



NORTH HEAD - ULLADULLA BUSHCARE ACTION PLAN

CONTACT INFORMATION

Group Name:	North Head (Ulladulla) Bushcare Group
Reserve Name:	North Head
Reserve No:	SUL944
Land Tenure:	Crown Land – CC/Trust

1. BUSHCARE GROUP GOALS

The goals of the North Head Bushcare Group are as follows:

1. To maintain and improve the biodiversity of the North Head by undertaking bush regeneration activities
2. Monitor the effects fire regimes on the headland's heathland ecology
3. Improve local awareness and public interest in the headlands natural and cultural values and attract new volunteers to group
4. Keep the area clean and tidy

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

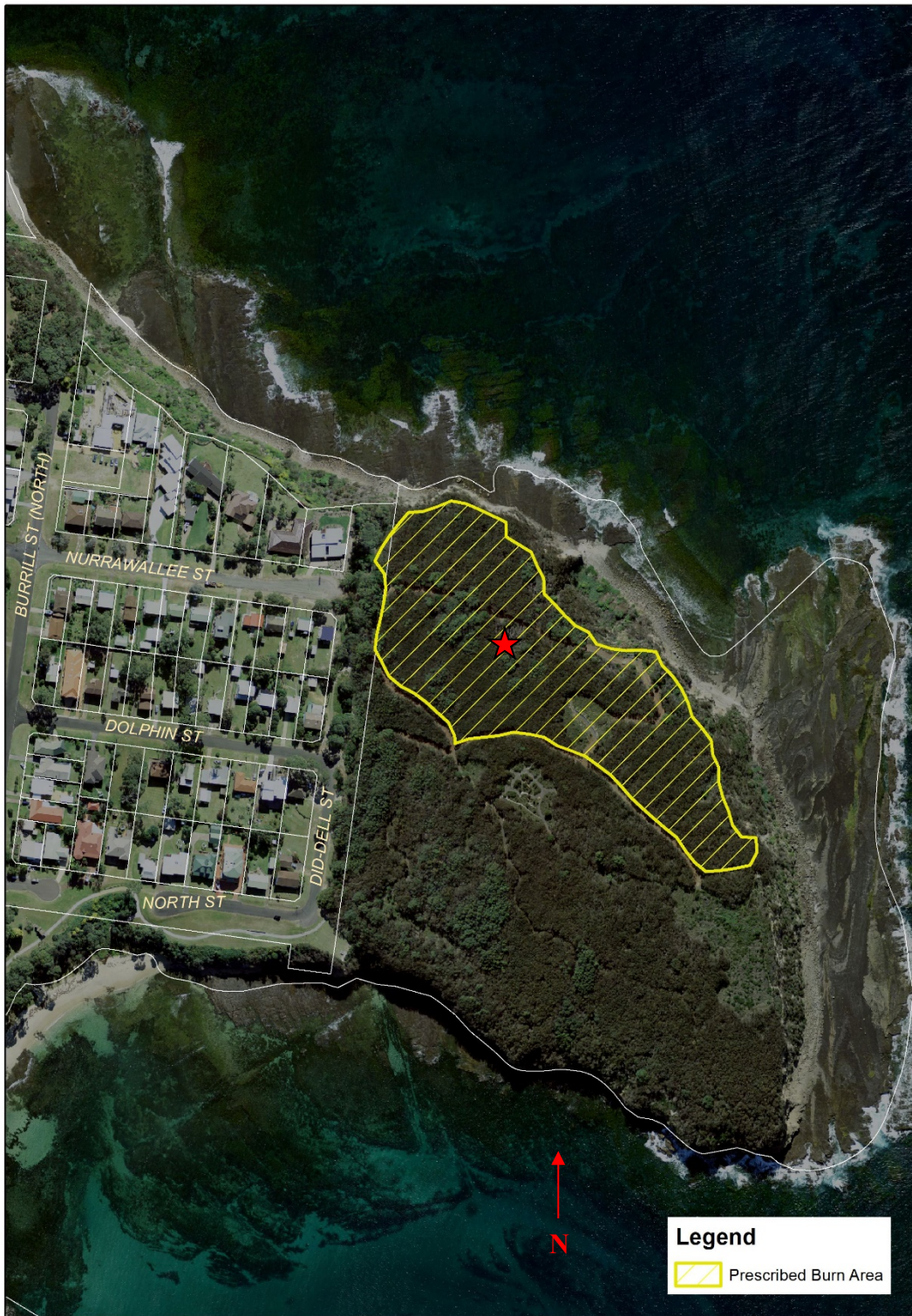
GROUP ACTION	PRIORITY	METHOD	TIME
BUSH REGENERATION/WEED CONTROL AND VEGETATION MONITORING			
<p>1. Area 1 – Prescribed Burn Area - Actions</p> <p>a. Spot spray or hand remove annual weeds, on the walking track edges, open areas and slashed fire break, prioritising the following species:</p> <ul style="list-style-type: none"> i. Parramatta Grass ii. Fleabane iii. Whiskey grass iv. Scotch and Sow Thistle v. Paspalum vi. Purple Top <p>b. Hand removal, spray and cut or scrape and paint perennial weeds targeting the following species:</p> <ul style="list-style-type: none"> i. Lantana ii. Ink Weed iii. Montbretia iv. Turkey Rhubarb v. Ink Weed 	M	<p>a. Spot spraying all annual weeds to be done using rate of 1% of glyphosate (roundup). Annual weeds that are hand removed should be left on site unless they are seeding (See attached Bush Regeneration Info Sheet)</p> <p>b. Undertake the following control methods for the weed species :</p> <ul style="list-style-type: none"> i. Hand pull small Lantana, Ink Weed, Montbretia or cut and paint larger Ink Weed plants, (See attached Bush Regeneration Info Sheets – Control of Woody Weeds) 	<p>Spraying in Spring/Summer & On going</p> <p>All year</p>

GROUP ACTION	PRIORITY	METHOD	TIME
<p>vi. Blackberry</p> <p>c. Council and Bushcare group to undertake monitoring of the vegetation within the burnt area of the headland, to determine if the presence of Allocasuarina spp are reducing the diversity of the regenerating native heathland species</p> <p>d. Support of any future proposal to undertake prescribed burns by SCC on North Head</p> <p>e. Support for cooperative research project between SCC, University of Wollongong and North Head into effects of fires and what fire regimes are required to improve the biodiversity of the North Head heathland vegetation</p>	<p>M</p> <p>M</p>	<p>ii. Scrape and paint small Blackberry plants, larger plants report to Council</p> <p>Council Bushcare Coordinator to assist the Bushcare Group with training in establishment and monitoring techniques using the following methods:</p> <p>i. Set up of 2 x 4mx 4m plots (control plot and a active plot)</p> <p>ii. GPS plots Using vegetation condition monitoring sheets to measure vegetation cover and abundance</p>	<p>On going</p> <p>On going</p> <p>Summer</p>

GROUP ACTION	PRIORITY	METHOD	TIME
<p>2. Area 2 - Unburnt Area (including car park planted area) – Actions</p> <p>a. Spot spray and hand control of annual weeds as per Area 1, including the following species:</p> <ul style="list-style-type: none"> i. Blackberry Nightshade ii. Wild Aster iii. Winter Grass iv. Dandelion v. Plantain vi. Kikuyu Grass <p>b. Control of Formosan Lily along track edges using cut and drip method</p> <p>c. Control of other perennial weeds as per Area 1</p> <p>d. Undertake additional and replacement planting in and around the reserve entrance car-park as required</p>	<p style="text-align: center;">M</p> <p style="text-align: center;">H</p> <p style="text-align: center;">M</p> <p style="text-align: center;">L</p>	<p>a. Spot spraying all annual weeds to be done using rate of 1% of glyphosate (roundup). Annual weeds that are hand removed should be left on site unless they are seeding (See attached Bush Regeneration Info Sheet).</p> <p>b. Cut base of plant and drip neat glyphosate onto stem</p> <p>c. As per Area 1</p> <p>d. Use attached species list for plant selection</p>	<p>As required</p>
WALKING TRACK			
<p>1. Bushcare Group to prune back hazardous overhanging branches or smaller fallen debris that is restricting access.</p>	M	<p>Only prune back vegetation debris to no more than 200mm from track edge</p>	<p>Prune up to 50mm in diameter</p>

GROUP ACTION	PRIORITY	METHOD	TIME
Report larger fallen debris to Council Bushcare Coordinator			
PUBLIC AWARENESS AND RECRUITMENT OF VOLUNTEERS			
<ul style="list-style-type: none"> a. Continued encouragement and recruitment of volunteers b. Working with Ulladulla Tourism Chamber and others to promote the walking track c. Installation of Bushcare Group sign at the entrance car park 	M	<ul style="list-style-type: none"> a. Word of mouth and local press releases and recruitment through other means b. Seek support from Ulladulla Tourism Chamber c. Council to install Bushcare Group sign at One Track for All entrance 	2011 -13
d. Undertake regular clean ups of rubbish throughout headland as required	M	d. Bushcare to undertake clean up with bags, gloves, tongs and sharps container provided by Council (Do not remove asbestos)	On Going

3. NORTH HEAD – ULLADULLA BUSHCARE GROUP ACTION PLAN MAP



Map Key
Monitoring Plots/Photo Points ★

4. BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc)	√	SWMS NR060
Chemical control (spraying of herbicides)	√	SWMS NR040
Planting	√	SWMSNR030
Minor construction (walking track, fencing, outdoor furniture)		
Propagation & seed collection		
Education (school groups, field days etc)		
Other		

5. COUNCIL SUPPORT

- a) Install "Bushcare Group working on this reserve" sign
- b) Technical advise and training
- c) Tools and equipment
- d) Grant application and management support
- e) Printing
- f) One Bushcare Support Trainer to assist the group on site for 4 hours per month
- g) Plants
- h) Herbicide

6. 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.

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

PPE Equipment Required	Date issued
First Aid Kit	2011
Gloves	2011
Sunscreen	2011

8. POSSIBLE FUTURE FUNDING

Project	Funding source
Further expansion of the previous ecological burn and research into result and fire regimes for heathland	Shoalhaven City Council, UOW, RFS and NSW Fire Service

9. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

23 October 2015

The group should review a summary of the Bushcare Policy & Procedures at the time of each annual review

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

Name of document	Year it was produced	Produced by
Generic Community Land Plan of Management - Natural Areas	2001	SCC
Foreshore Reserves Policy	2005	SCC

11. BUSHCARE SITE SPECIES LIST

OVERSTOREY TREES	
Botanical	Common
<i>Allocasuarina distyla</i>	She-oak
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Allocasuarina paludosa</i>	She-oak
<i>Banksia integrifolia</i> ssp. <i>integrifolia</i>	Coastal Banksia
<i>Corymbia gummifera</i>	Bloodwood
<i>Eucalyptus botryoides</i>	Bangalay
<i>Eucalyptus consideriana</i>	Yertchuk
<i>Eucalyptus imitans</i>	Illawarra stringybark

SHRUBS	
Botanical	Common
<i>Acacia longifolia</i> var. <i>longifolia</i>	Sydney Golden Wattle
<i>Acacia longifolia</i> var. <i>sophorae</i>	Coastal Wattle
<i>Acacia mearnsii</i>	Black Wattle
<i>Acacia myrtifolia</i>	Myrtle Wattle
<i>Acacia saligna</i>	Golden Wreath Wattle
<i>Acacia suaveolens</i>	Sweet-scented Wattle
<i>Acacia ulicifolia</i>	Prickly Moses or Juniper Wattle
<i>Baeckea imbricata</i>	Coastal Baeckea
<i>Banksia ericifolia</i> ssp. <i>ericifolia</i>	Heath-leaved Banksia
<i>Boronia polygalifolia</i>	Dwarf Boronia
<i>Bossiaea prostrata</i>	Coastal Banksia
<i>Bossiaea scolopendria</i>	Plank Plant
<i>Breynia oblongifolia</i>	Hairpin Banksia
<i>Dampiera stricta</i>	Blue Dampiera
<i>Desmodium rhytidophyllum</i>	Hairy Trefoil
<i>Dillwynia retorta</i> ssp. <i>retorta</i>	Heathy Parrot Pea
<i>Dodonaea triquetra</i>	Common Hop Bush
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Goodenia heterophylla</i> ssp. <i>eglandulosa</i>	Hop-Goodenia
<i>Goodenia ovata</i>	Star-haired Goodenia
<i>Goodenia stelligera</i>	Broad-leaved Hakea
<i>Hakea dactyloides</i>	Bushy Needlebush
<i>Hakea sericea</i>	Dagger Hakea
<i>Lambertia formosa</i>	Woolly Tea-tree
<i>Leptospermum grandifolium</i>	Prickly Tea-tree
<i>Leptospermum juniperinum</i>	Coastal Tea-tree
<i>Leptospermum laevigatum</i>	Tea-tree
<i>Leptospermum squarrosum</i>	Coastal Bearded Heath
<i>Leucopogon parviflorus</i>	Lobelia
<i>Lobelia alata</i>	Holly Lomatia

<i>Lomatia ilicifolia</i>	Giant or Bracelet Honeymyrtle
<i>Melaleuca armillaris</i> ssp. <i>armillaris</i>	Hillock Bush
<i>Melaleuca hypericifolia</i>	Hillock Bush
<i>Micrantheum eridoides</i>	Purple Mirbelia
<i>Mirbelia speciosa</i> ssp. <i>speciosa</i>	Woolly Tea-tree
<i>Parsonsia straminea</i>	Smooth Geebung or Wide-leaf Geebung
<i>Persoonia levis</i>	Smooth Geebung or Wide-leaf Geebung
<i>Persoonia mollis</i> ssp. <i>caleyi</i>	Geebung
<i>Petrophile sessilis</i>	Conesticks
<i>Phyllanthus hirtellus</i>	Thyme Spurge
<i>Pimelea linifolia</i> ssp. <i>linifolia</i>	Rice Flower
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Pultenaea daphnoides</i>	Large-leafed Bush Pea
<i>Pultenaea flexilis</i>	Graceful Bush-Pea
<i>Pultenaea linophylla</i>	Small-leafed Bush Pea
<i>Westringia fruticosa</i>	Coast Rosemary
<i>Zieria smithii</i>	Sandfly Zieria

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Actinotus helianthi</i>	Flannel Flower
<i>Actinotus minor</i>	Lesser Flannel Flower
<i>Adiantum aethiopicum</i>	Common Maidenhair Fern
<i>Adiantum aethiopicum</i>	Fishbone Water Fern
<i>Anisopogon avenaceus</i>	Oat Speargrass
<i>Aristida vagans</i>	Three-awned Speargrass
<i>Baloskian gracile</i>	Cord-rush
<i>Blandfordia nobilis</i>	Christmas Bells
<i>Blechnum nudum</i>	Fishbone Water Fern
<i>Brunoniella pumilio</i>	Dwarf Trumpet
<i>Burchardia umbellata</i>	Milkmaids
<i>Calochilus campestris</i>	Copper Beard Orchid
<i>Caustis recurvata</i> var. <i>recurvata</i>	N/A
<i>Comesperma sphaerocarpum</i>	Fairies' Wings
<i>Commelina cyanea</i>	Creeping Christian or Scurvy Weed
<i>Convolvulus erubescens</i>	Blushing Bindweed
<i>Cryptostylis erecta</i>	Hooded Orchid
<i>Cryptostylis subulata</i>	Large Tongue Orchid or Duck Orchid
<i>Cyathea cunninghamii</i>	Slender Tree Fern
<i>Cymbidium suave</i>	Snake Flower or Tree Orchid
<i>Dianella caerulea</i> var. <i>caerulea</i>	Blue Flax Lily
<i>Dianella caerulea</i> var. <i>producta</i>	Blue Flax Lily
<i>Dipodium variegatum</i>	Hyacinth Orchid
<i>Diuris aurea</i>	Golden Donkeytail Orchid
<i>Drosera peltata</i>	Sundew

<i>Drosera spathulata</i>	Common Sundew or Rosy Sundew
<i>Epacris microphylla</i> var. <i>microphylla</i>	Coral Heath
<i>Gahnia radula</i>	Saw Sedge or Sword Grass
<i>Gahnia sieberana</i>	Saw Sedge
<i>Gleichenia dicarpa</i>	Pouched Coral Fern
<i>Glossodia minor</i>	Waxlips
<i>Glycine clandestina</i>	Love Creeper or Twinning Glycine
<i>Glycine microphylla</i>	Love Creeper
<i>Helichrysum collinum</i>	Yellow Everlastings or Paper-daisies
<i>Hibbertia cistiflora</i> ssp. <i>cistiflora</i>	
<i>Hibbertia empetrifolia</i> ssp. <i>empetrifolia</i>	Trailing Guinea Flower
<i>Hybanthus vernonii</i> ssp. <i>vernonii</i>	Spade Flowers, Ladies Slipper, or Slender Violet
<i>Hypoxis hygrometrica</i> ssp. <i>hygrometrica</i>	Yellow Stars
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
<i>Juncus planifolius</i>	Broad-leaf Rush
<i>Lagenifera stipitata</i>	Druce
<i>Lepidosperma laterale</i>	Sword-sedge
<i>Lepyrodia scariosa</i>	Scale Rush
<i>Lindsaea linearis</i>	Screw Fern
<i>Lomandra brevis</i>	Tufted Matt Rush
<i>Lomandra filiformis</i> ssp. <i>coriacea</i>	Wattle Matt Rush
<i>Lomandra glauca</i> ssp. <i>glauca</i>	Pale Matt Rush
<i>Lomandra longifolia</i>	Matt Rush
<i>Lomandra multiflora</i> ssp. <i>multiflora</i>	Many Flowered Matt Rush
<i>Lomandra obliqua</i>	Fish Bones
<i>Lycopodiella cernua</i>	Cliff Clubmoss
<i>Lyperanthus suaveolens</i>	Brown Beaks
<i>Microtus parviflora</i>	Slender Onion Orchid
<i>Mitrasacme polymorpha</i>	Mitrewort
<i>Notodanthonia longifolia</i>	Wallaby Grass
<i>Olearia viscidula</i>	Daisy Bush
<i>Olearia viscidula</i>	Daisy Bush
<i>Opercularia aspera</i>	Thin Stink Weed
<i>Opercularia varia</i>	Stinkweed
<i>Orthoceras strictum</i>	Bird's Mouth Orchid or Horned Orchid
<i>Oxalis rubens</i>	N/A
<i>Ozothamnus diosmifolium</i>	Everlasting or Paper Daisy
<i>Panicum simile</i>	Two Colour Panic
<i>Parsonsia straminea</i>	Monkey Rope or Common Silkpod
<i>Patersonia sericea</i>	Short Purple Flag
<i>Plantago debilis</i>	Slender Plantain
<i>Polymeria calycina</i>	Swamp Bindweed
<i>Prasophyllum flavum</i>	Yellow Leek Orchid
<i>Pratia purpurascens</i>	White Root
<i>Pteridium esculentum</i>	Bracken
<i>Ptilothrix deusta</i>	Sedge

<i>Ranunculus lappaceus</i> var. <i>lappaceus</i>	Rough Groundsel
<i>Schizaea bifida</i>	Forked Comb Fern
<i>Selaginella uliginosa</i>	Common Maidenhair Fern
<i>Senecio hispidulus</i> var. <i>dissectus</i>	Rough Groundsel
<i>Smilax glycyphylla</i>	Native Sarsaparilla
<i>Solanum pungetium</i>	Eastern Nightshade
<i>Sowerbaea juncea</i>	Vanilla Lily
<i>Sphaerolobium vimineum</i>	Leafless Globe-pea
<i>Spiranthes sinensis</i>	Austral Ladies Tresses
<i>Stackhousia nuda</i>	N/A
<i>Stackhousia viminea</i>	Grass Trigger Plant
<i>Stylidium graminifolium</i>	Rough Groundsel
<i>Thelionema caespitosa</i>	Tufted Blue Lily
<i>Thelionema umbellata</i>	N/A
<i>Thelymitra carnea</i>	Pink Sun Orchid
<i>Thelymitra ixioides</i>	Spotted or Blue Sun Orchids
<i>Themeda australis</i>	Kangaroo Grass
<i>Thysanotus tuberosus</i>	Fringe Lily
<i>Veronica plebeia</i>	Speedwell
<i>Viola hederacea</i>	Native Violet
<i>Viola sieberana</i>	Tiny Violet

UNDERSTOREY (vines & climbers)	
Botanical	Common
<i>Hibbertia scandens</i>	Golden Guinea Flower
<i>Kennedia prostrata</i>	Running Postman
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Billardiera scandens</i> var. <i>scandens</i>	Apple Berry or Dumplings
<i>Parsonsia straminea</i>	Monkey Rope Vine

12. SITE WEED LIST

Noxious	Environmental
	Blackberry nightshade (<i>Solanum nigrum</i>)
	Dandelion (<i>Taraxacum sp</i>)
	Fleabane (<i>Conzea bonearensis</i>)
	Formosan Lily (<i>Lillium formosanum</i>)
	Ink Weed (<i>Phytolacca octandra</i>)
	Paramatta grass (<i>Sporobolus africanus</i>)
	Paspalum (<i>Paspalum dilatam</i>)
	Purple Top (<i>Verbena litoralis</i>)
	Scotch thistle (<i>Onopordum acanthium</i>)
	Sow Thistle (<i>Sonchus oleraceus</i>)
	Turkey Rhubarb (<i>Acetosa sagitata</i>)
	Whiskey Grass (<i>Andropogon virginicus</i>)
	Wild Aster (<i>Symphyotrichum subulatum</i>)
	Winter Grass (<i>Poa annua</i>)
Blackberry (<i>Rubus fruticosus</i>)	
Lantana (<i>Lantana camara</i>)	

Bushcare Group Name North Head - Ulladulla

Coordinator Name Peter Loyd

Signature

Date/...../.....

Attachments – Bush Regeneration Information Sheets (National Trust)

1. *Control of Weeds with Underground Reproduction Structures,*
2. *Control of Vines and Scramblers*
3. *Control of Small Hand – Pullable Plants,*
4. *Control of Woody Weeds*

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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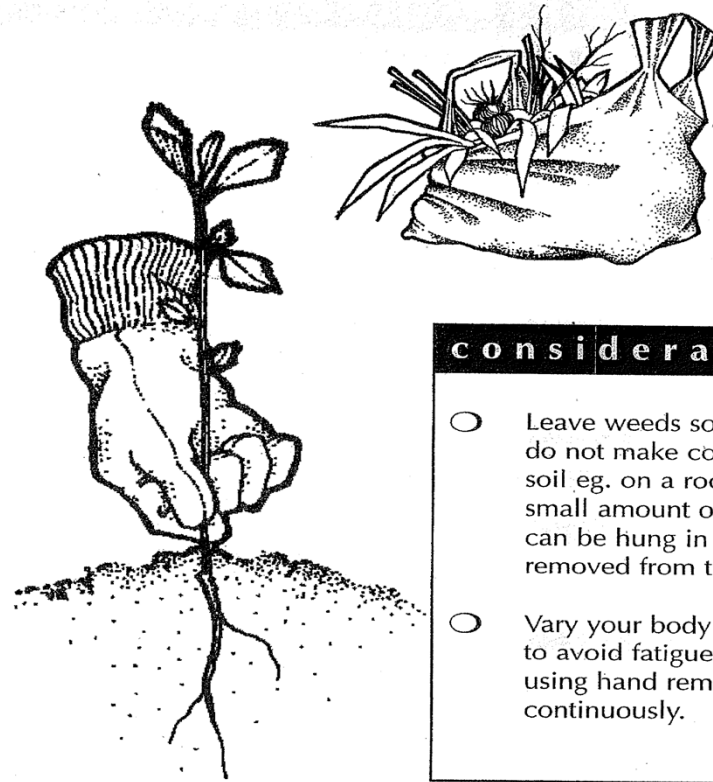


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METHODS OF REMOVAL

① 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.
- STEP 3:** Rock plant backwards and forwards to loosen roots, and pull out gently.
- STEP 4:** 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 soil eg. 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.



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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

METHODS OF REMOVAL

1 HAND REMOVAL OF PLANTS WITH A TAPROOT

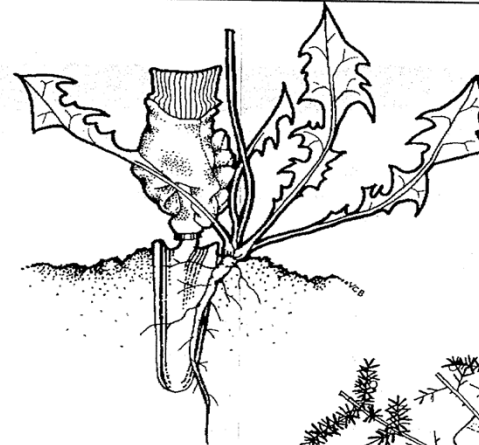
Examples: Paddy's lucerne, dandelion

- STEP 1** 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.
- STEP 3** Grasp stem at ground level, rock plant back 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.
- STEP 5** Remove and bag the crown.



HAND REMOVAL



CROWNING

Control of Woody Weeds

Examples of woody weeds include:

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

METHODS OF REMOVAL

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

- STEP 1** Make a horizontal cut as close to the ground as possible with secateurs, loppers or a bush saw.
- STEP 2** Immediately apply herbicide to the exposed flat stump surface.

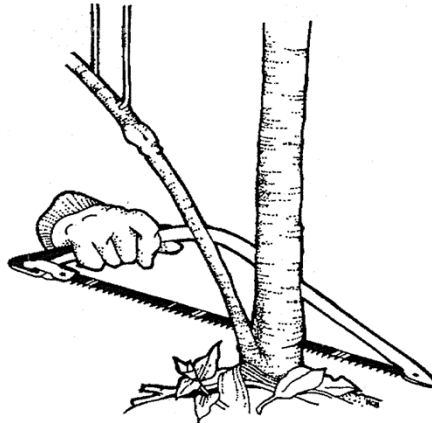
SAFETY CONSIDERATIONS

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

- 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.



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Control of Vines and Scramblers

Examples of vines include: ● balloon vine, morning glory, honeysuckle, cape ivy, jasmine, madeira vine, blackberry

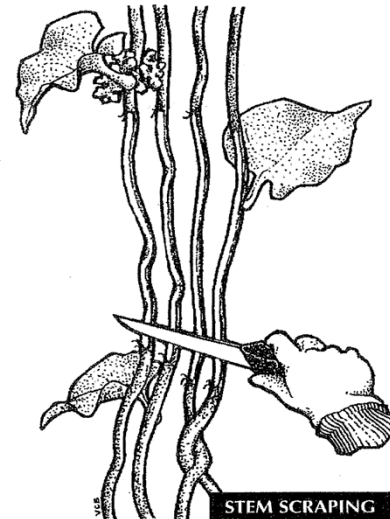
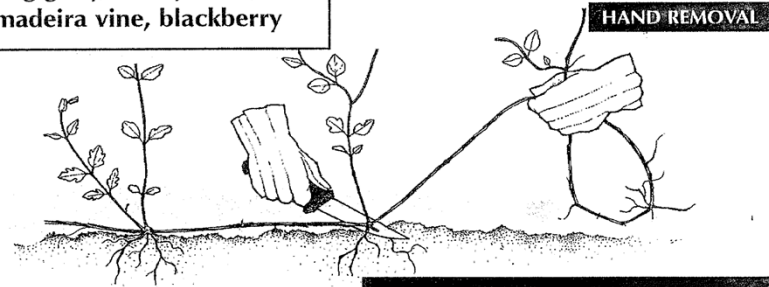
METHODS OF REMOVAL

1 HAND REMOVAL

- STEP 1** Take hold of one runner and gently pull it along the ground towards you.
- STEP 2** 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.
- STEP 3** 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

- STEP 1** With a knife, scrape 15 to 30 cm of the stem to reach the layer below the bark/outer layer.
- STEP 2** Immediately apply herbicide along the length of the scrape.



considerations

- A maximum of half the stem diameter should be scraped. Do not ring bark.
- 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.



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Map – Location of monitoring sites

