SCR Scrubby Range Land System

Landscape: Rolling to undulating rises with shallow rocky soils and associated small pediments with mostly calcareous soils.

Annual rainfall: 275 - 375mm average

Geology: The land system occurs in the apex of a fold of Proterozoic Adelaide Geosyncline rocks. The central core rocks are Appila Tillite Formation rocks, then Saddleworth Formation mudstones and siltstone, then Skillogalee Dolomite Formations.

Main soils:
L1 (39%) Shallow soil on rock (Rocky Rudosol-Tenosol)
A2 (36%) Calcareous loam on rock (Paralithic Calcarosol)

Minor soils:
B2 (8%) Shallow calcareous loam on calcrete (Petrocalcic Calcarosol-Rudosol)
C2 (8%) Gradational loam on rock (Shallow Red Dermosol-Kandosol-Calcarosol)
A3 (3%) Deep moderately calcareous loam (Calcic Calcarosol)

Summary: The Scrubby Range Land System consists of shallow rocky rises with rolling topography formed on mostly fine-grained rocks. Soils are mostly shallow and calcareous with minor deep gradational soils.

Soil Landscape Unit summary: Scrubby Range Land System (SCR)

SLU	% of area	Component	Main soils	Prop#	Notes
A-t	12.1	Rolling low rises and hills	L1	D	Rolling low rises and hills on tillites with mostly bare rock outcrop. Relief is 9-30m, slopes are 10-30%. Main soils: Shallow stony soils on rock - **L1**.
AAC	20.1	Rolling low hills	L1A2	D	Hills and rises with very shallow calcareous soils on rocky slopes. Mostly non-arable. **AAC** Bare rolling low hills. Relief is less than 30m slopes are 10-30%. **AAD** Bare steep low hills with much rock outcrop and very shallow, calcareous rocky sandy loam soils. Slopes range from 30% to 60% Relief is less than 90m. Non-arable. **AAH** Rolling rises with much rock outcrop and very shallow, calcareous rocky sandy loam soils. Relief is less than 30m, slope steepness: 10-30%. Watercourses are eroded and incised. Main soils: Shallow stony soils on rock - **L1** and Calcareous loam on rock – **A2**.
AAD	3.8	steep low hills	L1	D	
AAH	2.5	Rolling rises	L1A2	D	
ADD	2.5	Steep low hills	A2L1	D	Non-arable steep low hills formed on limestones dolomites and calc-siltstones with very shallow loamy soils. Relief is 30-90m, slopes are 30-50%. Main soils: Calcareous loam on rock – **A2** and Shallow stony soils on rock - **L1**.
API	4.2	Rolling low hills	A2B2 L1	D	Rolling low hills formed on coarse-grained rocks, with shallow, often rocky, soils with sandy textures ranging from loamy sand to sandy clay loam. Relief is 30-90m, slopes are 3-10%. Moderately gullied (5-10%). Main soils: Calcareous loam on rock – **A2**, Shallow calcareous loam on calcrete - **B2** and Shallow stony soils on rock - **L1**.

ARI	0.9	Rolling low hills	L1A2	D	Rolling low hills formed on quartzites with interbedded fine-grained rocks, with shallow, soils with sandy textures ranging from loamy sand to sandy clay loam. More than 20% of soils have secondary carbonate. Relief is 30-90m, slopes are 3-10%. Moderately gullied (5-10%). Main soils: Shallow stony soils on rock - **L1** and Calcareous loam on rock – **A2**.
AYB	1.3	Rolling rises	A2B2 L1	D	Rolling rises on fine-grained rocks, especially Skillogalee Dolomite. More than 20% of soils contain secondary carbonate. Relief is less than 30m, slopes are 10-30%. Main soils: Calcareous loam on rock – **A2**, Shallow calcareous loam on calcrete - **B2** and Shallow stony soils on rock - **L1**.
DQB	1.6	Gently undulating rises	D1C2	D	Gently undulating rises with pale brown silty, sodic texture contrast soils on rock. Slopes are 1-3%, relief is less than 30m. Main soils: Sandy Loam over clay on rock- **D1** and Gradational loam on rock -**C2**.
EHB	14.2	Rise	A2	V	Rises and pediments on calcareous siltstones and limestones. **EHB** Gently sloping rises with calcreted rises. Slopes are 1-3%, relief is 9-30m. **EHC** Undulating rises with calcreted rises. Relief is less than 30m, slopes are 3-10%. Main soils: ***Rises:*** Calcareous clay loam on rock – **A2**. ***Calcreted rises:*** Shallow calcareous loam on calcrete - **B2**.
		Calcrete rise	B2	L	
EHC	12.5	Rise	A2	V	
		Calcrete rise	B2	L	
EVc	1.6	Rise	A2C2	V	Rises with rock outcrops and shallow calcareous soils formed on fine-grained calcareous rocks. **EVc** Undulating non-stony and stony rises. Moderately gullied (10-20%) slightly saline subsoils. Slopes are 3-10%, relief is less than 9-30m. **EVm** Undulating rises with 5-10% of land is gullied, and up to 50% is scalded. Slopes are 3-10%, relief is less than 9-30m. **EVn** Rolling rises with 5-10% of land is gullied, and up to 50% is scalded. Relief is 9-30m, slopes are 10-30%. Main soils: ***Rises:*** Calcareous clay loam on rock – **A2** and Gradational loam on rock -**C2**. ***Stony rises:*** Shallow stony soils on rock - **L1**, Calcareous loam on rock – **A2** and Shallow calcareous loam on calcrete - **B2**. ***Fans:*** Deep moderately calcareous loam - **A3** and Deep (rubbly) calcareous sandy loam **-A4**.
		Stony rise	L1A2 B2	C	
EVm	16.4	Rise	A2C2	V	
		Fan	A3A4	C	
EVn	2.1	Rise	L1B2 A2	V	
		Fan	A3A4	L	
EZB	0.5	Slope	A2C2	E	Gently undulating slopes with mostly shallow calcareous soils on weathered siltstones. Associated creek flats have deeper calcareous soils. Up to 5% of land is gullied and/or scalded. Subsoils are moderately saline. Slopes are 1-3%, relief is less than 30m Main soils: ***Rises:*** Calcareous clay loam on rock – **A2** and Gradational loam on rock -**C2**. ***Creek flats:*** Deep (rubbly) calcareous sandy loam **-A4** and Deep moderately calcareous loamy sand - **A3**.
		Creek flat	A4A3	E	
JDB	0.7	Fan	D2	D	Fans and creek flats with texture contrast clay loam over, often crumbly, red clay. **JDB** Gently sloping fans. **JDoo** Creek flats. Severely gullied and moderately scalded. Main soils: Clay loam over red clay - **D2**
JDoo	2.4	Creek flat	D2	D	

KVJ	0.7	Creek flat	A4A3	D	Creek flats formed on calcareous outwash sediments derived from basement rock. More than 90% of soils are calcareous throughout (Calcarosols). Moderately saline soils throughout. Main soils: Deep (rubbly) calcareous sandy loam **-A4** and Deep moderately calcareous loamy sand - **A3**.

PROPORTION codes assigned to soils within Soil Landscape Units (SLU):

(D) Dominant in extent (>90% of SLU)
(V) Very extensive in extent (60–90% of SLU)
(E) Extensive in extent (30–60% of SLU)
(C) Common in extent (20–30% of SLU)
(L) Limited in extent (10–20% 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_3 buildup in the subsoil (<20% CO_3 in subsoil). Pediment type Calcarosols.

A4 Deep (rubbly) calcareous loam (Hypercalcic-Lithocalcic Calcarosol)
Calcareous sandy-clay loamy topsoil grading into loamy-clay loamy subsoil with a significant CO_3 buildup in the subsoil. Often rubbly. Soil usually >120 cm in depth

A5 Rubbly calcareous loamy sand on clay (Supracalcic-Lithocalcic Calcarosol on clay)
Calcareous loamy sand topsoil grading into loamy-clay loamy subsoil on a clayey substrate. Usually rubbly.

C2 Gradational loam on rock (Calcic / Hypercalcic Red Dermosol)
Loam to clay loam grading to friable red clay with soft Class I carbonate within 50 cm, grading to weathering rock within 100 cm.

D1 Loam over red clay on rock (Hypercalcic / Calcic, Red Chromosol / Sodosol)
Medium thickness hard gravelly 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.

D2 Hard loam over red clay (Calcic / Hypercalcic, Red Chromosol)
Hard setting sandy loam to clay loam (with variable quartzite stones) abruptly overlying a well structured red clay with soft Class I carbonate at depth.

L1 Shallow stony loam (Paralithic, Leptic Tenosol)
Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.

Further information: DEWNR Soil and Land Program