



KINGS POINT BUSHCARE ACTION PLAN

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CONTACT INFORMATION

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Reserve Name:	N/A
Reserve No:	SKP860 & SKP859
Land Tenure:	Shoalhaven City Council
Comm. Land Type:	Natural Areas & Park

1. BUSHCARE GROUP GOALS

The Kings Point Bushcare Group's aim is to restore and rehabilitate the natural areas surrounding the village of Kings Point. This will be achieved by working in areas of healthy native vegetation with minimal disturbance and gradually working towards more degraded areas of remnant native, thus letting the regeneration native vegetation dictate the rate of progress.

The Group would also like to foster a cohesive and cooperative approach to the management of natural areas amongst the residents of the Kings Point Village as well as help increase awareness of the bushland areas by providing sound scientific information on managing the local flora and fauna.

Bushcare Group to erect temporary signage (as per attached in appendix 2) when working on site

1. 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 ACTIONS	PRIORITY	METHOD	TIME
NOTE: The zones are laid out in the plan in order of priority i.e. with 1A being the highest priority down to zone 5 being the lowest priority			
ZONE 1A (see attached map)			
<p>Zone 1A is on the southern side of the headland at the end of James Cr. It is situated on an elevated rock shelf and is dominated by tall open Spotted Gum forest. The understory has scattered infestations of environmental weeds including Winter Senna, Ground Asparagus Fern, Tradescantia and some Buffalo Grass. The sewage pumping station has a denser infestation of these weeds due to the disturbance associated with its construction. The Actions for area 1A are as follows:</p> <p>Bushcare Actions:</p> <ol style="list-style-type: none"> 1. Cut and paint or hand removal of Winter Senna 2. Crowning of Asparagus Fern 3. Manual control of Fishbone Fern and Montbretia 4. Spot spray isolated infestations of Panic Velt Grass and Buffalo grass with low rates of Glyphosate 5. Snip and drip the Formosan Lilies 	H1	<ul style="list-style-type: none"> • Cut stumps as close to ground level as possible and dab on solution of 50/50 Glyphosate/water as quickly as possible. Larger plants should be stacked as close to the road as possible for pick up or small plants can be left to mulch on site. <p>For crowning of Asparagus Fern see attached information sheet "Control of weeds with underground reproductive structures"</p> <ul style="list-style-type: none"> • Dig out rhizomes of Fishbone Fern and Montbretia and remove 	<p>Spring/ Summer & on-going</p> <p>All year</p>

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p>6. Rake and roll Tradescantia (Wandering Jew) and remove from site</p> <p>7. Erect temporary Bushcare signage (as per app. 1)</p> <p>Council Actions:</p> <p>8. Spot spray out Buffalo Grass to encourage regeneration of native grasses, herbs and forbs.</p>		<p>from site.</p> <ul style="list-style-type: none"> • Spot spray <i>Ehrharta erecta</i> & Buffalo grass with ½ to 1% glyphosate using hand held spray applicators. • Cut stems of Formosan Lilies and drip on neat Glyphosate onto cut stem. • Using rake roll up beds of Trad and place in a bag or tarpaulin to remove. • Council to spot spray exotic grasses. 	<p>Winter</p> <p>All year</p> <p>Cooler months</p> <p>All year</p>
ZONE 1B			
<p>Zone 1B is situated on a lower shelf adjacent to zone 1A, the vegetation is effected more by saline lake level rises and falls. The over story is dominated by <i>Casuarina glauca</i> (Swamp Oak) with scattered macrophyte and salt marsh species around the edges. Large areas of this area have been infested with Buffalo grass which dominates the ground covers in a large percentage of the area. The actions for this area are as follows:</p> <p>Actions</p> <p>1. Clump planting in sprayed areas using ground covers species from the plans suggested planting list for zones</p>	H2	<ul style="list-style-type: none"> • Bushcare to replant 	

GROUP ACTIONS	PRIORITY	METHOD	TIME
1A, 1B, & 2 2. Spot spray Buffalo grass on the edges of areas where it is actively invading good quality native vegetation 3. Monitor for new or other weed infestations.		sprayed areas. <ul style="list-style-type: none"> • Spot spray Buffalo edge with 1% dilution rate of Glyphosate. • Bushcare group to monitor for new weeds. 	Autumn – Spring Winter All Year
ZONE 2			
<p><i>Zone 2 is situated on the western perimeter of the headland. This area takes up the majority of the natural area foreshore. The area is a long linear reserve comprised mainly of shallow soils with rocky outcrops of sandstone. This area has many private properties backing onto the reserve, many of which has extended their gardens and have encroachments on the reserve. The over story forest is dominated by Spotted Gum (Corymbia maculata), Grey Ironbark (Eucalyptus paniculata spp paniculata and Bloodwood (Corymbia gummifera) with mid and understory species associated with open tall eucalypt present. There are dense infestations of weeds in this area with the dominant weed species being Mother of Millions (Bryophyllum delagoense), Asparagus Fern (Asparagus athiopicus), Formosan Lily (Lilium Formosan, (Nephrolepis cordifolia) Fishbone Fern, (Epidendrum ibaguenseCrucifix Orchi, (Thunbergia alata) Black Eyed Susan, Ochna serralata (Micky Mouse Plant, (Hedychium</i></p>	H3	When work is undertaken in this area, direct contact should be made with the adjoining residents to inform them. The priority of methods. Work should be prioritised on areas where there is least amount of weeds and avoid areas where there is a large amount of garden escapee weeds spilling down from the back of residents properties. The following methods should be used:	

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p><i>gardnerianum</i>) Kahili Lily and Japanese Honeysuckle (<i>Lonicera japonica</i>). These occur in various abundance and densities across Zone 2, many of these weeds are located in steep rocky areas. The priority of actions for Zone 2 should be as follows:</p> <p>NOTE: Weed control should only be undertaken in areas of the reserve that have not been highly degraded by clearing and planting out of garden escapee weeds. Council staff to map weed infestation on the reserve to better determine the no work areas</p> <p>Council Actions:</p> <ol style="list-style-type: none"> 1. Spraying of the Ground Asparagus Fern, Mother of Millions and Japanese Honeysuckle infestations, some of the larger plants can be hand removed. <p>Bushcare Actions</p> <ol style="list-style-type: none"> 2. Crowning out of smaller infestations of Asparagus Fern (<i>Asparagus ethiopicus</i>) and the larger infestations can be sprayed. 3. Spraying of Japanese Honeysuckle (<i>Lonicera japonica</i>) or hand removal of smaller infestations. 		<ul style="list-style-type: none"> • Council to spray larger infestations of Mother of Millions in areas that are too hazardous for volunteers. • Bushcare group to hand remove smaller infestations of Mother of Millions. • Crown out isolated Asparagus Fern (refer to bush regeneration information sheets). • Council to spray larger areas of Asparagus fern. • Bushcare group to spot spray Honeysuckle using Glyphosate at 1% ratio. • Cut and paint Micky Mouse plant with 1:3 ratio of glyphosate:water NOTE: 	<p>Winter</p> <p>All year</p> <p>All year</p> <p>Spring - Summer</p> <p>Spring – Summer</p> <p>All year</p>

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p>4. Cut and drip Formosan Lilies (<i>Lilium formosanum</i>).</p> <p>5. Cut and paint Micky Mouse Plants</p> <p>6. Stem scrape re-growth Japanese Honeysuckle patches following spraying</p> <p>7. Consult with the adjoining landholders via the distribution of this plan and other material on minimising impacts on bushland reserves. This will be undertaken prior to implementing the actions in the Bushcare Plan</p>		<p>never hand pull plants as they have a long tap root.</p> <ul style="list-style-type: none"> • Stem scrape Honeysuckle with 1:3 ratio of glyphosate:water. • Cut the stem off the Lilies and drip neat Glyphosate onto the cut stem. Bag any seeds. • Prior to work letter box all residents along western side of James Cr. To invite them to participate along with environmental education material and the contact of the Kings Pt Bushcare Group and the Shoalhaven Bushcare Coordinator. 	<p>All Year</p> <p>All year</p> <p>Prior to work</p>
ZONE 3			
<p><i>Zone 3 is located on the North – Western side of the Kings Point peninsula, it is an area of foreshore reserve that runs from the James Crescent dirt boat ramp in the West along the foreshore area to the sewage pumping</i></p>			

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p><i>station at the rear of house number 60 James Crescent (see plan map). The reserve in this zone contains remnant salt marsh vegetation due to lower elevation of the land. It also contains remnant Swamp Oak trees which indicate that the area did contain Swamp Oak Forest complex. Both these vegetation types are classified as Ecologically Endangered Communities under the NSW Threatened Species Conservation Act 1995. These vegetation remnants are currently highly degraded due to past clearing and the on-going mowing/slashing practices by residents whose properties adjoin the reserve (see attached maps and photos)</i></p> <p>Zone 3 Actions:</p> <ol style="list-style-type: none"> 1. Bushcare Group to assist Council in making contact with the owners of the residential properties that back onto the reserve to negotiate the removal of mowing/slashing of some areas of the salt marsh vegetation as has been done at Harold St Reserve. This insures that Council, as the land owner is complying with Part 7 – Division 4 of the NSW Fisheries Management Act 1994 which makes it an offense to harm, damage or remove marine vegetation, which includes Salt Marsh vegetation. <ol style="list-style-type: none"> a. Organise a letter box drop to residents to make them aware of the laws relating to the harm of Salt Marsh under the act and invite them to an on-site 		<ol style="list-style-type: none"> 1. Council to prepare letter for distribution to residents. <ol style="list-style-type: none"> a) Council to write to adjoining residents. b) Organise on-site 	<ol style="list-style-type: none"> 1. 2015 and onwards

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p>meeting to discuss the future management of the vegetation on the reserve.</p> <p>b. Negotiate with residents which areas of the reserve are to be protected from further mowing and which areas are to be allowed continual slashing/mowing to allow some open space and natural areas to coexist.</p> <p>c. Prepare a detailed plan of these areas showing areas of salt marsh that will continue to be mown and areas for protection, which will be submitted to NSW Fisheries for approval under the NSW Fisheries Management Act 1994.</p> <p>d. Install bollards on the reserve to indicate protected areas/mowing areas.</p> <p>e. Removal of hand launching boats from salt-marsh foreshore vegetation areas and relocate onto open grass areas to reduce impacts on salt marsh</p>		<p>meeting with Council staff, Bushcare volunteers, residents and NSW DPI Staff.</p> <p>c) Council staff to have areas surveyed and submit to NSW Fisheries submit plan Council for formal adoption</p> <p>d) Council install bollards as per agreed areas in plan.</p> <p>e) Council Ranger Services to attempt manage dinghy removal or relocation.</p>	
ZONE 4			
<p><i>Zone 4 is located on low lying land on the northern side of Kings Point adjacent to Parkland Drive. The area is divided into two distinct zones one is a maintained parkland with formalised garden beds and infrastructure, the other zone is located between the parkland area and the lake with the parkland boundary being defined by a line of timber bollards. The natural area between the bollards and the lake is also subjected to varying lake levels depending on the entrance to Burrill Lake being open or closed. This changes the vegetation composition</i></p>	M	<p>When work is undertaken in areas direct contact should be made with the adjoining residents to inform them. The priority of methods to be used in this site are as follows:</p>	

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p><i>in this area with a retreating and advancing band of salt marsh and other macrophytes being present in the area. Any Bushcare work undertaken in this area has to be of an expendable and robust nature to suit these fluctuating lake levels and changing vegetation zonation. This zone contains two Ecologically Endangered Communities which are listed on the NSW Threatened Species Conservation Act, which are Swamp Oak Forest on a Coastal Floodplain and Coastal Salt Marsh. The Bushcare actions prioritised are as per the Review of Environmental Factors prepared by Council and the Kings Point Foreshore Plan of Management 2000 as follows (see plan attachments):</i></p> <p><i>NOTE: This area is a transitional vegetation zone and Bushcare works will need to vary according to the level of Burrill Lake.</i></p> <p>Zone 4 Actions:</p> <ol style="list-style-type: none"> 1. On-going control of weeds such as Buffalo Grass (<i>Stenotaphrum secundatum</i>) and Asparagus Fern (<i>Asparagus ethiopicus</i>). 2. Transplanting of native plants where weed control has been undertaken using low growing ground cover species as per plans suggested planting list for zones 3, 4 & 5). 		<ol style="list-style-type: none"> 1. Manual removal of smaller infestation of Asparagus fern (see attached bush regeneration information sheet on control of weeds with underground reproductive structures). Spot spraying of edges and larger areas of Buffalo 	<p>On –going</p>

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p>3. Selective removal of <i>Pittosporum undulatum</i> as per Review of Environmental Factors (REF see attached) once alternative local native species that have been planted reach the same growth form.</p> <p>4. Continue to control weeds such Turkey Rhubarb (<i>Acetosa Sagitatta</i>) and Monbretia (<i>Crocasmia x crocosmiiflora</i>)</p> <p>5. Bushcare Group to maintain foreshore walking track, when not inundated by high water.</p> <p>6. Removal of hand launching boats from salt-marsh foreshore vegetation areas and relocate onto open grass areas to reduce impacts on salt marsh</p>		<p>grass and Panic Veldt Grass that are invading good quality native vegetation.</p> <p>2. Transplanting of sedges, rushes and other ground cover plants to areas where weed control has been undertaken with supervision by Council to insure the right species are planted in the right zones.</p> <p>3. Council to remove Sweet Pittosporums and Bushcare group to replant.</p> <p>4. Manual removal of Monbretia and bag bulbs and spot spray Turkey Rhubarb with 1% glyphosate and</p> <p>5. Re-mulching of walking track as required and pruning back of vegetation to allow safe passage as required.</p>	<p>Autumn to Spring</p> <p>All Year</p> <p>All Year</p> <p>When track is not inundated by water.</p>

GROUP ACTIONS	PRIORITY	METHOD	TIME
		6. Council Ranger Services to attempt manage dinghy removal or relocation.	As required
ZONE 5			
<p><i>Zone 5 is located adjacent to Zone 4 and is located east of the open storm water drain next to Harold St. This zone is also low lying and contains remnant stands of Swamp Sclerophyll Forest which is listed as an Endangered Ecological Community under the NSW Threatened Species Conservation Act 1995. The area has large sections of mown and maintained areas. There are several species of weeds that have infested the native vegetation, mainly Buffalo Grass (<i>Stenotaphrum secundatum</i>) and Asparagus fern (<i>Asparagus ethiopicus</i>). The Kings Point Plan of Management identifies this area as needing a formal means of protecting the remnant vegetation stands from further degradation by installing permanent timber bollards to delineate the borders of the mown areas and remnant vegetation. The Bushcare actions in this area are follows:</i></p> <p>This zone is subject to a permit to harm marine vegetation by the NSW Department of Primary Industries under Part 7 of the NSW Fisheries Management Act 1994. The permit allows Council's staff and/or volunteers to mow sections of salt marsh vegetation along the foreshore reserve. For details of these areas see the</p>	M	<p>When work is undertaken in areas direct contact should be made with the adjoining residents to inform them. The priority of methods to be used in this site are as follows:</p> <p>1. Council to install timber</p>	2014 onwards

GROUP ACTIONS	PRIORITY	METHOD	TIME
<p>attached Permit to Harm and the permits map/s</p> <p>Zone 5 Actions:</p> <ol style="list-style-type: none"> 1. Protect existing remnant patches Saltmarsh/marine vegetation which has been delineated for protection as per the conditions of the NSW Fisheries Management Act Permit to Harm on the Western side of the walking track. 2. Control of exotic grasses in remnant salt marsh/Swamp Oak Forest areas in the “No Mow Zones” as delineated by the timber bollards as per the Permit to Harm map on the Western side of the walking track. 3. Removal of hand launching boats from salt-marsh foreshore vegetation areas and relocate onto open grass areas to reduce impacts on salt marsh <p><i>Note: The Permit to Harm issued under Part 7 of the NSW Fisheries Management Act 1994 and the associated maps are attached to the Bushcare Action Plan.</i></p>		<p>bollards to delineate remnant natural vegetation and mown open areas as required by the Permit to Harm (see attached map)</p> <ol style="list-style-type: none"> 2. Working from the healthy vegetation areas use a combination of manual control and spot spraying of Buffalo and Panic Veldt Grass to control exotic grasses in the salt marsh. 3. Council Ranger Services to attempt manage dinghy removal or relocation. 	<p>All year</p> <p>As required</p>

2. FIGURE 1: KINGS POINT BUSHCARE GROUP ACTION PLAN MAP



Figure 2: NSW DPE Permit to Harm Marine Vegetation PN14/116 Map



3. BUSHCARE GROUP OH&S & 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)		N/A
Propagation & seed collection	√	SWMSNR030
Education (school groups, field days etc)	√	N/A

4. COUNCIL SUPPORT

- a) Technical advice 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) Herbicides

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

Yes

6. 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
Insect repellent	2011

7. POSSIBLE FUTURE FUNDING

Project	Funding source
Assistance with control of larger infestation of weed species and supply of plants for revegetation works	Various

8. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

10/11/2017

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

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
Generic Community Land Plan of Management - Natural Areas	2001	Shoalhaven City Council
Foreshore Reserves Policy	2005	Shoalhaven City Council
Kings Point Foreshore Community Plan of Management No 2	2000	Shoalhaven City Council
Draft - Review of Environmental Factors for Burrill Lake Foreshore Works at Parkland Drive and Harold Street Kings Point	2011	Shoalhaven City Council
Burrill Lake Estuary and Catchment Management Plan	2002	Shoalhaven City Council
SRCMA Catchment Action Plan	2008	Southern Rivers Catchment Management Authority

10. SUGGESTED SPECIES PLANTING LIST (Zones 1a,1b &2)

OVERSTOREY TREES	
Botanical	Common
<i>Casuarina glauca</i>	Swamp Oak
SHRUBS	
Botanical	Common
<i>Acacia falcata</i>	Silver Leaf Wattle
<i>Acacia maidenii</i>	Maidens Wattle
<i>Allocasuarina torolusa</i>	Forest Oak
<i>Dodonaea triquetra</i>	Native Hops
<i>Persoonia mollis spp nectans</i>	Soft Geebung
<i>Pittosporum revolutom</i>	Rough Pittosporum
UNDERSTOREY (grasses, herbs, climbers)	
Botanical	Common
<i>Acacia ulicifolia</i>	Prickly Mosses
<i>Austrodanthonia pilosa</i>	Wallaby Grass
<i>Billarderia scandens</i>	Apple Dumpling
<i>Dichondra rapens</i>	Kidney Weed
<i>Glycine microphylla</i>	Love Creeper
<i>Hardenbergia violacea</i>	Happy Wonderer
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Lomandra longifolia</i>	Spiky Matt Rush
<i>Microlaena stipoides</i>	Weeping Grass
<i>Themeda australis</i>	Kangaroo Grass

11. SUGGESTED SPECIES PLANTING LIST (Zones 3 & 4)

SHRUBS	
Botanical	Common
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Pittosporum revolutum</i>	Rough Pittosporum
<i>Zieria smithii</i>	Sandfly Zieria
UNDERSTOREY (grasses, herbs, climbers)	
Botanical	Common
<i>Adiantum aethiopicum</i>	Common Maidenhair
<i>Dianella revoluta</i>	Native Flax Lily
<i>Einadia hastata</i>	Berry Saltbush
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Gleichenia dicarpa</i>	Coral fern
<i>Goodenia ovata</i>	Hop Goodenia
<i>Hardenbergia violacea</i>	Happy Wonderer
<i>Juncus krausii</i>	Sea Rush
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Lomandra longifolia</i>	Spiny Headed Mat

<i>Microlaena stipoides</i>	Weeping Grass
<i>Parsonia straminea</i>	Common Silkpod
<i>Phragmites australis</i>	Common Reed
<i>Sarcocornia quinqueflora</i>	Glasswort
<i>Sporobolus virginicus var. minor</i>	Saltwater Couch
<i>Tetragonia tetragonioides</i>	New Zealand Spinach/Warrigal Greens
<i>Viola hederacea</i>	Ivy leaved Violet

12. BUSHCARE SITE WEED LIST (Zones 1a,1b & 2)

Noxious	Environmental	Botanical Name
	Asparagus Fern (Ground)	<i>Asparagus aethiopicus</i>
	Buffalo and Kikuyu Grass	<i>Pennisetum clandestinum and Stenotaphrum secundatum</i>
	Formosan Lily	<i>Lilium formosanum</i>
	Japanese Honeysuckle	<i>Lonicera japonica</i>
	Mother of Millions	<i>Bryophyllum delagoense</i>
	Winter Senna	<i>Senna pedula</i>
	Fishbone Fern	<i>Nephrolepis cordifolia</i>
	Garden succulants	<i>Various species</i>
	Erhrata stricta	<i>Panic Velt Grass</i>
Blackberry		<i>Rubus fruticosus</i>
Parramatta Grass		<i>Sporobolus africanus</i>

13. BUSHCARE SITE WEED LIST (Zones 3, 4 & 5)

Noxious	Environmental	Botanical Name
Crofton Weed		<i>Ageratina adenophora</i>
	Asparagus Fern (Ground)	<i>Asparagus aethiopicus</i>
	Buffalo and Kikuyu Grass	<i>Pennisetum clandestinum and Stenotaphrum secundatum</i>
	Catsear	<i>Hypochaeris radicata</i>
	Common Sowthistle	<i>Sonchus oleraceus</i>
	Wandering Jew	<i>Tradescantia fluminensis</i>
	Water Buttons	<i>Cotula coronopifolia</i>

14. BUSHCARE SITE SPECIES LIST (Areas 1a,1b & 2)

OVERSTOREY TREES	
Botanical	Common
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia gummifera</i>	Bloodwood
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus paniculata spp paniculata</i>	Grey Ironbark

SHRUBS	
Botanical	Common
<i>Acacia falcata</i>	Silver Leaf Wattle
<i>Acacia maidenii</i>	Maidens Wattle
<i>Allocasuarina torolusa</i>	Forest Oak
<i>Breymia oblongifolia</i>	Coffee Bush
<i>Dodonaea triquetra</i>	Native Hops
<i>Exocarpus cupressiformis</i>	Ballard Cherry
<i>Persoonia mollis</i>	Soft Geebung
<i>Pittosporum undulatum</i>	Sweet Daphnae
<i>Pittosporum revolutom</i>	Rough Pittosporum
<i>Santalum obtusifolium</i>	Sandalwood

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Acacia ulicifolia</i>	Prickly Mosses
<i>Austrodanthonia pilosa</i>	Wallaby Grass
<i>Commolina cyamea</i>	Creeping Christian
<i>Dianella caerulea spp caerulea</i>	Blue Flax Lily
<i>Dichondra rapens</i>	Kidney Weed
<i>Dichelanchna micrantha</i>	Short Hair Plume Grass
<i>Echinopogon caespitosus</i>	Bushy Hedgehog-grass
<i>Einadia hastata</i>	Berry Saltbush
<i>Imperata cylindrical</i>	Blady Grass
<i>Lissanthe stigosa</i>	Native Cranberry
<i>Lomandra longifolia</i>	Spiky Matt Rush
<i>Microlaena stipoides</i>	Weeping Grass
<i>Plectranthus parviflorus</i>	Cockspur Thorn
<i>Pratia purpurascens</i>	White Root
<i>Schoenus melanstachys</i>	Bog Rush
<i>Themeda australis</i>	Kangaroo Grass

UNDERSTOREY (vines, creepers & climbers)	
Botanical	Common

<i>Billarderia scandens</i>	Apple Dumpling
<i>Desmodium varians</i>	Slender Tick-trefoil
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Gietanoplesium cymosum</i>	Scrambling lily
<i>Glycine clandestina</i>	Love Creeper
<i>Glycine microphylla</i>	Small-leaf glycine
<i>Hardenbergia violacea</i>	Running Postman
<i>Parsonsia stramina</i>	Monkey Rope Vine
<i>Tylophora barbata</i>	Tylophora

15. BUSHCARE SITE SPECIES LIST (Area 3, 4 & 5 Parkland Drive and Harold St)

OVERSTOREY TREES	
Botanical	Common
<i>Casuarina glauca</i>	Swamp Oak
<i>Eucalyptus botryoides</i>	Bangalay
<i>Eucalyptus robusta</i>	Swamp Mahogany

SHRUBS	
Botanical	Common
<i>Acacia longifolia</i> ssp. <i>sophorae</i>	Coastal Wattle
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Leptospermum laevigatum</i>	Coastal Tea Tree
<i>Melaleuca armillaris</i>	Bracelet Honey-myrtle
<i>Pittosporum revolutum</i>	Rough Pittosporum
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Syzygium australe</i>	Brush Cherry
<i>Zieria smithii</i> Sandfly	Sandfly Zieria

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Adiantum aethiopicum</i>	Common Maidenhair
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Cissus hypoglauca</i>	Water Vine
<i>Commelina cyanea</i>	Native Wandering Jew
<i>Cyperus laevigatus</i>	Smooth Flatsedge
<i>Dianella revoluta</i>	Native Flax Lily
<i>Dichondra repens</i>	Kidney Weed
<i>Dipodium roseum</i>	Hyacinth orchid
<i>Echinopogon ovatus</i>	Forest Hedgehog Grass
<i>Einadia hastata</i>	Berry Saltbush
<i>Entolasia marginata</i>	Bordered Panic
<i>Gahnia sieberiana</i>	Red-fruit Saw-segde
<i>Gleichenia dicarpa</i>	Coral fern
<i>Glycine clandestina</i>	Love Creeper

<i>Goodenia ovata</i>	Hop Goodenia
<i>Hardenbergia violacea</i>	Purple Coral Pea
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Juncus krausii</i> Sea Rush	Sea Rush
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Lomandra longifolia</i>	Spiny Headed Mat
<i>Microlaena stipoides</i>	Weeping Grass
<i>Parsonsia straminea</i>	Common Silkpod
<i>Phalaris sp. *</i>	N/A
<i>Phragmites australis</i>	Common Reed
<i>Pimelea humilis</i>	Common Rice Flower
<i>Pratia purpurascens</i>	Whiteroot
<i>Pteridium esculentum</i>	Common Bracken
<i>Samolus repens</i>	Creeping Brookweed
<i>Sarcocornia quinqueflora</i>	Glasswort
<i>Smilax glycyphylla</i>	Sweet Sarsaparilla
<i>Sporobolus virginicus var. minor</i>	Saltwater Couch
<i>Stephania japonica</i>	Snake Vine
<i>Suaeda australis</i>	Seablite
<i>Tetragonia tetragonioides</i>	New Zealand Spinach/Warrigal Greens
<i>Triglochin striata</i>	Streaked Arrow grass
<i>Viola hederacea</i>	Ivy leaved Violet

Bushcare Group Name

Coordinator Name

Signature

Date / /



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BUSH REGENERATION INFORMATION SHEET

Control of Weeds with Underground Reproductive Structures cont..

METHODS OF REMOVAL

3 REMOVAL OF PLANTS WITH BULBS, CORMS OR TUBERS

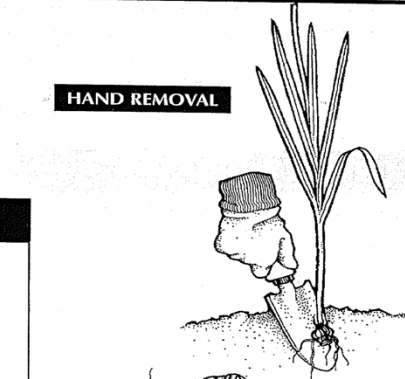
Examples: onion weed, watsonia, arrowhead vine, montbretia

- STEP 1** Move leaf litter away from base of plant.
- STEP 2** Dig down next to the stem until the bulb or tuber is reached.
- STEP 3** Remove plant and carefully bag the bulb or tuber.

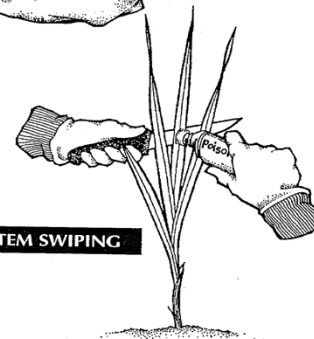
4 HERBICIDE TREATMENT - STEM SWIPING

- STEP 1** Gently remove any seed or fruit and carefully place into a bag.
- STEP 2** Using a herbicide applicator, swipe the stems/leaves.

HAND REMOVAL



STEM SWIPING



considerations

- Further digging may be required for plants with more than one tuber (e.g. arrowhead vine).
- Some bulbs (e.g. oxalis, onion weed) may have small bulbils attached or present in the soil around it. These need to be removed.
- 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 set.
- Have you addressed all safety issues ?



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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

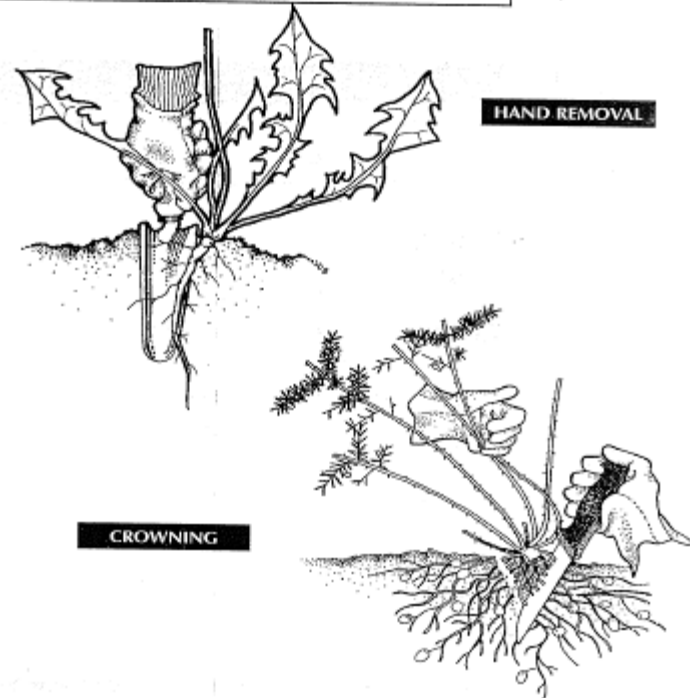
Examples: Paddy's lucerne, dandelion

- 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.



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.

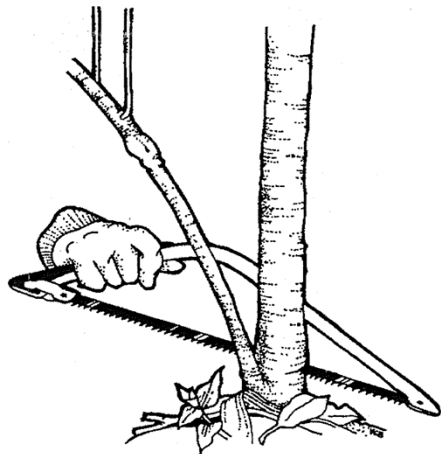
SAFETY CONSIDERATIONS

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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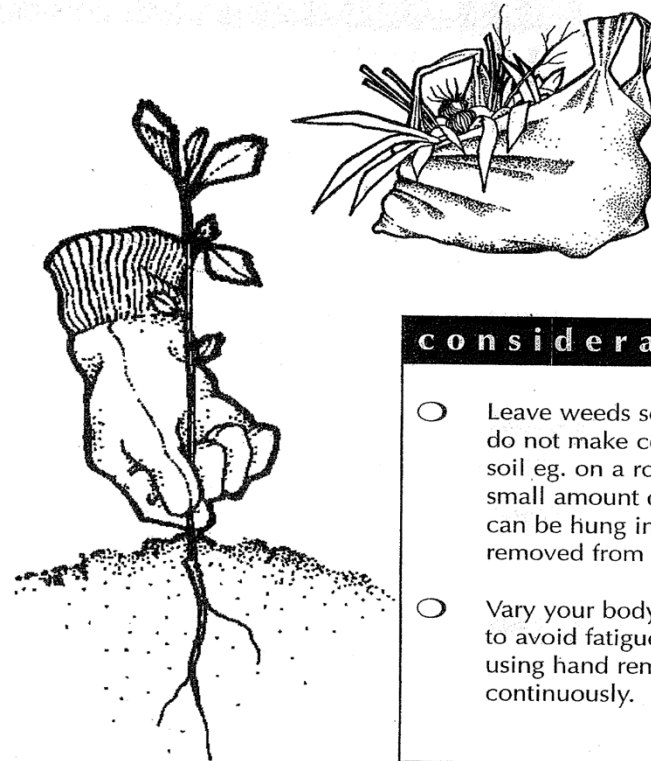
Control of Small Hand-pullable Plants

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

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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Attachment 2 & 3 as follows:

- *Draft - Review of Environmental Factors for Burrill Lake Foreshore Works at Parkland Drive and Harold Street Kings Point, 2011, Shoalhaven City Council*
- *Permit to Harm Marine Vegetation No. PN14/116, 2014, NSW Department of Primary Industry, Part 7 NSW Fisheries Management Regulations 2010.*

Attachment 4 – Example of temporary Bushcare Sign to be erected when Bushcare Group are working on site.



**SHOALHAVEN BUSHCARE
VOLUNTEERS WORKING
ON THIS RESERVE**

Volunteers are working on this reserve as part of a community Bushcare Group, which is supported by Shoalhaven City Council, under the Council's Bushcare program. Our group is working to regenerate and restore the bushland on the reserve. This work will help protect our fauna and flora, improve local biodiversity and the enjoyment of our city's natural areas for present and future generations.

If are interested in helping please ask one of our group volunteers working on site or see details below.

**OUR NEXT BUSHCARE GROUP
WORKING BEE IS:**

DAY & DATE:

START TIME:

FINISH TIME:

CONTACT PH:

For more information please call Council's
Bushcare Coordinator on Ph: 4429 3592.