

# Surface soil texture

**Surface soil texture is a key determinant of soil stability, moisture and nutrient retention and availability—important factors for plant establishment and growth**

**Surface soil texture** refers to the approximate proportions of sand, silt and clay size particles in the soil matrix. The soil matrix consists of particles less than 2 mm in size and excludes the coarse fraction, which contains larger particle sizes, such as gravel.

Surface texture influences many soil and land characteristics including stability, waterholding capacity, [water availability](#), nutrient-retention capacity, erodibility, permeability, workability and seedling emergence. Some of these are assessed as soil or land attributes in their own right.



Soil texture (and an estimate of clay content) can be determined by [ribboning](#) a moistened ball of soil. The longer the ribbon, the higher the clay content is in the soil.

## Land assessment in southern South Australia

Texture is determined in the field by manipulating a moistened soil sample between the fingers and attempting to form a ribbon. During this process, tactile characteristics are used to assess levels of sand (gritty), silt (silky) and clay (plastic/sticky).

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 area proportions of each *Surface soil texture* class (e.g. S, LS, etc.) have been estimated for each map unit. Eight aggregated texture classes are defined for reporting area statistics (see below).

Further information can be found in [Assessing Agricultural Land](#) (Maschmedt 2002).

## Area statistics

Surface soil texture	Approximate clay content	Area	Cleared land	Class
Sand	Less than 5%	23.08%	23.06%	S
Loamy sand, clayey sand	5–10%	9.21%	10.18%	LS
Sandy loam, fine sandy loam	10–20%	36.99%	37.25%	SL
Loam, silty loam, light sandy clay loam	20–25%	15.12%	14.30%	L
Sandy clay loam	20–30%	4.02%	3.24%	SCL
Clay loam, silty clay loam, fine sandy clay loam	30–35%	7.84%	7.54%	CL
Non cracking clay	More than 35%	0.39%	0.39%	CN
Cracking clay	More than 35%	1.67%	2.01%	CC
Not applicable		1.68%	2.03%	X
<b>TOTAL HECTARES</b>		<b>15,765,460</b>	<b>10,439,300</b>	

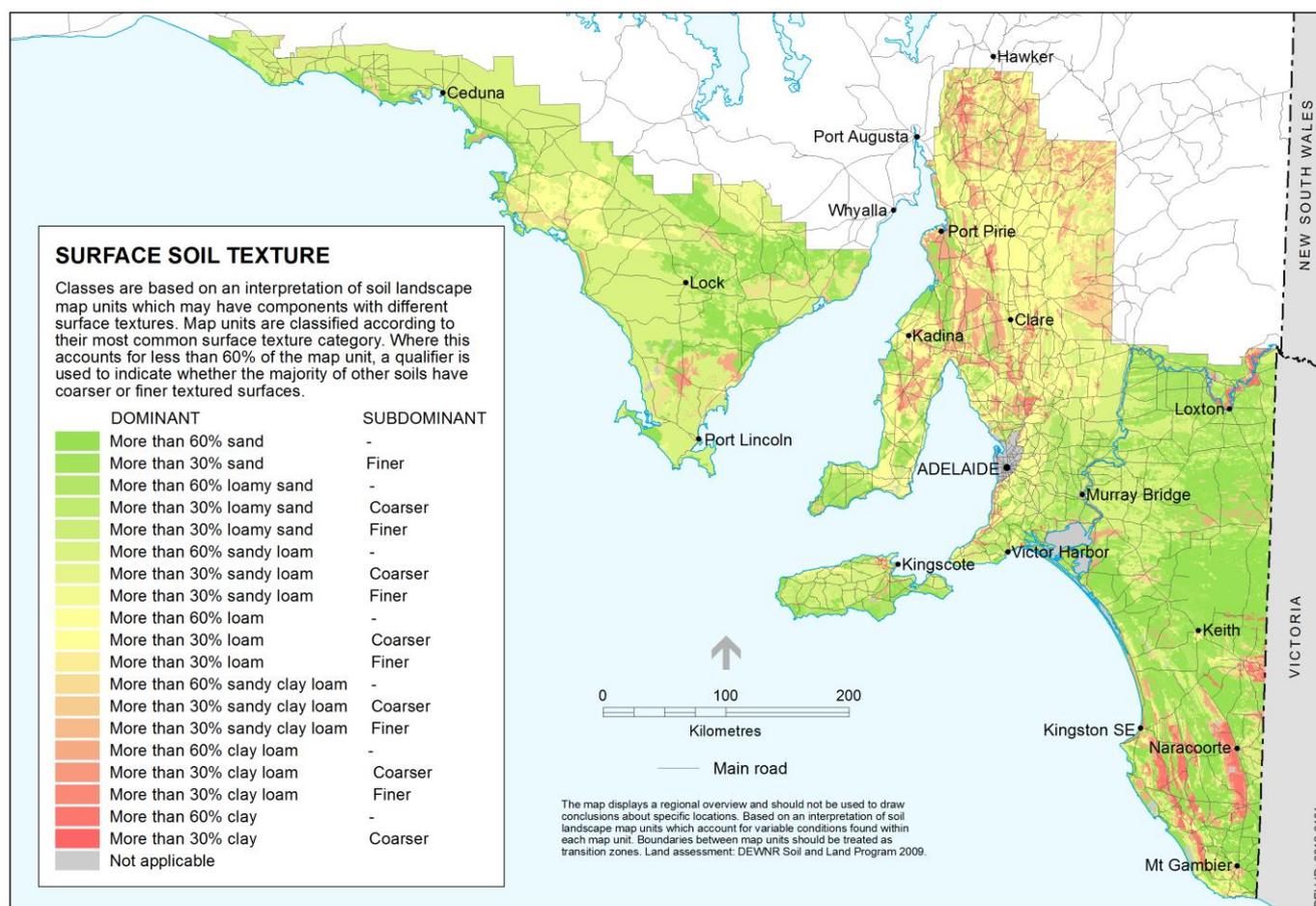


### Displaying data in soil maps

Soil and land attribute maps display a simplified version of the underlying data. Mapping classes are based on an interpretation of soil landscape map units which may have components with different *Surface soil textures*. Map units are classified according to their most common *Surface soil texture* category. Where this accounts for less than 60% of the map unit, a qualifier indicates whether the majority of remaining soil components have coarser (more sandy) or finer (more clayey) textured surfaces.



Texture can vary with depth as shown in this sand over clay soil



### 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](#)



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