

KEV Kevin Land System

Area: 364.3 km²

Landscape: Extensive near coastal salt lake / salt flat systems including back swamps and samphire flats on low lying ground extending inland. Associated with the saline flats are higher areas of coastal sands, calcreted calcarenite of old coastal dunes (Bridgewater Formation), highly calcareous Woorinen Formation deposits, highly calcareous sands, and Ripon / Bakara Calcretes.

Annual rainfall: 295 – 375 mm average

Main soils: Yamba - N2a (Hypersalic Hydrosol)
Variable highly saline sand and clay of coastal flats and swamps.
Saline soil - N2b (Salic / Hypersalic Hydrosol)
Miscellaneous wet saline soil influenced by saline groundwater tables. Gypsum lenses are characteristic of these profiles.

Minor soils: Chintumba - B1b (Hypervescent, Petrocalcic, Lithocalcic Calcarosol)
Medium thickness highly calcareous sandy loam to sandy clay loam containing increasing amounts of rubble with depth, over sheet calcrete at less than 50 cm.
Russell - B1a (Supravescent, Petrocalcic, Lithocalcic Calcarosol)
Medium thickness very highly calcareous loamy sand to sandy loam containing increasing amounts of rubble with depth, over sheet calcrete at less than 50 cm.
Semaphore - H1a/H3 (Shelly Rudosol)
Very thick sand comprising mixed shell and quartz grains.
Wookata - A1b (Supravescent, Hypercalcic / Lithocalcic Calcarosol)
Very highly calcareous (more than 40% CaCO₃) soft loamy sand to sandy loam grading to very highly calcareous sandy loam with variable rubble content.
Wookata (shallow) - A1a (Supravescent, Petrocalcic, Lithocalcic Calcarosol)
Very highly calcareous (more than 40% CaCO₃) soft loamy sand to sandy loam grading to very highly calcareous rubbly sandy loam, over calcrete deeper than 50 cm.
Shallow Haslam - H1b (Supravescent, Regolith, Hypercalcic Calcarosol)
Highly calcareous loamy sand to sand over calcrete usually at depths of between 50 and 100 cm.
Haslam - H1c (Supravescent, Hypercalcic Calcarosol OR Shelly Calcarosol)
Thick highly calcareous sand, becoming more calcareous with depth and continuing below 100 cm. These soils may consist of up to 90% fine shell fragments.

Summary: Low lying saline flats with little or no agricultural value. Associated with the flats are low rises of highly calcareous sandy loams, shallow stony sandy loams and highly calcareous sands. The deeper sandy loams have some potential, although wind erosion potential and low fertility limit productivity. Gypsum mining is extensive on this land.



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

SLU	% of area	Component	Main soils	Prop#	Notes
MeB	1.6	Stony rises	Shallow Wookata	E	Rises formed on Bridgewater Formation Calcarenes, overlain by Woorinen sediments. Most of the land is too stony / steep / exposed for cropping, but the Wookata/Haslam soils are arable, although prone to wind erosion, nutrient deficiencies and low waterholding capacity.
		Sandy loam rises	Wookata	E	
		Sand spreads	Haslam	C	
MzC	1.9	Steep rocky slopes on coast	Russell	D	
QFA	3.6	Very stony flats	Chintumba	V	Stony land formed on Ripon / Bakara Calcrete. Most is non arable - the land which is arable has either stony shallow soils, or infertile and wind erosion prone sands.
		Sandspreads	Haslam	L	
QHB	3.7	Stony rises	Chintumba	D	
WM-	1.9	Mangrove swamps	-	D	Coastal land complex of back swamps and coastal dunes. No agricultural potential.
WO-	0.2	Samphire flats (back swamps)	Yamba	D	
WR-	9.1	Salt flats (back swamps)	Yamba	V	
		High coastal sandhills	Semaphore	E	
YKE	2.5	Sandspreads	Haslam	D	Flats formed on highly calcareous Woorinen Formation deposits, with highly calcareous sandy loams and sands. Main factors affecting productivity are wind erosion potential, marginal fertility and limited waterholding capacity
YLL	0.1	Sandy loam flats	Wookata	E	
		Stony flats	Shallow Wookata	C	
		Sandspreads	Haslam	C	
ZD-	7.5	Salt lakes	-	D	Saline land with little or no productive potential. The limited areas of deep sands and shallow stony soils are also non productive. There is extensive gypsum mining on this land. Saline soils are potentially sulfidic.
ZH-	19.5	Complex of marginally and highly saline flats and salt lakes	Saline soil	D	
ZI-	30.9	Salt flats	Saline soil	V	
		High coastal sandhills	Semaphore	L	
ZK-	17.5	Salt flats	Saline soil	V	
		Stony rises	Russell	L	

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](#)

