

# Almanda Report 2017



A Friends of Scott Creek Conservation Park Project



**Government of South Australia**  
Department of Environment,  
Water and Natural Resources



The Friends of Scott Creek Conservation Park

## Almanda Project

to restore threatened wetlands in Scott Creek Conservation Park by rehabilitating degraded upland swamps, bogs, spring-fed gullies and seasonal creeklines.



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## Introduction

Scott Creek Conservation Park lies within the 'country' of the Peramangk Aboriginal people of the western Mount Lofty Ranges in South Australia. Stream valleys, such as those formed by Scott Creek and the Onkaparinga River, provided reliable water and food resources for the Peramangk people and were major travelling routes through the hills to the plains and coast.

Since European settlement in 1838, the area has had a varied history. Copper was discovered in 1859 and in 1867 silver was found, creating the 'Scott Creek Silver Rush'. The mining boom only lasted two years, but small-scale mining continued at the Almanda Mine until 1887. Stone ruins of the old mine buildings and workings still exist.

In 1880, a large part of the reserve was split into working men's blocks of 20 acres or less. At various times there has been a jam factory, powder factory and a pottery in the area. Heavy logging and clearing took place between 1940 and 1950 but, even with all this past history and several devastating fires, the Park retains a natural beauty. Glimpses of its varied history can still be seen.

The South Australian Government purchased the land in the early 1970s for water supply purposes. In November 1985 it was proclaimed as a Conservation Park, managed by National Parks and Wildlife S.A.<sup>1</sup>



Machinery next to Almanda Mine car park

The inaugural meeting of Friends of Scott Creek Conservation Park (FoSCCP) was held in 1990, five years after the Conservation Park was proclaimed. Since then, restoration activities that the group undertakes in the Park include rehabilitation of creek systems and other wetland areas, bush regeneration and tubestock planting to revegetate more degraded areas. There is monitoring, recording weed and native species locations, weed control and a bird banding program that has run for over 24 years.

The group runs annual public walks in the Park, produces a regular newsletter and maintains a web-site, which comprises a wealth of information available to the wider community.

The Almanda Project<sup>2</sup> commenced in July 2014 with the aim of restoring rare and beautiful native habitat along eight riparian areas (wetland areas along watercourses) of the Scott Creek sub-catchment within the Conservation Park.

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<sup>1</sup> Adapted from *Scott Creek Conservation Park – a South Australian Biodiversity Hotspot* by the Friends of Scott Creek Conservation Park, commemorating 25 years of work and pleasure, first print 2017.

Together with Mount Bold Reservoir Reserve, which is managed by SA Water, and other substantial landholdings nearby that are owned by Forestry SA, ElectraNet, local councils and numerous private landholders, this is one of the largest contiguous areas of remnant and revegetated native vegetation within the region, and represents an important biodiversity hotspot of considerable conservation value.

The Almanda Report 2017 begins with a progress report from Peter Watton, the President of the Friends of Scott Creek Conservation Park, summarising all aspects of the Project, from grants and fundraising, to on-ground volunteer and contractor work and some information about prescribed burning, which is undertaken in the Park by the Department of Environment, Water and Natural Resources. Following this is a summary of the work being done in each of the major creek systems within the Park, by both volunteers and contractors.

This report is a tribute to all those people who are part of restoring the beautiful and rare natural diversity in this exceptional part of South Australia.



View over Almanda Valley from the Almanda Track

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<sup>2</sup> The Almanda Project is described in more detail in the *Almanda Report 2015* written by Tom Hands and John Wamsley available from the Friends of Scott Creek Conservation Park.

## President's Report

### ALMANDA PROJECT – PROGRESS REPORT – June 2017

The third year of the Almanda Project continued to build on the significant gains made through habitat restoration work in its first two years. Fund-raising was again a focus, to ensure contractors could be engaged to carry out primary weed control and follow-up of previous work. Volunteer activities were widespread throughout the Park, to follow-up on weed control that had been carried out by the group over the previous 26 years.

It was an unusually wet spring and summer, which impacted on the growth pattern of the weeds, both in their timing and quantity. For example, there was significant growth of woody weeds, in particular seedling regrowth, which continued right through summer into autumn, whereas many younger seedlings would usually not survive a hot, dry summer. This also resulted in weed treatment being delayed and, in some cases, extended well past the regular management control period. Of course we then experienced an unusually dry start to winter, so the group's work needs to continually adapt to the quirks of nature and our variable weather.

### Fund Raising

Like last year, fund-raising efforts during the third year of the Almanda Project concentrated on specific activities, rather than utilising the broad crowd-funding initiative used to get the project up and running in 2014. While these were less fruitful this year, this is partly due to funds raised at the 2016 Wirrapunga Open Garden being held over until a ruling on tax deductibility can be obtained from the Australian Taxation Office. Regardless, a further \$6,000 to \$8,000 will be received in the next financial year.

Once more the Wirrapunga Open Garden event held at John Wamsley and Proo Geddes's beautiful property at Aldgate was the top fund-raising activity for the year. Visitor numbers were down a little from the previous year due to uncertain weather



The Almanda Project Open Day was an opportunity to showcase our achievements.

conditions for the weekend late in September, but a good result was still achieved. Proceeds from the gate takings and sales of books, artwork and other fundraising will again be donated to the Almanda Project.

For the second year in a row, we held an Open Day in autumn, at the Almanda Mine area of the Park on Dorset Vale Road, to showcase what had been achieved with the Almanda Project to date. On the chilly, overcast but dry Sunday morning of 7<sup>th</sup> May, a group of the Friends gathered to help prepare for the day.

The Friends' gazebo and display was set up, with photos, brochures, maps and other information about the group's activities in the Park on show. Don Reid set up a mist net and the bird banding equipment, to show visitors what is involved in this long-term Friends group activity. In addition to the FoSCCP display, Proo Geddes provided some of her books and cards for fund raising, and John Wamsley had a display of the rare Almanda Blue plant, with his specially designed stand and optional automated watering system.

The restoration work being undertaken in the Almanda Creek and Almanda Swamp is representative of the work being done in other creek systems through-out the Park as part of the Almanda Project. While there is contractor assisted work being done to manage Blackberry and Cape Tulip in the Almanda Swamp, all work in Almanda Creek, on the east side of the road, is now being carried out by volunteers.



John displayed the rare Almanda Blue with his specially designed stand and optional automated watering system.



Weed control has been part of the regular working bees schedule held across the park. Weeds of note in Almanda Creek and Almanda Swamp include Blackberry, Montpellier Broom, Water Cress, Three-cornered Garlic, Soursob and various thistles and other daisies. Led by John, a number of the group now attend additional working bees each month in this beautiful section of the Park, in between the groups' other scheduled activities.

Preparation of the walking trail for the Open Day was also included as part of these activities, but with extra special thanks to John for planning and Steve Davey for slashing the core parts of the trail. John also prepared nearly 80 numbered name tags, which were placed along the walking trail with plant names and other points of interest that matched a printed guide that visitors could take on the self-guided walk.



The Almanda Project Open Day included a display of our bird banding equipment.

The event was well attended by about 70 people, with \$272 raised and good publicity for the Park, the Friends group and the Almanda Project.

Once more, donations were supplemented by grant funding applications and financial support from the Department of Environment, Water and Natural Resources<sup>3</sup> (DEWNR) and Natural Resources Adelaide and Mount Lofty Ranges<sup>4</sup> (NR AMLR). New grants were approved under the City of Onkaparinga 2016 Environment Grants Program and the Adelaide Hills Council 2016-17 Community Development Grants Program. We applied for and were successful in a Community NRM Action Grant from NR AMLR and a DEWNR on-park Volunteer Support Grant. Contractor work was also financed through the NR AMLR Volunteer Support Officer Kat Hill and NR AMLR District Officer Mark Fagan. Without this support, our progress would be all the slower.

Along with the continued support from DEWNR and NR AMLR, it was terrific to receive funding this year from both of the councils that Scott Creek Conservation Park spans. This was the second grant in two years received from The City of Onkaparinga<sup>5</sup> and the second in three years from Adelaide Hills Council. This illustrates once again that our group's activities are important in helping the Councils achieve their objectives of fostering environmental stewardship and the benefit to local communities.

The only negative on the fund-raising scene this year was that our application for a second year of funding from the Patagonia Environmental Grants Fund of Tides Foundation was not approved. Following the approval of our grant application last year, Patagonia let us know that the goal with their community funding was to develop



We received strong support from NR AMLR and DEWNR, in particular from Jen Pitman (Senior Ranger), Kat Hill (Volunteer Support Officer) & Mark Fagan (District Officer).

strong, long lasting relationships with community groups such as ours and that they looked forward to a continued involvement with the Friends of Scott Creek Conservation Park. Unfortunately, when we applied for the grant this year, we were advised that Patagonia had received far more applications than they anticipated and, rather than continue to support our existing relationship, they advised us that they were unable to provide grant funding this time. It seems that we must continue to emphasise that environmental work is an ongoing task and can't be fixed in one year.

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<sup>3</sup> <http://www.environment.sa.gov.au/Home>

<sup>4</sup> <http://www.naturalresources.sa.gov.au/adalaidemtloftyranges/home>

<sup>5</sup> [http://onkaparingacity.com/onka/discover/history\\_heritage/environment/remnant\\_native\\_flora\\_and\\_fauna.jsp](http://onkaparingacity.com/onka/discover/history_heritage/environment/remnant_native_flora_and_fauna.jsp)

## **The Contractors**

With the excellent fund-raising achieved through grants and donations, a good deal had to be allocated to contractor work again this year. The majority of the work was undertaken by the same contractors that were engaged last year, often working in the same areas, doing follow-up and then extending the areas of weed control.

The abnormal weather patterns resulted in some weeds that have dormancy periods, like Blackberry and Bridal Creeper, being able to be sprayed with herbicide later than usual. Despite their growth often slowing down during the seasonal dry conditions of summer, most other woody weeds are able to be treated throughout the year. We did, however, notice significant numbers of woody weed seedlings germinating this year.

We would like to thank contractor principals Kieran Brewer (South Australian Indigenous Flora), Tony Patterson (Better Bushland), Russell Troon, Ben McCallum (Florsight), Candice Ochsenham (Biodiversity Restorations) and Danny Rohrlach (Minimal Disturbance Bushcare) for their significant contributions to work undertaken in the park this year.

## **Our Volunteers**

The Friends group has a relatively small team of active volunteers, but their tireless efforts have once again managed to achieve a huge contribution to the restoration of the Park, both on-ground and behind the scenes, helping keep all the activities and the group running smoothly.

We schedule three regular working bees in the Park each month, which take place on the first Tuesday, second Sunday and fourth Saturday. Generally we will have six to eight or nine of our dozen regular "Hands-on" volunteers attend these on-ground working bees. As mentioned above, several volunteers also recently started making an extra visit most weeks, to work in the Almanda Creek area adjacent to the Almanda Mine car park. This work keeps the momentum going on this showcase site for the Almanda Project.



[We had a good turn-out for our June working bee, cleaning up the tree guards from our 2014 tubestock planting.](#)

There are others who also venture into the Park on their own or in smaller groups, like Jenny Dawes who patrols areas for outlier weeds or larger patches that will require adding to the program for a future working bee. Others have their own special work area, like Barb Howe and Jane Juttner at gate 3, or other follow-up spraying or cutting and swabbing treatment of Blackberry, which is where Glenn Giles, John Butler and I like to put in a little extra time in one of the many creeklines where previous primary control has been undertaken. I also thank Don Reid as the group's Secretary, Donella Peters as Treasurer and Jenny Dawes as our Administration Assistant, for their significant work behind the scenes.

I can only reiterate that the in-kind value of our volunteer work is crucial in meeting the requirements of grant funding applications. In most cases, every dollar provided as grant funding needs to be matched by the equivalent volunteer or other in-kind value. Recently compiled figures for our report to DEWNR revealed a total of 2,913 volunteer hours were contributed by the Friends for the financial year, including 910 hours of on-ground restoration work. In the DEWNR on-park Volunteer Support Grant 2016-2017 application form, general volunteer hours were valued at \$34.34 per hour, meaning our group contributed \$100,032.42 in total and \$31,249.40 specifically to on-ground restoration work – a huge effort.

## Prescribed Burning

I will take this opportunity to add a little about prescribed burns in Scott Creek Conservation Park, as there is no doubt that they can both impact on and contribute to our restoration goals for the Park.

As most of our members are probably aware, there was a prescribed burn that took place in Bushrat Creek within Scott Creek CP late November 2016. What may not be so obvious is the amount of work that goes into planning such a burn.

Discussions between DEWNR and the Friends group started about three years ago with Tom Hands, our former FoSCCP President. Much of this was brokered, with appreciation, by our Senior Ranger Jen Pitman. This discussion is a crucial part of the planning, as there is a great deal of detailed knowledge that has been built up by the group over the years regarding specific locations of threatened plants, wildlife and weed infestations. This information assists with the planning of the burn, including the timing, desirable intensity, areas that should be left out of the burn and the level of weed management required following the burn.



Epicormic growth on eucalypts after the prescribed burn



Regrowth of native plants in one of the gullies post-fire

Part of the rationale for this burn was to create a strategic area with a lower fuel load, which can be used to help prevent the whole of the park and surrounding habitats from burning in a larger single bushfire event. The lower fuel areas provide locations where these fires can be fought more effectively and safely. This naturally benefits isolated fauna populations, which might become locally extinct if a bushfire sweeps through the whole region.

Within the prescribed burn area, there are a number of threatened plant species, mostly growing within the lower parts of the creeklines. Amongst these is a small population of the nationally critically endangered *Veronica derwentiana* ssp. *homalodonta* (Mt Lofty Speedwell). The good news is that this species generally responds well to fire, but it was still important to get the information about the population and factor it into the planning process.



Regrowth of the critically endangered Mt Lofty Speedwell

Part of the area is also suitable habitat for the nationally endangered Chestnut-rumped Heathwren. To benefit this species, the burn needed to be hot enough to stimulate native vegetation germination and regrowth in this area, which had been deteriorating with age and had a lack of new growth in recent years. On the other hand, there was also a known population of the nationally endangered Southern Brown Bandicoot living in the creekline. Suitable refuge for other wildlife in adjacent areas also needs to be available.

These and other issues, including follow-up weed management requirements, are all part of a detailed environmental assessment process which is undertaken by DEWNR and which is signed off by an ecologist. In the end, the proposed burn area was split in two, with 67 hectares scheduled to take place early in spring 2016, and the rest to go into the planning at a later date. With an early spring burn, the creeklines would be less likely to burn, protecting the threatened plants and Bandicoots, but it should still be dry enough on the higher ground to get good native plant germination and regrowth.

In the normal course, an early spring burn would probably mean September, but the extended spring rainfall meant that the vegetation was still too wet to burn at that time, and it ended up being the last week of November.

Weed management is one of the most important aspects of burn planning from the Friends' point of view. This is because, over the years, much effort has been contributed to treating weeds in this part of the park, in particular Blackberry, Boneseed, Broom and Erica. Most of these weeds are considered fire responsive, meaning they will either regrow after the fire or their previously dormant seedbank will germinate in great numbers.



Mass germination of Montpellier Broom, a Weed of National Significance

If follow-up of these weeds is not undertaken in the years immediately following the burn, they can impede the regrowth of the native vegetation, which we are trying to protect. There has been a strong commitment to this weed management by DEWNR, including some additional control undertaken before the prescribed burn took place.



State rare Bassian Thrush

It is always very interesting to see how nature bounces back after a fire, and this year was no different. Visiting the burn area in February 2017, it was obvious that the continued wet weather had resulted in masses of both weed and native plant growth, and it will certainly be a challenge for the staff from DEWNR to keep on top of their commitment to manage weeds after the burn.

Early on, DEWNR re-assessed their original strategy, which was to start work from the bottom of Bushrat Creek and work their

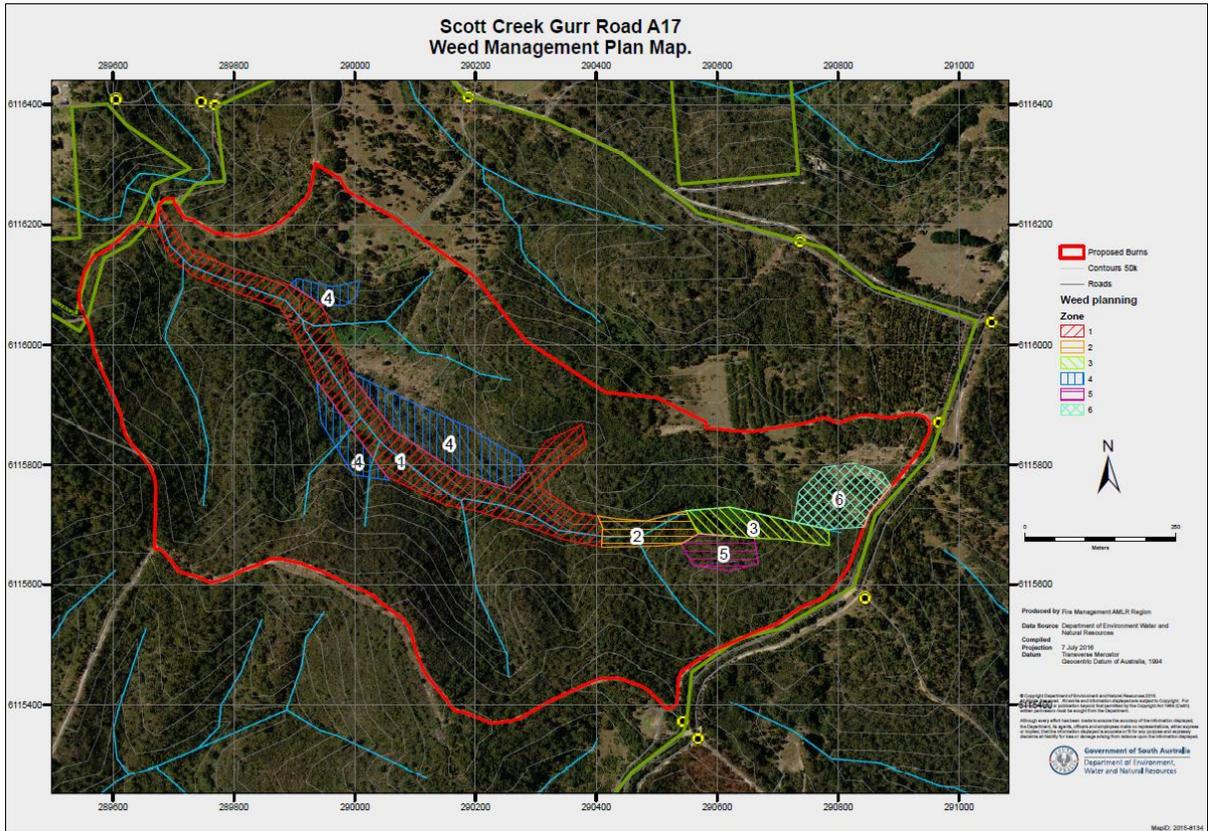
way upstream. Mass germination of Broom seedlings in the vicinity of the Mt Lofty Speedwell sites, along with strong Blackberry growth, resulted in work commencing in this area instead.

Since the fire, the Mt Lofty Speedwell has produced very good regrowth, along with germination of many of its own seedlings. Other positives include regrowth and seedling germination of the fire responsive *Viminaria juncea* (Golden Spray), which is an upright shrub in the Legume Family that grows in wet areas like creeklines and has a rare conservation status in SA. There was also a sighting of a Bassian Thrush, also rare in SA, within the area of the prescribed burn. This is a secretive bird that forages in leaf litter on the ground for small invertebrates and worms.



The Friends took the opportunity to join Senior Ranger, Jen Pitman, on a walk up Bushrat Creek one month after the prescribed burn

While there will be plenty of work for the Friends to contribute to the recovery after the prescribed burn, the last thing our members want is to have to divert our time away from our regular weed control activities across the whole park to attend to a problem created by the burn. Thus the weed management and planning by DEWNR is vital.

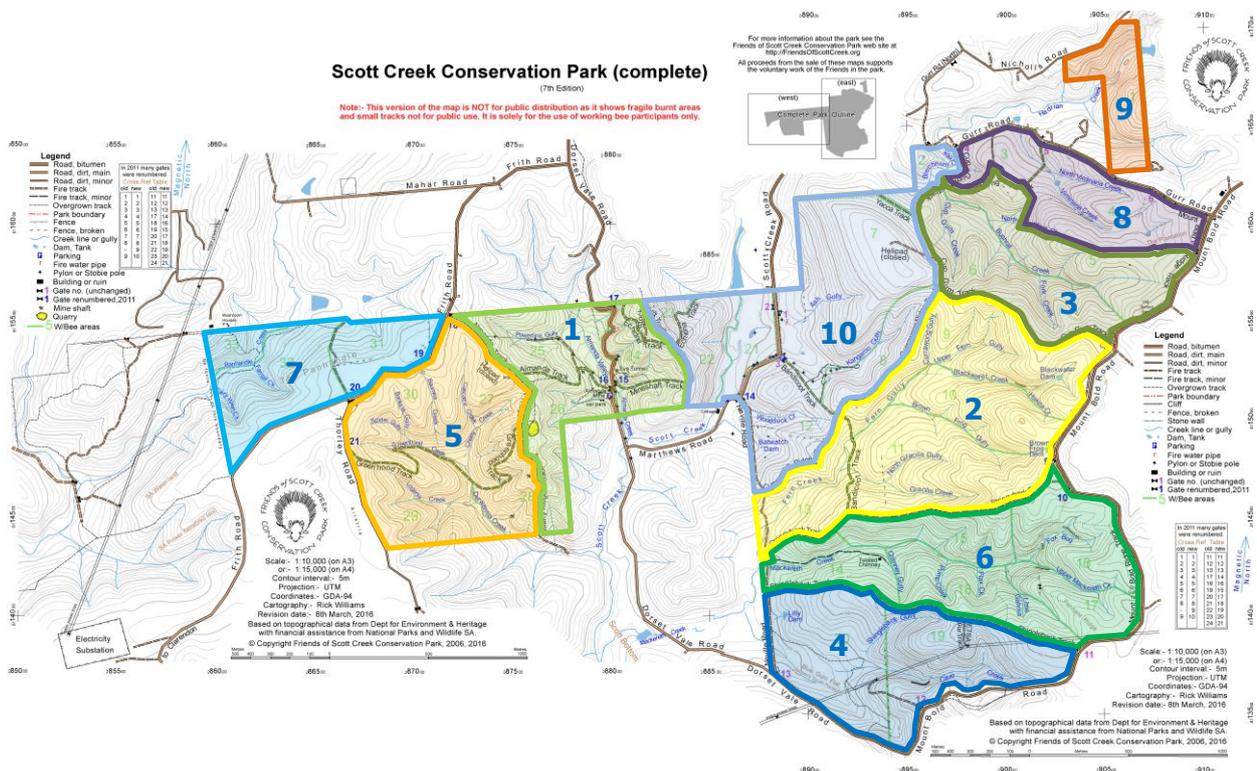


DEWNR Weed Management Plan Map prepared before the prescribed burn took place

# The Almanda Project 2016-2017

The original objectives of the Almanda Project centred on the restoration of eight headwater creek systems in the Park and the reduction of threats to four *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) listed species and 26 Adelaide and Mount Lofty Ranges (AMLR) regionally threatened species.

As the Project moved forward, it seemed natural to combine the eight headwater creek systems with the rest of the Park. Clearly the management of the other creek systems and the woodland and bushland areas above and adjoining the headwater creek systems significantly impact upon them. It is also difficult to clearly separate the on-ground works being undertaken in these various areas, both volunteer and contractor. It has therefore been decided that in future all works within the Park will be considered as being part of the Almanda Project. The areas that have now been added to the Project are Number 1 Block and Scott Creek System, represented by numbers 9 and 10 respectively in the map below.

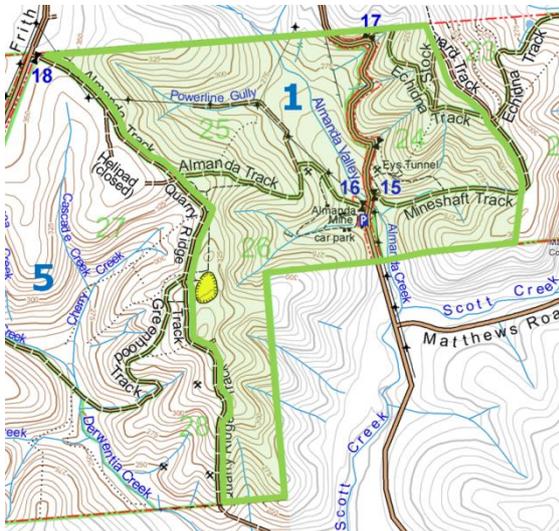


Map of Scott Creek Conservation Park showing the major creek systems

During this last twelve month period, contractors undertook work in nine creek systems within the Park, while volunteers continued their follow-up weed management throughout all major parts of the Park. Once more, contractor work initially concentrated on follow-up of previous work, and then expanded into several new areas, particularly in Number 1 Block and Cave Creek (areas 9 and 4 in the map above).

No new BushRAT (Bushland Rapid Assessment Technique) monitoring was completed this year. After discussions with our botanist, Ben McCallum, it was decided that it was too early to re-monitor any of the previously monitored areas, and new BushRAT monitoring areas were not necessary at this time.

## Almada Swamp and Creek System



The Almada Swamp and Creek System can be divided into several core areas.

The higher dryland areas that surround the Almada Swamp and the Almada Creek have previously had much of the main woody weed infestations cleared and are now the focus of follow-up working bees by the Friends, with the occasional small scale help from contractors.

South Australian Indigenous Flora was contracted to do some follow-up Blackberry spraying north-west from Almada Valley in

Powerline Gully. This was an outlier patch of Blackberry, which we wanted to treat before it got too large.

A large patch of Erica, near the intersection of the powerlines north of Almada Valley, has been worked on over the years, and this year was the subject of a Friends' working bee as well as some contractor work by Biodiversity Restorations.

Biodiversity Restorations slashed large areas of Cape Tulip on the western side of Almada Valley to reduce flowering and seed set in both 2015 and 2016. In 2016, over an area of approximately 800m<sup>2</sup> on the eastern side of the valley, Minimal Disturbance Bushcare trialed two different treatments of Cape Tulip using the herbicide Dalapon. This is a grass and rush selective herbicide which is being promoted quite widely for the treatment of Watsonia and other members of the Iridaceae family, the family that Cape Tulip also belongs to.

Biodiversity Restorations was contracted to establish some trial plots for the control of Cape Tulip in Almada Valley late in 2015, which Minimal Disturbance Bushcare added four extra Dalapon herbicide treatments to in 2016. We hope to be able to provide a summary of the methodology, treatments and results in next year's report.



Steve, John and Jenny celebrate the successful removal of a large Erica from Almada Valley

Almanda Creek is a key area for promoting the Almanda Project to the broader community. Its accessibility, being adjacent to Dorset Vale Road and the Almanda Mine car park, makes it the ideal place to show case what can be achieved when the community takes ownership of biodiversity conservation.



Blackberry sprayed over the Mount Lofty Ground-berry (*Acrotriche fasciculiflora*)

Blackberry spraying was undertaken by the Friends in late summer, and now the dead canes are being cut back to allow the native understorey plants to regenerate from propagules remaining in the soil. Naturally, there are many introduced species that are also taking advantage of the bare ground to colonise this space, and so the volunteers have started holding more regular bush gardening days here, in addition to our other scheduled working bees spread across the Park.

Led by John Wamsley, the group gathers in Almanda Creek about three times a month, generally on a Wednesday morning, to continue making inroads on the Blackberry infestation further downstream, and to remove seedling woody weeds and the variety of herbaceous weeds that germinate. In June, an established infestation of Three-cornered Garlic was also carefully spot sprayed using a broadleaf selective herbicide, while we also plan to reduce the areas of Soursob later this season.



A section of Almanda Creek following restoration

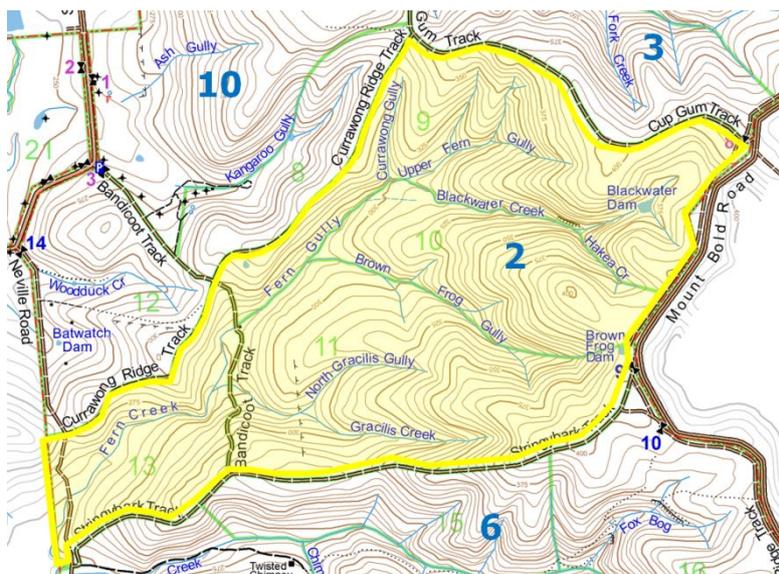
An access track has been cut through the Blackberry, which is being used as part of the self-guided walking trail for our Almanda Project Open Days, held annually in autumn. It is intended that we extend this track through Almanda Swamp and maintain it throughout the year, to retain access for weed control follow-up and reduce the work required to get it ready for the annual Open Day.



Iron Oxide is carried in the water from the Almanda Spring

We hope to develop a more detailed restoration plan for the Almanda Swamp section of the Park. While woody weeds have been treated and will continue to receive follow-up control, deciding on a strategy that will effectively manage the numerous and widespread herbaceous weeds, in particular Cape Tulip and pasture grasses, is a greater challenge.

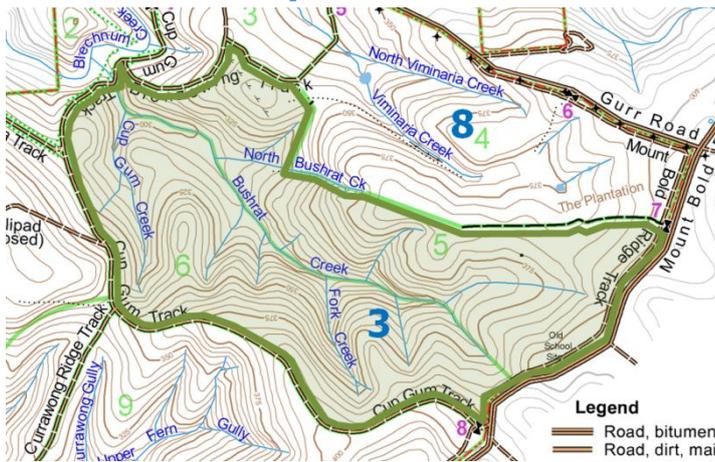
### Blackwater and Fern Gully System



Following on from Blackberry control along Blackwater Creek that was completed last year, South Australian Indigenous Flora was again contracted to complete a patrol around Blackwater Dam and down the creekline into Fern Gully. They sprayed Blackberry and removed a wide variety of other priority woody weeds encountered, including Erica, Boneseed, Montpellier Broom, English Broom, Gorse and *Acacia Longifolia*.

The Friends conducted a working bee on Boneseed and Erica along the northern slopes of Brown Frog Gully. The broader areas were patrolled and sparse woody weeds were removed, but several large patches were discovered closer to the creekline in Brown Frog Gully and will be treated by South Australian Indigenous Flora in the second half of 2017. Another working bee concentrated along Gracilis Creek, in the area east of Bandicoot Track and north of Stringybark Track, removing smaller patches of Blackberry, Boneseed and Dog Rose. We will need to return to tackle the remaining Boneseed and a larger infestation of Blackberry further up the creekline to the east.

## Bushrat Creek System



The Bushrat Creek System was the subject of the prescribed burn by DEWNR in late November 2016 (see earlier section in this report starting on page 9). As part of this process, DEWNR has committed resources to help manage weed growth in the burn area for the next three to four years. Very early after the burn, DEWNR Weed Management Officers commenced control of regrowth and

germinating weeds, particularly Blackberry seedlings and regrowth and Boneseed and Montpellier Broom seedlings. Other priority weeds that will require treatment include Erica and Watsonia.

There has been extensive work completed in this creek system over a number of years, by both volunteers and contractors. It is essential that any weed growth promoted by the prescribed burn be followed-up within the next few years, with particular emphasis on the Blackberry, Broom and Boneseed, to ensure weeds do not reach flowering and seeding stage. Where these weeds have previously been controlled, any new seed-fall will potentially set back our efforts in that area for many years. On the other hand, if the burn encourages germination of dormant weed seed in the soil, and this is successfully controlled, it may substantially reduce future work required here. It really is a fine line.

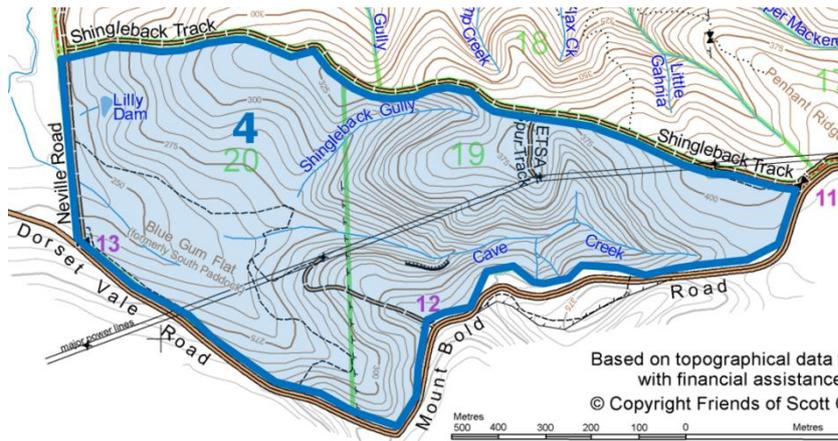
In addition to the DEWNR weed control, we contracted South Australian Indigenous Flora to spray a patch of Blackberry in an unburnt area of Bushrat Creek. Other woody weeds are scheduled to be treated later in 2017.



Bushrat Creek about five months after the prescribed burn

Volunteer activities were restricted due to the prescribed burn. However, there was an early working bee patrolling for Boneseed in the south-east corner of the area, plus several walks through Bushrat Creek, checking on the response of both native flora and weeds, to assist with programming future follow-up weed management.

## Cave Creek System



Following a Friends' working bee in the north-eastern section of the Cave Creek System, it was decided to prioritise containment of the creekline Blackberry infestation. It was found that much of the native vegetation within the area was in excellent condition, particularly in the higher

ground along either side of the creek, but Blackberry had already created a broad, dense infestation where it had invaded the junction with a side creek. While treatment of the main patch is not being considered at this time, contractors worked in the upper creekline, where the Blackberry is smaller. Here it scrambles around and through native plants like the Red-fruited Cutting-grass (*Gahnia sieberiana*). Minimal Disturbance Bushcare was engaged to undertake this Blackberry control.

During the Friends' working bee, there were scattered Boneseed and one isolated small patch of Erica that was found and treated, together with some Blackberry, African Daisy and Blackberry Nightshade. In a subsequent visit, while planning for the Blackberry contractor work, two other isolated Boneseed patches were found, one of which was quite large, and these were also removed.

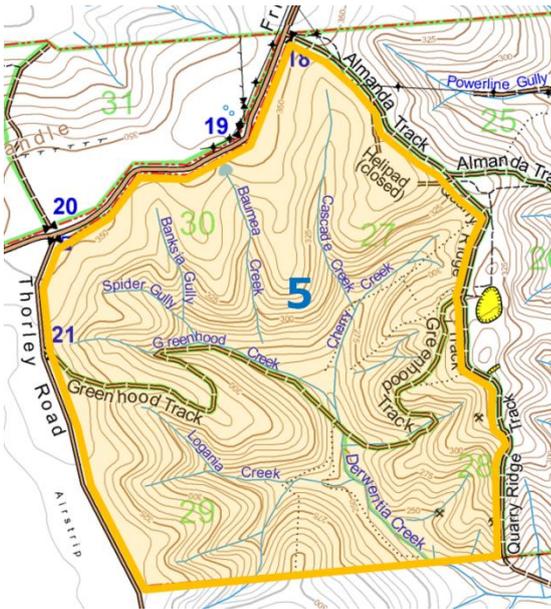


Much of the eastern end of Cave Creek System is in excellent condition



However, Blackberry extended blue through the creekline

## Derwentia Creek System



There is a large network of creeks leading into Derwentia Creek, before it leaves the park and travels into the adjacent SA Water land to the south, forming part of the Mount Bold Reservoir Reserve. Considerable work has been done in this part of the park in the past, mostly by the Friends group, restoring this from a heavily Blackberry infested creekline to the beautiful and diverse area of the park it is today.

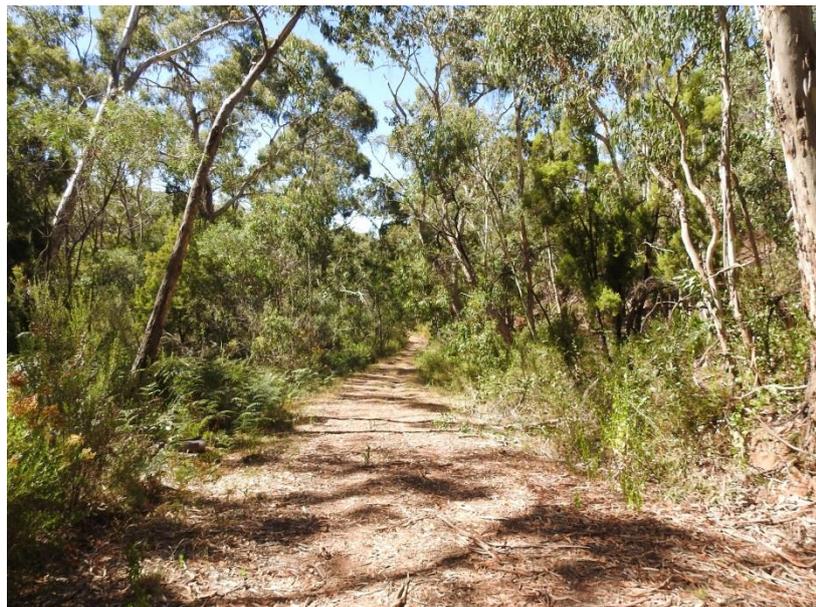
The Blackberry in the main creeklines of Greenhood Creek and Derwentia Creek has continued to be followed up by the Friends group, and remains in excellent condition. The upper slopes and creeklines contain a variety

of woody weed species, including Boneseed, Montpellier Broom, Erica and smaller patches of Blackberry. The priority bulb weeds are Bridal Creeper and Watsonia, with a mix of smaller species, mainly located in the northern section, closer to Frith Road.

During the year, volunteer working bees were held in this area to follow-up previous woody weed control, and some Bridal Creeper treatment has been scheduled for later in the current growing season.

Unfortunately, this part of the Park is also known to be infected by the plant pathogen *Phytophthora*.

*Phytophthora*<sup>6</sup> (pronounced fy-TOFF-thora) species are water moulds, fungus-like



Greenhood Track

organisms carried in soil and water that cause disease and death to a wide variety of native plant species, fruits, vegetables and garden plants. There are many species of *Phytophthora* found in South Australia. *Phytophthora cinnamomi*, which is also referred to as 'Pc', is the most common and destructive species.

<sup>6</sup> From Department for Environment and Heritage brochure *Phytophthora is killing our plants!* January 2009

Phytophthora attacks the roots and stems of susceptible plants and causes them to rot. The plants are no longer able to take up sufficient water and nutrients and they die. The first visual symptoms of infection are discoloration (usually yellow or red) of the leaves followed by dieback of the entire plant. Depending on local site and environmental conditions, small shrubs may die within a few weeks and large shrubs and trees may take several years to die.

Phytophthora can spread from plant to plant through root contact. It is spread most rapidly when rainfall coincides with warm temperatures, generally in spring, summer and early autumn. The disease can spread very quickly with the help of 'artificial' factors such as human disturbance. The transport of infested soil and plant material by vehicles and heavy machinery (such as in fire-fighting, logging and maintenance of roads and powerlines) is probably the most important factor in the spread of Phytophthora. Bushwalkers and bike riders can also spread Phytophthora by transferring infested soil on their boots and tyres.

There is no cure for Phytophthora, nor is there a way of stopping its spread once it has infested an area. We can, however, slow down its spread, and minimise its introduction into new areas by modifying the way we behave in Phytophthora infested or Phytophthora prone areas.

The best way to control Phytophthora is to prevent the transfer of infested soil or plant material, which includes avoiding driving, riding or walking in these areas when soils are wet and sticky. To help enforce this, Greenhood Track is closed from every year from 1<sup>st</sup> April to 31<sup>st</sup> October, which is when movement of Phytophthora is most likely to occur. This naturally also impacts on the Friends ability to access the area for weed control activities during this period.

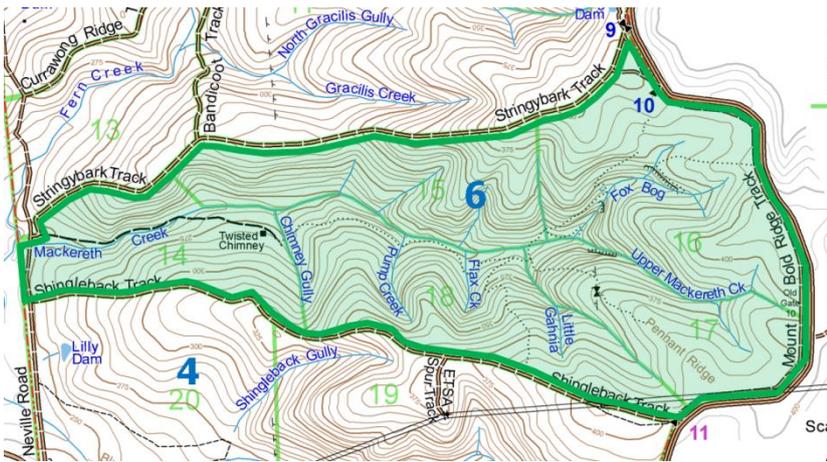


Tiny mosses and lichens are a feature of the Park during the cooler months



A female White-throated Treecreeper busy looking for a feed on a stringybark

## Fox Bog and Mackereth Creek



As mentioned earlier in this report, we missed out on a second year of funding from the Patagonia Environmental Grants Fund of Tides Foundation. Despite this, we felt compelled to ensure last year's Blackberry control within Mackereth Creek, upstream from the Twisted Chimney, was followed up by contractors. To enable

this, other Almanda Project funds were redirected and Minimal Disturbance Bushcare was engaged to reprise their efforts from the previous year. Early inspections indicated a good kill rate had been achieved with the Blackberry, however, there was strong regrowth after the very wet spring and summer in 2016-2017, and so much of the previously treated area needed to be re-treated.

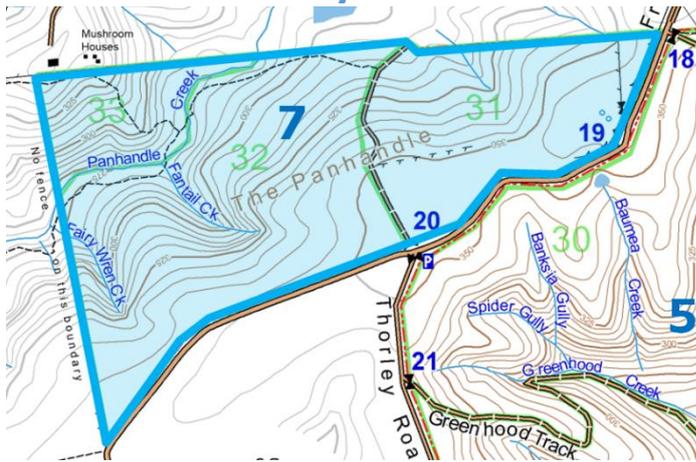
Blackberry follow-up spraying was also undertaken by volunteers at either end of the creek system. This included the length of Mackereth Creek from Neville Road up to the area adjacent to Twisted Chimney, where the contractor work started, and above and around Fox Bog. In the Fox Bog area it scrambled through the native understorey, mainly amongst Bracken in the creekline and Tea-tree up closer to Mount Bold Ridge Track. Several working bees, both scheduled and impromptu, worked on small outlier patches of woody weeds, including Boneseed, Broadleaf Cotton-bush, several Olives and Erica. Of particular note were several patches of Berry-flower Heath (*Erica baccans*) between Fox Bog and Upper Mackereth Creek. This is an uncommon weed in the park, and so is a priority for removal before it spreads further.



Twisted Chimney ruin

A fairly large, dense patch of Blue Periwinkle was sprayed near the Old Gate 10 site, on the west side of Mount Bold Ridge Track. This weed has proven to be a challenge to control in the past, and so it showed to be in this instance. Initially it was sprayed with a triclopyr and glyphosate mixture in January, with the Pulse penetrant additive. A follow-up spray of glyphosate and Pulse over part of the patch in March proved a lot more effective. It is possible that the timing of herbicide application may have contributed to the results, perhaps more so than which herbicide was used.

## Panhandle Creek System



Panhandle Creek itself is quite degraded, with large infestations of Blackberry and Broom along much of its length within the park. This is perhaps not surprising, being that the creek only passes through this north-western corner of the park, coming from grazing land to the north before heading out into SA Water land to the west. By contrast, the two minor creeks that feed into it from the south, Fantail Creek and

Fairy Wren Creek, both originate within the park and are in good condition. There are the inevitable scattered woody weeds along their sides, mainly Boneseed, Erica and *Acacia longifolia*, with denser infestations found closer to the western edge of the park.

The restoration of Panhandle Creek is a lower priority than most in the park, as it remains subject to the influences and impacts outside of the park and therefore outside of our management control. There is greater potential for restoration where the headwaters of a creek are within the park and it is not subject to upstream land management issues.

Better Bushland has been engaged to help control a number of weeds in the Panhandle. These include pushing back the weed-front of a particularly large infestation of Erica in the north-western corner, together with a smaller isolated population nearby. Some Sollya was also treated opportunistically and young Broom, which was creeping up the northern slopes above Panhandle Creek, was slashed to prevent seeding. It is intended that the Broom be sprayed as part of the contractor follow-up next year. This part of the park also has a large infestation of Bridal Creeper, which extends westwards into adjoining SA Water and ElectraNet land. Better Bushland will spray this later this season.



Panhandle Creek itself is very degraded, with well-established Blackberry, Broom and fruit trees

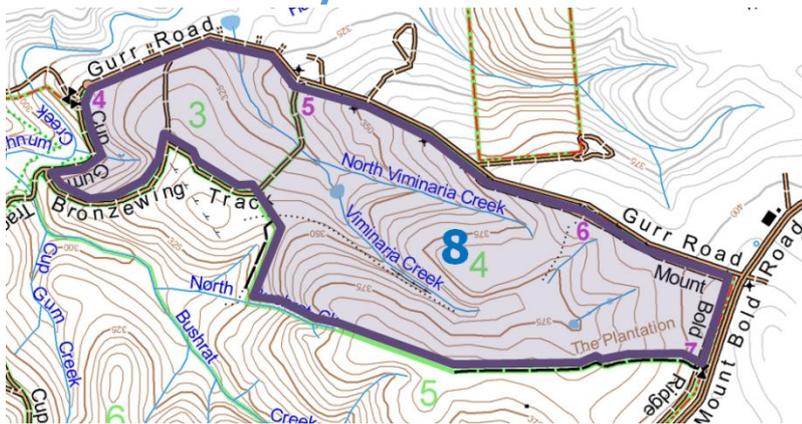
There were several volunteer working bees in the Panhandle, working in both the area between the upper parts of Fantail and Fairy Wren Creeks and Frith Road, and in the north-western corner of the park, above Panhandle Creek. Woody weeds were the main focus, particularly the scattered Boneseed, Sollya and Erica.

The section of the Panhandle east of gate 20 was the site of a revegetation project about 15 years ago. While there are some Blackberry patches scattered through this area, the understorey remains very degraded due to its historical grazing disturbance, and there is a large amount of Salvation Jane spread throughout. Again, this rates as a lower priority for the Friends group than much of the rest of the park. In addition, there is a prescribed burn planned for this section of the Panhandle within the next six months. This burn was originally to take place in autumn 2017, but was postponed after late rains delayed grape-picking at local vineyards and there were concerns that smoke from any prescribed burns would damage the crops.



Hoverfly with Bristly Bush-pea (*Pultenaea acerosa*)

### Viminaria Creek System



Viminaria Creek and North Viminaria Creek remain showcase examples of sustainable creekline restoration work. These were the subject of early work in the park and now are predominantly managed by the volunteers. Regular roaming working bees, look for and treat isolated woody

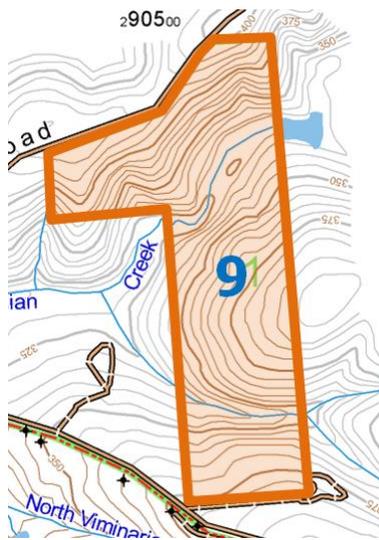
weeds like Boneseed, Broom, Erica and *Acacia longifolia*, plus a patch of the non-local *Kunzea ericoides*, just in from gate 5 along Bronzewing Track. There are a number of patches of *Watsonia*, some of which are quite large that need attention. Some of these patches are in areas that are inundated during the wetter months of the year, making treatment problematic.



Viminaria Creek

Blackberry within the creeklines is quite manageable and, while a few hours of spraying were allocated to South Australian Indigenous Flora, it was deemed unnecessary this year and so has been deferred until next season.

## Number 1 Block



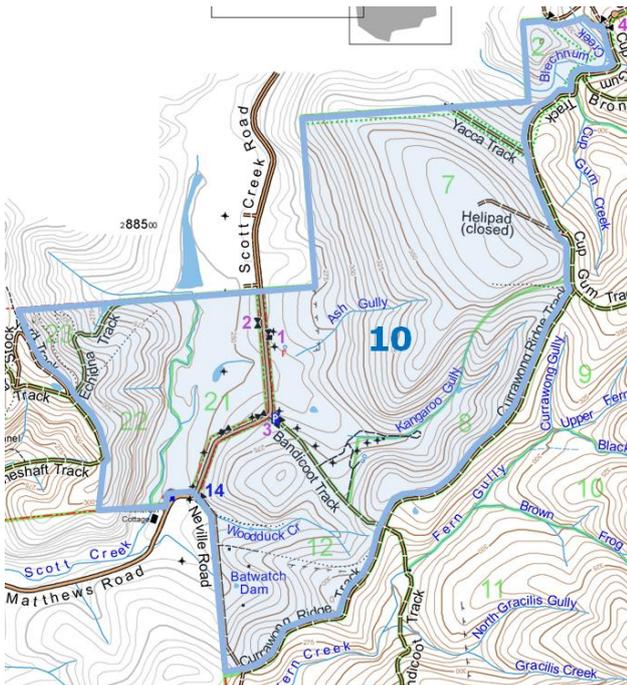
Once again, Number 1 Block was the focus of funded weed management through Natural Resources Adelaide and Mount Lofty Ranges, to add value to the work being done on neighbouring privately owned land. This is the second year that this funding has been made available and, after following-up last year's Blackberry and Erica control in the southern creekline, Blackberry spraying was undertaken in the northern, more heavily infested creekline. The Blackberry work was done by Russel Troon and the Erica by Better Bushland.

A Friends' working bee was run in the northern section of Number 1 Block, accessing the park from Nicholls Road. The group of volunteers managed to cover most of the area down to the northern creekline, finding and removing Boneseed, Broom and *Acacia longifolia*. There was one larger patch of Tagasaste and other woody weeds, near the neighbouring property to the north-east, which will need a return visit to be treated, but most of the rest of this section is in good condition.



Blackberry sprayed in the southern creekline in Number 1 Block, while Erica flowers on the overlooking hillside

## Scott Creek System



This is another of the creek systems that originates outside of the park, and is therefore subject to land management impacts from further upstream. Despite this, Scott Creek itself is in quite good condition, especially when compared to the area in SA Water land immediately downstream to the south. This downstream part of the creek has had no weed management in recent times and the creekline is choked by Blackberry, Willows, fruit trees and a variety of other woody weeds, creepers and herbaceous weeds.

Biodiversity Restorations was contracted to work on Blackberry, Boneseed, Broom and Dog Rose along the creekline and

above it to the west. This area is very steep and there are many more woody weeds scattered across the hillside that require further attention.



The hillside above Scott Creek to the west

Across Scott Creek Road in Kangaroo Gully, Better Bushland continued to work on Blackberry in Kangaroo Gully, with some Erica, Boneseed and Sollya control on the lower western slopes of Helipad Hill. Biodiversity Restorations undertook woody weed removal, in particular Blackberry, Broom and *Acacia longifolia*, in Blechnum Creek in the north-eastern corner of this creek system in the Park.

Volunteers again sprayed a Blackberry infestation around the bottom of Kangaroo Gully, next to a mown turning circle where bird banding activities are conducted. This is the second year that this has been done and, with good control achieved last summer, the rest of the patch was treated this year. The plan will be to follow-up the same area again next year and then expand the area of management westwards, around the edge of the more intact native vegetation growing up the hillside. There are numerous patches of Blackberry growing in the open degraded area between this part and Scott Creek Road. This is being used as habitat by wildlife and, as it is not directly threatening the native vegetation, it is not a priority for control at this time.

Other working bees treated woody weeds, including Boneseed, Erica, Sollya and *Acacia longifolia*, on the hillside north of Ash Gully, alongside Currawong Ridge Track and Helipad Hill. A large infestation of English Broom was found along the northern boundary fenceline at the end of Yacca Track, and this will be targeted later this year by contractors.



Anna treating Sollya north of Ash Gully

One working bee held in June this year proved to be very rewarding, as a group of regulars came together with some of the local community to help clean up the tree guards from the tubestock planting in the old paddock between Scott Creek and Scott Creek Road. This task was well overdue, with the planting done in 2014 but removal of tree guards delayed because of the large number of Kangaroos that graze in this paddock. Students from Scott Creek Primary School assisted with the original planting, which included species that provide food resources for the Yellow-tailed Black Cockatoo, which is listed as vulnerable in South Australia.

## Financials

|   |             |                    |
|---|-------------|--------------------|
| <b>Funds available at 1<sup>st</sup> July 2016<sup>1</sup></b>      |             | <b>\$32,850.00</b> |
| <b>Income:</b>  |             |                    |
| Donations <sup>2</sup>  | \$568.00    |                    |
| Adelaide Hills Council  | \$2,000.00  |                    |
| DEWNR, NRM & City of Onkaparinga grant funding<br>(held by FoP Inc) | \$13,200.00 |                    |
| NRM other funding (held by NRM)                                     | \$27,586.00 |                    |
| <b>Total Income</b>   |             | <b>\$43,354.00</b> |
| <b>Expenditure:</b>   |             |                    |
| Contractors (paid from FoSCCP account)                              | \$10,115.23 |                    |
| Contractors (paid by NRM)   | \$27,586.00 |                    |
| Contractors (paid by FoP Inc)                                       | \$13,238.50 |                    |
| <b>Total Expenditure</b>  |             | <b>\$50,939.73</b> |
| <b>Funds available at 30<sup>th</sup> June 2017<sup>2,3</sup></b>   |             | <b>\$25,264.27</b> |
| <b>Volunteer Hours<sup>4</sup></b>                                  |             | <b>1,275</b>       |

Notes:

1. Includes \$5,535 grant funding held on account by Friends of Parks Inc.
2. Excludes donation from Wirrapunga Open Garden September 2016 awaiting tax deductibility ruling from Australian Taxation Office.
3. Includes \$5,500 grant funding held on account by Friends of Parks Inc.
4. Includes only on-ground and event volunteer hours, no administration, planning or reporting

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...and the many others who have joined in our efforts but whose names may have been overlooked in the above list.