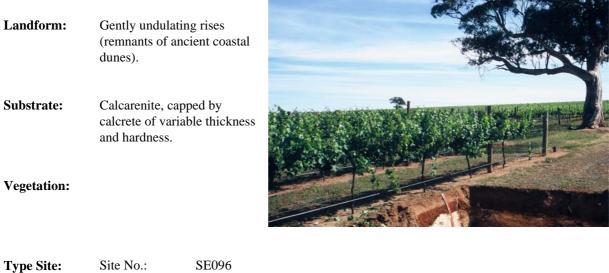
# LOAMY SAND OVER RED CLAY ON CALCRETE

#### General Description:

Medium thickness loamy sand to sandy loam over a well structured red clay on calcreted calcarenite



1:50,000 sheet:	7023-1 (Struan)	Hundred:	Jessie							
Annual rainfall:	575 mm	Sampling date:	03/12/04							
Landform:	Upper slope of a gently undulating rise, 3% slope									
Surface:	Firm with no stones									

#### Soil Description:

Depth (cm)	Description	
0-13	Dark reddish brown friable massive loamy sand. Clear to:	
13-23	Light reddish brown friable massive loamy sand. Abrupt to:	
23-40	Red firm medium clay with strong fine polyhedral structure. Sharp to:	
40-46	Moderately cemented massive calcrete. Clear to:	
46-75	Reddish yellow firm massive very highly calcareous light clayey sand with more than 50% semi-hard calcarenite fragments. Gradual to:	A WA IN
75-140	Semi-hard calcarenite with very pale brown and reddish yellow firm massive very highly calcareous light clayey sand between fragments.	



## Summary of Properties

Drainage:	Well drained. The soil is heavy or prolonged rainfa	•	more than a day or so following							
Fertility:	nutrient retention capacit are ample reserves of calc sampling site is outside th	y of the surface soil is limit cium, magnesium and pota- ne vine row – consequently ace elements are low. Main	changeable cation data. The ted by low clay content, but there ssium in the subsoil. The concentrations of phosphorus, ntenance of adequate nutrient							
рН:	Slightly alkaline at the su	rface, alkaline with depth.								
Rooting depth:	-		e concentration of roots on ots are expected to penetrate							
Barriers to root growth:	:									
Physical:	The calcrete where not rip fracturing.	pped is a variable restrictio	n depending on the degree of							
Chemical:	There are no apparent chemical barriers.									
Water holding capacity:	: (Estimates for potential root zone of grape vines)									
	Total available: Readily available:	50 mm (unripped) 25 mm (unripped)	80 mm (ripped) 45 mm (ripped)							
Seedling emergence:	Satisfactory.									
Workability:	Surface can be safely worked over a range of moisture conditions, but shattering is likely if soil is too dry.									
<b>Erosion Potential</b>										
Water:	Moderately low.									
Wind:	Moderately low.									
I aboratory Data										

### Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaC1 <sub>2</sub>	CO3 %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Cl mg/kg	SO4-S mg/kg	Boron mg/kg		(ED			Sum cations cmol		angea cmol(	ble Ca (+)/kg		Est. ESP
												Cu	Fe	Zn	Mn	(+)/kg	Ca	Mg	Na	K	
0-13	7.8	6.6	0.4	0.139	0.76	0.55	7	109	21	2.6	0.5	0.88	70	0.75	12.5	7.32	6.00	0.81	0.22	0.29	3.0
13-23	7.9	6.7	0.6	0.150	0.89	0.58	4	75	25	4.2	0.6	0.40	82	0.89	11.4	8.80	7.50	0.90	0.23	0.17	2.6
23-40	7.6	6.6	4.6	0.342	0.87	1.26	3	185	21	13.5	0.7	0.22	12	0.34	8.83	31.9	27.2	2.44	1.79	0.54	5.6
40-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46-75	8.9	8.1	92.6	0.152	0.92	0.29	<1	27	39	15.2	0.3	0.11	24	0.09	3.96	11.6	10.8	0.34	0.43	0.07	3.7
75-140	8.7	8.0	90.9	0.197	1.53	0.21	2	66	99	14.6	0.3	0.23	2.5	0.20	4.04	10.7	9.71	0.36	0.52	0.14	4.8

**Note:** Sum of cations, in a neutral to alkaline soil, approximates the CEC (cation exchange capacity), a measure of the soil's capacity to store and release major nutrient elements.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC, in this case estimated by the sum of cations.