

GDE Goode Land System

Area: 471.6 km²

Landscape: Rises formed on granite highs, mantled by highly calcareous Woorinen Formation deposits. Hard calcrete is at the surface in places. There are minor low to moderate parallel sandhills superimposed on the rises.

Annual rainfall: 285 – 330 mm average

Main soils:

Bookabie - A4a (Regolithic, Hypercalcic Calcarosol)
Calcareous soft sandy loam to sandy clay loam, becoming more clayey and calcareous with depth, over fine Class III A carbonate in a sandy clay loam to light clay matrix, from about 40 cm.

Bookabie (rubbly) - A4b (Regolithic, Supracalcic / Lithocalcic Calcarosol)
Calcareous soft sandy loam grading to a very highly calcareous friable massive sandy clay loam with rubbly Class III B or III C carbonate from about 50 cm, continuing with decreasing rubble content.

Minor soils:

Wookata (shallow) - A1/B1 (Supravescent, Petrocalcic, 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, over calcrete at about 40 cm.

Chintumba - B1 (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.

Penong - A1 (Hypervescent, Regolithic, Hypercalcic / Supracalcic Calcarosol)
Highly calcareous loam becoming more clayey and calcareous with depth, grading to more than 50% fine or rubbly carbonate in a sandy clay loam matrix.

Magnesia soil - A4c (Epihypersodic, Supracalcic, Regolithic Calcarosol)
Calcareous sandy loam to sandy clay loam, becoming more clayey and rubbly with depth. Saline throughout.

Moornaba - H2 (Calcareous, Arenic, Red-Orthic / Yellow-Orthic Tenosol)
Very thick red to brown sand, becoming weakly calcareous and often grading to an orange clayey sand with depth, overlying variable carbonate (fine to rubbly, occasionally sheet).

Moornaba (shallow) - B8 (Petrocalcic, Leptic Tenosol)
Up to 50 cm siliceous sand over calcrete.

Summary: The land is dominated by rises of moderately fertile calcareous sandy loams with reasonable waterholding capacity. High subsoil boron and salinity, slight wind erosion potential and minor magnesia patches are the main soil limitations to productivity.



Soil Landscape Unit summary: 5 Soil Landscape Units (SLUs) mapped in the Goode Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
QHA	0.3	Stony flats	Chintumba	D	Stony shallow soils - non arable.
SMB	90.5	Rises	Bookabie	D	Moderately fertile calcareous sandy loams with reasonable waterholding capacity. High subsoil boron and salinity, slight wind erosion potential and minor magnesia patches.
UJH	0.1	Swales	Bookabie	E	Complex of low to moderate sandhills and swales of calcareous sandy loams or shallow stony soils. The sandhills have low fertility and moderate to high wind erosion potential. The swales have soils similar to SMB and QHA (above). There are minor magnesia patches associated with Bookabie soils.
		Moderate sandhills	Moornaba	E	
		Stony swales	Chintumba	L	
UJJ	2.6	Swales	Bookabie	E	
		Low sandhills	Shallow Moornaba	E	
		Stony swales	Chintumba	L	
YFL	6.5	Flats	Penong	V	Flats with highly calcareous sandy loams and some stonier soils. These are: <u>Penong</u> : Highly calcareous sandy loam with slightly limited waterholding capacity, low fertility and slight to moderate wind erosion potential. Moderately saline with magnesia patches. <u>Shallow Wookata</u> : As for Wookata, except that waterholding capacity is reduced, and surface stone is increased to the point where it interferes with tillage.
		Stony flats	Shallow Wookata	L	

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

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

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

