

WOG Wonga Land System

- Area:** 51.8 km²
- Landscape:** Gentle rises and associated scalded plains. Patterned ground occurs in places. This land system is slightly elevated above the surrounding calcareous plains of the Mount Mary and Tiger Plains land systems.
- Annual rainfall:** 225 - 250 mm average
- Geology:** Pleistocene age calcreted and calcareous gravelly sediments overlying older clayey sediments such as Blanchetown Clay Formation. Holocene alluvium is associated with modern streams and creeks. Older alluvium forms lateral terraces and floodplain deposits.
- Main soils:**
- D4** Clay loam over pedaric red clay
 - A5** Rubbly calcareous loam on clay
 - C1** Gradational sandy loam
 - A6** Gradational calcareous clay loam
 - A4** Deep (rubbly) calcareous sandy loam
- Minor soils:**
- B2** Shallow calcareous sandy loam on calcrete
 - D3** Loam over poorly structured red clay
- Summary:** The Wonga Land System consists of slightly elevated calcreted rises above the surrounding calcareous plains. Drainage lines have broad alluvial flats and terraces. The soils are red texture-contrast or gradational profiles. Shallow soils over calcrete are common. Clayey sediments underlie the landscape.

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

SLU	% of area	Component	Main soils	Prop#	Notes
HgB	15.1	Gentle rises	C1D4 A6	V	Gentle non stony and stony rises formed in deep unconsolidated clayey sediments or highly weathered rock. Slopes are 1-3%, relief is less than 30m. Main soils: Non-stony rises: <u>gradational sandy loam - C1</u> , <u>clay loam over pedaric red clay - D4</u> and <u>gradational calcareous clay loam - A6</u> . Stony rises: <u>shallow calcareous sandy loam on calcrete - B2</u> and <u>deep (rubbly) calcareous sandy loam - A4</u> .
		Stony rises	B2A4	L	
IVA	18.3	Gentle rises	A5C1	V	Rises formed on unconsolidated clay sediments (e.g. Blanchetown Clay) or highly weathered rock. IVA Gentle non-stony and stony rises. Slopes less than 1%.
		Stony rises	B2A4	L	
IVg	15.4	Dissected rises	A5C1	D	IVg Dissected gentle rises. Slopes 1-3%, relief 9-30m. Moderately gullied (5-10%) and moderately saline.
IVh	1.8	Dissected slopes	A5C1	D	IVh Dissected undulating slopes. Slopes 3-10%, relief 9-30m. Moderately gullied (5-10%) and moderately saline. Main soils: Non-stony rises and slopes: <u>rubbly calcareous loam on clay - A5</u> and <u>gradational sandy loam - C1</u> , with <u>deep (rubbly) calcareous sandy loam - A4</u> . Stony rises: <u>shallow calcareous sandy loam on calcrete - B2</u> and <u>deep (rubbly) calcareous sandy loam - A4</u> .



JLA	6.7	Flats	D4	D	Plains and rises formed on fine grained outwash sediments. JLA Flats. JLP Flats, moderately saline. JLp Flats. More than 50% scalded. JLu Scalded very gentle slopes. More than 50% scalded, 5-10% of land affected by gullyng. Main soils: <u>clay loam over pedaric red clay - D4</u> , with <u>gradational calcareous clay loam - A6</u> and <u>loam over poorly structured red clay - D3</u> .
JLP	8.6	Flats	D4	D	
JLp	17.3	Scalded flats	D4	D	
JLu	1.2	Scalded slopes	D4	D	
KFA	2.6	Flats	A6D4	D	Plains formed on medium to fine grained outwash sediments. Main soils: <u>gradational calcareous clay loam - A6</u> and <u>clay loam over pedaric red clay - D4</u> .
QIB	12.5	Stony rises	B2A4	D	Gently undulating stony rises with shallow soils over calcrete. Main soils: <u>shallow calcareous sandy loam on calcrete - B2</u> and <u>deep (rubbly) calcareous sandy loam - A4</u> , with <u>rubbly calcareous loam on clay - A5</u> and <u>gradational calcareous clay loam - A6</u> .
QLA	0.5	Stony flats	B2A4	D	Stony flats with shallow soils over calcrete. Main soils: <u>shallow calcareous sandy loam on calcrete - B2</u> and <u>deep (rubbly) calcareous sandy loam - A4</u> .

PROPORTION codes assigned to Soil Landscape Unit (SLU) components:

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|---|--|---|-----------------------------------|
| 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) |

Detailed soil profile descriptions:

- A4** Deep (rubbly) calcareous sandy loam (Regolithic, Hypercalcic / Lithocalcic Calcarosol)
Calcareous sandy loam grading to a very highly calcareous sandy clay loam to light clay with variable rubble, continuing below 120 cm.
- A5** Rubbly calcareous loam on clay (Regolithic, Hypercalcic / Lithocalcic Calcarosol)
Calcareous loam grading to a very highly calcareous rubbly sandy clay loam to light clay, over a clayey substrate deeper than 60 cm, but within 120 cm.
- A6** Gradational calcareous clay loam (Pedal, Hypercalcic / Supracalcic Calcarosol)
Calcareous clay loam grading to a well structured very highly calcareous (sometimes rubbly) clay, over a red clayey substrate within 120 cm.
- B2** Shallow calcareous sandy loam on calcrete (Petrocalcic Calcarosol)
10 - 20 cm calcareous sandy loam to loam grading to rubbly sandy loam to sandy clay loam abruptly overlying sheet calcrete at 30 cm. This grades to rubbly carbonate over clay within 150 cm.
- C1** Gradational sandy loam (Hypercalcic, Red Kandosol)
Friable sandy to loamy topsoil grading to massive red-brown alkaline loamy to clay loamy subsoil, highly calcareous with depth, over alluvium.
- D3** Loam over poorly structured red clay (Calcic, Red Sodosol)
Medium thickness hard loam with up to 50% quartzite stones over a coarsely prismatic dispersive red clay, calcareous with depth over stony and clayey alluvium.
- D4** Clay loam over red friable clay (Calcic, Pedaric, Red Sodosol)
Thin to medium thickness clay loam over a finely structured friable red clay, calcareous from about 50 cm, grading to a clayey substrate.

Further information: [DEWNR Soil and Land Program](#)

