IDF Project Name:

Project Code: IDF Site ID: T467 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: Date Desc.: M.G. Cannon Locality: Trial area 1 'Shell Project' Lanercost: site 112:

Elevation: 22/09/86 No Data

Sheet No.: 8060 1:100000 Map Ref.: Rainfall: Northing/Long.: 145.90277777778 Runoff: Moderately rapid

Easting/Lat.: -18.627222222222 Drainage: Well drained

Geology

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

Land Form

Rel/Slope Class: Gently undulating plains <9m Pattern Type: Sheet-flood fan

1-3%

Mid-slope Morph. Type: Relief: No Data

Slope Category: Very gently sloped Elem. Type: Fan Slope: <2 % Aspect: 40 degrees

Surface Soil Condition (dry): Hardsetting, Soft

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A Gn2.21 Haplic Mesotrophic Red Kandosol **Principal Profile Form: ASC Confidence: Great Soil Group:** Red earth

All necessary analytical data are available.

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

Surface Coarse Fragments:

Profil	le Morphology	
A	0 - 0.12 m	Dark brown (7.5YR3/2-Moist); ; Coarse sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moist; Very weak consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Common, fine (1-2mm) roots; Gradual, Wavy change to -
AB	0.12 - 0.27 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, fine (1-2mm) roots; Gradual change to -
B21	0.27 - 0.54 m	Yellowish red (5YR5/6-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, fine (1-2mm) roots; Diffuse change to -
B22	0.54 - 0.85 m	Yellowish red (5YR5/6-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Granite, coarse fragments; Diffuse change to -
B23	0.85 - 1.08 m	Yellowish red (5YR5/8-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Clear, Wavy change to -
ВС	1.08 - 1.3 m	Yellowish red (5YR5/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Clear, Wavy change to -
2B	1.3 - 1.6 m	Reddish yellow (5YR6/6-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Diffuse change to -
	1.6 - 1.87 m	Reddish yellow (5YR6/6-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Gradual change to -
3B	1.87 - 1.97 m	Reddish brown (5YR5/4-Moist); , 2.5YR58, 2-10%, 0-5mm, Faint; , 2-10%, 0-5mm, Faint; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Very few (0 - 2 %),

Manganiferous, Fine (0 - 2 mm), Concretions;

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1.97 - 2.07 m ;

Morphological Notes

Observation Notes

STRONGLY WEATHERED GRANITIC GRAVELS BELOW 54CM: 5 X 60MM FINE GRAINED GRANITE GRAVEL IN BC:

Site Notes

LANERCOST

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Depth	рН	1:5 EC		nangeable //g	Cations K	Na	Exchangeab Acidity	le CEC	I	ECEC	E	SP
m		dS/m		9		Cmol (9	6
0 - 0.12	6.1A 5.9A	0.03A	3.19H	1.54	0.24	0.04		5.4 <i>A</i> 5C		5F		.74 .80
0.12 - 0.27	6.7A	0.02A	0.33H	0.63	0.14	0.02		2.5 <i>A</i> 3C		1.1F	0.	.80 .67
0.27 - 0.54	5.6A	0.01A	0.4H	0.79	0.17	0.02		2.5A 2C		1.4F	0.	.80 .00
0.54 - 0.85	5.8A	0.01A	0.65H	0.84	0.18	0.02		2.5 <i>A</i> 2C	١	1.7F	0.	.80 .00
0.85 - 1.05 1.08 - 1.3	5.8A 5.8A	0.01A 0.01A	0.9H	1.66	0.2	0.05		2.9 <i>A</i> 3C		2.8F	1.	.72 .67
1.3 - 1.6 1.6 - 1.87	5.8A 5.9A	0.01A 0.01A	0.82H	1.91	0.15	0.03		3.3 <i>A</i>	A.	2.9F	0.	.91
1.87 - 1.97 1.97 - 2.07	6.3A	0.01A						2C			1.	.50
Depth	CaCO3	Organic	Avail.	Total	Total	Tota					Analysis	
m	%	C %	P mg/kg	P %	N %	K %			cs	FS %	Silt (Clay
0 - 0.12		1.68C 1.77C	11A 9B		0.0	6A		6	48A	25	15	12
0.12 - 0.27		0.62C	8A 6B	0.06		6A		7	40A	28	15	17
0.27 - 0.54		0.25C	7A 3B		0.0	1A		11	42A	25	12	20
0.54 - 0.85 0.85 - 1.05		0.07C	7A		<0.0	1A		20 9	49A 43A	21 26	10 13	20 18
1.08 - 1.3		0.04C	7A 3B		<0.0	1A		18	41A	26	17	16
1.3 - 1.6 1.6 - 1.87			7A					9 6	39A 37A	22 25	24 23	16 15
1.87 - 1.97			2B 11A 9B					11	34A	25	21	20
1.97 - 2.07			12A <2B		0.0	5A						
Depth	COLE	0-4	Gravimetric/Volumetric Water Contents							ıt	K unsat	
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar g - m3/m	1 Bar 3	5 Bar	15 Bar	mm/	h	mm/h	

0 - 0.12 0.12 - 0.27 0.27 - 0.54 0.54 - 0.85 0.85 - 1.05 1.08 - 1.3 1.3 - 1.6

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1.87 - 1.97 1.97 - 2.07

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Laboratory Analyses Completed for this profile

15A2 CEC Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts 15D1_CEC CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach

15E1_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble 15E1_K Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts 15E1_MG Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts 15E1_NA Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

15J1 Effective CEC

3A1 EC of 1:5 soil/water extract 4A1 pH of 1:5 soil/water suspension

5_C_B Water soluble Chloride - Method recorded as B

6B3 Total organic carbon - high frequency induction furnace, infrared

Total nitrogen - semimicro Kjeldahl , automated colour 7A2

9B_9C Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable

Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES) 9G_BSES Clay (%) - Coventry and Fett pipette method

P10_CF_C P10_CF_CS P10_CF_FS P10_CF_Z Coarse sand (%) - Coventry and Fett pipette method Fine sand (%) - Coventry and Fett pipette method Silt (%) - Coventry and Fett pipette method

P10_GRAV Gravel (%)