



WARDEN HEAD BUSHCARE ACTION PLAN

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CONTACT INFORMATION

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Reserve Name:	Warden Head	
Reserve No:	SUL936	
Land Tenure:	Crown T/CC	Comm. Land Type: N/A

1. BUSHCARE GROUP GOALS

The Goals of the Warden Head Bushcare Group are as follows:

1. **Regeneration and protection of the Bangalay Sand Forest Ecologically Endangered Community that occurs on the headland**
2. **Enhance and maintain biodiversity of the bushland and native vegetation communities**
3. **Promote and increase awareness of the environmental, cultural and social values of the Warden Head environment**
4. **Work with the traditional owners to protect the headland Aboriginal cultural values**

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
<p>ZONE 1 – This zone is located around what is known as the “Dancing Grounds” and takes in the area NE of the lighthouse soccer oval. It contains an old open picnic type area with an over-story of <i>Banksia integrifolia</i>. The zone also contains stands of Bangalay Sand Forest which is listed as an Endangered Ecological Community under the NSW Threatened Species Conservation Act 1995. This vegetation is being heavily colonised by <i>Pittosporum undulatum</i> in sections and is dominating the lower and mid story structure of the vegetation community which is resulting in a loss of biodiversity on the reserve. The actions for the Warden Head Bushcare Group are listed in order of priority as follows:</p>			
<p>Continue with follow up control of Lantana using manual and chemical control concentrating on the areas where plantings have been done and pile burning has taken place. Following priority of actions:</p>	<p>H</p>	<ul style="list-style-type: none"> • Hand pull seedlings, spot spot spray using 1:100 glyphosate/water or cut and paint larger plants (see attached bush regeneration sheet) 	<p>On going</p>

GROUP ACTION	PRIORITY	METHOD	TIME
a. Manual control of Lantana and herbaceous annual weeds around pile burns and plantings. b. Chemical control of exotic grasses in previously revegetated areas and edges c. Control of secondary weeds in areas where Lantana has been removed/controlled, with particular attention to following weeds. i. Turkey Rhubarb ii. Wandering Jew d. Replacement plantings as required	H	<ul style="list-style-type: none"> • Spray grasses with 1:200 ratio glyphosate/water • Spot spray using 1:100 glyphosate/water and remove seeds • Larger areas can be sprayed using Starane advanced rake rolled and removed • Use species from attached planting list 	Winter 2011/2015 On going As required
Manual control of Japanese Honeysuckle patches	H	Scrape and paint (see attached info sheet)	Spring/summer
Consult with the Ulladulla Aboriginal Land Council regarding gradual control/removal of patches of <i>Stephotaphrum secundatum</i> (Buffalo Grass) dominating the understory of the Coastal Banksia forest and revegetation with ground cover species in a patch/mosaic pattern	M	Council to spray out patches of exotic grass and Bushcare group to plant out	2012/13
In direct consultation with the Rural Fire Service and Ulladulla Fire Brigade investigate the possibility of undertaking a trail ecological burn in this zone in areas where the <i>Pittosporum undulatum</i> is dominating the vegetation community.	L	Council to negotiate with town brigade, RFS and submit proposed ecological burn to the Shoalhaven Bushcare Committee and Council to conduct a 7 part test under NSW TSC Act	2012

GROUP ACTION	PRIORITY	METHOD	TIME
Monitor the regeneration of the site by establishing photo points and vegetation condition monitoring plots	M	Council and Bushcare Group to establish 20x20m monitoring quadrat and train volunteers to collect monitoring information	2011/2015
<p>Zone 2 – This zone takes in the gully that runs into Lobster Jacks Beach and is also boarded by the Lighthouse Oval on the southern end. There has been a lot of primary control of <i>Lantana camara</i> on this site from Council with grant funding over the past 4 – 5 years. The site also has some secondary weed occurring on this site that will need ongoing attention. The actions for the Warden Head Bushcare Group are listed in order of priority as follows:</p>			
Follow control on of Lantana using manual and chemical control in areas where previous control works have been undertaken. Avoid steeper sections of gullies	H	Hand pull Lantana seedlings or spot spray using 1:100 glyphosate/water	On going
Council to spray edges of Lighthouse Oval and Bushcare group to plant out to provide a buffer edge for the site	M	Council Noxious Weed unit to spray lantana once the density is down to a manageable level Bushcare group to revegetate using species from attached list	2012/2014
<p>Control of secondary and other weeds including as follows:</p> <ul style="list-style-type: none"> • Turkey Rhubarb (<i>Acestosa sagitata</i>) • African Aristeia (<i>Aristea ecklonii</i>) • Dipogen lignosus (<i>Dolichos Pea</i>) 	H	<ul style="list-style-type: none"> • Spot spray using 1:100 glyphosate/water and remove seeds • Hand remove by digging out underground reproductive parts (see attached info sheet) • Hand pull smaller plants and stem scrape larger ones (see attached information sheet) 	On going

GROUP ACTION	PRIORITY	METHOD	TIME
Council to undertake a 7 part test under the NSW Threatened Species Conservation Act to undertake selective culling of Sweet Pittosporum within the two zones	L	Council Bushcare Coordinator to do a 7 part test on the impact of Sweet Pitosporum culling and Bushcare group to marry out	2012
Zone 3 – Parson St, from the end of Rennies Beach Close to Pockets Beach			
<ul style="list-style-type: none"> • Control of noxious and environmental weeds across coastal headlands as required • Replant as required using species from the plans suggested revegetation list, allowing for existing views/vistas to be maintained 	M	Combination of manual control and chemical control as required	On – Going

3. WARDEN HEAD BUSHCARE GROUP ACTION PLAN MAP

Map Key

Zone 1



Zone 2



Zone 3



4. BUSHCARE GROUP OH&S & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc)	√	SWMSNR060
Chemical control (spraying of herbicides)	√	SWMSNR040
Planting	√	SWMSNR030
Minor construction (walking track, fencing, outdoor furniture)	N/A	
Propagation & seed collection	√	SWMSNR030
Education (school groups, field days etc)	N/A	
Other	N/A	

5. COUNCIL SUPPORT

- a) Technical advice and training
- b) Tools and equipment
- c) Grant application and management support
- d) One Bushcare Support Trainer to assist the group on site for 4 hours per month
- e) Plants
- f) Herbicide
- g) Assistance with larger scale weed control, such as spraying Lantana and Buffalo Grass in zones
- h) Preparation of 7 part test
- i) Assistance and training in undertaking monitoring

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

Yes

7. 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

8. POSSIBLE FUTURE FUNDING

Project	Funding source
Funding to undertake prescribed ecological burn and ongoing follow up control of Lantana and other secondary invasive weeds	SRCMA or Australian Govt

9. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

28 July 2014

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
Warden Head Bush Regeneration Plan	2005	SCC/Proust Bushland Services

11. SUGGESTED SPECIES PLANTING LIST

OVERSTOREY TREES	
Botanical	Common
<i>Acmena smithii</i>	Lilli Pilli
<i>Allocasuarina distyla</i>	She-oak
<i>Allocasuarina littoralis</i>	Black She-oak or Dahl-wah
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Banksia serrata</i>	Old Man Banksia
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Eucalyptus botryoides</i>	Bangalay

SHRUBS	
Botanical	Common
<i>Acacia longifolia</i>	Coast Wattle
<i>Acacia myrtifolia</i>	Myrtle Wattle
<i>Acacia sophorae</i>	Coast Wattle
<i>Acacia suaveolens</i>	Sweet-scented Wattle
<i>Acacia terminalis</i>	Sunshine Wattle
<i>Acacia ulicifolia</i>	Prickly Moses
<i>Banksia ericifolia</i> ssp. <i>ericifolia</i>	Heath-leaved Banksia
<i>Correa reflexa</i> var. <i>reflexa</i>	Common Correa
<i>Dodonaea triquetra</i>	Common Hop Bush
<i>Dracophyllum secundum</i>	N/A
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Ficus coronata</i>	<i>Sandpaper Fig</i>
<i>Goodenia ovata</i>	Hop Goodenia
<i>Kunzea ambigua</i>	Tick Bush
<i>Lambertia formosa</i>	Mountain Devil
<i>Leptospermum laevigatum</i>	Coastal Tea Tree
<i>Melaleuca armillaris</i> ssp. <i>armillaris</i>	Hillock Bush
<i>Melaleuca hypericifolia</i>	Scented Paperbark
<i>Melaleuca squarrosa</i>	Paperbark
<i>Melaleuca thymifolia</i>	Purple Mirbelia
<i>Monotoca elliptica</i>	Tree Broom Heath
<i>Myoporum boninense</i>	Boobialla
<i>Persoonia levis</i>	Smooth Geebung
<i>Persoonia mollis</i> ssp. <i>caleyi</i>	Geebung
<i>Pittosporum revolutum</i>	Rough Pittosporum
<i>Pittosporum undulatum</i>	Native Daphne
<i>Podoacarpus spinulosus</i>	N/A
<i>Pultenaea daphnoides</i>	Broad Bush Pea
<i>Rapanea variabilis</i>	Mutton Wood
<i>Rhagodia candolleana</i>	Seablite Berry
<i>Westringia fruticosa</i>	Coast Rosemary
UNDERSTOREY (grasses, herbs, climbers and climbers)	
Botanical	Common
<i>Hibbertia dentata</i>	Twining Guinea Flower
<i>Hibbertia scandens</i>	Golden Guinea Flower
<i>Hibbertia virgata</i> ssp. <i>virgata</i>	Guinea Flower
<i>Isopogon anemonifolius</i>	Drumsticks
<i>Kennedia prostrata</i>	Running Postman
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Pelargonium australe</i>	Coastal Geranium
<i>Pimelea linifolia</i> ssp. <i>linifolia</i>	Rice Flower
<i>Pultenaea daphnoides</i>	Large Bush Pea
<i>Rhagodia candolleana</i>	Seaberry or Coastal Saltbush
<i>Ricinocarpus pinifolius</i>	Wedding Bush
<i>Rubus parvifolius</i>	Native Raspberry
<i>Scaevola ramosissima</i>	Snake or Fan Flower
<i>Tetragonia tetragonioides</i>	Warrigal Greens

<i>Viola hederacea</i>	Native Violet
<i>Zieria smithii</i>	Sandfly Ziera

12. SITE WEED LIST

Noxious	Environmental	Control Method
Chrysanthemoides <i>monilifera</i> subsp <i>rotundata</i> (Biotu Bush)		Chemical or manual
Cortaderia <i>selloana</i> (Pampass Grass)		Chemical using glyphosate at 1:100 ratio
Lantana <i>camara</i> (Lantana)		Chemical and manual (hand pull or cut and paint)
<i>Rubus fruticosus</i>		Chemical and manual (Scrape and paint)
	<i>Acetosa sagittata</i> (Turkey Rhubarb)	Chemical (Spray with glyphosate at ratio of 1:100)
	<i>Aristea ecklonii</i> (African Aristea)	Chemical and manual (Hand dig)
	<i>Asparagus densifolius</i> (Ground Asparagus Fern)	Chemical or manual (Dig out crown)
	<i>Bidens pilosa</i> (Cobblers Peg)	Chemical and manual (hand pull or cut and paint)
	<i>Conzya</i> (Fleabane)	Manual
	<i>Crocsmia x crossmiifolia</i> (Montbretia)	Chemical or manual (Dig out crown)
	<i>Dipogen lignosus</i> (<i>Dolichos</i> Pea)	Chemical or manual
	<i>Lilium formosanum</i> (Tiger Lily)	Manual (snipe and drip with neat roundup)
	<i>Lonicera japonica</i> (Japanese Honeysuckle)	Chemical and manual (Scrape and paint)
	<i>Onopordum acanthium</i> (Scotch Thistle)	Chemical or manual
	<i>Passiflora edulis</i> (Passionfruit)	Manual (Hand Pull)
	<i>Phytolacca octandra</i> (Ink Weed)	Manual (Hand Pull)
	<i>Senna pendula</i> spp <i>pendula</i> (Winter Senna)	Manual (Cut and Paint)
	<i>Sida rhombifolia</i> (Paddy Lucerne)	Manual (Hand Pull)

	Stenotaphrum <i>secundatum</i> (Buffalo Grass)	Chemical using glyphosate at 1:200 ratio
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13. BUSHCARE SITE SPECIES LIST

OVERSTOREY TREES	
Botanical	Common
<i>Acmena smithii</i>	Lilli Pilli
<i>Allocasuarina distyla</i>	She-oak
<i>Allocasuarina littoralis</i>	Black She-oak or Dahl-wah
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Banksia serrata</i>	Old Man Banksia
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Eucalyptus botryoides</i>	Bangalay
<i>Glochidion ferdinandii</i>	Cheese Tree

SHRUBS	
Botanical	Common
<i>Acacia terminalis</i>	Sunshine Wattle
<i>Acacia longifolia</i>	Coast Wattle
<i>Acacia myrtifolia</i>	Myrtle Wattle
<i>Acacia sophorae</i>	Coast Wattle
<i>Acacia suaveolens</i>	Sweet-scented Wattle
<i>Acacia ulicifolia</i>	Prickly Moses
<i>Amperea xiphoclada var. papillata</i>	Broom Spurge
<i>Aotus ericoides</i>	Aotus
<i>Atriplex cinerea</i>	Grey Saltbush
<i>Baeckea imbricata</i>	Heath-myrtle
<i>Banksia ericifolia ssp. ericifolia</i>	Heath-leaved Banksia
<i>Bossiaea ensata</i>	Small Leafless Bossiaea
<i>Bossiaea heterophylla</i>	Variable Bossiaea
<i>Bossiaea prostrata</i>	N/A
<i>Brachyloma daphnoides ssp. daphnoides</i>	Daphne Heath
<i>Breynia oblongifolia</i>	Native Privet
<i>Conospermum ellipticum</i>	Smoke Bush or Cone-seed
<i>Convolvulus erubescens</i>	Australian or Blushing Bindweed
<i>Correa reflexa var. reflexa</i>	Common Correa
<i>Dampiera stricta</i>	N/A
<i>Dillwynia floribunda var. floribunda</i>	Parrot Pea
<i>Dillwynia glaberrima</i>	Parrot Pea
<i>Dodonaea triquetra</i>	Common Hop Bush
<i>Dracophyllum secundum</i>	N/A

<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Ficus coronata</i>	Sandpaper Fig
<i>Gahnia sieberana</i>	Red-fruited Saw Sedge
<i>Gonocarpus teucroides</i>	Germander Raspwort
<i>Goodenia ovata</i>	Hop Goodenia
<i>Kunzea ambigua</i>	Tick Bush
<i>Lambertia formosa</i>	Mountain Devil
<i>Leptospermum laevigatum</i>	Coastal Tea Tree
<i>Leptospermum morrisonii</i>	Tea-tree
<i>Leucopogon juniperinus</i>	Bearded Heath
<i>Lomatia ilicifolia</i>	Native Holly
<i>Macrozamia communis</i>	Burrawang
<i>Melaleuca armillaris ssp. armillaris</i>	Hillock Bush
<i>Melaleuca hypericifolia</i>	Scented Paperbark
<i>Melaleuca squarrosa</i>	Scented Paperbark
<i>Melaleuca thymifolia</i>	Purple Mirbelia
<i>Mirbelia speciosa ssp. speciosa</i>	Tree Broom Heath
<i>Monotoca eliptica</i>	Tree Broom Heath
<i>Myoporum boninense</i>	Boobialla
<i>Persoonia levis</i>	Smooth Geebung
<i>Persoonia mollis ssp. caleyi</i>	Geebung
<i>Pittosporum revolutum</i>	Rough Pittosporum
<i>Pittosporum undulatum</i>	Native Daphne
<i>Podocarpus spinulosus</i>	Plum Pine
<i>Pultenaea daphnoides</i>	Bush Pea
<i>Rapanea variabilis</i>	Mutton Wood
<i>Rhagodia candolleana</i>	Seablite Berry
<i>Westringia fruticosa</i>	Coast Rosemary

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Actinotus helianthi</i>	Fannel Flower
<i>Actinotus minor</i>	Flannel Flower - Minor
<i>Anisopogon avenaceus</i>	Oat Speargrass
<i>Austrodanthonia tenuior</i>	Wallaby Grass
<i>Blechnum ambiguum</i>	Fern
<i>Dianella caerulea var. caerulea</i>	Blue Flax Lily
<i>Dianella caerulea var. producta</i>	Blue Flax Lily
<i>Dianella congesta</i>	Coastal Flax Lily
<i>Dichondra repens</i>	Kidney Weed
<i>Diuris maculata</i>	Spotted Double Tail or Leopard Orchid
<i>Gleichenia dicarpa</i>	Pouched Coral Fern
<i>Helichrysum elatum</i>	White Paper Daisy
<i>Hibbertia aspera ssp. aspera</i>	Rough Guinea Flower
<i>Hibbertia cistiflora ssp. cistiflora</i>	Guinea Flower
<i>Hibbertia dentata</i>	Twining Guinea Flower
<i>Hibbertia diffusa</i>	Guinea Flower
<i>Hibbertia monogyna</i>	Leafy Guinea Flower

<i>Hibbertia scandens</i>	Golden Guinea Flower
<i>Hibbertia virgata</i> ssp. <i>virgata</i>	Guinea Flower
<i>Hybanthus monopetalus</i>	Spade Flowers
<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>Isolepis inundatus</i>	Sedge
<i>Isolepis nodosa</i>	Sword Sedge
<i>Isopogon anemonifolius</i>	Drumsticks
<i>Kennedia prostrata</i>	Running Postman
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Lagenifera stipitata</i>	N/A
<i>Lepidosperma concavuum</i>	Native Flax
<i>Linum marginale</i>	Native Flax
<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	Mat rush
<i>Lomandra glauca</i> ssp. <i>glauca</i>	Pale Mat Rush
<i>Lomandra multiflora</i>	Fish Bones
<i>Lomandra obliqua</i>	Leafy Purple Flags
<i>Opercularia aspera</i>	Thin Stinkweed
<i>Opercularia diphylla</i>	Stinkweed
<i>Oxalis rubens</i>	N/A
<i>Oxylobium cordifolium</i>	Heart-leaved Shaggy Pea
<i>Parsonsia straminea</i>	Monkey Rope or Common Silkpod
<i>Patersonia glabrata</i>	Silky Purple Flag
<i>Patersonia sericea</i>	Woolly Frogmouth
<i>Pelargonium australe</i>	Coastal Geranium
<i>Philydrum lanuginosum</i>	Native Reed or Thatch Reed
<i>Phragmites australe</i>	Sedge
<i>Pimelea linifolia</i> ssp. <i>linifolia</i>	Rice Flower
<i>Platysace lanceolata</i>	Native Parsnip (narrow-leaved form)
<i>Plectranthus parviflorus</i>	Cockspur Flowers
<i>Poranthera corymbosa</i>	N/A
<i>Pratia purpurascens</i>	White Root
<i>Pteridium esculentum</i>	Bracken
<i>Ptilothrix deusta</i>	Lilac Lily
<i>Pultenaea daphnoides</i>	Large Bush Pea
<i>Rhagodia candolleana</i> ssp. <i>candolleana</i>	Seaberry or Coastal Saltbush
<i>Ricinocarpus pinifolius</i>	Wedding Bush
<i>Rubus parvifolius</i>	Native Raspberry
<i>Rulingia hermaniifolia</i>	Wrinkled Kerrawang
<i>Scaevola ramosissima</i>	Snake or Fan Flower
<i>Schelhammera undulata</i>	Bog-rush
<i>Schoenus brevifolius</i>	Native Sarsaparilla
<i>Selaginella uliginosa</i>	Swamp Selaginella
<i>Senecio diaschides</i>	N/A
<i>Senecio hispidulus</i> var. <i>hispidulus</i>	Rough Groundsel
<i>Senecio minimus</i> var. <i>minimus</i>	Saw groundsel
<i>Solanum americanum</i>	Glossy Nightshade
<i>Solanum stelligerum</i>	Devil's Needles

<i>Spinifex sericeus</i>	White Lily
<i>Stylidium graminifolium</i>	Trigger Plant
<i>Tetragonia tetragonioides</i>	Warrigal Greens
<i>Thelionema umbellatum</i>	Kangaroo Grass
<i>Themeda australis</i>	Fringe Lily
<i>Thysanotus tuberosus</i>	Yellow Rush-lily
<i>Viola hederacea</i>	Native Violet
<i>Xanthosia pilosa</i>	Woolley Xanthosia
<i>Zieria pilosa</i>	Hairy Zieria
<i>Zieria smithii</i>	Sandfly Ziera

UNDERSTOREY (vines & climbers)	
Botanical	Common
<i>Billardiera scandens</i>	Apple Dumpling
<i>Carpobrotus glaucescens</i>	Pigface
<i>Cassytha glabella</i>	Slender Devil's Twine
<i>Cassytha pubescens</i>	Common Devil's Twine
<i>Caustis recurvata</i> var. <i>recurvata</i>	Old Man's Beard or Curly Cane
<i>Glycine clandestina</i>	Love Creeper
<i>Glycine tabacina</i>	Love Creeper
<i>Goodenia ovata</i>	Hop-Goodenia
<i>Hardenbergia violacea</i>	False Sarsaparilla
<i>Hibbertia scandens</i>	Native Guinea Flower
<i>Stephania japonica</i> var. <i>discolor</i>	Stephania or Snake Vine

Bushcare Group Name

Coordinator Name

Signature

Date / /

