

## GRADATIONAL RED SANDY LOAM

**General Description:** *Thick loamy sand to sandy loam overlying a massive red brown light sandy clay loam to sandy clay with minor carbonate nodules, grading to variable silty or sandy alluvium*

**Landform:** Alluvial flats of the Angas - Bremer flood plains

**Substrate:** Sandy to silty, occasionally clayey alluvium

**Vegetation:** Blue gum woodland

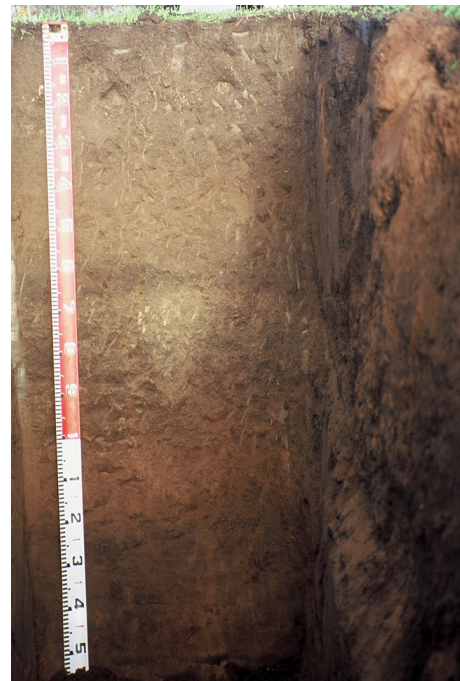


<b>Type Site:</b>	Site No.:	CH055	1:50,000 mapsheet:	6727-3 (Alexandrina)
	Hundred:	Strathalbyn	Easting:	320500
	Section:	3548	Northing:	6093250
	Sampling date:	18/08/93	Annual rainfall:	400 mm average

Very low rise on alluvial plain. Hard setting surface.

### Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-12	Dark reddish brown fine sandy loam with moderate granular structure. Clear to:
12-35	Dark reddish brown fine sandy loam with weak coarse blocky structure. Diffuse to:
35-100	Dark reddish brown fine sandy clay loam with weak coarse blocky structure. Clear to:
Buried soil	
100-140	Red massive loamy sand. Clear to:
140-175	Yellowish red massive fine sandy clay loam. Clear to:
175-200	Yellowish red soft massive loamy sand.



**Classification:** Sodic, Eutrophic, Red Kandosol; thick, non-gravelly, loamy / clay loamy, deep



## Summary of Properties

- Drainage:** The soil is well drained and is never wet for more than a day or so.
- Fertility:** The soil has moderate natural fertility, although the high pH may induce some trace element deficiencies. Phosphorus and organic carbon levels are high.
- pH:** Neutral at the surface grading to strongly alkaline with depth.
- Rooting depth:** More than 200 cm in the pit.
- Barriers to root growth:**
- Physical:** There are no apparent physical barriers to root growth as the soil is not excessively hard.
  - Chemical:** There are no apparent chemical barriers to root growth.
- Waterholding capacity:** 150 - 200 mm in the rootzone.
- Seedling emergence:** Good, provided that organic carbon levels are maintained above 2%, as the soil tends to set hard.
- Workability:** Good.
- Erosion Potential:**
- Water:** Low.
  - Wind:** Low to moderately low. The fine sandy surface will easily pulverize and blow if excessively worked.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Row	7.2	7.2	0	0.27	1.80	2.0	39	663	-	2.6	4.3	30	24.2	6.1	9.6	6.95	2.47	0.50	1.38	5.2
0-12	7.7	7.4	0.5	0.17	0.91	2.7	84	615	-	2.9	2.1	20	13.5	5.3	11.9	9.68	2.65	0.42	1.40	3.5
12-35	8.4	7.9	0.1	0.18	1.46	0.6	18	398	-	1.8	1.3	8	7.8	1.5	6.6	4.35	1.68	0.82	0.73	18.9
35-100	8.7	8.1	<0.1	0.21	2.02	0.4	11	341	-	1.2	0.9	6	4.9	0.3	6.2	3.53	1.61	1.21	0.69	19.5
100-140	8.7	7.6	<0.1	0.05	0.86	0.1	6	167	-	0.7	0.2	3	1.6	0.1	3.3	1.36	0.95	0.63	0.27	19.1
140-175	8.8	7.7	<0.1	0.10	0.76	0.1	7	298	-	1.2	0.6	5	2.0	0.2	6.5	2.72	2.49	1.47	0.61	22.6
175-200	9.0	8.0	<0.1	0.09	0.87	<0.1	<4	210	-	0.6	0.9	3	2.4	0.1	3.6	1.35	0.97	0.98	0.33	27.2

**Note:** Row sample bulked from 20 cores (0 - 10 cm) taken from along the vine rows around the pit.  
CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.  
ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.

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

