

# Water erosion potential

**Water erosion can occur when soil particles are displaced by the impact of raindrops and/or mobilised by flowing water**

**Water erosion potential** describes the inherent susceptibility of land to sheet or rill erosion caused by the overland flow of water. Potential for water erosion is based on topography (particularly slope steepness and length) and soil erodibility. Erodibility is influenced by the capacity of a soil to absorb rainfall and to resist raindrop impact and entrainment (dragging of particles along the surface) by runoff water. Erosion potential is independent of vegetative or other protective cover, and runoff control structures such as contour banks.



Rill erosion causing topsoil loss and watercourse siltation

## Land assessment in southern South Australia

*Water erosion potential* classes take account of slope and inherent soil erodibility characteristics, and are assessed for each landscape element (e.g. flat, rise) within a map unit. This assessment focusses on erosion potential, so doesn't include existing erosion (which can be obscured by subsequent cultivation), scalding, landslip or gully / streambank erosion. For consistent assessment, the land is assumed to be in a bare, clean, cultivated state.

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 *Water erosion potential* class (e.g. E1, E2, etc.; see table below) have been estimated for each map unit.

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

## Area statistics

Water erosion potential	Management implications	Area	Cleared land	Class*
Low	No specific management needed	66.34%	67.08%	E1
Moderately low	Modified surface management needed	15.05%	15.88%	E2
Moderate	Engineering works (e.g. contour banks) needed if cultivated	8.27%	9.09%	E3
Moderately high	Semi arable	3.17%	2.85%	E4
High	Non arable	3.33%	2.45%	E5
Very high	Non arable, not traversable	1.85%	0.90%	E6
Extreme	Non productive	0.63%	0.10%	E7
Not applicable	Not applicable	1.37%	1.65%	EX
TOTAL HECTARES		15,765,460	10,439,300	

\* The letter 'E' denotes classes that are specific to *Water erosion potential*

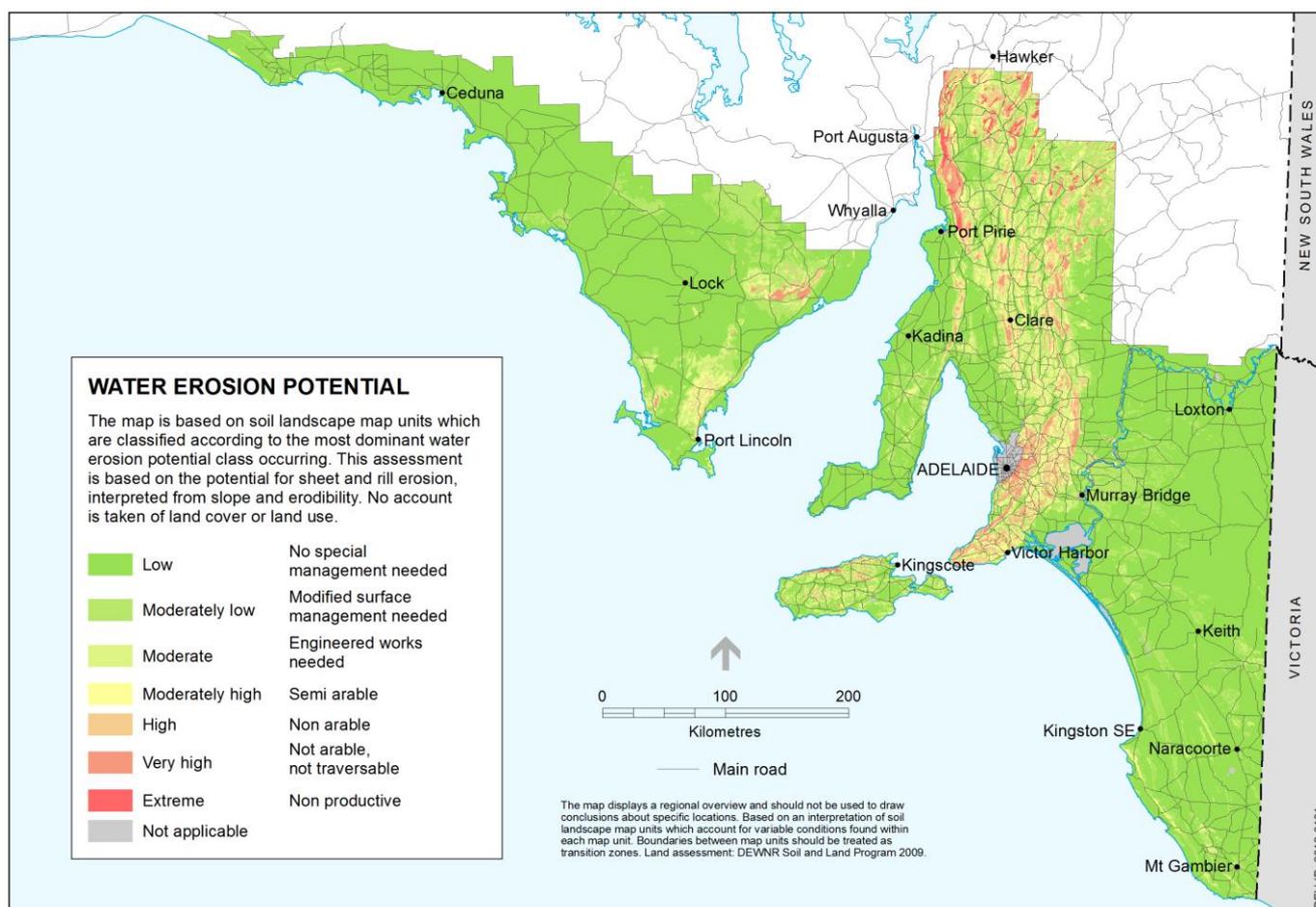


### Displaying data in soil maps

Land and soil attribute maps display a simplified version of underlying data. This is because, at the scale of mapping, a number of landscape elements and a range of *Water erosion potential* classes may be captured in each map unit. In this case, soil landscape map units display their predominant (most common) *Water erosion potential* class.



Rill erosion has removed valuable topsoil and exposed a calcrete substrate



### 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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