

793163

MULCAHY BAY

The Mulcahy Bay Land System covers all beaches and dunes in relatively protected bays on the west coast. Recent sands occur throughout and localised outcrops of Precambrian conglomerate and schist are found on some beaches (e. g. Mulcahy Bay). Sand blow outs are a common feature and appear to form at low points in the dune or where foredune vegetation has been disturbed. The blows extend inland covering and killing dune vegetation. In extreme cases sand may be transported for considerable distances, for example, a deposit occurs on the South West Cape Range (at 100 m) and was probably derived from Window Pane Bay a kilometre to the west.

Colour aerial photographs taken after a fire in 1985 revealed that it mainly affected sedgeland/heath of the Giblin River Land System. Taller vegetation associated with this land system was affected by occasional spotting which rarely seemed to spread. This is difficult to explain as the soils are well drained and the scrub and associated litter are likely to dry out rapidly in hot, dry weather. Protection is possibly afforded by on shore breezes, which frequently occur, or by poorly drained areas and small lakes which are situated behind the dunes.

Deep uniform sands are a typical feature of this land system. There is a general absence of horizon differentiation except for a dark surface horizon resulting from the accumulation of organic matter. Buried organic horizons occur at various depths

at Mulcahy and Stephens Bays. The sands are usually very deep and may have surface peat horizons which form in response to high rainfall, low evaporation and high humidity rather than poor drainage.

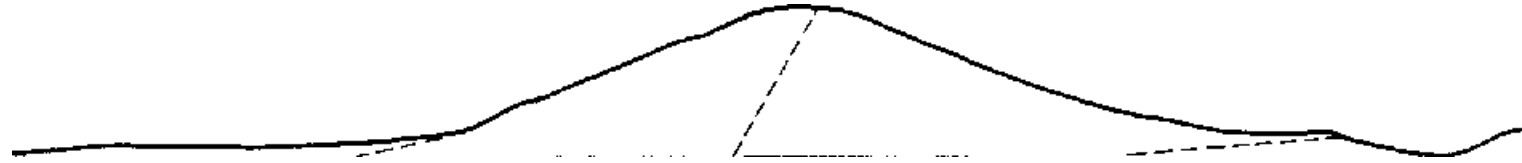
Beaches and recently disturbed foredunes are unvegetated. The first colonisers on the foredunes appear to be *Carpobrotus rossii*, *Senecio spathulatus* and *Isolepis nodosa*. The most stable positions (on foredunes) have scrub dominated by *Leucopogon parviflorus*, *Acacia sophorae*, *Helichrysum paraliu* and *Correa backhousiana*. Backdunes often have very thick scrub or heath with *Eucalyptus nitida*, *Pomaderris apetala*, *Correa backhousiana* and *Banksia marginata* common. Not included in the land system diagram because they cover small areas are protected backdune gullies which support *Eucalyptus nitida* forest with an understorey of *Dicksonia antarctica*, *Pittosporum bicolor*, *Melaleuca squarrosa*, *Clematis aristata*, *Drimys lanceolata*, *Monotoca glauca*, *Coprosma nitida*, *Cyathodes juniperina*, *Pimelea drupacea* and *Dianella tasmanica*. In these situations sandy peat (0. 20m) overlies a dark grey sand. Rivers or creeks typically flow around the margins of this land system. Although river and creek banks are often dominated by scrub, air photo examination reveals rain forest and mixed forest in places. Small lakes (e. g. at Mulcahy Bay, Nye Bay and Sandblow Bay) and poorly drained depressions have developed behind some dunes. These are surrounded by *Leptospermum scoparium* and *Melaleuca* spp. scrub. An infestation of spear thistle (*Cirsium vulgare*) was found in a sandy gully at Mulcahy Bay.

Nature conservation is the major land use. It is fairly inaccessible with fisherman and scientific researchers the only visitors.

LAND SYSTEM
MULCAHY BAY

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Area (ha): 2158



ALTITUDINAL RANGE (m)	0-300 (usually below 50m)	APPROXIMATE ANNUAL RAINFALL (mm) 1200-1500 mm		
SITE NO. /ALTITUDE (m) /ASPECT	NO site data	(170/10/W) (187/10/SW)	171/15/-	180/5/-
TOPOGRAPHY		Beaches and dunes (along the west coast)		
Position	Beaches	Foredunes	Backdunes	Creek banks
Typical Slope(°)	-	20-40	0-10	0-3
Proportion (%)	30	25	35	10
GEOLOGY		Recent sands		
NATIVE VEGETATION	-	Mosaic of scrub, herbs and sand scrub to closed-heath	Closed-	Open to closed scrub
Floristic Association (See Appendix 1 for common names)	Unvegetated	Leucopogon parviflorus Correa backhousiana Helichrysum paralium Pteridium esculentum Acacia sophorae Senecio spathulatus Carpobrotus rossii Acaena novae-zelandiae Olearia	Eucalyptus nitida Pomaderris apetela Correa backhousiana Cyathodes juniperina Banksia marginata Pteridium esculentum Pimelea drupacea Drymophila cyanocarpa Hydrocotyle javanica Microsorium	Leptospermum lanigerum Acacia sochorae Leucopogon parviflorus Banksia marginata Pomaderris apetala Olearia algida Pteridium esculentum Exocarpos
SOIL Surface (A or P horizon) Colour (wet) and texture	Sands	Dark grey (5 YR 4/1 or 10 YR 4/1) sand over greyish brown (10 YR 5/2) or light olive brown (2.5 Y 5/4) sand - occasionally with yellowish brown speckles.	Blade (10 YR 2/1) sandy fibrous peat in places over a brown (10 YR 5/3) sand over a very dark grey (10 YR 3/1) sand	Pale brown (10 YR 6/3) sand over a dark greyish brown (10 YR 4/2) sand over a greyish brown (10 YR 5/2) sand
Primary Profile form	-	Uniform	Uniform	Uniform
Depth surface horizon(m)	-	0.10-0.80	0.50	0.40
Typical total depth(m)	-	>3.00	>1.00	>1.50
Permeability	High	High	High	High
LAND USE		Nature conservation		
HAZARD				

Photo 43



A blow out in the dunes at Mulcahy Bay which covered and killed dune vegetation

Photo 44



An active blow out at Stephens Bay Going Hill forms the point in the background



Photo 45 The foredune component at Mulcahy Bay