

# Wind erosion potential

**Wind erosion is a key land management issue in lower rainfall areas, especially on sand and sandy loam soils**

**Wind erosion potential** indicates where soil erosion could be a problem if soils are left unprotected. Finer-grained soil particles are the most vulnerable to wind erosion. However in soils with more than 20% clay content, particles are usually bound together into larger aggregates and are therefore more resistant. Coarse sands are more resistant than fine sands due to their larger particle mass. Low clay content fine to medium sands have the highest erodibility due to their small particle masses and low potential for aggregation into larger particles. *Wind erosion potential* can vary greatly across the landscape, with much of the wind erosion prone land in South Australia occurring in complex landscapes of susceptible sandhills and more stable (more clayey or stony) flats.



Severe crop damage resulting from wind erosion

## Land assessment in southern South Australia

*Wind erosion potential* classes take account of inherent soil and land characteristics such as surface texture, soil particle size and topography, as well as average annual rainfall (higher rainfall areas usually provide more ground cover and stabilising organic matter), and are assessed in each landscape element (e.g. flat, rise) within a map unit. Vegetation cover at the time of assessment is ignored to provide a standardised assessment.

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 *Wind erosion potential* class (e.g. A1, A2, etc.) have been estimated for each map unit.

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

## Area statistics

Wind erosion potential	Management implications	Area	Cleared land	Class*
Low	Wind erosion should not be a significant problem	39.08%	39.32%	A1
Moderately low	Adoption of more conservative tillage practices should minimize erosion	35.28%	36.01%	A2
Moderate	Reduced tillage, early sowing, modified rotations etc. needed to minimize erosion	13.88%	14.54%	A3
Moderately high	Specialized crops (e.g. cereal rye) and well managed pasture phases needed	5.81%	6.07%	A4
High	Land is non arable, careful grazing management essential	2.71%	1.80%	A5
Extreme	Land should not be used for cropping or grazing	1.85%	0.60%	A7
Not applicable		1.40%	1.67%	AX
TOTAL HECTARES		15,765,460	10,439,300	

\* The letter 'A' denotes classes that are specific to *Wind erosion potential*

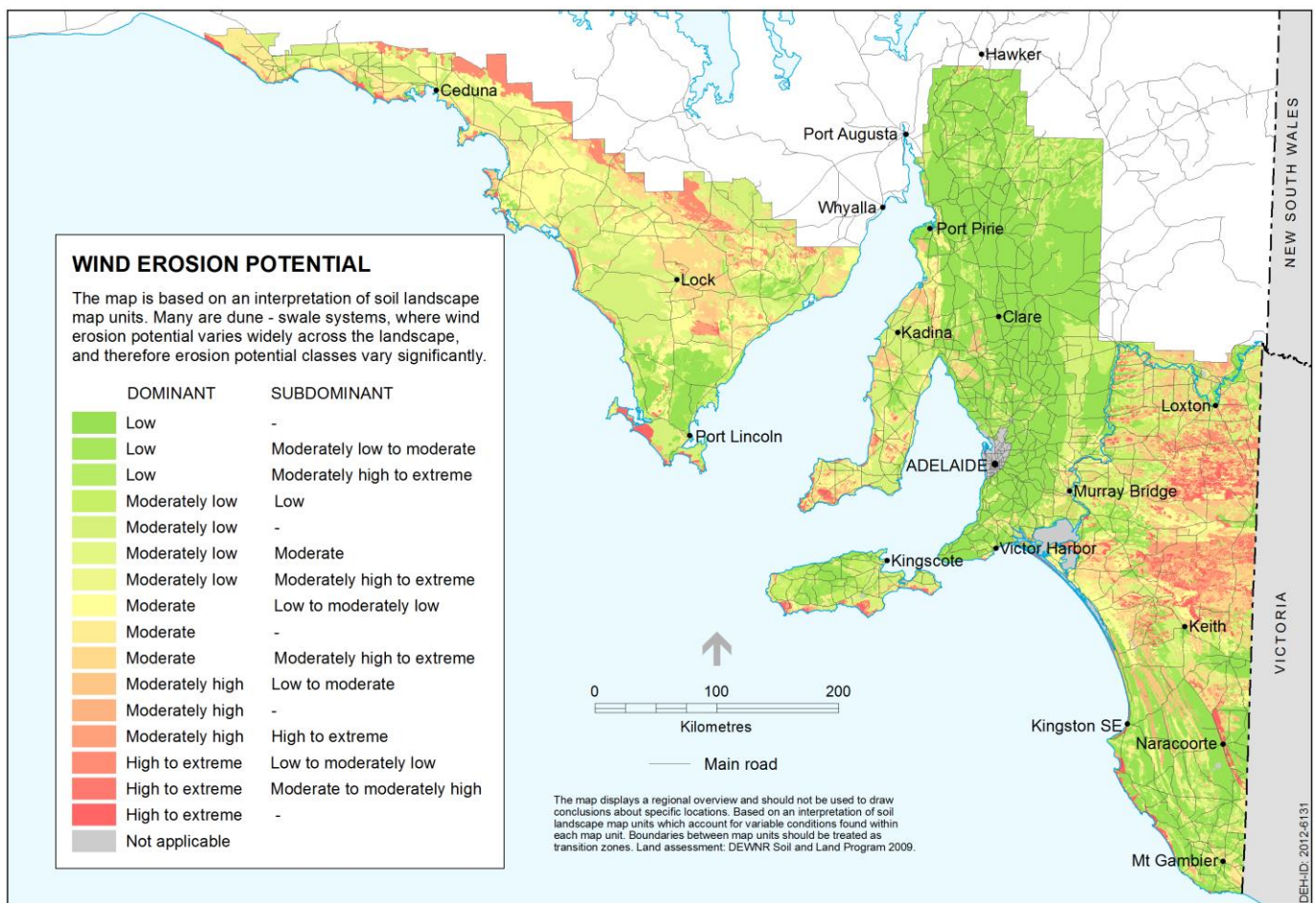


## Displaying data in soil maps

Land and soil attribute maps display a simplified version of the underlying data. This is because, at the scale of mapping, a number of landscape elements and a range of *Wind erosion potential* classes may be captured in each map unit. In this case, map units are classified to highlight the most limiting *Wind erosion potential* class, provided it occupies at least 30% of the area, while also accounting for variability in the remaining subdominant classes.



Sandhills are inherently erosion prone and require stabilisation



## 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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