

# PCK Peacock Land System

**Area:** 483.8 km<sup>2</sup>

**Annual rainfall:** 550 – 610 mm average

**Geology:** The land system is formed on an ancient coastal dune comprising mixed calcareous and siliceous sand which has hardened to calcarenite (Bridgewater Formation). There are extensive sand spreads (Molineaux Sand) overlying the landscape. These tend to be concentrated on the eastern (leeward) side of the range. Small depressions within the range are geologically variable and may be infilled with locally derived outwash sediments, drift sand or swamp sediments. Granitic intrusions protrude through the calcarenite in places, notably Jip Jip Rocks.

**Topography:** The Peacock Land System includes two parallel elongate ranges of rounded hills with a NNE-SSW orientation. The ranges have an overall relief of 60 m and slopes of 3 – 12%. Isolated closed depressions are scattered throughout the range. These are swampy in places. Sand deposits are occasionally in low east west dunes, but are more commonly randomly spread over the land surface. The western range appears to have less sand cover than the eastern range. Consequently there is greater proportion of stony soils with associated surface stone and rocky reefs in the west. Some areas are too rocky for cultivation.

**Elevation:** 20 – 70 m

**Relief:** 20 – 50 m

**Soils:**

*Sandy soils (dunes, rises and flats)*

**H3** Bleached siliceous sand

**G2** Bleached sand grading to sandy clay loam

**G3** Thick sand over clay

**G4** Sand over poorly structured clay

**I1** Highly leached sand

**I2** Wet highly leached sand

*Stony soils (rises)*

**B2** Shallow calcareous loam on calcrete

**B3** Shallow sandy loam on calcrete

**B4** Shallow red loam on calcrete

**B5** Shallow dark clay loam on limestone

**B6** Shallow loam over red-brown clay on calcrete

**B7** Shallow sand over clay on calcrete

**B8** Shallow sand on calcrete

**L1** Shallow soil on rock

**RR** Limestone outcrop

*Other soils*

**F2** Sandy loam over poorly structured brown or dark clay

**M2** Deep friable gradational clay loam

**N2** Saline soil

**N3** Wet soil (non to moderately saline)



**Main features:** The Peacock Land System is characterised by low hills with predominantly well drained sandy and shallow stony soils. However, cropping is limited by low fertility, water repellence, wind erosion potential or shallow stony soils, depending on the depth of sand cover. Depressions are minor overall, but have better productive potential, although swampiness and salinity are increasing.

**Soil Landscape Unit summary:** 4 Soil Landscape Units (SLUs) mapped in the Peacock Land System:

SLU	% of area	Main features #
A-g	0.31	Isolated granite outcrops. There is extensive rocky outcrop and surface stone. Main soils: <u>shallow soil on rock</u> - <b>L1</b> (D). These areas have little agricultural value.
MAB	0.14	Undulating to rolling rises formed on calcreted calcarenite and overlain by siliceous sand. There is greater than 90% shallow soil or calcrete outcrop with greater than 50% bare calcrete. Main soils: <u>limestone outcrop</u> - <b>RR</b> (E), <u>shallow sandy loam on calcrete</u> - <b>B3</b> (M) and <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (C). This land is non-arable as these soils are very shallow and have moderately low to low waterholding capacity and fertility.
MEB MEC	0.19 0.41	Undulating to rolling rises and low hills formed on calcreted calcarenite and overlain by siliceous sand. There is up to 30 m relief and slopes vary from 3-12%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with outcropping reefs and heavy stone in places. Sand is sometimes in dune form. <b>MEB</b> Undulating rises <b>MEC</b> Undulating rises to low hills Main soils: <u>shallow sandy loam on calcrete</u> - <b>B3</b> (E), <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (L), <u>shallow sand on calcrete</u> - <b>B8</b> (L), <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (M), <u>bleached siliceous sand</u> - <b>H3</b> (M), <u>sand grading to sandy clay loam</u> - <b>G2</b> (M) and <u>thick sand over clay</u> - <b>G3</b> (M). The shallow soil is semi-arable as these soils are very shallow and/or stony (variable to 50%, usually less than 20%) and have moderately low to low waterholding capacity and fertility. The sands are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and soil acidity limit pasture and crop growth and is susceptible to wind erosion.
MHB MHC MHh MHn	6.38 57.61 0.24 0.42	Undulating to rolling rises and low hills formed on calcreted calcarenite and overlain by siliceous sand. There is up to 30 m relief and slopes vary from 3-12%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with outcropping reefs and heavy stone in places. Sand is sometimes in dune form. <b>MHB</b> Undulating rises <b>MHC</b> Undulating rises to low hills <b>MHh</b> Undulating rises with 10-50% marginally saline land <b>MHn</b> Undulating rises with up to 10 saline land Main soils: <u>bleached siliceous sand</u> - <b>H3</b> (V) and <u>sand grading to sandy clay loam</u> - <b>G2</b> (C). These soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and soil acidity are limitations for pasture and crop growth and is susceptible to wind erosion. Shallow soils include: <u>shallow sandy loam on calcrete</u> - <b>B3</b> (M), <u>shallow red loam on limestone</u> - <b>B4</b> (M), <u>shallow sand over clay on calcrete</u> - <b>B7</b> (M) and <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (M). This land is semi-arable as these soils are very shallow and/or stony (variable to 50%, usually less than 20%) and have moderately low to low waterholding capacity and fertility.
MJB MJC	0.95 7.12	Undulating to rolling rises and low hills formed on calcreted calcarenite and overlain by siliceous sand. There is up to 50 m relief and slopes vary from 3-12%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with more in places. About 20% of the land surface is too rocky to have warranted clearing.



		<p><b>MJB</b> Undulating rises <b>MJC</b> Undulating rises to low hills</p> <p>Main soils: <u>shallow sandy loam on calcrete</u> - <b>B3</b> (E), <u>shallow red loam on limestone</u> - <b>B4</b> (C), <u>shallow sand over clay on calcrete</u> - <b>B7</b> (L) and <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (C). This land is semi-arable as these soils are very shallow and/or stony and have moderately low to low waterholding capacity and fertility. The minor soils are <u>bleached siliceous sand</u> - <b>H3</b> (L) and <u>sand grading to sandy clay loam</u> - <b>G2</b> (L). These soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and soil acidity limit pasture and crop growth and is susceptible to wind erosion</p>
MLB	0.50	<p>Undulating to rolling rises formed on calcreted calcarenite and overlain by siliceous sand. There is up to 50 m relief and slopes vary from 3-6%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with more in places.</p> <p>Main soils: <u>shallow sandy loam on calcrete</u> - <b>B3</b> (C), <u>limestone outcrop</u> - <b>RR</b> (C), <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (C), <u>shallow sand over clay on calcrete</u> - <b>B7</b> (M), <u>bleached siliceous sand</u> - <b>H3</b> (M), <u>highly leached sand</u> - <b>I1</b> (M) and <u>wet highly leached sand</u> - <b>I2</b> (M). The shallow soil is non-arable as these soils are very shallow and/or stony and have moderately low to low waterholding capacity and fertility. The deep sands have low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and soil acidity limits pasture and crop growth and is susceptible to wind erosion</p>
MOB	0.06	<p>Undulating to rolling rises formed on calcreted calcarenite and overlain by siliceous sand. There is up to 50 m relief and slopes vary from 3-6%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with more in places.</p> <p>Main soils: <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (E) and <u>limestone outcrop</u> - <b>RR</b> (E). This land is non-arable as these soils are very shallow and/or stony and have moderately low to low waterholding capacity and fertility.</p>
MVC	6.68	<p>Undulating to rolling rises and low hills formed on calcreted calcarenite and overlain by siliceous sand. There is up to 50 m relief and slopes vary from 3-12%. There is variable surface calcrete, depending on the presence of sand. 10-20% stone cover is common, with more in places.</p> <p>Main shallow soils: <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (C), <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (C), <u>limestone outcrop</u> - <b>RR</b> (L), <u>shallow sandy loam on calcrete</u> - <b>B3</b> (M) and <u>shallow red loam on limestone</u> - <b>B4</b> (M). This land is semi-arable as these soils are very shallow and/or stony and have moderately low to low waterholding capacity and fertility. The deep soils are <u>bleached siliceous sand</u> - <b>H3</b> (C) and <u>sand grading to sandy clay loam</u> - <b>G2</b> (M). These soils have low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and soil acidity limit pasture and crop growth and is susceptible to wind erosion.</p>
MWB	0.37	<p>Very low raised plain to gently sloping rise less than 3% slope and maximum relief of less than 20 m that is formed on calcreted calcarenites of ancient coastal dunes. There are variable deep sand and non-sandy slopes and surface stone.</p> <p>Main soils: <u>shallow sand over clay on calcrete</u> - <b>B7</b> (V), <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (L), <u>shallow sandy loam on calcrete</u> - <b>B3</b> (L) and <u>bleached siliceous sand</u> - <b>H3</b> (L). The shallow soils will have moderately low to low waterholding capacity, moderate fertility and rapid drainage. The subsoil clay may be a slight limitation to root growth and the depth to calcarenite is 25-50 cm.</p>
MwB	0.06	<p>Very low raised plain to gently sloping rise less than 3% slope and maximum relief of less than 20 m that is formed on calcreted calcarenites of ancient coastal dunes. There is predominantly shallow soil with variable deep sand.</p> <p>Main soils: <u>shallow loam over red-brown clay on calcrete</u> - <b>B6</b> (E), <u>shallow red loam on limestone</u> - <b>B4</b> (E), <u>shallow sandy loam on calcrete</u> - <b>B3</b> (M) and <u>limestone outcrop</u> - <b>RR</b> (L). This soil is non-arable as the soil is very shallow to shallow with variable stony outcrops. The soil has moderate fertility, rapid drainage and very low to low waterholding capacity.</p>
NKf	0.22	<p>Closed drainage depression within the undulating rises to rolling hills formed on calcreted calcarenite. Groundwater tables are often within two metres of the surface.</p> <p>Main soils: <u>shallow dark clay loam on limestone</u> - <b>B5</b> (C), <u>deep friable gradational clay loam</u> - <b>M2</b></p>



		(C) and <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (L). These soils are shallow to moderately deep, have moderate to high fertility and moderately low to moderate waterholding capacity. Drainage is imperfect to poor and salinity is moderate to moderately high. Productive potential would be decreased due to the presence of salinity.
NMG	0.06	Closed drainage depression within the undulating rises to rolling hills formed on calcreted calcarenite. There can be up to 50 m relief. Groundwater tables are often within 2 m of surface. Main soils: <u>shallow sand over clay on calcrete</u> - <b>B7</b> (E), <u>shallow dark clay loam on limestone</u> - <b>B5</b> (E), <u>sand over poorly structured clay</u> - <b>G4</b> (L) and <u>wet soil</u> - <b>N3</b> (L). These soils are moderately deep, have moderate to moderately low fertility and moderately low waterholding capacity. Drainage is poor.
NSG	0.06	Closed drainage depression within the undulating rises to rolling hills formed on calcreted calcarenite. There can be up to 30 m relief. Groundwater tables are often within 2 m of surface.  Main soils: <u>thick sand over clay</u> - <b>G3</b> (E), <u>wet soil</u> - <b>N3</b> (E) and <u>shallow dark clay loam on limestone</u> - <b>B5</b> (C). These soils are deep, have moderately low fertility and high water holding capacity. Drainage is imperfect to poor. The flats are dominated by soils with sandy surfaces and dispersive subsoil clays that are a slight limitation to root growth. The heavier clay loam surfaces are slightly more fertile however moderately low waterholding capacity.
NTG	0.06	Closed drainage depression within the undulating rises to rolling hills formed on calcreted calcarenite. There can be up to 50 m relief. Groundwater tables are often within 2 m of surface. Main soils: <u>thick sand over clay</u> - <b>G3</b> (E) and <u>wet soil</u> - <b>N3</b> (E). These soils are deep, have moderately low fertility and high water holding capacity. Drainage is imperfect to poor. The flats are dominated by soils with sandy surfaces and dispersive subsoil clays that are a slight limitation to root growth.
NZG NZa NZd NZf NZg	0.04 0.03 1.34 0.11 0.27	Closed depressions and flats within the undulating rises to rolling hills formed on calcreted calcarenite. Groundwater tables are often within two metres of the surface. <b>NZG</b> Drainage depression <b>NZa</b> Flats with 0-10% swamps and noticeable salinity <b>NZd</b> Flats with 0-10% swamps and noticeable and 0-10% stony rises <b>NZf</b> Flats with 10-50% saline swamps <b>NZg</b> Drainage depression with noticeable salinity  Main soils: <u>shallow sand over clay on calcrete</u> - <b>B7</b> (E), <u>sand over poorly structured clay</u> - <b>G4</b> (C), <u>saline soil</u> - <b>N2</b> (C), <u>wet soil</u> - <b>N3</b> (L), <u>thick sand over clay</u> - <b>G3</b> (M), <u>shallow dark clay loam on limestone</u> - <b>B5</b> (M) and <u>bleached siliceous sand</u> - <b>H3</b> (M). The soils are shallow to moderately deep, have moderately low to low fertility and imperfectly to poor drainage. The subsoil dispersive clays are a high to severe limitation to root growth penetration. Salinity levels range from nil to moderately high to high. These flats have low productive potential unless sown to salt and waterlogging tolerant pasture species. The minor sandy rises are susceptible to wind erosion, soil acidity and water repellence. They have rapid drainage, moderately low fertility and moderate water holding capacity.
NkG NkK	0.12 0.10	Closed depressions and flats within the undulating rises to rolling hills formed on calcreted calcarenite. Groundwater tables are often within two metres of the surface. <b>NkG</b> Drainage depression <b>NkK</b> Plains with 10-50% swamps and 0-10% sandy rises  Main soils: <u>shallow dark clay loam on limestone</u> - <b>B5</b> (C), <u>deep friable gradational clay loam</u> - <b>M2</b> (C), <u>sand over poorly structured clay</u> - <b>G4</b> (L), and <u>shallow sand over clay on calcrete</u> - <b>B7</b> (L), <u>thick sand over clay</u> - <b>G3</b> (L), <u>bleached siliceous sand</u> - <b>H3</b> (M) and <u>wet soil</u> - <b>N3</b> (M). The heavier soils are shallow to moderately deep, have moderate to high fertility and moderately low waterholding capacity. There may be a slight limitation to root growth due to the poor subsoil clays. The sandy soils have low fertility, rapid drainage and moderate waterholding capacity. Severe water repellence, soil acidity and the susceptibility to wind erosion are limitations for pasture and crop growth.
OFD	0.06	Greater than 90% low sand dune coverage found within the undulating rises to rolling hills formed on calcreted calcarenite.  Main soils: <u>highly leached sand</u> - <b>I1</b> (V), <u>sand grading to sandy clay loam</u> - <b>G2</b> (L) and <u>shallow sand</u>



		<p><u>over clay on calcrete</u> - <b>B7</b> (L).</p> <p>The deep sandy soils have low fertility, rapid drainage and moderate to high waterholding capacity. Severe water repellence, soil acidity and the susceptibility to wind erosion are limitations for pasture and crop growth. The shallower sand over clay soil has moderately low fertility, moderate waterholding capacity. Water repellence, soil acidity and the risk of wind erosion are limitations for this soil for crop and pasture growth.</p>
OLF OLd	0.53 12.22	<p>Up to 90% sand dune coverage found within the undulating rises to rolling hills formed on calcreted calcarenite.</p> <p><b>OLF</b> 60-90% sand dune or sandy rise coverage <b>OLd</b> 30-60% high sand dune coverage on undulating land</p> <p>Main soils: and <u>bleached siliceous sand</u> - <b>H3</b> (M) and <u>sand grading to sandy clay loam</u> - <b>G2</b> (L). The deep sandy soils have low fertility, rapid drainage and moderate to high waterholding capacity. Severe water repellence, soil acidity and the susceptibility to wind erosion are limitations for pasture and crop growth.</p> <p>The shallow soils are described in the MHB soil landscape. This land is semi-arable as these soils are very shallow and/or stony and have moderately low to low waterholding capacity and fertility.</p>
XuU Xul	0.05 0.07	<p>Depressions that are seasonally waterlogged and found within the undulating rises to rolling hills formed on calcreted calcarenite.</p> <p><b>XuU</b> Swampy drainage depression <b>Xul</b> Swampy and marginally saline plain with stony rises &amp; shallow soil over calcrete</p> <p>Main soils: <u>wet soil</u> - <b>N3</b> (V) and <u>sandy loam over poorly structured brown or dark clay</u> - <b>F2</b> (C). These soils are deep, have low fertility and high water holding capacity. Drainage is poor to very poor. There is a moderate limitation to root growth due to the dispersive subsoil clays. Some swamps have moderately high salinity.</p> <p>Shallow stony soils: <u>shallow calcareous loam on calcrete</u> - <b>B2</b> (M), <u>shallow sandy loam on calcrete</u> - <b>B3</b> (M) and <u>shallow dark clay loam on limestone</u> - <b>B5</b> (M).</p> <p>These soils are non-arable as they are very shallow and/or stony. They have moderately low fertility, poor waterholding capacity and have very little elevation.</p>
ZS-	0.60	<p>Saline swamps formed on calcareous clays and marls. These are natural features, representing the lowest points in the local landscape. They are seasonally inundated. Vegetation is commonly a reflection of the level of salinity. Cutting grass is common on moderately saline land, tea tree and samphire on highly saline land, while extremely saline land is usually bare.</p> <p>Main soils: <u>saline soil</u> - <b>N2</b> (D).</p> <p>These soils are very poorly drained with high to extreme salinity and are seasonally inundated. The swamps are too saline for any production other than opportunistic light grazing, but protection of halophytic vegetation must be considered.</p>
ZnO	0.57	<p>Plains and depressions that are seasonally waterlogged and saline, occupying more than half of the area. Groundwater tables are often within two metres of the surface.</p> <p>Main soils: <u>sand over poorly structured clay</u> - <b>G4</b> (E), <u>saline soil</u> - <b>N2</b> (E).</p> <p>These soils are imperfectly to poorly drained, have moderate to high waterholding capacity, low fertility, moderately high to high salinity and a moderate limitation to root growth due to the dispersive subsoil clays. Impeded drainage and increasing salinity limit the productivity of these areas. Improvements can be achieved through the establishment of salt tolerant pastures.</p>
ZpF Zpf Zpg Zpk Zps	0.12 0.11 0.20 1.13 0.28	<p>Groundwater tables are often within two metres of the surface.</p> <p><b>ZpF</b> Plains with 10-50% swamps <b>Zpf</b> Plains with 10-50% saline swamps <b>Zpg</b> Saline drainage depression <b>Zpk</b> Plains with 10-50% saline swamps and 0-10% sandy rises <b>Zps</b> Plains with 10-50% saline swamps and 10-30% sandy rises</p> <p>Main soils: <u>sand over poorly structured clay</u> - <b>G4</b> (E), <u>saline soil</u> - <b>N2</b> (E) and <u>thick sand over clay</u> - <b>G3</b> (L).</p> <p>These soils are deep, moderate to high water holding capacity and have moderately low to very low fertility. Drainage is imperfect to very poorly drained. There is a moderate to high limitation to root growth due to the dispersive subsoil clays. Salinity levels are high to very high due to</p>



		<p>rising groundwater tables.</p> <p>Minor deep sandy soils: <u>bleached siliceous sand</u> - <b>H3</b> (M) and <u>sand grading to sandy clay loam</u> - <b>G2</b> (M).</p> <p>These soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and the susceptibility to wind erosion are limitations for pasture and crop growth.</p>
Zsf Zsk	0.02 0.19	<p>Closed depression within the undulating rises to rolling hills formed on calcreted calcarenite.</p> <p>Groundwater tables are often within two metres of the surface.</p> <p><b>Zsf</b> Plains with 10-50% saline swamps <b>Zsk</b> Plains with 10-50% saline swamps and 0-10% sandy rises</p> <p>Main soils: <u>sand over poorly structured clay</u> - <b>G4</b> (E) and <u>saline soil</u> - <b>N2</b> (E).</p> <p>These soils are deep, moderate to high water holding capacity and have moderately low to very low fertility. Drainage is imperfect to very poorly drained. There is a moderate to high limitation to root growth due to the dispersive subsoil clays. Salinity levels are high to very high due to rising groundwater tables.</p> <p>Minor deep sandy soils: <u>bleached siliceous sand</u> - <b>H3</b> (M), <u>sand grading to sandy clay loam</u> - <b>G2</b> (M) and <u>thick sand over clay</u> - <b>G3</b> (M).</p> <p>These soils are deep with low fertility, moderate waterholding capacity and rapid drainage. Severe water repellence and the susceptibility to wind erosion are limitations for pasture and crop growth.</p>

# PROPORTION codes assigned to soils within Soil Landscape Units (SLU):

(D)	Dominant in extent (>90% of SLU)	(C)	Common in extent (20–30% of SLU)
(V)	Very extensive in extent (60–90% of SLU)	(L)	Limited in extent (10–20% of SLU)
(E)	Extensive in extent (30–60% of SLU)	(M)	Minor in extent (<10% of SLU)

### Detailed soil profile descriptions

- B2** Shallow calcareous loamy sand on calcrete (Petrocalcic Calcarosol)  
Medium thickness calcareous loamy sand with variable rubble overlying calcreted calcarenite within 50 cm.
- B3** Loamy sand over sandy clay loam on calcrete (Petrocalcic, Brown Kandosol / Petrocalcic, Leptic Tenosol)  
Medium to thick loamy sand with a bleached A2 layer, sometimes with a thin brown friable light sandy clay loam subsoil, over calcreted calcarenite.
- B4** Red sandy loam over calcrete (Petrocalcic, Red Dermosol)  
Medium thickness red sandy loam grading to friable red clay loam over calcreted calcarenite within 50 cm - rises.
- B5** Shallow dark clay loam on limestone (Petrocalcic, Black Dermosol)  
Black clay loam to light clay over calcreted limestone at shallow depth, grading to highly calcareous clay - flats.
- B6** Shallow sandy loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)  
Medium thickness sandy loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.
- B7** Sand over friable brown clay on calcrete (Petrocalcic, Brown Chromosol)  
Medium thickness sand overlying brownish friable clay on limestone or calcreted sandy clay within 50 cm.
- F2** Sandy loam over poorly structured brown or dark clay (Brown-Dark Sodosol-Chromosol)  
Topsoil <30 cm over a poorly structured subsoil. Loamy, often sandy loam, to clay loamy texture contrast soil with a sodic/dispersive/poorly structured brown clayey subsoil. Often sandy loam, usually with a bleached horizon, and thin topsoil over a poorly structured B.



- G2** Sand grading to sandy clay loam (Mesotrophic, Yellow Kandosol)  
Grey sand with a thick bleached A2 layer, over a yellow and red friable massive sandy clay loam.
- G3** Thick sand over clay (Hypercalcic, Brown Sodosol/ Chromosol)  
Thick bleached sand with an organically darkened surface abruptly overlying a massive to coarsely structured brown to reddish yellow sandy clay to clay, calcareous with depth - rises.
- G4** Sand over poorly structured clay (Lithocalcic / Calcic, Brown / Grey Sodosol)  
Medium to thick sand abruptly overlying a brown and grey mottled columnar sandy clay loam to sandy clay, with rubbly or soft carbonate at depth.
- H3** Deep bleached sand (Basic, Arenic, Bleached-Orthic Tenosol)  
Grey sand with a thick to very thick bleached A2 layer, over yellow sand continuing below 100 cm.
- I1** Highly leached sand (Fragic, Pipey, Aeric Podosol)  
Grey sand with a very thick bleached A2 layer, over dark brown and yellow massive soft to semi-hard clayey sand (coffee rock), grading to softer yellow and brown sand to sandy clay loam from about 80 cm.
- I2** Wet highly leached sand (Fragic, Humic, Aquic Podosol)  
Grey sand with a thick bleached A2 horizon, overlying a thin to thick layer of coffee rock, grading to pale brown sand sharply overlying a grey, brown and yellow mottled sandy clay loam to light clay.
- M2** Deep friable gradational clay loam (Red-Brown-Grey- Black Dermosol)  
Deep well structured red clay loamy soil.
- N2c** Wet saline clay loam (Dermosolic, Salic Hydrosol)  
Medium thickness dark grey to black clay loam to clay grading to well-structured dark grey clay with minor carbonates and a water table within 100 cm.
- N3** Seasonally waterlogged, non to marginally saline equivalents of soils listed above, viz.:  
**N3c** Wet **G3**  
**N3d** Wet **B5**  
**N3e** Wet **B7**
- WW** Water.
- RR** Bare rock.

*Sandy soils (dunes, rises and flats)*

- H3** Bleached siliceous sand (Arenic, Bleached-Orthic Tenosol)  
Thick to very thick bleached sand, organically darkened at the surface over yellow sand continuing below 100 cm.
- G2** Bleached sand grading to sandy clay loam (Sandy Petrocalcic, Brown Chromosol-Kandosol)  
Medium to thick sand with a bleached A2 layer abruptly overlying a brownish friable light sandy clay loam to sandy clay over calcreted calcarenite
- G3** Thick sand over clay (Mesotrophic, Mesonatric, Brown Chromosol/Sodosol)  
Thick to very thick sand with a pale sand layer directly overlying a brownish clay
- G4** Sand over poorly structured clay (Mesonatric, Brown/Grey Sodosol)  
Thick organically stained sandy surface overlying a pale sand layer overlying a brown poorly structured clay on limestone or calcrete usually within 100 cm.
- I1** Highly leached sand (Humeosesquic Aeric Podosol)  
Organically darkened sand to loamy sand grading to greyish sand overlying dark sands with organic-aluminium compounds.
- I2** Wet highly leached sand



*Stony soils (rises)*

- B2** Shallow calcareous loamy sand on calcrete (Petrocalcic Calcarosol)  
Medium thickness calcareous loamy sand with variable rubble overlying calcreted calcarenite within 50 cm.
- B3** Shallow sandy loam on calcrete (Petrocalcic, Orthic Tenosol)  
Loamy sand to loam with variable rubble and slight clay increase with depth overlying calcreted calcarenite shallower than 50 cm. Extensive on stony rises.
- B4** Red sandy loam over calcrete (Petrocalcic, Red Dermosol)  
Medium thickness red sandy loam grading to friable red clay loam over calcreted calcarenite within 50 cm - rises.
- B5** Shallow dark clay loam on limestone (Petrocalcic, Black Dermosol)  
Black clay loam to light clay over calcreted limestone at shallow depth, grading to highly calcareous clay - flats.
- B6** Shallow sandy loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)  
Medium thickness sandy loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.
- B7** Shallow sand over clay on calcrete (Petrocalcic, Yellow/Brown Chromosol)  
Medium thickness sand overlying yellow friable clay on limestone or calcreted sandy clay within 50 cm.
- B8** Shallow sand on calcrete (Bleached-Leptic Tenosol)  
Thick bleached sand over calcarenite.
- L1** Shallow soil on rock (Gritty Red Kandosol)  
Variable thickness gritty red loamy sand to sandy loam, becoming more clayey with depth over weathering rock.
- RR** Limestone outcrop

*Other soils*

- M2** Deep friable gradational clay loam
- N2** Saline soil (Calcarosolic, Hypersalic Hydrosol)  
Grey very highly calcareous loam grading to a pale grey clay loam over a white very highly calcareous silty clay loam by about 30 cm, with a water table within 100 cm.
- N3** Seasonally waterlogged, non to marginally saline equivalents of soils listed above, viz.:
- N3c** Wet **G3**
- N3d** Wet **B5**
- N3e** Wet **B7**

**Further information:** [DEWNR Soil and Land Program](#)

