

YUN

# Yunta Hill Land System

**Area:** 39 km<sup>2</sup>

**Landscape:** Range of low hills and rises, north-west of Yunta, trending north-east to south-west. The hills are steep in the north-east, with the prominent peak of Yunta Hill rising to 521m asl. Rock outcrop is common.

**Annual rainfall:** 225 - 250 mm average

**Geology:** The rocks are mostly non-calcareous, Pre-Cambrian siltstones and tillites, including Ulupa Siltstone, Pepuarta Tillite and Gumbowie Arkose sandstone.

**Soils:** Most common soils are shallow stony loams associated with rock outcrop

<b>Main soils:</b>	<b>L1</b>	Shallow stony loam
	<b>RR</b>	Rock outcrop

<b>Minor soils:</b>	<i>On rock</i>	
	<b>A2</b>	Shallow calcareous loam
	<b>B2</b>	Shallow calcareous loam on calcrete
	<b>C2</b>	Gradational loam on rock
	<b>D1</b>	Loam over clay on rock
	<b>D7</b>	Loam over poorly structured clay on rock
	<i>On outwash</i>	
	<b>A3</b>	Deep moderately calcareous loam
	<b>A5</b>	Rubbly calcareous loam on clay
	<b>C1</b>	Gradational sandy loam
	<b>D2</b>	Sandy loam over red clay
	<b>D4</b>	Sandy loam to loam over pederic red clay

**Summary:** The Yunta Hill Land System is a range of low hills and rises with shallow soils and rock outcrop. The soils are a mixture of shallow texture-contrast and gradational soils, often calcareous, over rock.

**Soil Landscape Unit summary:** 14 Soil Landscape Units (SLUs) mapped in the Yunta Hill Land System

SLU	% of area	Component	Main soils	Prop#	Notes
AAB	6.9	Rolling rises	L1RRA2	D	Rises and hills with shallow rocky calcareous soils formed on fine grained rocks. Rock outcrops are common. <b>AAB</b> Rolling rises. Relief is 9-30m, slopes are 10-30%.
AAG	9.2	Undulating rises	L1RRA2	D	<b>AAG</b> Undulating rises with 10-20% of land affected by eroded watercourses. Relief is less than 30m, slopes are 3-10%. <b>AAH</b> Rolling rises with 10-20% of land affected by eroded watercourses. Relief is 9-30m, slopes are 10-30%.
AAH	1.8	Rolling rises	L1RRA2	D	Main soils: <u>shallow stony loam</u> - <b>L1</b> , <u>rock outcrop</u> - <b>RR</b> and <u>shallow calcareous loam</u> - <b>A2</b> .
AEA	9.3	Gently und rises	L1RR	D	Non-arable rocky rises and low hills formed on mostly fine-grained rocks, capped by calcrete over 20-30% of the area. Soils are very shallow.
AEB	11.5	Rolling rises	L1RR	D	



AED	4.7	Steep rises	L1RR	D	<b>AEA</b> Gently sloping rises. Relief is less than 30m, slopes are 1-3%. <b>AEB</b> Rolling rises. Relief is 9-30m, slopes are 10-30%. <b>AED</b> Steep rises. Relief is 9-30m, slopes are 30-50%. <b>AEF</b> Very steep hills with much rocky outcrop. Relief is 90-300m, slopes are 60-100%. Main soils: <u>shallow stony loam - L1</u> and <u>rock outcrop - RR</u> , with <u>shallow calcareous loam on calcrete - B2</u> , <u>loam over clay on rock - D1</u> and <u>shallow calcareous loam - A2</u> .
AGB	2.2	Rolling rises	L1RR	D	Hills and rises formed on mainly fine grained rocks with loamy soils. <b>AGB</b> Rolling rises. Relief is less than 30m, slopes are 10-30%. 10-20% of land is gullied. <b>AGJ</b> Steep rises with more than 20% eroded watercourses and gullied land. Potential for landslip. Relief is 9-30m, slopes are 30-50%. Main soils: <u>shallow stony loam - L1</u> and <u>rock outcrop - RR</u> , with <u>loam over clay on rock - D1</u> .
DSC	4.6	Pediments	D1C2D7	V	Complex of pediments and rises formed on mixed fine grained weathering rocks and outwash sediments. Areas of rocky outcrop occupy 20-30% of the land.
DSI	17.9	Rock outcrop	L1RR	C	<b>DSC</b> Undulating pediments with rocky outcrops. Relief is less than 30m, slopes are 3-10%. <b>DSI</b> Gently sloping pediment with rocky outcrops, 10-20% gullied and 10-50% scalded land. Slopes are 1-3%, relief is less than 30m. Main soils: <b>Pediments:</b> <u>loam over (pederic) red clay on rock - D1</u> , <u>gradational loam on rock - C2</u> and <u>loam over poorly structured clay on rock - D7</u> . <b>Rocky land:</b> <u>shallow stony loam - L1</u> and <u>rock outcrop - RR</u> .
		Pediments	D1C2D7	V	Gently undulating rises with 20-30% areas of rocky outcrops. Slopes are 1-3%, relief is less than 30m. Main soils:
EZB	0.7	Rocky outcrops	RR	C	<b>Rises:</b> <u>shallow calcareous loam - A2</u> , <u>rubbly calcareous loam on clay - A5</u> and <u>shallow calcareous loam on calcrete - B2</u> . <b>Rocky outcrops:</b> <u>rock outcrop - RR</u> with <u>shallow stony loam - L1</u> and <u>shallow calcareous loam on calcrete - B2</u> .
		Gently undulating rises	A2A5B2	V	Gently sloping pediments formed on fine grained outwash. Slopes are 1-3%, relief is less than 30m. Main soils: <u>loam over pederic red clay - D4</u> with <u>deep moderately calcareous loam - A3</u> .
JLB	1.0	Pediments	D4	D	Gently sloping pediments formed on fine grained outwash. Slopes are 1-3%, relief is less than 30m. Main soils: <u>loam over pederic red clay - D4</u> with <u>deep moderately calcareous loam - A3</u> .
JVG	3.9	Pediments	D4D2C1	D	Gently sloping pediments with sandy loam surfaced soils formed on medium grained outwash. Moderately gullied (5-10%). Slopes are 1-3%, relief is less than 30m. Main soils: <u>sandy loam over pederic red clay - D4</u> , <u>sandy loam over red clay - D2</u> and <u>gradational sandy loam - C1</u> .

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

D Dominant in extent (&gt;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 (&lt;10% of SLU)



**Detailed soil profile descriptions:**

- A2** Shallow calcareous loam (Paralithic, Hypercalcic / Lithocalcic Calcarosol)  
Calcareous stony loam grading to soft or rubbly carbonate over weathering dolomite or calc-siltstone within 50 cm.
- A3** Deep moderately calcareous loam (Regolithic, Calcic Calcarosol)  
Calcareous loam grading to a loamy to clayey subsoil without a significant carbonate accumulation in the subsoil, grading to medium to fine grained alluvium.
- A5** Rubbly calcareous loam on clay (Regolithic, Supracalcic / Hypercalcic 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.
- B2** Shallow calcareous loam on calcrete (Petrocalcic, Calcic / Lithocalcic Calcarosol)  
Stony calcareous sandy loam to loam, often with a very highly calcareous more clayey subsoil, over sheet calcrete within 50 cm. This grades to rubbly carbonate over weathering basement rock 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.
- C2** Gradational loam on rock (Calcic / Hypercalcic Red Dermosol)  
Loam grading to a friable red clay with soft Class I carbonate within 50 cm, grading to weathering rock within 100 cm.
- D1** Loam over clay on rock (Hypercalcic / Calcic, Red Chromosol)  
Medium thickness hard gravelly loam over a friable and finely structured red clay, calcareous with depth, grading to weathering basement rock within 100 cm.
- D2** Sandy loam over red clay (Calcic / Hypercalcic, Red Chromosol)  
Hard setting sandy loam (with variable quartzite stones) abruptly overlying a well structured red clay with soft Class I carbonate at depth.
- D4** Sandy loam to loam over red friable clay (Calcic, Pedaric, Red Sodosol)  
Thin to medium thickness 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 poorly structured clay on rock (Calcic / Hypercalcic, Red Sodosol)  
Medium to thick hard loam sharply overlying a coarsely structured dispersive red clay, calcareous with depth, grading to highly weathered kaolinized siltstone or quartzite.
- L1** Shallow stony loam on fine grained rock (Paralithic, Leptic Tenosol)  
Shallow stony loam, often calcareous with depth, overlying weathering fine grained rock shallower than 50 cm.
- RR** Rock outcrop

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

