



DYBALL RESERVE BUSHCARE ACTION PLAN 2017

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CONTACT INFORMATION

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Reserve Name:	Dyball Reserve
Reserve Number:	R78638
Land Tenure:	Crown T/M

1. BUSHCARE GROUP GOALS

Dyball Reserve Bushcare Group Action Plan Goals:

1. Maintain and protect biodiversity values in the short and long-term by:
 - a. Undertaking weed control using approved techniques, tools and chemicals.
 - b. Conduct a rabbit baiting program using approved techniques, tools and chemicals.
 - c. Undertake revegetation using local native plant species in strategic locations to improve connectivity between existing areas remnant native vegetation.
2. Provide information on the reserve's biodiversity values to raise awareness in the wider community.
3. Consult with the community and all key stakeholders to involve them in the implementation of the Bushcare group Action Plan.

NOTE: The Dyball Reserve Bushcare Group Action Plan takes its goals and actions from a management plan prepared by Samuel Dunnett as part of his major assignment for the Conservation and Land Management – Diploma (see attached).

2. Dyball Reserve Environmental Values

Dyball Reserve and Swan Lake surrounding area has the following environmental values:

- a) Swan Lake and nearby Berrara Creek, and their catchment support a great variety of habitats. The area is known to be a biodiversity hotspot, with nearly 500 plant species, 150 bird species, and at least 23 native mammal species known to occur in the area.
- b) There is little development in the catchments and large areas of land remain in unspoilt condition with their original floristic composition and structure. Most of the catchment areas lie in the Conjola National Park.
- c) Healthy seagrass, algae and foreshore vegetation provide important habitats, oxygenate the water and assist to stabilise the sediments on the lake and creek beds.
- d) A range of internationally protected wading birds use the foreshore vegetation, sand and mud flats, rocky shores, beach sands and wetlands for feeding, resting and breeding sites. Large populations of swans and other water birds are present on the lake when conditions are favourable.
- e) Wetlands to the north of Swan Lake and at the mouths of Mondayong and Teatree Creeks are protected under Coastal Wetlands State Environmental Planning Policy No 14. Other wetlands to the west and south are also significant.
- f) Populations of a number of rare or threatened plant and animal species are known to exist in the area. These include Black Bittern, Pied Oystercatcher, and Sooty Oystercatcher, Osprey, Hooded Plover, Powerful Owl, Glossy Black Cockatoo, Regent Honeyeater and the saltmarsh plants (*Wilsonia backhousia* and *Wilsonia rotundifolia*.) The Hooded Plover (Endangered) and Pied Oystercatcher (Vulnerable) have been recorded nesting at the entrances to both Swan Lake and Berrara Creek. They nest from October to February and may be affected if the lake is opened artificially during this time. This is one of the most important localities of Hooded Plovers in Australia (NPWS, 2002).
- g) The vegetation cover of Dyball Reserve fits the criteria of Coastal Estuary Swamp and Bangalay Sand Forest. Both of these are listed as Endangered Ecological Communities in the *NSW Threatened Species Conservation Act 1995*.

3. Threats to Dyball Reserve

Factors that pose a direct threat to the above environmental values of the reserve and Swan Lake are:

- Introduced animals, including foxes, domestic and feral cats and dogs, black rats and rabbits, threaten native animal and plant populations;
- Weeds, although scarce overall, are prevalent in some areas where they threaten native plant communities;

- Dumping of garden refuse and other material causes damage to bushland;
- Artificial opening of Swan Lake to the sea affects the natural fluctuations in populations of fish and other aquatic species and affects foreshore vegetation and wetlands;
- Significant vegetation and populations of threatened and rare species exist on land that is not part of a reserve system; and
- There is a risk that the invasive marine seaweed *Caulerpa taxifolia* could be introduced to the lake. This presents a threat to the biological diversity, amenity and economic viability of local tourist industries that depend on healthy coastal lakes in the Shoalhaven (Shoalhaven City Council, 2002).

4. DYBALL RESERVE BUSHCARE GROUP STRATEGY TABLE (to be in conjunction with attached site map)

NOTE: Timing Key: Short Term = within 12 months, Medium Term = within 24 months, Long Term = 2 to 5 years, On-going

Bushcare Group Action Plan Strategy/Objective	Bushcare Group Actions	Priority	Timing	Whom
Protect significant ecological communities and populations of rare or threatened species that are on and near Dyball Reserve	Conduct biological surveys throughout the reserve	High	Medium Term	Dyball Reserve Bushcare Group Coordinator and Council staff
	Make a list of a rare and endangered animals, plants and communities found at the reserve	High	Short Term	Dyball Reserve Bushcare Group Coordinator
	Investigate capability and appropriate uses of the reserve	Medium	Short Term	Dyball Reserve Bushcare Group Coordinator
Control populations of introduced animals and plants in Dyball Reserve	Develop management strategies for pests that exist in and near the reserve	High	Medium Term	Dyball Reserve Bushcare Group Coordinator
	Implement management strategies for pests on the reserve.	High	Ongoing	Dyball Reserve Bushcare Group with assistance from Council staff and/or contractors
Protect Cultural Resources in Dyball Reserve	A thorough search of the reserve was conducted as well as a history of the site via the internet.	Medium	Medium Term	Dyball Reserve Bushcare Group Coordinator
	Consult members of the local Aboriginal Land Council about the historical use of these sites and their significance to the Jerrinja people and register any Aboriginal Cultural Heritage sites with the	High	Short Term	Dyball Reserve Bushcare Group, Traditional Aboriginal Land Owners and Council and Archaeologist

Bushcare Group Action Plan Strategy/Objective	Bushcare Group Actions	Priority	Timing	Whom
	NSW Office of Environment and Heritage to improve protection of the sites			

5. SHOALHAVEN BUSHCARE GROUP ACTIVITIES TABLE (to be in conjunction with attached site map)

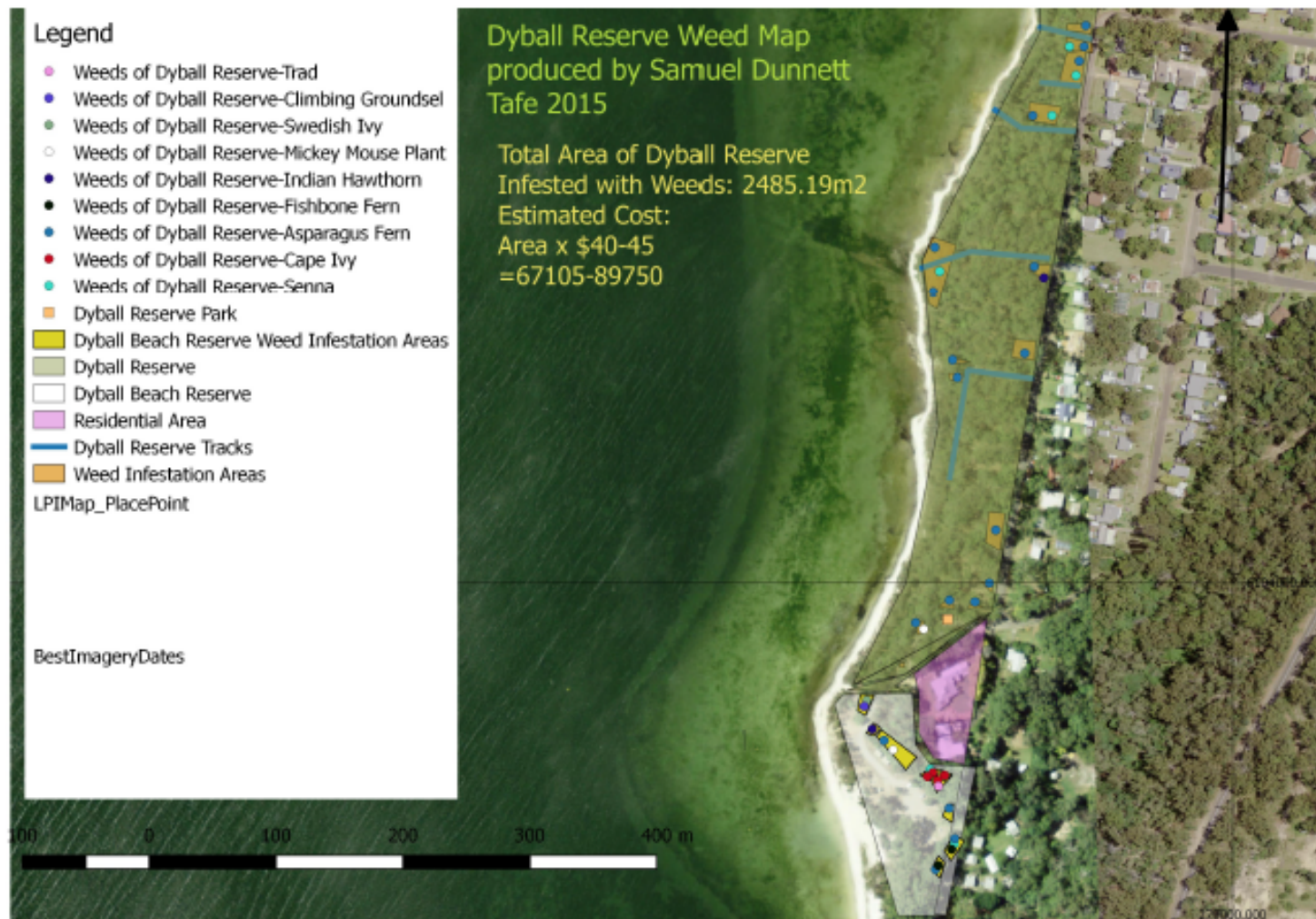
NOTE: Priority ranks: H = High (within 12 months); M = Medium (1-3 years); L = Low

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
Area 1: <ul style="list-style-type: none"> Conduct primary weed control 	H	Follow the weed removal or control techniques found in <i>Strategies for the Management of Target Pests in Dyball Reserve</i>	
Area 2: <ul style="list-style-type: none"> Conduct primary weed control Choose suitable locations within Area 2 for lethal baiting practices 	H H		
Area 3: <ul style="list-style-type: none"> Conduct primary weed control Choose suitable locations within Area 2 for lethal baiting practices 	H H		
Area 4: <ul style="list-style-type: none"> Conduct primary weed control No Chemical applications to be done within 2 metres of the shoreline. 	H H		

6. Dyball Reserve Management Annual Gantt Chart (sourced from the Dyball Reserve Management Plan, Dunnett. S)

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Conduct weed control												
Conduct feral animal control												
Conduct planting												
Maintain planting and site monitoring												
Summarise weed and feral animal control results												

7. DYBALL RESERVE BUSHCARE GROUP ACTION PLAN MAP



8. BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS/SWI name included
Safe Work Instruction – Herbicide Spraying	√	SWI129
Safe Work Instructions – Poisons – Handling	√	SWI160

9. COUNCIL SUPPORT

Shoalhaven Council will provide the following support:

- On-site supervision and support with a trained bush regenerator for 3 hours per month/11 months per year;
- Provision of tools/materials within budgetary constraints;
- Provision of all personal protection equipment;
- Technical advice and support; and
- Supply of a waste tipping account for the disposal of free waste up to \$27.

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

Yes √ No

11. 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

12. POSSIBLE FUTURE FUNDING

Project	Funding source
Bush regeneration and pest animal control	Various
Aboriginal Heritage assessment/Due diligence	Various

13. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

26/9/2020

14. PLEASE LIST OTHER LOCAL OR REGIONAL MANAGEMENT PLANS OR STRATEGIES THAT THIS PLAN RELATES TO

Name of document	Year it was produced	Produced by
Shoalhaven Council Foreshore Reserves Policy	2005	Shoalhaven City Council
Community Land Generic Plan of Management – Natural Areas	2001	Shoalhaven City Council
Swan Lake and Berrara Creek Natural Resource Management Strategy	2002	Shoalhaven City Council

15. BUSHCARE SITE RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

OVERSTOREY TREES	
Botanical	Common
<i>Allocasuarina littoralis</i>	Black she-oak
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Eucalyptus longifolia</i>	Woolly butt
<i>Eucalyptus pilularis</i>	Blackbutt
SHRUBS	
Botanical	Common
<i>Banksia spinulosa</i>	Hairpin Banksia
<i>Ficus coronata</i>	Sandpaper Fig
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Monotoca elliptica</i>	Tree Broom-heath
<i>Ricinocarpus pinifolius</i>	Wedding Bush
UNDERSTOREY (grasses, herbs, climbers)	
Botanical	Common
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Gahnia clarkei</i>	Tall saw-sedge
<i>Gahnia sieberiana</i>	Red-fruited saw-sedge
<i>Glycine clandestina</i>	Twining glycine
<i>Isolepis nodosa</i>	Knobby Club-rush
<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Morinda jasminoides</i>	Sweet Morinda

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

Noxious	Environmental	Control Method
Asparagus Fern (<i>Asparagus aethiopicus</i>)		Manual Removal and Chemical Control
	Cape Ivy (<i>Delairea odorata</i>)	Manual Removal and Chemical Control
	Swedish Ivy (<i>Plectranthus verticillatus</i>)	Chemical Control
	Climbing Groundsel (<i>Senecio angulatus</i>)	Chemical Control
	<i>Tradescantia fluminensis</i> (Wandering Jew)	Manual Removal and Chemical Control
	Fishbone Fern	Manual Removal and Chemical

	<i>(Nephrolepis cordifolia)</i>	Control
	Wild Gooseberry <i>(Physalis angulata)</i>	Manual Removal
	Indian Hawthorn (<i>Rhaphiolepis indica</i>)	Manual Removal and Chemical Control
	Winter Senna (<i>Senna pendula</i> <i>spp. pendula</i>)	Manual Removal and Chemical Control
	Micky Mouse Plant (<i>Ochna serrulata</i>)	Manual Removal and Chemical Control

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

OVERSTOREY TREES	
Botanical	Common
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus botryoides</i>	Bangalay Gum
<i>Casuarina glauca</i>	Swamp She-oak
<i>Acacia irrorata</i>	Black Wattle
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Banksia serrata</i>	Old Man Banksia
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Eucalyptus globoidea</i>	White Stringybark
<i>Acacia implexa</i>	Hickory Wattle
<i>Pittosporum undulatum</i>	Sweet Pittosporum
SHRUBS	
Botanical	Common
<i>Banksia spinulosa</i>	Hairpin Banksia
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Acacia longifolia</i>	Sydney Golden wattle
<i>Acacia longissima</i>	Long-leaf wattle
<i>Dodonaea viscosa</i>	Common Hopbush
<i>Pomaderris prunifolia</i>	Plum-leaf Pomaderris
UNDERSTOREY (grasses, herbs, orchids)	
Botanical	Common
<i>Adiantum aethiopicum</i>	Maiden Hair Fern
<i>Adiantum aethiopicum</i>	Maiden Hair Fern
<i>Apium prostratum</i> Labill. ex Vent. subsp. <i>prostratum</i>	Sea Celery
<i>Baumea juncea</i>	Bare Twig-rush
<i>Caladenia carnea</i>	Pink Fingers Orchid
<i>Caladenia carnea</i>	Pink Fingers Orchid

<i>Dianella caerulea</i>	Blue Flax-lily
<i>Dichondra repens</i>	Kidney Weed
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Isolepis cernua (Vahl) Roem. & Schult.</i>	Nodding Club Rush
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Pteridium esculentum</i>	Bracken Fern
<i>Pteridium esculentum</i>	Bracken Fern
<i>Pterostylis nutans</i>	Nodding Greenhood
<i>Pterostylis nutans</i>	Nodding Greenhood
<i>Stenotaphrum Secundatum</i>	Buffalo Grass
<i>Viola hederacea</i>	Ivy-leaved Violet
<i>Viola hederacea</i>	Ivy-leaved Violet
UNDERSTOREY (vines & climbers)	
Botanical	Common
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Marsdenia rostrata</i>	Milk Vine
<i>Parsonsia straminea</i>	Common Silkpod
<i>Stephania japonica</i>	Snake Vine