Soils (soil type)

It's not uncommon for three soil types to occur in one paddock, making a challenge for precision farming

Soils (soil type) vary across the landscape due to differences in factors such as parent material, climate, topography, biotic influences and time of formation. Sixty one representative classes of *Soils (soil type)* have been identified to describe the variation in soils found across southern South Australia. These classes highlight important features for land use and management, and are based on significant profile features observed and recorded by soil scientists during the course of the State Land and Soil Mapping Program (1986–2001). Three miscellaneous classes (rock, water, not applicable) are also recorded.

Soil variability in southern South Australia

Soil properties can vary across the landscape in a subtle or dramatic fashion. Mapping at a regional scale is not able to display this level of variability, however proportions of each *Soils (soil type)* class (e.g. A1, A2, etc.; see table below) have been estimated for each map unit.

Soils (soil type) and related *Soil groups* are described in the reference book: 'The Soils of Southern South Australia' (Hall et al. 2009, see link overleaf*).

Calcareous loam (A4) soils are the most widespread of 61 classes

Area statistics

Soil groups	Soil	Description	Area	Cleared land
A Calcareous soils	A1	Highly calcareous sandy loam	5.33%	5.76%
	A2	Calcareous loam on rock	2.11%	1.53%
	A3	Moderately calcareous loam	0.99%	0.52%
	A4	Calcareous loam	8.47%	9.02%
	A5	Calcareous loam on clay	3.49%	3.62%
	A6	Calcareous graditional clay loam	2.50%	2.73%
	A7	Calcareous clay loam on marl	0.18%	0.23%
	A8	Gypseous calcareous loam	0.16%	0.12%
B Shallow soils on calcrete or limestone	B1	Shallow highly calcareous sandy loam on calcrete	2.45%	1.88%
	B2	Shallow calcareous loam on calcrete	8.16%	6.88%
	B3	Shallow sandy loam on calcrete	5.16%	4.11%
	B4	Shallow red loam on limestone	0.28%	0.39%
	B5	Shallow dark clay loam on limestone	0.65%	0.94%
	B6	Shallow loam over red clay on calcrete	0.86%	1.11%
	B7	Shallow sand over clay on calcrete	1.66%	2.17%
	B8	Shallow sand on calcrete	0.50%	0.56%
	B9	Shallow clay loam over brown or dark clay on calcrete	0.03%	0.03%

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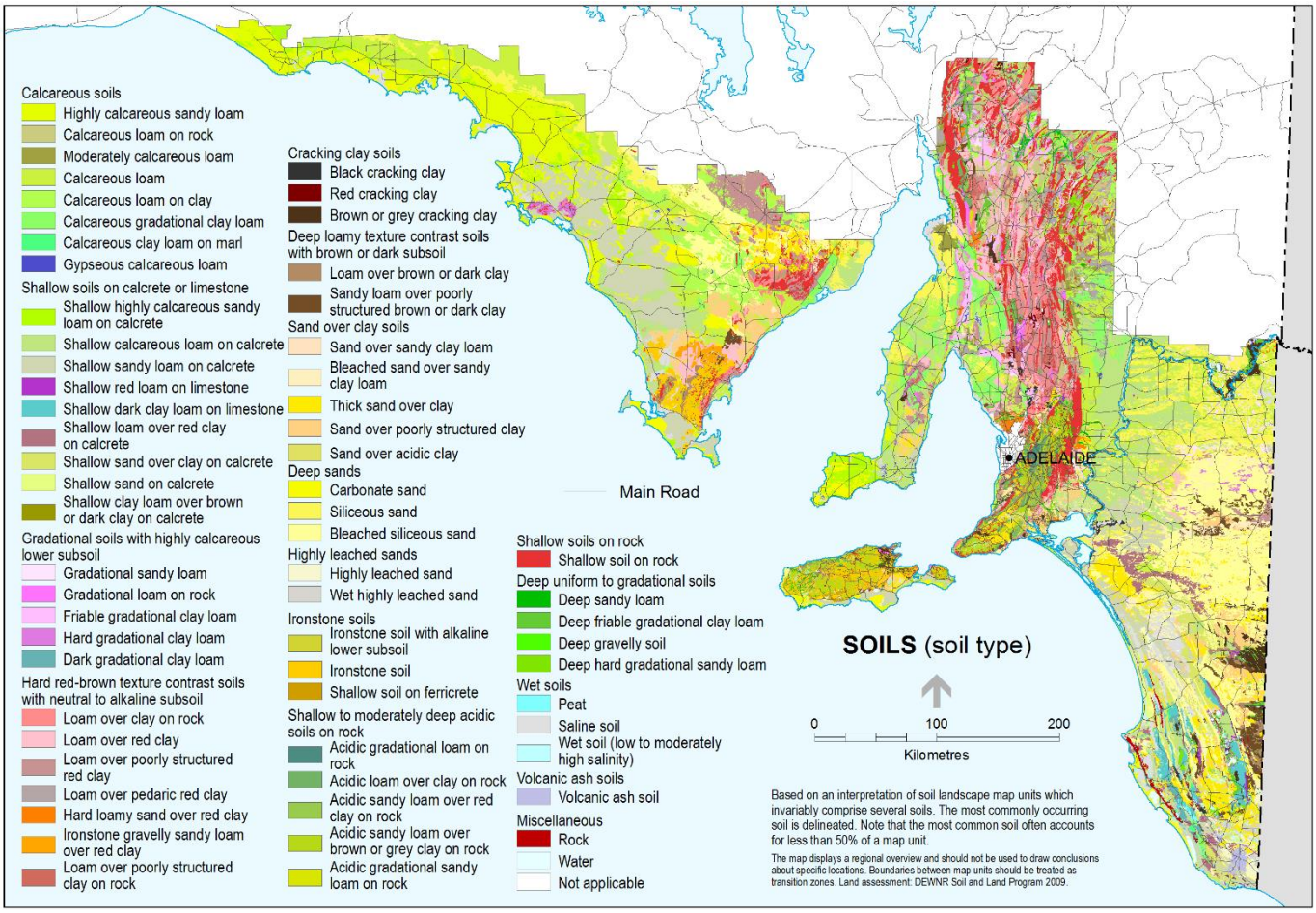
Soil groups	Soil	Description	Area	Cleared land
C Gradational soils with highly calcareous lower subsoil	C1	Gradational sandy loam	1.54%	1.79%
	C2	Gradational loam on rock	0.87%	0.85%
	C3	Friable gradational clay loam	1.47%	1.72%
	C4	Hard gradational clay loam	0.40%	0.55%
	C5	Dark gradational clay loam	0.19%	0.27%
D Hard red-brown texture contrast soils with neutral to alkaline subsoil	D1	Loam over clay on rock	2.12%	2.23%
	D2	Loam over red clay	2.53%	3.20%
	D3	Loam over poorly structured red clay	3.15%	4.13%
	D4	Loam over pedaric red clay	1.45%	0.45%
	D5	Hard loamy sand over red clay	0.28%	0.35%
	D6	Ironstone gravelly sandy loam over red clay	0.25%	0.32%
	D7	Loam over poorly structured clay on rock	0.63%	0.76%
E Cracking clay soils	E1	Black cracking clay	0.24%	0.33%
	E2	Red cracking clay	0.33%	0.36%
	E3	Brown or grey cracking clay	0.71%	0.81%
F Deep loamy texture contrast soils with brown or dark subsoil	F1	Loam over brown or dark clay	1.01%	1.26%
	F2	Sandy loam over poorly structured brown or dark clay	1.70%	2.20%
G Sand over clay soils	G1	Sand over sandy clay loam	0.96%	1.23%
	G2	Bleached sand over sandy clay loam	1.77%	2.00%
	G3	Thick sand over clay	3.80%	4.27%
	G4	Sand over poorly structured clay	2.45%	3.25%
	G5	Sand over acidic clay	0.19%	0.22%
H Deep sands	H1	Carbonate sand	2.10%	1.13%
	H2	Siliceous sand	5.12%	5.50%
	H3	Bleached siliceous sand	6.35%	5.37%
I Highly leached sands	I1	Highly leached sand	0.44%	0.55%
	I2	Wet highly leached sand	0.37%	0.48%
J Ironstone soils	J1	Ironstone soil with alkaline lower subsoil	0.21%	0.22%
	J2	Ironstone soil	1.10%	1.27%
	J3	Shallow soil on ferricrete	0.10%	0.10%
K Shallow to moderately deep acidic soils on rock	K1	Acidic gradational loam on rock	0.24%	0.29%
	K2	Acidic loam over clay on rock	0.52%	0.59%
	K3	Acidic sandy loam over red clay on rock	0.46%	0.55%
	K4	Acidic sandy loam over brown or grey clay on rock	0.89%	0.77%
	K5	Acidic gradational sandy loam on rock	0.17%	0.15%
L Shallow soils on rock	L1	Shallow soil on rock	3.87%	2.31%
M Deep uniform to gradational soils	M1	Deep sandy loam	0.42%	0.37%
	M2	Deep friable gradational clay loam	0.61%	0.77%
	M3	Deep gravelly soil	0.11%	0.03%
	M4	Deep hard gradational sandy loam	0.44%	0.41%
N Wet soils	N1	Peat	0.13%	0.17%
	N2	Saline soil	2.29%	1.72%
	N3	Wet soil (non to moderately saline)	0.48%	0.59%
O Volcanic ash soils	O1	Volcanic ash soil	0.10%	0.15%
Miscellaneous	RR	Rock	0.86%	0.44%
	WW	Water	1.10%	1.24%
	XX	Not applicable (urban, reservoirs, lakes, quarries)	0.48%	0.69%
TOTAL HECTARES			15,765,460	10,439,300



Displaying data in soil maps

Soil and land attribute maps display a simplified version of underlying data. Mapping classes are based on an interpretation of soil landscape map units which invariably comprise several soils.

The most commonly occurring soil is delineated on the map. (Note that the most common soil often accounts for less than 50% of a map unit.)

Sand over poorly structured clay (G4) is characterised by low fertility, wind erosion risk and water repellence

Further information

- View data on NatureMaps (→ Soils)
- Read the metadata for this layer
- Read more about soil attribute mapping
- Contact Mapland

Download from Enviro Data SA:

- Statewide map and spatial dataset
- Assessing Agricultural Lands (Maschmedt 2002)
- * Soils of Southern SA book Part 1 and Part 2