



## Background on the blackberry

Blackberry was first introduced to Australia in the early 1830s, with the *Rubus* species (originating from Europe, North America and Asia) having become naturalised and now infesting over 8.8 million hectares of land across southern Australia.

## South West Catchments Council

PO Box 5066 Bunbury WA 6230  
Telephone: (08) 9780 6193 Fax: (08) 9780 6198  
Email: [swcc@agric.wa.gov.au](mailto:swcc@agric.wa.gov.au)  
[www.swccnrm.org.au](http://www.swccnrm.org.au)

There are 26 known introduced species of blackberry in Australia and 5 within Western Australia.

The two most widespread blackberry species that occur in WA are the focus of this management program. They are the European blackberry (*Rubus anglocandicans*), also named 'common' blackberry and the American blackberry (*Rubus laudatus*), also named 'early' blackberry.

In southern WA, both species have become naturalised and together are spread over a 600 km long by 100 km wide belt from Perth to Albany.

Blackberry causes serious degradation to the natural environment. It out-competes native plants, causing loss of habitat for native animals, and harbours destructive vermin. It may affect the productivity of farms by shading out cropping areas and reducing available land for livestock. Blackberry can also be a fire hazard.

The European and American blackberry species grow in the riparian zone of rivers, streams and creeks, often forming impenetrable thickets which block access to these waterways. The easiest way to distinguish between the two species is by their flowering and fruiting times. The American blackberry flowers 'early' from late October to November; while European blackberry flowers from December to January.

## What can you do to help?

### Report Sightings

For the buffer zone to work, we need to know where the American blackberry is located within and also south of the zone. You can help by reporting early flowering blackberry occurrences to DAFWA.

### Undertake Weed Control

If you have either species of blackberry on your property, you can help by destroying these occurrences. This will stop the spread of the plants to neighbouring properties via seeds being transported by birds, animals and in waterways.

To report American blackberry or to get advice on treating blackberry on your property, please contact a DAFWA Biosecurity Officer on 9780 6100.

**The SWCC website provides further information and contact details: [www.swccnrm.org.au](http://www.swccnrm.org.au)**



# Maintaining the Blackberry Buffer Zone

## A community collaborative project

This project is proudly funded by the Australian Government's Caring for our Country, Government of Western Australia's State NRM Program and BHP Billiton Worsley Alumina Pty Ltd



# Blackberry - a Weed of National Significance



European Blackberry next to American Blackberry

Blackberry is a declared Weed of National Significance (WoNS). It is considered to be one of Australia's worst weed species, found in temperate zones in all states, including the south west of Western Australia.

## Why do we need a buffer zone?

In 2007, with some National 'Defeating the Weed Menace' funding, the Department of Agriculture and Food (DAFWA) established a buffer zone to geographically separate the European blackberry species from the American blackberry species. This buffer zone acts as a barrier to stop the American blackberry in the north from becoming established south of the zone where it currently exists in very few isolated patches.

## Where is the zone?

The blackberry buffer zone is a six kilometre wide buffer from the coast near Australind east to Darkan. The northern boundary is the Brunswick River and the Williams Collie Road to Darkan. The southern boundary is the Collie River and the Coalfields highway.

## Identifying Blackberry

### Blackberry type

American (early) blackberry  
European (common) blackberry

### Flowers & Fruits

Sept to Nov  
Dec to Jan

## Why keep the two species separate?

The European blackberry is significantly affected by a biological control agent, the blackberry rust fungus. By contrast, the American blackberry is not affected by the rust fungus. Therefore, to ensure effective control of the blackberry:

**the American blackberry must not extend its current range south and invade bushland where the vigour of the European blackberry is reduced.**

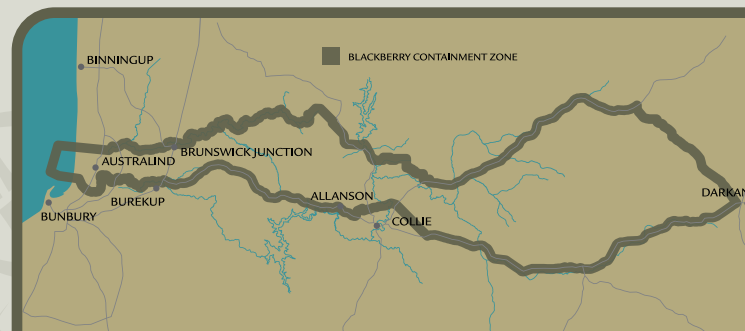
## What is happening within the zone?

Prior to 2010, many agencies were undertaking blackberry control and restoration. To rectify this and take a collaborative approach, the Blackberry Working Group was formed with representatives from South West Catchments Council (SWCC), Leschenault Catchment Council (LCC), DAFWA, Department of Environment and Conservation (DEC), Department of Water (DoW), BHP Billiton Worsley Alumina and the local Shires.

**A program of blackberry control and rehabilitation started with Caring for our Country (CfoC), State NRM and Worsley Community funding, achieving:**

- **2009 / 10** - over 216 ha of control within the buffer zone
- **2010 / 11** - over 110 ha of control within the buffer zone and 36 ha of American blackberry south of the buffer zone (Preston River).

In addition to the spray program, the Blackberry Working Group has been very active in planning for future works. An audit was undertaken of the current status of blackberry within the buffer zone, initial surveillance work was completed on key waterways south of the buffer zone, looking for out breaks of American blackberry. An evaluation report was then written providing recommendations for the future direction of the program.



# You've killed the blackberry Now what?



## Restoration - why is it necessary following blackberry control?

Initial blackberry control is not enough - ongoing treatment, and site restoration to suppress regrowth and prevent reinvasion is essential! Factor these activities into your management from the outset.

## Monitoring

Landscape restoration is about incremental change and inspirational results can be easily overlooked if you are on site every day. A fantastic way of gauging progress is to establish photo monitoring points. This can be as easy as installing a post to establish a regular point of reference where a series of photos can be taken from, over time. Photo monitoring is an easy way of sharing results with others, attracting funding and publicity for a site or encouraging local governments to support ongoing remedial works.

For a successful restoration project, it is essential to monitor:

- **Fences** - If you are restoring areas that are stocked. If your neighbours have stock make sure they know about your restoration plans and work with you.
- **Weeds** - Keep a close lookout for blackberry, especially in areas that you know have been previously infested.
- **Seedling survival rates** - Replant before it's too late. If you miss the season, replant next winter and fill in the gaps.

## Restoration Techniques

There are many quality resources available to assist you in your weed control and revegetation activities. Some essential information to think about when planning your works is provided in this brochure.

## Ground Preparation

Ground Preparation options for different soil types in areas accessible by machinery.

Soils	Ripping	Mounding	Furrowing	Cultivation
Sandy	X		X	
Saline	X	X		
Clay/ Loams	X			X
Gravel	X			
Shallow Soils	X	X		

## Ripping

All farmland soils will have some degree of compaction from machinery and stock. This compaction will need relieving for improvement in plant growth; therefore, ripping is essential on all sites. It's best to rip in late summer/early autumn when the soil is dry and rip to 500 mm.

Cultivating may be required in clays/loams to break up the clods. Always rip on the contour even if the site doesn't appear to undulate much, to minimise erosion.

Don't rip through waterways. Do leave gaps every now and then in your rip line to allow surface water flow. Always rip outside the drip line near remnant vegetation and above the high water mark near waterways.

## Mounding

Mounding over ripped ground can be considered in saline and waterlogged areas to prevent root rot. In most cases mounds should be 5 - 10 cm above ground level.

Mounding can cause erosion, so it is important to mound on contours parallel to waterways and above the high water mark. Complete the ground preparation a few months prior to planting so you can focus on weed control.

## Furrowing

Do this on deep sandy soils that are water repellent to help direct water into the soil and the roots of new seedlings. Always make furrows parallel to the river to reduce water erosion.

**It is also important not to undertake any mechanical ground works prior to completing blackberry eradication (sometimes requiring a second and third blackberry treatment).**

**Wait 6 - 8 weeks after follow-up treatments to start restoration in order to let the chemical to take full effect.**

# The next step - Bush Regeneration



An example of the mounding technique



## Low Impact Bush Regeneration

To treat blackberry infested areas in relatively undisturbed bush, the ground works previously mentioned might do more damage than good. In these situations, after blackberry treatment, spot spray or hand remove any other weeds and plant directly into ground with a spade or auger.

## Weed Control

Before you can do any weed control you need some knowledge of what you are trying to control. Two good books are: "Southern Weeds" and "Western Weeds", both available from DAFWA. You can also take samples of the weeds into DAFWA for identification.

Weeds compete very effectively with native plants for water, light and nutrients, making this a critical part of your revegetation program. It is important that weed control be started as early as possible, aiming for a minimum of 12 months prior to planting.

Pre planting weed control is much easier and cheaper than post planting, but expect to do some follow up weed control. Monitor your site regularly, especially for reoccurrences of blackberry.

If you are using chemicals to control weeds, exercise care.

Protect yourself and the environment, especially working close to water and don't use chemicals at all if rain is expected in the next 6 hours.

## Fencing

Exclude stock to protect the growing seedlings. This can either be permanent with a post and wire fence or a more temporary electric arrangement.

Another important factor for seedling survival, especially for the first few years, is the protection from feral animals and small burrowing animals. Tree guards can help and also provide the added benefit of protecting the seedlings from harsh weather.

## Species Selection

Native species from local provenances have adjusted to the conditions in that area over thousands of years, making small changes in the way they grow or reproduce. By using local plants in your revegetation project, you will have a higher seedling survival rate and you will also be providing habitat for local wildlife that live in the area. There are many resources available to help you with your selection. For further advice contact the LCC, SWCC or a local native nursery and indicate your soil type, location and types of plants you want (trees, shrubs, rushes/sedges and creepers).

To make sure you get the right species selection for your site, get your order in early. Contact your nursery by November to order for the following planting season, especially for large revegetation projects.

## New plantings and 2 years growth (right)

## Planting Densities

Planting density is determined by rainfall, soil type, soil depth and plant size. With river restoration work, water is generally available for most of the year and hence, planting densities can be quite high, between 2,000 and 5,000 plants per hectare would be appropriate.

Walk through bushland areas near your site and be guided by nature. You will see that trees can be quite wide spaced, and you will need many more understorey species.

## Support

Walk through your site with an experienced Natural Resource Officer and discuss appropriate restoration methods. Organisations like the LCC and SWCC have experienced technical staff that are working to protect the natural assets in our region and are eager to assist.

There is also a wealth of knowledge in the local 'friends of' groups and community environmental groups who have experience in doing similar restoration work.

