Project Name: Cooloola
Project Code: Cooloola **Site ID:** B861 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	C.H. Thompson	**Locality:**	53m E 5m N of Ref Peg 0. near hole 5.
Date Desc.:	04/12/74	**Elevation:**	100 metres
Map Ref.:	Sheet No. : 9545-IV 1:50000	**Rainfall:**	No Data
Northing/Long.:	153.1262243	**Runoff:**	No Data
Easting/Lat.:	-26.04481554	**Drainage:**	Well drained

Geology

ExposureType:	No Data	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	No Data	**Substrate Material:**	No Data

Land Form

Rel/Slope Class:	No Data	**Pattern Type:**	No Data
Morph. Type:	No Data	**Relief:**	45 metres
Elem. Type:	Dune	**Slope Category:**	No Data
Slope:	1.6 %	**Aspect:**	No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Podosol
ASC Confidence:
Confidence level not specified

Mapping Unit: N/A
Principal Profile Form: Uc2.21
Great Soil Group: Podzol

Site Disturbance:

Vegetation: Low Strata - , 0.51-1m, . *Species includes - Acacia flavesens, Acacia cunninghamii
Mid Strata - , 6.01-12m, . *Species includes - Xylomelum species, Casuarina torulosa, Banksia serrata
Tall Strata - , 12.01-20m, . *Species includes - Angophora woodsiana, Eucalyptus racemosa

Surface Coarse Fragments:

Profile Morphology

A00	0 - 0.005 m	;
A11	0.005 - 0.055 m	Grey (10YR6/1-Moist); Light grey (10YR7/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 6.6 (Raupach); Gradual change to -
A12	0.055 - 0.105 m	Grey (10YR6/1-Moist); Grey (10YR5/1-Moist); ; Sand; Single grain grade of structure; Very weak consistence; Field pH 6.4 (Raupach);
A12	0.105 - 0.205 m	Grey (10YR6/1-Moist); Grey (10YR5/1-Moist); ; Sand; Single grain grade of structure; Very weak consistence; Field pH 6.4 (Raupach); Diffuse change to -
A13	0.205 - 0.305 m	Grey (10YR5/1-Moist); Dark grey (10YR4/1-Moist); , 10YR61; Sand; Single grain grade of structure; Weak consistence; Field pH 5.8 (Raupach); ManyDiffuse change to -
A14	0.305 - 0.405 m	Grey (10YR5/1-Moist); Grey (10YR6/1-Moist); , 10YR71; Sand; Single grain grade of structure; Very weak consistence; Field pH 6 (Raupach); Diffuse change to -
A21	0.405 - 0.505 m	Light grey (10YR7/2-Moist); , 10YR61; Sand; Single grain grade of structure; Loose consistence; Field pH 6.5 (Raupach); Diffuse change to -
A22	0.505 - 0.605 m	Pale brown (10YR6/3-Moist); Light grey (10YR7/2-Moist); , 10YR54; Sand; Single grain grade of structure; Loose consistence; Field pH 6.5 (Raupach); Diffuse change to -
B1	0.605 - 0.705 m	Dark yellowish brown (10YR4/4-Moist); , 10YR56; , 10YR63; Sand; Single grain grade of structure; Weak consistence; Field pH 5.4 (Raupach); Diffuse change to -
B21	0.705 - 0.905 m	Strong brown (7.5YR5/6-Moist); Yellowish brown (10YR5/6-Moist); , 7.5YR43; Sand; Single grain grade of structure; Firm consistence;
B22	0.905 - 1.205 m	Yellowish brown (10YR5/6-Moist); , 7.5YR33; Sand; Single grain grade of structure; Weak consistence; Field pH 6.2 (Raupach);
B31	1.205 - 1.505 m	Brownish yellow (10YR6/5-Moist); , 10YR54; Sand; Single grain grade of structure; Very weak consistence; Field pH 6.6 (Raupach);

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B32	1.505 - 1.805 m	Brownish yellow (10YR6/5-Moist); , 10YR54; Sand; Single grain grade of structure; Loose consistence; Field pH 6.9 (Raupach); Diffuse change to -
C1	1.805 - 2.105 m	Olive yellow (2.5Y6/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C1	2.105 - 2.405 m	Olive yellow (2.5Y6/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C1	2.405 - 2.705 m	Olive yellow (2.5Y6/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C1	2.705 - 3.005 m	Olive yellow (2.5Y6/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C1	3.005 - 3.305 m	Olive yellow (2.5Y6/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C2	3.305 - 3.605 m	Yellow (2.5Y7/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C2	3.605 - 3.905 m	Yellow (2.5Y7/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C2	3.905 - 4.205 m	Yellow (2.5Y7/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
C2	4.205 - 4.505 m	Yellow (2.5Y7/5-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);

Morphological Notes

A00	Discontinuous litter of Banksia, Eucalyptus, Angophora leaves and bark pieces.
A11	Discrete OM and charcoal.
A12	Diffuse and discrete OM.
A13	Diffuse OM.
A22	Few small 5-8mm pockets of B trans OM Bhorizon with tongues of A2 Fe OM B horizon.
B21	Auger sample from 0.9m.
B31	yB patches are translocated OM.
B32	Few yB patches of translocated OM.
C1	Great whacks of heavy mineral below 2.0.
C2	Less heavy mineral below 4.2m.

Observation Notes

Parent material: Quaternary silica sands (Chalambar formation). Landform: Nose of stabilised sandblow sloping crest (slope 1 degree to NW) Veg: Open grassy forest.

Site Notes

State Forest - indigenous hardwoods. Controlled burning every 3rd year but not burned in 1974 with area E of Freshwater

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.005										
0.005 - 0.055	5.8H	<0.02B	0.1K	<0.1	0.1	<0.1	1.1D		1.3F	
0.055 - 0.105	5.4H	<0.02B								
0.105 - 0.205	4.9H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.8F	
0.205 - 0.305	4.8H	<0.02B								
0.305 - 0.405	4.9H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.7F	
0.405 - 0.505	5.1H	<0.02B								
0.505 - 0.605	5.1H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.5F	
0.605 - 0.705	4.9H	0.03B	<0.1K	<0.1	<0.1	<0.1			0.8F	
0.705 - 0.905	5H	<0.02B								
0.905 - 1.205	5.2H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.5F	
1.205 - 1.505	5.3H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.4F	
1.505 - 1.805	5.6H	<0.02B								
1.805 - 2.105	5.8H	<0.02B								
2.105 - 2.405										
2.405 - 2.705										
2.705 - 3.005	6.3H	<0.02B								
3.005 - 3.305			<0.1K	<0.1	<0.1	<0.1			0.4F	
3.305 - 3.605										
3.605 - 3.905										
3.905 - 4.205										
4.205 - 4.505	6.6H	<0.02B	<0.1K	<0.1	<0.1	<0.1			0.5F	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.005												
0.005 - 0.055		0.57E	3B		0.024B							
0.055 - 0.105		0.49E	3B		0.02B							
0.105 - 0.205		0.39E	3B		0.015B				98I		0	2
0.205 - 0.305		0.37E	3B		0.014B							
0.305 - 0.405		0.29E	2B		0.011B							
0.405 - 0.505		0.1E	2B		0.009B							
0.505 - 0.605		0.06E	4B		0.006B				99I		1	2
0.605 - 0.705		0.2E	3B		0.013B				97I		0	2
0.705 - 0.905		0.34E	2B		0.018B				98I		0	2
0.905 - 1.205		0.33E	4B		0.016B				97I		0	2
1.205 - 1.505		0.16E	7B		0.009B				98I		0	0
1.505 - 1.805		0.11E	7B		0.008B							
1.805 - 2.105		0.06E	7B		0.005B				99I		1	1

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2.105 - 2.405										
2.405 - 2.705										
2.705 - 3.005		0.05E		8B			0.004B			
3.005 - 3.305										
3.305 - 3.605										
3.605 - 3.905										
3.905 - 4.205										
4.205 - 4.505		0.05E		8B			0.003B			

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.005										
0.005 - 0.055										
0.055 - 0.105										
0.105 - 0.205										
0.205 - 0.305										
0.305 - 0.405										
0.405 - 0.505										
0.505 - 0.605										
0.605 - 0.705										
0.705 - 0.905										
0.905 - 1.205										
1.205 - 1.505										
1.505 - 1.805										
1.805 - 2.105										
2.105 - 2.405										
2.405 - 2.705										
2.705 - 3.005										
3.005 - 3.305										
3.305 - 3.605										
3.605 - 3.905										
3.905 - 4.205										
4.205 - 4.505										

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Laboratory Analyses Completed for this profile

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_H	Hydrogen Cation - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
15J1	Effective CEC
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recordede
6Z	Organic carbon (%) - Not recorded
7_NR	Total nitrogen (%) - Not recorded
8A1	Total organic carbon/total nitrogen ratio
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
P10_NR_C	Clay (%) - Not recorded
P10_NR_S	Sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded