

FRIENDS OF WAITE CONSERVATION RESERVE Inc.



COMING EVENTS

Saturday 12th October
2013

Loop Walk Launch
and Nature Walk,
10am—12 noon, fol-
lowed by a free BBQ
lunch.

Please join us!



THE UNIVERSITY
of ADELAIDE

President's message

It is the last gasp of July as I put pen to paper (or finger to key), having spent a few hours in the reserve earlier today watching birds and spraying out weeds in preparation for a working bee planting. The weather was grey and overcast but, on entering the reserve near Quartz Hill, the world seemed suddenly to brighten by a few lux, (lux of course being the SI unit of illuminance and luminous emittance). It became immediately obvious that the first of the Golden Wattles had started to flower, and there can be few things as luminous as a Golden Wattle on a grey winter's day!

Wisdom and passion! These were the two clear impressions that I took away from Bob Myers' presentation at the AGM in May. And it was clear from the buzz in the kitchen afterwards that the rest of the committee was similarly impressed.

After more than 20 years as the 'grassmeister' of the Adelaide Hills it is not difficult to understand how Bob has acquired the 'wisdom', but 'aint it grand to see someone who has done as much as Bob and still to have the fire burning brightly within!

Jennifer and I attempted to dampen Bob's fire a little when we invited him back a few weeks later for a wander around the reserve ..during which we all got drenched. But although his body was sodden, his spirit was undiminished! See inside for, not one, but two articles recounting Bob's grassy life and his tips for how we might better manage our grassy woodland.

The walking trail project is nearing completion. Already 2000 copies of the smart new brochure are sitting printed and ready to accompany brave souls on the new 4km Waite Loop Trail. Similarly post holes are dug, awaiting posts bearing spiffy new 'Blue Devil' trail markers to direct walkers. The final design and instructions for 5 new interpretation signs have been sent to the sign-makers. All that now remains is the official launch – see inside for your invitation.

You will notice that there is no new working bee program in this issue. The University is currently reviewing use of volunteers in the reserve and have asked us to defer working bees until they have resolved the situation. I trust that we will be allowed to continue to contribute meaningfully to the health of the reserve through working bees very soon. I'll keep you posted.

Pete



Contents

President's message	1
President's AGM Report	2
Bob Myers AGM talk summary	3
Working Bee Report	3
Bob Myers' tips for managing native grasses	4
Spring 2013 Manager's Report	4
Ornithologica V	6

FROM THE COMMITTEE

PRESIDENT'S AGM REPORT

I start with a rather sorry tale. It seems that in the last couple of months we have misplaced 26 hectares of the reserve. For a long time we thought the reserve was 147 hectares. Recently however Jennifer discovered that a past mapping error had over-estimated the size and in fact it is only 121 hectares. My disappointment at finding we have fewer hectares to love and care for is tempered by knowing there are also fewer hectares from which to remove olives and other weeds!

Over the past year the Friends group has again pursued its core business of supporting the University by assisting with the reserve's ecological rehabilitation - code for controlling weeds and encouraging native plants in their place. Our main contribution takes the form of working bees, held on the first Saturday and third Sunday of each month. In the early years these mostly involved olive control but, as the university was able to employ more staff to do the heavy work, the Friends have concentrated more on tree-planting, maintenance of plantings and on targeting other problem weeds such as the isolated population of Perennial Veldt Grass on Quartz Hill.

This year our focus was again on new plantings at Netherby Knoll and in other weedy areas to provide a source of seed to assist future establishment of native species in areas where weeds dominate. The total volunteer time contributed by the Friends over the year amounted to 1020 hours.

Last year I reported on two grant applications submitted for funding, in part to raise the profile of the reserve and the Friends. Both were ultimately successful but in the end it became clear that we hadn't the resources to effectively discharge one of them - to re-vegetate a section of the high profile Yurrebilla Trail - and we regretfully decided not to take up the option.

This has enabled us to concentrate more fully on the second Community NRM Action Grant project, to update the trail guide and interpretive signs for the Waite Loop Trail. The old guide had been well used over the past 10 years but was in dire need of a re-vamp, especially the map which could be misleading - literally!

To date we have chosen a new route, incorporating part of the Yurrebilla Trail; created draft text for a new brochure and 5 new interpretive signs; engaged Ann Prescott to liven up the text of both; and designed new 'Blue Devil' trail markers to guide the route. We envisage the package will be ready for launch in a couple of months and hope to celebrate with a walk to mark the occasion.

Each year we arrange extra-curricular member activities that don't involve sweat and toil. In the past year it was a butterfly walk and koala count. As a result we were able to almost double the list of butterflies known from the reserve to 20 species and we recorded about 20 koalas. Thanks to all participants. I am always pleased to receive members' suggestions for future activities.

Among other things we also had made two sandwich board signs to advertise the Friends group at working bees and replaced three picnic table tops at the bottom of Wild Dogs Glen.

I want to finish up by thanking the committee and other contributors: to Secretary Helen Pryor, Treasurer Lynda Yates, Pete Lang for his extraordinary botanical expertise; Newsletter Editor Penny Paton; Meg Byrt for all manner of contributions and to Clint Garrett especially for his technical expertise.

Thanks also to the university work crew - Stephen, Dan and Liam who worked shoulder-to-shoulder with us at working bees - and to Jennifer Gardner, also from the university, who provides wonderful support to the group.

And thank you to all the weed-pullers and tree-planters that give their mornings on the first Saturday and third Sunday of the month to contribute to the working bees. Your help is greatly appreciated.

Finally I also thank Annette and Andy Baker and call on Jennifer to make presentations of Life Membership for their huge contribution to the reserve.

Peter Bird
President

29 May 2013



Pair of nesting Rainbow Lorikeets, WCR (Photo: J. Gardner)

Bob Myers - a small property case study

Bob and Wanda Myers have a property near Birdwood in the Adelaide Hills, which they call 'Lichen Rocks'. At an earlier stage of its life, it was called 'Poverty Paddock', which gives one some indication of how denuded it was for many years. Initially, they ran the property as an agistment block but, from 1986 onward, they began to actively restore the landscape, starting with fencing off the banks of the Upper River Torrens to prevent stock watering directly from the river.

They knew that in its original state the property would have been grassy woodland, as had been the majority of the Adelaide Hills region. Their mission was to try to restore the landscape to something more like that original grassy woodland; they did this by minimizing weeds and promoting native grasses in their place. A benefit of this approach was that the new landscape would also be less fire prone than the weed infested area that they had purchased.

Fortunately for them there were still some small areas of remnant grasses which were subsequently used as a seed source for other areas of the property. In addition, they still had some of the original River Red Gums, Manna Gums and Blackwoods that had escaped the axe and grazing.

Through a process of trial and error and in consultation with others, Bob and Wanda have now restored much of the property and have turned their initial protected areas into 1.9 hectares of seed producing grasses, the seed of which they offer for sale and which continue to contribute to the natural regeneration of grasses on the property.

A key finding of their effort was that any area which was to be re-seeded with native grasses had to be fallowed for at least one year and preferably for three years. Some of the reseeded areas are managed as a commercial harvesting operation, with plants in rows and in some cases with subsurface irrigation, just as you would expect in a commercial nursery operation. Harvesting of grass seeds is a little different to harvesting of wheat, so Bob has had to invent/convert machines so that they are fit for purpose, eg a blower/vac can be used for sucking off the seed heads on some species, while a mini street cleaner is useful for other species.

Bob has found that there is a place for fire in the management of his grass plots. Autumn fires remove much of the thatch and also act to stimulate new growth. Bob also spoke about the use of native grasses as a method of reducing bushfire risk. Native grasses carry a much lower fuel load than introduced species such as Wild Oats. The CFA in Victoria has recognized this and in some areas have created buffer zones by using these grasses. Bob and Wanda have done the same with their home at 'Lichen Rocks', which is really a case of put-

your ideas to the test.

Over the years that Bob and Wanda have been working on 'Lichen Rocks', they have had significant success in restoring the landscape, while at the same time creating a commercial business. Animals such as bandicoots have returned to the area and the grassy woodland now supports a greater diversity of birds and insects.

Clinton Garrett



Bob Myers at the AGM (Photo: C. Garrett)

Working Bees

Due to the wet weather and sometimes very thick fog we have only had five working bees this year. The first one was on Stone Reserve focussing on olives, boneseed and buckthorn (*Rhamnus*). The others involved weed removal, mainly small olives and African daisy on Urrbrae Ridge, Leafhopper Gully and Netherby Spur. Several working bees concentrated on planting; some grasses around the picnic tables at the top, three boxes of sheoaks where the contractors have been clearing olives below Netherby Spur and a variety of species in the valley under Wylie Trig, the highest point of the reserve.

The working bees under Jennifer's supervision have been very productive and with the results of our work clearly visible, very satisfying. (The weeds have been very easy to pull out from the wet soil.) We regret there has been a suspension of working bees until the University reviews staffing supervision of future working bees. At the start of Wild Dogs Glen a number of South African Weed Orchid *Disa bracteata* (Synonym *Monadenia bracteata*) have been sighted. If members notice any along the walking trail, please dig out the bulbs carefully and crush.

FROM THE COMMITTEE

BOB MYERS – tips for managing native grasses

Bob has been managing native grassland and growing grasses for seed harvesting for more than 20 years. Many of the same grasses occur in Waite reserve. The following tips for direct seeding and managing grasses were gleaned from Bob's AGM talk and a later walk through the reserve.

Seed collection

- Maintaining local provenance for grasses is less important than for trees and shrubs for a number of reasons. Consider purchasing seed due to the large quantities required for direct seeding.
- Collect seed using a power vacuum cleaner.
- Add magnesite to stored seeds to kill insect pests.
- Harvest kangaroo grass (*Themeda*) by cutting whole stems with a brush-cutter in January before the seed has begun to shed.

Ground preparation

- Spray out areas proposed for direct seeding 2-3 years beforehand to reduce weed competition. Do so as early as possible following weed germination to minimise nitrogen buildup.
- Slash weeds in a buffer zone around the sprayed area to minimise seed set. The resulting trash also helps trap weed seeds that might blow or wash onto the site.
- Alternatively, scalp topsoil to remove weed seeds and excess nutrients.
- Experiment with small blocks but re-seed the largest blocks possible to minimise weed encroachment on the perimeter.

Seeding

- Plant cool season (C3) native grasses (eg. wallaby & spear grasses) after breaking rains in autumn when soil temperatures are 12-20°C.
- Plant warm (C4) season native grasses (except *Themeda*) in spring when soil is constantly moist and temperatures 25-30°C.
- Hand broadcast in a light breeze 3-5 grams of florets/ m².
- Plant *Themeda* by laying out cut stems following harvest.
- Seedlings emerge in as little as 4 days in spring and 2 weeks in autumn. Check ID of seedlings against seedlings sown into a pot at same time.
- Potential for using biologically inoculated seed, hydro polymer gels, fine char and sugar is currently being investigated.

Weed control and management

- Apply a granular pre-emergent (Oxadiazon) in winter and summer to control emerging weeds.

- Warm season native grasses can be over-sprayed with half strength glyphosate (1:200) soon after the autumn break to knock out freshly germinated weeds and after mid-winter frosts when native grasses are dormant.
- Overspray with broadleaf herbicide with added accelerators to target broadleaf weeds. Spot spray or use serrated sickle knife on individual broadleaf weeds.
- Remove thatch from *Themeda* grassland every few years by cool burns in autumn –late winter, or graze with sheep for 4-5 days.
- Try using a shrouded sprayer with glyphosate to control pussytail grass (*Pentasthesis pallida*) on Quartz Hill or possibly a wick wiper.

Spring 2013 Manager's Report

Work in Progress

Olive eradication has continued this year on the steep rocky north facing slope of Netherby Spur parallel to the Yurrebilla Trail. EBS Restoration's capable and enthusiastic team of four led by Dan Newport have felled a swathe of olives, frilled and poisoned the stumps and burnt large piles of branches from previous olive removal, feeding on freshly cut branches as they worked. This work, completed in June, was funded by a \$30,000 Caring For Our Country Grant 2012/13. Subsequent FWCR working bees planted the sterilised burn sites with Drooping Sheoak seedlings.



Netherby Spur olive treatment
(Photo: J. Gardner)

The EBS Restoration team continued its work in August with our annual control of bridal creeper which, helped by a couple of years of good winter rain, has proliferated in the Reserve. Then it was back to tackling olives and other weeds funded by the third year of a 3 year grant to the University of \$112,000 from Native Vegetation Council – Special Environmental Benefit Grants.

There has been a substantial increase in feral deer roaming the Mt Lofty Ranges. After many months when deer have been either absent from the Reserve or

transient, a herd of bucks has recently returned. Besides the considerable environmental damage they cause, the concern is that they may take up residence in our scrub for the summer and pose a risk to public safety. I have been liaising closely with Andy Baker who is monitoring the deer on a daily basis and coordinating the control efforts in collaboration with our neighbours and members of the Australian Deer Association. This follows very successful operations last year.



Working bee—planting sheoaks on Netherby Spur after olive removal (Photo: J. Gardner)

Grant funding

It is 20 years since the Waite Conservation Reserve was established and I was given the responsibility for overseeing its care as part of my job as Director of the Waite Arboretum. I have been grateful for the advice of the botanists, ecologists and others with expertise in native vegetation restoration who have generously shared their knowledge and given advice. Over that time \$621,000 in external funding has been secured for the Reserve to match the University's contribution. Friends of WCR working bees have been valuable in securing grant funding because volunteer time counts towards the Applicant's contribution. Working bees have been fewer this year in part due to stormy weather. None-the-less, as Helen has reported in this newsletter, a substantial number of seedlings have been planted and I express my thanks to our growers and working bee participants.

Mapping

Last year I took an introductory TAFE course in ArcGIS (Geographical Information Systems) for Map Production. The potential uses of the application as a management and reporting tool in the Reserve are many. It has been very useful for producing maps documenting annual progress on the extent of olive removal for grant acquittals, Tracks and Trails, the Loop Trail for the new brochure, gates, photopoint localities, fire tracks (for the CFS), localities of specific weeds to be monitored

each year, and areas to be slashed or brushcut by contractors for bushfire risk management. In the course of my map making I uncovered an error in the current area of the Waite Conservation Reserve (121 ha) which has varied as parcels of land were added and subtracted. 110 ha are under Heritage Agreements.

In 2006 Grant Joseph who was one of the Reserve bush-care team did the GIS course and, as part of his project work, collected and analysed an astonishing wealth of data about the Reserve flora and other attributes. He mapped every eucalypt and sheoak and documented the associated understorey species to define 14 different Vegetation Community Structures which informed his WCR Revegetation Management Plan (2006). When Grant moved to Western Australia he donated all his electronic files. Working with consultant and TAFE GIS Lecturer, Marian McDuie, we have sorted, rationalised and organised ~20,000 files into a valuable integrated information set of 3,770 files which provide historic and useful baseline data for future research and to enhance the visitor experience (eg following trails and downloading information *en route*) and for citizens to collect and upload data (such as in the recent Great Koala Count) which could be integrated into the Reserve information system.

Website

My next project is to update the Reserve website. It will be migrated to a completely new-look University template which will be more attractive and user-friendly. Once the new structure is in place the most recent plant checklist compiled by Peter Lang, fauna surveys, trail notes, newsletters and fliers of forthcoming events can be uploaded and kept current.

Acknowledgements

I would like to thank everyone who supports the Waite Conservation Reserve through attendance at working bees, membership of the Friends and donations. In particular I acknowledge the FWCR Committee: President Peter Bird, Secretary Helen Pryor, Treasurer Lynda Yates, Newsletter Editor Penny Paton, Peter Lang for establishing and maintaining the flora database, Meg Byrt and Clint Garrett for their hard work in the Reserve. Recent grants secured by the Friends have enabled the production of the new Loop Trail brochure and trail markers and interpretive signs. I congratulate Peter Bird on securing the grant and both Peter and Ann Prescott for all the work they have done on the signs and Loop Trail brochure which will be launched later this year. Since the formation of the FWCR, grants totalling over \$13,200 have been secured for small equipment, display stand & posters, signs and trail guides. In addition individual Friends have donated money for picnic tables and seats which provide welcome resting spots for walkers. Members of the Committee have expertise in botany, ornithology, herpetology, ecology and plant and animal pest control. I greatly appreciate their willingness to share their knowledge and experience.

FROM THE COMMITTEE

Finally, I pay tribute to volunteers **Andy and Annette Baker** who were awarded well deserved Life Memberships of the FWCR at the AGM in recognition of their outstanding contributions over 13 years. They both have been loyal participants at working bees and at the end of each session we all enjoy the very welcome cuppa and delicious sausage sizzle donated by the Bakers and cooked to perfection by Annette. Andy has served on the FWCR Committee and in his own time has installed interpretive signs, trail markers, seats and gates. He started walking in the Reserve regularly for fitness. With his keen observational powers he has acquired an intimate knowledge of the Reserve which has proved invaluable in assisting to control feral deer over the last three years. He has spent many hundreds of hours monitoring the infrared cameras he placed in strategic locations, scrutinising deer tracks and coordinating control efforts. Congratulations and heartfelt thanks to Andy & Annette.

Jennifer Gardner

Ornithologica V— Penny Paton

While not directly relevant to the Waite Conservation Reserve (although we do see Peregrine Falcons there sometimes), I want to explore the often vexed issue of birds and windfarms. My latent interest was reinvigorated by reading notes in *Boobook* (the journal of the Australasian Raptor Association) and a paper from their conference held in Adelaide in early August.

Windfarms are an emotive topic and I will only address the nexus between wind turbines and birds and not their aesthetic, noise or suggested health impacts. Looking at the really big picture, the replacement of carbon-intensive power generation with renewable technologies will help to reduce human-induced climate change - an advantage for the natural environment and fauna and flora. And compared to other causes of bird death world-wide, windfarms make a small contribution, but possibly an increasing one, as more windfarms are built. They also preferentially impact certain types of birds. (continued page 8)



Jennifer Gardner presenting Andy and Annette Baker with their Honorary Life Membership certificates (Photo: C. Garrett)

Friends of Waite Conservation Reserve



photo: P.J. Lang

WHEN

Saturday
12th October 2013
10.00am
BBQ Lunch 12.00 pm

VENUE

Eastern end Hartley Grove,
Urrbrae

FREE

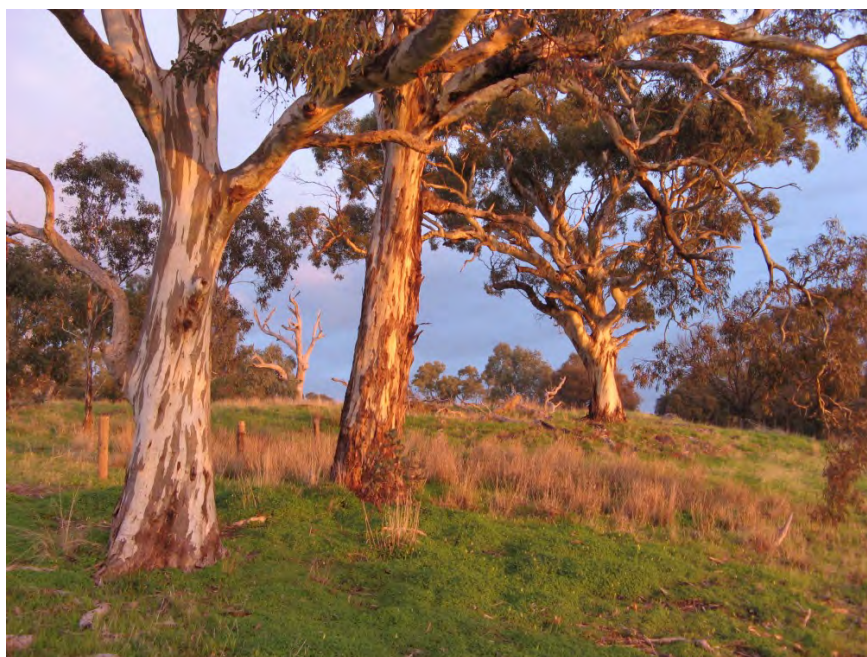
ALL ENQUIRIES

RSVP Helen Pryor
before 9th October
helenpryor10@yahoo.com.au



THE UNIVERSITY
of ADELAIDE

Waite Conservation Reserve *Loop Walk Launch* *and nature walk*



Come on a walk to celebrate the launch of the new Waite Conservation Reserve Loop Walk, guide & signs. Join expert guides Ann Prescott & Peter Bird to discover this hidden treasure on Adelaide's doorstep.

Experience one of the best surviving Grey Box woodlands near Adelaide & its community of plants & animals set against breathtaking views over the city.

Stay for a free picnic lunch/ sausage sizzle afterwards.

The walk is grade 3 with one steep rocky section and uneven ground. It is 4 km. Wear good walking shoes, appropriate clothing, hat and sunscreen.

Directions: Take Waite Road, Urrbrae, off Cross Road. Turn left into Hartley Grove at the roundabout & follow to the entrance gate at the eastern end. There are car parks along the way if needed.

www.waite.adelaide.edu.au/reserve

I cannot locate data from Australia but, in the US in 2001, mortality of birds from various causes was estimated to be:

- vehicles: 60 to 80 million (different studies in different areas found between 2.7 and 96.3 bird deaths per mile of road each year)
- buildings and windows: 98 to 980 million
- powerlines: up to 174 million
- communication towers: 4 to 50 million
- windfarms: 10,000-40,000 (an average of 2.19 bird deaths per wind turbine per year in the US)

The powerline issue is a double-edged sword – birds fly into them, but also risk electrocution, especially on medium-voltage powerlines. A note in *Boobook* relates that Germany now has strong legislation for bird protection on powerlines. There are prescriptions for the construction of new lines as well as retrofitting old lines and a recommendation to construct all new lines as earth cables. While I could not find figures for deaths of birds (and other wildlife) for Australia, there are anecdotal reports of such deaths, particularly for raptors that use powerlines extensively for perching and nesting. I frequently find dead possums under powerlines in my suburb, so the fauna kill rate in Australia must be high.

A US study also found that cats killed 1.4 - 3.7 billion birds annually and, to give a local perspective, a 2007 Government of South Australia study showed that one domestic cat kills more birds in a year than one wind turbine. Of course the type of birds killed by cats and wind turbines is likely to be very different, but it does put into perspective the social context of the debate – we rarely question the keeping of domestic cats, but everyone has a view on windfarms.

And to return to windfarms, Birdlife International (new name for Birds Australia) believes that the key issue is whether a windfarm poses a risk of significant impact on bird populations, either because they confer a significant risk of mortality to threatened species, or by causing high levels of mortality among species which might be killed in high numbers, such as migratory or

flocking species. They also suggest that a number of mitigation measures need to be put in place, as well as ongoing monitoring of impacts.

Concerns have been expressed about the impacts of windfarms on the subspecies of Wedge-tailed Eagle found only in Tasmania. The subspecies is listed as endangered at the national level and there are believed to be only about 220 territories, of which about 95 produce young in any given breeding season. People with knowledge of the eagle believe that many more eagles die than are found, because no account is made of birds that are injured and die elsewhere at a later date. They are calling for independent monitoring at the site (perhaps using dogs to search for injured birds) as well as more research into population turnover around windfarms and control sites, using radio-tagged individuals.

Scotland, a country which aims to provide 100% of its energy from renewable sources by 2020, seems to have adopted a pro-active response to the threats posed to birds of prey by windfarms. Before construction of windfarms, checks are made on potential nest sites of threatened raptors and their flight lines, including their height and frequency, at all times of the day and year. These data will help decision-making about siting of windfarms now and in the future, as well as be invaluable for raptor conservation generally. This type of research together with more bird-friendly turbine design could help ameliorate the negative impacts of windfarms on birds.

References

- Bell, Phil and Nick Mooney. National recovery plan for the Wedge-tailed Eagle, 1998-2003.
International News. 2013. *Boobook*, 31:24.
Mooney, Nick. 2013. Priority work required for Wedge-tailed Eagle conservation in Tasmania. *Boobook*, 31:15-16.
Rae, Stuart. 2013. Raptor studies in association with wind farms in Scotland. Paper presented to the Australasian Raptor Conference, Adelaide, 10th-11th August 2013.
<http://yes2renewables.org/renewables-faq-and-mythbusting/what's-the-bigger-threat-to-birds---climate-change-or-wind-farms> (accessed 14/8/2013)
http://www.fremantlewindfarm.com.au/?page_id=294 (accessed 14/8/2013)

WELCOME TO OUR NEW MEMBERS

Christine James, Beaumont
Joanne Baulderstone, Belair

Yi Feng & Ma Yan, c/- Waite Campus
Valerie Lawley, Mitchell Park

President: Peter Bird (0418-853 -834) pjbird@chariot.net.au

Secretary: Helen Pryor (helenpryor10@yahoo.com.au)

Editor: Penny Paton

Treasurer: Lynda Yates

Membership Secretary: Meg Byrt

Committee: Jennifer Gardner, Clint Garrett, Peter Lang.

Address: Friends of Waite Conservation Reserve, University of Adelaide, Waite Campus
PMB 1, GLEN OSMOND 5064

Phone: 8313 7405

Email: jennifer.gardner@adelaide.edu.au

Website: www.waite.adelaide.edu.au/reserve/