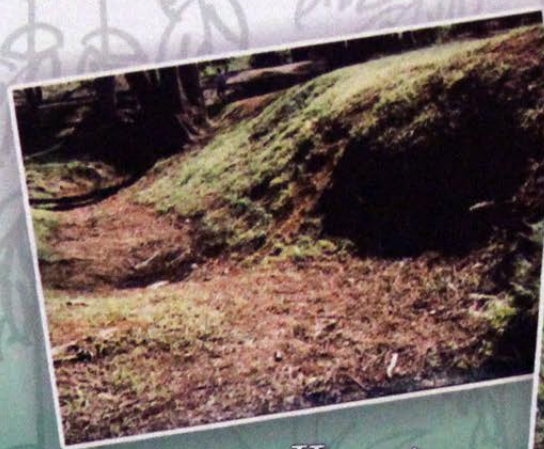


Bellinghen Urban Landcare Incorporated

RESTORATION GUIDE

In association with
Commonwealth Government 'Envirofund'



*How to go
from this TO THIS!*



BELLINGEN URBAN LANDCARE

(BULC) started in 1995. Since that time local volunteers and groups have spent more than 20,000 hours regenerating Bellinggen's waterways. We Currently work on 12 sites in the Bellinggen township, all of which are on public land. We place strong emphasis on community participation and partnerships, use of local species for planting, and where possible, non-toxic weed control methods.



This booklet sets out some basic regeneration tips for Bellinggen residents. They are based on the experience of Bellinggen Urban Landcare volunteers and have been tested extensively on our sites over many years.

As Bellinggen residents we know that we live in one of the most beautiful valleys on this earth. However, the health of the waterways in our town - Cemetery, Carrati and Ringwood Creeks, and the Bellinger River - has deteriorated as a result of the impact of urbanisation, changes in land use, and the introduction of exotic plant species.



ABOUT OUR CREEKS

You may not know that Bellinggen is also home to a number of endangered species that rely on clean water and native habitat for their survival. Bellinggen's creeks are home to a diversity of native plant species, birds, water creatures and small animals. Platypus have been seen on higher stretches of some creeks. The creeks in town are home to the rare Great Barred Frog and Ringwood tree. If you sit quietly sooner or later you will see a water dragon, spoonbill or azure kingfisher for example.

The creeks also have litter, oil, garden waste and detergent from carwashing as well as fertilizers and herbicides. These enter the creek system through stormwater, neglect or from run-off. These baddies spoil water quality, change the kind of vegetation along the waterways, and make it hard for native plants and animals to survive.



The RIPARIAN ZONE is the area running alongside a waterway. Vegetation in these areas acts as a buffer and filter to the creek. Clean water ensures the survival of birds, animals and fish. Revegetating the riparian zone with local species also enhances biodiversity by providing habitat and a wildlife corridor. Trees can moderate water temperature, which is essential for aquatic life. Larger blocks of vegetation act as a sponge, releasing water slowly during droughts and reducing run-off during storm periods. Riparian vegetation also binds creek banks, essential to Bellinggen during periods of storm flow.



BEFORE YOU PLANT

Think about what you can achieve. How much time do you have? You may need to maintain a planted area for five to six years. Weeds and grass grow fast in the wet summer months competing with new plants. So be realistic about what you can do.

Get permission. Check with council to see if you need any government permissions before starting work. Consult with neighbours in case they have concerns.

Get skilled. Do you know how to use herbicides, identify plants and weeds, and the basic principle of weed control and regeneration? This booklet will give you a good start and you can learn more by coming to our working bees or by contacting the Landcare support group - Bellinger Landcare. (See contact numbers at back.)

Get your tools. Brush hooks are great for cutting grass around the base of plantings. Spades for digging, saws and loppers for removing small weed trees, a small axe for ringbarking, a mattock for digging out privet, buckets for watering, and gloves of course. Also, big plastic bags for rubbish and for removing some weeds that can't be left on site e.g. Madeira Vine. If you have a large area, you may need a whipper-snipper to help control grass around your plantings.

Make sure the site is safe. Barbed wire and broken glass should be marked or removed before work begins. Check for other hazards such as steep banks or rotting branches.

Take care of the critters. Birds, water dragons and frogs (including the endangered Great Barred Frog) live in or along Bellinger's creeks. Try to protect nests and if removing weed trees, leave some as homes for native animals until other trees are established. Look out for bee's nests and get them removed if anyone is allergic to their sting.

Consider the site. Is the soil sandy? Is the area open or shaded? Planting in full sun with sandy soils means lots of watering till plants get established.

Get your gear on. Leave your hat on, and accessories with a liberal application of sun-cream, sturdy shoes, gloves and a lightweight shirt. A basic first aid kit helps with bites and scratches.

SAL'S TOP TIP 1
 "Darlings this is nowhere near as much hard work as all of those 'soldiers' out west have to endure. In fact you have an absolutely FABulous chance of success, and we look forward to you sharing it with us."



Ochna



Madeira Vine

3



Celtis Trunk



Lantana



Cats Claw



4

SAL'S TOP TIP 2
 "Take lots of piccies. God bless the clever little sprocket who invented cameras! Start off with a shot or two of how it looks at the beginning and record your progress. In less than a year you will be staggered at what you have achieved."

GETTING THE JOB DONE

Step 1: Preparation

Identify and tag existing natives with bright tape (not blue - bower birds will get them!)

Control vine weeds, then weed trees, shrubs & groundcovers.

Control weeds when they are actively growing and before they seed. Most herbicides work best here in summer and autumn. Non-chemical methods can be successful throughout the year.

**SAL'S
TOP TIP 3**
"Remember small is beautiful. Start on a small section and work out from the edge of any healthy, native weed-free areas. Take one step at a time darling".



Water Gum



Cheese Tree



Step 3: Maintenance

Only plant as much as you can maintain. Maintenance work involves weeding, replanting, and observation again and again until the trees, shrubs and ground covers form a canopy that can keep out frosts, keep in moisture, and minimise weeds.

Undertake maintenance in small amounts (every four to ten weeks, depending upon weather, season and type of site) for about five years.

Up to 90% of work needed for a successful regeneration project is maintenance. This includes cutting grass around new plantings, weeding, watering new plants if they are in dry areas, replanting etc.

Step 2: Planting

Plant local species where possible. Plant groundcovers, grasses and sedges as well as trees and shrubs. (see suggestions on page 7).

Plant appropriately, for example, grasses and sedges along water's edges and some fast growers for a quick canopy to help reduce weed growth.

Water plants well. Use water crystals when planting in sandy soils.

If you want to plant large areas, do it in the wet season.

Work from areas of successful regeneration towards areas of weeds.



Some rainforest plants grow BIG and are not suitable near homes, but others are ideal. You can create rainforest pockets in your garden. This will attract birds and reduce weed growth. Here are some good options.

**SAL'S
TOP TIP 4**
"If in doubt don't pull it out. Sometimes our native friends trick us into thinking they are weeds. Just in case it's a 'friendly', get help to identify it".



Blue Flax Lily



Rose Myrtle



Bolwara



Bleeding Heart



Snow Wood

PLANTING

Some local shrubs / small trees
 Rose Myrtle (*Archirhodomyrtus beckleri*)
 Creek Sandpaper Fig (*Ficus coronata*)
 Bolwara (*Eupomatia laurina*)
 Bleeding Heart (*Omalanthus populifolius*)
 Snow Wood (*Parachidendron Pruinosum*)
 Native Guava (*Rhodomyrtus psidoides*)
 Pink Hibiscus (*Hibiscus splendens*)
 Tree Ferns (eg *Cyathea cooperi*)
 Palm Lily's - *Cordyline* species

Some larger shrubs / and trees
 Water Gum (*Tristanopsis laurina*)
 Creek Lilly Pilly (*Acmena smithii*)
 Bangalow Palm (*Archontophoenix cunninghamiana*)
 Cheese Tree (*Glochidion ferdinandii*)
 Guioa (*Guioa semiglauca*)
 Callicoma (*Callicoma serrulata*)

Some Groundcovers
 Mat Rush (*Lomandra hystrix* or *L.longifolia*)
 Blue Flax Lily (*Dianella caerulea*)
 Birds Nest Fern (*Asplenium australasicum*)
 River Lily (*Crinum pedunculatum*)

Some scramblers / vines
 Climbing Guinea Flower (*Hibbertia scandens*)
 Wonga Vine (*Pandorea species*)

Trees and shrubs tend to grow smaller in the garden and in full sun than in a forest. Many rainforest trees can be trimmed with garden shears to keep them compact. Alternately create space and shade by cutting back the lower branches and stems. Careful - do not leave sharp branch ends that can damage eyes.

SUGGESTIONS

Features
 Small rose coloured flowers
 Hardy, attractive edible fruits
 Attractive, interesting flowers
 Fast. Old leaves turn red
 Attractive bark, leaves, flowers
 Attractive flowers, edible fruit
 Large flowers. Protect from wind
 Moist shady spot best
 Tall lily. Attractive flowers/fruit

Very hardy. Beautiful bark
 Easily trimmed. Edible fruit
 Attractive red fruits
 Hardy, dense shade or trim
 Common rainforest shrub, slow
 Attractive leaves & ball flowers

Hardy, common, edible shoots
 Stunning flowers & blue fruits
 Attractive soft green foliage
 Attractive flowers, likes wet feet

Attractive yellow flowers
 Attractive yellow purple flowers



Callicoma



Climbing Guinea Flower



Bangalow Palm



Palm Lily



Creek Sandpaper Fig

**SAL'S
TOP TIP 5**
 "Stress lines are just not becoming darling. If it all gets on top of you during the summer rains, don't worry about keeping things pristine. As the dry winter months approach you will be able to take back control".

KNOW YOUR WEEDS

What's a weed?

For us, a weed is an introduced (non-local) species that out-competes local native plants. In Bellingen some are so competitive that our creeks now support only one tree species compared with the over 100 different species that are native to the area.

How can I learn about weeds?

- * Join an experienced land care group or ask local nursery staff.
- * Get a free copy of weeds booklet from Bellingen Council or talk to their Vegetation Officer.
- * Talk to the coordinators at Bellinger Landcare (see back for details).

Some common weeds in Bellingen bushland
Vines

- Madeira vine (*Anredera cordifolia*)
- Balloon vine (*Cardiospermum grandiflora*)
- Blue morning glory (*Ipomoea indica*)
- Cats claw creeper (*Macfadyena unguis-cati*)

Trees

- Camphor laurel (*Cinnamomum camphora*)
- Celtis (*Celtis sinense*)
- Narrow leaf privet (*Ligustrum lucidum*)
- Large leaf privet (*Ligustrum lucidum*)

Shrubs

- Lantana (*Lantana camara*)
 - Ochna (*Ochna serrulata*)
 - Castor oil plant (*Ricinus communis*)
 - Winter senna (*senna pendula var. glabrata*)
- Groundcovers
- Trad (*Tradescantia fluminensis*)
 - Mistflower (*Ageratina riparia*)
 - Coral berry (*Rivinia humilis*)
 - Broad leaf paspalum (*Paspalum wetsteinii*)

Know your weeds

If you are not sure about a plant - leave it, tag it and check it out. Some important local native plants can look similar to weeds. What is the colour, shape and feel of the leaf? When you crush the leaf in your hand what does it smell like? What does the bark look like? Are there any other distinguishing features?

Celtis



Narrow Leaf Privet

Camphor Laurel



Broad Leaf Privet

SAL'S TOP TIP 6

"We know that Triffords are everywhere. There are just so many weeds popping up that I feel like I hear the music from 'Jaws' following me everywhere. But never fear, the good guys win in the end...(and get the girl)".

CONTROLLING WEEDS WITHOUT HERBICIDES

Non-herbicide methods can be very effective. They keep vegetation cover and lessen the chances of erosion. They also preserve habitat for wildlife and encourage the insects, fungi and bacteria that attack weed species.



Some Methods That We Use

- * Cut grass with a brush cutter or brush hooks.
- * Initially preserve existing canopy cover (even if it's weed), and plant fast growing trees and shrubs to create a canopy. This slows down weed growth.
- * Control Camphor Laurels by:
 - Hammer-ringbarking. Use the flat of a carpenter's hammer. Remove about 300mm of bark around the tree, at a height of 1.8 metres. Eye protection must be used when doing this. Be aware that trees may become diseased, unstable and drop branches as a consequence.
 - Planting Strangler Figs in hollows in older trees.
 - Contracting a professional tree lopper.
 - Chipping regrowth from the stump. Do this regularly so trees don't re-establish.
- * Hand weed camphor laurels, small leaf and broad-leaf privets when small. Many woody weeds (camphor, privet, ochna, cassia, lantana) can be easily removed by hand.
- * Chop larger Privet out of the ground with an axe.
- * For mature privet bushes chop to a height of 900mm. Remove all shoots and any regrowth regularly. Insects and fungi will attack the stumps.



Mistflower



Take Note

There are some weeds that should be bagged and removed from the work site. Madeira Vine tubers, Morning Glory, Elephant Ears, and Impatiens may re-establish if composted or not removed from your work site.

There are also government regulations restricting the use of herbicides near waterways. Call Bellingen Council or the Department of Infrastructure, Planning and Natural Resources for advice.

SAL'S TOP TIP 7
"You're not alone dear. If our handy little booklet hasn't answered all your questions remember the world-wide-web thingy. Or come and spend a day or two with us where you can not only learn but enjoy one of our famous morning teas".

WHO TO CONTACT FOR HELP

Bellingen Urban Landcare "BULC" 6655 2678
Further details on what is in this book (AND MORE)

Bellingen Sire Council 6655 1007
Development approvals, advice on weeds, advice on use of herbicides

Bellinger Landcare 6655 0588
How to obtain funding, training and where to get plants

Dept of Infrastructure, Planning and Natural Resources 6653 0100
Advice on approvals, use of herbicides, technical assistance

USEFUL BOOKS

Big Scrub Landcare Group (2002) *Common weeds of Northern NSW Rainforest. A practical manual on their identification and control.* Big Scrub Rainforest Landcare Group. 2nd edition.

Buchanan, R.A. (1989) *Bush Regeneration. Recovering Australian Landscapes.* Open Training and Education Network, TAFE. NSW.

Floyd, A.G. (1989) *Rainforest trees of mainland south-eastern Australia.* Forestry Commission of New South Wales. Inkata Press, Melbourne & Sydney.

Nicholson N. & Nicholson H. (1985-1994, 2000). *Australian Rainforest Plants, volumes 1-5.* Terania Rainforest Nursery, The Channon via Lismore.

NSW North Coast Weeds Advisory Committee (2003) *Bushland Friendly Nursery Scheme. BFNS Environmental weeds and native alternatives - Taree to Tweed. A guide to identification, control and replacement.* NCWAC. (Get from Council Free)

Scanlon, T (2003) *Camphor Laurel Kit. Everything you need to know about Camphor Laurel and its control.* NSW North Coast Weeds Advisory Committee.
(Available at www.northcoastweeds.org.au)

Rainforest Plant Photos courtesy of Hugh & Nan Nicholson
www.rainforestpublishing.com.au

Weed species photos by Coastcare, NSW DPI, QLD NRME, T Scanlon, G Steenbeke

Visit our website on www.bellingenurbanlandcare.org.au