**Project Name:** Regional

T466 Observation ID: 1 **Project Code: REG** Site ID:

**CSIRO** Division of Soils (QLD) **Agency Name:** 

**Site Information** 

Locality: Desc. By: M.G. Cannon Trial area 1 'Shell Project' Lanercost: site 117 Date Desc.:

22/09/86 Elevation: No Data

Sheet No.: 8060 1:100000 Map Ref.: Rainfall:

Northing/Long.: 145.90277777778 Runoff: Moderately rapid Easting/Lat.: -18.625 Well drained Drainage:

Geology

ExposureType: Conf. Sub. is Parent. Mat.: No Data Undisturbed soil core Substrate Material: No Data Geol. Ref.: Oa

**Land Form** 

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

1-3%

Morph. Type: Lower-slope Relief: No Data

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

Surface Soil Condition (dry): Hardsetting, Soft

**Erosion:** 

**Soil Classification** 

Australian Soil Classification: Mapping Unit: N/A Gn2.11 Melanic Mesotrophic Red Kandosol **Principal Profile Form:** Red earth ASC Confidence: **Great Soil Group:** 

All necessary analytical data are available.

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

Vegetation:

# **Surface Coarse Fragments:**

<b>Profile Morphology</b>								
A	0 - 0.09 m							

Very dark grey (7.5YR3/0-Moist); Brown (7.5YR5/2-Dry); ; Sandy clay loam (Light); Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Common, medium (2-5mm) roots; Clear, Wavy change to -

Dark brown (7.5YR3/2-Moist); Pinkish grey (7.5YR6/2-Dry); ; Sandy clay loam; Massive grade of AR 0.09 - 0.24 m structure; Earthy fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular,

dispersed, Quartz, coarse fragments; Common, medium (2-5mm) roots; Gradual, Wavy change

B21 0.24 - 0.49 m Reddish brown (5YR4/4-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric;

Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, dispersed, Granite, coarse fragments; Very few (0 - 2%), , , ; Few, fine (1-2mm) roots; Diffuse change to -

B22 Yellowish red (5YR5/6-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric;  $0.49 - 0.79 \, \text{m}$ 

Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Granite, coarse fragments; Few, fine (1-2mm) roots; Diffuse change to -

B23 0.79 - 1.19 m Reddish brown (5YR5/4-Moist); , 5YR58, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct;

Sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%,

fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Clear change to

2B 1.19 - 1.54 m Yellowish red (5YR4/6-Moist); , 5YR58, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%, fine

gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Clear change to -

2B 1.54 - 1.9 m Yellowish red (5YR5/6-Moist); , 5YR58, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Clay

loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Many (20 - 50 %), Manganiferous,

Medium (2 -6 mm), Soft segregations; Diffuse change to -

Reddish vellow (5YR6/6-Moist); , 5YR74, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; 1.9 - 2.25 m

Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 2-10%, fine

gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Very few (0 - 2 %),

Manganiferous, Medium (2 -6 mm), Soft segregations; Diffuse change to -

**Project Name:** Regional

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**Agency Name: CSIRO** Division of Soils (QLD)

> $\label{light} \begin{tabular}{ll} Light reddish brown (5YR6/4-Moist); , 5YR58, 2-10\% , 5-15mm, Faint; , 2-10\% , 5-15mm, Faint; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 2-10\%, fine $$(1.5)$ and $(1.5)$ are the sum of the sum$ 2.25 - 2.55 m gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous,

Medium (2 -6 mm), Soft segregations; Gradual change to -

3В 2.55 - 2.95 m Reddish yellow (7.5YR6/6-Moist); , 2.5YR58, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint;

Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Few (2 -

10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Gradual change to -

2.95 - 3.35 m Reddish yellow (7.5YR6/6-Moist); , 2.5YR58, 0-2% , 5-15mm, Distinct; , 0-2% , 5-15mm,

Distinct; Clay loam, sandy; Massive grade of structure; Earthy fabric; Weak consistence; 10-

20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Diffuse change to -

 $Reddish\ yellow\ (7.5YR6/6-Moist);\ ,\ 2.5YR58,\ 2-10\%\ ,\ 5-15mm,\ Distinct;\ ,\ 7.5YR72,\ 2-10\%\ ,\ 7.5YR72$ 3.35 - 3.76 m

15mm, Distinct; Sandy light clay; Massive grade of structure; Earthy fabric; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments;

## **Morphological Notes**

## **Observation Notes**

TRACES OF CHARCOAL IN B21,2.95 to3.35 HAS >6MM GRAVEL LENSES THROUGHO UT:

## **Site Notes**

LANERCOST

Regional REG Site ID: T466 CSIRO Division of Soils (QLD) Observation ID: 1

Project Name: Project Code: Agency Name:

Depth	рН	1:5 EC		nangeable		Na	Exchangeab Acidity	le CEC	E	CEC	E	SP
m		dS/m	ca i	Иg	К	Na Cmol (					%	•
0 - 0.09	6.3A 6A	0.15A 0.05A	5.87H	1.97	0.48	0.11		8.8A 7C	. 8	3.4F		25
0.09 - 0.24	6.1A	0.03A 0.03B	2.19H	0.67	0.08	0.03		9.2A 5C		3F	0.	57 33 60
0.24 - 0.49	6.1A	0.02B	1.52H	1.03	0.26	0.03		3.7A 4C	. 2	2.8F	0.	
0.49 - 0.79	6.1A	0.01B	0.92H	1.62	0.22	0.03		3.7A 3C	. 2	2.8F	0.	
0.79 - 1.19 1.19 - 1.54	6A 5.8A	0.01B 0.01B	0.77H	1.02	0.3	0.02		2.7A 3C	. 2	2.1F	0.	74 67
1.54 - 1.9 1.9 - 2.25	6A 6.1A	0.01B 0.01B	1.2H	1.88	0.16	0.05		3.9A 3C	. 3	3.3F	1.3	28 67
2.25 - 2.55 2.55 - 2.95	6.2A 6.3A	0.01B 0.01B	1.33H	1.88	0.11	0.06		3.9A	. 3	3.3F	1.	54
2.95 - 3.35	6.5A 6.3A	0.01B						3C			۷.۱	00
3.35 - 3.76	0.5A											
Depth	CaCO3	Organic	Avail.	Total	Total	Tot		Pa		ize A	nalysis	
m	%	C %	P mg/kg	P %	N %	K %			CS	FS %	Silt C	lay
0 - 0.09		2.28C	10A		0.1	4A		9	47A	23	17	13
0.09 - 0.24		2.38C 1.17C	8B		0.0	4A		8	34A	30	20	16
0.24 - 0.49		0.61C	7A 8B		0.0	2A		11	34A	25	17	24
0.49 - 0.79		0.12C						7	37A	25	17	20
0.79 - 1.19 1.19 - 1.54		0.05C 0.05C	12A					8 12	39A 44A	24 24	17 16	19 16
1.15 1.54		0.000	10B					12	77/	27	10	10
1.54 - 1.9			0.4					9	31A	28	19	21
1.9 - 2.25			8A 4B					9	32A	27	20	21
2.25 - 2.55								7	41A	23	18	18
2.55 - 2.95			7A 3B					8	39A	25	20	16
2.95 - 3.35			8A 7B		0.0	8A		12	44A	21	18	16
3.35 - 3.76			. 5					10	44A	22	19	15
Depth	COLE				lumetric V				K sat	ŀ	( unsat	
m		Sat.	0.05 Bar	0.1 Bar g/g	0.5 Bar g - m3/m3	1 Bar 3	5 Bar	15 Bar	mm/h		mm/h	

0 - 0.09 0.09 - 0.24 0.24 - 0.49

Project Name: Project Code: Agency Name:

Regional REG Site ID: T466 CSIRO Division of Soils (QLD) Observation ID: 1

0.49 - 0.79 0.79 - 1.19 1.19 - 1.54 1.54 - 1.9 1.9 - 2.25 2.25 - 2.55 2.55 - 2.95 2.95 - 3.35 3.35 - 3.76

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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

3\_NR Electrical conductivity or soluble salts - Not recorded

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

5\_C\_B Water soluble Chloride - Method recorded as B

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

7A2

Total nitrogen - semimicro Kjeldahl , automated colour Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable 9B\_9C

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

P10\_CF\_C P10\_CF\_CS

Coarse sand (%) - Coventry and Fett pipette method P10\_CF\_FS P10\_CF\_Z Fine sand (%) - Coventry and Fett pipette method Silt (%) - Coventry and Fett pipette method

P10\_GRAV Gravel (%)