

# **Stanwell Park Beach Dune Vegetation Site Plan 2018**

**August 2018**

## REVISION HISTORY

<u>VERSION</u>	DATE	COMMENTS	REVISED BY
0.1	August 2016	New vegetation mapping and actions	Eli Kircher
0.2	June 2017	Revised actions	Martine Fraser
0.3	August 2018	Updated due to adoption of Tree and Vegetation Vandalism Policy	Martine Fraser

## Introduction

Council adopted a Wollongong Dune Management Strategy for the Patrolled Swimming Areas of 17 Beaches in March 2014. Management options were identified to address safety and recreational amenity issues, whilst also considering ecological values and the role of dunes in protection against coastal hazards.

Options relating to vegetation management are management of noxious and invasive weed species and management of subspecies of *Acacia longifolia* (Coastal Wattle).

This site plan will guide vegetation management works at Stanwell Park beach which will be undertaken by a number of parties including Council's dune crew and contractors, and Dunecare volunteers.

## Vegetation Maps

Vegetation mapping at Stanwell Park beach was undertaken on 29 July 2016 to inform works and provide a baseline to monitor progress. The site was divided into Bays as delineated by access paths. Each Bay was divided into patches to indicate the location and abundance of weeds and native plants.

## Management Actions and Priorities

Actions have been prioritised taking into consideration the following factors:

1. The overall aim to improve sight lines for lifeguards and lifesavers, recreational amenity and site access.
2. Safety of those working on the site. For example, potential for cuts from old wire and broken glass and eye injury from sticks and branches.
3. Suitability of actions to be undertaken by different parties. For example, some activities such as spraying and using mechanical equipment cannot be undertaken by Dunecare participants.
4. Severity and type of weed infestation. For example several Weeds of National Significance (WoNS) are present in the dunes. These include *Chrysanthemoides monilifera* subsp. *rotundata* (Bitou Bush), *Lantana camara* (Lantana), *Asparagus asparagoides* (Bridal Creeper), *Asparagus aethiopicus* (Asparagus Fern), *Senecio madagascariensis* (Fireweed), *Anredera cordifolia* (Madeira Vine) and *Opuntia* species (Prickly Pear).
5. Resources available.
6. Need to minimise weed reinfestation.

## General Planting Guidelines

Tube stock should be planted into bare areas at a density of one plant per square metre or one or two per square metre for grasses (NSW DLWC 2001). Planting will only occur in areas where weeds or dead vegetation are removed, or where vegetation vandalism has occurred, in accordance with the Tree and Vegetation Vandalism Policy.

Species to be planted should be selected from Council's adopted dune planting list as shown below (GHD 2014). The site has been divided into three management zones to aid selection of species for planting. Location of zones shown on the maps is indicative only.

Zone 1 – no planting

Zone 2 – species from incipient dune list can be planted

Zone 3 – species from fore-dune/crest and incipient dune lists can be planted

Note along the creek mouth in Bay B - Zone 2, grasses can also be selected from the creek mouth list.

Where planting is to replace tree or vegetation that was subject to vandalism, Council will respond in accordance with the Tree and Vegetation Vandalism Policy, adopted by Council on 23 July 2018. This may result in species selection that varies from these guidelines.

## Plant species list for dune planting – Appendix I Dune Management Strategy (GHD 2014)

For the patrolled beach management zones, Council will consider sight line requirements when selecting suitable species for planting. Note that several patrolled beaches do not have a hind dune, and in some patrolled beach management areas, tall-growing variants of subspecies of *Acacia longifolia* have created sight line problems for lifeguard/lifesavers and can exist as a monoculture.

### Incipient dune

Scientific Name	Common Name
<i>Actites megalocarpus</i>	Coastal Sowthistle
<i>Calystegia soldanella</i>	
<i>Canavalia rosea</i>	Beach Bean
<i>Carex pumila</i>	Strand Sedge
<i>Carpobrotus glaucescens</i>	Pigface
<i>Cynodon dactylon</i>	Couch
<i>Dianella congesta</i>	Coastal Flax Lily
<i>Ficinia nodosa</i>	Clubrush
<i>Melanthera biflora</i>	
<i>Poa billardiarei</i>	Coastal Fescue

Scientific Name	Common Name
<i>Scaevola calendulacea</i>	Scented Fanflower
<i>Senecio spathulatus</i>	
<i>Spinifex sericeus</i>	Spinifex
<i>Sporobolus virginicus</i>	Sand Couch
<i>Tetragonia tetragonioides</i>	Warrigal Greens, Warrigal Spinach

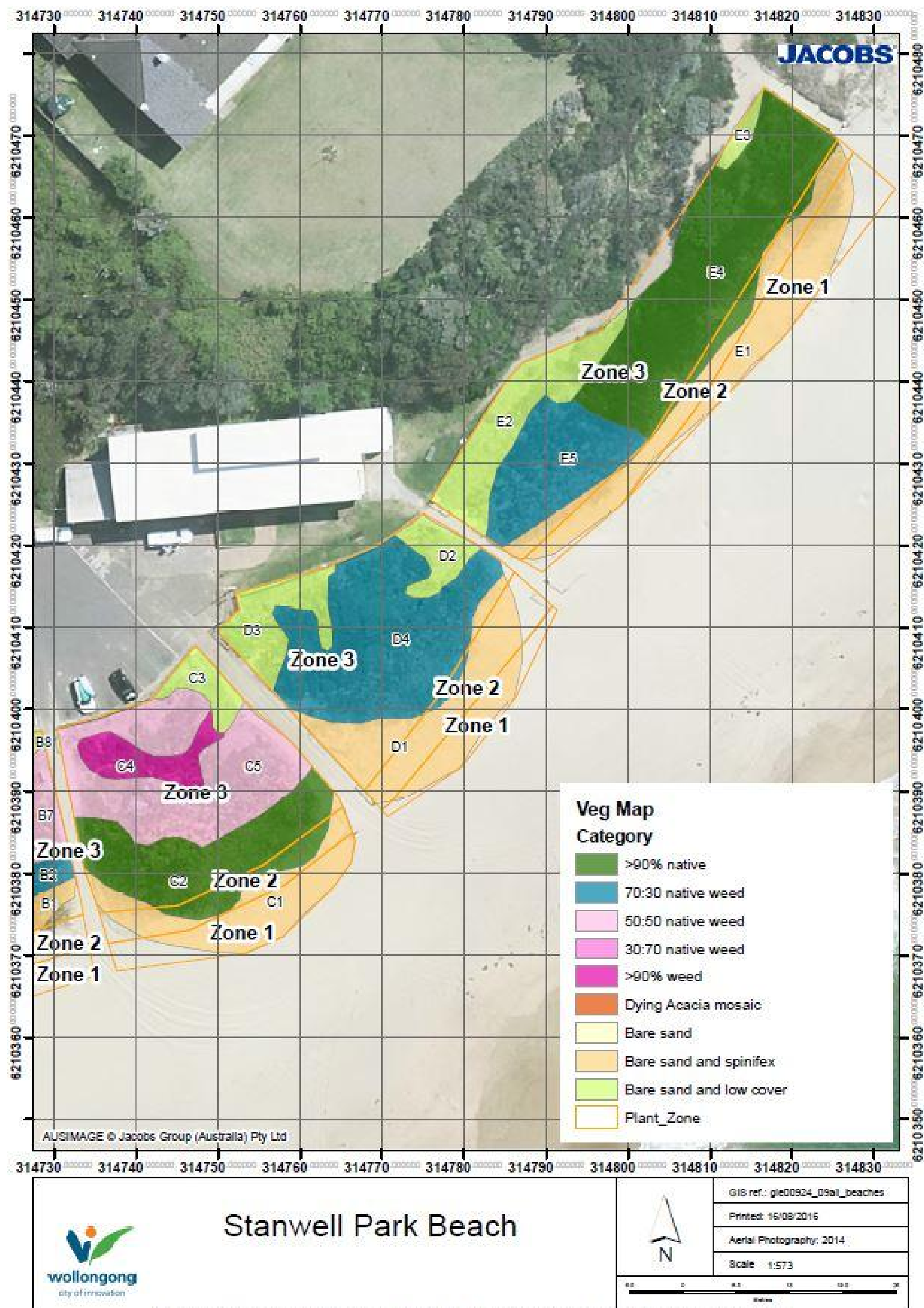
### Fore-dune and Crest

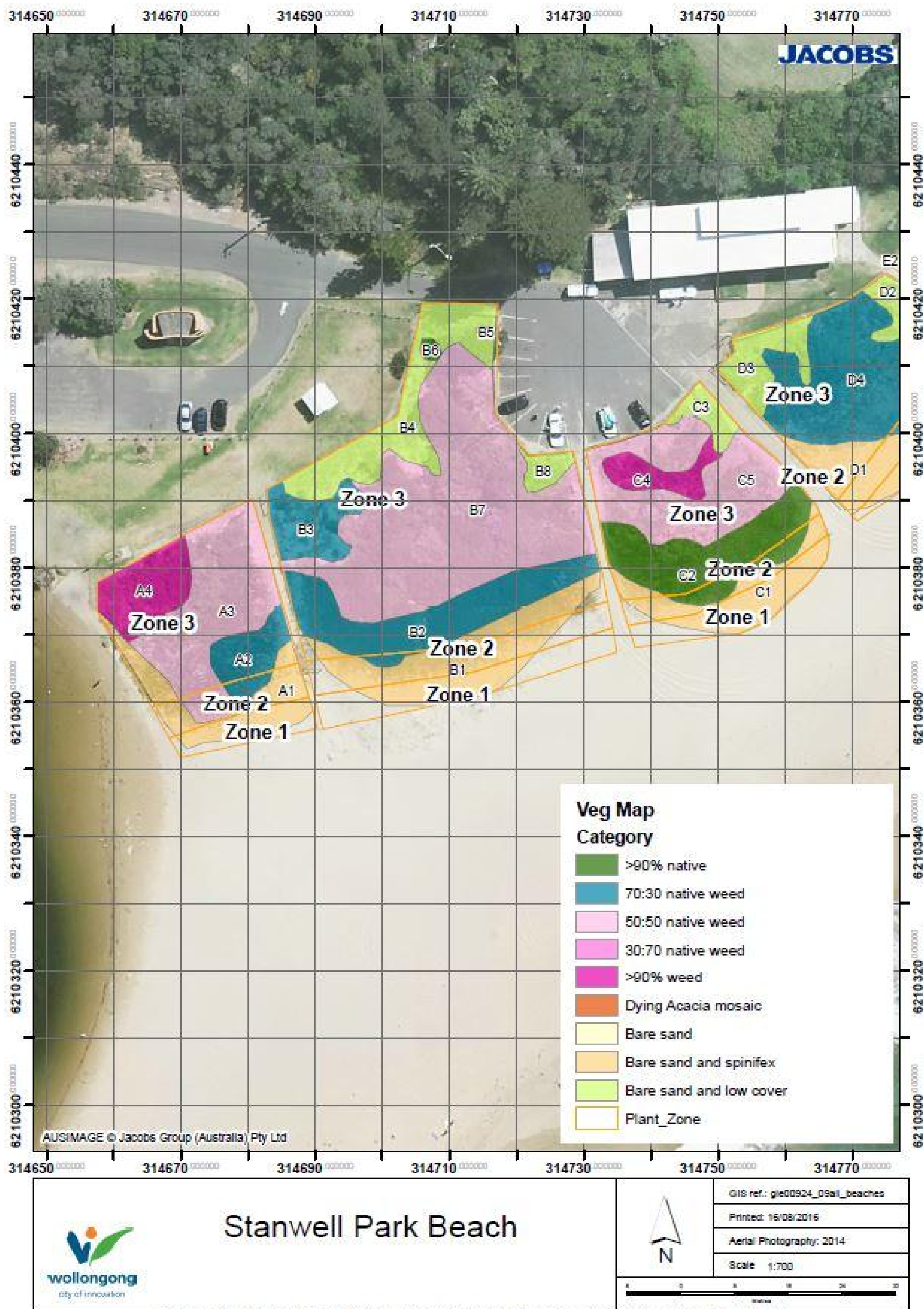
Scientific Name	Common Name
<i>Atriplex australasica</i>	Saltbush
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Cayratia clematidea</i>	Slender Grape
<i>Commelina cyanea</i>	Scurvy Weed
<i>Correa alba</i> var. <i>alba</i>	White Correa
<i>Dichondra repens</i>	Kidney Weed
<i>Hibbertia scandens</i>	Golden Guinea Flower
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
<i>Leucopogon parviflorus</i>	White-beard
<i>Lomandra longifolia</i>	Mat Rush
<i>Monotoca elliptica</i>	Tree Broom-heath
<i>Monotoca scoparia</i>	
<i>Myoporum boninense</i> subsp. <i>australe</i>	Boobialla
<i>Pelargonium australe</i>	Coastal Geranium
<i>Rhagodia candolleana</i> subsp. <i>candolleana</i>	Seaberry Saltbush
<i>Westringia fruticosa</i>	Coastal Rosemary

### Hind-dune and creek mouths

Scientific Name	Common Name
<i>Acronychia oblongifolia</i>	White Aspen
<i>Acronychia wilcoxiana</i>	Silver Aspen
<i>Alphitonia excelsa</i>	Red Ash
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	Coastal Banksia
<i>Carex appressa</i>	
<i>Casuarina glauca</i>	Swamp Oak
<i>Celtis paniculata</i>	Native Celtis
<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum

Scientific Name	Common Name
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Crinum pedunculatum</i>	Swamp- Lily
<i>Desmodium brachypodum</i>	
<i>Dodonaea triquetra</i>	Hop Bush
<i>Duboisia myoporoides</i>	Poison Corkwood
<i>Endiandra sieberi</i>	Corkwood
<i>Eucalyptus botryoides</i>	Bangalay
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Gahnia clarkei</i>	Saw-sedge
<i>Gahnia melanocarpa</i>	Saw-sedge
<i>Geitonoplesium cymosum</i>	Scrambling Lily
<i>Glochidion ferdinandi</i> var. <i>ferdinandi</i>	Smooth Cheese tree
<i>Glochidion ferdinandi</i> var. <i>pubens</i>	Hairy Cheese Tree
<i>Guioa semiglauc</i>	
<i>Hardenbergia violacea</i>	False Sarsparilla
<i>Homalanthus populifolius</i>	Bleeding Heart
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush
<i>Kennedia rubicunda</i>	Running Postman
<i>Leptospermum laevigatum</i>	Coastal Tea-tree
<i>Melaleuca linariifolia</i>	Snow in Summer
<i>Myrsine variabilis</i>	Muttonwood
<i>Notelaea venosa</i>	Native Olive
<i>Oplismenus imbecillis</i>	Basket Grass
<i>Pandorea pandorana</i> subsp. <i>pandorana</i>	Wonga Wonga Vine
<i>Pittosporum revolutum</i>	Rough-fruit Pittosporum
<i>Planchonella (Pouteria) australis</i>	Black Apple
<i>Poa poiformis</i>	Coastal Tussock
<i>Pseuderanthemum variabile</i>	Pastel Flower
<i>Synoum glandulosum</i> subsp. <i>glandulosum</i>	Bastard Rosewood
<i>Zoysia macrantha</i>	Coastal Couch







## Dune Vegetation Management Actions and Priorities – Stanwell Park beach

Information for mapping collected on the **29 July 2016**; and updates to actions were undertaken annually on **19 June 2017** and **6 August 2018**.

Priorities are Immediate (I), High (H), Medium (M) and Low (L). Timeframes - Immediate to start within <3 months, High 3-6 months, Medium 6-12 months, Low 12-18 months, subject to availability of resources.

Action statuses are either Ongoing, New, Complete or TBA (to be advised): Ongoing actions are actions stated in the previous dune management plan that remain relevant; New actions are newly arisen since the previous plan creation and currently relevant; Complete actions are completed since the previous plan, but may become relevant again in the future; and TBA actions are relevant pending future decisions only (e.g. due to threat of vandalism to plants) and funding availability.

Bay A	Status	Actions	Priority (I,H,M,L)	Patches within bay							
				1	2	3	4				
	Ongoing	Digging and disposal of small- medium sized <i>Asparagus aethiopicus</i> Asparagus Fern crowns	I		X	X	X				
	Ongoing	Treatment of large clumps of <i>Asparagus aethiopicus</i> Asparagus Fern	H		X	X	X				
	Ongoing	Treatment of <i>Senna pendula</i> Cassia	I			X	X				
	Ongoing	Treatment of <i>Osteospermum fruticosum</i> African Daisy	I			X	X				
	Ongoing	Treatment of <i>Acetosa sagittata</i> Turkey Rhubarb	I		X	X					
	TBA	Installation of a diversity of low growing native species in zones 2 and 3 following removal of weed species	L		X	X	X				
Bay B	Status	Actions	Priority	1	2	3	4	5	6	7	8
	Ongoing	Hand weed annual weeds from around native ground covers	I				X				
	Ongoing	Digging and disposal of small- medium sized <i>Asparagus aethiopicus</i> Asparagus Fern crowns (especially in B3)	I			X		X		X	X
	Ongoing	Treatment of large clumps of <i>Asparagus aethiopicus</i> Asparagus Fern	H			X		X		X	X
	Ongoing	Treatment of <i>Lantana camara</i>	I								X
	Ongoing	Treatment of <i>Osteospermum fruticosum</i> African Daisy	I	X						X	
	Ongoing	Treatment of <i>Bromus catharticus</i> Prairie Grass	I				X	X			
	Ongoing	Treatment of <i>Senna pendula</i> Cassia	I								X
	Ongoing	Treatment of <i>Senecio madagascariensis</i> Fireweed	H								X
	TBA	Installation of low growing native species in bare areas of zones 2 and 3	L				X				X
	TBA	Installation of native plant species in areas following weed removal in zones 2 and 3	L		X	X				X	
Bay C	Status	Actions	Priority	1	2	3	4	5			
	Ongoing	Digging and disposal of small- medium sized <i>Asparagus aethiopicus</i> Asparagus Fern crowns	I		X	X	X	X			
	Ongoing	Treatment of large clumps of <i>Asparagus aethiopicus</i> Asparagus Fern	H		X	X	X	X			
	Ongoing	Treatment of <i>Osteospermum fruticosum</i> African Daisy	I					X			
	Ongoing	Treatment of <i>Bromus catharticus</i> Prairie Grass	I			X	X				
	Ongoing	Treatment of <i>Senna pendula</i> Cassia	I					X			
	Ongoing	Treatment of <i>Araujia sericifera</i> Moth Vine	I				X	X			

	Ongoing	Treatment of <i>Phytolacca octandra</i> Inkweed	I			X					
	TBA	Installation of low growing native species in bare areas of zones 2 and 3	L			X					
	TBA	Installation of native plant species in areas following weed removal in zones 2 and 3	L			X	X	X			
Bay D	Status	Actions	Priority	1	2	3	4				
	Ongoing	Crush down dead vegetation including <i>Lantana camara</i> and <i>Asparagus aethiopicus</i>	I		X	X					
	Ongoing	Digging and disposal of small- medium sized <i>Asparagus aethiopicus</i> Asparagus Fern crowns	I		X	X	X				
	Ongoing	Treatment of large clumps of <i>Asparagus aethiopicus</i> Asparagus Fern	H		X	X	X				
	Ongoing	Treatment of <i>Lantana camara</i>	I				X				
	Ongoing	Treatment of <i>Acetosa sagittata</i> Turkey Rhubarb	I		X		X				
	TBA	Installation of low growing native species in bare areas of zones 2 and 3	L		X	X					
	TBA	Installation of native plant species in areas following weed removal in zones 2 and 3	L				X				
Bay E	Status	Actions	Priority	1	2	3	4	5			
	Ongoing	Digging and disposal of small- medium sized <i>Asparagus aethiopicus</i> Asparagus Fern crowns	I		X	X	X	X			
	Ongoing	Treatment of large clumps of <i>Asparagus aethiopicus</i> Asparagus Fern	H		X	X	X	X			
	Ongoing	Treatment of <i>Osteospermum fruticosum</i> African Daisy	I		X			X			
	Ongoing	Treatment of <i>Acetosa sagittata</i> Turkey Rhubarb	I	X	X		X	X			
	Ongoing	Treatment of <i>Senna pendula</i> Cassia	I					X			
	Ongoing	Treatment of <i>Bromus catharticus</i> Prairie Grass	I		X						
	TBA	Installation of low growing native species in bare areas of zones 2 and 3	L		X	X					

### General actions across the whole site

	Status	Actions	Priority (I, H, M, L)
	Ongoing	Litter removal	I
	Ongoing	Removal of annual weeds, eg. <i>Bidens pilosa</i> , <i>Conyza</i> sp., <i>Sonchus</i> sp., <i>Solanum</i> sp., <i>Stellaria media</i> , <i>Trifolium</i> sp.	I
	Ongoing	Treatment of weed grasses eg. <i>Ehrharta erecta</i> , <i>Pennisetum clandestinum</i> , <i>Bromus catharticus</i> around native plants	H
	Ongoing	Management of regenerating taller growing native plants	L

### References

GHD (2014) Wollongong Dune Management Strategy for the Patrolled Swimming Areas of 17 Beaches. Adopted by Wollongong City Council March 2014.

NSW Department of Land and Water Conservation (2001), Coastal Dune Management: A Manual of Coastal Dune Management and Rehabilitation Techniques, Coastal Unit, DLWC, Newcastle