

CTS Cactus Land System

- Area:** 415.0 km²
- Landscape:** Coastal dunes of mixed calcareous and siliceous sand, overlying calcreted calcarenite of the Bridgewater Formation, sometimes exposed on cliffs and rises. There are occasional depressions and flats with salt lakes.
- Annual rainfall:** 275 – 405 mm average
- Main soils:**
Semaphore - H1a/H3 (Shelly Rudosol)
 Very thick sand comprising mixed shell and quartz grains.
Yamba - N2 (Hypersalic Hydrosol)
 Variable highly saline sand and clay of coastal flats and swamps.
- Minor soils:**
Russell - B1 (Supravescent, Petrocalcic, Lithocalcic Calcarosol)
 Medium thickness highly calcareous loamy sand to sandy loam containing increasing amounts of rubble with depth, over sheet calcrete at less than 50 cm.
Shallow Haslam - H1b (Supravescent, Hypercalcic Calcarosol / Shelly Calcarosol)
 Thick highly calcareous sand, becoming more calcareous with depth, over calcreted calcarenite within 100 cm. These soils may consist of up to 90% fine shell fragments.
Haslam/Wookata - H1c (Hypervescent, Regolithic, Supracalcic Calcarosol)
 Highly calcareous loamy sand becoming slightly more clayey and very highly calcareous with variable rubbly carbonate at depth.
Wookata - A1 (Supravescent, Hypercalcic / Lithocalcic Calcarosol)
 Highly calcareous (more than 40% CaCO₃) soft loamy sand to sandy loam grading to very highly calcareous sandy loam with variable rubble content.
- Summary:** The coastal dune systems are fragile environments where conservation is the primary aim of management. The potential for wind erosion is high to extreme due to the great depth of sand, and the height and exposure of the dunes. Loss of protective cover in the past has resulted in severe erosion of some sections of dune.



Soil Landscape Unit summary: 13 Soil Landscape Units (SLUs) mapped in the Cactus Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
MzC	2.6	Stony slopes	Russell	D	Shallow stony soil, exposed position.
WFC	58.0	High dunes	Semaphore	D	High to extreme wind erosion potential - bare dunes are actively drifting. Very low fertility. High conservation value land of no agricultural use. Protection from livestock grazing and feral animals is crucial. Minor saline flats and salt pans are scattered between the dunes.
WFD	3.8	Moderate dunes	Semaphore	D	
WFE	0.6	Low dunes	Semaphore	D	
WFF	4.2	High dunes	Semaphore	V	
		Salt flats	Yamba	L	
WFH	0.6	Low dunes	Semaphore	E	
		Salt flats	Yamba	E	
WFC	13.2	High dunes (bare)	Semaphore	D	
WFD	1.5	Moderate dunes (bare)	Semaphore	D	
WO-	0.4	Salt flat	Yamba	D	
WR-	12.1	Salt flat	Yamba	V	High salinity on flats and extreme wind erosion potential on dunes.
		High dune	Semaphore	E	
WX-	0.3	Cliffs / frontal slopes	Semaphore	E	High wind erosion potential and extreme exposure.
			Russell	E	
YID	1.8	Moderate sandhills	Shallow Haslam	E	Moderately high wind erosion potential and low soil fertility.
		Rises	Wookata	C	
		Rises	Haslam/Wookata	C	
YIK	0.9	Low sandhills	Shallow Haslam	E	Moderate wind erosion potential and low soil fertility.
		Rises	Wookata	C	
		Rises	Haslam/Wookata	C	

PROPORTION codes assigned to Soil Landscape Unit (SLU) components:

- D Dominant in extent (>90% of SLU)
- V Very extensive in extent (60–90% of SLU)
- E Extensive in extent (30–60% of SLU)
- C Common in extent (20–30% of SLU)
- L Limited in extent (10–20% of SLU)
- M Minor in extent (<10% of SLU)

Further information: [DEWNR Soil and Land Program](#)

