



HUSKISSON BEACH BUSHCARE ACTION PLAN

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CONTACT INFORMATION

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Reserve Name: Huskisson Beach
Reserve No: BHU595
Land Tenure: Crown TM/CC

1. BUSHCARE GROUP GOALS

The goals of the Huskisson Beach Bushcare Action Plan are as follows:

1. Improve and maintain the biodiversity of the Huskisson Beach dunes
2. Improve the Huskisson Beach dune resilience through staged weed control across the dunes and revegetating with a diversity of coastal native plants

NOTE: The Huskisson Beach Bushcare Action Plan does not operate in isolation it compliments and works in with the following plans:

- *Huskisson Beach Moona Moona Creek Plan of Management, 2003*
- *Huskisson Beach Foreshore Rehabilitation Plan – Nowra Street to Moona Moona Creek, 2014*
- *Huskisson Beach Tourist Park – Landscape Plan (Foreshore Area), 2011*

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 (these should relate to your project description)	PRIORITY	METHOD	TIME
SOUTHERN BEACH SECTION			
<p><i>The condition of the dunes remnant vegetation along this section is very poor, with little of the original remnant Eucalypt forest remaining. The potential for native regeneration from existing seed store is minimal due to the high level of site disturbance and high density and abundance of noxious and environmental weeds. In this section of the site almost the entire mid and over-story species are no longer present and much of the remnant vegetation is fragmented and the habitat values have become degraded. Exotic Weeds cover approximately 50% of the site with little/no recruitment of native species occurring (Proust Bushland Services, 2013).</i></p>			
<p>Zone 1 Actions:</p> <ol style="list-style-type: none"> 1. Spray exotic grasses such as Buffalo and Kikuyu Grasses to prepare site for revegetation. 2. Brush matt areas of the dunes that have been left bare from spraying using <i>Acacia spp.</i> and <i>Leptospernum spp.</i> 3. Undertake planting of treated areas once exotic grasses have died off using hardy fore-dune native coastal species (from species on the suggested revegetation list - attached) at a rate of 2 plants per square metres. <i>NOTE: Ensure that mid and over-story species are planted in clump formations so as to provide views and vistas from the adjacent cycleway, park area and caravan park.</i> 4. Compliment planting by direct seeding of <i>Acacia spp</i> and <i>Lomandra spp.</i> 	<ol style="list-style-type: none"> 1. H 2. H 3. M 4. L 	<ol style="list-style-type: none"> 1. Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water 2. Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting 3. Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer season) 	<ol style="list-style-type: none"> 1. Wint. 2. All year 3. Aut & Wint 4. Aut, Wint & Sum

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
		4. Source seeds from local area and treat as follows: <ol style="list-style-type: none"> a. Acacia spp place seeds in boiling water and discard seeds that float and use the remainder to hand cast on site with NPK fertiliser b. Cut Lomandra spp. seed heads when ripe and place in shallow trench along with pre-soaked water crystals 	
Zone 2 Actions: <ol style="list-style-type: none"> 1. Spray exotic grasses such as Buffalo and Kikuyu to prepare site for revegetation. 2. Brush matt areas that have been left bare from spraying using <i>Acacia spp.</i> and <i>Leptospernum spp</i> 3. Undertake planting of treated areas once exotic grasses have died off using hardy fore-dune native coastal species (from species on the revegetation list) at a rate of 2 plants per square metres. <i>NOTE: Ensure that mid and over-story species are planted in clump formations so as to provide views and vistas from the adjacent cycleway, park area and caravan park.</i> 	<ol style="list-style-type: none"> 1. H 2. H 3. M 4. L 	<ol style="list-style-type: none"> 1. Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water 2. Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting 3. Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer 	<ol style="list-style-type: none"> 5. Wint. 6. All year 7. Aut & Wint 8. Aut, Wint & Sum

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
4. Compliment planting by direct seeding of <i>Acacia</i> spp and <i>Lomandra</i> spp.		season) 4. Source seeds from local area and treat as follows: a. <i>Acacia</i> spp place seeds in boiling water and discard seeds that float and use the remainder to hand cast on site with NPK fertiliser b. Cut <i>Lomandra</i> spp. seed heads when ripe and place in shallow trench along with pre-soaked water crystals	
Zone 3 Actions: 1. Spray exotic grasses such as Buffalo and Kikuyu to prepare site for revegetation. 2. Brush matt areas of the dunes that have been left bare from spraying using <i>Acacia</i> spp. and <i>Leptospermum</i> spp 3. Undertake planting of treated areas once exotic grasses have died off using hardy fore-dune native coastal species (from species on this plans suggested revegetation list) at a rate of 3 plants per square metres. <i>NOTE: Ensure that mid and over-story species are planted in clump formations so as to provide views</i>	1. H 2. H 3. M 4. L 5. H	1. Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water 2. Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting 3. Undertake plantings in Autumn and Winter (avoid plating in	9. Wint. 10. All year 11. Aut & Wint 12. Aut, Wint & Sum

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
<p><i>and vistas from the adjacent cycleway, park area and caravan park.</i></p> <ol style="list-style-type: none"> 4. Compliment planting by direct seeding of Acacia spp and Lomandra spp. 5. Pull down all Morning Glory vine that is climbing on and within the native vegetation and spot spray when on the ground with glyphosate and re-treat any new growth. 		<p>hotter Spring and Summer season)</p> <ol style="list-style-type: none"> 4. Source seeds from locally and treat as follows: <ol style="list-style-type: none"> a. Acacia spp place seeds in boiling water and discard seeds that float and use the remainder to hand cast on site with NPK fertiliser b. Cut Lomandra spp. seed heads when ripe and place in shallow trench along with pre-soaked water crystals 5. Make sure all Morning Glory vine is off native plants and spot spray with glyphosate (Roundup) at 20ml per litre 	

3. HUSKISSON BEACH BUSHCARE GROUP ACTION PLAN - SOUTHERN BEACH SECTION MAP



GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
NORTHERN BEACH SECTION			
<p>The northern section of Huskisson Beach is in better ecological condition than the Southern section, although there are still areas where the remnant vegetation condition is poor. Remnant canopy trees still existing however they are mainly isolated single trees. The understory vegetation has areas of high weed density. Works in this section will focus on reducing the weed density and abundance on the dune area and improving the dune resilience by strategic revegetation.</p>			
<p>Southern Area Actions</p> <p>5. Spray exotic grasses such as Buffalo and Kikuyu to prepare site for revegetation in small 20m x 20m areas at a time</p> <p>6. Undertake environmental and noxious weed control as required</p> <p>7. In areas where dune has been left bare weed control undertake brush matting with <i>Acacia</i> spp. and <i>Leptospernum</i> spp</p> <p>8. Undertake planting of treated areas once exotic grasses have died off using hardy fore-dune native coastal species (from species on this plans suggested revegetation list) at a rate of 2 plants per square metres. <i>NOTE: Ensure that mid and over-story species are planted in clump formations so as to provide views and vistas from the adjacent cycleway, park area and caravan park.</i></p>	<p>1. H 2. H 3. M 4. M</p>	<p>1. Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water</p> <p>2. Control techniques as per best management practise</p> <p>3. Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting</p> <p>4. Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer season)</p>	<p>1. Winter</p> <p>2. All year</p> <p>3. All year</p> <p>4. Autumn – Winter</p>

3 a) HUSKISSON BEACH BUSHCARE GROUP ACTION PLAN – NORTHERN SECTION MAP



4. 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
Other		SWMS NR040

5. COUNCIL SUPPORT

Council will provide the following support:

- Assistance with spraying and weed control
- Landscape construction and fencing
- Mulching
- Provision of tools, equipment
- Provision of plants, stakes, guards etc
- Provision of chemical
- Training and technical assistance
- First Aid
- Assistance with grant applications and management
- Personal Protective Equipment (PPE)

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

Yes √ No

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

PPE Equipment Required	Date issued
First Aid Kit	2013
Gloves	2013
Sunscreen	2013
Insect repellent	2013

8. POSSIBLE FUTURE FUNDING

Project	Funding source
Rehabilitation of the Huskisson Beach Dune	Various

9. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

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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
<i>Huskisson Beach Moona Moona Creek Plan of Management</i>	<i>Adopted by SCC in Sept 2004</i> <i>Adopted by NSW Lands Dec 2004</i>	<i>NSW Department of Lands</i>
<i>Draft Huskisson Beach Foreshore Rehabilitation Plan – Nowra Street to Moona Moona Creek</i>	<i>2014</i>	<i>Shoalhaven City Council</i>
<i>Draft Huskisson Beach Tourist Park – Landscape Plan (Foreshore Area)</i>	<i>2011</i>	<i>Shoalhaven City Council</i>
<i>Rehabilitation Management Plan for the Huskisson Beach Foreshore Reserve – Proust Bushland Services</i>	<i>2013</i>	<i>Shoalhaven City Council</i>
<i>Draft Estuary and Coastal Asset Management Plan</i>	<i>2013</i>	<i>Shoalhaven City Council</i>
<i>Foreshore Reserve Policy</i>	<i>2005</i>	<i>Shoalhaven City Council</i>

11. RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

OVERSTOREY TREES	
Botanical	Common
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Banksia serrata</i>	Old Man Banksia
<i>Eucalyptus botryoides</i>	Bangalay Gum
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus robusta</i>	Swamp Mahogany
SHRUBS	
Botanical	Common
<i>Acacia longifolia</i> spp. <i>Sophorae</i> (a)	Coastal Wattle
<i>Acacia suaveolens</i>	Sunshine Wattle
<i>Breynia oblongifolia</i>	Native Privet
<i>Correa alba</i>	White Correa
<i>Correa reflexa</i>	Native Fuchsia
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Leucopogon parviflorus</i>	Bearded Heath
<i>Melaleuca hypericifolia</i>	Ulladulla Beacon
<i>Monotoca elliptica</i>	Pigeon Berry Ash
<i>Monotoca elliptica</i>	Pigeon Berry Ash
<i>Myoporum acuminatum</i>	Coastal Boobiella
<i>Pittosporum revolutum</i>	Rough Fruited Pittosporum
<i>Rhagodia condolleanea</i>	Sea Berry Salt Bush
<i>Westringia fruticosa</i>	Coastal Rosemary
UNDERSTOREY (grasses, herbs, climbers)	
Botanical	Common
<i>Carpobrotus glaucescens</i>	Pig Face
<i>Clematis aristata</i>	Old Mans Beard
<i>Dianella</i> spp	Native Flax
<i>Hardenbergia violacea</i>	Happy Wonderer
<i>Hibbertia scandens</i>	Native Guinea Flower
<i>Isolepis nodosa</i>	Nodding Club Rush
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Lomandra longifolia</i>	Spiny Matt Rush
<i>Pelargonium australe</i>	Coastal Geranium
<i>Spinifex sericeus</i>	Coastal Spinifex
<i>Tetragonia tetragonoides</i>	Native Spinach/Warrigal Green
<i>Themeda australis</i>	Kangaroo Grass
<i>Viola hederacea</i>	Native Violet

Note: (a) – Coastal Wattle (*Acacia longifolia* spp. *Sophorae*) has been included in the revegetation list as it already occurs at the site and is expected to be naturally pruned by salt wind as the beach is open to onshore Easterly salt laden winds.

12. SITE WEED LIST

The following weeds have been found on the site:

Noxious	Environmental	Control Method
	<i>Stenotaphrum secundatum</i> (Buffalo Grass)	Spot spray with 1ml per litre in Winter (cooler season)
	<i>Pennisetum clandestinum</i>) Kikuyu Grass	Spot spray with 1ml per litre in Winter (cooler season)
	<i>Ipomea indica</i> (Coastal Morning Glory)	Remove vine from native plants and spot spray with glyphosate at 10ml per litre
	<i>Agapanthus praecox</i> (Agapanthus)	Hand dig, bag and remove from site. Spot spray.
	<i>Crocasmia x crocosmiiflora</i> (Monbretia)	Hand dig all connected bulbs and bag for safe disposal. Appropriate spray when in flower
	<i>Asparagus aethiopicus</i> (Ground Asparagus)	Crown, Bag crown
	<i>Acacia saligna</i> 9Western Australian Willow Wattle)	Cut/paint, leave on site.
	<i>Acetosa sagittata</i> (Turkey Rhubarb)	Hand dig small infestation esp. near native plants. Spray dense infestations
	<i>Coprosma repens</i> (NZ Mirror Bush)	Cut/paint, leave on site

13. BUSHCARE SITE SPECIES LIST

The following species have been found on the site:

OVERSTOREY TREES	
Botanical	Common
<i>Acmena smithii</i>	Lilli Pilli
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Casuarina glauca</i>	Swamp Oak
<i>Eucalyptus botryoides</i>	Bangalay Gum
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Leptospermum laevigatum</i>	Coastal tea Tree

SHRUBS	
Botanical	Common
<i>Acacia irrorata</i>	Green Wattle
<i>Acacia longifolia</i> spp <i>longifolia</i>	Sydney Golden Wattle
<i>Acacia longifolia</i> spp <i>sophorae</i>	Coast Wattle
<i>Acacia mearnsii</i>	Black Wattle
<i>Breynia oblongifolia</i>	Native Privet
<i>Monotoca elliptica</i>	Tree Broom Heath
<i>Notelaea longifolia</i>	Mock Olive
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Westringia fruticosa</i>	Coastal Rosemary

UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Cakile</i> sp.	Sea Spinach
<i>Commelina cyanea</i>	Scurvy Weed
<i>Dianella</i> spp.	Flax Lily
<i>Imperata cylindrica</i>	Blady Grass
<i>Isolepis nodosus</i>	Club Rush
<i>Lomandra longifolia</i>	Spiny Matt Rush
<i>Oplismenus</i> sp.	Basket Grass
<i>Pteridium esculentum</i>	Bracken Fern
<i>Senecio latus</i>	Native Groundsel
<i>Solanum americanum</i>	Glossy Nightshade
<i>Solanum nigrum</i>	Dull Nightshade
<i>Sporobolus virginicus</i>	Sand Couch
<i>Tetragonia tetragonoides</i>	Warrigal Green
<i>Themeda australis</i>	Kangaroo Grass

UNDERSTOREY (vines & climbers)	
Botanical	Common
<i>Clematis aristata</i>	Old Man's Beard
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Glycine</i> sp.	Scrambling Lily

<i>Hibbertia scandens</i>	Native Guinea Flower
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Rubus rosifolius</i>	Native Raspberry

Bushcare Group Name

Coordinator Name

Signature

Date/.....

Appendix 1: Northern Section of Huskisson Beach Bushcare Action Plan site photos showing impression of new plantings



