



## HUSKISSON BEACH BUSHCARE ACTION PLAN

**Document Number:** D13/220891 – **Adopted:** 10/11/2014 – **Minute Number:** D14/296550 – **File:** 1835e – **Produced By:** Planning & Development Services – **Review Date:** 10/11/2017

### CONTACT INFORMATION

<b>Group Name:</b>	<b>Huskisson – Woollamia Bushcare Group</b>
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<b>Reserve Name:</b>	<b>Huskisson Beach Dunes Rehabilitation</b>
<b>Reserve No:</b>	<b>BHU595</b>
<b>Land Tenure:</b>	<b>Crown TM/CC</b>

### 1. BUSHCARE GROUP GOALS

The goals of the Huskisson – Woollamia Bushcare Group are as follows:

1. Improve and maintain the biodiversity of the Huskisson Beach dunes
2. Improve the Huskisson Beach dune resilience through a staged weed control across the dunes and revegetating with a diversity of fore-dune native plant species.
3. Bushcare Group to erect temporary signage (as per attached in appendix 2) when working on site

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

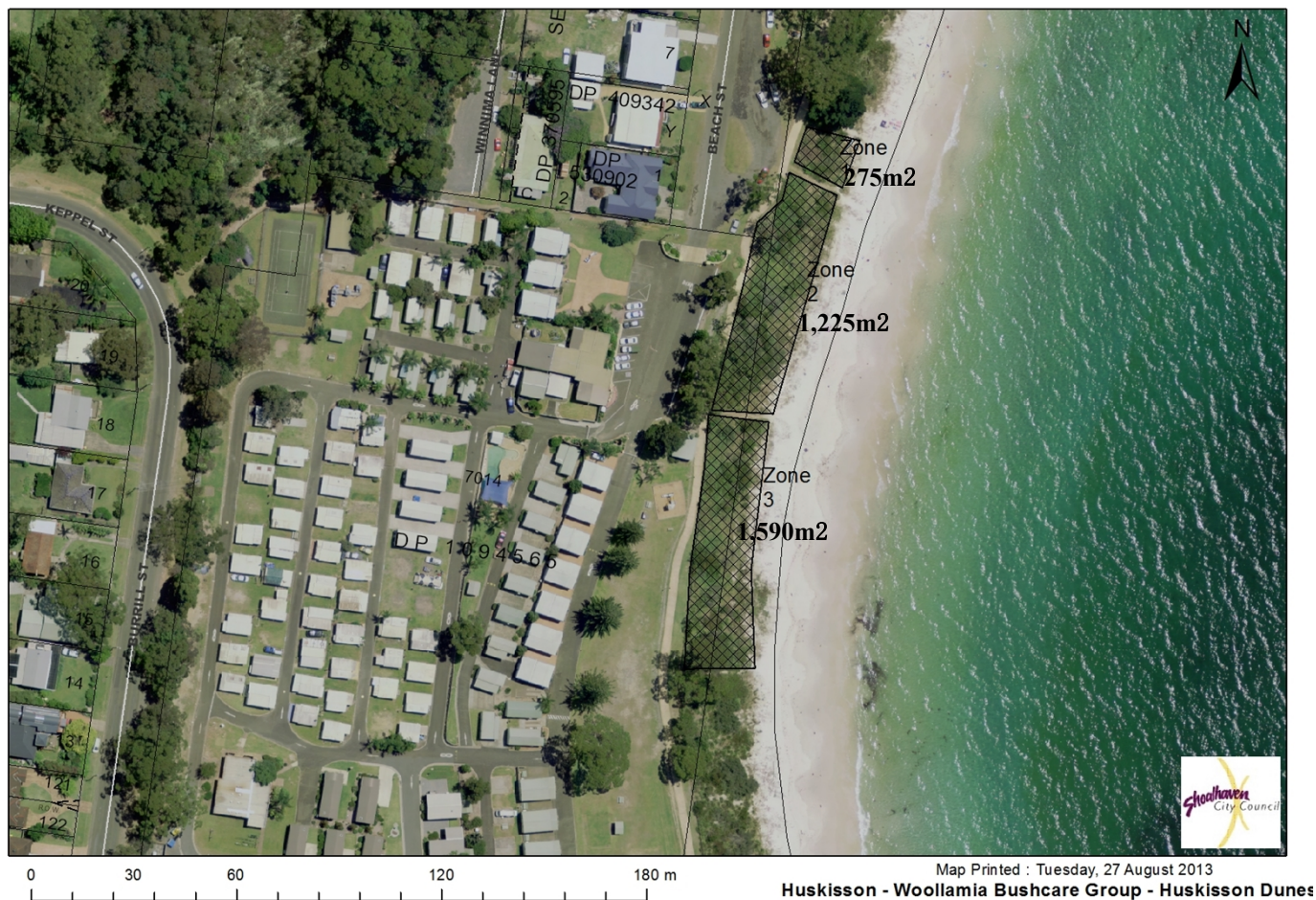
GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
<b>SOUTHERN BEACH SECTION</b>			
<p><i>The condition of the dunes remnant vegetation along this section is very poor, with little of the original remnant Eucalypt forest remaining. The potential for native regeneration from existing seed store is minimal due to the high level of site disturbance and high density and abundance of noxious and environmental weeds present on the site. 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, through the loss of hollow bearing large trees for nesting sites for birds and mammals. Exotic weeds cover approximately 50% of the site with little no recruitment of native species occurring (Proust Bushland Services, 2013).</i></p>			
<p><b>Zone 1 Actions:</b></p> <ol style="list-style-type: none"> <li>1. Spray exotic grasses such as Buffalo and Kikuyu Grasses to prepare site for revegetation.</li> <li>2. Brush matt areas of the dunes that have been left bare from spraying using <i>Acacia spp.</i> and <i>Leptospernum spp.</i></li> <li>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: Insure that mid and over-story species are planted in clump formations so as to maintain views and vistas from the adjacent cycleway, park area and caravan park.</i></li> <li>4. Compliment planting by direct seeding of <i>Lomandra spp.</i></li> <li>5. Erect temporary Bushcare signage (as per app. 2)</li> </ol>	<ul style="list-style-type: none"> <li>• H</li> <li>• H</li> <li>• M</li> <li>• L</li> </ul>	<ul style="list-style-type: none"> <li>• Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water</li> <li>• Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting</li> <li>• Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and</li> </ul>	<ul style="list-style-type: none"> <li>• Winter</li> <li>• All year</li> <li>• Autumn &amp; Winter</li> <li>• Autumn, Winter &amp; Summer</li> </ul>

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
		Summer season) <ul style="list-style-type: none"> <li>• Source seeds from local area and treat as follows:               <ul style="list-style-type: none"> <li>a. Cut Lomandra spp. seed heads when ripe and place in shallow trench along with pre-soaked water crystals</li> </ul> </li> </ul>	
<p><b>Zone 2 Actions:</b></p> <ol style="list-style-type: none"> <li>1. Spray exotic grasses such as Buffalo and Kikuyu Grasses to prepare site for revegetation.</li> <li>2. Brush matt areas of the dunes that have been left bare from spraying using <i>Acacia spp.</i> and <i>Leptospernum spp</i></li> <li>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 maintain views and vistas from the adjacent cycleway, park area and caravan park.</i></li> <li>4. Compliment planting by direct seeding of Lomandra spp.</li> <li>5. Erect temporary Bushcare signage (as per app. 2)</li> </ol>	<ul style="list-style-type: none"> <li>• H</li> <li>• H</li> <li>• M</li> <li>• L</li> </ul>	<ul style="list-style-type: none"> <li>• Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water</li> <li>• Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting</li> <li>• Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer season)</li> <li>• Source seeds from local area and treat as follows:               <ul style="list-style-type: none"> <li>a. Cut <i>Lomandra spp.</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Winter</li> <li>• All year</li> <li>• Autumn &amp; Winter</li> <li>• Autumn, Winter &amp; Summer</li> </ul>

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
		seed heads when ripe and place in shallow trench along with pre-soaked water crystals	
<p><b>Zone 3 Actions:</b></p> <ol style="list-style-type: none"> <li>1. Spray exotic grasses such as Buffalo and Kikuyu Grasses to prepare site for revegetation.</li> <li>2. Brush matt areas of the dunes that have been left bare from spraying using <i>Acacia spp.</i> and <i>Leptospermum spp</i></li> <li>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 maintain views and vistas from the adjacent cycleway, park area and caravan park.</i></li> <li>4. Compliment planting by direct seeding of <i>Lomandra spp.</i></li> <li>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.</li> <li>6. Erect temporary Bushcare signage (as per app. 2)</li> <li>7. Council and Bushcare Group to establish photo points</li> </ol>	<ul style="list-style-type: none"> <li>• H</li> <li>• H</li> <li>• M</li> <li>• L</li> <li>• H</li> </ul>	<ul style="list-style-type: none"> <li>• Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water</li> <li>• Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting</li> <li>• Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer season)</li> <li>• Source seeds from locally and treat as follows: <ol style="list-style-type: none"> <li>a. Cut <i>Lomandra spp.</i> seed heads when ripe and place in shallow trench along with pre-soaked water crystals</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Winter</li> <li>• All year</li> <li>• Autumn &amp; Winter</li> <li>• Autumn, Winter &amp; Summer</li> </ul>

<b>GROUP ACTION (these should relate to your project description)</b>	<b>PRIORITY</b>	<b>METHOD</b>	<b>TIME</b>
and review revegetation on site annually to insure that existing views are maintained		<ul style="list-style-type: none"> <li>• Make sure all Morning Glory vine is off native plants and spot spray with glyphosate (Roundup) at 20ml per litre</li> </ul>	

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



GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
<p><b>NORTHERN BEACH SECTION</b></p> <p>The northern section of Huskisson Beach Bushcare Action Plan is in better ecological condition than the Southern section, having said this there is still areas where the remnant vegetation condition is poor. There are remnant over-story canopy trees still existing however they are mainly isolated single canopy trees. The understory vegetation also has areas of high weed density and abundance mainly in the understory. Bushcare 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><b>Actions:</b></p> <ol style="list-style-type: none"> <li>1. Spray exotic grasses such as Buffalo and Kikuyu Grasses to prepare site for revegetation in small 20m x 20m areas at a time</li> <li>2. Undertake environmental and noxious weed control as required</li> <li>3. In areas where dune has been left bare weed control undertake brush matting with Acacia spp. and Leptospernum spp</li> <li>4. 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 maintain views and vistas from the adjacent cycleway, park area and caravan park.</i></li> <li>5. Erect temporary Bushcare signage (as per app. 2)</li> </ol>	<ul style="list-style-type: none"> <li>• H</li> <li>• H</li> <li>• M</li> <li>• M</li> </ul>	<ul style="list-style-type: none"> <li>• Spray in Winter months using low dilution rate of glyphosate at 1: 200 parts glyphosate/water</li> <li>• Control techniques as per best management practise</li> <li>• Source brush matting material from adjacent Asset Protection Zones/other vegetation clearing areas in Vincentia and Huskisson for brush matting</li> <li>• Undertake plantings in Autumn and Winter (avoid plating in hotter Spring and Summer season)</li> </ul>	<ul style="list-style-type: none"> <li>• Winter</li> <li>• All year</li> <li>• All year</li> <li>• Autumn</li> <li>–</li> <li>Winter</li> </ul>



### 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

**Attach a copy of the site/s risk assessment to the plan.**

#### 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:

10/11/2017

## 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>	2014	<i>Shoalhaven City Council</i>
<i>Draft Huskisson Beach Tourist Park – Landscape Plan (Foreshore Area)</i>	2011	<i>Shoalhaven City Council</i>
<i>Rehabilitation Management Plan for the Huskisson Beach Foreshore Reserve – Proust Bushland Services</i>	2013	<i>Shoalhaven City Council</i>
<i>Draft Estuary and</i>	2013	<i>Shoalhaven City Council</i>

<i>Coastal Asset Management Plan</i>		
<i>Foreshore Reserve Policy</i>	<i>2005</i>	<i>Shoalhaven City Council</i>

## 11. RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

<b>OVERSTOREY TREES</b>	
<b>Botanical</b>	<b>Common</b>
<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
<i>Leptospermum leavigatum</i>	Coastal Tea Tree
<b>SHRUBS</b>	
<b>Botanical</b>	<b>Common</b>
<i>Acacia longifolia</i>	Sydney Golden Wattle
<i>Acacia longifolia</i> spp. <i>sophorae</i>	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
<b>UNDERSTOREY (grasses, herbs, climbers)</b>	
<b>Botanical</b>	<b>Common</b>
<i>Carpobrotus glaucescens</i>	Pig Face
<i>Clematis aristata</i>	Old Man's 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

## 12. SITE WEED LIST

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> (Western 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

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 spp longifolia</i>	Sydney Golden Wattle
<i>Acacia longifolia spp 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 sp.</i>	Sea Spinach
<i>Commelina cyanea</i>	Scurvy Weed
<i>Dianella spp.</i>	Flax Lily
<i>Imperata cylindrica</i>	Blady Grass
<i>Isolepis nodosus</i>	Club Rush
<i>Lomandra longifolia</i>	Spiny Matt Rush
<i>Oplismenus sp.</i>	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 sp.</i>	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*









Appendix 2 – Temporary A Frame Bushcare Group Sign to be erected on site when the Bushcare Group are working

