

YUN Yunta Hill Land System

Area: 39 km²

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

Main soils: **L1** Shallow stony loam
RR Rock outcrop

Minor soils: *On rock*
A2 Shallow calcareous loam
B2 Shallow calcareous loam on calcrete
C2 Gradational loam on rock
D1 Loam over clay on rock
D7 Loam over poorly structured clay on rock
On outwash
A3 Deep moderately calcareous loam
A5 Rubbly calcareous loam on clay
C1 Gradational sandy loam
D2 Sandy loam over red clay
D4 Sandy loam to loam over pedaric 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. AAB Rolling rises. Relief is 9-30m, slopes are 10-30%.
AAG	9.2	Undulating rises	L1RRA2	D	AAG Undulating rises with 10-20% of land affected by eroded watercourses. Relief is less than 30m, slopes are 3-10%. AAH 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> - L1 , <u>rock outcrop</u> - RR and <u>shallow calcareous loam</u> - A2 .
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	<p>AEA Gently sloping rises. Relief is less than 30m, slopes are 1-3%. AEB Rolling rises. Relief is 9-30m, slopes are 10-30%. AED Steep rises. Relief is 9-30m, slopes are 30-50%. AEF Very steep hills with much rocky outcrop. Relief is 90-300m, slopes are 60-100%. Main soils: <u>shallow stony loam</u> - L1 and <u>rock outcrop</u> - RR, with <u>shallow calcareous loam on calcrete</u> - B2, <u>loam over clay on rock</u> - D1 and <u>shallow calcareous loam</u> - A2.</p>
AEF	2.8	Very steep hills	RRL1	D	
AGB	2.2	Rolling rises	L1RR	D	<p>Hills and rises formed on mainly fine grained rocks with loamy soils. AGB Rolling rises. Relief is less than 30m, slopes are 10-30%. 10-20% of land is gullied. AGJ 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</u> - L1 and <u>rock outcrop</u> - RR, with <u>loam over clay on rock</u> - D1.</p>
AGJ	23.5	Steep rises	L1RR	D	
DSC	4.6	Pediments	D1C2D7	V	<p>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. DSC Undulating pediments with rocky outcrops. Relief is less than 30m, slopes are 3-10%. DSI 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: Pediments: <u>loam over (pedaric) red clay on rock</u> - D1, <u>gradational loam on rock</u> - C2 and <u>loam over poorly structured clay on rock</u> - D7. Rocky land: <u>shallow stony loam</u> - L1 and <u>rock outcrop</u> - RR.</p>
		Rock outcrop	L1RR	C	
DSI	17.9	Pediments	D1C2D7	V	
		Rock outcrop	L1RR	C	
EZB	0.7	Gently undulating rises	A2A5B2	V	
		Rocky outcrops	RR	C	
JLB	1.0	Pediments	D4	D	
JVG	3.9	Pediments	D4D2C1	D	

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** 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](#)

