

DAP Darke Peak Land System

Area: 153.0 km²

Landscape: The system comprises abrupt, massive and steep outcrops of Warrow Quartzite at Darke Peak, Caralue Bluff and Tooligie Hill. The outcrops are flanked by gently inclined outwash fans formed on gravelly clayey sands and sandy clays (Pooraka Formation). These are largely covered by highly calcareous windblown silty sands of the Woorinen Formation. There are minor low dunes of Molineaux Sand.

Annual rainfall: 340 – 435 mm average

Main soils:

Wiabuna - A6 (Regolithic, Hypercalcic Calcarosol)
Calcareous loam becoming more clayey and calcareous with depth, grading to a very highly calcareous clay (Class I carbonate) over alluvial clay.

Cleve - D3 (Hypercalcic, Red Sodosol)
Thin to medium thickness hard loamy sand to sandy clay loam over a red clay with coarse prismatic structure, highly calcareous from about 25 cm, grading to alluvial clay.

Skeletal soil - L1 (Lithic, Leptic Tenosol / Rudosol)
Variable gravelly loamy sand to sandy clay loam over basement rock at depths usually less than 50 cm.

Minor soils:

Shallow Wiabuna - B2 (Petrocalcic Calcarosol)
Calcareous sandy clay loam over carbonate rubble over sheet calcrete within 50 cm.

Rubbly Wiabuna - A4b (Regolithic, Supracalcic Calcarosol)
Calcareous sandy loam grading to a rubbly very highly calcareous sandy clay loam over light clay from about 100 cm.

Pooraka - M1 (Calcareous / Basic, Regolithic, Red-Orthic Tenosol)
Thick gravelly loamy sand to light sandy clay loam with slight clay increase at depth, grading to alluvial gravel, clayey sand and sandy clay.

Cleve (shallow) - D1 (Calcic, Red Chromosol)
Thin to medium thickness gravelly sandy loam to clay loam over a red well structured clay, calcareous with depth, grading to weathering metamorphic rock within 50 cm.

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).

Summary: The System comprises two distinct components. The most obvious (although accounting for less than 20% of the area) are the massive rocky hills projecting out of a very gently undulating plain. These are very steep and rocky, with high conservation value. The flanking gentle slopes are fully arable, with moderately fertile sandy loam soils (both calcareous and non calcareous). These are potentially productive, although they have minor limitations attributable to restricted waterholding capacity, boron toxicity and slight wind and water erosion potential.



Soil Landscape Unit summary: 8 Soil Landscape Units (SLUs) mapped in the Darke Peak Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
A-g	18.0	Steep to very steep rocky hills	Skeletal	D	Non arable and mostly non traversable - conservation areas.
ETC	0.8	Gentle slopes	Shallow Cleve	E	Moderately shallow but relatively fertile soils between rocky outcrops - semi arable.
		Rocky outcrop	Skeletal	E	
IfA	10.1	Flats	Wiabuna	E	Calcareous sandy loams of moderate fertility but with somewhat restricted waterholding capacity. Slight wind erosion potential.
			Rubbly Wiabuna	E	
IrB	2.6	Very gentle slopes	Rubbly Wiabuna	E	Moderately fertile calcareous sandy loams or sandy loam over clay soils. Moderately low potential for wind and water erosion.
			Pooraka	E	
KLB	51.4	Very gentle slopes	Wiabuna	E	Deep moderately fertile sandy loam soils, some calcareous and some non calcareous. All are slightly susceptible to wind erosion. Water erosion potential is slight (KLB) to moderate (KLC). Subsoil boron toxicity is common
KLC	12.5	Gentle slopes	Cleve	E	
			Wiabuna	E	
KLC	12.5	Gentle slopes	Cleve	E	
			Wiabuna	E	
SYA	4.3	Stony flats	Rubbly Wiabuna	V	Marginally fertile calcareous sandy loams with limited waterholding capacity. Slight wind erosion potential.
			Shallow Wiabuna	C	
U-D	0.3	Low sandhills	Moornaba	D	Low fertility, wind erosion prone sands.

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](#)

