

ARMIDALE TREE GROUP NEWSLETTER

Number 116 Spring Edition

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Coping with the Drought



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Cover Photo: Many Banksia integrifolia near Sandy Creek east of Wollomombi on Waterfall Way appear to be dying due to the drought. Photo Kerry Steller

Editor's note: 2019 Spring Edition

Welcome to our Spring Edition of the Armidale Tree Group Newsletter. We didn't make a Winter edition due to the drought...it has been heart-wrenching time for all involved.

This Spring edition focuses on Coping with the Drought. The Nursery has been suffering a lot from the effects of drought with record low retail sales. Alicia Cooper, our manager, has worked hard with Paul Cahill, our Environmental Services manager to secure some big plantings further afield and she shares this work with us in this edition. Paul McFarland and Dave Carr have written an article on Greywater Use. We also have some survey results from the Farmer's Market customers' views and Alicia wants pictures of your hardy natives for our next newsletter. We are also asking members to look out for patches of bush that are dying and to record this each month for us so that we can get a record of this unprecedented drought event and have a record of its effect on our vegetation. Richard Bird took Dave and myself to his property Heatherbrae at Devil's Pinch to visit and identify his favourite trees and we have featured an amazing tree. I have shared some information from the Nature Play Conference that I was lucky enough to attend and present our ATG education programs. It is with great sadness that we heard of the passing of Warren Sheather in August this year. He was a great promoter and prolific propagator of native plants, a great supporter of the Armidale Tree Group and a Life Member. Don't forget to come to the Black Gully Festival on Saturday 9th November.

Committee news

ATG Running out of water?

ATG is investigating having a bore sunk near the nursery to ensure a reliable source of water into the future. This is a costly but necessary step towards the nursery's sustainability. We can't do any local plantings as we have little water to use on them. At present we use our windmill to pump from the Black Gully dam in the Woodland but this is now getting low.

Our new ATG CWC subcommittee:

Thank you to our members who nominated for this committee. Chris Nadolny (interim chair), Kate Boyd, Cath Hunt, Stephen Harris, Ken and Leontine Barnett, Lynne Hosking, Peter Metcalfe, Narelle Clarke (minutes), Janeen Robb for consultation.

Our AGM is coming up soon. A separate notice is to go out. Can you contribute your time and talent to the Tree group Committee? Let us know!

Database now set up:

This database of New England Plants now on our website. See Dave Carr's article in this edition. <http://armidaletreegroup.org.au/plants-of-new-england/>

Kerry Steller (editor)

Environmental Services Breaking New Ground

By Alicia Cooper

Despite the dry, our Environmental Services crew have been busy over the past 18 months, completing several large planting jobs and working on a number of *Saving our Species* projects.

Our work has taken us as far as Beryl and Orange, where we recently completed the vegetation screening for two large solar farms. We have also finished the planting for the University of New England Solar Farm, which required applying mulch to nearly two and a half thousand trees and shrubs. That's a lot of wheelbarrow loads! We are confident that these plantings will be a success, as each project has a maintenance regime of watering and weed control attached.



Beryl Solar Farm. Photo by Alicia Cooper

Last year we completed planting projects for the Metz Solar Farm outside Armidale and the White Rock Wind and Solar Farm in Glen Innes. We are in the maintenance stage for both these projects, which is proving challenging in our current climate.

Tamworth Phytocap Site

We were contracted by Stringybark Ecological to provide the plant stock, revegetation labour and maintenance components for the phytocapping site at the Tamworth Waste Transfer Station. Phytocapping is a relatively new technology in Australia, with the Tamworth site being the first in NSW outside of a trial site in Lismore. Essentially, the vegetation planted on a soil cap over the landfill acts as both a bio-pump and rainfall interceptor. This reduces the



Tamworth Phytocap Site 2018. Photo by Paul Cahill

amount of water that can seep into the buried waste and be released as leachate. Once established, the vegetation also provides habitat for native birds and insects.

This was a challenging site; hot, exposed and frequently experiencing 50km/h winds racing across the landscape. Our Environmental Services crew not only had to battle becoming human versions of tumbleweeds, but they also had to deal with the less than pleasant aromas wafting on the winds. A flock of resident crows also decided that the cardboard guards made for perfect playthings, leaving the crew to replace the ones that had been torn asunder by cheeky beaks.



Eucalyptus and Kurrajong trees. Photos by Paul Cahill.

Despite these initial difficulties, the project was a success, with over 6000 native seedlings propagated and planted, with a mix of local trees, shrubs, chenopods, forbs and grasses. One year later, the site is looking very different to when we started - the ground layer is establishing, and the trees are taking off.

Using Greywater for Watering Plants in a Drought

by Paul McFarland and Dave Carr

Level 5 water restrictions are upon us and, unfortunately, there does not seem to be a short-term end to the drought in sight. With water in short supply and water restrictions limiting us to watering plants by bucket we need to make every drop count. One of the ways we can use some of our household water 'twice' is through the re-use of greywater.

Many of you are probably already using grey water. However, this article will take us through some of the basic issues by defining grey water and discussing some of the issues and limitation of grey water use. The article will also dispel some of the myths about using grey water on native plants.

What is grey water?

Grey water is the water from showers, hand basins and washing machines. It is generally re-usable for things such as flushing toilets and watering plants.

What about washing-up water from the kitchen sink?

Washing up water is generally considered as 'blackwater'. Blackwater sources, which includes water from toilet flushing, contains pathogens (germs) that can cause a variety of illnesses. Blackwater can only be re-used if it is treated in a facility such as a Council sewerage treatment plant, or an on-site treatment system approved by NSW Health and your local Council.



How can greywater be collected?

There are three ways greywater can be collected: by containers, such as buckets, through greywater diversion systems and through a greywater treatment system. Collecting greywater from the shower can be as simple as putting a bucket on the floor of the shower with us when we are showering. We can also use a bucket in the laundry tub to collect water from washing our hands, or even use a bucket for soaking clothes prior to washing. Note: water from soiled nappies, pet washing, or the like must not be re-used as greywater, unless treated through a Council approved treatment system.

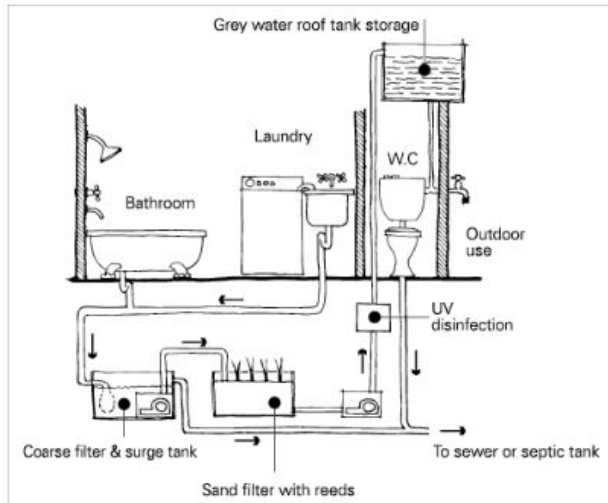
Diversion systems for washing machine water can be installed. The systems go from the relatively simple to complex systems and depend on factors such as the type of washing machine and the way your machine is currently connected to the plumbing system. Installing diversion systems can be relatively cheap.

Having a chat with a local plumber about grey water diversion systems would

be the best place to start.

The more permanent approach is to install systems that automatically divert grey water to your toilet and other collection tanks. The design and installation of such systems are more easily done in new homes, but can be retrofitted into existing buildings.

This is definitely a task that is recommended be done by a qualified plumber.



A wastewater reuse system.

How long can I store greywater?

Health regulations require that greywater not be stored for more than 24 hours. This avoids the development of odours.

What about using greywater on native plants?

Greywater often contains chemicals such as soap, shampoo and fabric softeners. These contain surfactants and nutrients such as Phosphorus and Nitrogen and can be quite alkaline (high pH). In concentrated form they will damage most plants, but when mixed with shower, bath or washing machine water are dilute enough to put on most native plants. Some native species, particularly in the Proteaceae family, are sensitive to too much Phosphorus. This includes some, but not all, Grevilleas and Banksias, Waratahs, Boronias and Epacridaceae. Not all species in these genera are affected by Phosphorus. The local *Banksia integrifolia* (pictured) would thrive with a few buckets of shower water a day to cope with the dry.

As a general rule avoid using water from the 'wash' cycle



on the washing machine on sensitive plants or those with soft leaves as this is often quite alkaline from the detergents. Use this water on lawns, trees and large shrubs. Water from the shower, bath or 'rinse' cycle of the washing machine can be used on most plants. Observe your plants and if any start to show signs of nutrient imbalance (usually through discoloured leaves) change the source of water you are using.

Surfactants are chemicals found in soap and detergent that break down surface tension so water can get to dirt and grease. When applied to the garden in grey water they are likely to increase the ability of water to soak into the ground and will be gradually broken down by soil microorganisms.

Can greywater be used for watering vegetables?

It is fine to use greywater for watering vegetables provided that the water is poured on the soil around the base of the plants. Just in case there are any potential nasties in the water, grey water should not be used directly on the foliage, or flowering and fruiting parts of vegetable plants.

In a drought the growing of vegetables in pots is great way to still have fresh veggies, while being able to manage limited water supplies. There are plenty of water saving pot designs available that allow watering from the bottom, thereby avoiding any potential contamination of the plant or fruit.

Further information

Gardening Australia (2005) Fact Sheet – Greywater

<https://www.abc.net.au/gardening/factsheets/grey-water/9424030>

Sustainable Gardening Australia (2019)

<https://www.sgaonline.org.au/greywater-info/>

Sydney Water (2019)

<http://www.sydneywater.com.au/SW/your-home/using-water-wisely/greywater-reuse/index.htm>

YourHome: Australia's Guide to Environmentally Sustainable Homes (2013)

<http://www.yourhome.gov.au/water/wastewater-reuse>

Drought-Hardy Gems

A note from the manager

We want to hear from you!

This year has been particularly challenging for gardeners, with the extremely low rainfall in Armidale breaking both weather records and the hearts of plant lovers. However, by necessity, gardeners are a resilient bunch, and we can find the silver linings in our botanical struggles. When a plant gives up the ghost, it's an opportunity to plant something new and add to our knowledge of what works in our particular patch.

What native plants in your or your friend's garden have survived on no or minimal water during this Tablelands drought? I have an established Grevillea "Nancy Otzen" in my yard which receives no water other than rainfall. Despite the dry, nutrient-poor soil and only 160mm of rain this year, it continues to shine, even managing to put forth a few flowers. It seems to be the preferred shrub of choice for sleeping Superb Fairy Wrens, whose alarmed twitters call out if I walk past it at night.



Male Superb Fairy Wren on Grevillea "Nancy Otzen". Photo by Alicia Cooper.

If you would like to share some of your success stories, please send some photos of your surviving native plants (and your name!) with a few comments to the email address below and I will feature them in an article for our next newsletter.

manager@armidaletreegroup.org.au

Managing and Drought-proofing your garden.

SURVEY: Share your ideas with us for so we can add to our lists

Survey Responses so far:

<p><i>What plants have you lost first in your garden with little to no water?</i></p> <ul style="list-style-type: none"> • Native pines and banksias (20 yrs old), newer plantings showing stress in paddocks • Manuka tea tree • Vegies • Hebes, pittosporum and box hedges • Hakeas, all young • Banksia integrifolia 	<p><i>What plants grow best in your garden with little to no water?</i></p> <ul style="list-style-type: none"> • Callistemons and eucalypts, deciduous trees now budding got through winter • Rosemary, osteospermum, banksia, rose, westringia, salvia • Natives • Rosemary, roses, cista, salvia, touch scented geraniums • Camelias, roses, correas
<p><i>How are you reusing water?</i></p> <ul style="list-style-type: none"> • Bucketing water from showers and laundry • Grey water though dripper hose • Recycling showers and washing water • Long black flexible hose (from Bunnings) onto garden from washing water 	<p><i>How have you mulched your plants and has that helped?</i></p> <ul style="list-style-type: none"> • Mulch from tip and ducats. It has revitalised the soil and we have earthworms and microbial activity. • Tip mulch with dripper hose inside, cardboard around trees • Sugarcane and mulch • Sugarcane mulch, Straw and pine chips • Newspaper, cardboard and mulch
<p><i>What are you doing to drought proof your garden?</i></p> <ul style="list-style-type: none"> • Continuous mulching and replenishing this as it breaks down. Limit watering to early morning or evening. • Mulch and dripper hose • Installing a reticulated greywater system 	<p><i>Any other tips?</i></p> <ul style="list-style-type: none"> • Concentrate on key plants (most important to you). A good soaking of a few plants so water can soak down to the root zone. • Dripper hose from Armidale Pumps and Irrigation – aerated and pumped, does 4L per hour. • Mediterranean garden in pots • Keep plants in pots until it rains. Vegies in vertical pots. •

ATG SURVEY QUESTIONS:

Send responses to manager@armidaletreegroup.org.au

What plants have you lost first in your garden with little to no water?

What plants grow best in your garden with little to no water?

How are you reusing water?

How have you mulched your plants and has that helped?

What are you doing to drought proof your garden?

Any other tips?



Armidale Regional Council launched a Water Saving survey with the introduction of Level 5 water restrictions on 1st October. This survey will help identify how residents feel about saving water and the current water restrictions. It will show us the best ways to keep residents and businesses informed about the water restrictions and to encourage everyone to get on board with water saving initiatives.

We want to hear about the things you're doing to help save water, or barriers to you conserving water at home.

This short survey should take you 10 minutes or less to complete but the feedback will be invaluable in helping our community to conserve our precious water supplies.

https://yoursay.armidale.nsw.gov.au/water-restrictions/survey_tools/water-savings-survey-residents

Plants of New England

<http://armidaletreegroup.org.au/plants-of-new-england/>

The vegetation of the Northern Tablelands includes eucalypt forests and woodlands, natural and derived grasslands, rainforests, heaths and wetlands. Within these communities there are 2725 plant species, including 2196 endemic natives, 11 non-endemic natives and 516 exotic species (Plant Net). The endemic natives include 188 threatened species. These species include most plant forms: trees, shrubs, grasses, forbs, vines, etc. Telling the difference between these plants can be difficult, so we have created a resource to help you.

The **new** **Plants of New England** page on our website connects you with information to help you identify, manage and use some of these native plants. Land managers need to be able to identify native plants for many reasons:


- To better understand their uses such as grazing value, timber, fodder, food, flowers, etc.,
- To be able to gain more information about the plants,
- To distinguish threatened species and communities,
- To distinguish weeds or plants with detrimental characteristics,
- To identify habitat values,
- To collect seed, propagate or grow them,
- For interest sake.

With funding from Northern Tablelands Local Land Services, we created a database of 220 of the more common plants growing in New England. You can search this database and generate fact sheets about individual plant species. It is possible to produce two types of fact sheet: plant identification, or seed and propagation. Soon we will also be able to produce nursery labels as well.

The plant ID sheets have plain-English descriptions, photos, distribution maps, site and soil preference, frost and drought tolerance and uses. The seed sheets cover flowering and fruiting time, seed collection and storage methods, germination, dormancy, distribution and threatened species status.

Of the initial species, about 150 have lots of information. The others will be added as we have time. We anticipate that this will be an ongoing project, which may take many years to cover all 2196 endemic natives. In the meantime, please

use the resource and give us feedback. We are also looking for good photos and any volunteers who can help with the population of the remaining information.

<i>Blechnum nudum</i>		BLECHNACEAE
fishbone water fern		
		
Growth Form	Fern and fern allies 0.6M x 0.5M (H x W)	
Description	Bark: nil; Flowers: No flowers but spores borne on back of leaves; Flower_colour: Brown spots;	
Site Characteristics		
Distribution		
Suitability for direct seeding		
Unsuitable		
Suitability for farm planting		
Unsuitable		
Frost tolerance		
Medium		
Drought tolerance		
Low		
Uses		
Wildlife, Ornamental		

Distribution Map





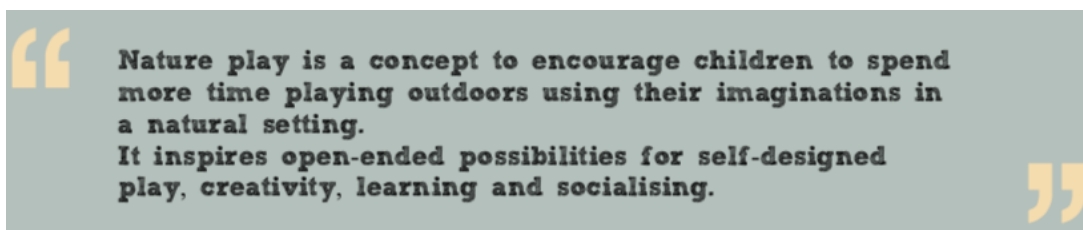
Armidale Tree Group made a presentation at this year's Nature Play Conference held at Thalgarrah Environmental Education Centre last month. This is the second year that the conference has been held and around 80 educators took part over the two days.

The key note speaker, Michael Hann, a paediatric dietician and clinical biochemist, who has worked in over 30 countries on child health, fully supported the research that has shown that contact with nature has been associated with a number of health benefits for children, such as improved cognitive function, increased creativity, improved interaction with adults, reduced attention deficit hyperactivity disorder symptoms and reduced rates of aggression.

ATG's presentation "Be a Tree" encouraged early childhood educators to use drama and song to show the lifecycle of a tree and to encourage them to notice and love the biodiversity of our natural environment.

A video of the conference by David Waugh is available on the link below:

<https://vimeo.com/359186256>



L to R. Conference participants 'Be a Tree' and children play in nature.
Photos: David Waugh

My Favourite Native Tree

Richard Bird



Richard Bird shows the scale of his favourite tree on his property at Devil's Pinch
Photo: Lynne Walker



A mighty Eucalyptus viminalis
Photo: Kerry Steller

My favourite tree is this Eucalyptus viminalis (ribbon gum or manna gum). It is on my property, Heatherbrae at Devil's Pinch. It is quite large and maybe had an accident early in life through bushfire or damage by clearing then re-shooting around the circumference. The butt of the tree is 7.4m in circumference and it has six trunks and one new shoot). The individual trunk circumferences are 3m, 2.8m, 2.7m, 1.3m, 1.2m with one new shoot coming from near the base. This tree looks a lot older than the clearing in this area of the property. It is growing in basalt soil that is underlain by trap (Sandon sedimentary Beds).

Do you have a favourite native tree?

Send a picture and tell us about why you love this particular tree - see ideas on *What's to love about a tree?* (From our last newsletter) If you have a poetic bent you may wish to send us a poem about a tree or trees, as well as or instead of a photo.

The Dead Tree Detective

Scientists need your help spotting dead trees then supplying photos with location, species and numbers through [The Dead Tree Detective](#) citizen science project. We're hearing anecdotal reports of tree death in the news and on twitter. We're aiming to capture these anecdotal reports, and back them up with information including photographs, locations, numbers and species of trees affected, on the Dead Tree Detective.

We encourage anyone who sees dead trees around them to hop online and contribute. The Detective also allows people to record tree deaths from other causes – and trees that have come back to life again (sometimes dead isn't *dead*). It can be depressing to see trees die – but recording their deaths for science helps to ensure they won't have died in vain. <https://biocollect.ala.org.au/acsa/project/index/77285a13-e231-49e8-b212-660c66c74bac>



The Sandy Creek fire on Waterfall Way 27th September 2019 saw a lot of *Banksia integrifolia* (many already dead from the drought) and *Callitris oblonga* burnt. The Tree Group plans to monitor this area for signs of regrowth of these species after rain.

Photo: Kerry Steller

Vale Warren Sheather



Photo: Courtesy of the Australian Plants Society

The early days Warren and Gloria joined Blue Mountains Group and worked in Glenbrook Native Plant Reserve when it was first established. On moving to Armidale they were foundation members of the New England Group when it was formed in August 1977. Warren held positions as seedbank officer, vice president and president. In his work, Warren was initially in the PMG and later in the Navy as a civilian working in electronics. He followed his interest in native plants to become a ranger at Warrumbungles National Park and was later a ranger at New England National Park.

Working at UNE As the Sheather family grew older, they moved to Armidale to be closer to schools for their children. Warren took up a position as Professional Officer in the Department of Botany at the University of New England. He continued his association with National Parks, serving on the Advisory Service. He also completed a Bachelor of Arts majoring in botany at UNE. At UNE, Warren ran lunchtime teaching sessions in a voluntary capacity, for the staff and students, on native plant propagation. He also worked with the UNE administration to plant out the grounds with native plants, many of which he grew himself.

Promoting Australian plants to the community Warren promoted Australian plants continually throughout his life. He had a fortnightly column in the local newspaper, the *Armidale Express*, for over 30 years. He also wrote articles for other papers. His articles explored species suitable for local conditions with details of their natural distribution and growing conditions. For over 20 years, Warren had a fortnightly half hour session on ABC Saturday Gardening where he answered questions on air and discussed the propagation and cultivation of native plants. He has been a popular guest speaker for many community groups. He maintained his own website www.yallaroo.com.au for over 25 years, where he has over 500 items about Australian plants, wildlife and National Parks. He

maintained an online diary about what was happening in his garden and a photography collection with a commentary on how to grow native plants.

The Sheathers developed a 5 acre hobby block to the west of Armidale at Invergowrie where they planted an enormous number of species. This block also served as an inspiration for those seeking to learn how to revegetate after the 1970s Eucalyptus dieback. They then moved to Yallaroo where they continued to propagate and cultivate Australian plants. This garden was visited regularly by many different community groups. Warren and Gloria received the Golden Spade award from Peter Cundall of ABC Gardening Australia. Their property has served as a practical demonstration of what can be achieved with local flora.

Warren and Gloria have been "Australian plants" for northern NSW for 40 years, increasing the awareness and knowledge of Australian plants, fostering the growing of Australian plants, protecting and conserving Australian plants.

*Warren died in August 2019. Article Courtesy of the Australian Plants Society.
Warren and Gloria Sheather were awarded Life Membership of APS NSW in 2018.*



Armidale Tree Group member's tour of Yallaroo, March 2016. Published in Newsletter 105, Autumn 2016. Warren regularly wrote an article for our newsletter until he moved from Armidale. He was awarded a Life Membership to ATG in 2017. Photo: Kerry Steller

BLACK GULLY FESTIVAL 2019

On **Saturday 9th November** the Black Gully Festival will be held in the parklands behind New England Art Museum in Armidale. This is the 9th Festival, put on by a range of community groups, with the themes of Music, Art, Environment and Community. The heart of the festival is live music, with performances from 10am to 10pm on 3 stages. All of the music is by local performers and includes a wide range of musical styles with bands, soloists and small groups. The Music program is presented by The Musicians of Armidale whose members volunteer as festival performers. This year we are mixing some of our fantastic youth performers through the program.



The Foundlings perform at Black Gully Festival. Photo Dave Carr.

Supporting the music program is a range of other activities. A Makers Market features local artisans and foodies with an exciting array of wares. A variety of food stalls will feed the masses all day and night. This year for the first time the Festival will feature a dance space, coordinated by Suzie Grant from Bellydance Earth and Sky. This space will feature local dance groups performing dances from Salsa to Balinese to Bellydance. A highlight will be the communal rain dance that everyone can join in. This will be one year when we won't mind if we get washed out!

The Slow Fashion tent is back, where you can bring clothes to swap for others. This activity is always popular with many people getting some great new fashion pieces while seeing someone else enjoying something they no longer had use for. Clothes, shoes, bags, accessories for both women and men feature at this stall. For the first time the Festival will feature a Fixit space, where people can bring items to be repaired or mended. Volunteers with skills will help you mend clothes, repair and maintain bikes, repair wooden items and glue things back together. After the festival the Fixit shop will continue in a shopfront in town.



Kids enjoy exploring Black Gully: Photo Dave Carr

The Environment theme also continues with displays from Armidale Tree Group, Southern New England Landcare, Sustainable Living Armidale, Armidale Regional Council and the exhibit of the finalists in the Northern Inland Regional Waste “Inspire Us” photography awards. A programme of sustainability-themed films will screen throughout the day.

The Black Gully Printmakers will have an exhibition and sale and people can try their hand at different types of printing. NERAM will be open all day with great exhibitions, artist talks and poetry readings. EcoArts Australis will be there weaving willow shelters and sculptures on site.



**Circus performance skills are always a hit with the children.
Photo: Dave Carr**

The Black Gully Festival is a community-driven event so you never know what other activities and events are likely to pop up on the day. Circus Confabularium will be there to keep the kids busy learning to juggle, hoola hoop and balance and will have their Paper Moon photo booth operating. Black Gully Festival is free and open to all ages. Festival costs are covered by our generous sponsors who are mostly local businesses and community groups including “Super-Mega” sponsors: Green Jelly, UNE Life, Sustainable Living Armidale and Southern New England Landcare and “Very Special” sponsors Phoenix Foundry and Regional Australia Bank. Many people volunteer their time or loan equipment to put this event together. For more information look for Black Gully Festival on Facebook (<https://www.facebook.com/events/1179174672241293/>) and Instagram.



Membership Application/Renewal

Name: _____

Address: _____

Telephone: _____

***Email (Required):** _____

Payment method: cash / cheque / credit card / direct credit

Please indicate your membership preference, you will receive an email when membership is due:

- ☐ \$5.00 for 1 year
- ☐ \$10 for 2 years
- ☐ \$25 for 5 years
- ☐ \$50 for 10 years

Donation \$ _____

Please find enclosed my/our cheque* for \$ _____

* Make cheques payable to Armidale Tree Group Inc.

or

Please debit my credit card for \$ _____

Card type: Visa / Mastercard only

Card number: _____

Expiry date: _____

CCV number: _____

Name on card _____

Signature: _____

To pay by Direct Credit Please remit payment to

BSB: 932000 Account No...620682 (please tag payment as 'subs')

accounts@armidaletreegroup.org.au

Donations over \$2.00 are tax deductible to The Armidale Tree Group Fund

Date processed: _____

Office use only
