

# PLANT COMMUNITY FIELD GUIDE



Coastal Sand Wallum  
Woodland-Heath



Map  
Unit  
34



# HCCREMS Extant Vegetation Mapping

Vegetation communities this guide have been classified and mapped according to Hunter Central Coast Regional Environment Management Strategy (HCCREMS) Vegetation Survey, using Mapping Units (MU). For more comprehensive and up-to-date information on this survey please contact HCCREMS.

<http://www.hccrems.com.au>

When you are starting out regenerating a bushland site, it may be that you don't know a lot of native species, but if you can provide a council vegetation officer, community support officer or local native plant nursery with some of the information from the Field Data sheet, it is likely that they would be able to identify the broader vegetation community.

The Site Orientation Booklet in this series has a useful contact list including:

Coastcare Officers

Landcare and Community Support Officers

National Parks Officers

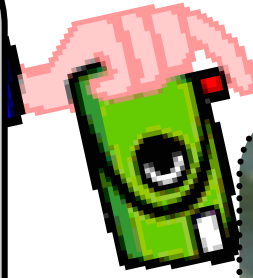
Land Managers

# Field Data Sheet

Habitat Type: <i>please circle</i>			
River bank	Wetland	Floodplain	Drainage line
Open Forest	Closed Forest	Rainforest	Disturbed / Grazed (Livestock)
Shrub(2-4m)	Heath (< 2m)	Grassland	Other:
Position on Slope : <i>please circle</i>			Altitude in metres
Watercourse	Flat	Lower Slope	Upper Slope
		Crest	Dune
Geology		Aspect: <i>please circle</i>	
		N NE E SE S SW W NW	
Soil Description			
Colour	Type	pH	Sand
			Clay Loam
Vegetation Description			
Vegetation community, association, type		Weed Invasion: <i>please circle</i>	
		High Medium Low	
Dominant upper storey species		Species diversity: <i>please circle</i>	
		High Medium Low	
Dominant middle storey species		Species diversity: <i>please circle</i>	
		High Medium Low	
Dominant lower storey/groundcover species		Species diversity: <i>please circle</i>	
		High Medium Low	

# Common Coastal Vegetation

On many sites, there may be some overlapping of these species and other species. You need to make a decision as to which species is most numerous on the site. If you are not sure, then take a photo and collect some foliage (not just one leaf) and capsules, and consult your support network.



*Eucalyptus robusta*  
Swamp Mahogany



*Eucalyptus robusta*  
Swamp Mahogany

In areas where natural vegetation communities remain or have been reinstated, foredune areas are fairly well-vegetated with *Spinifex*, *Scaevola*, *Carpobrotus* and *Acacia*, while the hind-dunes are generally a mix of native plant species; *Banksia integrifolia*, *Banksia serrata*, *Leptospermum* spp., *Monotoca elliptica*, *Melaleuca nodosa*, *Allocasuarina distyla*.

*Scaevola calendulacea*  
Scented Fan Flower



*Carpobrotus*  
Pigface

In some cases, at Redhead and Frenchman's Beach for example, the *Acacia sophorae*-*Banksia integrifolia*-*Leptospermum laevigatum* dune thicket has been reconstructed over large areas and Bitou weed control has formed a substantial component of dune maintenance work.

In these reconstructed native plant communities, low species diversity is a common issue, though the opportunity now exists for enrichment planting of mosaics of unrepresented local dunal communities to be established as part of Landcare/Dunecare's follow-up of dune maintenance and weed control works.



*Acacia sophorae*  
Coastal Wattle



*Banksia integrifolia*  
Coastal Banksia



*Leptospermum laevigatum*  
Coastal Tea tree



*Chrysanthemoides monilifera*  
Bitou Bush



Before and after Bitou Bush removal

# HCCREMS Extant Vegetation Mapping

The following summary does not include the NPWS lands- Wallarah, Awabakal, Glenrock, Worimi Conservation Lands or Tomaree. NPWS have their own vegetation mapping, management recommendations, and support officers for volunteer workers.

Any volunteer group contemplating work within any of the NPWS estate should first contact the relevant NPWS officer. Contact details are in the Site Orientation workbook

HCCREMS mapping lists the following vegetation communities for the coastal zone:

- **Catherine Hill Bay (east of Flowers Drive)**  
MU34 Coastal Sand Wallum Woodland-Heath  
MU53 Beach Spinifex
- **Caves Beach/Hams Beach (east of Pacific Drive), Frenchman's Beach, Crabs Creek, Swansea Heads**  
MU34 Coastal Sand Wallum Woodland-Heath  
MU50 Coastal Sand Scrub
- **Blacksmiths**  
MU34 Coastal Sand Wallum Woodland-Heath
- **Redhead**  
MU34a Heath  
MU34 Coastal Sand Wallum Woodland-Heath  
MU37 Swamp Mahogany-Paperbark Forest  
MU50 Coastal Sand Scrub  
MU53 Beach Spinifex
- **Dudley**  
MU1 Coastal Wet Gully Forest  
MU6 Coastal Narrabeen Moist Forest  
MU15 Coastal Foothills Spotted Gum Ironbark Forest  
MU48 Coastal Clay Heath  
MU51 Coastal Headland Complex
- **Stockton Bight**  
MU33 Coastal Sand Apple- Blackbutt Forest-Beach Sand/ Sand

Remember that working any part of our coast or coastal lake or estuary system is likely to involve working on a site of potential Aboriginal heritage. A starting point for any project is consultation with the LALC, and you need to remember that grant funding usually allows for a cultural assessment of your site by an appropriate officer.

As the Map Unit Profiles are necessarily generalizations, the accuracy of this mapping is questionable in some sites, and there is no mapping as such for the immediate Newcastle coastal zone. There are important omissions of quite small remnants of some significant vegetation communities:

**Endangered Ecological Community- Littoral Rainforest**

There are some small disconnected remnants of littoral rainforest communities at Swansea Heads- at Little Beach on the slope from the headland down to the beach, at Illawong Park a remnant dwarfed to three metres by wind-shear, at Crabs Beach as a regrowth mosaic beneath Casuarina and Banksia, and at Salts Bay. There are similar disconnected remnants on Dudley Bluff.

**Endangered Ecological Community- Themeda grasslands on seacliffs and coastal headlands**

There are poorly managed remnants of this community at Illawong Park, at Swansea Heads near the Coastguard station, at Dudley Bluff, and at King Edward Park. Trees In Newcastle is currently working in and near the remnant in King Edward Park with funding through Newcastle City Council.



Salts Bay  
stabilisation  
work

# A description of a plant community

Abridged from [http://www.lhccrems.com.au/biodiversity/mu32\\_34.html#mu34](http://www.lhccrems.com.au/biodiversity/mu32_34.html#mu34)

## MU34 Coastal Sand Wallum Woodland-Heath

### MU34a Heath

**Canopy Label:** *Banksia aemula* / *Corymbia gummifera* / *Angophora costata*

**Structural Classification (Specht):** Low Open Forest- Low woodland-Heathland

#### Description

This dry woodland - heath assemblage is marked by the dominance of Wallum Banksia (*Banksia aemula*). It occurs largely on Pleistocene sands across the Tomago Coastal Plain, perched dunes of Bouddi Peninsula (Mc Rae, 1990) and coastal headlands east of Lake Macquarie.

Structurally, this community varies from heathland in exposed areas of low relief and to low open forest in areas of increased shelter. As Heathland (mapped as MU34a where API delineates structural variation), a shrub layer of *Banksia aemula*, *Leptospermum trinervium*, *Isopogon anemonifolius*, and *Ricinocarpus pinifolius* to a height of 2 metres dominates this community.

Where it forms a woodland *Angophora costata* and *Corymbia gummifera* emerge above the heathland as low trees to a height of 10 metres. Where this community occurs as low open forest, the canopy can also include *Eucalyptus piperita*, and *Eucalyptus signata*.

A large example of this form is found in Port Stephens across the Tomago Sandbeds. Where this occurs the understorey is somewhat less dense than the heathland variation, it still contains Wallum Banksia however includes shrubs such as *Leptospermum trinervium*, *Acacia ulicifolia* and *Lambertia formosa*. Where fire is frequent *Pteridium esculentum* can dominate the understorey.

This community type is related to Map Unit 33: Coastal Sand Apple Blackbutt Forest which occurs on higher dunes of deeper soils. Close similarity with Map Unit 49 Wallum Clay Heath is apparent. However it is distinguished by its marked abundance of *Melaleuca sieberi* and moisture tolerant sedges in the lowest stratum.

Map Unit 36: Tomago Sand Swamp Woodland merges with Coastal Sand Wallum Heath around Williamtown. The absence of *Banksia aemula*, and presence of *Eucalyptus Parramattensis* subsp *decadens* and *Melaleuca nodosa* are indicative of the differences .

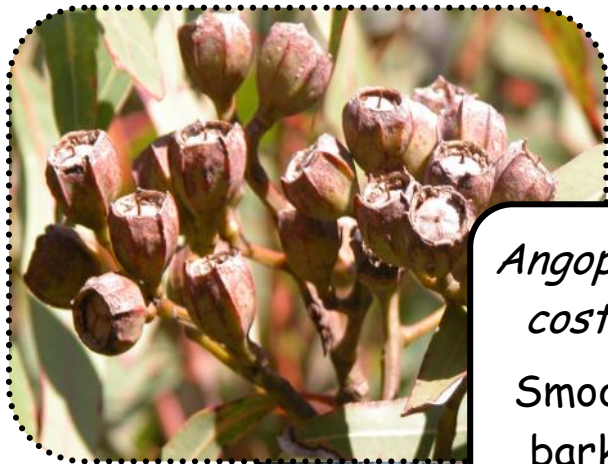
# MU34 coastal Sand Wallum Woodland-Heath

## MU34a Heath

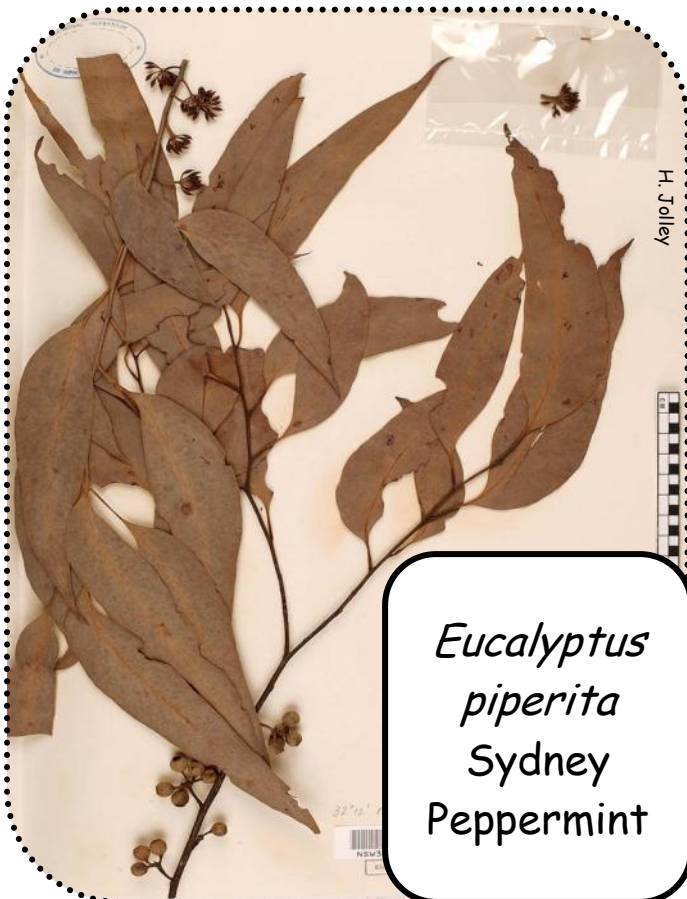
Stratum	Scientific name	% in community	Common name	
<b>Tallest</b>	<i>Angophora costata</i>	43		
	<i>Corymbia gummifera</i>	36		
	<i>Eucalyptus piperita</i>	20		
	<i>Eucalyptus signata</i>	13		
	<i>Eucalyptus pilularis</i>	6		
	<i>Eucalyptus camfieldii</i>	3		
	<i>Eucalyptus capitellata</i>	1		
<b>Mid</b>	<i>Banksia aemula</i>	83		
	<i>Isopogon anemonifolius</i>	76		
	<i>Ricinocarpos pinifolius</i>	66		
	<i>Leptospermum trinervium</i>	63		
	<i>Leucopogon ericoides</i>	56		
	<i>Acacia ulicifolia</i>	53		
	<i>Acacia terminalis</i>	36		
	<i>Lambertia formosa</i>	36		
	<i>Ochrosperma lineare</i>	6		
	<i>Allocasuarina distyla</i>	30		
	<b>Lowest (&lt;1m)</b>	<i>Bossiaea ensata</i>	70	
		<i>Gonocarpus teucroides</i>	66	
		<i>Monotoca scoparia</i>	56	
<i>Pimelea linifolia</i>		56		
<i>Pteridium esculentum</i>		56		
<i>Aotus ericoides</i>		53		
<i>Eriostemon australasius</i>		53		
<i>Bossiaea heterophylla</i>		50		
<i>Lomandra glauca</i>		50		
<i>Dillwynia retorta</i>		46		
<i>Leucopogon deformis</i>		10		
<b>Vines and Epiphytes</b>	<i>Cassytha glabella</i> forma <i>glabella</i>	53		

A picture guide to plants in  
 MU34 coastal Sand Wallum Woodland-Heath  
 MU34a Heath

Tall trees



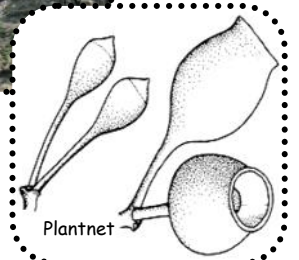
*Angophora  
 costata*  
 Smooth-  
 barked  
 Apple



*Eucalyptus  
 piperita*  
 Sydney  
 Peppermint



*Corymbia  
 gummifera*  
 Red  
 Bloodwood



A picture guide to plants in  
MU34 coastal Sand Wallum Woodland-Heath

MU34a Heath

Mid storey



*Banksia aemula*  
Wallum Banksia



*Isopogon anemonifolius*  
Drumsticks



*Acacia ulicifolia*  
Prickly Moses



*Allocasuarina distyla*  
Scrub She-oak



A picture guide to plants in  
MU34 coastal Sand Wallum Woodland-Heath  
MU34a Heath

Lowest storey



*Gonocarpus  
teuroides*  
Raspwort



*Pteridium  
esculentum*  
Bracken Fern



*Bossiaea  
heterophylla*  
Variable  
Bossiaea



*Dillwynia  
retorta*  
Eggs and Bacon



# References

Hunter Councils Inc (2003) Lower Hunter and Central Coast Regional Environmental Strategy  
[http://www.lhccrems.com.au/biodiversity/mu32\\_34.html#mu34](http://www.lhccrems.com.au/biodiversity/mu32_34.html#mu34) (Accessed 12.05.07)

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# Image Credits

All plant photographs unless otherwise stated are by Peter Saunderson, TIN volunteer.

Bush Regeneration photos are from the TIN collection unless otherwise stated.

Cover - Botanical Clip Art -Down Under Collection Deluxe CD-New Horizons Educational Software .[www.nh.com.au](http://www.nh.com.au)

Page 9 *Corymbia gummifera* : Trunk/sap pic Marita Macrae [http://www.pittwater.nsw.gov.au/environment/plants\\_\\_and\\_\\_animals/native\\_animals/sugar\\_gliders](http://www.pittwater.nsw.gov.au/environment/plants__and__animals/native_animals/sugar_gliders) (accessed 9/8/07)

Page 9 *Corymbia gummifera* Gumnuts-Plantnet, Tree D. Hardin Dec 2004 ©Royal Botanic Gardens & Domain Trust, Sydney Australia <http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Corymbia~gummifera> (accessed 9/8/07)

Page 9 *Eucalyptus piperita* Photo H. Jolley Mar 2003 ©Royal Botanic Gardens & Domain Trust, Sydney Australia <http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&photo=31&file=23/633/324161.jpg> (accessed 9/8/07)

# Useful people

The Site Orientation Booklet in this series has a useful contact list including Coastcare Officers, Landcare and Community Support Officers, National Parks Officers Land Managers



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