

Appendix 19 - Soil classification within the trunklines corridor

Soil Order	Area (Ha)	% total extent	Description
SO - Sodosol	1000.1	63.9%	<p>Sodosols show strong texture contrast with highly sodic B horizon but they are not highly acidic (pH > 5.5). Parent materials of Sodosols range from highly siliceous, siliceous to intermediate in composition.</p> <p>Sodosols are only found in poorly drained sites with rainfall between 50mm and 1100mm. Generally, sodosols have very low agricultural potential with high sodicity leading to high erodibility, poor structure and low permeability. These soils have low to moderate chemical fertility and can be associated with soil salinity.</p>
CH - Chromosol	267.4	17.1%	<p>Chromosols have a strong contrasting texture. They are not strongly acidic or sodic in the upper B horizon. The parent material of Chromosols ranges from highly siliceous, siliceous to intermediate in composition.</p> <p>These soils are found in imperfectly drained sites (yellow and grey chromosol) where rainfall is between 250mm and 900mm. They are also found in well-drained sites (brown and red chromosol) with rainfall between 350mm and 1400mm. These soils have moderate agricultural potential with moderate chemical fertility and water-holding capacity. They can be susceptible to soil acidification and soil structure decline.</p>
DE - Dermosol	173.8	11.1%	<p>Dermosols do not have strong texture contrast. They have a well-structured B2 horizon containing low levels of free iron. The parent materials of dermosols range from siliceous, intermediate to mafic in composition.</p> <p>The soils are found in imperfectly drained sites (yellow and grey dermosols) with rainfall between 550mm and 1350mm and in well-drained sites with rainfall between 450mm and 1200mm. Dermosols generally have high agricultural potential with good structure and moderate to high chemical fertility and water-holding capacity with few problems.</p>
VE - Vertosol	75.5	4.8%	<p>Vertosols are clay-rich soils (>35%) of uniform texture. They have the potential for strong cracking and slickensides. The parent materials of Vertosols range from intermediate, mafic to ultramafic in composition. These soils are found in imperfectly drained sites (black vertosol) with rainfall up to 1150mm in well-drained sites (red vertosol) with rainfall up to 900mm.</p> <p>These soils have high agricultural potential with high chemical fertility and water-holding capacity but they require significant amounts of rain before water is available to plants. Gypsum and/or lime may be required to improve their structure. Heavy plastic clays can be difficult to cultivate especially when they are wet. Shrink-swell phenomena also creates problems for site reinstatement if not treated correctly.</p>
RU - Rudosol	24.8	1.6%	<p>Variable soils dependant on the parent material source and the position in the depositional regime of the stream. Where the surface texture is fine and the site is moist for long periods, the accumulation of organic matter will produce a dark well-structured surface (A) horizon. There is usually little variation in texture or colour below the surface horizon, and gravel often occurs within one metre of the soil surface. The soils on drier ephemeral-stream deposits and alluvial fans usually have only minimal organic darkening of the surface horizon.</p> <p>The soils are typically acid throughout and plant nutrient availability is quite variable, possibly influenced by the degree of weathering of the sediments from which they are formed. They may have good infiltration capacity but probably low water holding capacity.</p>

Soil Order	Area (Ha)	% total extent	Description
SO - Sodosol	1000.1	63.9%	Sodosols show strong texture contrast with highly sodic B horizon but they are not highly acidic (pH > 5.5). Parent materials of Sodosols range from highly siliceous, siliceous to intermediate in composition. Sodosols are only found in poorly drained sites with rainfall between 50mm and 1100mm. Generally, sodosols have very low agricultural potential with high sodicity leading to high erodibility, poor structure and low permeability. These soils have low to moderate chemical fertility and can be associated with soil salinity.
KU - Kurosol	18.8	1.2%	Kurasols have a strong texture contrast (also known as a duplex soil) with a strongly acid B horizon that may or may not be sodic. Kurosols form from parent materials that are highly siliceous, siliceous to intermediate in composition and where rainfall is from 50 to 1350mm in poorly drained sites or 750 to 1300mm on well-drained sites. The surface of Kurosol soils are often acidic. They generally have very low agricultural potential with high acidity (pH < 5.5) and low chemical fertility. Kurosols commonly have low water-holding capacity and are often
Unnamed	6	0.4%	This area is not classified on the soil mapping and therefore requires ground truthing during the design and assess phase to verify soil type.

Sources:

http://vro.agriculture.vic.gov.au/dpi/vro/neregn.nsf/pages/ne_soil_north; <http://www.soil.org.au/soil-types.htm>