Project Name: **Soils of the MonartoTown Site**
Project Code: **Monarto** **Site ID:** **A1145** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

Site Information

Desc. By: Malcolm J. Wright
Date Desc.: 24/11/75
Map Ref.: 1:50000
Northing/Long.: 6112900 AMG zone: 54
Easting/Lat.: 335870 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

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

Land Form

Rel/Slope Class: No Data
Morph. Type: No Data
Elem. Type: No Data
Slope: %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: Dr2.53
Great Soil Group: N/A

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Dark reddish brown (5YR3/3-Moist); ; Loamy sand; Massive grade of structure; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, Gravel, coarse fragments; Field pH 6.5 (Raupach); Sharp change to -
A1	0.1 - 0.12 m	Dark reddish brown (5YR3/4-Moist); ; Sandy loam; Massive grade of structure; Dry; Very firm consistence; 2-10%, fine gravelly, 2-6mm, Gravel, coarse fragments; Sharp change to -
B2	0.12 - 0.2 m	Dark red (2.5YR3/6-Moist); ; Sandy light clay; Massive grade of structure; Dry; Strong consistence; , Calcareous, , Soft segregations; Field pH 8 (Raupach);
B2	0.2 - 0.3 m	Dark red (2.5YR3/6-Moist); ; Sandy light clay; Massive grade of structure; Dry; Strong consistence; Common (10 - 20 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach); Gradual change to -
B2k	0.3 - 0.4 m	Dark red (2.5YR3/6-Moist); , 5YR78; Light clay; Weak grade of structure, Angular blocky; Dry; Very firm consistence; Common (10 - 20 %), Calcareous, , Soft segregations; Field pH 9 (Raupach); Clear change to -
B2k	0.4 - 0.5 m	Reddish yellow (5YR7/6-Moist); , 2.5YR36, 2-10% ; Light clay; Moderate grade of structure, Platy; Very firm consistence; Very many (50 - 100 %), Calcareous, , ; Field pH 9 (Raupach); Clear change to -
2C	0.5 - 0.7 m	Red (2.5YR4/6-Moist); , 5YR58; Clayey sand; Weak grade of structure, Platy; Dry; Very firm consistence; Very many (50 - 100 %), Calcareous, , ; Field pH 9 (Raupach);
2C	0.7 - 0.9 m	Red (2.5YR4/6-Moist); , 5YR58; Clayey sand; Massive grade of structure; Dry; Very firm consistence; Common (10 - 20 %), Calcareous, , ; Field pH 9 (Raupach);
2C	0.9 - 1.1 m	Red (2.5YR4/6-Moist); , 10YR54; Clayey sand; Massive grade of structure; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Common (10 - 20 %), Calcareous, , ; Field pH 9 (Raupach);
2C	1.1 - 1.25 m	Reddish brown (2.5YR4/4-Moist); , 5YR46; Sandy clay; Massive grade of structure; Strong consistence; 20-50%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, , ; Field pH 9 (Raupach); Clear change to -
2Ck	1.25 - 1.38 m	Yellowish red (5YR5/6-Moist); ; Weak grade of structure, Platy; Strong consistence; 0-2%, Schist, coarse fragments; Field pH 9 (Raupach); Clear change to -

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2Ck	1.38 - 1.6 m	Red (2.5YR4/6-Moist); , 7.5YR84; Sandy clay loam; Massive grade of structure; Very firm consistence; 2-10%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Field pH 9 (Raupach); Gradual change to -
3C	1.6 - 1.8 m	Red (2.5YR4/6-Moist); , 10YR66; Sandy light clay; Massive grade of structure; Very firm consistence; 0-2%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, , ; Field pH 9 (Raupach);
3C	1.8 - 2 m	Red (2.5YR4/6-Moist); , 10YR53; Sandy light clay; Weak grade of structure, Angular blocky; Very firm consistence; 0-2%, cobbly, 60-200mm, Schist, coarse fragments; Few (2 - 10 %), Calcareous, , ; Field pH 9 (Raupach); Gradual change to -
3C	2 - 2.2 m	Red (2.5YR4/6-Moist); , 10YR56; Clayey sand; Massive grade of structure; Very firm consistence; 0-2%, cobbly, 60-200mm, Schist, coarse fragments; Very few (0 - 2 %), Calcareous, , ; Field pH 9 (Raupach); Clear change to -
4R	2.2 - 2.4 m	Rock
4R	2.4 - 2.6 m	Rock

Morphological Notes

B2	Pockets of organic staining.
B2k	Transition zone between clay and carbonate.
B2k	Mainly carbonate with pockets of clay persisting.
2C	Lime fingering out into CS.
2C	Sandy clay (SC) texture is questioned.
2Ck	Some clay in carbonate.
2Ck	Intimate mixture of semi-hard carbonate and SCL.
4R	Mainly highly weathered schist with clay deviations in cleavages.

Observation Notes

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m				Cmol (+)/kg				%
0 - 0.1	8A	<0.06A	5K	0.9	0.75	0.24		<0.1J		
0.1 - 0.12										
0.12 - 0.2	7.7A	<0.06A	8.4K	3	0.85	0.34		<0.1J		
0.2 - 0.3										
0.3 - 0.4	8.7A	0.13A	11.4K	8.4	2	0.7		3.2J		21.88
0.4 - 0.5										
0.5 - 0.7										
0.7 - 0.9	9.6A	0.17A	4.9K	4.8	1	1.4		4.8J		29.17
0.9 - 1.1										
1.1 - 1.25										
1.25 - 1.38										
1.38 - 1.6										
1.6 - 1.8	9.7A	0.34A	3.3K	4.8	0.99	4		0.26J		1538.46
1.8 - 2										
2 - 2.2										
2.2 - 2.4										
2.4 - 2.6										

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 - 0.1	11C								1I	47	1	11
0.1 - 0.12												
0.12 - 0.2	26C								1I	36	1	26
0.2 - 0.3												
0.3 - 0.4	50C								2I	18	2	50
0.4 - 0.5												
0.5 - 0.7												
0.7 - 0.9	16C								3I	34	3	16
0.9 - 1.1												
1.1 - 1.25												
1.25 - 1.38												
1.38 - 1.6												
1.6 - 1.8	20C								4I	30	4	20
1.8 - 2												
2 - 2.2												
2.2 - 2.4												
2.4 - 2.6												

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 - 0.1										
0.1 - 0.12										
0.12 - 0.2										
0.2 - 0.3										
0.3 - 0.4										
0.4 - 0.5										
0.5 - 0.7										
0.7 - 0.9										

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0.9 - 1.1
1.1 - 1.25
1.25 - 1.38
1.38 - 1.6
1.6 - 1.8
1.8 - 2
2 - 2.2
2.2 - 2.4
2.4 - 2.6

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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_CEC	CEC - 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
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5_NR	Water soluble Chloride - Cl(%) - Not recordede
P10_NR_C	Clay (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_S	Sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded