

# Revegetation Planner

A calendar guide to planning and implementing your tree planting and direct seeding projects

*Dense planting of shrubs, including Narrow-leaf Hop-bush (*Dodonea viscosa* subsp. *angustissima*) and Varnish Wattle (*Acacia verniciflua*). Dense planting can provide good habitat/nesting sites for native birds.*

Please read this guide in conjunction with the *Protecting and enhancing remnant native vegetation* practical guide for additional information and refer to the guides listed in the *Other Resources* section for further information.

## Site Planning

### Mapping

Map your revegetation site(s), identifying remnant areas, identifying native species, vegetation types (Ecological Vegetation Classes - EVCs) from the *North East Revegetation Guides* for your area and weeds. Mark out potential fencing, any off-stream watering infrastructure and tracks.

### Grazing management plan for remnant areas

Develop a grazing management plan for your remnant areas in consultation with Landcare staff or Natural Resource agency. Note: this won't be needed in green-field revegetation projects until sites are 4-5 years old. Grassy woodlands, native grass pastures, and some wetlands and waterways will benefit from some form of grazing. Sensitive or vulnerable species, timing, duration, class of stock and condition of the site are key factors to consider. Grazing is not suitable or necessary for all sites.

### Monitor over-abundant native wildlife and deer

Complete spot-lighting surveys to record numbers of kangaroos, wallabies and deer in particular areas. Wombats and cockatoos can also be destructive to new plantings. Think about what strategies you will need if native animals are a problem.

### Plan pest animal and plant control

Plan for what pest plant and animal control activities are required. Get started on this early as part of control plans for your entire property. Talk to neighbours and your Landcare group or Natural Resource agency about effective strategies for different types of weeds and pest animals.

### Order seedlings (if planting tubestock)

To ensure the species and numbers of plants you want are available, order early – ideally before Christmas. If you are completing a Landcare project, your group might be placing a larger order - provide your numbers to your group.

### Order guards and stakes (if planting tubestock)

Order guards and stakes at the same time as plants. Consider the type of guard that will best suit your site and address the threats to plant establishment. If you are doing a large planting (over 1000 plants), considering ordering directly from a supplier to reduce costs. Again, your Landcare group might be putting in a larger order so talk to your group first.

## Labour and contractors

Be realistic about what you can achieve and book in contractors and friends to help complete tasks. Book contractors well ahead of time. Spraying, fencing and direct seeding contractors get very busy and you don't want to miss out.

If direct seeding, talk with your contractor to arrange the mix of seed species and order if needed. Your contractor may want to visit your site prior to seeding.

## Equipment

Ensure your equipment is in good working order to complete tasks such as spraying, ripping and planting on time. Your local Landcare group may have equipment that you can hire or borrow, including spray equipment and planting tools.

*Lines sprayed and ripped ready for tube stock planting at a new corridor at Warby Range Road. Spraying is important to reduce competition during establishment. Consider how you want your site to look in years to come. Curved/wavy rip lines can create a more natural look.*



## Site Preparation

### Fencing

Ideally complete all fencing before planting. Stock may not be able to access a site with unfinished fencing, but native wildlife and deer will have easy access to your new plants. Completing fencing will be essential where you are using electric fencing to help control wildlife and deer. A site can be decimated in one night.

### Crash grazing

Crash grazing is utilising a larger mob of stock for a short period of time to reduce grass loads and make spraying and access easier. Crash graze sites early, to give enough time for weeds and grass to regrow and be suitable for any spraying that may be required. If you are planting into remnant areas consult the *Protecting and enhancing remnant native vegetation* section of this booklet.

### Slashing

Slashing can be an option where grazing is not possible and/or you have no stock. Again, complete early to allow regrowth for spraying.

### Ripping (if planting tube stock)

Ripping shatters soils and creates spaces for plant roots to get established. It also makes planting and guarding much quicker and easier. Ripping must be done when sites are dry. Consider more natural looking wavy and crossing rip lines, particularly in remnant areas where you are doing enhancement planting. Always rip across contours and you can rip spider web-like circles/crosses for planting clumps of shrubs. Short crossed lines are a good idea for planting trees in more natural areas. Driving over rip lines will knock down large clods. If you have the time and equipment consider cultivating over rip lines - don't do this in good quality remnants.



## Weed control for planting tubestock

Spot spray 1m circles for trees 20-30m apart and 3-4m circles for clumps of shrubs. If you have rip lines, spray along rip lines in a strip 1m wide.

## Weed control for direct seeding

Spray lines (1m width) or patches where you want the direct seeding to occur. Consider wavy and crossing lines to get a more natural effect. Remember to allow for room for turning a vehicle and trailer (the seeding machine). Discuss weed control with your direct seeding contractor in advance. Sites with dense Paspalum or Phalaris will require spraying several times to ensure these grasses are eradicated prior to direct seeding, otherwise emerging seedlings will be quickly smothered by dense grass.

## Over-abundant native wildlife

Kangaroo numbers may need to be controlled before and after planting. You will need to apply for an Authority to Control Wildlife (ATCW). You or an agent can undertake culling. Refer to the Department of Environment, Land, Water and Planning website for more details ([www.delwp.vic.gov.au](http://www.delwp.vic.gov.au)).

# Planting tubestock

## Soil moisture

Planting can be carried out once there is adequate soil moisture. All planting should be completed before conditions begin to dry out and warm up in early September, allowing for establishment before the summer heat.

## Preparation

Ensure seedlings are well watered before planting. Make sure you have your tools and helpers ready to go.

## Planting

Seedlings (tubestock or hiko plants) can be planted into riplines using a potiputki and kidney bucket. Ensure you fill your bucket with a mix of tree and shrub species. In un-ripped sites, use a shovel to dig holes. Try to leave a shallow dish to catch water in drier sites. Remember to plant seedlings deep enough - make sure the root ball is well covered and no potting mix is visible.

## Pest animal control

**Rabbits and hares** - Rip, or hand collapse and fumigate rabbit burrows. This is best done when there is some soil moisture. Follow up with poison baiting. Continue as rabbits are noticed. Hares can be particularly destructive being taller and able to nip plants off above standard milk carton and plastic guards. Control hares by shooting and consider using taller guards if necessary.

**Deer** - Deer can be shot by you or an agent on your behalf (written permission is required from you). Night spotlighting is now allowed. Refer to the Victorian Game Management Authority website for more details.

## Guarding

Guard plants immediately after planting. Do not leave plants un-guarded over night. Get extra help if needed, or do a small amount of planting and guarding at one time. Tall plastic buckets are useful for carrying guards and stakes. Use a rubber mallet to ensure stakes are well driven in.

## Watering-in

Plants can benefit from being watered in. Not all plantings will be accessible for watering. Also it may not be practical to water large sites.

## Direct seeding

Seeding is best carried out when the soil is still warm in Autumn. Soon after rain is ideal. Accessible sites can be sown through Winter also.



*Make sure you have all the resources to effectively undertake your planned revegetation works. Enlisting some willing workers is a great way to get the job done.*

## Maintenance post planting and direct seeding

### Red legged earth mite (if direct seeding)

Red legged earth mites (RLEM) are tiny black mites with red legs seen on emerging pastures and crops. Check every few weeks for RLEM. RLEM can damage and kill new young native seedlings. Control with an insecticide might be required if numbers and damage is high. RLEM are more likely to affect seedlings near pastures and crops. Talk to your seeding contractor for advice.

### Check fences

Do this regularly and keep an eye out for holes under fences. Check electric wires are working.

### Watering (if planting tubestock)

Some sites that are easily accessed and have smaller numbers of plants can be watered over the summer months to help establishment. If plants have gone in when soils are wet, they may not need additional watering.

### Replacing guards (if planting tubestock)

Wind and wildlife will move guards. Check regularly and replace until plants are well established. If rabbits and hares continue to be a problem, leave guards on longer to stop ringbarking.

### Pest animals and wildlife

Be vigilant and check plants once a week and implement control measures as soon as you see damage.

## Ongoing care

### Removing guards (if planting tubestock)

Most guards will need to be removed at some stage. Plastic sleeves and corflute guards if taken off early enough (before they have to be cut) can be reused. Balance this with potential ringbarking from rabbits and hares. Don't leave plastic sleeves and corflute guards to blow around. Stock will chew plastic guards. Cardboard guards will break down and do not have to be removed.

### Fence maintenance

Do this regularly and keep your fences in a stock-proof condition over the long-term. Grazing can then be used as a potential management tool to control grass and weeds once plants are established.

### Re-planting (if site was initially planted with tubestock)

Failures will occur. Follow earlier steps to prepare sites for planting. You are likely to have some plants in your site and crash grazing may not be an option. If you have lots of grass consider slashing lines or circles. Have a spotter to help you see small plants in long grass. Re-rip areas if accessible following slashed lines/ areas. Spray these areas. If your site is inaccessible or a natural area you are enhancing, you may need to spot spray. Some good natural areas will not need spraying prior to replanting.

### Re-seeding (if site was initially direct seeded)

With direct seeding, it can take up to 5 years for plants to be really noticeable and even after this time, new plants might still be germinating. Wait 2-3 seasons to see what is emerging before undertaking re-seeding. Follow earlier steps to prepare sites for re-seeding. You are likely to have some plants in your site and crash grazing will not be an option. If you have lots of grass, consider slashing lines or patches. Have a spotter to help you see small plants in long grass. Spray around these plants carefully. Some good natural areas will not need spraying prior to re-seeding.

### Weed control

Inspect your site regularly and spot spray or chip weeds. Don't let your new planting site become a harbour for weeds that may spread across your property. Weeds can take off and new weeds may pop up whilst plants are establishing, so keep a watch for weeds and control as necessary.

### Pest animals and wildlife

Continue to monitor and control pest animals and wildlife until plants are well established - up to 2 years for tubestock and up to 5 years for sites that are direct seeded. Prevent pest species from using your revegetation area as a refuge and implement control measures, especially for rabbits, hares and foxes.

### Grazing management

Once plants are well established, crash grazing can be used to help manage grass loads. This can be important in reducing fire risk. If you have planted into a remnant area you can restart your grazing management plan if this is relevant for your site - refer to the *Protecting and enhancing remnant native vegetation* section of this booklet.

### Thinning

Thinning is something to consider where trees are growing too close together. Remember to consult your local Council as permits are required for removing native vegetation.

If using tubestock, prevent the need for thinning by planting widely spaced trees, or refrain from planting additional trees at your site if you have remnant trees close by as these will naturally regenerate over time.

If direct seeding, prevent the need for thinning by using the smallest amount of tree seed (talk to your contractor about this) and not sowing any tree seed if you have remnant trees in your site or close by.

# Revegetation Calendar

This calendar is a general guide to the timing and sequence of activities. The exact timing of activities will depend upon the characteristics of the season, soil type and existing site condition. Use this calendar as a general guide and discuss further with your Landcare Facilitator or Natural Resource Management Officer.

Activity	Jan - Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov - Dec
<b>Site planning</b>										
Mapping	Complete as early as possible. Do not wait for project funding, start planning now.									
Grazing management plan for remnant areas										
Plan pest animal and plant control										
Monitor over-abundant native wildlife and deer										
Order seedlings										
Order guards and stakes										
Equipment										
Labour and contractors										
<b>Site preparation</b>										
Fencing										
Crash grazing										
Slashing										
Ripping										
Weed control (tubestock or direct seeding)										
Pest animal control (rabbits and hares) - Rip/fumigate										
Pest animal control (rabbits and hares) - Poison baiting										
Pest animal control (rabbits and hares) - Shooting										
Pest animal control - deer										
Over-abundant native wildlife										



Activity	Jan - Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov - Dec	
<b>Planting of tubestock</b>											
Soil moisture				Best	Best	Best	Best	Also			
Preparation				Best	Best	Best	Best	Also			
Planting				Best	Best	Best	Best	Also			
Guarding				Best	Best	Best	Best	Also			
Watering-in				Best	Best	Best	Best	Also			
<b>Direct seeding</b>											
Undertake seeding			Best	Best	Also	Also	Also	Also			
<b>Maintenance post planting/direct seeding</b>											
Watering (if planting tubestock)	Best	Best								Best	
Replacing guards (if planting tubestock)	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Red legged earth mites (if direct seeding)			Best	Best	Best	Best	Best	Best	Best	Also	
Pest animals and wildlife	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Check fences	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
<b>Ongoing care</b>											
Removing guards (if planting tubestock)	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Fence maintenance	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Re-planting			Best	Best	Best	Best	Best	Also			
Re-seeding			Best	Best	Also	Also	Also	Also			
Weed control	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Pest animals and wildlife	Best	Best	Best	Best	Best	Best	Best	Best	Best	Best	
Grazing management	This will be very site and season dependant, and may not be required or suitable for your site. Refer to the <i>Protecting and enhancing remnant native vegetation</i> section of this booklet.										
Thinning	Also	Also	Best	Best	Also	Also	Also	Best	Best	Also	
<b>Key</b>	Best	Best time to undertake activity									
	Also	Also suitable time									

## References and Other Resources

The following publications provide additional information on the establishment of revegetation using planting of tubestock and direct seeding. These references are available electronically on [www.gretalandcare.org.au](http://www.gretalandcare.org.au)

DELWP (2015). DELWP Output delivery standards. For the delivery of environmental activities. Version 2.1. The State of Victoria, Department of Environment, Land, Water and Planning.

DSE (2007). North East Revegetation Guides. Victorian Government Department of Sustainability and Environment, Melbourne.

Greening Australia (2003). Revegetation Techniques. A guide for establishing native vegetation in Victoria.

NECMA (2017). Healthy Catchments Information Kit. Prepared by the North East Catchment Management Authority, Wodonga.

*Corflute guards and hardwood stakes are used to protect these shrubs during establishment. Guards protect young plants from browsing animals such as rabbits and hares, protect the plants from wind and help maintain a warm and moist environment to encourage growth.*





# Acknowledgements

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