

# Surface rockiness

**Stones interfere with farming operations, but they can reduce soil moisture loss and lessen erosion risk**

**Surface rockiness** refers to loose surface rocks and stones, and rock outcrops. Surface rocks and stones can interfere with cultivation, damage machinery, spark fires and in extreme cases can reduce the area of soil for plant growth or be hazardous to livestock. Some land uses are more affected by stoniness than others. Small amounts of stone make land unsuitable for root crops, and for land uses which involve mowing. Rock outcrops which are clustered in reefs or on knolls are easier to work around than those which are uniformly distributed across the land. Where rock outcrops become too dense, the land is effectively non-arable. The cut-off point between arable and non-arable rocky land is a matter of practicality with regard to machinery access, wear and tear.

## Land assessment in southern South Australia

No attempt is made to distinguish between different types or sizes of rocks. A visual assessment of the land surface is made which aims to describe rockiness in terms of management implications, as indicated in the table below.

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 *Surface rockiness* class (e.g. R1, R2, etc.) have been estimated for each map unit.

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



*Shallow stony soils on rubbly and sheet calcrete*

## Area statistics

Degree of rockiness or stoniness	Area	Cleared area	Class*
No outcrop. Nil to minor surface stone	46.63%	50.21%	R1
Sufficient stones or rocks to interfere with tillage, but picking or rolling is not necessary for most uses	21.45%	23.96%	R2
Sufficient stones to necessitate picking or rolling for cultivation; or less than 10% rock outcrop, concentrated in reefs	9.34%	10.45%	R3
Between 10% and 50% rock outcrop concentrated in reefs, allowing cultivation in between	7.80%	6.94%	R4
Too stony or rocky for cropping, but some pasture improvement possible, using standard equipment	7.54%	4.48%	R5
Too rocky for machinery access	5.50%	2.15%	R6
Rock pavements and rock faces	0.36%	0.14%	R8
Not applicable	1.38%	1.66%	RX
<b>TOTAL HECTARES</b>	<b>15,765,460</b>	<b>10,439,300</b>	

\* The letter 'R' denotes classes that are specific to *Surface rockiness*

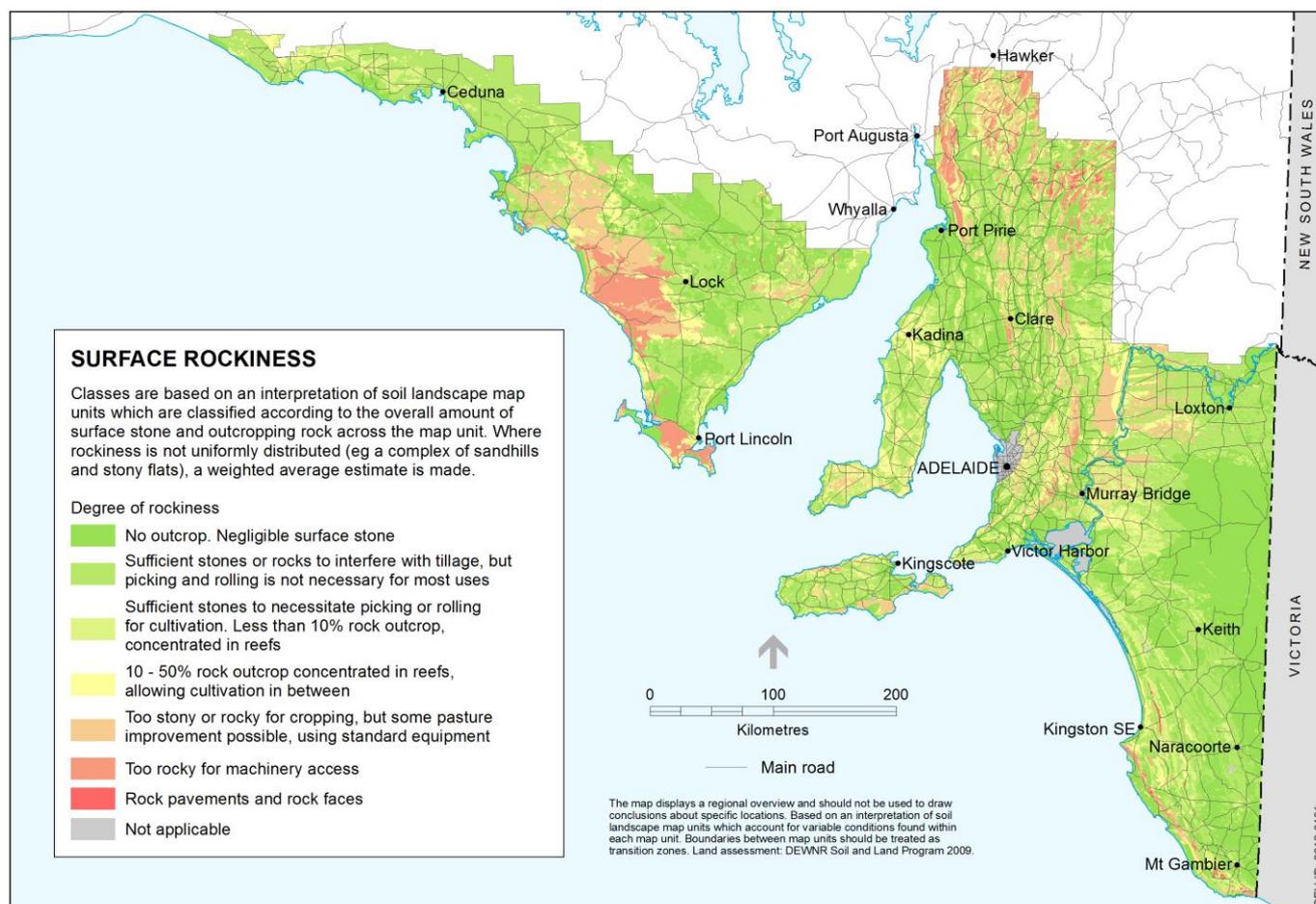


## Displaying data in soil maps

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 variable *Surface rockiness*. Map units are categorised into legend categories with increasing degree of rockiness, based on the overall amount of surface stone and outcropping rock. Where rockiness is not uniformly distributed across the map unit (e.g. a complex of sandhills and stony flats), an area proportion estimate is used.



*Surface rockiness prohibits cropping land use*



## 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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