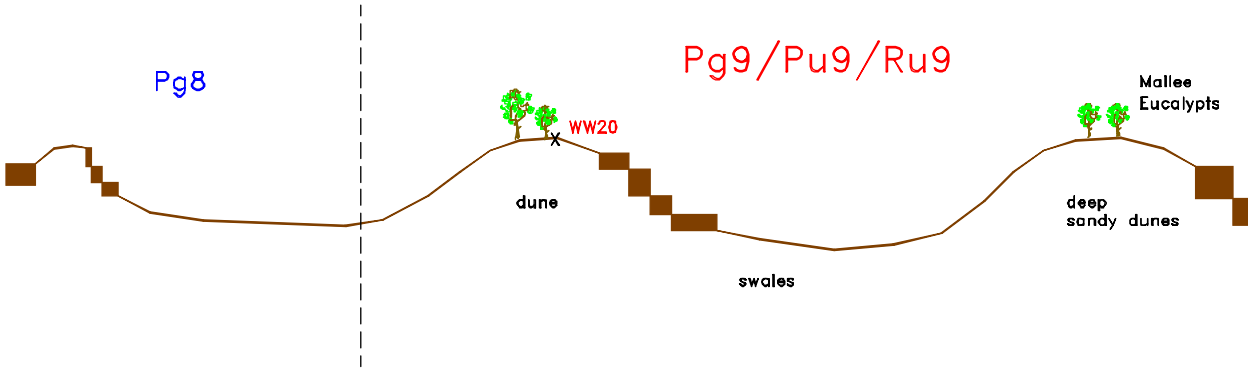
6.2.9 LITTLE DESERT - 9 LAND SYSTEM
Map units Pg9, Pu9, Ru9



Landscape

The landscape of the Little Desert land system is predominantly gently undulating plains (Pg9) and gently undulating plains (closer spaced undulations) (Pu9), although there is a small area of higher relief that has been mapped as gently undulating rises (closer spaced undulations) (Ru9). The land system is largely vegetated, with much of the unit in the Little Desert National Park. Some areas have been cleared for agriculture.

Plate 18 Cleared agricultural land of the Little Desert land system leading to the Little Desert National Park.

Vegetation
The vegetation mainly consists of Mallee Eucalypts, Banksia, Tea Tree and heath understorey.

Soil types
The dunes and rises commonly have over 1.5 metres of sand (WW20). Some of the lower slopes can reach the Parilla Sand over the space of one metre. On the depressions between the dunes there can be more clay formation under a shallower cover of sand.

Current land use
The land that is not part of the Little Desert National Park, is used predominantly for grazing.

REPRESENTATIVE SOIL TYPE FOR THE LITTLE DESERT - 9 - Pg9/Pu9/Ru9 LAND UNITS

MAP UNIT: Pg9, Pu9, Ru9 **Site Number:** WW20

Position in Landscape: Dune **Grid Ref:** 557 800 E, 5945 800 N;
Aust. Soil Class.: Basic, Arenic, Orthic TENOSOL
Northcote Factual Key: Uc ***Great Soil Group:*** siliceous sand

General Landscape Description:
The deep yellow sand occurs on the dunes of the gently undulating plain (Pg9), gently undulating plains (closer spaced undulations) (Pu9) and gently undulating rises (closer spaced undulations) (Ru9) land units of the Little Desert - 9 land system.

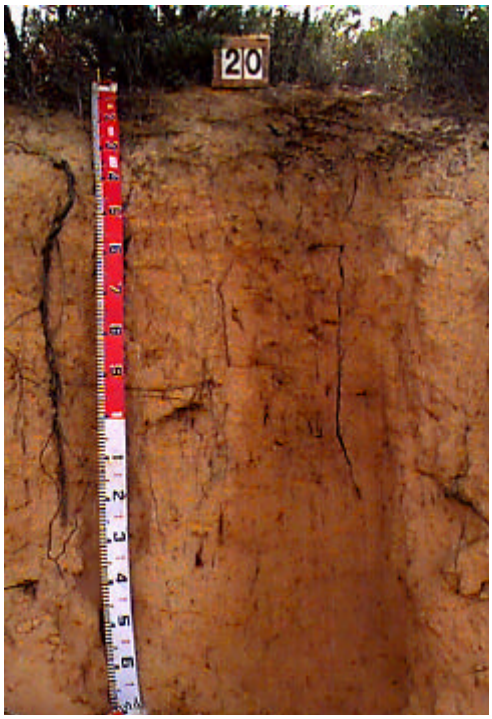
Soil Profile Morphology:

Topsoil
Ap 0-20 cm Dumped material

A 20-40 cm Light yellowish brown (2.5Y6/4) *sand*, minor organic matter content, weak consistence when dry. pH 5.6.

Subsoil
B21 40-120 cm Brownish yellow (10YR6/8) *sand*, very weak consistence. pH 5.6.

B22 120-170 cm+ Yellow (10YR7/8) *sand*, very thin irregular silcrete laminations, very weak consistence. pH 5.6.



Soil Profile Characteristics:

Horizon	pH	Salinity	Sodicity	Dispersion	Internal Drainage	Hydro-phobicity
Surface (A1 horizon)	moderately acid	very low	-	-	moderately well drained	severe*
Subsoil (B21 horizon)	moderately acid	very low	-	-		
Deeper subsoil (at 1 metre)	moderately acid	very low	-	-		

* estimate

Key Profile Features:

- Deep sand
- Hydrophobic topsoil
- Acidic topsoil
- Acidic subsoil

Soil Restrictions and Management Prescriptions

Feature	Result	Management Prescription
Sandy topsoil	Poor plant available water holding capacity. Poor nutrient holding capacity. Increased risk of wind erosion. Potential for hydrophobicity.	*Horticulture* - improve organic matter through maintenance of vegetative cover and growing green manure crops. Establish wind protection barriers. Increase frequency of fertiliser (eg side dressings) and irrigations.
Hydrophobic topsoil	Poor infiltration of water into the soil. Increased risk of water erosion. Poor seed germination.	Maintenance of surface vegetative cover. Claying.
Acidic topsoil	Potential nutrient imbalance. Unsuitable for acid intolerant plants.	Apply lime.
Acidic subsoil	Potential nutrient	Grow acid tolerant species or varieties.

	imbalance. Unsuitable for acid intolerant plants.	

Land Suitability Rating Table

LAND USE	SUITABILITY CLASS	MAJOR LIMITING COMPONENT
Wheat	3	Soil
Canola	3	Soil
Chickpeas	3	Soil
Lentils	3	Soil
White clover seed	3	Soil
Lucerne for seed production	2	Climate, landscape, soil
Viticulture	3	Soil
Apples	3	Soil
Potatoes	2	Climate, landscape, soil
Carrots	2	Landscape, soil
Onions	2	Climate, landscape, soil
Sweet corn	3	Soil
Radiata Pine	3	Climate
Blue Gum	3	Climate

Land Suitability Assessment and Primary Limitations

Wheat	*Climate*	2*	High frost risk for most of the land unit
	Landscape	2	Water and wind erosion hazard
	Soil	3	Deep sandy profile
Canola	*Climate*	2*	High frost risk for most of the land unit
	Landscape	2	Water and wind erosion hazard
	Soil	3	Deep sandy profile
Chickpeas	*Climate*	2*	High frost risk for most of the land unit, slightly high rainfall
	Landscape	2	Wind and water erosion hazard
	Soil	3	Deep sandy profile
Lentils	*Climate*	2*	High frost risk for most of the land unit
	Landscape	2	Wind and water erosion hazard
	Soil	3	Deep sandy profile
White clover seed	*Climate*	2	Moderate frost risk
	Landscape	2	Wind and water erosion hazard
	Soil	3	Deep sandy profile

Lucerne for seed production	*Climate*	2	Moderate frost risk
	Landscape	2	Water and water erosion hazard
	Soil	2	Sandy subsoil, slightly impeded internal drainage, hydrophobicity, slightly acid subsoil pH
Viticulture	*Climate*	2*	High frost risk for most of the land unit
	Landscape	2	Water erosion hazard
	Soil	3	Deep sandy profile
Apples	*Climate*	2*	High frost risk for most of the land unit, slightly high mean maximum January temperature
	Landscape	2	Water erosion hazard
	Soil	3	Deep sandy profile
Potatoes	*Climate*	2	Slightly high mean maximum January temperature
	Landscape	2	Wind and water erosion hazard
	Soil	2	Sandy subsoil, slightly impeded internal drainage, hydrophobicity
Carrots	*Climate*	1	No major limitation
	Landscape	2	Water and wind erosion hazard
	Soil	2	Slightly impeded internal drainage, hydrophobicity
Onions	*Climate*	2	Moderate frost risk
	Landscape	2	Water and wind erosion hazard
	Soil	2	Deep sandy subsoil, slightly impeded internal drainage, hydrophobicity
Sweet corn	*Climate*	1	No major limitation
	Landscape	2	Water and wind erosion hazard
	Soil	3	Deep sandy profile
Radiata Pine	*Climate*	3	Low rainfall
	Landscape	2	Water erosion hazard, wind erosion hazard
	Soil	2	Sandy subsoil texture, topsoil depth, hydrophobicity
Blue Gum	*Climate*	3	Low rainfall
	Landscape	2	Water erosion hazard, wind erosion hazard
	Soil	2	Sandy subsoil texture, topsoil depth, hydrophobicity

* Some areas may be higher frost risk therefore they may be potentially unsuitable. Obtain local knowledge on frost prior to investment