

Fact sheet

Revegetation and planting tips and tricks



There is much to consider when undertaking a project to revegetate a riparian zone. It's important the appropriate planning, preparation and understanding of what is involved is known prior to committing to the project, to ensure it has the best chance of succeeding. This resource aims to provide such advice which can then be incorporated into your project planning and implementation.

Species selection

Choosing the correct species for your riparian revegetation project is vital in the overall success of your project. The riparian zone can be a harsh environment for establishing new plants — especially during flood seasons. Plants can be subject to high velocity flows and de-oxygenated saturated soil. If unsuitable plants are chosen, it is unlikely they will survive.

A good place to start is to look at what is already growing successfully in the remnant riparian

vegetation near your project site, and to use the species there as a guide for what to plant. Starting with pioneer species, which are faster-growing and hardier, will help to provide a canopy and structure for the vegetation community. Establishing an early canopy helps to keep your maintenance to a minimum, while also attracting birds and animals into the site, which further encourages natural regeneration. An early canopy will also help keep your maintenance to a minimum.

Then, once the first stage is established, secondary species that require more protection can be planted. These same basic principles can be applied to all revegetation projects, not just riparian situations.

Key takeaway

Selecting the appropriate species for your initial planting will set your project up for success.

Planting plan

Once species have been chosen, you will need to plan where on the bank they will be planted, and at what spacing. Grasses, reeds and sedges should be spaced much closer together than trees.

Generally speaking, there would be a much higher concentration of grasses, reeds and sedges towards the bottom or toe of the bank, with the middle and upper bank being dominated by larger shrubs and trees.

When creating your planting plan, keep in mind the size of your site and your budget for plants. A staged approach may help to reduce the size and cost of your initial planting site and provide for the correct plant density for each stage.

Correct plant densities will help prevent the dominance of woody weeds and vines and avert the need for excessive maintenance.

Key takeaway

Right plants in the right areas, it's not a case of one size fits all with regards to your planting.

Site preparation

Like all projects, preparation is key, and planting is no different. It is very important all invasive woody weeds, as well as vine weeds within the site, are removed prior to planting to ensure your planted seedlings will get the best chance of survival, and are not outcompeted for space, nutrients and moisture.

It is best to prepare each planting spot by either spraying a 1 metre diameter ring with herbicide or brush cutting the same size spot to the ground. Keep in mind if herbicide is used this will ideally be done 2 to 3 weeks prior to planting.

Ensure all instructions and best practice is followed with regards to any chemical application, especially when operating around waterways, as many herbicides and chemical additives can be very harmful to aquatic life.

Key takeaway

Remove the competition (weeds) so your plants are the only ones on the playing field.

Planting

The timing of your planting can be critical to the success of your project. It is best to choose a time where you can be confident that rain will likely fall in the first few weeks following planting otherwise supplementary watering will be necessary.

On the NSW east coast, it's generally best practice to start planting once the initial spring rains have fallen. The late stages of autumn or winter are not the best time to plant trees as there is a high possibility of an extended dry period coming up, plus the winter months don't offer the plant the opportunity for early growth that the warmer months do.

When planting the seedling, ensure there is an appropriately sized hole dug for your plant, ideally twice as wide and 50% deeper than the pot. This allows the soil to be broken up around the plant roots. In heavy clay soils, a round auger hole with smooth inside walls can result in the plant becoming "pot bound" within the hole, so a square hole dug with a spade is better for this situation.

Riverbank and riparian soils are often nutrient-rich, and the application of fertiliser is not necessary or recommended. If fertiliser is used, ensure it is put in the hole with the plant and back filled over with soil, this will ensure the fertiliser isn't washed into the stream in high rainfall events.



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If the soil is dry at the time of planting, it would be beneficial to pour 1 or 2 litres of water into the hole and allow it to drain away prior to planting the seedling. This ensures plenty of moisture remains accessible for the seedling roots if no significant rains fall after planting.

Mulching is beneficial to retain soil moisture and suppress weeds around seedlings. If you have prepared the spot with herbicide, the weeds and grasses killed by the spray can be an effective mulch. If you have chosen to prepare the spot by brush cutting, it is best to heavily mulch the bare soil left by this process to suppress the regrowth of weeds and grasses keeping the mulch away from the stem of the tree to allow air flow and prevent stem rot.

Tree guards are beneficial in areas where browsing or disturbance by wildlife is common. If tree guards are to be used, they need to be factored into the cost. Check with your local Landcare group who have specific local knowledge and may be able to tell you if your site is in an area subject to excessive browsing by wildlife.

Cheap bamboo stakes can be useful for marking the plants to find them later during maintenance, especially if the site is dominated by tall exotic grasses prior to planting.

The type of materials used in protective guards also needs to be considered, as it is not uncommon for tree guards to be washed away in floods when used in a riparian site. In these occasions, the guards may damage the seedlings, and also become plastic waste in the environment.

Key takeaway

Know your conditions and how you can support your plants, while always being adaptable.

Maintenance

Timely and appropriate maintenance can often mean the difference between the success and failure of any planting project. Keeping the site free of woody and vine weeds will give your plants the best opportunity to dominate the site and do their job of protecting the soil from erosion. This can be done by either manually or mechanically controlling these weeds by hand or brush cutter or similar, or with the use of herbicide to maintain a weed-free ring around the plant.

Keep a good eye out for native groundcovers and try to encourage them if you see them as they are essentially a living mulch which will help do the job of weed suppression.

Maintenance is often very labour intensive and time consuming within the first 12 to 18 months following planting. However, if done correctly within that period, the task will become easier and easier over the following years.

If an appropriate density of plants was used, it is likely that within 5 years, the maintenance requirements will be reduced to not much more than an annual wander through to remove the occasional weed and mostly admire the success of your growing trees and plants.

Key takeaway

Once your plants are in, the real work begins. Put the effort in early and your plants, and you, will benefit in the years ahead.

Find out more

To find out more information about revegetation, planting and riparian zones, speak with a Local Land Services staff member via 1300 795 299 or visit www.lls.nsw.gov.au

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For further information visit: www.lls.nsw.gov.au/river-rehab

