalmsleyunderwoodreserves.aspx

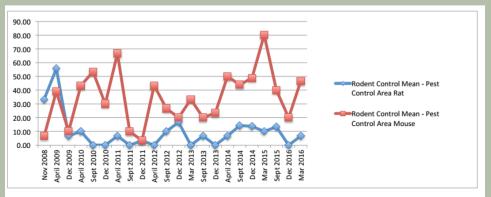
New reserve land at Oakley Creek Te Auaunga

The new esplanade on the peninsula on the west side of the creek, from Phyllis Reserve, through to Harbutt Reserve by 36 Cradock Street, is now showing as being reserve land on the Auckland Council GIS web page -'subsoil/36'. This was a consent condition for the SH20 motorway extension, whereby NZTA had to give this land to Auckland Council. It is a considerable size approx 3935 m², and something we will be putting it on the agenda for some work, in the not too distantfuture.

Monitoring and pest control

Rodent monitoring

Summary tracking tunnel data, showing % of tracking cards with rodent prints, from November 2008, before pest control began, until the latest results in March 2016.



Friends of Oakley Creek Te Auaunga 10th Anniversary Celebration









At this special celebration, there were fine words spoken and fine new posters...



There was fine music played by the Nathan James Trio, fine conversation, fine food, and a fine anniversary cake ...



We would like to thank Albert Eden Local Board for their support of this event.



And, there were ten fine kahikatea trees planted by many Friends, to represent the ten years of streamside planting and care at Oakley Creek Te Auaunga.

Oakley Creek restoration - what makes up a typical season?

Here is an update on the work plan for Oakley Creek, downstream from New North Rd for 2016. It is not possible to plant in some areas until the Resource Consent and Archaeological Authority to Modify come through. but all other work - site preparation and weed control - is on schedule.

Albert Eden Local Board:

 MU6 - West above waterfall - initial planting/site prep done in January. Follow-up / final site prep to be done in late April. (202 plants)
 MU9 - Harbutt Reserve corner at top of steps - initial planting/site prep done in January. Follow-up / final site prep to be done in late April. (220 plants)

3. Remnant Mahoe Rock Forest (RMRF):

a) MU8-MU11 - follow-up weed control of all rock forest areas (A-F) done in March. Some 'buffering' to be done at end of May, to keep weeds from surrounding areas from encroaching into the rock forest areas.
b) RMRF Area E (north end) - MU9 Harbutt Reserve - site prep completed in

March for planting. (500 plants) 4. Stream Enhancement:

a) MU8 - below Phyllis Reserve Carpark - bindweed control - initial work done in January / February. Some top up to be done in April.

b) MU9 RO (Restoration Opportunity (RO) #11 - plant maintenance/weed initial work undertaken in January/February. Follow-up due in April. (50 plants - infill)
c) MU10 (upstream of RMRF Area E) - planting/site prep - initial work done.
Followup / finial site prep to be done late April. (353 plants)

Auckland Council Stormwater:

1. MU11 - floodplain - upstream of 2015 planting - nominal site prep required. (250 plants)

Auckland Council Parks West:

1. MU12 - Cradock St Esplanade Reserve (west - downstream of Cradock St Bridge) - follow-up control of bindweed / blue morning glory etc. undertaken. (50 plants - infill)

2. MU12 - Powell St Reserve (end of Powell St) - two site prep visits undertaken in Jan & March. Some follow- up still to be done. (648 plants)

Auckland Council - Sustainable Catchments:

 MU8 RO#7 (steep slope, south-west corner of Phyllis Reserve) follow-up weed control undertaken in March. (75 plants - infill)
 MU8 - West peninsula floodplain - weed control / trimming low hanging privet branches undertaken in March. (180 plants)

Auckland Council - Sustainable Neighbourhoods (SN):

Funding provides for work on both public and private land. Plant numbers still to be confirmed.

1. Cradock Street SN - one weed control visit undertaken in February. One more to be done in April. Some infill planting.

2. Powell Street SN - two weed control visits to be undertaken

Well Connected Alliance (WCA):

 MU2-MU4A - follow-up weed control, mainly of bindweed, to be done.
 MU1-MU3A - 2nd year of mitigation planting - infill - some weed control / site prep still to be done. (1295 plants - 445 to be planted by contractors, 850 to be planted by community)

Auckland Council Environment Resource Consent (ERC):

1. MU7 – northern half of gabion wall planting (infill, to be planted by contractors)

2. MU10 (south of RMRF Area E, up slope from AELB Stream Enhancement planting) – remainder of plants from MU7.

And, of course, much is happening upstream too. So, there's lots of planting coming up, with dates to be advised in due course.



Above: This native rush, Juncus prismatocarpus, was noticed by Wendy John recently, growing at Oakley Creek. This is a new species to add to our plant species list. It has flat and compressed, yet hollow, leaves with distinct segments within them.

Below: A basalt outcrop in Alan Wood Reserve, a cabbage tree in full bloom, pre-Christmas, and a fantail encounter.







Harbutt Reserve erosion works: 2015

As with many of urban streams, due to natural processes, including flooding and, in this case, the loss of a tree with the ensuing failure of its roots to stabilise the bank, Oakley Creek is constantly on the move. And, when we humans build structures such as paths and bridges in the way, this can result in some major works and expense.

Recently, there was an area of stream bank in Harbutt Reserve that started to erode away. The process to repair it was interesting to observe ...





The problem - in April (above) and July (right). Photos: W . John



The solution - started in August (above).

against the diseases of oblivion.



Biodiversity is ...

The result - in November (right).

McCarthy, 2007



This woody cased caddisfly and fingernail clam were found during water monitoring at Oakley Creek.



Biodiversity is defined as the sum of an area's genes (the building blocks of inheritance), species (organisms that can interbreed), and ecosystems (amalgamations of species in their geological and chemical landscapes). The richer an area's biodiversity, the tougher its immune system, since biodiversity includes not only the number of species but also the number of individuals within that species, and all the inherent genetic variations - life's only army

Photos: W. John

Calculate your carbon footprint ...

Investigate this new initiative from United by taking a look at http://www.oneplanet.unitec.ac.nz/MakeAPledge. A link on the page takes you to a calculator to work out your carbon footprint. Then, you can return to the page to make a pledge on various things, including restoring a metre of stream, planting a tree or making a donation of \$20 to Friends of Oakley Creek Te Auaunga.

Macroinvertebrates are on the rise at Oakley Creek Te Auaunga

Research on macroinvertebrate monitoring by Martin Neale and Emma Moffet was presented at the 2015 Whau River Symposium. This presentation,

http://www.whauriver.org.nz/wp-

content/uploads/2015/05/Dr-Martin-Neale-Presentation.pdf, included data which shows an upward trend for the Macroinvertebrate Community Index of Oakley Creek between 2003 and 2013 - the only creek, from those quoted, where this was happening. It's great to see this and Friends of Oakley Creek Te Auaunga can claim some credit!

The main purpose of the research was to compare stream monitoring undertaken by trained professionals and volunteers.

The conclusion was that: "Overall, stream monitoring data collected by volunteers provided an assessment of stream health that was concordant with assessments based on data collected by professionals, indicating that volunteer data could be used to support professional monitoring programmes." (Neale and Moffat, 2015. New Zealand Journal of Marine and Freshwater Research.)

Note that this is a separate study to the NIWA research undertaken at the creek last year, which included analysis of the monitoring of a range of streamwater physical properties and which is yet to be published.

Thank you to all our volunteers who monitor the water at various points along Oakley Creek, with the help of Wai Care, and who have contributed to this valuable research.

Our wonderful water monitoring volunteers



Jagjeeta Kaur (left) tested the water near the Unitec bridge with new Wai Care co-ordinator, Stacey Bensemann At the Mt Albert St Judes Scout den site, Eileen Witt (centre right) also met with Stacey to carry out her regular monitoring. Sunny and Rachel Shearer (right) checked out the macroinvertebrates with Stacey at their site near Cradock St. Photos: W. John



the same area, to continue the great work they had done. There was a great turnout - approximate 30 volunteers, and we removed around 9 cu metres of rubbish. Thanks to Rob, Margi and team from Waterview, the Well Connected Alliance, for providing the skip and refreshments, and the community for all of their great work.

Waterview Shared Path

Initial works are now underway for the construction of the new 2.5km 'shared path' along the lower Oakley Creek catchment. There will be three bridges that are, currently, referred to as the Alford Street Bridge, the Phyllis - Harbutt Reserves Boardwalk and the Soljak Place Bridge.

Friends of Oakley Creek has been involved in discussions with Auckland Transport, Auckland Council, the Albert Eden Local Board and representatives from Mana Whenua around the design of the project, particularly, the Alford Street Bridge. This bridge will cross over the top of the valley, from Waterview to Unitec.

Completion of the project is due in early 2017. Meanwhile, there will be periods, particularly, while the Alford Street Bridge is being constructed, where a section of the walkway will be closed. Signs about closure times have been placed near-by.

See: <u>https://at.govt.nz/projects-roadworks/waterview-shared-path/</u>



Alford Bridge concept sketches,

Images: Auckland Transport



Oakley Creek Te Auaunga Ecological Restoration Plan 2015-2025

3.1.1 Historic Vegetation

The original vegetation cover through this area was likely to have been predominantly Puriri forest (WF7) with small areas of Kauri, podocarp, broadleaved forest (WF11) (Draft Indigenous terrestrial and freshwater ecosystems of Auckland, Singers, N et al, 2014). These classifications are part of the terrestrial and freshwater ecosystems that have been identified by Auckland Council as occurring in the Auckland Region. Due to a history of modification the vegetation at Oakley Creek can no longer be classified as WF7 or WF11 forest types. The vegetation along Oakley Creek has been affected by human influences over a long period and is largely modified. Some vegetation would have been lost during Māori occupation through clearance and natural fires. European settlement would have further reduced the original vegetation through farming and urbanisation. Archaeological evidence includes stone walls and numerous midden sites. There are also the remains of old quarries in Phyllis and Harbutt Reserves, where basalt rock would have been extracted in the period from potentially late 1800s to early 1900s (exact dates unconfirmed, B. Druskovich pers. comm.). The surrounding vegetation near guarries could have been cleared for access or firewood. Aerial photos from the 1940s show that the upper reaches were relatively open with scattered specimen trees along the banks and the surrounding land use as farming and some residential

housing. The southern part of the creek was more densely vegetated. There are earthworks apparent at Phyllis Street Reserve and at the end of Harbutt Avenue in these images. These earthworks are the Phyllis Street Closed Landfill site, which has had remedial works carried out between 1999 and 2002, including clay capping and stormwater management improvements (Andrew Stewart, 2015). On the eastern slope of Management Unit 8 there is still evidence of a refuse tip, with old bottles and metal present (some of which was removed in 2014). The exact extent of landfill in Harbutt Reserve is unclear, but is from site observations suspected to be the upper flat areas and some of the regraded slopes in MU 9 and MU 10. Early use of the land included the planting of a number of exotic tree species along Oakley Creek in the northern reaches of the project area, such as Tasmanian blackwood, white poplar, pedunculate oak, alder, pines, Yunnan poplar, bangalay (Eucalyptus botryoides) and flame tree. Tree privet, acmena and willows could have been planted and would have also spread naturally. The southern parts of the restoration work area contain areas of mature tree privet dominated forest. In the intervening period a wide range of environmental weed species invaded the length of the Oakley Creek stream corridor and there were serious weed infestations by 2004, when ecological restoration began in earnest.

Te Ngahere 2015, on behalf of Auckland Council.







Wairaka wetland pukatea - flowers (October 10), seed pods (February 25) and seed (March 2).

Pollution travesty ...

It is hard to believe incidents like this can and do still happen! This paint-like pollutant came from a stormwater pipe flowing into the Wairaka Stream on April 14. Wendy John was working with volunteers near-by and called the Auckland Council Pollution Hotline immediately - everyone should have the number on their mobiles - 09 377 3107, for just such incidents. Auckland Council are working to trace the source.



Photos: W. John

Weed watch

This section of the newsletter features details about weeds that threaten the native plants along Oakley Creek. You can help by tackling these at the stream and in your garden. In this issue:

Queensland Poplar

Homalanthus populifolius

Family Euphorbiaceae (spurge) family

Also known as Bleeding heart tree, poplar leaved omalanthus

Where is it originally from? Australia, Papua New Guinea

What does it look like?

Shrub or small tree (to 5 m) with smooth, heart-shaped leaves (3-20 cm long) that turn red with age. Small and inconspicuous individual flowers occur in clusters of spikes (up to 17 cm long) from September to November, and are followed by smooth fruits (up to 8-10 mm diameter) made up of two sections with a groove in between, and two small 'antennae' that stick out from the top.

Are there any similar species?

Homalanthus polyandrous has 3-angled, reddish fruit (10-12 mm diameter).

Why is it weedy?

Produces large amounts of seed and is shade-tolerant.

How does it spread?

Seed is spread by birds, water, and machinery, especially roadside mowers.

What damage does it do?

Forms a sub-canopy and can displace native species by competing for light, nutrients, water and space.

Which habitats is it likely to invade?

Regenerating bush, forest margins, roadsides and waste places.

What can I do to get rid of it?

- 1. Grub out seedlings (all year round).
 - 2. Cut and stump paint larger plants: picloram gel.
 - 3. Spray smaller plants: metsulfuron methyl 600g/kg (5g /10L).

What can I do to stop it coming back?

Replant site with native species to prevent re-establishment.



www.weedbusters.org.nz



Queensland poplar



Queensland poplar



Queensland poplar

Queensland poplar has a Surveillance designation under the Auckland Regional Pest Management Strategy 2007-2012 Pest Plant Category, currently being updated.

Oakley Creek Te Auaunga 10th Anniversary Scavenger Hunt

On your next walk along the creek, can you collect:

- 1) 10 fallen flowers
- 2) 10 cicada shells
- 3) 10 fallen autumn leaves
- 4) 10 pieces of rubbish
- 5) 10 weeds
- 6) 10 weed seeds

and make:

- 7) 10 different fungi photos
- 8) 10 different native plant leaf rubbings
- 9) 10 different spider web photos
- 10) 10 leaf boats to race down the stream.

Take a moment to learn about ... Dredging versus hedging

Abstract:

Efforts to ameliorate flooding have historically centred on engineered solutions such as dredging rivers, building levees, and constructing spillways. The potential for ecosystembased adaptation (EbA) options is becoming increasingly apparent; however, implementation is often limited by a poor understanding of their costs and benefits.

This study compares the costs and benefits of a range of hard infrastructure and ecosystem-based adaptation options to mitigate flooding under climate change using data from two catchments in Fiji. We employ unique survey data to document the costs of flooding under various climate change scenarios. We then use a hydrological model to simulate the potential benefits of a range of hard infrastructure and EbA options and conduct a comprehensive cost-benefit analysis.

We find that under reasonable economic assumptions, planting riparian buffers is the most cost-effective option, yielding benefit-cost ratios between 2.8 and 21.6. However, the absolute level of protection provided by this strategy is low. Afforestation provides greater overall benefits, yielding net present values between 12.7 and 101.8 million Fijian dollars, although implementation costs would be substantial. Planting floodplains and reinforcing riverbanks provide some monetary benefits that are lower than riparian and upland planting. Elevating houses is not economically viable under any climate scenario.

Daigneault A, Brown P, Gawith D. 2016. Dredging versus hedging: Comparing hard infrastructure to ecosystem-based adaptation to flooding. *Ecological Economics* 122:25-35



In December, a team from Langham Hotel helped with rubbish removal from along the banks of the creek.

Photo: W. John







From the archives ...

Photos: W. John

It's a win:win opportunity

Volunteering at Oakley Creek Te Auaunga offers a wonderful opportunity to corporate organisations and businesses, enabling them to both give to the community and contribute to the enhancement of their local environment, while undertaking a valuable teambuilding activity. Please contact Wendy John by email: <u>info@oakleycreek.org.nz</u> or phone: 815 3101 or 027 232 6454 to arrange a suitable session or if you know of any organisations who may be interested. Thank you.

Out and about ...

Photos: W. John (unless stated otherwise)







The **CVNZ Local** team are back in full swing for their Tuesday sessions working in parks around the isthmus, including Oakley Creek. Their help is much appreciated to help us keep up with the plethora of work that needs doing to restore Oakley Creek. This team of **Conservation Volunteers** (above, far right) worked in the south-east of Management Unit 3A, weeding and edge clearing (before and after photos, above). **CVNZ International** teams also volunteer at our project. This group (right) helped in the nursery, in March.



These CVNZ volunteers (left) were delighted to be treated with a freshly boiled 'billy' and afternoon tea when working on the creek, thanks to one of our Powell Street Sustainable Neighbourhood members. -thanks, Dave..

As always, many hands made light work at the November community working bee (right).







The Powell Street Sustainable Neighbourhood group gathered for an enjoyable weeding session on the creek over the summer. Planning is also underway for the more working bees, including further planting. From top left: Michael, Linley and Marin.



Cake and her sons, Said and Basil, joined Margaret McConnell and John Allen to help with the rodent control in March. Said is working towards his Duke of Edinburgh Award. The team took the opportunity to collect up some rubbish as well – many thanks!



Auckland Council staff members, Rowena Gilchrist and Matt Bloxham (above), worked on the Alligator Weed Delimitation Survey from War Memorial Reserve up to, and including the Akarana Golf Club grounds, at the top of the catchment in December.



The swamp maire in the Wairaka Wetland, planted by the **Buchanan Rehabilitation Centre Garden Group** in 2006, has flowered. This species is regionally threatened in Auckland, so it is great to see it doing well. The **Weedbusting team** attacked moth plant and woolly nightshade at Waterview Downs - Keith Ayton, Jean Barton and Margaret McConnell.







And more **weedbusters** (above right), our faithful volunteers, Arthur Heighton (left) and Margaret McConnell (right), along with a few extra helping hands like Andrea Olsen (centre), have a done a wonderful job, over the summer months, helping to keep the bindweed at bay. Thanks, heaps, to you all.



Mt Roskill Grammar International Students volunteered at the creek in March.



Following on from the many hours of weeding, by Margaret McConnell, the community did a great job of mulching the *Muehlenbeckia complexa* site in **the Lizard Management Area**, at the **February community working bee**. The plants are doing well and should be providing habitat for our native copper skinks and, hopefully, some native copper butterflies soon. If you are walking through this area, keep a keen eye out, and if you happen to see either of these species, do let us know.

Copper skink being released into the Lizard Management Area in 2012.







Mt Albert St Judes' Scout Group had a very successful working bee, clearing weeds from around the den and by the creek.





St Judes Scouts Den 2009-2015







Autumn is a great time to see **fungi**. The parts that you notice most are actually the fungal fruiting bodies, with the main body of the fungus, the thread-like hyphae, hidden under the ground or within a plant - or even insect ...



And still more bindweed

Lucia and Fleur helped out with clearing the traps in the rain last week. That is one less rat at Oakley Creek Te Auaunga - thank you!











We gratefully acknowledge the support of Foundation North, The Trusts Community Foundation, The Lion Foundation and Auckland Council: Albert-Eden, Puketapapa and Whau Local Boards; Community Organisation Grants Scheme (COGS).

Next Newsletter: Contributions and comments for the next newsletter are welcome - email info@oakleycreek.org.nz

New Members Welcome, Donations Too!

We welcome more members (\$10.00) and/or donations towards the work we are doing to protect and restore our wonderful urban 'taonga' - Oakley Creek Te Auaunga. Donations over \$5.00 are tax deductible.

Contributions and gift plant orders can be made directly into our bank account:

Friends of Oakley Creek - Kiwibank - A/c 38-9003-0978224-00

or cheques, made out to 'Friends of Oakley Creek', can be sent to: 4/65 Woodward Road, Mt Albert, Auckland 1025.



Chairperson: Wendy John Treasurer: Jane Shand Secretary: Volunteer needed Committee: Leslie Haines, Adrienne Stanton, John Stevenson, Volunteers needed Newsletter Editor: Adrienne Stanton

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