

# NOW North Whydown Land System

**Area:** 26.2 km<sup>2</sup>

**Landscape:** Pediments and valley floors between the Waroonee Range and the Yunta Hill Land Systems. Only a small part of the land system occurs on the Paratoo 1:100,000 mapsheet, most of it is outside of the 1:100,000 soil-landscape mapping area.

**Annual rainfall:** 235 - 255 mm average

**Geology:** Holocene low angle slope deposits and alluvium.

**Main soils:**

<b>A5</b> (31%) Rubbly calcareous loam on clay	(Supracalcic-Lithocalcic Calcarosol on clay)
<b>D4</b> (26%) Loam over pedaric red clay	(Pedaric Red Sodosol-Dermosol)
<b>A3</b> (21%) Deep moderately calcareous loam	(Calcic Calcarosol)
<b>D1</b> (18%) Loam over clay on rock	(Shallow Calcic-Hypercalcic Red Chromosol)

**Summary:** The North Whydown Land System is a broad valley with between two ranges. Pediment slopes and alluvial plains have mainly rubbly calcareous soils and red, texture-contrast soils with crumbly (pedaric) clay subsoils.

**Soil Landscape Unit summary:** North Whydown Land System (NOW)

SLU	% of area	Component	Main soils	Prop#	Notes
DSC	5.1	Shallow pediment	D1C2D7	V	Pediments and rises complexes with shallow, clay-loamy surfaced, duplex soils over rock with more than 20% outcropping rock.
		Rock outcrop	L1RR	C	
DSD	0.7	Shallow pediment	D1C2D7	V	<p><b>DSC</b> Undulating pediment with texture contrast or gradational shallow sandy loam over red clay on rock or deep texture contrast sandy loam over poorly structured red clay. 20-30% bare rock. Relief is less than 30m, slopes are 3-10%.</p> <p><b>DSD</b> Rolling pediment as above. Relief 9-30m, slopes 10-30%.</p> <p>Main soils: <u>Clay loam over pedaric red clay on rock - D1</u>, <u>Gradational red-brown clay loam over rock - C2</u>, <u>Loam over poorly structured clay on rock - D7</u> and <u>Shallow stony soils on rock - L1</u>.</p>
		Rock outcrop	L1RR	C	
EVB	0.5	Gently undulating rises	A2	V	<p>Gently undulating rises with rock outcrops and shallow calcareous soils formed on fine-grained calcareous rocks. Slopes are 1-3%, relief is less than 30m.</p> <p>Soils include gradational calcareous sandy loam over clay loam on weathered rock; 10-30% shallow calcareous sandy loam on rock and 20-30% bare rock.</p> <p>Main soils: <u>Calcareous loam on rock - A2</u> and <u>Bare rock - RR</u>.</p>
		Rocky outcrops	RR	C	
JKB	27.9	Pediments	D1A3A5	D	<p>Pediments with texture contrast sandy loam over crumbly red clay (pedaric Sodosol-Chromosol) with gradational moderately calcareous sandy loam over clay (Calcarosol), or non-calcareous gradational sandy loam over red clay (Kandosol).</p> <p><b>JKB</b> Gently sloping pediments with sandy loam over red clay</p>



JKoo	3.3	Valley floor	D1A3A5	D	on rock, or deep rubbly calcareous soils. Slopes are 1-3%, relief is less than 9m. <b>JKoo</b> Valley floor with soils as above. Severely gullied (over 20%) and moderately scalded (10-50%).  Main soils: <u>Sandy Loam over pedaric red clay on rock</u> - <b>D1</b> , <u>Deep moderately calcareous (sandy) loam</u> - <b>A3</b> and <u>Rubbly calcareous (sandy) loam on clay</u> - <b>A5</b> .
JLB	2.9	Gently sloping plain	D4D1A5	D	Plains and pediments with more than 20% pedaric, texture contrast (loam over crumbly red clay) soils, but less than 20% calcareous gradational soils.  <b>JLB</b> Gently sloping pediments with loam over crumbly red clay, often on rock or deep moderately calcareous loam over clay. Slopes are 1-3%, relief is less than 9m. <b>JLoo</b> Flood plain with soils as above. Severely gullied (over 20%) and moderately scalded (10-50%).  Main soils: <u>Clay loam over pedaric red clay</u> - <b>D4</b> and <u>Loam over pedaric red clay on rock</u> - <b>D1</b> and <u>Rubbly calcareous loam on clay</u> - <b>A5</b> .
JLoo	8.2	Flood plain	D4D1A5	D	
JPI	9.1	Pediment	D4A5	D	Pediments and plains with texture contrast soils formed on outwash sediments derived from basement rocks. Calcareous in some part of the profile. More than 20% of soils are pedaric (fine crumbly structure in subsoils).  <b>JPI</b> Gently sloping pediments. Moderately gullied (10-20%) and scalded (5-10%). Slopes are 1-3%, relief is less than 9m. <b>JPII</b> Gently sloping pediments. Severely gullied (over 20%) and moderately scalded (5-10%). Slopes are 1-3%, relief is less than 9m.  Main soils: <u>Loam over pedaric red clay</u> - <b>D4</b> , and <u>Rubbly calcareous loam on clay</u> - <b>A5</b> .
JPII	34.6	Pediment	D4A5	D	
JZI	7.6	Pediment Rocky outcrops	D4A5 RR	V M	Gently sloping pediment-basement rock complex with pediments with red texture contrast soils with clay loam over crumbly red clay, or rubbly calcareous loam on clay and up to 30% rocky rises with shallow texture contrast soils. Slopes are 1-3%, relief is less than 9m. <10% rocky outcrops. Moderately gullied (10-20%) and scalded (5-10%).  Main soils: <b>Pediments and plains:</b> <u>Loam over pedaric red clay</u> - <b>D4</b> and <u>Rubbly calcareous loam on clay</u> - <b>A5</b> with minor <u>Deep moderately calcareous sandy loam</u> - <b>A3</b> . <b>Rocky rises:</b> Bare rock - <b>RR</b> .

# 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)



**Detailed soil profile descriptions:**

- A2/L1** Shallow calcareous loam (Paralithic, Hypercalcic / Lithocalcic Calcarosol)(A2) OR Shallow stony loam (Calcareous, Paralithic, Leptic Tenosol)(L1)
- A3** Deep moderately calcareous (sandy) loam (Calcic Calcarosol)  
Calcareous (sandy) loam topsoil grading into loamy-clay loamy subsoil without a significant CO<sub>3</sub> buildup in the subsoil (<20% CO<sub>3</sub> in subsoil). Pediment type Calcarosols.
- A5** Rubbly calcareous loamy sand (sandy loam) on clay (Supracalcic-Lithocalcic Calcarosol on clay)  
Calcareous loamy sand –sandy loam topsoil grading into loamy-clay loamy subsoil on a clayey substrate. Usually rubbly. Clayey substrate occurs at >60 cm and <120 cm.
- C2** Gradational loam on rock (Calcic / Hypercalcic Red Dermosol)  
Loam to clay loam grading to a friable red clay with soft Class I carbonate within 50 cm, grading to weathering rock within 100 cm.
- D1** (Sandy) Loam over red clay on rock (Hypercalcic / Calcic, Red Chromosol / Sodosol)  
Medium thickness hard gravelly (sandy) loam over a red clay, friable and finely structured (D1), to hard, coarsely structured and dispersive (D7), calcareous with depth, grading to weathering basement rock within 100 cm.
- D4** Loam over red friable clay (Calcic, Pedaric, Red Sodosol)  
Thin to medium thickness fine sandy loam to loam over a finely structured friable red clay, calcareous from about 50 cm, grading to fine or medium grained alluvium.
- D7** Loam over dispersive red clay on rock (Calcic / Hypercalcic, Red Sodosol)  
Medium to thick hard sandy loam to clay loam sharply overlying a coarsely structured dispersive red clay, calcareous with depth, grading to highly weathered kaolinized siltstone.
- L1** Shallow stony loam (Paralithic, Leptic Tenosol)  
Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.
- RR** Bare rock.

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

