



NOWRA - BENS WALK BUSHCARE ACTION PLAN – REVIEW 2016

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CONTACT INFORMATION

Group Name:	Bens Walk
Contact:	Anthony Jennings
Address:	
Telephone:	
Email:	
Reserve Name:	Bens Walk – Nowra Showground
Reserve Number:	CNO407, R70802, CNO406
Land Tenure:	Crown Land - TM

1. BUSHCARE GROUP GOALS

The Bens Walk Bushcare Group goals are as follows:

1. To maintain and improve the ecological health of the Bens Walk area.
2. Promote the natural and cultural assets and history of the local area through education and awareness raising activities such as signage, fact sheets and electronic media.

2. **BUSHCARE GROUP ACHEIVEMENTS TO DATE – (What successes has your Bushcare Group achieved in relation to achieving the goals and actions in your current Bushcare Group Action Plan and what lessons or new skills/knowledge have you learnt from these achievements?)**

Successes/Goals/Actions achieved to date	Lessons learnt
Weed control and planting of 550 native groundcovers, shrubs and trees on the eastern edge of Bens Walk which was severely degraded	Safety issues around dumped rubbish and working on steep slippery slopes
Primary weed control of 2.5 hectares of remnant riparian vegetation along Nowra Creek	Some difficulties with removal of weed propagules waste and vegetation vandalism
Primary weed control of Mother of Millions (<i>Bryophyllum delagoense</i>) along the cliff tops on the crown land reserve from Hanging Rock lookout to Paringa Park	Qualified personal required to undertake control due to dangerous heights on cliff tops adjacent to Scenic Drive

3. **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 (these should relate to your project description)	PRIORITY	METHOD	TIME
<p>AREA 1 – Picnic Point to Swing Bridge</p> <p>EXISTING AND CURRENT ACTIONS</p> <ol style="list-style-type: none"> 1. Undertake control of the following noxious and environmental weeds in the following priority order: <ol style="list-style-type: none"> a. <i>Lantana camara</i> (Lantana) b. <i>Asparagus aethiopicus</i> (Ground Asparagus Fern) c. <i>Anredera cordifolia</i> (Madeira Vine) d. <i>Ligustrum lucidum</i> (Large Leaf Privet) e. <i>Ligustrum sinense</i> (Small Leaf Privet) f. <i>Senna pendula</i> spp. <i>pendula</i> (Cassia) g. <i>Rubus fruticosus</i> (Blackberry) h. <i>Bryophyllum delagoense</i> (Mother of Millions) i. <i>Ipomea indica</i> (Morning Glory) j. <i>Ochna serrulata</i> (Micky Mouse Plant) k. <i>Araujia sericifera</i> (Moth Vine) l. <i>Thunbergia alata</i> (Black Eyed Susan) m. <i>Tradescantia fluminensis</i> (Wandering Jew) n. <i>Sida rhombifolia</i> (Paddys Lucerne) o. <i>Conyza bilbaoana</i> (Fleabane) 	<ol style="list-style-type: none"> 1. H 	<p>EXISTING AND CURRENT ACTIONS</p> <ol style="list-style-type: none"> 1. Use a combination of manual and chemical control techniques as per individual weed species best management practices 	<ol style="list-style-type: none"> 1. On-going

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
<p>p. <i>Solanum mauritianum</i> (Wild Tobacco Tree) q. <i>Ricinus communis</i> (Castor Oil Plant)</p> <p>2. Undertake river bank planting and any rubbish and weed control around Picnic Point.</p> <p>3. Seek support from Council to treat <i>Bryophyllum delagoense</i> (Mother of Millions) around the sandstone cliff areas at Hanging Rock lookout</p> <p>4. Maintain existing planted areas on the boundary of the Nowra Showground by undertaking replacement planting and weed control</p> <p>NEW ACTIONS</p> <p>1. Undertake Mangrove planting around the entrance to Nowra Creek to address bank erosion on the Shoalhaven River using, "A Guide to River Bank Restoration of Tidal River Erosion, 2nd Edition" (Shoalhaven Riverwatch) with support from Shoalhaven Riverwatch</p>		<p>2. Select species as per the suggested revegetation species list in section 14 of this plan.</p> <p>3. Coordinate on-going Mother of Millions control in dangerous cliff areas with Council to have suitably qualified staff to undertake control</p> <p>4. Use plant species from plans suggested revegetation list in section 14 of this plan</p> <p>NEW ACTIONS</p> <p>1. Consult the Mangrove Planting reference book and advice from Riverwatch</p>	<p>2. Autumn</p> <p>3. Needs be basis</p> <p>4. Needs be basis</p> <p>1. 2016 - 18</p>

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
AREA 2 – Swing Bridge to Paperbark Swamp			
EXISTING AND CURRENT ACTIONS			
1. Undertake control of the following noxious and environmental weeds in the following priority order: <ol style="list-style-type: none"> a. <i>Lantana camara</i> (Lantana) b. <i>Asparagus aethiopicus</i> (Ground Asparagus Fern) c. <i>Ligustrum lucidum</i> (Large Leaf Privet) d. <i>Ligustrum sinense</i> (Small Leaf Privet) e. <i>Senna pendula</i> spp. <i>pendula</i> (Cassia) f. <i>Rubus fruticosus</i> (Blackberry) g. <i>Ochna serrulata</i> (Micky Mouse Plant) h. <i>Araujia sericifera</i> (Moth Vine) i. <i>Tradescantia fluminensis</i> (Wandering Jew) 	1. H	1. Use a combination of manual and chemical control techniques as per individual weed species best management practice	1. On-going
NEW ACTIONS			
1. Revegetate areas where Lantana has been chemically/manually controlled/removed towards the escarpment to prevent new weed species colonising the space	1. M	1. Use species from revegetation list in section 14	1. As needed

4. BENS WALK BUSHCARE GROUP ACTION PLAN AREA 1 MAP - Picnic Point to Swing Bridge



4 a). BENS WALK BUSHCARE GROUP ACTION PLAN MAP 2 - Swing Bridge to Paperbark Swamp



5. BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc.)	√	SWMSNR030
Chemical control (spraying of herbicides)	√	SWMSNR030
Planting	√	SWMSNR040
Propagation & seed collection	√	SWMSNR040

6. COUNCIL SUPPORT

- Supply of personal protection equipment and other Work, Health and Safety equipment identified in SWMS and/or site specific risk assessment.
- Supply of other materials and equipment within budgetary constraints.
- Assistance with Primary weed control in various location where budgets allow.
- Assistance with grant project application, administration and management.
- Supply of on-site Bushcare Field Officer for 3 hours per month to assist with WHS and technical aspects.

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

Yes √ No

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

PPE Equipment Required	Date issued
First Aid Kit	2015
Gloves	2015
Sunscreen	2015
Insect repellent	2015

9. POSSIBLE FUTURE FUNDING

Project	Funding source
Mother of Millions control along cliff tops adjacent to Scenic Drive	Various
Riverbank restoration and erosion control	Various

10. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

24/05/2019

11. 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
Shoalhaven River Estuary Management Plan	2008	Shoalhaven City Council

12. BUSHCARE SITE RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

OVERSTOREY TREES	
Botanical	Common
<i>Aegiceras corniculatum</i>	River Mangrove
<i>Alphitonia excelsa</i>	Red Ash
<i>Avicennia marina</i>	Grey Mangrove
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus agglomerata</i>	Blue Leaved Stringybark
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus punctata</i>	Grey Gum
<i>Melaleuca styphelioides</i>	Prickly Paperbark
SHRUBS	
Botanical	Common
<i>Acacia binervata</i>	Two Veined Hickory
<i>Acacia falcata</i>	Sickle Wattle
<i>Acacia implexa</i>	Hickory Wattle
<i>Acacia longifolia ssp. longifolia</i>	Sydney Golden Wattle
<i>Acmena smithii</i>	Lilli Pilli
<i>Allocasuarina torulosa</i>	Forest She Oak
<i>Breynia oblongifolia</i>	Breynia
<i>Bursaria spinosa</i>	Blackthorn
<i>Ceratopetalum gummiferum</i>	NSW Christmas Bush
<i>Clerodendrum tomentosum</i>	Clerodendrum
<i>Dodonaea triquetra</i>	Common Hop Bush
<i>Eleocarpus reticulatus</i>	Blueberry Ash
<i>Ficus coronata</i>	Sandpaper Fig
<i>Homalanthus populifolius</i>	Bleeding Heart
<i>Indigofera australis</i>	Australian Indigo
<i>Pittosporum revolutum</i>	Rough Fruited Pittosporum
<i>Pittosporum spinescens</i>	Orange Box Thorn
<i>Pomaderris intermedia</i>	Pomaderris
<i>Pomaderris inflorescence</i>	Pomaderris
UNDERSTOREY (grasses, herbs, climbers)	
Botanical	Common
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Imperata cylindrica</i>	Blady Grass
<i>Lomandra fluviatilis</i>	
<i>Lomandra longifolia</i>	Spiny Matt Rush
<i>Oplismenus aemulus</i>	Basket Grass
<i>Themeda australis</i>	Kangaroo Grass
<i>Hardenbergia violacea</i>	False Sarsaparilla
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Pandorea pandorana spp. pandorana</i>	Wonga Vine

13. BUSHCARE SITE WEED LIST (The following weeds have been recorded on the site)

Noxious	Environmental	Control Method
Lantana (<i>Lantana camara</i>)		Cut and paint with 50/50 roundup/water
Blackberry (<i>Rubus fruticosus</i>)		Can be scrape and painted on with undiluted roundup for small infestation larger infestation should be treated with a selective herbicide (contact Council)
	Asparagus Fern (<i>Asparagus aethiopicus</i>)	Crown out the underground parts of the plant using a boning knife or small saw larger areas can be treated with non-selective herbicide such as Glyphosate but a wetting agent must be added. Non selective herbicide may also be used such as Brushoff® best time to treat is in Spring and early summer
	Madeira Vine (<i>Anredera cordifolia</i>)	Scrape a meter long length of the main stem and apply neat glyphosate, place a large tarp around the base to catch as many of the tubers as possible.
Large Leaf Privet (<i>Ligustrum lucidum</i>)		Cut and paint the stump with 50/50 Glyphosate/water or hand pull seedling re-growth
Small Leaf Privet (<i>Ligustrum sinense</i>)		
	Mickey Mouse Plant (<i>Ochna serrulata</i>)	Cut and paint stump with 50/50 Glyphosate/water or hand pull seedling re-growth, be careful as the plant has a large tap root that can easily snap off
	Coastal Morning Glory (<i>Ipomea indica</i>)	Treat small infestation by hand pulling or stem scraping or large areas can be treated with a non-selective herbicide
	Wandering Jew (<i>Tradescantia fluminensis</i>)	Large areas can be rolled with a rake and placed in a bag, care must be taken not to leave any nodules behind
	Moth Vine (<i>Araujia</i>)	Plants can be hand pulled and left

	<i>sericifera</i>)	on the ground to break down, any of the chocko seedling should be bagged
	<i>Cassia (Senna pendula var glabrata)</i>	Cut and paint stump with 50/50 Glyphosate/water or hand pull seedling re-growth
	Camphor Laurel (<i>Cinnamomum camphora</i>)	Cut and paint of direct inject larger trees
	Mother of Millions (<i>Bryophyllum delagoense</i>)	Hand pull (insure that all plant are removed from site) or chemical control
	<i>Ehrarta stricta</i> (Panic Grass)	Chemical control
Mist Flower (<i>Ageratina riparia</i>)		Hand pull or biological control

14. BUSHCARE SITE SPECIES LIST (The following species have been recorded on the site)

OVERSTOREY TREES	
Botanical	Common
<i>Aegiceras corniculatum</i>	River Mangrove
<i>Alphitonia excelsa</i>	Red Ash
<i>Avicennia marina</i>	Grey Mangrove
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus agglomerata</i>	Blue Leaved Stringybark
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus punctata</i>	Grey Gum
<i>Melaleuca stypheliodes</i>	Prickly Paperbark
SHRUBS	
Botanical	Common
<i>Acacia binervata</i>	Two Veined Hickory
<i>Acacia falcata</i>	Sickle Wattle
<i>Acacia implexa</i>	Hickory Wattle
<i>Acacia longifolia ssp. longifolia</i>	Sydney Golden Wattle
<i>Acacia mearnsii</i>	Black Wattle
<i>Acacia miadenii</i>	Maidens Blush
<i>Acacia obtusifolia</i>	
<i>Acacia parramattensis</i>	Parramatta Green Wattle
<i>Acacia ulicifolia</i>	Prickly Mosses
<i>Acmena smithii</i>	Lilli Pilli
<i>Allocasuarina torulosa</i>	Forest She Oak
<i>Aotus ericoides</i>	

<i>Backhousia myrtifolia</i>	Grey Myrtle
<i>Brachychiton acerifolius</i>	Illawarra Flame Tree
<i>Breynia oblongifolia</i>	Breynia
<i>Bursaria spinosa</i>	Blackthorn
<i>Cerapetalum gummiferum</i>	NSW Christmas Bush
<i>Clerodendrum tomentosum</i>	Clerodendrum
<i>Commersonia fraseri</i>	Brush Kurrajong
<i>Cryptocarya microneura</i>	Murrogun
<i>Cyathea australis</i>	Rough Tree Fern
<i>Daviesia ulicifolia</i> spp. <i>ulicifolia</i>	Gorse Bitter Pea
<i>Dodonaea triquetra</i>	Common Hop Bush
<i>Dodonaea truncatiales</i> var. <i>truncatiales</i>	Common Hop Bush
<i>Eleocarpus reticulatus</i>	Blueberry Ash
<i>Eupomatia luarina</i>	Native Guava
<i>Exocarpus cupressiformis</i>	Ballard Cherry
<i>Ficus coronata</i>	Sandpaper Fig
<i>Ficus rubiginosa</i>	Port Jackson Fig
<i>Ficus superba</i> var. <i>henneana</i>	Deciduous Fig
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Goodia lotifolia</i>	Clove-tree
<i>Hibbertia monogyna</i>	Guinea Flower
<i>Homalanthus populifolius</i>	Bleeding Heart
<i>Indigofera australis</i>	Australian Indigo
<i>Kunzea ambigua</i>	Tick Bush
<i>Leptospermum polyanthum</i>	Slender Tea Tree
<i>Macrozamia communis</i>	Burrawang
<i>Melicope micrococca</i>	Melicope
<i>Notalea longifolia</i>	Mock Olive
<i>Persoonia linearis</i>	Narrow-leaf Geebung
<i>Phebalium squamulosum</i>	Scaly Phebalium
<i>Pimelea spicata</i>	Slender Rice Flower
<i>Pisonia umbellifera</i>	Bird Lime Tree
<i>Pittosporum revolutum</i>	Rough Fruited Pittosporum
<i>Pittosporum spinescens</i>	Orange Box Thorn
<i>Pittosporum undulatum</i>	Sweet Daphnae
<i>Podolobium ilicifolium</i>	Native Holly
<i>Pomaderris intermedia</i>	Pomaderris
<i>Pomaderris inflorescence</i>	Pomaderris
<i>Rapanea variabilis</i>	Brush Muttonwood
UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Adiantum aethiopicum</i>	Maidens Hair Fern
<i>Austrodanthonia pilosa</i>	Wallaby Grass
<i>Blechnum ambiguum</i>	Gristle Fern
<i>Blechnum nudum</i>	Fishbone Fern
<i>Calochlaena dubia</i>	False Bracken Fern
<i>Commelina cyanea</i>	Scurvy Weed

<i>Dianella caerulea</i>	Blue Flax Lily
<i>Dichondra repens</i>	Kidney Weed
<i>Doodia aspera</i>	Rasp Fern
<i>Einadia hastata</i>	Seablite
<i>Imperata cylindrica</i>	Blady Grass
<i>Lomandra fluviatillis</i>	
<i>Lomandra longifolia</i>	Spiny Matt Rush
<i>Oplismenus aemulus</i>	Basket Grass
<i>Pteridium esculentum</i>	Bracken Fern
<i>Stylidium graminifolium</i>	Trigger Plant
<i>Themeda australis</i>	Kangaroo Grass
UNDERSTOREY (vines & climbers)	
Botanical	Common
<i>Cissus antarctica</i>	Kangaroo Grape
<i>Clematis aristata</i>	Old Man's Beard
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Glycine microphylla</i>	Love Creeper
<i>Hardenbergia violacea</i>	False Sarsaparilla
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Pandorea pandorana</i> spp. <i>pandorana</i>	Wonga Vine
<i>Parsonsia straminea</i>	Monkey Rope Vine
<i>Rubus parvifolius</i>	Native Raspberry
<i>Smilax australis</i>	Lawyer Vine
<i>Stephania japonica</i>	Snake Vine