KAY Kaylee Land System

Area: 124.2 km^2

Landscape: Calcrete plain formed on sheet to rubbly calcretes of the Ripon / Bakara Formations, capped by calcareous silty sands of the Woorinen Formation. There are minor accumulations of windblown Molineaux Sands.

Annual rainfall: 400 – 435 mm average

Main soils:

Calcrete soil - **B2a** (Petrocalcic, Lithocalcic Calcarosol)
Thin calcareous sandy loam to clay loam over hard calcrete, associated with abundant surface calcrete and sheet rock.

Terre - **B3** (Petrocalcic, Leptic Tenosol)
Thin to medium thickness red sandy loam to clay loam over sheet calcrete.

Minor soils:

Shallow Wiabuna - **B2b** (Petrocalcic, Lithocalcic Calcarosol)
Thick red calcareous sandy clay loam over broken calcrete.

Rubbly Wiabuna - **A4** (Regolithic, Supracalcic Calcarosol)
Calcareous sandy loam grading to a rubbly very highly calcareous sandy clay loam over light clay from about 100 cm

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

Moornaba - **H2** (Petrocalcic, Brown-Orthic Tenosol)
Very thick brownish loose siliceous sand over sheet or rubbly calcrete between 50 and 100 cm.

Calcarenite soil - **B2c** (Petrocalcic, Lithocalcic Calcarosol)
Up to 30 cm (sometimes thicker) calcareous sandy loam to clay loam over calcreted calcarenite, associated with abundant surface calcrete and sheet rock.

Summary: Calcrete plain dominated by sheet rock and associated very shallow loamy soils. About two thirds of the land is non arable. Most of the rest comprises moderately shallow to moderately deep red calcareous sand non calcareous sandy loams to sandy clay loams, with reasonable fertility, although stone interferes with cultivation, and soil water holding capacities are restricted.

Soil Landscape Unit summary: 7 Soil Landscape Units (SLUs) mapped in the Kaylee Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
MAC	0.4	Calcreted calcarenite rises	Calcarenite soil	V	Remnant coastal sandhills, indurated at the surface to form a layer of calcrete cap rock with minimal soil - non arable.
			Rocky reefs	C	
Q-A	26.5	Very stony flats	Calcrete soil	E	Calcrete plains with shallow soils - deeper where Woorinen or Molineaux cover occurs. Soils are: Calcrete soil: Very shallow stony soils with more than 50% sheet rock - non arable. Terre: Shallow stony soil with restricted water holding capacity and sufficient surface stone and rock to prevent cultivation in places. Shallow Wiabuna: Moderately deep and moderately fertile red calcareous sandy clay loam - arable, although stone interferes with cultivation and water holding capacity is restricted. Rubbly Wiabuna: As for shallow Wiabuna, but with greater water holding capacity. Shallow Moornaba: Moderately deep, infertile and erosion prone sand.
			Terre	E	
			Rocky reefs	C	
Q-As	14.5	Very stony flats	Calcrete soil	E	
		Low sandhills	Terre	C	
			Shallow Moornaba / Moornaba	M	
QRA	23.0	Stony flats	Calcrete soil	E	
			Terre	E	
			Rocky reefs	C	
QUE	0.1	Very stony depressions	Calcrete soil	V	
			Rocky reefs	C	
			Saline scalds	M	
QaA	4.7	Stony flats	Shallow Wiabuna	E	
		Very stony flats	Calcrete soil	L	
		Stony flats	Rubbly Wiabuna	L	
		Low sandhills	Shallow Moornaba / Moornaba	L	
		Very stony flats	Rocky reefs	M	
QdA	30.8	Stony flats	Shallow Wiabuna	V	
		Very stony flats	Calcrete soil	C	
			Rubbly Wiabuna	L	
			Rocky reefs	M	

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