

SBD Saltbush Dam Land System

- Area:** 184 km²
- Landscape:** Broad alluvial / flood plains with extensive scalding. Drainage is generally from north to south; from near "Bendigo" and "The Oaks" towards "Kia-Ora".
- Annual rainfall:** 225 - 275 mm average
- Geology:** Medium to fine grained alluvium is extensive. Isolated hard rock remnants occur in places, formed on Proterozoic sediments including Appila Tillite and Bunyeroo and Ulupa Formation siltstones.
- Soils:** Most soils are deep with sandy loam to clay loam surfaces (most commonly sandy clay loam). Profiles are either gradational (usually calcareous throughout), or texture contrast with non calcareous surfaces and friable subsoil clays.
- Main soils:** *On alluvium*
- A3** Deep moderately calcareous sandy loam to clay loam
 - D4** Loam to clay loam over pedaric red clay
 - A4** Deep (rubbly) calcareous sandy loam to loam
 - M4** Hard gradational sandy clay loam
- Minor soils:** *On alluvium or reworked sediments*
- A5** Rubbly calcareous loam on clay
 - A8** Gypseous calcareous loam
 - C1** Gradational sandy loam
 - C3** Gradational sandy clay loam
 - M2** Deep gradational clay loam
- On rock*
- A2** Shallow calcareous loam
 - C2** Gradational loam on rock
 - L1** Shallow stony loam
 - RR** Rock outcrop
- Summary:** The Saltbush Dam Land System is a broad alluvial/flood plain with isolated hard rock inselbergs. Main soils: gradational calcareous soils and red pedaric texture contrast sodic soils.

Soil Landscape Unit summary: 30 Soil Landscape Units (SLUs) mapped in the Saltbush Dam Land System

SLU	% of area	Component	Main soils	Prop#	Notes
AAB	0.3	Ridges	L1A2	D	Ridges and steep peaks on limestone and calc-siltstone with very shallow loamy soils. AAB Ridges with relief of less than 30m, and slopes of 10-30%. AAD Steep, dissected, rocky peak, relief is 30-90m, slopes 30-50%. Main soils: <u>shallow stony loam</u> - L1 and <u>shallow calcareous loam</u> - A2 , with <u>rock outcrop</u> - RR .
AAD	0.1	Steep peaks	L1A2	D	



EEB	0.2	Rises	A2	D	Gently undulating rises formed on calc-siltstones. Slopes are 1-3%, relief is less than 30m. Main soils: <u>shallow calcareous loam</u> - A2 , with <u>deep (rubbly) calcareous loam</u> - A4 .
EOB	0.4	Rises	A2A4	D	Gently undulating rises formed on calc-siltstones. Slopes are 1-3%, relief is less than 30m. Main soils: <u>shallow calcareous loam</u> - A2 and <u>deep (rubbly) calcareous loam</u> - A4 , with <u>shallow stony loam</u> - L1 and <u>gradational loam on rock</u> - C2 .
EVB	1.6	Rises	A2A4	V	Gently undulating rises with rock outcrops formed on fine-grained calcareous rocks, and drainage depressions with 10-50% scalding formed on locally derived alluvium. Slopes 1-3%, relief less than 30m. Main soils: Rises: <u>shallow calcareous loam</u> - A2 and <u>deep (rubbly) calcareous loam</u> - A4 , with <u>shallow stony loam</u> - L1 . Drainage Depressions: <u>deep moderately calcareous clay loam</u> - A3 and <u>deep (rubbly) calcareous sandy loam</u> - A4 , with <u>gradational sandy loam</u> - C1 , <u>gradational sandy clay loam</u> - C3 and <u>loam over pedaric red clay</u> - D4 .
		Drainage depressions	A3A4	L	
JLy	5.9	Drainage depressions	D4A3	D	Drainage depressions formed on fine textured outwash. Subsoils are moderately saline.
JLyy	26.8	Drainage depressions	D4A3	D	JLy Drainage depressions, more than 50% scalded, 5-10% gullyng. JLyy Drainage depressions, more than 50% scalded and with more than 20% gullyng Main soils: <u>sandy clay loam over pedaric red clay</u> - D4 and <u>deep moderately calcareous sandy clay loam</u> - A3 , with <u>hard gradational sandy clay loam</u> - M4 and <u>rubbly calcareous loam on clay</u> - A5 .
JPU	7.2	Flats	D4	D	Flats and drainage depressions formed on outwash sediments derived from basement rocks. JPU Plains, 10-50% scalded. JPo Creek flats. 10-20% gullied (10-20%) and 10-50% scalded. JPy Drainage depressions, 10-50% scalded, 5-10% gullied. Main soils: <u>clay loam over pedaric red clay</u> - D4 with <u>deep moderately calcareous clay loam</u> - A3 , <u>rubbly calcareous loam on clay</u> - A5 and <u>hard gradational sandy clay loam</u> - M4 .
JPo	2.4	Flats	D4	D	
JPy	1.3	Drainage depressions	D4	D	
Kbt	9.0	Flats	A3	D	Outwash plains formed on fine grained alluvium. Over 50% of land is scalded. Main soils: <u>deep moderately calcareous clay loam</u> - A3 with <u>gradational sandy clay loam</u> - C3 and <u>clay loam over pedaric red clay</u> - D4 .
KFA	0.9	Rises	A4	V	Flats and low rises formed on outwash sediments. KFA Low rises and 20-30% flats. Slopes are less than 1%.
		Flats	A3A4	C	
KFL	0.1	Rises	A4	D	KFL Gently sloping rises. Slopes are 1-3%. Soils are moderately saline.
KFI	0.4	Rises	A4	D	KFI Gently sloping rises, slopes 1-3%. 10-20% gullied and 10-50% scalded.
KFo	2.5	Drainage depressions	A3A4	D	KFo Drainage depressions, 10-20% gullied and 10-50% scalded.
KFU	14.4	Rises	A4	V	KFU Low rises and 30-40% flats. Flats are 10-50% scalded. KFu Flats. 5-10% gullied and over 50% scalded.
		Flats	A3A4	E	
KFu	1.7	Flats	A3A4	D	KFV Gentle rises, 1-3% slope, and 10-20% flats. Flats 5-10% scalded.
KFV	1.0	Rises	A4	V	Main soils:



		Flats	A3A4	L	<p>Rises: <u>deep (rubbly) calcareous sandy loam - A4</u>, with <u>rubbly calcareous loam on clay - A5</u> and <u>deep moderately calcareous clay loam - A3</u>.</p> <p>Flats and drainage depressions: <u>deep moderately calcareous clay loam - A3</u> and <u>deep (rubbly) calcareous sandy loam - A4</u>, with <u>sandy clay loam over pedaric red clay - D4</u>, <u>gradational sandy loam - C1</u> and <u>gradational sandy clay loam - M4</u>.</p>
KIG	0.2	Fans	C1A3	D	Fans formed on medium grained outwash.
KIH	1.9	Fans	C1A3	D	<p>KIG Gently sloping fans, 1-3% slope. 10-20% gullied.</p> <p>KIH Undulating fans, 3-10% slope. 10-20% gullied.</p> <p>Main soils: <u>gradational sandy loam - C1</u> and <u>deep moderately calcareous loam - A3</u>, with <u>loam over pedaric red clay - D4</u> and <u>deep (rubbly) calcareous sandy loam - A4</u>.</p>
KKB	1.9	Fans	A3A4	V	Gently sloping fans with 20-30% rises formed on outwash sediments. Slopes are 1-3%.
		Rises	A4	C	<p>Main soils:</p> <p>Fans: <u>deep moderately calcareous clay loam - A3</u> and <u>deep (rubbly) calcareous sandy loam - A4</u>, with <u>sandy clay loam over pedaric red clay - D4</u>, <u>gradational sandy loam - C1</u> and <u>gradational sandy clay loam - M4</u>.</p> <p>Rises: <u>deep (rubbly) calcareous sandy loam - A4</u>.</p>
KLB	1.2	Rises	A4A3	D	Rises and fans formed on medium grained outwash, with clay loamy calcareous soils.
KLI	4.6	Fans	A4A3	E	
		Rises	A4	E	KLB Gently undulating rises, 1-3% slope.
KLV	0.3	Rises	A4A3	D	<p>KLI Gently undulating fans and rises, 1-3% slope, with 10-20% gullyng and 10-50% scalding on fans.</p> <p>KLV Gently undulating rises, 1-3% slope, with 10-50% scalding.</p> <p>Main soils:</p> <p>Rises: <u>deep (rubbly) calcareous sandy loam - A4</u> and <u>deep moderately calcareous clay loam - A3</u>, with <u>gradational sandy loam - C1</u> and <u>gradational sandy clay loam - M4</u>.</p> <p>Fans: <u>deep (rubbly) calcareous sandy loam - A4</u> and <u>deep moderately calcareous clay loam - A3</u>, with <u>sandy clay loam over pedaric red clay - D4</u> and <u>gradational sandy loam - C1</u>.</p>
KOB	0.2	Fans	A4A5	D	<p>Gently sloping fans formed on medium grained outwash. Slopes are 1-3%.</p> <p>Main soils: <u>deep (rubbly) calcareous sandy loam - A4</u> and <u>rubbly calcareous loam on clay - A5</u>.</p>
KVB	1.6	Rise	A4A3	D	Low rises, fans and plains formed on calcareous outwash sediments derived from basement rock. Soils are moderately saline.
KVE	3.6	Flat	A4A3	D	
KVu	0.2	Fan	A4A3	D	
Xc-	0.3	Lunettes	A8	D	<p>Lunettes with deep gypseous loam over clay loam. 10-30% calcareous loam over clay on marl in swampy hollows.</p> <p>Main soil is <u>gypseous calcareous loam - A8</u>.</p>
XOA	7.8	Flats	A3	D	<p>Flood plains, swampy and marginally saline, with clayey calcareous soils on alluvium. 0-5% scalding.</p> <p>Main soils: <u>deep moderately calcareous clay loam - A3</u>, with <u>deep gradational clay loam - M2</u>.</p>



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 sandy loam to clay loam (Regolithic, Calcic Calcarosol)
Calcareous sandy loam to clay loam grading to a loamy to clayey subsoil without a significant carbonate accumulation in the subsoil, grading to medium to fine grained alluvium.
- A4** Deep (rubbly) calcareous sandy loam to loam (Regolithic, Hypercalcic / Lithocalcic Calcarosol)
Calcareous sandy loam to 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, 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.
- A8** Gypseous calcareous loam (Gypsic Calcarosol)
Calcareous loam grading to a highly calcareous clay loam to light clay over highly gypseous light clay at between 50 and 100 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.
- C3** Gradational sandy clay loam (Calcic / Hypercalcic Red Dermosol)
Loam to clay loam grading to a friable red clay with abundant soft Class I carbonate within 50 cm, overlying alluvium within 100 cm.
- D4** Loam to clay loam over red friable clay (Calcic, Pedaric, Red Sodosol)
Thin to medium thickness loam to clay loam over a finely structured friable red clay, calcareous from about 50 cm, grading to fine or medium grained alluvium.
- L1** Shallow stony loam (Paralithic, Leptic Tenosol)
Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.
- M2** Deep gradational clay loam (Calcic, Red / Brown Dermosol)
Friable loam to light clay grading to a well structured red or brown dark clay, calcareous with depth, over alluvium.
- M4** Hard gradational sandy clay loam (Calcic, Brown / Red Dermosol / Kandosol)
Hard setting sandy loam to sandy clay loam grading to a poorly structured to massive hard red or brown sandy clay to clay, weakly to moderately calcareous with depth, over alluvial sediments.
- RR** Rock outcrop

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

