



CURRARONG VILLAGE BUSHCARE ACTION PLAN

CONTACT INFORMATION

Group Name: Currarong Village Bushcare

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Reserve Name: Various reserves within and surrounding Currarong

Reserve No's: CCR393, CCR39, & CCR435 Land Tenure: Crown Trust Manager & SCC

1. BUSHCARE GROUP GOALS

The Goals of the Currarong Village Bushcare Group are:

- 1. Reduce the impact of exotic weeds on the ecology and biodiversity in and around the village of Currarong
- 2. Enhance the health and habit quality of the Endangered Ecological Communities in and around the village of Currarong
- 3. Increase awareness and engage the community in understanding and appreciating the areas biodiversity and how they can assist in the protection of it for future generations
- 4. To build social capital amongst Currarong residents

2. SHOALHAVEN BUSHCARE GROUP ACTIVITIES TABLE (to be in conjunction with attached site map) NOTE: Priority should be rated as H = High (within 12 months); M = Medium (1-3 years); L = Low

		GROUP ACTION	PRIORITY	METHOD	TIME
		These actions are to read in con	junction with	the priority works map of the	
		Currarong Bushland	d Weed Manag	gement Plan 2009	
		ity 1 zones– Area 1 - Plutu's Creek & Crown land m reserve:	l areas and Th	ne Wreck and areas of EEC around A	brahams
1.	towa spe	tus Creek - Working from Plutus Creek back ards the village controlling the following key weed cies in the following priority:	Н	Use the following wed control methods (see attached bush regeneration information sheets):	On going
	a. b.	Asparagus asparagoides (Asparagus Fern) Chrysanthemoides monilifera susp. Rotunda (Bitou Bush)		a) Manual removal crowning out reproductive parts of plants and remove crowns from site	
	C.	Lantana camara (Lantana)		b) Cut and paint or spot spray with 1:100 glyphosate/water	
	d. e.	Bryophyllum delagoense (Mother of Millions) Senna pendula (Winter Senna)		c) Cut and paint or spot spray with 1:100 glyphosate/water	
	С.	Serina pendula (vviillei Serina)		d) Hand removal, bag and remove from sitee) Cut and paint larger plants or	

	GROUP ACTION	PRIORITY	METHOD	TIME
			hand pull smaller plants	
1.	Priority 1 zones- Area 2- SS Merimbula Wreck and Abrahams Bosom Reserve - The following priority actions for these areas are:	Н	Use following methods (see attached bush regeneration information sheets):	
	a. Work with the NSW Land and Property Management Authority to undertake primary secondary weed control patch of Winter Senna and Crofton Weed		a) Bushcare Coordinator to coordinate with NSW LPMA regarding works b) Cut and paint woody weeds,	a) 2012 -15
	b. Undertake secondary weed control/regenerations works of the Littoral Rainforest, dune and Swamp Slerophyl Forest in and surrounding Abrahams Bosom targeting the following key weed species:		crown out Asparagus Fern, Hand pull or spot spray Crofton Weed and spot spray Buffalo grass with 1:200 glyphosate/water	b) On going
	i. <i>Senna pendula</i> (Winter Senna) ii. <i>Asparagus asparagoides</i> (Asparagus Fern)		c) Use attached species list and only plant groundcovers	c) Autumn
	iii. Ageratina andenophora (Crofton Weed)iv. Stenotaphrum secundatum (Buffalo Grass)		d) Council to provide "Being a Bush Friendly Neighbour" and Bushcare to letter box drop	d) 2012
	c. Undertake supplementary under story planting to increase biodiversity in the Littoral Rainforest			
	 Raise awareness of residents backing onto reserve along Crookhaven Pde and Jervis St of 			

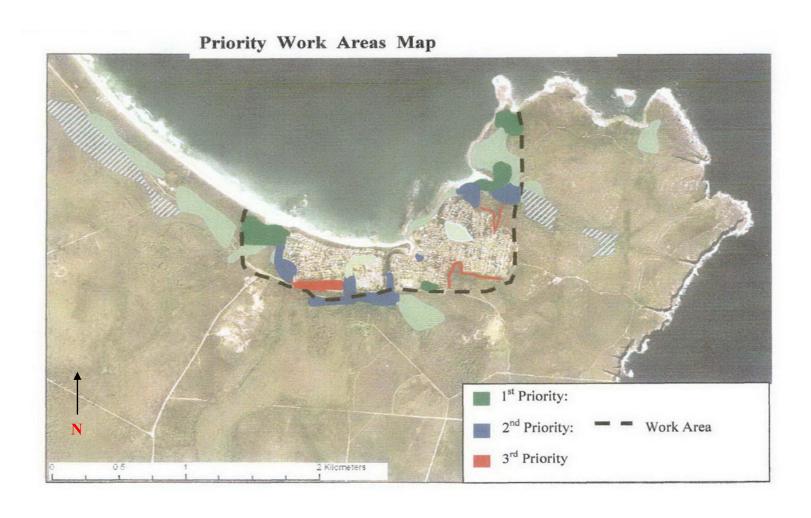
	GROUP ACTION	PRIORITY	METHOD	TIME
	the negative impacts of dumping garden waste and growing invasive plants by letter box drops			
	Priority 2 Zones – Area 3 - Swamp Sclerphyll Forest re side of the corner of Currarong Rd and Cambewarra F		liday Haven Tourist Park, Crown lan	d on southern
1.	Swamp Scilerophyll Forest remnant/Caravan Park – This remnant is classified as an Endangered Ecological Community and was identified as a priority area for bush regeneration efforts in the Currarong Natural Resource Management Strategy 200. The priority actions for this zone are as follows:	M	Use the following methods:	2012
a b	 Apply for grant funding to assist the Bushcare Group in undertaking bush regeneration works Approach Holiday Haven Tourist Parks to assist with funding to employ contractors to undertake bush 		a) Council to assist with grant application and management b) Bushcare Coordinator to	
	regeneration works		approach Holiday Haven	
2.	Crown land on southern side of the corner of Currarong Rd and Cambewarra Rd – This area contains remnants of Swamp Oak Forest which is listed as an Endangered Ecological Community under the NSW Threatened Species Act 1995. The priority actions for this area are as follows:	Н	Use following method:	On going

	GROUP ACTION	PRIORITY	METHOD	TIME
	 Undertake secondary control of Asparagus asparagoides (Asparagus Fern) following initial primary spray by contractors Priority 3 Zones – Area 4 - Warrain Beach dunes, Crowthroughout the village 	wn Land adja	a) Hand removal of seedlings or crown out larger regrowth cent to bowling club and keystone we	eeds
1.	Warrain Beach Dunes – Assist the existing Currarong Dunecare group with their dune rehabilitation activities on a need be basis	L	As per Currarong Dunecare Action Plan	As required
2.	 Crown Land adjacent to Currarong Bowling Club a. Undertake primary weed control of annual and perennial weeds, leaving the extended gardens from the adjacent residential properties as per the agreement with NSW Land and Property Management Authority b. Educate all Bushcare volunteers working on the site about the Villious Mint Bush (<i>Prostanthera densa</i>) as this plant is an endangered species under in NSW (see attached information on appendix) 	М	 a) Manual or chemical control of weeds b) When undertaking work on this reserve please take a along the picture of the Villious Mint Bush (<i>Prostanthera densa</i>) for reference 	On going

	GROUP ACTION	PRIORITY	METHOD	TIME
3.	Keystone Weeds in and around the village as required – There are keystone weed species that occur in and surrounding the village. These species have been identified according to a priority rating methodology developed by Proust Bushland Services based on their ability to reduce biodiversity. The Bushcare Group should prioritise their efforts to controlling the following species:	М	Use the following methods for the control of keystone weeds:	On going
	a. Lantana camara (Lantana)		a) Cut and paint	
	b. Asparagus asparagoides (Asparagus Fern)		b) Crown out	
	c. Ageratina andenophora (Crofton Weed)		c) Spot spray with Metsulfron- methyl at 15g per 100L water	
	 d. Chrysanthemoides monilifera susp. Rotunda (Bitou Bush) 		d) Spot spray with 1:100 glyphosate/water	
	e. Acetosa sgittata (Turkey Rhubarb)		e) Spot spray with glyphosate 100ml in 10L water	

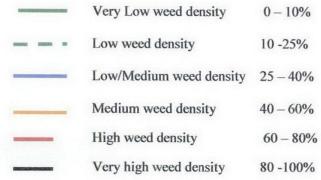
Bushcare group to continue to raise awareness of the villages residents and visitors of the ecological values and biodiversity of the Currarong natural environment through organised workshops, guided walks and printed information

2. MAP 1 - CURRARONG VILLAGE BUSHCARE GROUP ACTION PLAN PRIORITY AREAS MAP (Sourced from the Currarong Bushland Weed Management Plan 2009)

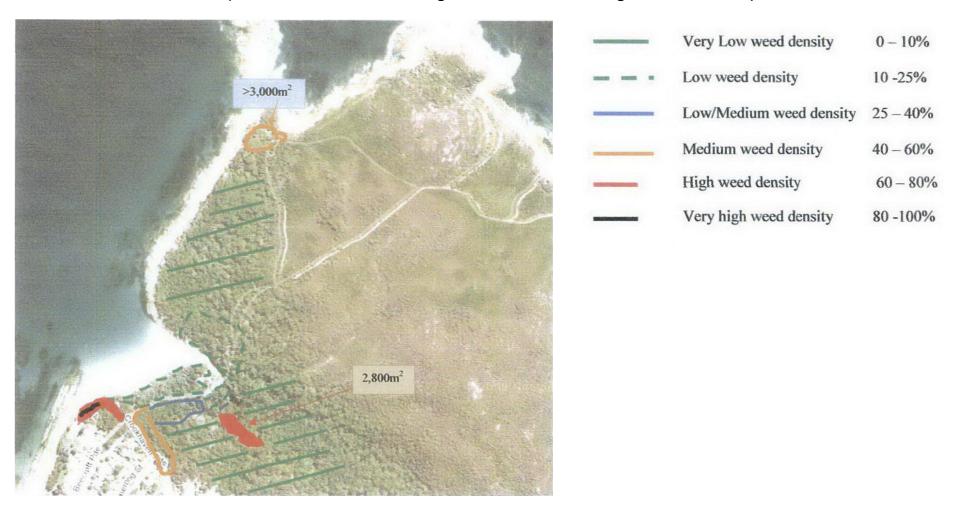


MAP 2 - CURRARONG VILLAGE BUSHCARE GROUP ACTION PLAN - PRIORITY 1 ZONES - PLUTUS CREEK AND CROWN LAND WESTERN END OF VILLAGE MAP (Sourced from the Currarong Bushland Weed Management Plan 2009)

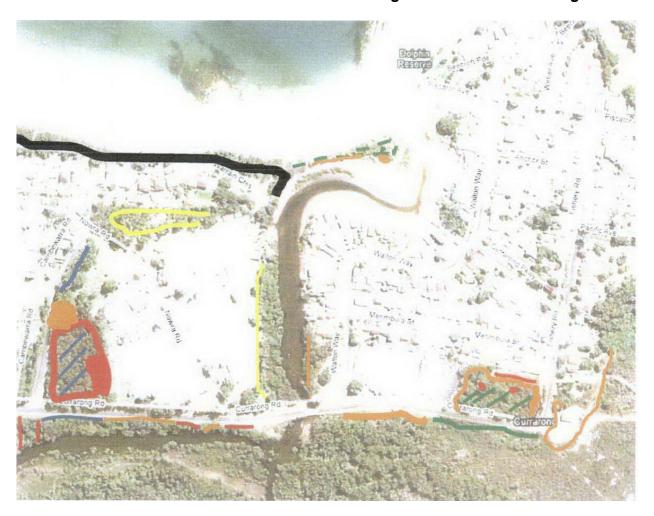


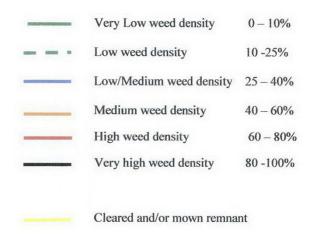


MAP 3 - CURRARONG VILLAGE BUSHCARE GROUP ACTION PLAN - PRIORITY 1 ZONES - ABRAHAMS BOSOM AND SS MERIMBULA WRECK MAP (Sourced from the Currarong Bushland Weed Management Plan 2009)



MAP 4 - CURRARONG VILLAGE BUSHCARE GROUP ACTION PLAN - PRIORITY 2 & 3 ZONES - CURRARONG TOURIST PARK, CROWN LAND SOUTH OF CURRARONG RD, WARRAIN BEACH AND RESERVE EAST OF BOWLING CLUB MAP (Sourced from the Currarong Bushland Weed Management Plan 2009)





3. BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc)	V	SWMS040
Chemical control (spraying of herbicides)	√	SWMS060
Planting	$\sqrt{}$	SWMS030
Minor construction (walking track, fencing, outdoor furniture)		
Propagation & seed collection	√	SWMS030
Education (school groups, field days etc)	√	
Other		

4. COUNCIL SUPPORT

- a. Technical advise and training
- b. Tools and equipment
- c. Grant application and management support
- d. Printing
- e. One Bushcare Support Trainer to assist the group on site for 4 hours per month
- f. Plants
- g. Herbicide

5. HAS A SITE HAZARD AND RISK ASSESSMENT BEEN COMPLETED FOR THE BUSHCARE SITE?

Yes

Attach a copy of the site/s risk assessment to the plan.

6. LIST THE PERSONAL PROTECTION EQUIPMENT REQUIRED FOR VOLUNTEERS WHILST WORKING ON THE SITE

PPE Equipment Required	Date issued
First Aid Kit	2010
Gloves	2010
Sunscreen	2010
Insect Repellent	2010

7. POSSIBLE FUTURE FUNDING

Project	Funding source
Swamp Sclerrophyll and Swamp Oak Forest Remnant adjacent to Currarong Tourist Park as per Currarong Natural Resource Management Plan	State or Aust Govt grant programs
Other areas as per the Currarong Village and Surrounding Reserves Bushland Weed Management Plan	Any source available

8. PLAN WILL BE REVIEWED EVERY THREE YEARS

23 October 2015

9. PLEASE LIST OTHER LOCAL OR REGIONAL MANAGEMENT PLANS OR STRATEGIES THAT THIS PLAN RELATES TO

Name of document	Year it was produced	Produced by
Currarong Natural Resource Management Strategy	2005	Shoalhaven City Council
Currarong Bushland Weed Management Strategy	2010	Shoalhaven City Council
Shoalhaven Foreshore Reserve Policy	2005	Shoalhaven City Council

10. SUGGESTED SPECIES PLANTING LIST FOR ABRAHAMS BOSOM AND CARAVAN PARK

OVERSTOREY TREES		
Botanical Common		
Acmena smithii	Lilly Pilli	
Casuarina glauca	Swamp Oak	
Corymbia gummifera	Bloodwood	
Eucalyptus botryoides	Bangalay Gum	

Eucalyptus robusta	Swamp Mahogany		
SHRUBS			
Botanical	Common		
Acacia longifolia spp longifolia	Sydney Golden Wattle		
Acacia longifolia spp sophorae	Coastal Wattle		
Elaeocarpus reticulatus	Blueberry Ash		
Brynia oblongifolia	Native Privet		
Omalanthus populifolius	Bleeding Heart		
Acacia filicifolia	Fan-leaved Wattle		
Rapanea variabilis	Rapanea		
UNDERSTOREY (grasses, herbs, climbers)			
Botanical	Common		
Carpobrotus glaucescens	Pigface		
Dianella spp.	Blue Flax Lilly		
Geitonosplesium cymosum	Scrambling Lily		
Gharnia clarkei	Sword Grass		
Isolepis nodosus	Club Rush		
Kennedia rubicunda	Dusky Coral Pea		
Lepidosperma laterale	N/A		
Lomandra longifolia	Matt Rush		
Oplismus spp.	Basket Grass		
Viola hederacea	Native Violet		
Westringia fruiticosa	Coastal Rosemary		
Hibbertia scandens	Native Guinea Flower		
Rubus parvifolius	Native Raspberry		
Smilax australis	Smilax		

11. BUSHCARE SITE SPECIES LIST

OVERSTOREY TREES		
Botanical	Common	
Acmena smithii	Lilly Pilli	
Anagophora floribunda	Rough Barked Apple Box	
Banksia integrifolia	Coastal Banksia	
Casuarina glauca	Swamp Oak	
Corymbia gummifera	Bloodwood	
Eucalyptus botryoides	Bangalay Gum	
Eucalyptus robusta	Swamp Mahogany	
Ficus rubiginosa	Port Jackson Fig	
Glochideon ferndinandi	Chees Tree	
Leptospermum leavigatum	Coastal Tea Tree	
Livistonia australis	Cabbage Palm	
Melaleuca stypheliodes	Prickly Paperbark	
Syzigium paniculatum	Magenta Lily Pily	

SHRUBS		
Botanical	Common	
Acacia filicifolia	Fan-leaved Wattle	
Acacia longifolia spp longifolia	Sydney Golden Wattle	
Acacia longifolia spp sophorae	Coastal Wattle	
Breynia oblongifolia	Native Privet	
Eleocarpus reticulatus	Blueberry Ash	
Omalanthus populifolius	Bleeding Heart	
Leucopogan parviflorus	Bearded Heath	
Melaleuca ericifolia	Swamp Paperbark	
Pittosporum revolutum	Rough Fruited Pittosporum	
Pittospourm undulatum	Sweet Daphnae	
Rapanea variabilis	Rapanea	

UNDERSTOREY (grasses, herbs, orchids)		
Botanical	Common	
Actites megalocarpa	Coastal Sowthistle	
Adiantum aethiopicum	Common Maidenhair Fern	
Aneilema acuminatum	N/A	
Carpobrotus glaucescens	Pigface	
Centella asiatica	Indian Pennywort	
Commelina cyanea	Scurvy Weed	
Cyperus imbecillis	N/A	
Cyperus spp	Rush	
Dianella spp.	Blue Flax Lilly	
Dichondra rapens	Kidney Weed	
Entolasia spp.	N/A	
Geitonosplesium cymosum	Scrambling Lily	
Gahnia clarkei	Sword Grass	
Imperata cylindrica	Blady Grass	
Isolepis nodosa	Club Rush	
Kennedia rubicunda	Dusky Coral Pea	
Lepidosperma laterale	N/A	
Lomandra longifolia	Matt Rush	
Oplismus spp.	Basket Grass	
Pseuderanthenum variable	Pastel Flower	
Pteridium escuentum	Bracken	
Restio tetraphyllus	Restio	
Ripogonum album	White Sapplejack	
Sigesbeckia arientalis	Indian Weed	
Solanum americianum	Glossy Nightshade	
Tetragonia tetragonoides	Warrigal Green	
Viola hederacea	Native Violet	
Westringia fruiticosa	Coastal Rosemary	

UNDERSTOREY (vines & climbers)

Botanical	Common
Calystegia marginate	Forest Bindweed
Cissus antarctica	Native Grape
Cissus hypoglauca	Water Vine
Eustrephus latifolius	Wombat Berry
Hibbertia scandens	Native Guinea Flower
Marsdenia rostrata	Milk Vine
Parsonsia straminea	Silkpod
Rubus parvifolius	Native Raspberry
Smilax australis	Smilax
Smilax glyciphylla	Native Sarsparilla
Stephania japonica	Snake Vine
Tylophora barbata	Tylophora Vine

12. SITE WEED LIST

Noxious	Environmental	Treatment/Control Method
Bitou Bush (Chrysanthemoides monolifera spp rotunda)		Cut and paint, hand pull
Blackberry (Rubus fruiticosus)		Scrape and paint or spot spray (see attached bush regeneration information fact sheet)
Bridal Creeper (Asparagus aspagiodes)		Crown out or spread biological control rust fungus (see attached bush regeneration information fact sheet)
Crofton Weed (Ageratina adenphora)		Hand pull, Spot spray (see attached bush regeneration information fact sheet)
	African Olive (Olea europaea subsp. Cripidata)	Cut and paint (see attached bush regeneration information fact sheet)
	Buffalo Grass (Stenotaphrum secundatum)	Spot spray with 1:200 ratio roundup/water in winter months
	Climbing Groundsel (Senncio tamoides)	Spot spray
	Coastal Morning Glory (<i>Ipomea</i> caricia)	Hand removal or spot spray (see attached bush regeneration information fact sheet)
	Coral Tree (<i>Erythrina x skyesii</i>)	Large trees should be drilled and injected unless they will cuase a public risk from falling dead limbs then they need total removal (see attached bush regeneration information fact sheet)

	Fishbone Fern (Nephrolepsis	Spot spray or hand removal
	cordifolia)	
	Ginger Lily	Hand dig and dispose of tubers
	(Hedycium	(see attached bush regeneration
	gardneriatum)	information fact sheet)
1	Ground Asparagus	Crown out or spot spray (see
	Fern (Asparagus	attached bush regeneration
	aethopicus)	information fact sheet)
1	Japanese	Scrape and paint (see attached
	Honeysuckle	bush regeneration information
	(Lonicera japonica)	fact sheet)
1	Kikuyu (<i>Pennisetum</i>	Spot spray with 1:200 ratio
	clandestinum)	roundup/water in winter months
	Mile a Minute	Hand removal or spot spray (see
	(Ipomea indica)	attached bush regeneration
		information fact sheet)
	Montbretia	Spot spray or hand removal (see
	(Crocosmia x	attached bush regeneration
	crocosmiiflora)	information fact sheet)
1	Moth Vine (<i>Araujia</i>	Hand pull (see attached bush
	sericifera)	regeneration information fact sheet)
	Mother of Millions	Hand removal and dispose of all
	(Bryophyllum	of plant material or spot spray
	delagoense)	· · · ·
	Paddy's Lucerne	Spot spray or hand removal (see
	(Sida rhombifolia)	attached bush regeneration
	•	information fact sheet)
	Panic Grass	Spot spray or hand removal (see
	(Ehrharta spp)	attached bush regeneration
		information fact sheet)
	Senna <i>(Senna</i>	Cut and paint or hand remove
	pendula spp)	(see attached bush regeneration
		information fact sheet)
	Turkey Rhubarb	Hand dig and dispose of tubers
	(Acetosa sagittata)	or spot spray Spot spray (see
		attached bush regeneration
		information fact sheet)
1	Wandering Jew	Spot spray of rake and roll (see
1	(Tradescantia	attached bush regeneration
	fluminesis)	information fact sheet)

Bushcare Group Name
Coordinator Name
Signature
Date//

Appendix 1 – National Trust bush regeneration fact sheet – hand removal of plants with underground growing parts

NATIONAL TRUST

BUSH REGENERATION INFORMATION SHEET

Control of Weeds with Underground Reproductive Structures cont..

HAND REMOVAL



NSW NATIONAL PARKS AND WILDLIFE SERVICE



Australian Association of Bush Regenerators

METHODS OF REMOVAL

REMOVAL OF PLANTS WITH BULBS, CORMS OR TUBERS

Examples: onion weed, watsonia, arrowhead vine, montbretia

Move leaf litter away from base of plant.

Dig down next to the stem until the bulb or tuber is reached.

Remove plant and carefully bag the bulb or tuber.

4 HERBICIDE TREATMENT - STEM SWIPING

Gently remove any seed or fruit and carefully place into a bag.

Using a herbicide applicator, swipe the stems/leaves.

STEM SWIPING

considerations

- Further digging may be required for plants with more than one tuber (e.g. arrow head vine).
- O Some bulbs (e.g. oxalis, onion weed) may have small bulbils attached or present in the soil around it. These need to be removed.
- O It may be quicker and more effective to dig out the weed.
- Make sure native plants and seedlings will not be affected.
- Learn and understand how the herbicide works - for bulb and corm species the most effective time is after flowering and before fruit is
- Have you addressed all safety issues?

Appendix 2 - National Trust bush regeneration fact sheet – hand removal of plants with underground growing parts (crowning)



BUSH REGENERATION INFORMATION SHEET

Control of Weeds with Underground Reproductive Structures

- Examples: Weeds with Tap roots catsear, dandelion
 - Rhizomes asparagus fern, ginger plant
 - Bulbs and corms oxalis, onion weed, watsonia, freesias, montbretia
 - Tubers madiera vine, arrow head vine



PARKS AND WILDLIFE SERVICE



Australian Association of Bush Regenerators

METHODS OF REMOVAL

• HAND REMOVAL OF PLANTS WITH A TAPROOT Examples: Paddy's lucerne, dandelion

Gently remove and bag seeds or fruit.

STEP 2 Push a narrow trowel or knife into the ground next to the taproot. Carefully loosen soil. Repeat this step around the taproot.

Grasp stem at ground level, rock plant back STEP 3 wards and forwards and pull gently.

STEP 4 Gently tap the roots to dislodge soil. Replace disturbed soil and lightly pat down.

2 CROWNING (Many grasses can be crowned) Example: asparagus fern

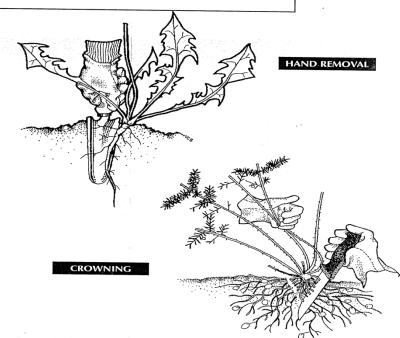
STEP 1 Gently remove and bag stems with seed or fruit. STEP 2

Grasp the leaves or stems together so that the base of the plant is visible.

STEP 3 Insert, at an angle, a knife or lever, close to the "crown".

STEP 4 Cut through all the roots around the crown.

Remove and bag the crown.



Appendix 3 - National Trust bush regeneration fact sheet - Control of Woody Weeds (Cut and Paint)



BUSH REGENERATION INFORMATION SHEET

Control of Woody Weeds

Examples of woody weeds include:

- lantana, bitou bush, cotoneaster, privet (cut and paint)
 camphor laurel, Mickey Mouse bush (ochna) and
- camphor laurel, Mickey Mouse bush (ochna) and cassia/senna (stem scrape)

NSW NATYONAL

NATIONAL PARKS AND WILDLIFE SERVICE



Australian Association of Bush Regenerators

METHODS OF REMOVAL

- CUT AND PAINT —Useful for small to medium sized woody weeds up to 10cm basal diameter
- STEP 1

STEP 2

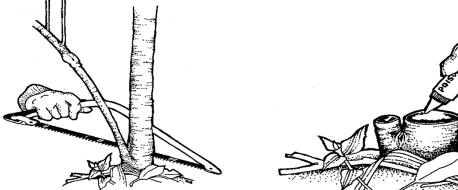
Make a horizontal cut as close to the ground as possible with secateurs, loppers or a bush saw.

Immediately apply herbicide to the exposed flat stump surface.

SAFETY CONSIDERATIONS

The following general precautions should be made when using herbicides:

- Read the label before opening the container and follow the instructions.
- Wear protective clothing as directed on the label.
- Wash hands after use and before eating or smoking.



considerations

- O Cuts should be horizontal to prevent herbicide from running off the stump. Sharp angle cuts are hazardous.
- Herbicide must be applied immediately before the plant cells close and translocation of herbicide ceases.
- If plants resprout, cut and paint the shoots after sufficient regrowth has occurred.
- Stem scraping can be more effective on some woody weeds.

Appendix 4 - National Trust bush regeneration fact sheet - Control of Vines and scramblers (scrape and paint)		





Control of Vines and Scramblers

Examples of vines include:

balloon vine, morning glory, honeysuckle, cape ivy, jasmine, madeira vine, blackberry

METHODS OF REMOVAL



STEP 2

STEP 3

STEP 1

STEP 2

STEP 1 Take hold of one runner and gently pull it along the ground towards you.

> Check points of resistance where fibrous roots grow from the nodes. Cut roots with a knife or dig out with a trowel and continue to follow the runner.

The major root systems need to be removed manually or scrape/cut and painted with herbicide.

STEP 4 Bag any reproductive parts.

2 STEM SCRAPING

With a knife, scrape 15 to 30 cm of the stem to reach the layer below the bark/outer layer.

Immediately apply herbicide along the length of the scrape.



HAND REMOVAL

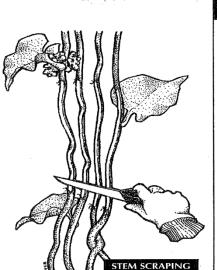
- A maximum of half the stem diameter should be scraped. Do not ring bark.
- \bigcirc Larger stems (>1cm) should have two scrapes opposite each other.
- Aerial tubers on madeira vine should die with the plant when stem scraping is used. Those that fall from the plant in the scraping process need to be bagged.
- Vines can be left hanging in trees after treatment.



NATIONAL PARKS AND WILDLIFE SERVICE



Australian Association of Bush Regenerators



Appendix 5 - National Trust bush regeneration fact sheet - Hand pulling weeds



BUSH REGENERATION INFORMATION SHEET

Control of Small Hand-pullable Plants

- To Control: Small soft weeds eg. fleabane, crofton weed, small grasses
 - Seedlings of any weeds including privet, lantana, moth vine



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STEP 3

STEP 4



METHODS OF REMOVAL

HAND REMOVAL (Minimal Disturbance)

STEP 1 Gently remove any seeds or fruits and carefully place into a bag.

STEP 2 Grasp stem at ground level.

> Rock plant backwards and forwards to loosen roots, and pull out gently.

Carefully tap the roots to dislodge any soil. Replace disturbed soil and pat down.



considerations

- Leave weeds so that roots do not make contact with soilleg. on a rock - a small amount of debris can be hung in a tree or removed from the site.
- Vary your body position to avoid fatigue when using hand removal continuously.



Regenerators