

# MOR Moonabie Range Land System

- Area:** 9.5 km<sup>2</sup>
- Landscape:** Rounded hills formed on sandstone and overlain by low to moderate siliceous sandhills and sand spreads
- Annual rainfall:** 270 – 295 mm average
- Main soils:** Wiabuna (sandy) - A4 (Regolithic, Supracalcic / Lithocalcic Calcarosol)  
Calcareous loamy sand to sandy loam grading to carbonate rubble (Class III B or C).  
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).  
Midgee - D5 (Calcic, Red Sodosol)  
Medium thickness loamy sand to sandy loam abruptly overlying a red sandy clay loam to clay, calcareous with depth, grading to gritty alluvium derived from sandstone, or highly weathered sandstone.
- Minor soils:** Skeletal soil - L1 (Lithic, Leptic Tenosol / Rudosol)  
Variable gravelly loamy sand to sandy loam over basement sandstone at depths usually less than 50 cm.  
Alluvial soil - M1 (Calcareous, Regolithic, Red-Orthic Tenosol)  
Very thick brown loamy sand to sandy loam, continuing below 100 cm.
- Summary:** This land system is mostly non-arable, not only due to low rainfall, but to the combination of moderately steep, rocky slopes with shallow stony soils, and infertile sandy soils which would be highly susceptible to wind erosion if developed.

**Soil Landscape Unit summary:** 3 Soil Landscape Units (SLUs) mapped in the Moonabie Range Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
AKB	16.1	Rocky hills	Skeletal	D	Very rocky, non arable and often inaccessible.
DTI	63.4	Moderate slopes (semi arable)	Midgee	V	Moderately deep and moderately fertile soils, but highly susceptible to erosion, with rocky reefs and eroded watercourses.
			Skeletal	C	
UBu	20.5	Sandy rises	Moornaba	E	Mainly sandy soils of variable depth. Wind erosion potential and low fertility are limiting factors. Alluvial soils are deep and moderately fertile but prone to water erosion.
		Swales	Sandy Wiabuna	E	
		Creek flats	Alluvial soil	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](#)

