

Introduction

The aim of this document is to design a strategy to manage weeds in the Tintern Schools Remnant Bushland. It should be used in conjunction with Kate Waller's assignment (last years junior division winner) to provide a clear action plan for reducing weeds and increasing indigenous plants to our bushland area. It is important to understand that long term solutions to weed problems are only achieved through constant attention to controlling weeds and appropriate new plantings.

What is a weed?

A weed is defined as “a plant growing in a situation where it is not wanted”. Weeds are usually very hardy, introduced species that are adapted to grow rapidly when they get the chance, even in poor conditions. Weeds can grow excessively in an area, they can invade an area or they cause damage to an area. A weed can come about without being planted because the seed may have been eaten by fauna or carried on a shoe or just blown through the wind.

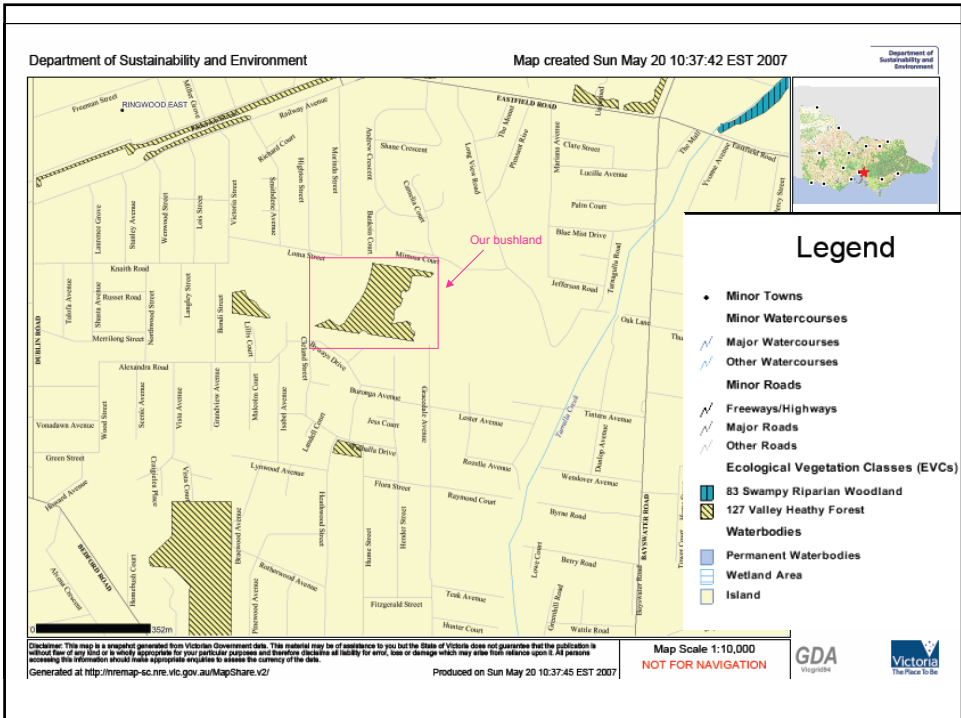
Environmental weeds are a serious environment problem. They threaten indigenous plant and animal biodiversity by effecting there food sources, shelter and habitat. They threaten plant species which may become extinct.

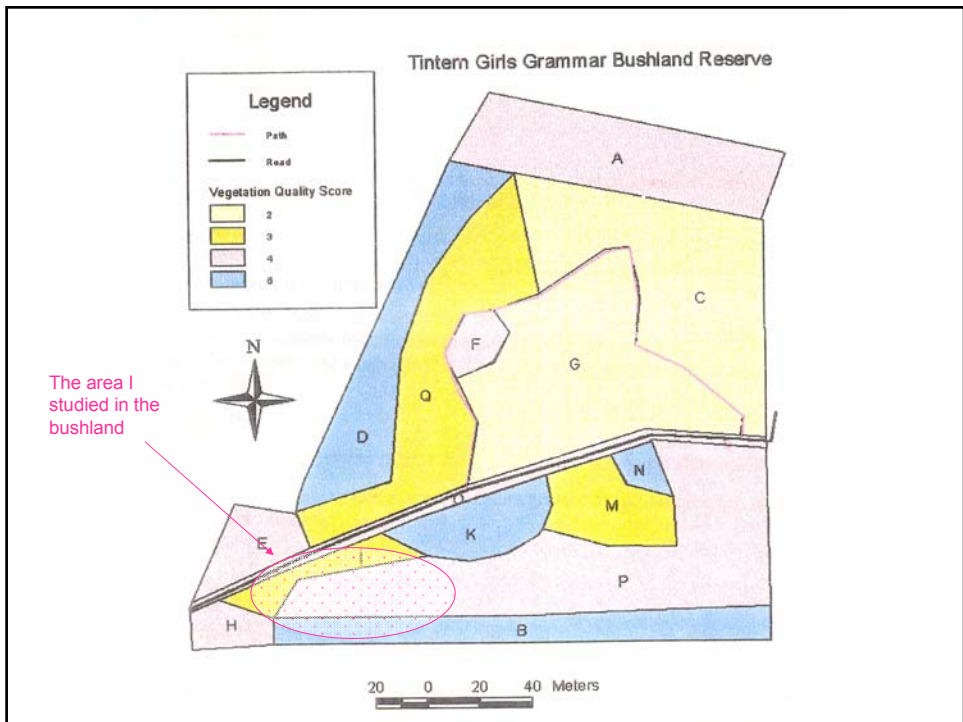
Remnant bushland

Our remnant bushland is situated in Tintern Girls Grammar School, Ringwood East, Victoria. The whole covers approximately 5 hectares although this study covers a part of the area (refer to Tintern girls grammar bushland reserve) . The bushland is one of the Maroondah's Sites of Biological Significance and it is protected in the Maroondah Planning Scheme under the Vegetation Protection Overlay. This means that it is very important to continue to conserve our bushland. The best way to do this is by getting rid of the weeds and replanting indigenous plants to re-establish the natural bushland. The ecological vegetation class (EVC) is 127 Valley Heathy Forest and it suggests the indigenous species we should plant once the area has been weeded.

http://www.dse.vic.gov.au/conserv/EVC-PDF/HSF_0127.pdf

If we can stick to these guidelines and stamp out the weeds we will have this unique remnant bushland for many years to come.







Large-leaf Cotoneaster



The Cotoneaster glaucophyllus also known as the large leaf Cotoneaster is a very prominent weed in our remanent bushland. It was originally brought over from china for ornamental uses. It is classified as an evergreen shrub or small tree that grows to approximately 7m high and wide. It is usually passed on through animal droppings because its rich, red berries are very inviting to the inhabitant animals.

It invades the edge of our bushland due to 'the edge effect'. The border properties surrounding us have a few large cotoneasters growing, these are dropping seeds or getting eaten by our native fauna causing rapid growths in the bushland.

The cotoneaster leaf has a large green top with a light green under surface and are not glossy but are slightly hairy with a matt finish.

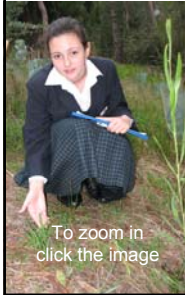
The red berries are 7-8mm in diameter, round with a flat base and grow in clusters.

The flowers are small, white and grow in tight clusters.



Angled Onion

The *Allium triquetrum*, Angled onion or Three-cornered Garlic is a real issue in our bushland. It is a bulbous perennial herb, 20-40cm high, which is capable of totally getting rid of the native ground covers whenever the opportunity arises. The crushed leaves and stems have an onion-like aroma and they create 3 acute angles hence the common name. The white, drooping, bell shaped flowers also give off a strong onion smell. The onion weed is declared a noxious weed in Victoria by the DSE. It was brought out from the Mediterranean region and was used as a cooking herb. It is spread by water running down hills, disturbance of soil containing it and ants carrying the seed.



To zoom in
click the image



Angled onion in flower

Angled onion in the
Tintern bushland



English Ivy

Hedera helix, English Ivy is a woody, evergreen, perennial, climbing weed which is a definite problem in our bushland. It has a habit of creeping along the ground, up fences and even up trees choking and smothering them. It can grow to 30m and it has shiny, deeply lobed, dark green foliage with very prominent veins. It has flowers in late March, growing on the climbing areas with a yellowish-green colouring. The seeds are small black berries which are very inviting to birds but poisonous to humans. The seeds are spread by birds eating the fruit.



English Ivy in the Tintern bushland

English Ivy flowers

English Ivy foliage

English Ivy Berries

Management Plan (Overall)

It is pointless to try and control weeds if you don't have a structured planting plan. Weed control needs to be carried out in conjunction with the right regeneration planting to make sure it replicates its original bushland environment. Spring is a good time to carry out a vegetation assessment in the area because the majority of species will be evident. Correct identification of weeds is important to be able to determine appropriate action required. Action on weed monitoring and control must take place so that our remnant bushland areas are preserved and provide a unique education and increase biodiversity for our native fauna into the future.

Effective control methods could include the removal of weeds by hoe or digging or hand pulling, taking as much root as possible and before they go to seed. Chemical control relies on the use of herbicides that kill or damage plant growth. Care should be taken to choose the right type of product for the particular weed needing to be eradicated. You must avoid damaging nearby plants and harmful residues left in the soil.

Management Plan

Prioritising weeds for control is needed along with determining appropriate methods to remove particular species. Working with the whole school community, local government and neighbouring land holders will eventually lead to control and eradication of environmental weeds.



Regularly review and evaluate the area to see if weeds are being reduced and recommended improvements and implement them as needed.

Management Plan-Angled Onion

Location	Species of weed	Method of Control	Priority	Timing
Entire Area	<i>Allium triquetrum</i> Angled Onion Noxious weed	Hand remove small plants or groups, make sure to pull up the whole root system. Be careful because disturbance of soil containing seeds or bulbs will spread this weed. or Spray the angled onion with an appropriate herbicide. Avoid damage to other plants. Monitor for rejuvenation.	Very High	Commence eradication of this plant as soon as is practical. Most effective time to spray is early to mid winter. Ongoing until it will never come back.

Management plan- Cotoneaster

Location	Species of weed	Method of Control	Priority	Timing
Edge of property	<i>Cotoneaster glaucophyllus</i> Large-leaf Cotoneaster Environmental weed	Hand remove small plants, make sure to take out the whole root system. or Spray cotoneaster with an appropriate herbicide. Avoid damage to other plants. or For larger plants use cut and paint and drill & fill methods. Monitor for regeneration For long term control, talk to neighbouring properties and get them involved with this weed management plan.	Medium	Commence destroying of this plant as soon as is practical. Check annually. Ongoing until eradicated

Management plan- English Ivy

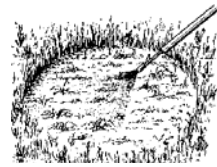
Location	Species of weed	Method of Control	Priority	Timing
Fences/ trees and ground	<i>Hedera helix</i> English Ivy Environmental weed	<p>Cut vine from tree and remove plant cuttings immediately. Spot spray or cut and paint with herbicide but being especially careful to avoid damage to trees.</p> <p>For long term control talk to neighbouring properties and get them involved with this weed management plan.</p>	Medium to high	Commence as soon as is practical in the bushland. Continue to maintain regularly

Methods of control Diagrams

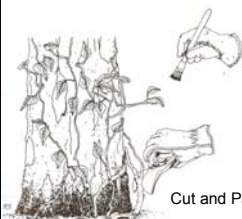
Hand weeding method



Drill-Fill method



Spraying chemical method



Cut and Paint method



Frilling method

Stem-scrape method



Conclusion

Weed control should be aimed at eliminating weeds and avoiding conditions that contribute to further weed growth. Weed control must not rely on 1 method only but should involve a combination of methods that will discourage weeds while encouraging desired plants. Small out breaks may be controlled by repeated manual removal of the entire plant. Repeated hand pulling will get rid of bulb numbers of the onion weed and this may require many years of control methods. A newly weeded area needs to be planted up as quickly as is practical due to weeds rigorous growth nature and there ability to take advantage of almost any condition, they will quickly fill a bare area before anything else has a chance.

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