

OXY Oxys Land System

(Equivalent to Oxys Land System of Rangelands)

Area: 9.4 km²

Landscape: Very gently undulating plains and rises formed on Tertiary clays (Blanchetown Clay equivalent), capped by highly calcareous windblown silty sands (Woorinen Formation). There are minor deposits of Moornaba Sand as low to moderate linear sandhills, and scattered granitic outcrops protruding through the clay substrate (outside agricultural land mapping). This land is the southern extremity of a system extending northwards into the pastoral country.

Annual rainfall: 290 – 305 mm average

Main soils: Kimba - D3 (Hypercalcic, Red Sodosol)
Medium thickness hard loamy sand to loam overlying a strongly subangular blocky red clay, highly calcareous (Class I carbonate) from about 30 cm, grading to Blanchetown Clay equivalent.

Wiabuna - A6a (Hypercalcic Calcarosol)
Calcareous loam becoming more clayey and calcareous with depth, grading to a very highly calcareous clay (Class I carbonate) over Tertiary clay.

Minor soils: Rubbly Wiabuna - A4 (Regolithic, Lithocalcic / Supracalcic Calcarosol)
Calcareous sandy loam to sandy clay loam grading to carbonate rubble.

Shallow Wiabuna - B2 (Petrocalcic, Supracalcic / Lithocalcic Calcarosol)
Calcareous sandy clay loam over carbonate rubble grading to sheet calcrete.

Magnesia soil - A6b (Hypervescent, Regolithic, Hypercalcic Calcarosol)
Highly calcareous clay loam becoming more calcareous with depth, over clay. Saline throughout, with surface concentration.

Summary: The land is potentially arable, but is on the extreme northern fringe of the agricultural zone, so productivity is likely to be relatively low and erratic. The soils are moderately deep and relatively fertile. The gentle slopes have some potential for water erosion, and the lighter soils are prone to wind erosion. The underlying clayey sediments restrict leaching, so accumulation of boron at toxic concentrations in the potential rootzone is common. Lack of leaching capacity has similarly caused the concentration of salts in some soils to the point where scattered magnesia patches have formed.



Soil Landscape Unit summary: 1 Soil Landscape Unit (SLU) mapped in the Oxys Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
IrB	100	Very gentle slopes	Wiabuna	E	Mixture of sandy loam over clay soils and calcareous sandy clay loams - moderately deep and relatively fertile. Minor wind erosion potential, minor to moderate water erosion potential. Boron toxicity common. Magnesia patches affect up to 2% of land. Slopes with minor to moderate water erosion potential.
			Kimba	E	
			Rubbly / shallow Wiabuna	L	
			Magnesia soil	M	

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](#)

