**Project Name:** Soils of the MonartoTown Site

**Project Code:** Monarto Site ID: A1169 Observation ID: 1

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

Site Information

Malcolm J. Wright Desc. By: Locality:

Date Desc.: Elevation: 21/11/75 No Data Map Ref.: 1:50000 Rainfall: No Data Northing/Long.: 6111730 AMG zone: 54 Runoff: No Data 329420 Datum: AGD66 Easting/Lat.: Drainage: No Data

Geology

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

**Land Form** 

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

Surface Soil Condition (dry):

**Erosion:** 

**Soil Classification** 

Australian Soil Classification: N/A Mapping Unit: Principal Profile Form: Gc2.21 ASC Confidence: **Great Soil Group:** N/A

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

**Profile Morphology** 

Dark reddish brown (5YR3/3-Moist); ; Sandy loam; Massive grade of structure; Very firm  $0 - 0.1 \, \text{m}$ consistence; Field pH 8 (Raupach); Sharp change to -

Dark reddish brown (5YR3/3-Moist); ; Sandy loam; Moderate grade of structure, 50-100 mm, 0.1 - 0.15 m Angular blocky; Very firm consistence; Field pH 8.5 (Raupach); Clear change to

Dark reddish brown (2.5YR3/4-Moist); , 5YR32; Sandy clay loam; Moderate grade of structure, 0.15 - 0.22 m 50-100 mm, Angular blocky; Very firm consistence; Field pH 8.5 (Raupach);

0.22 - 0.35 m Dark reddish brown (2.5YR3/4-Moist); , 5YR32; Sandy medium clay; Moderate grade of

structure, 50-100 mm, Angular blocky; Very firm consistence; Very few (0 - 2 %), Calcareous,

Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (Raupach); Sharp change to -

Dark reddish brown (2.5YR3/4-Moist); , 5YR32; Sandy medium clay; Moderate grade of structure, 50-100 mm, Angular blocky; Very firm consistence; Common (10 - 20 %), 0.35 - 0.39 m

Calcareous, , ; Field pH 8.5 (Raupach); Sharp change to -

Brown (7.5YR4/4-Moist); , 7.5YR66; Sandy loam; Massive grade of structure; Very firm 0.39 - 0.49 m

consistence; Common (10 - 20 %), Calcareous, , Soft segregations; Field pH 9 (Raupach); Clear

change to -

0.49 - 0.59 m Pinkish yellow (7.5YR8/2-Moist); , 7.5YR66; Sandy clay loam; , Platy; Very firm consistence;

Field pH 9 (Raupach);

0.59 - 0.75 m Pale yellow (2.5Y7/4-Moist); , 7.5YR56; , 10YR81; Sandy clay loam; Weak grade of structure,

Platy; Very firm consistence; , Calcareous, , Soft segregations; Field pH 8.5 (Raupach);

0.75 - 0.95 m Strong brown (7.5YR5/6-Moist); , 5Y53; , 10YR81; Sandy clay loam; Massive grade of structure: Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse

fragments; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach); Diffuse

Strong brown (7.5YR5/6-Moist); , 5Y53; , 10YR81; Sandy loam; Massive grade of structure; Very firm consistence; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 0.95 - 1.2 m

(Raupach); Clear change to -

Strong brown (7.5YR5/6-Moist); , 5Y53; , 10YR81; Loamy sand; Massive grade of structure; 1.2 - 1.5 m

Strong consistence; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach);

Clear change to -

Project Name: Soils of the MonartoTown Site
Project Code: Monarto Site ID: A1169 Observation ID: 1
Agency Name: CSIRO Division of Soils (SA)

1.5 - 1.6 m Red (2.5YR4/8-Moist); , 10YR68; , 10YR81; Clayey sand; Massive grade of structure; Very firm consistence; 0-2%, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 9 (Raupach); Sharp change to 1.6 - 1.8 m Yellowish red (5YR5/8-Moist); , 5YR46; , 10YR81; Fine sandy loam; Massive grade of structure; Very firm consistence; Few (2 - 10 %), Calcareous, , Soft segregations; Diffuse
1.8 - 2 m Strong brown (7.5YR5/8-Moist); ; Fine sandy loam; Massive grade of structure; Loose consistence; Few (2 - 10 %), Calcareous, , Soft segregations; Clear change to 2 - 2.15 m Strong brown (7.5YR5/8-Moist); ; Sandy clay loam; Massive grade of structure; Very firm consistence; , Calcareous, , Soft segregations; Clear change to -

2.15 - 2.5 m ; Very firm consistence; , Calcareous, , Soft segregations;

## **Morphological Notes**

Much semi-hard and smaller amounts of soft carbonate in grey brown matrix. Much worm activity.

Mainly hard somewhat platy carbonate with parilla sand.

Carbonate input in Parilla sand.

Sand becomes yellower. Pockets of carbonate persist.

Sand becomes redder with occassional grey mottles. Sand is coarser and well graded. Parilla sand containing weathered meta siltstone. The type of gravel is questioned, but thought to be SI (silcrete).

Weathered meta siltstone fragments. Stone layer of round quartz at bottom. The type of gravel is questioned, but thought to be SI (silcrete).

Grey weathered in situ meta siltstone.

## **Observation Notes**

## **Site Notes**

Ex cereal and grazing. Cultivation paddock.

Project Name: Project Code: Agency Name: Soils of the MonartoTown Site

Monarto Site ID: A1169 CSIRO Division of Soils (SA) Observation ID: 1

| Laboratory Test Results.  |               |         |             |           |          |         |              |       |          |             |          |           |
|---------------------------|---------------|---------|-------------|-----------|----------|---------|--------------|-------|----------|-------------|----------|-----------|
| Depth                     | pН            | 1:5 EC  | Exc         | hangeable | Cations  |         | Exchangeable | CEC   |          | <b>ECEC</b> |          | ESP       |
|                           |               |         | Ca          | Mg        | K        | Na      | Acidity      |       |          |             |          | •         |
| m                         |               | dS/m    |             |           |          | Cmol (+ | ·)/kg        |       |          |             |          | %         |
| 0 0 4                     | 0.44          | 0.074   | 0.71/       | 4.0       | 0.00     | 0.54    |              | 40.1  |          |             |          |           |
| 0 - 0.1                   | 8.4A          | 0.07A   | 9.7K        | 1.6       | 0.83     | 0.51    |              | 13J   |          |             |          | 3.92      |
| 0.1 - 0.15                | 8.5A          | 0.07A   | 9.8K        | 1.2       | 0.54     | 0.32    |              | 12J   |          |             |          | 2.67      |
| 0.15 - 0.22               | 8.5A          | 0.07A   | 16K         | 1.9       | 0.52     | 0.49    |              | 18J   |          |             |          | 2.72      |
| 0.22 - 0.35               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.35 - 0.39               |               |         |             |           |          | ·       |              |       |          |             |          |           |
| 0.39 - 0.49               | 9.1A          | 0.11A   | 12.7K       | 2.1       | 0.38     | 0.71    |              | 13J   |          |             |          | 5.46      |
| 0.49 - 0.59               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.59 - 0.75               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.75 - 0.95               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.95 - 1.2                | 9.7A          | 0.17A   | 5K          | 3.6       | 0.33     | 1.2     |              | 8J    |          |             | •        | 15.00     |
| 1.2 - 1.5                 |               |         |             |           |          |         |              |       |          |             |          |           |
| 1.5 - 1.6                 |               |         |             |           |          |         |              |       |          |             |          |           |
| 1.6 - 1.8                 |               |         |             |           |          |         |              |       |          |             |          |           |
| 1.8 - 2                   | 9.8A          | 0.44A   | 2.9K        | 4         | 0.3      | 2.2     |              | 7J    |          |             | 3        | 31.43     |
| 2 - 2.15                  |               |         |             |           |          |         |              |       |          |             |          |           |
| 2.15 - 2.5                |               |         |             |           |          |         |              |       |          |             |          |           |
|                           |               |         |             |           |          |         |              |       |          |             |          |           |
| Depth                     | CaCO3         | Organic | Avail.      | Total     | Total    | Total   | l Bulk       | Da    | rticle   | Sizo        | Analysi  |           |
| Deptili                   | Cacos         | C       | Avaii.<br>P | P         | N        | K       | Density      | GV    | CS       | FS          | -        | S<br>Clay |
| m                         | %             | %       | mg/kg       | г<br>%    | %        | %       | Mg/m3        | GV    | CS       | %           | Siit     | Clay      |
| •••                       | 70            | 70      | mg/ng       | 70        | 70       | /0      | mg/ms        |       |          | 70          |          |           |
| 0 01                      | 0.2C          |         |             |           |          |         |              |       | 01       | 40          | 0        | 16        |
| 0 - 0.1                   | 0.2C          |         |             |           |          |         |              |       | 8I<br>7I | 36          | 8<br>7   | 16        |
| 0.1 - 0.15<br>0.15 - 0.22 | 0.2C<br>0.15C |         |             |           |          |         |              |       | 11       | 26          | 1        | 16        |
| 0.13 - 0.22               | 0.150         |         |             |           |          |         |              |       | - 11     | 20          | - 1      | 26        |
|                           |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.35 - 0.39               | 29C           |         |             |           |          |         |              |       | 21       | 15          | 2        | 12        |
| 0.39 - 0.49               | 290           |         |             |           |          |         |              |       | 21       | 15          | 2        | 12        |
| 0.49 - 0.59               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.59 - 0.75               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.75 - 0.95               | 0.40          |         |             |           |          |         |              |       | 01       | 00          | •        | •         |
| 0.95 - 1.2                | 2.4C          |         |             |           |          |         |              |       | 21       | 33          | 2        | 8         |
| 1.2 - 1.5                 |               |         |             |           |          |         |              |       |          |             |          |           |
| 1.5 - 1.6                 |               |         |             |           |          |         |              |       |          |             |          |           |
| 1.6 - 1.8                 | 0.00          |         |             |           |          |         |              |       | 41       | 00          | 4        | 40        |
| 1.8 - 2                   | 6.8C          |         |             |           |          |         |              |       | 41       | 62          | 4        | 10        |
| 2 - 2.15                  |               |         |             |           |          |         |              |       |          |             |          |           |
| 2.15 - 2.5                |               |         |             |           |          |         |              |       |          |             |          |           |
|                           |               |         |             |           |          |         |              |       |          |             |          |           |
| Depth                     | COLE          |         |             |           |          |         |              |       |          | K unsa      | at       |           |
| m                         |               | Sat.    | 0.05 Bar    | 0.1 Bar   | 0.5 Bar  | 1 Bar   | 5 Bar 1      | 5 Bar | mm       | /h          | mm/h     |           |
| 111                       |               |         |             | g/        | g - m3/m | J       |              |       | 111111   | /··         | 11111/11 |           |
| 0 - 0.1                   |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.1 - 0.15                |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.15 - 0.22               |               |         |             |           |          |         |              |       |          |             |          |           |
| 0.10 0.25                 |               |         |             |           |          |         |              |       |          |             |          |           |

0.15 - 0.22 0.22 - 0.35 0.35 - 0.39 0.39 - 0.49 0.49 - 0.59 0.59 - 0.75 0.75 - 0.95 0.95 - 1.2

Project Name: Soils of the MonartoTown Site
Project Code: Monarto Site ID: A1169 Observation ID: 1
Agency Name: CSIRO Division of Soils (SA)

1.2 - 1.5 1.5 - 1.6 1.6 - 1.8 1.8 - 2 2 - 2.15 2.15 - 2.5 Project Name: Soils of the MonartoTown Site

Project Code: Monarto Site ID: A1169 Observation ID: 1

Agency Name: CSIRO Division of Soils (SA)

## **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\_KExch. basic cations (K++) - meq per 100g of soil - Not recorded15\_NR\_MGExch. basic cations (Mg++) - meq per 100g of soil - Not recorded15\_NR\_NAExch. 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
P10\_NR\_FS
P10\_NR\_FS
P10\_NR\_S
P10\_NR\_Z
P