

# CLC Calca Land System

**Area:** 334.4 km<sup>2</sup>

**Landscape:** Low hills formed on Hiltaba Granite. The granite is at or near the surface over less than 20% of the area, where it outcrops extensively. The rest of the slopes are covered by weathering or outwash materials. These in turn are covered by highly calcareous Woorinen Formation silty sands. These are concentrated on western slopes.

**Annual rainfall:** 355 – 410 mm average

**Main soils:**

Cooper - C4 (Lithocalcic, Red Dermosol)  
Thin firm clay loam over a red coarsely structured clay grading to Class III C carbonate in a clayey matrix.

Calca - A1/A4 (Supravescent, Hypercalcic / Lithocalcic Calcarosol)  
Highly calcareous soft sandy loam to clay loam grading to very highly calcareous sandy clay loam to light clay with variable rubble content.

**Minor soils:**

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

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.

Calcrete - B2 (Petrocalcic, Lithocalcic Calcarosol)  
Thin calcareous sandy loam to clay loam over hard calcrete, associated with abundant surface calcrete and sheet rock.

Heggaton - G3 (Calcic, Brown Chromosol)  
Thick sand to loamy sand with a bleached A2 layer, abruptly overlying a weakly structured brown sandy clay to clay, calcareous with depth, grading to Tertiary sediments.

Semi saline soil - N2 (Salic Hydrosol)  
Miscellaneous seasonally wet semi saline soil influenced by rising saline groundwater tables.

**Summary:** Low hills with mainly sandy loam soils with red clayey subsoils. These are fertile with moderate waterholding capacity, but on slopes they are prone to water erosion. Associated with these soils are highly calcareous sandy loams with marginal fertility, and slight to moderate wind erosion potential. Rocky outcrops and associated moderately shallow to shallow soils over granite account for less than 20% of the area. Much is non arable - the rest is potentially productive, although with limited waterholding capacity and moderate susceptibility to erosion.



**Soil Landscape Unit summary:** 11 Soil Landscape Units (SLUs) mapped in the Calca Land System:

SLU	% of area	Component	Main soils	Prop#	Notes	
A-g	0.5	Granite outcrops	Skeletal	D	Gentle to moderate slopes underlain by granite. About a third is arable, although restricted moisture holding capacity is a limitation. There is slight to moderate water erosion potential throughout.	
AKB	1.8	Rocky slopes	Skeletal	D		
DTC	2.7	Undulating slopes	Shallow Cleve	V		
		Rocky slopes	Skeletal	E		
ETC	2.4	Stony slopes	Shallow Cleve/ skeletal	E		
		Rock outcrops	Skeletal	E		
EqB	9.4	Gentle slopes:				
		Very rocky	Skeletal	V		
		Arable	Shallow Cleve	C		
EqC	1.5	Undulating slopes:				
		Very rocky	Skeletal	V		
		Arable	Shallow Cleve	C		
GGA	0.5	Sandy flats	Heggaton	D	Low fertility soil with moderate wind erosion potential.	
HEB	78.1	Gentle slopes	Cooper	V	Slopes with Woorinen Formation carbonates overlying weathering granite and localized outwash sediments. Main carbonate accumulations are on western slopes. Water and wind erosion potential, and marginal fertility of the sandier Calca soils are the main issues. Soils are: <u>Cooper</u> : Fertile sandy loam soils with moderate water holding capacity. Slight to moderate water erosion potential. <u>Calca</u> : Highly calcareous sandy loam to clay loam with slightly limited water holding capacity, marginal fertility, subsoil boron and salt, and slight to moderate wind erosion potential.	
		Western slopes	Calca	E		
HEZ	0.1	Plateau	Cooper	D		
QHB	2.6	Stony slopes	Calcrete	D		Shallow stony soils with extensive sheet calcrete - non arable.
ZA-	0.4	Moderately to highly saline flats	Semi saline alluvial	D		Too salty for cropping, but suitable for establishment of salt tolerant forage plants.

# 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](#)

