



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 (Council as Trust Manager)

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 including Ulladulla High School
4. Work with the traditional owners to protect the headland Aboriginal cultural values
5. Identify and monitor where weed species have spread which are inaccessible to the group, to report to council for action – e.g., Cape Ivy and Turkey Rhubarb
6. Work closely with contractors in fulfilment of these goals.


2. BUSHCARE GROUP ACHIEVEMENTS TO DATE


Successes/Goals/Actions achieved to date	Lessons learnt
Lantana Control	Contractor used for initial control with follow up by Bushcare Group
Planting near Dancing Grounds and east of gully to Lobster Jack's Beach	
Ongoing weed control on focussed patches of Dolichos Pea (<i>Dipogen lignosus</i>) and Lonicera japonica	Inaccessible areas needed to be managed by contractors
Opportunistic plantings in response to seasonal conditions where watering was not possible	
Continued participation of Macarthur Anglican School teams each year	This has been a good form of active community engagement, which has helped develop students' appreciation of coastal bushland and also contributed to the overall volunteer effort

3. WARDEN HEAD BUSHCARE GROUP ACTION PLAN MAP



Map Key

Zone 1 

Zone 2 

4. SHOALHAVEN BUSHCARE GROUP ACTIVITIES TABLE (to be read in conjunction with above map)

Priority: H = High (started within 12 months); M = Medium (1-3 years); L = Low

GROUP ACTION	PRIORITY	METHOD	TIME
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 is predominantly Bangalay Sand Forest which is listed as an Endangered Ecological Community under the NSW Biodiversity Conservation Act 2016. Sweet Pittosporum (<i>Pittosporum undulatum</i>) has become abundant in areas.			
Continue with follow-up control of Lantana using manual and chemical control concentrating on the areas where plantings have been done. Following priority of actions:	H	Hand pull seedlings, spot-spray or cut and paint larger plants as per herbicide labels or Australian Pesticide and Veterinary Medicines Assn (APVMA) off-label permits	Ongoing
<ul style="list-style-type: none"> a. Manual control of Lantana and herbaceous annual weeds around plantings. b. Manual and 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: <ul style="list-style-type: none"> i. Turkey Rhubarb ii. Dolichos Pea iii. Easter Senna iv. Fishbone Fern v. Formosan Lily vi. <i>Aristea eklonii</i> d. Replacement plantings as required 	H	<p>Herbicide use as per product label or APVMA off-label permits</p> <p>Revegetate with species from attached planting list</p>	<p>Ongoing</p> <p>Autumn to early spring</p>
Manual control of Japanese Honeysuckle patches	H	Herbicide use per product label or APVMA off-label permits	Spring and summer

GROUP ACTION	PRIORITY	METHOD	TIME
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 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	2019-22
Monitor the regeneration of the site by establishing photo points and vegetation condition monitoring plots. Establish a vegetation survey comparing areas where Sweet Pittosporum have been illegally removed compared to control areas	M	Council and Bushcare Group to establish a monitoring program and train volunteers to collect monitoring information	2019

GROUP ACTION	PRIORITY	METHOD	TIME
<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 edge. There has been a lot of primary control of <i>Lantana camara</i> on this site. The site also has some secondary weed occurring.</p>			
Follow-up control of Lantana avoiding steeper sections of gullies	M	Hand pull seedlings, cut and paint, or spot spray larger plants per product label or APVMA off-label permits	On going
Council to control Lantana along steep edges of Lighthouse Oval and Bushcare group to plant out to provide a buffer edge for the site and where it is safe, steeper gullies.	M	Council to spray lantana. Once the density is down to a manageable level Bushcare group to revegetate using species from attached list	2019
Council to undertake weed control within the steep gully at Lobster Jacks Beach. Council and Bushcare group to monitor re-growth of Lantana, Turkey Rubarb and other weeds.	H	As per product label or APVMA off-label permits	Spring/ Summer Ongoing
<p>Control of secondary and other weeds including:</p> <ul style="list-style-type: none"> • Turkey Rhubarb • Blue stars • Dolichos Pea • Formosan Lily • Easter Senna • Ground asparagus • Exotic palm seedlings 	H	As per product label or APVMA off-label permits	Ongoing

5. BUSHCARE GROUP WORKPLACE HEALTH AND SAFETY

New volunteers must be inducted in Shoalhaven City Councils corporate induction process and volunteers must comply with the Volunteer Induction Handbook.

Based on the activities included in this action plan, a new site hazard and risk assessment has been completed (Council document D18/369009). Volunteers are to be inducted on this revised risk assessment with the adoption of this plan. The 'site hazard and risk assessment' is to be revised as need be, for example, upon the identification of a new hazard, or of a new control measure for an existing hazard.

The following activities are managed by Council through the following documents. Volunteers must comply with these standards.

Activity	WHS documentation
Manual Handling	SCC Policy P15 Hazardous Manual Tasks
Chemical weed control	SCC Policy P11 Hazardous Chemicals; SCC Procedure SWI29 Herbicide Spraying; Safety Data Sheets and product labels for chemicals used
Tree Planting and watering	SWI103 Water Cart SWI93 Trailers – towing

6. 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 3-4 hours per month
- e) Plants
- f) Herbicide
- g) Assistance with larger scale weed control, such as spraying Lantana and Buffalo Grass in zones
- h) Assistance and training in undertaking monitoring

7. POSSIBLE FUTURE FUNDING

Project	Funding source

8. REVIEW

This plan will be reviewed 6 years from its adoption but can be reviewed sooner if agreed.

9. REGIONAL MANAGEMENT PLANS OR STRATEGIES

Document	Year	Produced by
Generic Community Land Plan of Management - Natural Areas	2001	Shoalhaven City Council
Foreshore Reserves Policy	2005	Shoalhaven City Council
Warden Head Bush Regeneration Plan	2005	SCC/Proust Bushland Services
Bushcare/Parkcare Policy and Procedures	2018	Shoalhaven City Council

10. 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>	Sandpaper Fig
<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 eliptica</i>	Tree Broom Heath
<i>Myoporum boninense</i>	Boobiolla
<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>Podocarpus spinulosus</i>	Dwarf plum Pine
<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 ssp. 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 ssp. 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

11. SITE WEED LIST

Scientific Name	Common Name
<i>Chrysanthemoides monilifera</i> subsp <i>rotundata</i>	Bitou Bush
<i>Cortaderia selloana</i>	Pampas Grass
<i>Lantana camara</i>	Lantana
<i>Rubus fruticosus</i>	Blackberry
<i>Acetosa sagittata</i>	Turkey Rhubarb
<i>Aristea ecklonii</i>	Blue Stars, African Aristea
<i>Asparagus densifolius</i>	Ground Asparagus Fern
<i>Bidens pilosa</i>	Cobblers Peg
<i>Conzya species</i>	Fleabane
<i>Crocsmia x crossmiifolia</i>	Montbretia
<i>Dipogen lignosus</i>	Dolichos Pea
<i>Lilium formosanum</i>	Tiger Lily
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Onopordum acanthium</i>	Scotch Thistle
<i>Passiflora edulis</i>	Passionfruit
<i>Phytolacca octandra</i>	Ink Weed
<i>Senna pendula spp pendula</i>	Winter Senna
<i>Sida rhombifolia</i>	Paddy Lucerne
<i>Stenotaphrum secundatum</i>	Buffalo Grass

12. 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 teucrioides</i>	Germander Raspwort
<i>Goodenia ovata</i>	Hop Goodenia
<i>Kunzea ambigua</i>	Tick Bush

SHRUBS	
Botanical	Common
<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 elliptica</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 ssp. virgata</i>	Guinea Flower
<i>Hybanthus monopetalus</i>	Spade Flowers

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<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>Isolepsis inundatus</i>	Sedge
<i>Isolepsis 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>Parsonia straminea</i>	Monkey Rope or Common Silkpod
<i>Patersonia glabrata</i>	Silky Purple Flag
<i>Patersonia sericea</i>	Wooly 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

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<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