Project Name: **Soils of the MonartoTown Site**
Project Code: **Monarto** **Site ID:** **A1173** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

Site Information

Desc. By: Malcolm J. Wright
Date Desc.: 21/11/75
Map Ref.: 1:50000
Northing/Long.: 6110720 AMG zone: 54
Easting/Lat.: 326790 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: Gc1.11
Great Soil Group: N/A

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

0 - 0.08 m	Dark brown (7.5YR3/2-Moist); ; Sandy clay loam; Weak grade of structure; Very weak consistence; Few (2 - 10 %), Calcareous, , ; Field pH 8 (Raupach); Clear change to -
0.08 - 0.15 m	Reddish brown (5YR4/4-Moist); ; Sandy clay; Moderate grade of structure, Angular blocky; Very firm consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, , ; Field pH 8.5 (Raupach); Gradual change to -
0.15 - 0.3 m	Yellowish red (5YR5/6-Moist); , 10YR82; Sandy clay; Massive grade of structure; Firm consistence; Common (10 - 20 %), Calcareous, , ; Field pH 9 (Raupach);
0.3 - 0.41 m	Reddish yellow (7.5YR6/6-Moist); ; Clay loam; Massive grade of structure; Firm consistence; Common (10 - 20 %), Calcareous, , Nodules; Field pH 9 (Raupach); Clear change to -
0.41 - 0.55 m	Reddish yellow (7.5YR6/6-Moist); , 10YR82; Clay loam; , Platy; Firm consistence; Common (10 - 20 %), Calcareous, , Nodules; Field pH 9 (Raupach);
0.55 - 0.66 m	Pink (7.5YR7/4-Moist); , 5YR56; Clay loam; , Platy; Firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Field pH 9 (Raupach); Clear change to -
0.66 - 0.8 m	Pink (7.5YR7/4-Moist); , 5YR46; Sandy clay loam; Massive grade of structure; Firm consistence; Common (10 - 20 %), Calcareous, , Concretions; Field pH 9 (Raupach);
0.8 - 1 m	Yellowish red (5YR4/6-Moist); , 10YR53; , 10YR84; Sandy clay; Massive grade of structure; Very firm consistence; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach);
1 - 1.16 m	Yellowish red (5YR4/6-Moist); , 10YR53; , 10YR84; Sandy clay; Massive grade of structure, Prismatic; Moderate grade of structure, Angular blocky; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach);
1.16 - 1.3 m	Yellowish red (5YR4/6-Moist); , 10YR53; , 10YR84; Sandy clay; , Angular blocky; Strong grade of structure, Prismatic; Very firm consistence; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach);
1.3 - 1.5 m	Brown (7.5YR5/4-Moist); , 10YR54; Sandy clay; , Angular blocky; Strong grade of structure, Prismatic; Very strong consistence; 2-10%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, , ; Field pH 9 (Raupach); Gradual change to

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1.5 - 1.7 m	Brown (7.5YR5/4-Moist); , 10YR54; Sandy clay; , Angular blocky; Strong grade of structure, Prismatic; Very strong consistence; 2-10%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 8.5 (Raupach); Gradual change to -
1.7 - 2 m	Brown (7.5YR5/4-Moist); , 10YR54; Sandy clay; Strong consistence; 2-10%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 7.5 (Raupach); Clear change to -
2 - 2.3 m	Brown (7.5YR5/4-Moist); , 10YR54; Sandy clay; Strong consistence; Field pH 6.5 (Raupach);

Morphological Notes

Highly vesicular. SC texture is uncertain.
Highly porous. Carbonate nodules. SC texture is uncertain.
Highly porous. Carbonate nodules.
Increased amounts of Blanchetown clay in carbonate matrix, clay and lime more intimately mixed.
SC texture is uncertain.
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Mainly Blanchetown clay with occassional lime pockets persisting. SC texture is
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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 - 0.08	8.6A	0.18A	16.4K	3.6	2.9	0.77		27J		2.85
0.08 - 0.15	8.5A	0.1A	18.7K	3.2	1.9	0.42		28J		1.50
0.15 - 0.3	8.9A	0.11A	9K	6.9	1.5	4.1		23J		17.83
0.3 - 0.41										
0.41 - 0.55	9.9A	0.4A	5.4K	6.3	1.8	8.4		22J		38.18
0.55 - 0.66										
0.66 - 0.8										
0.8 - 1	10A	1.02A	5.4K	6.3	1.8	8.5		22J		38.64
1 - 1.16										
1.16 - 1.3										
1.3 - 1.5										
1.5 - 1.7	8.5A	1.3A	0.53K	7.9	2	10.4		25J		41.60
1.7 - 2										
2 - 2.3										

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 - 0.08	4.4C								7I	40	7	23
0.08 - 0.15	2.8C								4I	46	4	28
0.15 - 0.3	18C								2I	36	2	24
0.3 - 0.41												
0.41 - 0.55	51C								3I	20	3	16
0.55 - 0.66												
0.66 - 0.8												
0.8 - 1	55C								1I	14	1	22
1 - 1.16												
1.16 - 1.3												
1.3 - 1.5												
1.5 - 1.7	<0.1C								2I	36	2	38
1.7 - 2												
2 - 2.3												

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	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.08									
0.08 - 0.15									
0.15 - 0.3									
0.3 - 0.41									
0.41 - 0.55									
0.55 - 0.66									
0.66 - 0.8									
0.8 - 1									
1 - 1.16									
1.16 - 1.3									
1.3 - 1.5									
1.5 - 1.7									
1.7 - 2									
2 - 2.3									

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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_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