

**Project Name:** Cooloolo  
**Project Code:** Cooloolo      **Site ID:** B868      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	C.H. Thompson	<b>Locality:</b>	
<b>Date Desc.:</b>	28/07/75	<b>Elevation:</b>	20 metres
<b>Map Ref.:</b>	Sheet No. : 9545-IV    1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	153.0263207	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	-26.02397455	<b>Drainage:</b>	Imperfectly drained

**Geology**

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Flood plain
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	%	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):**

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Podosol		<b>Principal Profile Form:</b>	Uc2.36
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Humus podzol
Confidence level not specified			

**Site Disturbance:**

**Vegetation:** Low Strata - , 3.01-6m. , \*Species includes - Banksia aemula, Eucalyptus seeana, Melaleuca quinquenervia

**Surface Coarse Fragments:**

**Profile Morphology**

A11	0 - 0.01 m	Grey (10YR6/1-Moist); Light grey (10YR7/1-Moist); ; Sand; Single grain grade of structure; Loose consistence; Field pH 5.5 (Raupach);
A12	0.01 - 0.1 m	Very dark grey (10YR3/1-Moist); ; Sand; Single grain grade of structure; Massive grade of structure; Weak consistence; Few
A12	0.1 - 0.2 m	;
A12	0.2 - 0.3 m	;
A13	0.3 - 0.45 m	Dark grey (10YR4/1-Moist); , 10YR51; , 10YR52; Sand; Single grain grade of structure; Massive grade of structure; Weak consistence;
A13	0.45 - 0.6 m	Light grey (10YR7/1-Moist); , 10YR52; Sand; Single grain grade of structure; Massive grade of structure; Very weak consistence;
A14	0.6 - 0.7 m	(10YR9/1-Moist); ; Sand; Single grain grade of structure; Massive grade of structure; Very weak consistence;
B21	0.7 - 0.75 m	Black (10YR2/1-Moist); ; Sand; Single grain grade of structure; Massive grade of structure; Strong consistence;
B22	0.75 - 0.8 m	Dark yellowish brown (10YR3/5-Moist); Dark yellowish brown (10YR4/5-Moist); , 10YR21; Single grain grade of structure; Massive grade of structure; Strong consistence;
B23	0.8 - 0.9 m	Dark yellowish brown (10YR4/6-Moist); , 10YR32; Single grain grade of structure; Massive grade of structure; Very strong consistence;
B23	0.9 - 1.2 m	Very dark greyish brown (10YR3/2-Moist); , 10YR46; Single grain grade of structure; Massive grade of structure; Firm consistence;
B23	1.2 - 1.4 m	Light brownish grey (10YR6/2-Moist); , N60; Fine sandy clay loam; Single grain grade of structure; Massive grade of structure; Firm consistence;
B23	1.4 - 1.5 m	Pale brown (10YR6/3-Moist); , 2.5Y72; , 10YR42; Fine sandy clay loam; Single grain grade of structure; Massive grade of structure; Firm consistence;

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B23	1.5 - 1.7 m	Pale brown (10YR6/3-Moist); , 2.5Y72; , 10YR42; Single grain grade of structure; Massive grade of structure; Firm consistence;
B23	1.7 - 1.8 m	Light brownish grey (10YR6/2-Moist); , 10YR42; Fine sandy clay; Single grain grade of structure; Massive grade of structure;
B1WT	1.8 - 1.9 m	Black (10YR2/1-Moist); , 10YR62; Fine sandy clay loam; Single grain grade of structure; Massive grade of structure; Very firm consistence;
B1WT	1.8 - 1.9 m	Black (10YR2/1-Moist); , 10YR62; Fine sandy clay loam; Single grain grade of structure; Massive grade of structure; Very firm consistence;
B2WT	1.9 - 2.1 m	Black (10YR2/1-Moist); , 10YR72; Sandy loam; Single grain grade of structure; Massive grade of structure; Very firm consistence;
B2WT	2.1 - 2.4 m	Black (10YR2/1-Moist); , 10YR72;
B2WT	2.4 - 2.55 m	Black (10YR2/1-Moist); , 10YR72;
C	2.55 - 2.7 m	Dark greyish brown (10YR4/2-Moist); ; Sand; Single grain grade of structure; Weak grade of structure;
C	2.7 - 5 m	Dark greyish brown (10YR4/2-Moist); ; Sand; Single grain grade of structure; Weak grade of structure;
D	5 - 5.3 m	Light grey (5Y7/1-Moist); , 10YR42; Medium clay; Single grain grade of structure; Massive grade of structure; Field pH 5.5 (Raupach);

#### **Morphological Notes**

A11	Rain bashed sand.
A12	Diffuse organic matter, some roots.
A13	Diffuse organic matter.
A13	Saturated sand
A14	Saturated sand.
B21	Organic hardpan.
B22	Fe + hummate hardpan.
B23	Fe - hummate hardpan.
B23	Fe - hummate pan.
B23	Wet sticky plastic clay.
B2WT	Definite sedimentary bedding into which hummate has moved with water table.
C	Medium grained sand.
C	Easing drilled through with plug bit inserted.

#### **Observation Notes**

Sample taken from Gemco 15cm core. Parent material: Sandy alluvium from Mesozoic quartzose and feldspathic sandstone.  
 Landform: Very gently sloping plain - ancient flood plain of Teewa Creek. Veg: Very open woodland

#### **Site Notes**

Included in indigenous hardwood forest reserve.

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.01										
0 - 0.1	5.3H	<0.02B	1.2K	0.3	0.1	0.1	0.3D		2F	
0.1 - 0.2										
0.2 - 0.3	5H	<0.02B								
0.3 - 0.45	5.3H	<0.02B								
0.45 - 0.6										
0.6 - 0.7	5.9H	<0.02B								
0.7 - 0.75	4.7H	0.05B	0.6K	1.3	<0.1	0.2	<0.1D		1.7F	
0.75 - 0.8	4.7H	0.05B								
0.8 - 0.9	5H	0.03B	0.2K	0.2	<0.1	0.1	1.6D		2F	
0.9 - 1.2	5H	0.03B								
1.2 - 1.4										
1.4 - 1.5										
1.5 - 1.7	5.2H	0.02B								
1.7 - 1.8										
1.8 - 1.9	4.9H	0.03B								
1.9 - 2.1										
2.1 - 2.4	5.4H	0.06B								
2.4 - 2.55										
2.55 - 2.7	6.1H	0.02B								
2.7 - 5										
5 - 5.3										

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01												
0 - 0.1		1.34E	6B		0.05B			94I			2	2
0.1 - 0.2												
0.2 - 0.3		0.41E	3B		0.016B							
0.3 - 0.45		0.11E	4B		0.006B							
0.45 - 0.6												
0.6 - 0.7		0.01E	5B		0.001B			97I			3	1
0.7 - 0.75		3.35E	3B		0.06B			84I			6	4
0.75 - 0.8		2.24E	17B		0.04B							
0.8 - 0.9		2.18E	7B		0.038B							
0.9 - 1.2		1.78E	4B		0.033B							
1.2 - 1.4												
1.4 - 1.5												
1.5 - 1.7		0.27E	3B		0.008B							
1.7 - 1.8												
1.8 - 1.9		1.04E	6B		0.015B							
1.9 - 2.1												
2.1 - 2.4		2.34E	6B		0.035B							
2.4 - 2.55												
2.55 - 2.7		0.49E	3B		0.008B							
2.7 - 5												
5 - 5.3												

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	

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m	g/g - m3/m3	mm/h	mm/h
0 - 0.01			
0 - 0.1			
0.1 - 0.2			
0.2 - 0.3			
0.3 - 0.45			
0.45 - 0.6			
0.6 - 0.7			
0.7 - 0.75			
0.75 - 0.8			
0.8 - 0.9			
0.9 - 1.2			
1.2 - 1.4			
1.4 - 1.5			
1.5 - 1.7			
1.7 - 1.8			
1.8 - 1.9			
1.9 - 2.1			
2.1 - 2.4			
2.4 - 2.55			
2.55 - 2.7			
2.7 - 5			
5 - 5.3			

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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