

Project Name: Cooloola
Project Code: Cooloola **Site ID:** B844 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	C.H. Thompson	Locality:	Cooloola SF 451, 120m W of Peg No. 0 and 2m SE. 2m NW of Litter Bin No. 3 under E. racemosa canopy. Hole 2. Kabali West hole 2.
Date Desc.:	04/09/74	Elevation:	48 metres
Map Ref.:	Sheet No. : 9545-IV 1:50000	Rainfall:	No Data
Northing/Long.:	153.0764566	Runoff:	No Data
Easting/Lat.:	-26.01913788	Drainage:	Rapidly drained

Geology

Exposure Type:	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:	15 metres
Elem. Type:	Dune	Slope Category:	No Data
Slope:	9.5 %	Aspect:	90 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Podosol		Principal Profile Form:	Uc2.21
ASC Confidence:		Great Soil Group:	Podzol
Confidence level not specified			

Site Disturbance:

Vegetation: Low Strata - , 3.01-6m, . *Species includes - Banksia serrata
Mid Strata - , 3.01-6m, . *Species includes - Angophora costata, Angophora intermedia
Tall Strata - Tree, 12.01-20m, . *Species includes - Eucalyptus racemosa

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.02 m	Grey (10YR5/1-Moist); Grey (10YR6/1-Moist); ; Sand; Single grain grade of structure; Field pH 6.5 (Raupach); Wavy change to -
A11	0 - 0.02 m	Grey (10YR5/1-Moist); Grey (10YR6/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 6.5 (Raupach); Wavy change to -
A12	0.02 - 0.1 m	Dark grey (10YR4/1-Moist); Very dark grey (10YR3/1-Moist); ; Sand; Single grain grade of structure; Weak consistence; Field pH 5.5 (Raupach);
A12	0.1 - 0.2 m	Dark grey (10YR4/1-Moist); Very dark grey (10YR3/1-Moist); ; Sand; Single grain grade of structure; Weak consistence; Field pH 5.2 (Raupach);
A12	0.2 - 0.3 m	Dark grey (10YR4/1-Moist); Very dark grey (10YR3/1-Moist); ; Sand; Single grain grade of structure; Weak consistence; Diffuse change to -
A13	0.3 - 0.4 m	Grey (10YR5/1-Moist); , 7.5YR72; Sand; Single grain grade of structure; Weak consistence; Field pH 5.2 (Raupach); Diffuse change to -
A14	0.4 - 0.6 m	Pinkish grey (7.5YR7/2-Moist); , 10YR81; Sand; Single grain grade of structure; Very weak consistence; Field pH 5.8 (Raupach); Diffuse change to -
A15	0.6 - 0.9 m	(10YR9/1-Moist); , 7.5YR72; Sand; Single grain grade of structure; Loose consistence; Field pH 6.7 (Raupach); Diffuse change to -
A21	0.9 - 1.2 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
A21	1.2 - 1.5 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
A21	1.5 - 1.8 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);

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A21	1.8 - 2.1 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
A21	2.1 - 2.4 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 7 (Raupach);
A22	2.4 - 2.7 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	2.7 - 3 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	3 - 3.3 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	3.3 - 3.6 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	3.6 - 3.9 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	3.9 - 4.2 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	4.2 - 4.5 m	(10YR9/1-Moist); (10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	4.5 - 4.8 m	(10YR9/1-Moist); ; Sand; Loose consistence;
A22	4.8 - 5.1 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	5.1 - 5.4 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	5.4 - 5.7 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	5.7 - 6 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	6 - 6.6 m	(10YR9/1-Moist); (10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	6.6 - 7.2 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	7.2 - 7.8 m	(10YR9/1-Moist); ; Sand; Loose consistence;
A22	7.8 - 8.4 m	(10YR9/1-Moist); ; Sand; Loose consistence;
A22	8.4 - 9 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	9 - 9.6 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	9.6 - 10.2 m	(10YR9/1-Moist); ; Sand; Loose consistence;
A22	10.2 - 10.8 m	(10YR9/1-Moist); ; Sand; Loose consistence;
A22	10.8 - 11.4 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	11.4 - 12 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A22	12 - 12.6 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A23	12.6 - 13.2 m	White (10YR8/1-Moist); ; Sand; Loose consistence;
A23	13.2 - 13.8 m	White (10YR8/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A23	13.8 - 14.4 m	White (10YR8/1-Moist); ; Sand; Single grain grade of structure; Loose consistence;
A23	14.4 - 14.9 m	White (10YR8/1-Moist); ; Sand; Loose consistence; Field pH 6.5 (Raupach);
B1	14.9 - 15 m	Brown (10YR4/3-Moist); ; Clayey sand; Single grain grade of structure; Firm consistence; Field pH 5.3 (Raupach);

Morphological Notes

A11	Discrete OM
A11	Discrete OM
A12	Many roots binding sand together. Diffuse OM.
A12	Many roots binding sand together. Diffuse OM.
A12	Many roots binding sand together. Diffuse OM.
A13	Diffuse OM.
A14	Diffuse OM staining.
A23	1470 Water-table. Translocated OM (3-12-1974)

Observation Notes

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Geology of parent material: Quaternary silica sands. Kabali Formation. Literature: Coadlak JE. (1961): - CSIRO Bulletin No.283 p.96, Thompson C.H. (1972): - Proc Roy Soc Qld.

Site Notes

State Forest Reserve. Controlled burning every 3rd year. - burnt in 1972.

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Cations		Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
				Mg	K					
0 - 0.02	5.1H	<0.02B								
0.02 - 0.1	5H	<0.02B								
0.1 - 0.2	4.8H	<0.02B								
0.2 - 0.3										
0.3 - 0.4	4.7H	<0.02B								
0.4 - 0.6										
0.6 - 0.9	5H	<0.02B								
0.9 - 1.2										
1.2 - 1.5	5.2H	<0.02B								
1.5 - 1.8										
1.8 - 2.1										
2.1 - 2.4										
2.4 - 2.7										
2.7 - 3										
3 - 3.3										
3.3 - 3.6										
3.6 - 3.9										
3.9 - 4.2										
4.2 - 4.5	5.8H	<0.02B								
4.5 - 4.8										
4.8 - 5.1										
5.1 - 5.4										
5.4 - 5.7										
5.7 - 6	5.6H	<0.02B								
6 - 6.6										
6.6 - 7.2										
7.2 - 7.8										
7.8 - 8.4										
8.4 - 9	5.9H	<0.02B								
9 - 9.6										
9.6 - 10.2										
10.2 - 10.8										
10.8 - 11.4										
11.4 - 12	5.8H	<0.02B								
12 - 12.6										
12.6 - 13.2										
13.2 - 13.8										
13.8 - 14.4										
14.4 - 14.9	5.1H	<0.02B								
14.9 - 15	5H	0.03B	0.1K	0.5	0.1	0.2	0.1D		0.9F	

Depth m	CaCO ₃ %	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle GV	CS	Size FS %	Analysis Silt	Clay
0 - 0.02		0.63E	2B		0.024B							
0.02 - 0.1		0.69E	2B		0.02B							
0.1 - 0.2		0.68E	2B		0.014B							
0.2 - 0.3												
0.3 - 0.4		0.54E	1B		0.011B							
0.4 - 0.6												
0.6 - 0.9		0.06E	1B		0.001B							

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0.9 - 1.2								
1.2 - 1.5	<0.02E	1B	0.001B					
1.5 - 1.8								
1.8 - 2.1								
2.1 - 2.4								
2.4 - 2.7								
2.7 - 3								
3 - 3.3								
3.3 - 3.6								
3.6 - 3.9								
3.9 - 4.2								
4.2 - 4.5	<0.02E	1B	0.001B					
4.5 - 4.8								
4.8 - 5.1								
5.1 - 5.4								
5.4 - 5.7								
5.7 - 6	<0.02E	3B	<0.001B		97I	0	1	
6 - 6.6								
6.6 - 7.2								
7.2 - 7.8								
7.8 - 8.4								
8.4 - 9	<0.02E	1B	<0.001B					
9 - 9.6								
9.6 - 10.2								
10.2 - 10.8								
10.8 - 11.4								
11.4 - 12	<0.02E	2B	<0.001B					
12 - 12.6								
12.6 - 13.2								
13.2 - 13.8								
13.8 - 14.4								
14.4 - 14.9	0.03E	1B	0.001B		99I	0	0	
14.9 - 15	0.17E	7B	0.009B		76I	9	16	

Depth m	COLE	Gravimetric/Volumetric Water Contents						K sat mm/h	K unsat mm/h
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar		
		g/g - m3/m3							

0 - 0.02
 0.02 - 0.1
 0.1 - 0.2
 0.2 - 0.3
 0.3 - 0.4
 0.4 - 0.6
 0.6 - 0.9
 0.9 - 1.2
 1.2 - 1.5
 1.5 - 1.8
 1.8 - 2.1
 2.1 - 2.4
 2.4 - 2.7
 2.7 - 3
 3 - 3.3
 3.3 - 3.6
 3.6 - 3.9
 3.9 - 4.2
 4.2 - 4.5
 4.5 - 4.8
 4.8 - 5.1

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5.1 - 5.4

5.4 - 5.7

5.7 - 6

6 - 6.6

6.6 - 7.2

7.2 - 7.8

7.8 - 8.4

8.4 - 9

9 - 9.6

9.6 - 10.2

10.2 - 10.8

10.8 - 11.4

11.4 - 12

12 - 12.6

12.6 - 13.2

13.2 - 13.8

13.8 - 14.4

14.4 - 14.9

14.9 - 15

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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
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 recorded
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